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Marcel Erlinghagen  
Andreas Ette  
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Nils Witte *Editors*

# The Global Lives of German Migrants

Consequences of International  
Migration Across the Life Course

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Editors

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Across the Life Course

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# Preface

This volume is the result of a long-lasting examination of the German population's international mobility. It all started more than a decade ago, when the ebbs and flows of international migration shifted the public and political attention from a paramount interest in immigration to emigration from Germany. Originating from different areas of study—research on social inequality, mobility, migration, and integration—the editors are united by their shared interest in this phenomenon of a globally networked world. Both the number of people deciding to move abroad from Germany and the number of people in Germany who stayed abroad for significant periods of their life are increasing. This edited volume is a first attempt to systematically study the personal consequences of this regularly overlooked form of international migration and internationalising life courses. Furthermore, the book constitutes a first collection of research originating from the German Emigration and Remigration Panel Study (GERPS). It aims to complement existing national surveys by adding the international linkages of an otherwise apparently sedentary population.

The editors would like to express their gratitude to many people who made this research possible. We want to thank the Federal Institute for Population Research and in particular the German Research Foundation (DFG) for generously funding this research project. Our scientific advisory council and its individual members—Claudia Diehl, Bernhard Nauck, Cornelia Schu, and Gert G. Wagner—provided continuous guidance and supported this research project from its earliest beginnings. Special thanks go to Frederik Knirsch and his team at the SOKO Institute for Social Research and Communication as the responsible survey data collector. New research designs regularly entail unanticipated and startling turns and necessary modifications. They supported this project throughout all phases with a great deal of flexibility and personal engagement. We are particularly indebted to all of the people who made this book possible by participating in the German Emigration and Remigration Panel Study and supporting the continued data collection. Spread globally in more than 160 countries, their time and dedication to regularly respond to our questionnaires provides us with insights into their changing life circumstances in the months and years following their international movements.

The production of the volume benefitted from reciprocal feedback by other authors and by external colleagues. In particular, the authors want to thank Karsten Hank, Andreas Heinz, and Anja Steinbach for their careful reading and valuable feedback. All chapters of this book benefitted from additional anonymous reviews, and the editors and authors want to thank the referees for their feedback and suggestions that helped improve and assure the quality. Our student assistants Katharina Apfelbaum, Antonia Lang, and Jonas Aljoscha Weik supported the preparation of many of the chapters. We express our gratitude to Marie-Fleur Philipp and Sybille Steinmetz for their help in formatting the book and to Faith Ann Gibson, Susannah Goss, Lotte John, and Amanda C. Seyle Jones for carefully proofreading the manuscript. Special thanks go to Irina Isaakyan and Anna Triandafyllidou from the IMISCOE network and Alexander James and Bernadette Deelen-Mans from the Springer editorial team for their support during the production process.

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**Part I**  
**Introduction**

# Chapter 1

## Between Origin and Destination: German Migrants and the Individual Consequences of Their Global Lives



Marcel Erlinghagen, Andreas Ette, Norbert F. Schneider, and Nils Witte

### 1.1 Introduction

Global migration shapes modern societies. There are 272 million international migrants worldwide, with Europe and North America still representing the major regions of destination (UN 2019). In most of the economically highly developed countries in these two regions, international migration has become the central demographic factor shaping population dynamics and politically, migration is of fundamental concern today not only for international relations, it also forms one of the basic national lines of division (cf. Castles et al. 2014).

From this traditional perspective, global migration shapes modern societies through immigration causing social transformations. But global migration shapes modern societies in hitherto unnoticed ways, namely through the international mobility of these affluent societies' own citizens. During the twentieth century, international migration was mainly understood as immigration into economically highly developed welfare states. This has changed over the course of recent decades and these very countries are meanwhile understood as both receiving *and* sending countries making them important sources of international mobility (cf. Favell et al. 2007; van Dalen and Henkens 2013). Alongside the increasing volume of international migration originating from these countries, we are witnessing an increasing internationalisation of individual life courses of these countries' citizens. Thanks to the globalisation of communication and transport, episodes of living abroad have become the norm for increasing numbers of these welfare states' populations. According to the Eurobarometer, one in ten Europeans has lived and worked in

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another country in the past (European Commission 2019). Particularly for the younger cohorts, ‘*global lives*’—either in the form of temporary stays abroad or permanent settlement in another country—are biographical opportunities unseen by former generations. Unfortunately, we know little about who these internationally mobile people are. Why are they moving abroad and leaving their home countries, which provide them with good economic opportunities, high living standards, and well-established welfare states? We know even less about the consequences of international mobility for individual life courses. What effects do global lives have on individual professional careers or family life and how do these new biographical opportunities affect the societies in the origin countries?

From an individual perspective, international mobility may increase personal competencies because migration experiences potentially increase available “mobility capital” (Kaufmann et al. 2004), “intercultural capital” (Pöllmann 2013), “mobility competencies” (Rüger et al. 2013), or “transnational human capital” (Gerhards and Hans 2013). Many countries increasingly teach their citizens how to be mobile: Today, stays abroad are a formal requirement in many academic curricula. The yearly number of international students originating from North America and Western Europe studying abroad has increased from 481,000 in the year 2000 to 746,000 in the year 2019 and the Erasmus+ program of the European Union sent 853,000 Europeans to study, train, or volunteer abroad in the year 2018 alone (UIS 2020; European Commission 2019). Also for the demand side—the employer perspective—soft skills and tacit knowledge gained from international mobility are of increasing importance. Previous international experiences and stays abroad have become part of many job posting prerequisites (Gerhards et al. 2017). Overall, international migration has become a common part of individual careers in many economically highly developed welfare states and access to transnational resources is said to be an important determinant of social status and life chances (cf. Beck 2009; Faist 2016; Schneider et al. 2002; Weiß 2005). There is indeed some evidence that the availability of transnational human capital is a relevant precondition for successful social, political, and economic participation in an increasingly globalised world (e.g. Cresswell 2006; Diez Medrano 2014; Jacob et al. 2019). Thus, we can assume that the “mobility turn” (Urry 2007) has far-reaching consequences for social inequalities. While this may be convincing at the theoretical level, there are few empirical data that would enable the empirical assessment of such theoretical perspectives. As a consequence, we know rather little about the consequences of the increasing international migration for individual lives (Willekens et al. 2016).

This volume is a direct response to this lack of knowledge about the emigration from economically highly developed countries and the consequences international experiences and temporary stays abroad have for the life course of mobile individuals. Taking Germany as a paradigmatic case study for an economically highly developed country, all chapters in this volume are based on the *German Emigration and Remigration Panel Study* (GERPS). This new data infrastructure was established to learn more about this form of international mobility. It complements national surveys by adding existing international linkages of an otherwise ostensibly sedentary population.



In the remainder of this chapter, we develop a conceptual framework for investigating the consequences of international migration. Incorporating recent debates in migration studies, it argues that individual consequences are not only a question of migrants' integration into destination societies. Rather, the consequences of international mobility should also be studied by comparing migrants with the non-mobile population of the country of origin. Equally, the consequences of international mobility have to be analysed as results of specific trajectories in individual life courses during the migration process. Second, the chapter presents German emigration and remigration—for both theoretical and practical reasons—as particularly well suited case studies to analyse international migration from economically highly developed welfare states. Finally, we separate different dimensions of the life course to systematically study the individual consequences of international migration and provide an outline of the book contents and its chapters.

## 1.2 Towards a New Conceptual Framework for Migration Studies

Migration studies are not well equipped for the analysis of international migration from economically highly developed welfare states. The lack of theoretical development and the interdisciplinary fragmentation of studies about these mobile populations are major reasons for this unsatisfactory state of research. International movements from affluent countries are rarely studied through the lens of established migration theories but treated as *sui generis* cases of international experiences. Consequently, one is confronted with detailed studies about business or self-initiated expatriates (e.g. Andresen et al. 2015; Habti and Elo 2019; McNulty and Brewster 2017), the international mobility of professionals and the highly skilled within multinational enterprises (e.g. Findlay and Li 1998; Peixoto 2001), as well as the migration of transnational professionals and economic elites (e.g. Harrington and Seabrooke 2020; Pohlmann 2009). Apart from economic migration, there are specialised studies about academic migration and international students (e.g. Ackers and Gill 2008; Bilecen and van Mol 2017), mobility caused by a search for a better lifestyle, and privileged migration linked with the retirement transition (e.g. Benson and O'Reilly 2009; Fauser 2020).

The constant development of new concepts and definitions about our research subject is a welcome sign of a lively and dynamic academic exchange. However, compartmentalising a phenomenon might also hamper scientific progress and we propose that international migration from economically highly developed welfare states be studied within a more encompassing framework that incorporates established theories in migration studies. Building on recent debates in migration studies (e.g. Amelina and Faist 2012; FitzGerald 2012; Guveli et al. 2016), we propose the “destination-origin-migration approach” (DOM) as a new conceptual framework for migration research. Its basic premise perceives emigration and remigration as

events with far-reaching short-, medium-, and long-term consequences for the life course. Consequently, migration should result in various transformation and adaptation processes in the lives of internationally mobile individuals. It proposes studying the individual consequences of international migration along three spatio-temporal reference units (cf. Pries 2010, p. 131): (1) the population in the *destination* country, (2) the population in the *origin* country, and (3) along the individual *migration* process and life course.

*Destination perspective:* The destination country is a central spatial reference unit for investigations of the consequences of migration. In classical migration research, individual consequences of migration have been analysed mainly from the perspective of integration or assimilation into the receiving society, relying on interpersonal comparisons between immigrants and the native population (e.g. Alba and Nee 1997; Berry 1997; Heath and Cheung 2007; Portes and Zhou 1993). Obviously, destination countries play a crucial role for the definition of opportunities for immigrants. Although international migrants from economically highly developed welfare states—and in the context of this volume German migrants in particular—are potentially less likely to face discrimination and racialised stereotypes in their destination countries than many other immigrant groups are, evidence suggests that privileged migrants also struggle with stereotypes (e.g. Hainmueller and Hiscox 2010; Helbling 2011). Consequently, the questions of conventional integration research are also relevant for understanding the immigration experiences of German citizens. Do German migrants make efforts at cultural, social, and even political integration in their countries of destination? How do processes of integration develop and how do stays intended as temporary evolve into more permanent settlement? How do structures and opportunities of destination countries moderate individual consequences? These destination country characteristics are likely to shape the short- and long-term consequences of migration. Analytically, research following the destination country perspective examines, for example, the influence of the varying institutional contexts of reception in the different host societies on the consequences of migration for the life course of migrants. It regularly adopts multi-level approaches (cf. DiPrete and Forristal 1994; Snijders and Bosker 2011) to analyse the embeddedness of individuals in structuring social conditions of the life course (e.g. Luthra et al. 2018; Norris and Inglehart 2012; Wright and Bloemraad 2012).

*Origin perspective:* In the wake of classic integration and assimilation theory, empirical research usually compares natives and groups from various origins in several dimensions of integration. This approach to integration has been criticised for treating integration like a contest between ethnic groups competing for achievement in their destination country (FitzGerald 2014). The first expansion of such a destination perspective, which focuses on integration and assimilation only, points to a different spatial reference: the society in the country of origin (e.g. Baizán et al. 2014; Zuccotti et al. 2015). In this perspective, the living conditions of migrants are compared to the living conditions of the spatially non-mobile population of their home country (sometimes also called “stayers”). This additional spatial reference unit raises a different set of questions. Rather than comparing

achievements of migrants from various countries of origin, it compares biographies of the internationally mobile with the biographies of non-mobile persons. How are careers affected by international migration? What are the consequences of moving abroad—either temporarily or permanently—for family formation? How do social relationships in the origin country shape emigration but also remigration processes? This origin perspective has recently gained importance and is described as “dissimilation from origins” (Guveli et al. 2016) or just “dissimilation” (FitzGerald 2012). This additional spatial reference unit not only enables investigating the selectivity of migrants compared to non-migrants regarding, for instance, their socio-demographic characteristics, their employment, their partnership, or their health. Analytically, it is better understood as a kind of a counterfactual (Morgan and Winship 2015) where stayers are a crucial control group for the evaluation of individual outcomes of migration. From this perspective, migration is conceptualised as a treatment resulting in individual transformation and adaptation processes (e.g. Braun and Arsene 2009; Erlinghagen 2011; McKenzie et al. 2010; Nikolova and Graham 2015).

*Migration perspective:* The third reference unit of the destination-origin-migration approach is temporal. From this perspective, consequences of international migration are understood as intra-personal transitions and mobilities. Instead of dealing with contested understandings of integration, international migration is conceptualised as an event in the life course with potential consequences for the individual. From a life-course perspective, international migration is a dynamic, open, and multi-dimensional process and offers, again, a different perspective on the consequences of international migration. How do events in the economic or family dimension of the life course impact the migration process? What consequences do different durations of the stay abroad have on the economic returns of migration after remigration? What consequences does the initiative of one person to become internationally mobile have on significant others like their partner or children? Life course analysis has recently developed into an adequate theoretical framework for both qualitative migration research (e.g. Latcheva and Herzog-Punzenberger 2011; Nohl et al. 2014) and quantitative migration research (e.g. Geist and McManus 2008; Kley 2011; Mulder 1993). It principally stresses that the consequences of migration can be better understood if previous migration decisions and past migration experiences are considered. Furthermore, it highlights existing interdependencies between different life domains. That makes the approach particularly apt to investigate, for example, family and employment conditions and their relationship with migration behaviour. Finally, the life course approach enables researchers to recognise the mutual dependencies of the life courses of interacting individuals (e.g. Elder 2003; Mayer 2009). This third research perspective focuses on the migration process itself and asks for changes in various life domains and how these changes are connected with the migration process (e.g. Fuller 2015; Kogan and Weißmann 2013; Windzio and Aybek 2015; Wingers et al. 2011). Additionally, the temporal reference unit, *migration*, is particularly sensitive for different durations of migration. Migration research is too often predicated on the iconic and antiquated image of migrants who board a steamboat and leave their home country for good. However,

and not least in times of globalisation, stays abroad are often transitory and migration may proceed in unforeseen ways. The implication is that migration today is not a singular event but a chain of several episodes. Migration biographies increasingly include several temporary stays abroad of different lengths interrupted by remigration or onward migration processes resulting in complex and oscillating mobility behaviours (Findlay et al. 2015). Although theoretical concepts underlining the transnational character of migrant lives thrive (Levitt and Jaworsky 2007), empirical research still struggles to capture temporary, transitional, repeat, circular, or liquid forms of migration (e.g. Constant and Zimmermann 2011; Engbersen et al. 2010).

In conclusion, the DOM approach provides a conceptual framework that integrates different strands of previous migration research. It combines more traditional perspectives on the integration and incorporation of migrants in their destination countries with more recently stressed perspectives comparing migrants with the population in their origin country and the intra-personal developments during the individual migration process. DOM offers a new prism that aims to guide a comprehensive investigation of the individual consequences of international migration.

### 1.3 The Case for German Emigration and Remigration

Besides the theoretical fragmentation discussed above, the dearth of suitable data constitutes a second reason for the unsatisfactory state of research about international migration from economically highly developed welfare states. Internationally mobile persons are a rare and hard-to-reach population and the collection of individual level data is a very complex and ambitious enterprise (Kalton and Anderson 1986; Lavrakas 2008). In response, qualitative studies have started to fill this gap by contributing detailed studies on specific groups of international migrants from economically highly developed welfare states. These include international students, highly skilled professionals, or retirees and their privileged migration experiences (e.g. Carlson 2013; Favell 2008; Hayes 2014). This resulted in a scattered state of research missing the bigger picture of international migration between economically highly developed welfare states. Quantitative research, however, for a long time struggled to come up with adequate research designs and sampling frames. From the perspective of the origin country, existing surveys regularly fail to cover international migration processes in an adequate manner because their sampling frame is usually restricted to national borders. Emigrants are omitted as soon as they move abroad because the event of border crossing simultaneously marks the event of leaving the target population. From the perspective of the destination country, the situation is not much better. Although recent decades have seen significant progress through the establishment of specific migrant surveys in many major countries of destination, these data collection initiatives usually focus on major source countries of migration and therefore regularly neglect migrants from economically highly developed countries (e.g. Diehl et al. 2015; Prandner and Weichbold 2019; see also Ette et al. 2021b in this volume). Despite this lack of data, there are several

exceptions that investigate emigration in prosperous welfare states. These include, for example, classic immigration countries like the United States or Australia (e.g. Dashefsky and Woodrow-Lafield 2020; Hugo 2006; Klekowski von Koppenfels 2014) as well as many European countries like Austria, Denmark, France, Germany, or the Netherlands (e.g. Beck and Weinar 2017; Ette and Sauer 2010; Kauppinen et al. 2019; Scheibelhofer 2018; van Dalen and Henkens 2013), and also some first cross-nationally comparative analyses (King and Williams 2018; Recchi and Favell 2009; Recchi 2014) but all with significant restrictions concerning their sampling frames and data bases.

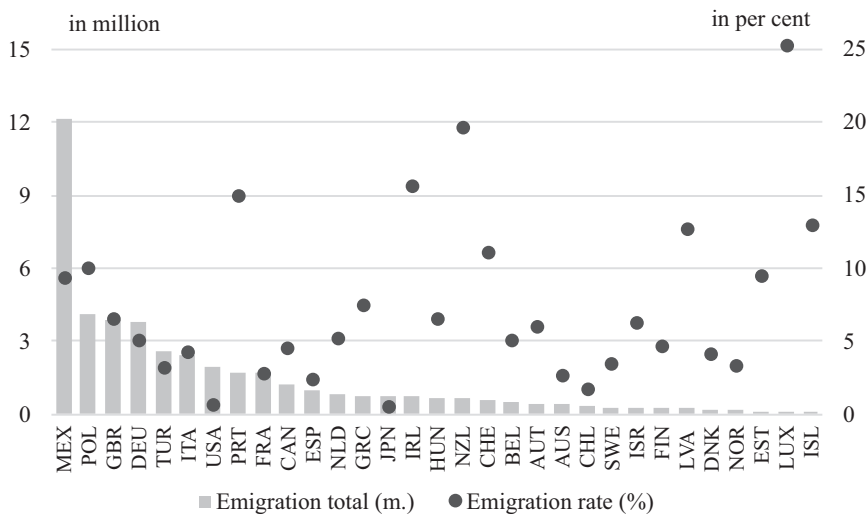
All chapters in this volume are based on a new data infrastructure because informative data that allow for the examination of the individual consequences of international migration from economically highly developed countries are generally scarce. The *German Emigration and Remigration Panel Study* (GERPS) provides detailed information about more than 11,000 internationally mobile German citizens. Its research methodology facilitates the analysis of the individual consequences of international mobility from the three perspectives of the destination-origin-migration approach through two major design features.

First, the study follows a longitudinal design and combines the collection of retrospective biographical data about the situation before the migration event with panel data to study the individual consequences of global lives. Second, GERPS applies a multi-sited design studying migration in both the origin and destination countries. The study was developed in close alignment with the Socio-Economic Panel (SOEP) as the longest running panel survey in Germany. The SOEP provides information about the internationally non-mobile population and facilitates analyses of the consequences of international migration (cf. Ette et al. 2021b in this volume).

At least four reasons advocate the establishment of this new data infrastructure in Germany. First, Germany is a well-suited representative for the group of economically highly developed welfare states since it is one of the world's leading economies with a comparatively low poverty rate and moderate inequality. Among broad measures of wellbeing, Germany offers a high standard of living, a stable democracy, and a highly developed welfare state. When it comes to public social spending, Germany ranks eighth among OECD countries behind France, Finland, and Sweden (OECD 2019). At the same time, the German economy is strongly globalised and export oriented. Experiences abroad have become a priority in the educational system but also for the labour market where the international mobility of workers plays an important role for the prosperity and innovation of German companies (Adick et al. 2014; Lauterbach et al. 2017). Surrounded by European member states, the European Union defines an institutional framework of free movement which governs a large fraction of German emigration (Recchi 2015; Boswell and Geddes 2011). The case selection enables explorations of how this unparalleled supranational mobility project affects international relocations compared with potential countries of destination that offer less welcoming contexts of reception.

Second, the number of Germans living abroad is rather high compared to other OECD countries, but their share in proportion to the population size in Germany is average. Constructed on the basis of census data and major national household surveys, the Database on Immigrants in OECD Countries (DIOC) provides some indications about the volume of emigration from all OECD member states (Dumont and Lemaître 2008). In the years 2015/16—the newest data available—almost 45 million emigrants from OECD member states lived in one of the other OECD countries (see Fig. 1.1). This corresponds to a total of 4% of the population over 15 years of age, who thus live outside their country of birth. While economic prosperity makes emigration less of a necessity for a successful career, generous visa-admissions around the globe and comparatively low visa costs make emigration from rich countries comparatively easy (Mau et al. 2015; Recchi et al. 2020). The 3.8 million German emigrants constitute the fourth largest origin group behind Mexican, Polish, and British emigrants but its emigration rate—the proportion of emigrants in relation to the total population in the country of origin—of 5.1% is just about the average of all OECD member states and resembles that of Italy, Canada, and Finland. In addition to Germany’s representative role as one of the economically highly developed welfare states, the broad indicators on the international mobility of the German population reviewed above also make Germany a suitable case study.

A third reason is of more practical relevance. It concerns the general requirements for setting up a specialised data infrastructure about the internationally mobile population in Germany. Based on information from Germany’s population register, the average yearly number of German citizens moving abroad during recent years was about 132,000 and the corresponding number of remigrants was 111,000



**Fig. 1.1** Emigrated population (in million) and emigration rates (in per cent) by country of birth of emigrants for the years 2015/16. (Source: OECD DIOC 2015/16; authors’ calculation and presentation)

(cf. Ette and Erlinghagen 2021 in this volume). Those substantial numbers of the internationally mobile population in Germany provide a basis for sampling an otherwise rare population. Furthermore, the population register in Germany not only allows us to identify internationally mobile German citizens, but also provides the necessary information to contact them after their return to Germany and after their movement abroad to their destination countries (cf. Ette et al. 2021b in this volume).

Fourth, Germany is a country where demographic developments make monitoring the international mobility of its own population a political priority. Most economically highly developed countries can be described as ageing societies caused by declining fertility and increasing life expectancy (e.g. Lutz and Kebede 2018; Zeman et al. 2018). Two central consequences concern the organisation of health care and the demand for skilled labour. Specifically, labour shortages in the care sector and high costs for elder care may be potential push factors for the migration of older people. As for labour markets, the combination of demographic and technological change has boosted demand for qualified labour in personal services and in particular for highly qualified labour in business services (Oesch and Rodríguez Menés 2011). Although women's increased labour market integration partly responds to this demand increase, skills shortages remain a concern in many economically highly developed countries—but in particular for Germany due to its demographic development. The emigration of its own population potentially aggravates both problems.

## 1.4 Outline of the Book

This volume sheds light on international migration from economically highly developed welfare states. Based on the example of Germany, it concentrates on the consequences temporary or putatively permanent stays abroad have for the life courses of internationally mobile individuals. Aiming at the systematic and comprehensive analysis of the individual consequences of migration, the volume forgoes traditional dimensions of structural, social, and cultural assimilation or integration (e.g. Esser 1980; Gordon 1964). In line with classical conceptualisations of social inequality (e.g. Hradil 2005; Savage et al. 2005), it focuses instead on four dimensions of the life course that already structure many analyses about the individual consequences of regional migration within nation-states (e.g. Schneider and Meil 2008; Viry and Kaufmann 2015): (1) employment and social mobility, (2) partner and family, (3) wellbeing and health, and (4) friends and social integration. Applying these general dimensions of the life course to the realm of migration also helps us transcend migration research's overwhelming focus on the integration of ethnic groups into host societies as primordial entities (Wimmer 2009) and provides empirical illustrations for a “strategy to ‘de-migranticise’ research on migration and integration” (Dahinden 2016, p. 2214).

Following the aims of this volume, the first section of this book consists of two chapters. Whereas this chapter presents the conceptual framework of the volume,

Chap. 2 discusses its empirical foundation. Ette et al. (2021b) present the German Emigration and Remigration Panel Study (GERPS) as a new data infrastructure for analysing the individual consequences of international migration. The authors argue that the origin-based sampling strategy and the push-to-web surveying strategy represent promising templates for other migrant surveys.

The second section of the book focuses on international migration from economically highly developed welfare states. Addressing the lack of information about emigration from these countries, the following chapters provide basic information about internationally mobile people. Why do they leave a country offering good economic opportunities, high living standards, and a well-established welfare state? Chap. 3 by Ette and Erlinghagen (2021) sets the scene for this part of the volume. They provide an historical overview of Germany as a country of emigration and present basic demographic patterns of international German migrants. Whereas the volume of emigration of German citizens has been slowly increasing over the past three decades, they highlight the fact that net migration has remained rather stable. The economic and non-economic determinants of international migration decisions are at the centre of the article by Ette and Witte (2021) in Chap. 4. Focusing on a comparison between emigrants and non-migrants, they model the emigration decision, whereas the contrast between remigrants and emigrants provides information about the remigration decision to provide individual level information about a potential ‘brain drain’ from Germany. Extending neo-classical economic approaches to migration, Lübke et al. (2021) focus on psychological determinants of migration. In their analysis, they investigate individual risk attitudes as preconditions for migration as well as for the choice of the destination country (Chap. 5). Finally, Ette et al. (2021a) focus on the permanence of emigration from economically highly developed welfare states. Applying a life-course approach, they highlight the interrelations between different life-course domains and the intentions of German emigrants to settle permanently abroad, planning to return, or being undecided about the further course of their migration project (Chap. 6).

Part III of this volume is concerned with two central dimensions of social mobility research: the intra- and the intergenerational mobility of German emigrants. Favourable conditions in the German labour market compared to other countries imply that emigration may hardly improve individual labour market outcomes. Yet recent theoretical propositions suggest that the individual experience of international migration could be an asset that improves labour market outcomes. Witte and Guedes Auditor (2021) deal with German emigrants’ wage changes that are suggestive of intragenerational mobility and demonstrate a clearly positive average wage change after emigration compared with non-migrants (Chap. 7). Witte et al. (2021) investigate the social background of German emigrants’ in terms of their parents’ education and social class and analyse the consequences of spatial mobility for intergenerational social mobility of emigrants compared to non-migrants (Chap. 8).

Part IV investigates the nexus of global lives with partnership and family status. Unless migration is a move to unite couple households, it puts families and partnerships under stress. Erlinghagen (2021) deals with the migration motives, timing, and outcomes of internationally mobile couples (Chap. 9). He investigates the



phenomenon of trailing partners and documents not only traditional gender patterns of emigrating couples but also the decreasing life satisfaction of trailing women. Chap. 10 provides analyses of partnership breakup patterns among German emigrants and remigrants and presents findings on separations in the course of migration (Baykara-Krumme et al. 2021). Their findings suggest that the risk of partnership dissolution is particularly increased by non-egalitarian and non-synchronised migrations of couples.

Part V deals with German migrants' health and wellbeing. According to classical human capital theories, migrants are supposedly healthier than non-migrants. This mechanism of self-selection could, however, be counterbalanced by stressors that accrue from migration. With regard to subjective wellbeing, Guedes Auditor and Erlinghagen (2021) analyse possible impacts of emigration on overall life satisfaction (Chap. 11). Chapter 12 yields results concerning interrelations between international mobility and self-rated health status (Stawarz et al. 2021). They test the healthy migrant effect, well known from international migration in other geographic contexts, for the case of German emigrants and remigrants and document significant self-selection with increasing age at migration.

Part VI of this volume explores German migrants' friends and social participation. Earlier research on international German migrants suggests that emigration lowers satisfaction with social bonds and causes a loss of social capital after migration (Engler et al. 2015). Whereas Mansfeld (2021) presents results on emigrants' contact with friends in Germany and its impact on subjective wellbeing (Chap. 13), Décieux and Mörchen (2021) investigate the development of friendship network size shortly after emigration (Chap. 14). In Chap. 15, Décieux and Murdock (2021) analyse identity constructs of German international migrants. Their findings indicate that identification with host countries is already rather strong shortly after arrival.

Finally, Part VII of this volume analyses different aspects of the research methods applied in the German Emigration and Remigration Panel Study (GERPS). Genoni et al. (2021) analyse a methodological experiment offering potential participants an alternative survey mode alongside computer assisted web interviewing (CAWI). They concentrate on the effect of the push-to-web design on unit-nonresponse and panel participation, highlighting a generally high level of acceptance of an online surveying mode across all age groups in this internationally mobile population (Chap. 16). The final Chap. 17 by Décieux (2021) offers methodological findings on the potential of paradata analysis in GERPS by analysing differences in response behaviour according to device use—a crucial feature of surveys of highly mobile populations.

The articles in this volume demonstrate that the destination-origin-migration approach results in a theoretically broad and empirically rich picture of the individual consequences of international migration. Whereas the context of reception in the destination countries was only touched upon in a few chapters (e.g. Chaps. 3, 5, 6, 12, 13 and 15), the bulk focused on the origin and migration perspective. In particular Chaps. 4, 5, 7, 8, 11, 12, and 14 address the origin perspective and focus on the comparison between the internationally mobile and the non-mobile stayers. The

life course perspective instead is at the centre of Chaps. 6, 7, 8, 9, 10, 12, and 14, which focus in particular on the dynamic development of global lives following an international migration event.

Methodologically, most articles refer to cross-sectional information collected throughout the first wave of this panel survey, which includes information about the living situation before migration as well as at the time of the interview shortly after the migration event. Despite the timeliness of the data, three chapters (Chaps. 8, 10, and 14) apply information from the second wave, which was conducted during the summer of 2019. Whereas the results in all chapters rely on multivariate statistical methods, some work strictly within the counterfactual framework for estimating causal treatment effects (Chaps. 7, 8 and 11).

Overall, the studies in this volume demonstrate GERPS's potential for further comparative and longitudinal analyses. This potential will increase with the publication of subsequent survey waves and provide additional information to substantiate causal claims about the consequences of international migration. Confronted with the fragmented state of research about the international mobility of populations in economically highly developed welfare states, this volume hopes to make a contribution by addressing several imminent research questions in this field.

## References

- Ackers, L., & Gill, B. (2008). *Moving people and knowledge. Scientific mobility in an enlarging European Union*. Cheltenham: Edward Elgar.
- Adick, C., Maletzky, M., Pries, L., & Gandlgruber, B. (Eds.). (2014). *Cross-border staff mobility. A comparative study of profit and non-profit organisations*. London: Palgrave Macmillan.
- Alba, R., & Nee, V. (1997). Rethinking assimilation theory for a new era of immigration. *International Migration Review*, 31(4), 826–874.
- Amelina, A., & Faist, T. (2012). De-naturalizing the national in research methodologies: Key concepts of transnational studies in migration. *Ethnic and Racial Studies*, 35(10), 1707–1724.
- Andresen, M., Biemann, T., & Pattie, M. W. (2015). What makes them move abroad? Reviewing and exploring differences between self-initiated and assigned expatriation. *The International Journal of Human Resource Management*, 26(7), 932–947.
- Baizán, P., Beauchemin, C., & González-Ferrer, A. (2014). An origin and destination perspective on family reunification: The case of Senegalese couples. *European Journal of Population*, 30(1), 65–87.
- Baykara-Krumme, H., Erlinghagen, M., & Mansfeld, L. (2021). Disruption of family lives in the course of migration: 'Tied migrants' and partnership breakup patterns among German (r) emigrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Beck, S., & Weinar, A. (2017). Mobile French citizens and La Mère-Patrie: Emigration and diaspora policies in France. In A. Weinar (Ed.), *Emigration and diaspora policies in the age of mobility* (pp. 85–99). Cham: Springer.
- Beck, U. (2009). Jenseits von Klasse und Nation: Individualisierung und Transnationalisierung sozialer Ungleichheiten. *Soziale Welt*, 59(4), 301–325.
- Benson, M., & O'Reilly, K. (2009). Migration and the search for a better way of life: A critical exploration of lifestyle migration. *The Sociological Review*, 57(4), 608–625.

- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34.
- Bilecen, B., & van Mol, C. (2017). Introduction: International academic mobility and inequalities. *Journal of Ethnic and Migration Studies*, 43(8), 1241–1255.
- Boswell, C., & Geddes, A. (2011). *Migration and mobility in the European Union*. Basingstoke: Palgrave Macmillan.
- Braun, M., and Arsene, C. (2009). The demographics of movers and stayers in the European Union. *Pioneers of European Integration. Citizenship and Mobility in the EU*, Cheltenham, Edward Elgar.
- Carlson, S. (2013). Becoming a Mobile student—A processual perspective on German degree student mobility. *Population, Space and Place*, 19(2), 168–180.
- Castles, S., de Haas, H., & Miller, M. J. (2014). *The age of migration. International population movements in the modern world* (5th ed.). Basingstoke: Palgrave Macmillan.
- Constant, A. F., & Zimmermann, K. F. (2011). Circular and repeat migration: Counts of exits and years away from the host country. *Population Research and Policy Review*, 30(4), 495–515.
- Cresswell, T. (2006). *On the move: Mobility in the modern western world*. New York: Taylor & Francis.
- Dahinden, J. (2016). A plea for the 'de-migrantization' of research on migration and integration. *Ethnic and Racial Studies*, 39(13), 2207–2225.
- Dashefsky, A., & Woodrow-Lafield, K. (2020). *Americans abroad: A comparative study of emigrants from the United States*. Dordrecht: Springer.
- Décieux, J. P. (2021). Is there more than the answer to the question? Device use and completion time as indicators for selectivity bias and response convenience in online surveys. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Décieux, J. P., & Mörchen, L. (2021). Emigration, friends, and social integration: The determinants and development of friendship network size after arrival. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Décieux, J. P., & Murdock, E. (2021). Sense of belonging: Predictors for host country attachment among German emigrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Diehl, C., Lubbers, M., Mühlau, P., & Platt, L. (2015). Starting out: New migrants' socio-cultural integration trajectories in four European destinations. *Ethnicities*, 16(2), 157–179.
- Diez Medrano, J. (2014). The socio-economic returns of fluency in English as a foreign language. In J. Gerhards, S. Hans, & S. Carlson (Eds.), *Globalisierung, Bildung und grenzüberschreitende Mobilität* (pp. 239–257). Wiesbaden: Springer VS.
- DiPrete, T. A., & Forristal, J. D. (1994). Multilevel models: Methods and substance. *Annual Review of Sociology*, 20(1), 331–357.
- Dumont, J.-C., & Lemaître, G. (2008). Counting foreign-born and expatriates in OECD countries: A new perspective. In J. Raymer & F. Willekens (Eds.), *International migration in Europe. Data, models and estimates* (pp. 11–40). John Wiley & Sons.
- Elder, G. H. (2003). The life course in time and place. In W. R. Heinz & V. W. Marshall (Eds.), *Social dynamics of the life course: Transitions, institutions, and interrelations* (pp. 57–71). New York: de Gruyter.
- Engbersen, G., Snel, E., & de Boom, J. (2010). 'A van full of Poles': Liquid migration from central and Eastern Europe. In R. Black, G. Engbersen, M. Okólski, & C. Panțiru (Eds.), *A continent moving west? EU enlargement and labour migration from central and Eastern Europe* (pp. 115–140). Amsterdam University Press.
- Engler, M., Erlinghagen, M., Ette, A., Sauer, L., Scheller, F., Schneider, J., & Schultz, C. (2015). *International Mobil: Motive, Rahmenbedingungen und Folgen der Aus- und Rückwanderung deutscher Staatsbürger*. Berlin: Sachverständigenrat deutscher Stiftungen für Integration und Migration (SVR).

- Erlinghagen, M. (2011). Nowhere better than here? The subjective well-being of German emigrants and remigrants. *Comparative Population Studies*, 36(4), 899–926.
- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Esser, H. (1980). *Aspekte der Wanderungssoziologie. Assimilation und Integration von Wanderern, ethnischen Gruppen und Minderheiten. Eine handlungstheoretische Analyse*. Darmstadt, Neuwied: Luchterhand.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021b). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Sauer, L., & Fauser, M. (2021a). Settlement or return? The intended permanence of emigration from Germany across the life course. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Witte, N. (2021). Brain drain or brain circulation? Economic and non-economic factors driving the international migration of German citizens. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- European Commission. (2019). *Erasmus+ annual report 2018*. Luxembourg: Publications Office of the European Union.
- Faist, T. (2016). Cross-border migration and social inequalities. *Annual Review of Sociology*, 42(5), 1–24.
- Fauser, M. (2020). *Mobile citizenship. Spatial privilege and the transnational lifestyles of senior citizens*. London: Routledge.
- Favell, A. (2008). *Eurostars and Eurocities. Free movement and mobility in an integrating Europe*. Oxford: Blackwell.
- Favell, A., Feldblum, M., & Smith, M. P. (2007). The human face of global mobility: A research agenda. *Society*, 44(2), 15–25.
- Findlay, A. M., & Li, F. L. N. (1998). A migration channels approach to the study of professionals moving to and from Hong Kong. *International Migration Review*, 32(3), 682–703.
- Findlay, A., McCollum, D., Coulter, R., & Gayle, V. (2015). New mobilities across the life course: A framework for analysing demographically linked drivers of migration. *Population, Space and Place*, 21(4), 390–402.
- FitzGerald, D. (2014). The sociology of international migration. In C. B. Brettell & J. F. Hollifield (Eds.), *Migration theory: Talking across disciplines*. Routledge.
- FitzGerald, D. (2012). A comparativist manifesto for international migration studies. *Ethnic and Racial Studies*, 35(10), 1725–1740.
- Fuller, S. (2015). Do pathways matter?: Linking early immigrant employment sequences and later economic outcomes: Evidence from Canada. *International Migration Review*, 49(2), 355–405.
- Geist, C., & McManus, P. A. (2008). Geographical mobility over the life course: Motivations and implications. *Population, Space and Place*, 14(4), 283–303.
- Genoni, A., Décieux, J. P., Ette, A., & Witte, N. (2021). Setting up probability-based online panels of migrants through push-to-web recruitment: Methodological challenges and lessons learned from the German emigration and remigration panel study (GERPS). In M. Erlinghagen, A. Ette,

- N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Gerhards, J., & Hans, S. (2013). Transnational human capital, education, and social inequality. Analyses of international student exchange. *Zeitschrift für Soziologie*, 42(2), 99–117.
- Gerhards, J., Hans, S., Carlson, S., & Drewski, D. (2017). The globalisation of labour markets: A content Analysis of the demand for transnational human capital in job advertisements. *Soziale Welt*, 68(1), 25–44.
- Gordon, M. M. (1964). *Assimilation in American life. The role of race, religion, and national origins*. New York: Oxford University Press.
- Guedes Auditor, J., & Erlinghagen, M. (2021). The happy migrant? Emigration and its impact on social wellbeing. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Guveli, A., Ganzeboom, H. B. G., Platt, L., Nauck, B., Baykara-Krumme, H., Eroğlu, Ş., Bayrakdar, S., Sözeri, E. K., & Spierings, N. (2016). *Intergenerational consequences of migration. Socio-economic, family and cultural patterns of stability and change in Turkey and Europe*. Basingstoke: Palgrave Macmillan.
- Habti, D., & Elo, M. (2019). *Global mobility of highly skilled people*. Cham: Springer International Publishing.
- Hainmueller, J., & Hiscox, M. J. (2010). Attitudes toward highly skilled and low-skilled immigration: Evidence from a survey experiment. *American Political Science Review*, 104(1), 61–84.
- Harrington, B., & Seabrooke, L. (2020). Transnational professionals. *Annual Review of Sociology*, 46(1), 1–19.
- Hayes, M. (2014). 'We gained a lot over what we would have had': The geographic arbitrage of North American lifestyle migrants to Cuenca, Ecuador. *Journal of Ethnic and Migration Studies*, 40(12), 1953–1971.
- Heath, A. F., & Cheung, S. Y. (2007). The comparative study of ethnic minority disadvantage. In A. F. Heath & S. Y. Cheung (Eds.), *Unequal chances. Ethnic minorities in Western labour market* (pp. 1–44). New York: Oxford University Press.
- Helbling, M. (2011). Why Swiss-Germans dislike Germans. Opposition to culturally similar and highly skilled immigrants. *European Societies*, 13(1), 5–27.
- Hradil, S. (2005). *Soziale Ungleichheit in Deutschland* (8th ed.). Wiesbaden: VS Verlag.
- Hugo, G. J. (2006). An Australian Diaspora? *International Migration*, 44(1), 105–133.
- Jacob, M., Kühhirt, M., & Rodrigues, M. (2019). Labour market returns to Graduates' International experience: Exploring cross-country variation in Europe. *European Sociological Review*, 35(4), 491–505.
- Kalton, G., & Anderson, D. W. (1986). Sampling rare populations. *Journal of the Royal Statistical Society. Series A (General)*, 149(1), 65–82.
- Kaufmann, V., Bergman, M. M., & Joye, D. (2004). Motility: Mobility as capital. *International Journal of Urban and Regional Research*, 28(4), 745–756.
- Kauppinen, I., Nikolka, T., & Poutvaara, P. (2019). *Self-selection and motivations of emigrants from a welfare state*. München: Ifo Institute for Economic Research.
- King, R., & Williams, A. M. (2018). Editorial introduction: New European youth mobilities. *Population, Space and Place*, 24(1), e2121.
- Klekowski von Koppenfels, A. (2014). *Migrants or expatriates? Americans in Europe*. Basingstoke: Palgrave.
- Kley, S. (2011). Explaining the stages of migration within a life-course framework. *European Sociological Review*, 27(4), 469–486.
- Kogan, I., & Weißmann, M. (2013). Immigrants' initial steps in Germany and their later economic success. *Advances in Life Course Research*, 18(3), 185–198.
- Latcheva, R., & Herzog-Punzenberger, B. (2011). Integration revisited. Zur Dynamik und Kontextabhängigkeit individueller Integrationsverläufe am Beispiel von MigrantInnen der ersten Generation in Wien. *Österreichische Zeitschrift für Soziologie*, 36(3), 3–27.

- Lauterbach, W., Ette, A., & Waibel, S. (2017). Transnationale Bildungswanderungen zur Höherqualifizierung. In E. Schlemmer, A. Lange, & L. Kuld (Eds.), *Handbuch Jugend in demografischen Wandel*. Weinheim: Beltz: 188–208 (pp. 188–208). Weinheim: Beltz.
- Lavrakas, P. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: SAGE Publications.
- Levitt, P., & Jaworsky, B. N. (2007). Transnational migration studies: Past developments and future trends. *Annual Review of Sociology*, 33(1), 129–156.
- Lübke, C., Décieux, J. P., Erlinghagen, M., & Wagner, G. G. (2021). Comparing the risk attitudes of internationally mobile and non-mobile Germans. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Luthra, R., Soehl, T., & Waldinger, R. (2018). Reconceptualizing context: A multilevel model of the context of reception and second-generation educational attainment. *International Migration Review*, 52(3), 898–928.
- Lutz, W., & Kebede, E. (2018). Education and health: Redrawing the Preston curve. *Population and Development Review*, 44(2), 343–361.
- Mansfeld, L. (2021). Out of sight, out of mind? Frequency of emigrants' contact with friends in Germany and its impact on subjective well-being. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Mau, S., Gülzau, F., Laube, L., & Zaun, N. (2015). The global mobility divide: How visa policies have evolved over time. *Journal of Ethnic and Migration Studies*, 41(8), 1192–1213.
- Mayer, K. U. (2009). New directions in life course research. *Annual Review of Sociology*, 35, 413–433.
- McKenzie, D., Stillman, S., & Gibson, J. (2010). How important is selection? Experimental vs. non-experimental measures of the income gains from migration. *Journal of the European Economic Association*, 8(4), 913–945.
- McNulty, Y., & Brewster, C. (2017). The concept of business expatriates. In Y. McNulty & J. Selmer (Eds.), *Research handbook of expatriates* (pp. 21–60). Cheltenham: Edward Elgar.
- Morgan, S. L., & Winship, C. (2015). *Counterfactuals and causal inference: Methods and principles for social research*. New York: Cambridge University Press.
- Mulder, C. H. (1993). *Migration dynamics: A life course approach*. Amsterdam: Thesis Publishers.
- Nikolova, M., & Graham, C. (2015). In transit: The Well-being of migrants from transition and post-transition countries. *Journal of Economic Behaviour and Organization*, 112, 164–186.
- Nohl, A.-M., Schittenhelm, K., Schmidtke, O., & Weiß, A. (2014). *Work in transition: Cultural capital and highly skilled Migrants' passages into the labour market*. University of Toronto Press.
- Norris, P., & Inglehart, R. F. (2012). Muslim integration into Western cultures: Between origins and destinations. *Political Studies*, 60(2), 228–251.
- OECD. (2019). *Society at a Glance 2019*. Paris: OECD Publishing.
- Oesch, D., & Rodríguez Menés, J. (2011). Upgrading or polarization? Occupational change in Britain, Germany, Spain and Switzerland, 1990–2008. *Socio-Economic Review*, 9(3), 503–531.
- Peixoto, J. (2001). The international mobility of highly skilled workers in transnational corporations: The macro and micro factors of the organizational migration of cadres. *International Migration Review*, 35(4), 1030–1053.
- Pohlmann, M. (2009). Globale ökonomische Eliten? Eine Globalisierungsthese auf dem Prüfstand der Emperie. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 61(4), 513–534.
- Pöllmann, A. (2013). Intercultural capital: Toward the conceptualization, operationalization, and empirical investigation of a rising marker of sociocultural distinction. *SAGE Open*, 3(2), 1–7.
- Portes, A., & Zhou, M. (1993). The new second generation: Segmented assimilation and its variants among post 1965 immigrant youth. *Annals of the American Academy of Political and Social Sciences*, 530, 74–96.

- Prandner, D., and Weichbold, M. (2019). Building a Sampling Frame for Migrant Populations via an Onomastic Approach – Lesson learned from the Austrian Immigrant Survey 2016. *Survey Methods: Insights from the Field*.
- Pries, L. (2010). *Transnationalisierung: Theorie und Empirie grenzüberschreitender Vergesellschaftung*. Wiesbaden: Springer VS.
- Recchi, E. (ed.). (2014). *The Europeanisation of Everyday Life: Cross-Border Practices and Transnational Identifications among EU and Third-Country Citizens-Final Report*: MISC.
- Recchi, E. (2015). *Mobile Europe: The theory and practice of free movement in the EU*. Basingstoke: Palgrave Macmillan.
- Recchi, E., Deutschmann, E., Gabrielli, L., & Kholmatova, N. (2020). *Assessing visa costs on a global scale*. San Domenico di Fiesole: Migration Policy Centre.
- Recchi, E., & Favell, A. (Eds.). (2009). *Pioneers of European integration. Citizenship and mobility in the EU*. Cheltenham: Edward Elgar.
- Rüger, H., Ruppenthal, S., Fliege, H., Hillmann, J., Kaukal, M., Bellinger, M. M., & Schneider, N. F. (2013). *Mobilitätskompetenzen im Auswärtigen Dienst. Risiken und protektive Faktoren bei der Bewältigung der Auslandsrotation*. Würzburg: Ergon.
- Savage, M., Warde, A., & Devine, F. (2005). Capitals, assets, and resources: Some critical issues. *The British Journal of Sociology*, 56(1), 31–47.
- Scheibelhofer, E. (2018). Shifting migration aspirations in second modernity. *Journal of Ethnic and Migration Studies*, 44(6), 999–1014.
- Schneider, N. F., Limmer, R., & Ruckdeschel, K. (2002). *Mobil, flexibel, gebunden: Familie und Beruf in der mobilen Gesellschaft*. Frankfurt am Main: Campus Verlag.
- Schneider, N. F., & Meil, G. (Eds.). (2008). *Mobile living across Europe I. relevance and diversity of job-related spatial mobility in six European countries*. Opladen, Farmington Hills: Barbara Budrich.
- Snijders, T. A. B., & Bosker, R. J. (2011). *Multilevel analysis. An introduction to basic and advanced multilevel Modeling*. London: SAGE Publications.
- Stawarz, N., Ette, A., & Rüger, H. (2021). Healthy migrants? Comparing subjective health of German emigrants, remigrants and non-migrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- UIS. (2020). *Outbound internationally mobile tertiary students studying abroad*. Montreal: UNESCO Institute for Statistics.
- UN. (2019). *International migrant stock 2019 (United Nations database, POP/DB/MIG/Stock/Rev.2019)*. New York: United Nations, Population Division.
- Urry, J. (2007). *Mobilities*. Cambridge: Polity Press.
- van Dalen, H. P., & Henkens, K. (2013). Explaining emigration intentions and behaviour in the Netherlands, 2005-10. *Population Studies*, 67(2), 225–241.
- Viry, G., & Kaufmann, V. (Eds.). (2015). *High mobility in Europe: Work and personal life*. London: Palgrave Macmillan UK.
- Weiß, A. (2005). The Transnationalization of social inequality: Conceptualizing social positions on a world scale. *Current Sociology*, 53(4), 707–728.
- Willekens, F., Massey, D., Raymer, J., & Beauchemin, C. (2016). International migration under the microscope. *Science*, 352(6288), 897–899.
- Wimmer, A. (2009). Herder's heritage and the boundary-making approach: Studying ethnicity in immigrant societies. *Sociological Theory*, 27(3), 244–270.
- Windzio, M., and Aybek, C. M. (2015). Marriage, norm orientation and leaving the parental home: Turkish immigrant and native families in Germany.
- Wingsen, M., Windzio, M., de Valk, H., & Aybek, C. (Eds.). (2011). *A life-course perspective on migration and integration*. Heidelberg, London, New York: Springer.
- Witte, N., & Guedes Auditor, J. (2021). Affluent lives beyond the border? Individual wage change through migration. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global*

*lives of German migrants. Consequences of international migration across the life course.* Cham: Springer.

- Witte, N., Pollak, R., & Ette, A. (2021). Social origins of German emigrants: Maintaining social status by international mobility? In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course.* Cham: Springer.
- Wright, M., & Bloemraad, I. (2012). Is there a trade-off between multiculturalism and socio-political integration? Policy regimes and immigrant incorporation in comparative perspective. *Perspectives on Politics*, 10(1), 77–95.
- Zeman, K., Beaujouan, É., Brzozowska, Z., & Sobotka, T. (2018). Cohort fertility decline in low fertility countries: Decomposition using parity progression rates. *Demographic Research*, 38, 651–690.
- Zuccotti, C. V., Ganzeboom, H. B. G., & Guveli, A. (2015). Has migration been beneficial for migrants and their children? Comparing social mobility of Turks in Western Europe, Turks in Turkey, and Western European natives. *International Migration Review*, 51(1), 97–126.

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# Chapter 2

## Surveying Across Borders: The Experiences of the German Emigration and Remigration Panel Study



Andreas Ette, Jean P. Décieux, Marcel Erlinghagen, Jean Guedes Auditor, Nikola Sander, Norbert F. Schneider, and Nils Witte

### 2.1 Introduction

International migration is predominantly conceptualised as population flows from economically less developed to economically more developed regions. This state of affairs has changed in the course of the last few decades when even the economically most prosperous countries increasingly developed into important sources of international migration. The economically highly developed countries particularly in Europe and North America continue to be major destination regions: More than 55% of all estimated 272 million international migrants in 2019 live in these countries, but they are also major source countries with 68 million international migrants originating from these regions (UN 2019). Academic scholarship about those international population movements is highly fragmented. Marginalised within migration studies, the international experiences of individuals originating from those economically prosperous societies are regularly conceptualised under a plethora of more specific headlines. They are conceptualised as “expatriates” (McNulty and Brewster 2017), “transnational professionals” (Harrington and Seabrooke 2020), “international students” (Bilecen and van Mol 2017), “mobile elites” (Jansson 2016), “life style migrants” (Benson and O’Reilly 2009) or “privileged migrants” (Fauser 2020). Given rising international movements from those economically

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highly developed countries and the potential relevance of international experiences and temporary stays abroad for successful social and economic participation in an increasingly globalised world, there exists a pressing need for more thorough investigations (cf. Erlinghagen et al. 2021 in this volume; but also van Dalen and Henkens 2013; Weinar and Klekowski von Koppenfels 2019).

The German Emigration and Remigration Panel Study (GERPS) is an ultimate response to this lack of information about the international migration of populations from economically highly developed welfare states. Drawing on Germany as a case study, GERPS collects data about the experiences of German international migrants. Conceptually, it is based on the “destination-origin-migration approach” (Erlinghagen et al. 2021) and aims to examine individual consequences not only as a question of migrants’ integration into receiving societies (*destination*). Rather, the consequences of international mobility are also to be studied by comparing migrants with the non-mobile population of the country of origin (*origin*). At the same time, the consequences of international mobility will be analysed as results of specific trajectories (*migration*) in individual life courses during the migration process. Although GERPS focuses on the emigrant rather than the immigrant population, it is confronted with familiar methodological difficulties migration scholars have always discussed the sampling of an international mobile population as a “rare” (Lavrakas 2008) and often “hard-to-reach population” (Kalton and Anderson 1986; see also Lynn et al. 2018). Immigrants are a comparatively small population in their receiving society. Once we restrict the group of interest to recent immigrants or emigrants, they all the more constitute a rare population because for most countries and for most years only a fraction of the overall population are internationally mobile and leave their country of birth for an extended period. Additionally, emigrants constitute a hard-to-reach population not only because they are geographically mobile but also because they are highly dispersed, living, in most cases, in various potential destination countries. Tracking them is unfeasible based on conventional sampling procedures. In response, GERPS aims to provide a new data infrastructure to study the individual consequences of emigration from Germany and return to Germany after temporary settlement abroad.

This chapter discusses the assets and drawbacks of this approach based on the “total survey error” framework (Groves et al. 2004, p. 48). After a short discussion of previous approaches to the investigation of internationally migrating populations from economically highly developed countries, it presents the principal research design, sampling strategy, and contents of the survey. Finally, the chapter presents assessments of the data quality including analyses of nonresponse and comparisons of the survey data with available reference statistics. Finally, the chapter suggests the research design as a template for future studies that aim to survey migrants across borders and highlights four major prospects of the data for empirical analyses in this volume.

## 2.2 Tackling Pitfalls of Existing Strategies to Study Internationally Mobile Populations

The most common data sources for studying international migration are national population censuses, national household surveys and national labour force surveys (Bilsborrow et al. 1997; Font and Méndez 2013b). Although surveys based on such data sources collect valuable information, the data they provide generally refer to the resident population only, including immigrants. Internationally mobile populations, including emigrants living abroad or remigrants who returned from abroad, by contrast, rarely appear in national survey data. There are various reasons for the omission of emigrants and remigrants in these data sources: Although remigrants are part of the resident population and consequently appear in such data sources, these data sources regularly fail to document that some people previously lived abroad. Emigrants are omitted from national survey data because they are—by definition—not part of the resident population that usually constitutes the sampling frame of national surveys.

In order to overcome these difficulties, recent studies have endeavoured to create new data sources that cover internationally mobile populations. Focusing on emigration in particular, they share a common approach by compiling data on immigration for major destination countries to get an understanding of the overall emigrant population of specific countries of origin. These specific compilations are based on administrative or census data (e.g. Beine et al. 2006; OECD 2015), but researchers have extended this approach to major national surveys such as the European Social Survey (ESS) or the European Union Labour Force Survey (EULFS) to get a better understanding of this population (e.g. Erlinghagen 2011; Ette and Sauer 2010). One advantage of the compiled information is that it facilitates the analysis of emigrants' socio-economic background and—using EULFS or ESS data—their living conditions in their destination countries. Recent years have seen efforts to include specific migration and emigration modules into established surveys, developed new forms of multiplicity sampling by collecting information on non-resident household members (e.g. Lien 2016; Woodrow-Lafield 1996), and applied this additional information for demographic modelling of emigration (e.g. Willekens et al. 2017). Nevertheless, major shortcomings of such approaches remain: This includes, in particular, missing information on the situation of emigrants before they left their country of origin and limited information about the migration process itself, which hinders the investigation of causes and consequences of migration (Groenewold and Bilsborrow 2008). These shortcomings also apply to remigrants: Some national labour force surveys include items about the place of residence 12 months before, principally allowing the identification of the internationally mobile population returning to their country of origin (Martí and Ródenas 2007). The problem of missing information on the situation of remigrants before they return to their country of origin and the limited information about the migration process itself remain, reducing the potential of national population censuses or national household and labour force surveys to study the causes and consequences of migration.

Next to those general population surveys that also include migrants, recent decades have seen significant progress with respect to specific migrant surveys (Font and Méndez 2013a; Kraler and Reichel 2010). New immigrant surveys conducted nowadays in many major countries of destination are of particular relevance. They include information on the situation of migrants before migration as well as about motives for migration and additional information about the migration process (e.g. Jasso et al. 2000; Reher and Requena 2009). With respect to emigration, however, these data collection initiatives are hardly comparable and based on comparatively small sample sizes. Compiling immigrant data in major destination countries to gather information about emigration from particular source countries—seen before for census and large-scale national household surveys—is not a plausible strategy for this otherwise rich data source. With respect to migrants from economically highly developed countries, the value of these specific immigrant surveys is also limited because these surveys regularly focus on immigrants from major countries of destination but rarely sampling, for example, migrants from Germany (e.g. Diehl et al. 2015; Prandner and Weichbold 2019).

In the absence of data on emigrants matching the information now available about immigrants in major destination countries, several strategies for obtaining more information about emigrants from developed countries have been devised. A first set of approaches makes use of survey data collected in the countries of origin of potential emigrants. These studies either analyse emigration and its underlying determinants by focusing on migration intentions (e.g. Cai et al. 2014; Tjaden et al. 2019; van Dalen and Henkens 2007) or they make use of retrospective questions to obtain information on temporary stays abroad after migrants have returned to their country of origin (e.g. Gerhards and Hans 2013; Kratz and Netz 2018). Data about intended behaviour are, however, only weak indicators of actual emigration behaviour and of the underlying motives for emigration. Meanwhile, data gathered through retrospective questions have general reliability problems and exclude permanent emigrants altogether (cf. Lugtig et al. 2016; Smith and Thomas 2003).

Attempts have also been made to sample emigrants directly, but these strategies have run into serious data quality issues. For example, surveys that focused on specific subgroups of emigrants, such as students or academics working abroad, generally suffer from having highly selective sample frames (e.g. van Mol 2014). Meanwhile, efforts to survey emigrants in selected countries have resulted in better sampling frames, at least for countries with appropriate population registers. Yet the data produced by such strategies appear to be highly selective—most of the participating emigrants had been living in their respective country of destination for many years, whereas individuals engaged in return migration and temporary migration were not adequately taken into account (e.g. Recchi and Favell 2009). The most ambitious attempts that have been made from a methodological perspective tracked participants of national panel surveys after they had moved abroad (Schupp et al. 2008). However, this approach resulted in unsatisfactory response rates, which inhibited the originally planned analyses and fundamentally called this otherwise attractive research strategy into question.

### 2.3 Research Design

The German Emigration and Remigration Panel Study (GERPS) emerged as an immediate response to this lack of appropriate data to study the individual consequences of international migration. Five main elements characterise its research design (for an overview see Fig. 2.1):

First, GERPS relies on an *origin-based sampling design* (cf. Ghimire et al. 2019) to sample this rare and hard-to-reach population. It reverses usual procedures for setting up samples of international migrants: Whereas international migrants are traditionally sampled in their countries of destination, this new approach samples the internationally mobile population in their country of origin. Origin-based sampling has not yet resulted in a coherent set of strategies, but all existing studies share that they sample international migrants in their country of origin (e.g. Beauchemin and González-Ferrer 2011; Ghimire et al. 2019; Massey and Espinosa 1997; Parrado et al. 2005; Teruel et al. 2012). GERPS applies this idea by making use of Germany’s population register to set up a probability sample of the internationally mobile German population.

A second design element of GERPS is its focus not only on emigrants but also on remigrants returning to Germany after living for some time abroad. Such a *both-ways migration design* (cf. Rallu 2008) provides the opportunity to account for

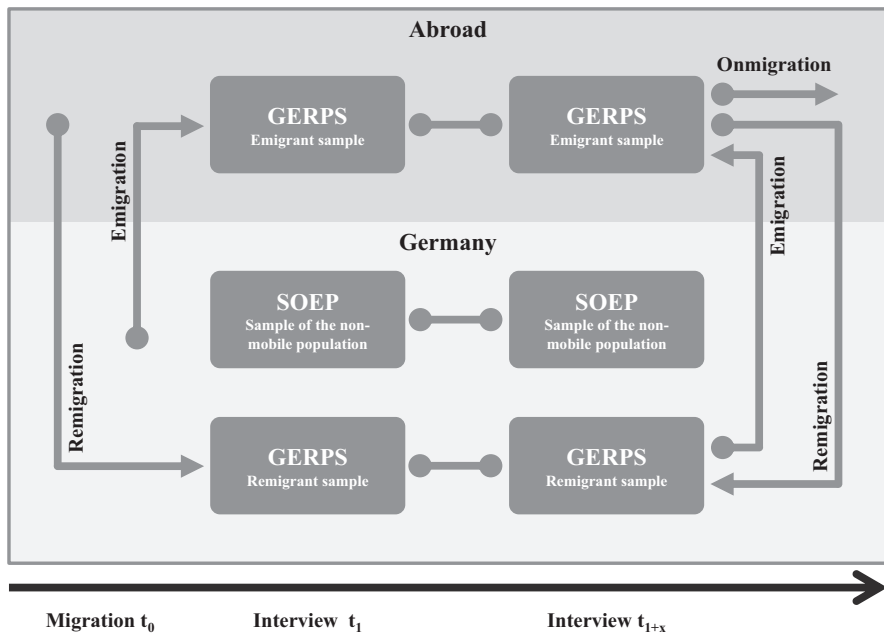


Fig. 2.1 Schematic representation of the research design of the German Emigration and Remigration Panel Study. (Source: Authors’ presentation)

selective return migration and reduce potential bias. In GERPS, the problem of selective return migration is additionally reduced by focusing on recent migration of German citizens for whom the register indicates that they emigrated or remigrated in the 12 months before the sampling took place (see “Migration  $t_0$ ” in Fig. 2.1).

A third design element is a logical consequence of using the population register as a sampling frame. In GERPS, the postal addresses provided by the registers are used to invite potential survey members offline, using postal invitation letters to motivate them to participate online in the web survey. This *push-to-web design* (cf. Dillman 2017) matches the highly mobile target population. It allows for surveying emigrants during their time abroad in a large and diverse number of countries of destination, whereas remigrants are surveyed after their return to Germany (see “Interview  $t_1$ ” in Fig. 2.1).

Fourth, GERPS applies a *multi-sited design* studying migration in both the origin and destination countries (cf. Mazzucato 2008; Amelina and Faist 2012; Guveli et al. 2016). Many analyses of the causes and consequences of international migration must be based on information about the internationally non-mobile population. Within the GERPS research design, no separate sample of this population was drawn. Instead, the survey instruments used by GERPS were developed closely in line with the Socio-Economic Panel (SOEP) as the most established panel survey in Germany. GERPS data is easily harmonised with SOEP data to provide unlinked multi-sited data (see “SOEP” in Fig. 2.1 as well as Ette et al. 2020 for more information).

A final research design element of GERPS is its *longitudinal design* combining the collection of retrospective biographical data about the situation before the migration event with panel data to study the individual consequences of living globally. In total, at least three more follow-up surveys are planned after the first wave (see “Interview  $t_1 + x$ ” in Fig. 2.1). It provides the opportunity to capture further movements of survey participants, for example if remigrants currently living in Germany emigrate again or if emigrants decide to move onwards to another destination country or back to Germany.

## 2.4 Sampling Strategy

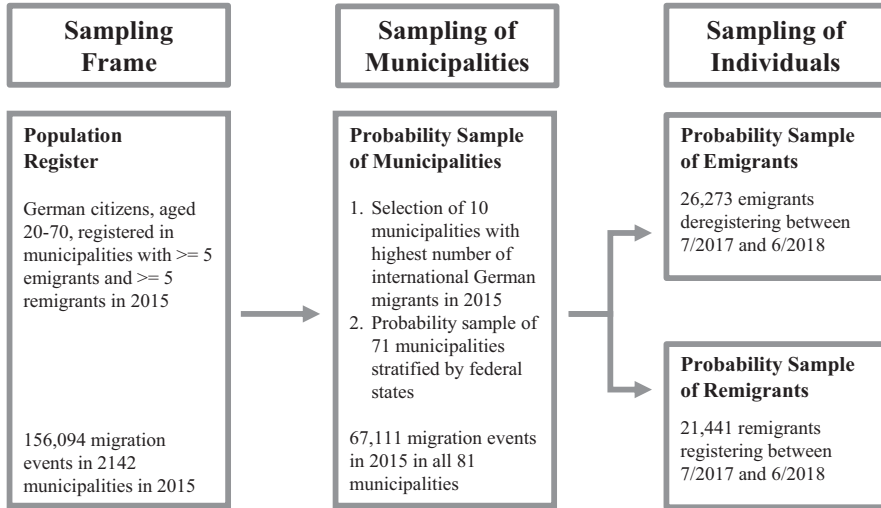
Following an origin-based sampling design, GERPS uses Germany’s population register as a sampling frame of the internationally migrating population. In most countries with population registers, high quality population surveys are regularly making use of this available list to draw random samples. Reference to population registers is particularly widespread if rare populations have to be identified as is regularly the case in migrant samples (cf. Bilsborrow et al. 1997; Méndez and Font 2013, p. 277). The problem of population registers is that they primarily serve administrative purposes. Comparing the target population of GERPS—German citizens who move and subsequently live abroad for a substantial period of time—with

the administrative procedures of Germany's population registers, over-coverage as well as under-coverage errors exist (Groves et al. 2004).

The over-coverage problems (e.g. multiple movements within a certain period, deregistrations "ex officio") are easily adjusted within the sampling process. Under-coverage, by contrast, is more difficult to adjust because it concerns an unknown quantity of persons who are principally part of the internationally mobile population in Germany but do not appear in the population register. This refers in particular to short term moves abroad, e.g. by students in exchange years, short-term assignments of employers, or retired people living for parts of the year abroad. The precise size of under-coverage is unknown but previous research shows that international migration rates documented in national household surveys are smaller compared to the information from population registers (Ette et al. 2008). Although population registers are traditionally criticised for their failure to adequately document emigration, this problem is reduced if migrants hold the citizenship of their country of origin. Whereas former immigrants now returning to their country of origin have limited incentives to legally deregister before leaving, this problem is fundamentally reduced if the national welfare state system has certain incentives to officially deregister (Poulain et al. 2006).

Although population registers do not offer perfect sampling frames for the emigrating population, the advantages of population registers definitely outweigh their disadvantages. It is therefore not surprising that the use of the population registers has been awarded "best practice" status (Häder 2015, p. 10; see also Zabal 2014) as a sample frame for high-quality population surveys with particular advantages when the aim is to identify rare and mobile populations (e.g. Cornesse et al. 2020; Glowsky 2013; Poutvaara et al. 2009). One of the major advantages of population registers is that they allow us to identify the population of interest, provide the opportunity for probability sampling, and include key demographic characteristics (e.g. sex, age, nationality, etc.) subsequently used to control for potential biases (Careja and Bevelander 2018). Based on Germany's population register, it was one of the main objectives of the sampling strategy used for GERPS to provide probability samples of the target populations. Their major characteristic is that the probability of being in the sample is known for all elements in the population and allows us to infer from the sample to the target population. Basically, the target population of GERPS includes internationally mobile German citizens. More concretely, two separate samples were necessary—a sample of emigrants and a sample of remigrants. Both included German citizens aged between 20 and 70 years. The emigrant sample additionally included only persons who had deregistered in Germany between July 2017 and June 2018 as moving from Germany to a foreign country. Correspondingly, the remigrant sample included only persons who had registered in Germany between July 2017 and June 2018 as moving from a foreign country to Germany.

In line with other studies, sampling based on the population register in Germany is always a two-stage procedure—sampling of municipalities and sampling of individuals—because Germany's population registers are decentralised and no aggregated register exists (Albers 1997; ADM 2014). The municipalities were sampled



**Fig. 2.2** Schematic representation of the sampling process of the German Emigration and Remigration Panel Study. (Source: Authors' presentation)

based on Germany's official migration statistics from the year 2015 restricted to emigrants and remigrants from municipalities with at least five emigrants and five remigrants (for an overview about the sampling process see Fig. 2.2). Although this potentially excluded a large number of municipalities with smaller numbers of international migrants, the effect on overall migration events and potential sampling errors (Groves et al. 2004) seemed reasonable.

Despite this restriction on the number of municipalities in the sampling frame, the distribution of emigrants and remigrants along the municipalities in Germany remains highly skewed, with a comparatively large portion originating from urban areas and a much smaller share from rural areas. In response, a stratified random sampling approach differentiating two sampling procedures was applied (Lohr 2010, 73ff.). A first sampling procedure determined that the ten municipalities with the highest number of international migrants in 2015 (i.e. total number of 20 to 70-year-old emigrants and remigrants with German citizenship) are part of the sample of municipalities. Within those ten municipalities, a fixed share of remigrants and emigrants are sampled based on a simple probability sample. All ten municipalities were able to provide the necessary data. In a second sampling procedure, 71 additional municipalities with smaller numbers of international migrants were sampled as clusters. These municipalities were sampled randomly proportional to their total number of movements in the year 2015 and stratified by the federal states of Germany to control for regionally proportional sampling. A balanced sampling algorithm was applied, which approximates the weighted number of emigrations and remigrations to the sampling frame (Tillé 2006). Using this strategy, the final



sample contains 81 municipalities within which two samples were drawn—a probability sample of 26,273 emigrants and a probability sample of 21,441 remigrants together constituting the gross sample.

## 2.5 Survey Mode and Questionnaire Structure

There are several modes for conducting standardised surveys including personal interviews (“face-to-face”), postal surveys (“mail surveys”), telephone surveys, and web surveys. All of these modes have several advantages and disadvantages (for an overview see, for example, Couper 2011) and the decision to find the “right” mode for a study depends on several aspects such as topic, target group, availability of contact information, budget, field period, and time frame of the project. The push-to-web design applied by GERPS follows a mixed-mode approach with differences between contact mode and survey response mode. This offers us the possibility to combine advantages of offline mail recruitment (Sakshaug et al. 2019) with the benefits of an online survey (Cernat and Lynn 2017; Evans and Mathur 2018; Lee et al. 2018).

The mixed-mode element in the push-to-web design was seen as a crucial obstacle because of the necessary transition from an offline letter to an online response including the self-administered login into the online questionnaire. Survey implementation and field work closely followed the recommendations of the “tailored design method” (Dillman et al. 2011). This included appealing, personalised invitation letters, the subsequent sending of up to two reminder letters in a fixed chronological sequence, and other aspects to generate trust in the research project including an appealing questionnaire design, information about the research project, a detailed data protection concept, and extensive usage of incentives (see Ette et al. 2020 for more detailed information).

The questionnaire structure follows the multi-sited design: To enable comparative analyses between GERPS data—on the internationally mobile population—with data from the SOEP—on Germany’s internationally non-mobile resident population—requires coherence between the questionnaires of both studies. Therefore, wherever possible and reasonable, questions from the SOEP were incorporated so that experiences, personal characteristics, and life situations of the internationally mobile population could be compared with their non-mobile counterparts (Goebel et al. 2019; Wagner et al. 2007). In sum, 63 questions from the emigrant questionnaire and 66 from the remigrant questionnaire are comparable to the SOEP data. Additionally, the online questionnaires for both samples, emigrants and remigrants, were kept as identical as possible to provide comparative analyses on both ends of the migration process. This includes questions on various topics, including items on socio-structural characteristics as well as questions that explore the subjective attitudes, motives, and feelings of the respondents. This basic questionnaire was extended by specific questions focusing on the different situations of emigrants and remigrants and also included retrospective questions on the situation before the migration event (see Table 2.1 for an overview).

**Table 2.1** Thematic structure of the questionnaires for both samples of the German Emigration and Remigration Panel Study

	Emigrant questionnaire	Remigrant questionnaire
1.	Motives and reasons for leaving Germany	Motives and reasons for last move to Germany
2.	Household structure, partnership, and housing situation before leaving Germany	Household structure, partnership, and housing situation before move to Germany
3.	Employment before leaving Germany	Employment before moving to Germany
4.	Previous long-term stays abroad and planned duration of stay abroad	Previous long-term stays abroad and planned future stays abroad
5.	Current household structure, partnership, and housing situation	Current household structure, partnership, and housing situation
6.	Contacts to friends and relatives	Contacts to friends and relatives
7.	Personal situation compared to the situation before leaving Germany	Personal situation compared to the situation before move to Germany
8.	Current employment and financial situation	Current employment and financial situation
9.	General demographic and socio-economic questions about person including language skills	General demographic and socio-economic questions about person including language skills
10.	General demographic and socio-economic questions about partner and parents	General demographic and socio-economic questions about partner and parents
11.	Attitudes, personality, and well-being	Attitudes, personality, and well-being

Source: GERPSw1

## 2.6 Nonresponse and Data Quality

In addition to the coverage and sampling errors discussed above, unit nonresponse is the third component affecting the quality of a survey. Unit nonresponse is the term used when not all members of a sample ultimately participate in a survey. Unit nonresponse can harm data quality and lead to biased estimations if nonresponding survey members are distributed differently among specific population subgroups in systematic ways, thus resulting in nonresponse error. Three major components of unit nonresponse are distinguished in the literature: noncontact, inability, and refusal (e.g. Groves et al. 2004; Schnell 2012). Noncontact refers to survey members who did not receive information about the survey and are thus not likely to know about the survey request, for example because the post office for various reasons did not deliver the survey invitation. Inability refers to sampled persons who did receive the information about the survey but are unable to participate because of physical obstacles or technical difficulties. In some cases, these persons inform the initiator or collector of the survey data (explicit inability), but most of the time these persons will not take part without any further information (implicit inability). These latter cases are not distinguishable from implicit refusals, which refer to sampled persons who know about the survey invitation but are unwilling to participate. They are only distinguished from implicit inability if they actively do not cooperate and inform the initiator or collector of the survey data (explicit refusal).

**Table 2.2** Components of unit nonresponse and cooperation rates by sample

	Emigrants		Remigrants		Total	
	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Gross sample	26,273	100.0	21,441	100.0	47,714	100.0
Noncontact	9765	37.2	3842	17.9	13,607	28.5
Explicit refusal	29	0.0	43	0.2	72	0.2
Explicit inability	4	0.0	4	0.0	8	0.0
Implicit refusal and inability	11,478	43.7	10,652	49.7	22,130	46.4
Interviews	4997	19.0	6900	32.2	11,897	25.0
Break-offs	256	0.0	382	1.8	638	1.3
Partial interviews	125	0.0	124	0.6	249	0.5
Complete interviews	4616	17.6	6394	29.8	11,010	23.1

Source: GERPSw1

In line with population surveys in general, explicit inability and refusal is almost negligible in a mixed-mode survey based on postal invitation letters. There are differences to general experiences, however, with respect to noncontact. Recent international migrants are by definition a highly mobile group and it is not surprising that address information for them is of lower quality (Méndez and Font 2013, p. 286). This is the case for remigrants contacted at their recent address in Germany after they returned from abroad. Here, 17.9% of all 21,441 sampled persons did not receive either the invitation letter or one of the reminders (see Table 2.2). The obstacles in contacting emigrants in their country of destination, where 37.2% were not successfully contacted, are even greater. Despite these difficulties contacting this rare and hard-to-reach population, 11,010 complete interviews were conducted during the first wave of the German Emigration and Remigration Panel Study. This results at a response rate of 23.1% (for standards of calculation see AAPOR 2016, p. 61), in line with surveys applying comparable research designs surveying individuals in Germany (e.g. the GESIS Panel and the German Internet Panel).

In addition to nonresponse rates and detailed nonresponse analyses (cf. Ette et al. 2020), comparative analyses between the distributions of key demographic variables in official reference statistics with the gross sample of GERPS and the final survey data provide additional information to assess data quality. Germany's official migration statistics provided by the Federal Statistical Office certainly constitute the most important reference to crosscheck data quality. Aiming to match the sampling frame of GERPS as closely as possible, data from official migration statistics in all following tables are restricted to 20 to 70-year-old German citizens and exclude deregistrations "ex officio." Additionally, the information from official statistics refers to average results of Germany's migration statistics for the years 2017 and 2018 to match the sampling period of GERPS (July 2017 to June 2018) as closely as possible. In all tables, the information on the distribution in the gross sample of GERPS relies on register information, whereas the data on complete interviews refers to the unweighted information provided by the respondents themselves. Weights that correct both for sampling errors and bias through unit nonresponse

**Table 2.3** Distribution of sex in GERPS data and official statistics, in per cent

	Emigrants			Remigrants		
	Official statistics	Gross sample	Complete interviews	Official statistics	Gross sample	Complete interviews
Male	52.6	52.1	48.9	54.5	54.4	49.5
Female	47.4	47.9	51.1	45.5	45.6	50.5
N	91,399	26,226	4509	79,174	21,004	6401

Sources: Authors' calculations based on GERPSw1 and official statistics provided by the Federal Statistical Office

were under development at the time of writing and are therefore not applied in this volume.

Table 2.3 presents the distribution of male and female emigrants and remigrants. The results show that the gross sample of GERPS very closely matches the distribution share of emigrants and remigrants. Official statistics record that 52.6% of emigration events took place by males, whereas the respective share in the gross sample of GERPS is 52.1%. For remigrants, the difference is even lower and differs only by 0.1 percentage points demonstrating that errors were marginal with respect to sex sampling. As for the distribution in the sample of the interviews, however, the table shows a higher probability of females to respond to the GERPS questionnaire. As a result, females are overrepresented in the emigrant sample by 3.7 percentage points compared to official statistics and by 5.0 percentage points in the remigrant sample.

With regard to age (Table 2.4), differences in the distribution between official statistics and the gross sample of GERPS are more pronounced. This is mainly because official migration statistics record migration events with no reference to specific individuals or households. The sampling procedure of GERPS, by contrast, concentrates on only one randomly chosen individual per household. Since international migration in the household context is more likely in older age groups, the sampling procedure results at an overrepresentation of younger age groups (20–29 and 30–39 years) in the gross sample. In the survey results, the 30 to 39-year-old respondents in both samples are overrepresented by 8.7 percentage points for the emigrant sample and 7.6 percentage points for the remigrant sample. This higher probability of response by the 30 to 39-year-olds consequently results at an underrepresentation of the older age groups of both samples.

Finally, Germany's migration statistics also provide information about the geography of migration. The distribution of the region of destination of emigrants in the gross sample largely matches the corresponding distribution in official statistics with a 1.6 percentage point overrepresentation of Switzerland in the gross sample marking the most obvious discrepancy. Interestingly, the pattern of divergences between official statistics and the gross sample is more marked with respect to remigrants. Potential sampling errors in the divergent distribution between official statistics and the gross sample are the most pronounced. For example, 39.8% of remigrants return from an EU-28 country whereas their respective share is 42.8% in the gross sample. This is most likely caused by the regional stratification of the sampling strategy of GERPS (see Table 2.5). Additional nonresponse bias has only marginal consequences for the remigrant sample (with the exception of "other European

**Table 2.4** Distribution of age in GERPS data and official statistics, in per cent

	Emigrants			Remigrants		
	Official statistics	Gross sample	Complete interviews	Official statistics	Gross sample	Complete interviews
20–29	33.3	33.6	32.0	28.2	31.0	30.1
30–39	30.6	35.9	39.3	29.0	31.1	36.6
40–49	15.8	14.8	14.6	18.3	17.5	17.6
50–59	12.8	10.3	10.4	15.8	13.9	11.0
60–70	7.5	5.3	3.7	8.7	6.4	4.7
<i>N</i>	91,399	26,261	4501	79,174	21,402	6393

Sources: Authors' calculations based on GERPSw1 and official statistics provided by the Federal Statistical Office

**Table 2.5** Distribution of the region of destination of emigrants and the region of origin of remigrants in GERPS data and official statistics, in per cent

	Emigrants			Remigrants		
	Official statistics	Gross sample	Complete interviews	Official statistics	Gross sample	Complete interviews
EU-28	45.5	45.3	50.3	39.8	42.8	42.1
Other European	6.8	5.7	3.5	10.1	6.3	3.8
Switzerland	15.1	16.7	22.1	11.0	10.6	11.7
North America	10.3	10.4	10.1	10.3	10.6	11.4
Latin America	4.4	4.3	2.9	6.2	7.7	8.0
Asia	8.1	7.8	5.7	11.0	9.5	10.7
Africa	3.0	2.8	1.7	3.9	4.3	4.1
Oceania	4.2	4.0	2.6	4.0	3.6	4.6
Near and Middle East	2.5	3.1	1.2	3.7	4.7	3.6
<i>N</i>	91,399	25,239	4527	79,174	21,379	6426

Sources: Authors' calculations based on GERPSw1 and official statistics provided by the Federal Statistical Office

countries'') compared to the emigrant sample. These divergences between the gross sample and the complete interviews of emigrants are mostly explained by more serious noncontact problems in non-European countries, whereas emigrants in most European countries are more easily recruited by using an origin-based sampling approach with destination based interviewing.

## 2.7 Conclusions

The central aim of this chapter was to present the methodological foundations of the German Emigration and Remigration Panel Study. The survey is suggested as a foundation for testing the effectiveness of the destination-origin-migration approach

for empirical research. Given the difficulties in sampling rare and hard-to-reach populations, the research design is characterised by five main elements: (1) an origin-based sampling design applying Germany's population register as a sampling frame; (2) a both-ways migration design sampling both emigrants and remigrants; (3) a push-to-web design allowing emigrants to be surveyed in their countries of destination as well as remigrants back in Germany; (4) a multi-sited design, which links data of the internationally mobile population in Germany with existing SOEP data about the non-mobile resident population; and finally (5), a longitudinal design offering retrospective information about the situation before migration as well as panel information throughout the migration process. Discussing potential survey errors and assessing data quality based on available reference statistics, the chapter showed that the research design of GERPS presents a promising starting point for surveying migrants across borders that complements traditional methods of sampling international migrants. Although the contributions in this volume may not yet exploit the full potential of these data, they are a leap ahead for migration research. There are four major contributions of GERPS data in closing existing knowledge gaps about the international migration of populations from economically highly developed welfare states in migration studies:

1. **Comparative analyses with the society in the country of origin:** Traditional samples of international migrants are regularly used to analyse group-level structural integration outcomes of immigrants in comparison to natives of the destination country. The destination society is not, however, the appropriate comparison group for an analysis of the individual consequences of migration. GERPS offers us the opportunity to compare individuals who left their country of origin with those who did not, in order to shed light on effects of international migration on individual life courses of migrants.
2. **Comparative analyses between multiple destination countries:** Traditional samples of international migrants focus on the country of destination to study immigrant populations. Such surveys in one destination country naturally only capture those emigrants who live in this particular country and ignore the possibility that migration motives and selection mechanisms might differ between destination countries of emigrants from the same country of origin. Furthermore, potentially different paths of structural integration—responding to different opportunity structures offered by different countries of destination—are rarely studied within migrant samples concentrating on only one country of destination. GERPS provides us the opportunity for comparative analyses between multiple destination countries.
3. **Comparative analyses between emigrants and remigrants:** Traditional samples of international migrants regularly focus only on the living situation in their countries of destination. They capture neither the selective migration of individuals returning home nor the individual consequences of remigration. GERPS gives us the opportunity to understand migration processes from both ends, namely regarding the time before and after emigration as well as before and after remigration so we can comparatively study individual adjustment processes abroad as well as after return.

4. **Longitudinal analyses of the individual consequences of migration across the life course:** Traditional samples of international migrants regularly provide cross-sectional data only, but international migration is a dynamic process. Multiple measurements of central target variables within a comparatively short time interval within GERPS provides us with the opportunity to understand and explain the dynamics of international migration processes and their consequences along four central dimensions of the life course—employment and income, partnership and family, well-being and life satisfaction, as well as social relations and social participation.

## References

- AAPOR. (2016). *Standard definitions. Final dispositions of case codes and outcome rates for surveys* (9th Edn). Washington: American Association for Public Opinion Research.
- ADM. (2014). *Stichproben-Verfahren in der Umfrageforschung. Eine Darstellung für die Praxis*. Wiesbaden: Springer VS.
- Albers, I. (1997). Einwohnermelderegister-Stichproben in der Praxis. In S. Gabler & J. H. P. Hoffmeyer-Zlotnik (Eds.), *Stichproben in der Umfragepraxis* (pp. 117–126). Wiesbaden: VS Verlag.
- Amelina, A., & Faist, T. (2012). De-naturalizing the national in research methodologies: Key concepts of transnational studies in migration. *Ethnic and Racial Studies*, 35(10), 1707–1724.
- Beauchemin, C., & González-Ferrer, A. (2011). Sampling international migrants with origin-based snowballing method: New evidence on biases and limitations. *Demographic Research*, 25(3), 103–134.
- Beine, M., Docquier, F., & Rapoport, H. (2006). *Measuring international skilled migration: New estimates controlling for age of entry, policy research discussion paper*. World Bank: Washington D.C.
- Benson, M., & O'Reilly, K. (2009). Migration and the search for a better way of life: a critical exploration of lifestyle migration. *The Sociological Review*, 57(4), 608–625.
- Bilecen, B., & van Mol, C. (2017). Introduction: International academic mobility and inequalities. *Journal of Ethnic and Migration Studies*, 43(8), 1241–1255.
- Biltsborrow, R. E., Graeme, H., Oberai, A. S., & Zlotnik, H. (1997). *International migration statistics. guidelines for improving data collection systems*. Geneva, International Labour Office.
- Cai, R., Esipova, N., Oppenheimer, M., & Feng, S. (2014). International migration desires related to subjective well-being. *IZA Journal of Migration*, 3, 8.
- Careja, R., & Bevelander, P. (2018). Using population registers for migration and integration research: examples from Denmark and Sweden. *Comparative Migration Studies*, 6, 19.
- Cernat, A., & Lynn, P. (2017). The role of e-mail communications in determining response rates and mode of participation in a mixed-mode design. *Field Methods*, 30(1), 70–87.
- Cornesse, C., Blom, A. G., Dutwin, D., Krosnick, J. A., De Leeuw, E., Legleye, S., Pasek, J., Pennay, D., Phillips, B., Sakshaug, J., Struminskaya, B., & Wenz, A. (2020). A review of conceptual approaches and empirical evidence on probability and nonprobability sample survey research. *Journal of Survey Statistics and Methodology*, 8(1), 4–36.
- Couper, M. P. (2011). The future of modes of data collection. *Public Opinion Quarterly*, 75(5), 889–908.
- Diehl, C., Lubbers, M., Mühlau, P., & Platt, L. (2015). Starting out: New migrants' socio-cultural integration trajectories in four European destinations. *Ethnicities*, 16(2), 157–179.

- Dillman, D. A. (2017). The promise and challenge of pushing respondents to the Web in mixed-mode surveys. *Survey Methodology*, 43(1), 3–30.
- Dillman, D. A., Smyth, J. D., & Melani, L. (2011). *Internet, mail, and mixed-mode surveys: the tailored design method*. Toronto: Wiley & Sons.
- Erlinghagen, M. (2011). Nowhere better than here? The subjective well-being of German emigrants and return migrants. *Comparative Population Studies*, 36(4), 899–926.
- Erlinghagen, M., Ette, A., Schneider, N. F., & Witte, N. (2021). Between origin and destination: German migrants and the individual consequences of their global lives. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Genoni, A., Auditor, J. G., Knirsch, F., Kühne, S., Mörchen, L., Sand, M., Schneider, N. F., & Witte, N. (2020). *German emigration and return migration panel study: methodology and data manual of the baseline survey (Wave 1)*. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Ette, A., Unger, R., Graze, P., & Sauer, L. (2008). Measuring spatial mobility with the German Microcensus: The case of German return migrants. *Zeitschrift für Bevölkerungswissenschaft*, 33(3), 409–431.
- Evans, J. R., & Mathur, A. (2018). The value of online surveys: A look back and a look ahead. *Internet Research*, 28(4), 854–887.
- Fauser, M. (2020). *Mobile citizenship. Spatial privilege and the transnational lifestyles of senior citizens*. London: Routledge.
- Font, J., & Méndez, M. (2013a). Introduction: The methodological challenges of surveying populations of immigrant origin. In J. Font & M. Méndez (Eds.), *Surveying ethnic minorities and immigrant populations: Methodological challenges and research strategies* (pp. 11–41). Amsterdam: Amsterdam University Press.
- Font, J., & Méndez, M. (Eds.). (2013b). *Surveying ethnic minorities and immigrant populations: Methodological challenges and research strategies*. Amsterdam: Amsterdam University Press.
- Gerhards, J., & Hans, S. (2013). Transnational human capital, education, and social inequality. Analyses of international student exchange. *Zeitschrift für Soziologie*, 42(2), 99–117.
- Ghimire, D. J., Williams, N. E., Thornton, A., Young-DeMarco, L., & Bhandari, P. (2019). Strategies for origin-based surveying of international migrants. *Journal of Ethnic and Migration Studies*, 45(7), 1185–1206.
- Glowsky, D. (2013). Stichprobenziehung von Ehepaaren: ein Praxisbericht zur Erhebung von seltenen Paarkombinationen. *Methods, Data, Analyses*, 7(1), 35–58.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German socio-economic panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik*, 239(2), 345–360.
- Groenewold, G., & Bilsborrow, R. (2008). Design of samples for international migration surveys: Methodological considerations and lessons learned from a multi-country study in Africa and Europe. In C. Bonifazi, M. Okólski, J. Schoorl, & P. Simon (Eds.), *International migration in Europe: new trends and new methods of analysis* (pp. 293–312). Amsterdam: Amsterdam University Press.
- Groves, R. M., Fowler, F. J., JR, M. P. C., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2004). *Survey methodology*. Hoboken: John Wiley.
- Guveli, A., Ganzeboom, H. B. G., Platt, L., Nauck, B., Baykara-Krumme, H., Eroğlu, Ş., Bayrakdar, S., Sözeri, E. K., & Spiering, N. (2016). *Intergenerational consequences of migration. Socio-economic, family and cultural patterns of stability and change in Turkey and Europe*. Basingstoke: Palgrave Macmillan.
- Häder, S. (2015). *Stichproben in der Praxis*. Mannheim: GESIS—Leibniz-Institut für Sozialwissenschaften.



- Harrington, B., & Seabrooke, L. (2020). Transnational professionals. *Annual Review of Sociology*, 46(1), 1–19.
- Jansson, A. (2016). Mobile elites: Understanding the ambiguous lifeworlds of Sojourners, Dwellers and Homecomers. *European Journal of Cultural Studies*, 19(5), 421–434.
- Jasso, G., Massey, D. S., Rosenzweig, M. R., & Smith, J. P. (2000). The New Immigrant Survey Pilot (NIS-P): Overview and New Findings about U. S. Legal Immigrants at Admission. *Demography*, 37(1), 127–138.
- Kalton, G., & Anderson, D. W. (1986). Sampling rare populations. *Journal of the Royal Statistical Society. Series A (General)*, 149(1), 65–82.
- Kraler, A., & Reichel, D. (2010). *Statistics on migration, integration and discrimination in Europe: Prominstat final report*. Vienna: International Centre for Migration Policy Development.
- Kratz, F., & Netz, N. (2018). Which mechanisms explain monetary returns to international student mobility? *Studies in Higher Education*, 43(2), 375–400.
- Lavrakas, P. (2008). *Encyclopedia of survey research methods*. Thousand Oaks, CA: SAGE Publications.
- Lee, H., Kim, S., Couper, M. P., & Woo, Y. (2018). Experimental comparison of PC web, smart-phone web, and telephone surveys in the new technology era. *Social Science Computer Review*, 37(2), 234–247.
- Lien, H. H. (2016). Migrants on the European Labour Market. Some results from the European Labour Force Survey ad hoc module 2014. *Wirtschaft und Statistik* 55–68.
- Lohr, S. L. (2010). *Sampling: Design and analysis*. Brooks: Cengage.
- Lugtig, P., Glasner, T., & Boevé, A. J. (2016). Reducing underreports of behaviors in retrospective surveys: The effects of three different strategies. *International Journal of Public Opinion Research*, 28(4), 583–595.
- Lynn, P., Nandi, A., Parutis, V., & Platt, L. (2018). Design and implementation of a high-quality probability sample of immigrants and ethnic minorities: Lessons learnt. *Demographic Research*, 38, 513–548.
- Martí, M., & Ródenas, C. (2007). Migration estimation based on the labour force survey: An EU-15 perspective. *International Migration Review*, 41(1), 101–126.
- Massey, D. S., & Espinosa, K. (1997). What's driving Mexican-U.S. Migration? A theoretical, empirical and policy analysis. *American Journal of Sociology*, 102, 939–999.
- Mazzucato, V. (2008). Simultaneity and networks in transnational migration: Lessons learned from a simultaneous matched-sample methodology. In J. DeWind & J. Holdaway (Eds.), *Migration and development within and across borders: Research and policy perspectives on internal and international migration* (pp. 69–100). Geneva: International Organization for Migration.
- McNulty, Y., & Brewster, C. (2017). The concept of business expatriates. In Y. McNulty & J. Selmer (Eds.), *Research handbook of expatriates* (pp. 21–60). Cheltenham: Edward Elgar.
- Méndez, M., & Font, J. (2013). Surveying immigrant populations: Methodological strategies, good practices and open questions. In J. Font & M. Méndez (Eds.), *Surveying ethnic minorities and immigrant populations: Methodological challenges and research strategies* (pp. 271–290). Amsterdam: Amsterdam University Press.
- OECD. (2015). *Connecting with emigrants. A Global Profile of Diasporas 2015*. Paris: OECD Publishing.
- Parrado, E. A., McQuiston, C., & Flippen, C. A. (2005). Participatory survey research. *Sociological Methods & Research*, 34(2), 204–239.
- Poulain, M., Perrin, N., & Singleton, A. (Eds.). (2006). *THESIM. Towards harmonised european statistics on international migration*. Louvain: Presses Universitaires de Louvain.
- Poutvaara, P., Munk, M. D., & Junge, M. (2009). *Self-section and earnings of emigrants from a Welfare State, IZA DP No. 4144*. Bonn: IZA.
- Prandner, D., and Weichbold, M. (2019). Building a sampling frame for migrant populations via an onomastic approach—Lesson learned from the Austrian Immigrant Survey 2016. *Survey Methods: Insights from the Field*.

- Rallu, J. L. (2008). One-way or both-ways migration surveys. In C. Bonifazi, M. Okólski, J. Schooli, & P. Simon (Eds.), *International migration in Europe: new trends and new methods of analysis* (pp. 273–292). Amsterdam: Amsterdam University Press.
- Recchi, E., & Favell, A. (Eds.). (2009). *Pioneers of European integration. Citizenship and mobility in the EU*. Cheltenham: Edward Elgar.
- Reher, D., & Requena, M. (2009). The national immigrant survey of Spain: A new data source for migration studies in Europe. *Demographic Research*, 20, 253–278.
- Sakshaug, J., Vicari, B., & Couper, M. P. (2019). Paper, E-mail, or both? Effects of contact mode on participation in a web survey of establishments. *Social Science Computer Review*, 37(6), 750–765.
- Schnell, R. (2012). *Survey-interviews: Methoden standardisierter Befragungen*. Wiesbaden: VS Verlag.
- Schupp, J., Siegel, N. A., Erlinghagen, M., Stegmann, T., and Wagner, G. G.. (2008). Leben außerhalb Deutschlands—Eine Machbarkeitsstudie zur Realisierung von Auslandsbefragungen auf Basis des Sozio-oekonomischen Panels (SOEP). *SOEPpapers on Multidisciplinary Panel Data Research* 120 (August 2008).
- Smith, J. P., & Thomas, D. (2003). Remembrances of things past: Test-retest reliability of retrospective migration histories. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 166(1), 23–49.
- Tuerel, G., Rubalcava, L., & Arenas, E. (2012). Migration in the Mexican family life survey. In A. Cuecuecha & C. Pederzini (Eds.), *Migration and remittances from Mexico: Trends, impacts, and new challenges* (pp. 15–35). Lexington.
- Tillé, Y. (2006). *Sampling algorithms*. New York: Springer.
- Tjaden, J., Auer, D., & Laczko, F. (2019). Linking migration intentions with flows: Evidence and potential use. *International Migration*, 57(1), 36–57.
- UN. (2019). *International Migrant Stock 2019 (United Nations database, POP/DB/MIG/Stock/Rev.2019)*. New York: United Nations, Population Division.
- van Dalen, H. P., & Henkens, K. (2007). Longing for the good life: Understanding emigration from a high-income country. *Population and Development Review*, 33(1), 37–65.
- van Dalen, H. P., & Henkens, K. (2013). Explaining emigration intentions and behaviour in the Netherlands, 2005–10. *Population Studies*, 67(2), 225–241.
- van Mol, C. (2014). Erasmus student mobility as a gateway to the international labour market? In J. Gerhards, S. Hans, & S. Carlson (Eds.), *Globalisierung, Bildung und grenzüberschreitende Mobilität* (pp. 295–314). Wiesbaden: Springer VS.
- Wagner, G. G., Frick, J. R., & Schupp, J. (2007). *The German Socio-Economic Panel Study (SOEP)—Evolution, scope and enhancements*. Berlin: DIW Berlin/SOEP.
- Weinar, A., & Klekowski von Koppenfels, A. (2019). Migration, mobility, integration, segregation—Migrations within the Global North. *International Migration*, 57(3), 171–176.
- Willekens, F., Zinn, S., & Leuchter, M. (2017). Emigration rates from sample surveys: An Application to Senegal. *Demography*, 54(6), 2159–2179.
- Woodrow-Lafield, K. (1996). Emigration from the United States: Multiplicity survey evidence. *Population Research and Policy Review*, 15, 171–199.
- Zabal, A. (2014). The challenge of meeting international data collection standards within national constraints: Some examples from the fieldwork for PIAAC in Germany. *Methods, Data, Analyses*, 8(2), 175–198.

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**Part II**  
**Who Are the German International**  
**Migrants?**

# Chapter 3

## Structures of German Emigration and Remigration: Historical Developments and Demographic Patterns



Andreas Ette and Marcel Erlinghagen

### 3.1 Introduction

Germany today is one of the world's most important countries of immigration. According to its official migration statistics, more than 37.6 million migrants have arrived in Germany over the past five decades. Whereas in its beginnings this migration was shaped by immigration from southern Europe, the countries of origin have become increasingly diverse. This heterogenisation of migration is also apparent in Germany's resident population. The German Microcensus, as the administrative national household survey, reports that 13.4 million migrants and over 7.3 million descendants of immigrants live in Germany today, demonstrating that international migration is a key factor for its population development as well as the social structure today. However, Germany is not only a country of immigration but also a major country of emigration. This includes the high migration dynamic of its immigrant population with the subsequent return of immigrants constituting a major share of today's migration experience. Germany is also a country of emigration with respect to the German-born population. Over the past three decades—between 1991 and 2018—more than 3.3 million German citizens have left the country whereas 2.5 million have returned (Destatis 2020). Today, 3.8 million Germans live outside Germany in another OECD country (OECD 2019). This chapter sets the scene for the following chapters in this volume. It describes the historical developments, the existing geographical patterns, and the demographic structures as well as individual motives of internationally mobile people.

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### 3.2 Historical Development of Emigration and Remigration from Germany

Germany has a long tradition as a country of emigration. As early as the nineteenth century, Germany developed into a country of emigration. At that time, emigration from Germany, but also many other European countries, was primarily a transatlantic phenomenon. The agricultural crisis in Europe in the 1840s, the failed revolutions of 1848/49, and the discovery of gold in California and Australia in the 1850s caused emigration figures to rise, especially in North-western and Central Europe. In Germany, this transatlantic emigration gained importance from the 1830s onwards (Bade 1992). Accurate figures about the development of those historical migration flows hardly exist. Various countries existed at that time on today's territory of Germany and the whole concept of emigration and remigration is questionable in an era of nation-building and state formation when borders and ethno-national affiliations were in flux. Nevertheless, existing estimates assume that between 1816 and 1914 approximately 5.5 million Germans emigrated overseas. Particularly the years between 1846–57 and 1864–73 were major emigration phases with more than one million emigrants each. An additional 1.8 million emigrants followed in the final major emigration phase of 1880–93. The year 1893 is often referred to as the end of mass emigration before the First World War and from 1894 to 1918 the emigration figures registered in Germany were comparable to those of the early 1840s only.

The main destination of German emigrants at that time was the United States of America (USA), to which about 80–90% of emigrants relocated. The population born in Germany in the USA in 1820–60 was the second strongest immigrant group after the Irish (around 30%), and in 1861–90 it was the strongest (Oltmer 2010, p. 10). Other important overseas emigration destinations were Canada, Brazil, Argentina, and Australia. Although overseas emigration dominated migration at the time, emigration to other European countries was also important. Around 1900, about 740,000 Germans were registered there. The largest group at that time, with almost 220,000 people, lived in Switzerland. Other important target countries with large German population groups were Russia, the Austrian countries, France, Belgium, and Great Britain. Compared to today, particularly overseas emigration was planned permanently but even then it is assumed that approximately 30% of German emigrants returned (for more details see also Ette and Sauer 2010).

The reasons for the sharp increase in emigration during the nineteenth century were low economic growth, and stagnation in the demand for labour coupled with a dynamically developing population size. This economic constellation varied greatly between the regions within Germany. Whereas emigration started first in the southwest of Germany, in the northeast and especially in Mecklenburg and Brandenburg it began in the late 1840s and early 1850s, while Pomerania, West Prussia and Poznan followed a decade later. The relocation of the main emigration area from the southwest to the northeast also shifted the professional and social structure of the emigrants: Until the 1860s, self-employed small farmers, small traders, and small

artisans were the most important occupational groups of the emigrants. With the shift of the focus to the northeast, the group of emigrants increasingly consisted of day labourers and peasant sons. Since the 1890s, the share of secondary and tertiary employment in overseas emigration grew steadily, but lagged significantly behind the growth of the corresponding share of employees on the labour market of the emigration country (Marschalck 1973, 77f.).

The considerable expansion of economic opportunities offered by high industrialisation and agricultural modernisation in Germany became a major factor in the decline in overseas emigration at the end of the nineteenth century. Only after the First World War did emigration from Germany increase again, albeit to a lesser extent than in the period before. It is estimated that between 1919 and 1932 about 603,000 Germans emigrated overseas. Germany was at that time again one of the major European emigration countries alongside the British Isles, Italy, Portugal, and Spain. Following the stabilisation of the currency at the end of 1923 and US immigration restrictions in 1924 (Fischer 1987, p. 37), however, the number of German emigrants fell again and, during the global economic crisis of the early 1930s, amounted to only 10,000 to 15,000 persons per year. Furthermore, the importance of the countries of destination changed away from the USA to Brazil and Argentina.

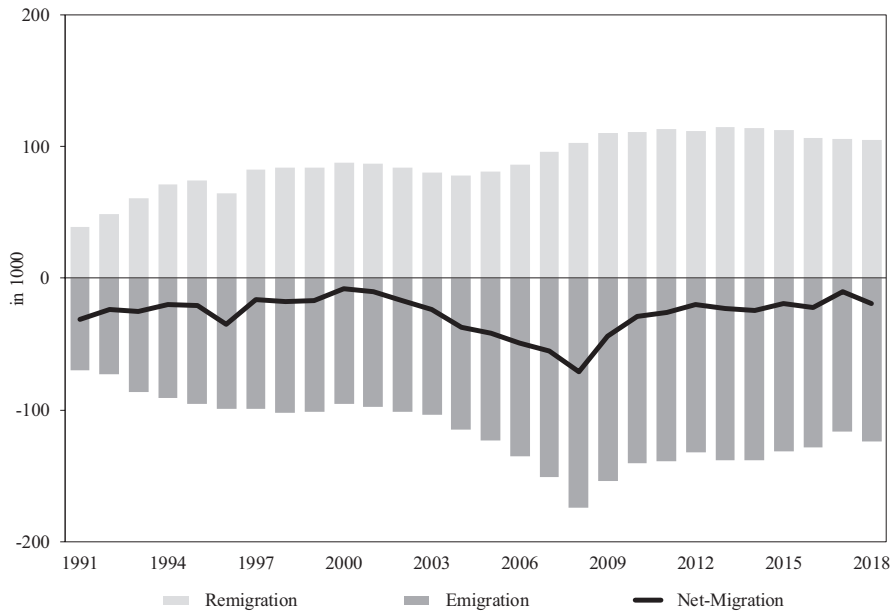
Political emigration and Jewish refugee migration from National Socialist Germany was a fundamentally different development of emigration (Bade 2004, p. 314). This emigration took place in phases, reflecting the pressure from Hitler's takeovers and the early measures to combat domestic political opponents as well as the first anti-Semitic laws until the Nuremberg Laws of 1935. The last wave of emigration began with the open violence against Jews during the November Pogroms. It ended with the beginning of the Second World War, which drastically reduced the possibilities for emigration and, after the ban on emigration in 1941, led to the genocide of German and European Jews (Röder 1992, p. 347; Oltmer 2010, p. 42). The number of Jewish emigrants is estimated at between 450,000 and 600,000. In 1933, 75% of this emigration was still concentrated in European states, but from 1934 onwards the majority of Jewish emigrants sought refuge in non-European states, especially in the USA, Palestine, and Argentina. In addition, numerous individuals from the cultural and scientific fields as well as other ethnic and cultural groups left Germany, as well as people who were persecuted for their political work in Germany, Austria, and other occupied territories.

In the years immediately following the Second World War, migration in Germany was essentially characterised by the large number of displaced persons. Largely in line with the situation after the First World War, the emigration of Germans played only a subordinate role due to the restrictive immigration regulations of the Allied states towards German citizens. Immigration was only open to German spouses and children of foreign nationals, recognised persecutees of the Nazi regime and particularly sought-after German scholars and highly qualified persons. The founding of the Federal Republic and the acceptance of the entry of Germans by the then most important countries of destination—the USA, Canada, and Australia—created the basis for a sharp increase in overseas emigration from the beginning of the 1950s. In addition to marriage migration by Allied soldiers stationed in Germany, the

targeted recruitment of German workers by Western European states, Australia, and Canada explain this high level of emigration during the 1950s (Steinert 1992, 389f.). During the early 1960s, the economic upswing in Germany led to a noticeable decline in the emigration of Germans.

Reliable statistical data about the international migration of German citizens are only available from the late 1960s onwards after a proper population register was implemented in Germany and several conceptual and spatial changes following the Second World War came into place. In the 1970s, an average of about 56,000 Germans emigrated per year. Since then, this figure has been slowly increasing with 62,000 in the 1980s and 92,000 in the 1990s. The first decade after the turn of the millennium saw an obvious increase to an average of 125,000 emigrants per year, stabilising since then at this level with 132,000 in the years 2010 to 2018 (see Fig. 3.1).

Considering the emigration rate, there has been a marked increase: While the emigration rate was below one per mill during the 1970s, it has almost doubled to



**Fig. 3.1** Development of emigration, remigration and net migration of German citizens, 1991–2018, in 1000. (Sources: Federal Statistical Office 2019, Federal Office of Administration 2019, authors’ calculations). Notes: The official migration statistic is derived from Germany’s population registers. Due to their administrative background, there have been regular changes in the underlying procedure and necessary adjustments to the population registers in recent decades. In order to allow for temporal comparison, the figure is based on data about outflows and inflows of German citizens, whereby deregistrations “ex officio” as well as to unknown foreign countries are not taken into account. This procedure excludes in particular statistical artefacts resulting from register adjustments in the years 2004–2007 as well as a change in the registration procedure from 2016 onwards. Current figures on the international mobility of Germans have been significantly higher since 2016, but this is due to a change in procedure. Furthermore, the statistics exclude the inflows of ethnic Germans, as this is also a specific form of migration that should not be combined with the forms of international mobility that are the focus of this book

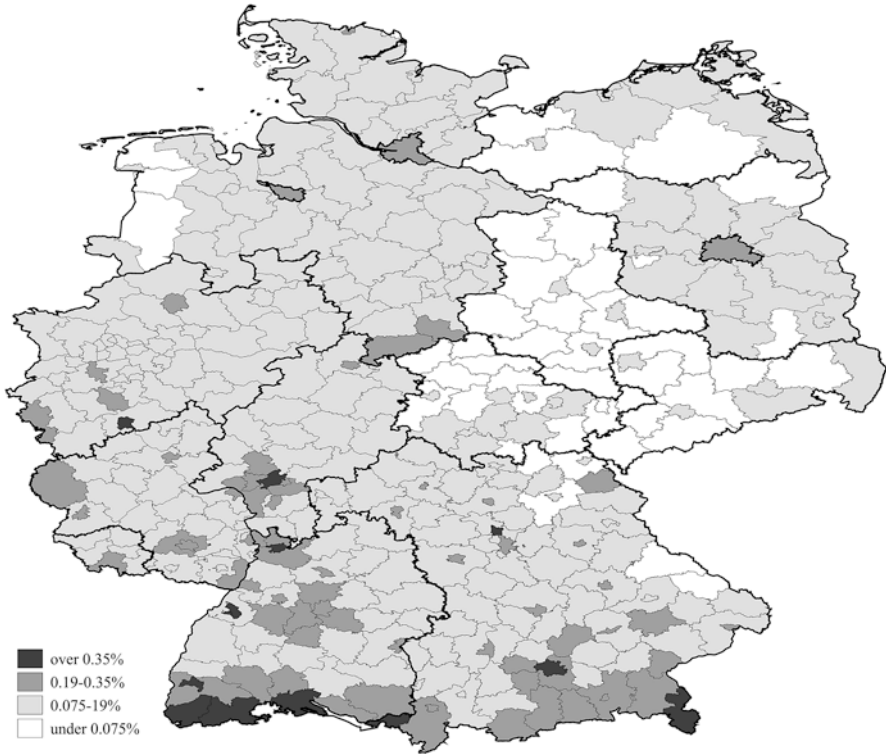


1.8 per mill in the years since 2010. Thus, in absolute numbers as well as in proportion to the population as a whole, the population is internationally significantly more mobile today than in previous decades. Focusing on the last three decades, the remigration of German citizens returning to Germany is laterally reversed to emigration. Figure 3.1 shows that the yearly average return migration rate in the 1990s was about 68,000 remigrants and increased afterwards to 89,000 in the first decade after the turn of the millennium to 111,000 for the years since 2010. The fact that the dynamic of return migration follows emigration on a slightly lower level results in a negative migration balance throughout the last three decades. For the whole period from 1991 to 2018, overall 758,000 more German citizens emigrated than returned afterwards, resulting in an average annual negative migration balance of approximately  $-27,000$  Germans.

### 3.3 Geography of Departure and Arrival

In addition to potential historical path dependencies, the geographical pattern of departure and arrival also provides an important context to help understand the recent international mobility of German citizens. Existing studies on the demographic selectivity of migration in Germany focus in particular on interregional relocations documenting stark regional differences (e.g. Gatzweiler 1975; Schlömer 2009). In line with these findings, the geography of departure of international migrations also highlights obvious regional discrepancies. The most obvious result concerns differences between the old and the new federal states. On average, 101,000 people emigrated from former West Germany every year in 2017–18, while only 19,000 people from former East Germany (including Berlin) opted for international migration. In line with the procedure adopted in Fig. 3.1, all subsequent analyses based on Germany's official migration statistics rely on average results for the years 2017 and 2018 and always exclude registrations "ex officio" in order to increase comparability of these data. Considering the emigration rate, a significant difference remains: On average, 0.8 of every 1000 persons in the new federal states move abroad, while in the old federal states this rate is 1.7 of every 1000 (cf. Fig. 3.2). The highest emigration rates are found in Baden-Württemberg (0.28%) followed by the city-states of Berlin (0.28%), and Hamburg (0.23%). Overall, the spatial pattern of remigration is the reverse of the geography of departure. The remigration rate, for example, is 1.5 of every 1000 people in the old federal states and 0.8 in the new federal states. The highest rates are again found in Baden-Württemberg, Berlin, and Hamburg. Because of this close relationship, all subsequent analyses focus on emigration only.

Significant regional differences also exist within the federal states. There is, firstly, a regional difference below the level of the federal states between urban and rural areas. Classifying the administrative districts along their settlement structure (BBSR 2019) shows that the emigration rate of major cities (0.22%) is much higher than in urban districts (0.17%), rural districts (0.13%), and peripheral rural areas



**Fig. 3.2** Emigration rate of German citizens by administrative districts (average of the years 2017–18, in per cent). (Source: Federal Statistical Office 2019, authors' calculations and presentation)

(0.11%). Figure 3.3 highlights the relationship between the population density of Germany's administrative districts and its emigration rate. The large cities and conurbations in particular exhibit a high migration volume with foreign countries. In addition to the aforementioned cities of Berlin and Hamburg, this includes in particular Munich, Cologne, and Frankfurt showing the highest numbers of emigrants.

Although three-quarters of all emigrants originate from major cities and urban districts, the population density hardly predicts the emigration rate ( $r^2 = 0.10$ ). Economic and geographic factors are of greater importance for explaining the heterogeneity of the geography of departure. Figure 3.3 highlights the relationship ( $r^2 = 0.22$ ) between the share of employees with academic degrees in Germany's 401 academic districts with the resulting emigration rate. This also puts much smaller cities like Heidelberg and Freiburg on the map, both having substantial numbers of international German migrants. Larger cities likely host transnational companies but also academic institutions, both contributing to increased emigration from these regions. Finally, proximity to the border also makes a difference. Taking into account that districts with an international border are regularly less urbanised, the direct proximity to a foreign country has a positive effect on the emigration rate

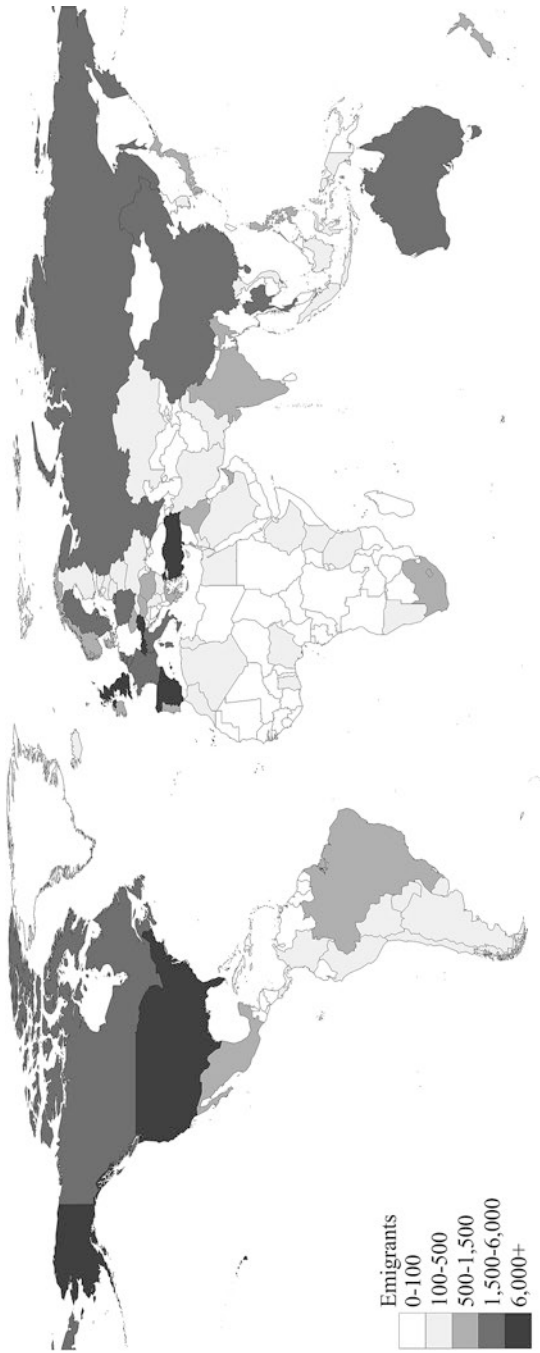


**Fig. 3.3** Emigration rate of German citizens by administrative districts and their population density as well as share of highly qualified employees (average of the years 2017–18, in per cent). (Sources: Federal Statistical Office 2019, Federal Institute for Research on Building, Urban Affairs and Spatial Development 2019; authors' calculations and presentation)

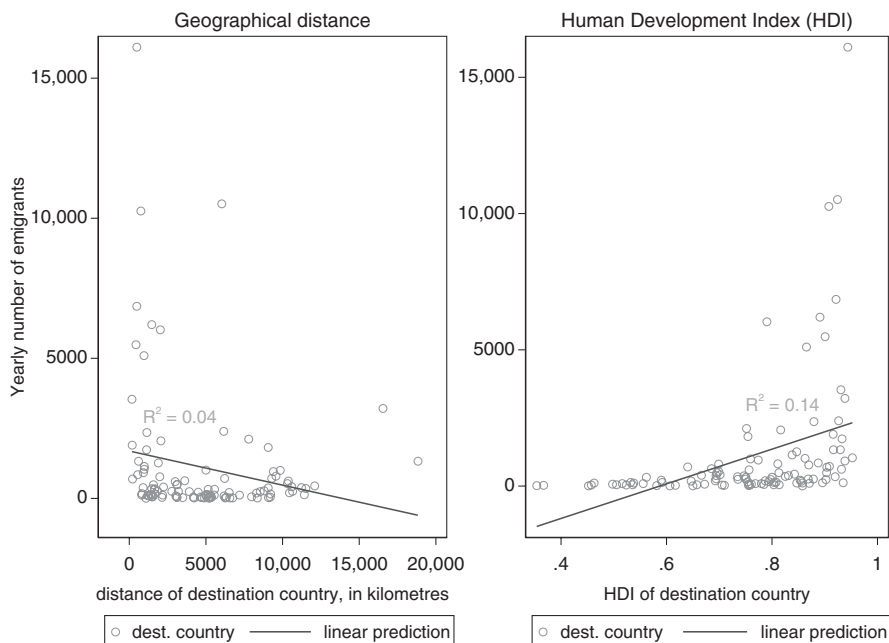
of those districts. Examples include in particular Lörrach, Konstanz, and Waldshut sharing a border with Switzerland, Garmisch-Partenkirchen, and Berchtesgadener Land at the border to Austria, and Aachen at the Dutch, as well as Saarbrücken at the French border. The federal states in former East Germany bordering the new EU member states—Poland and the Czech Republic—show no statistically significant effect.

Emigration from Germany is a highly selective process in terms not only of regions of origin, but also in terms of destination countries and regions. Figure 3.4 provides an initial overview of the spatial pattern of emigration showing the average emigration of German citizens to the various destination countries for the years 2017 and 2018. Emigration from Germany is an overwhelmingly European phenomenon. Of an average of 121,000 emigrants per year during those last two years, 64.7% emigrated to other European states, with about 43,600 emigrating to the 14 member states of the European Union (EU) that joined the EU before the year 2004, and another 9900 to the new accession states from the enlargement rounds since 2004. A further 24,100 Germans emigrated to other European countries, with Switzerland being by far the most important destination, with an average of 16,100 emigrants in 2017–18.

Figure 3.5 shows the average number of emigrants during the year 2017–18 to all major destination countries. Although there is a negative relationship between the distance between Germany and the destination country and the number of emigrants



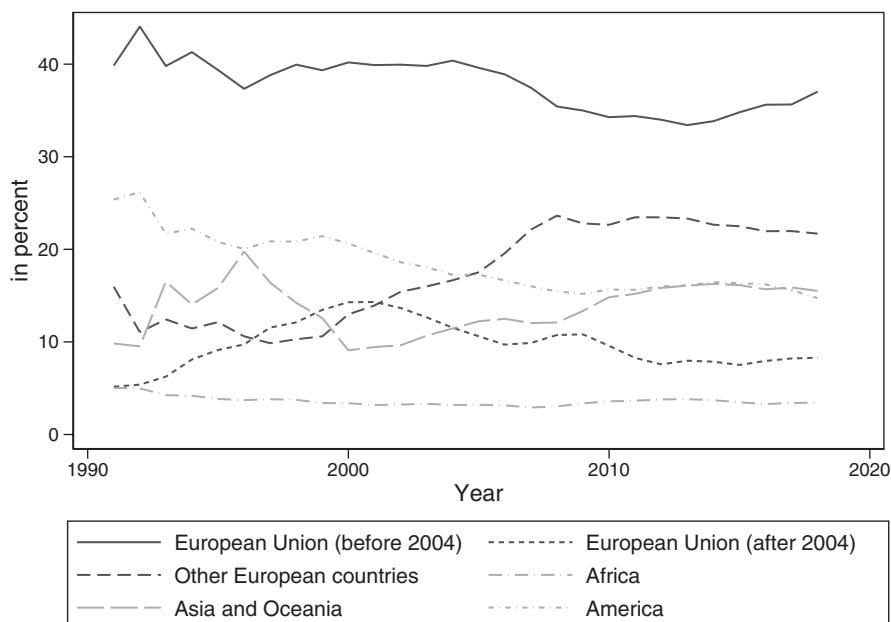
**Fig. 3.4** Countries of destination of German emigrants (average of the years 2017–18). (Source: Federal Statistical Office 2019, authors' calculations and presentation)



**Fig. 3.5** German emigrants by country of destination and their geographical distance to Germany as well as their human development index (average of the years 2017–18). (Source: Federal Statistical Office 2019, authors' calculations and presentation)

those countries attract, the influence of geographical distance in shaping emigration patterns from Germany is of little relevance. In Asia, major destination countries are China (2100 emigrants), and Thailand (1800 emigrants), in South America and Africa they are Brazil (1000 emigrants), Mexico (1000 emigrants), and South Africa (800 emigrants). The living standard in potential countries of destination is of greater importance than spatial proximity. Measured by the Human Development Index (HDI) it is of greater relevance ( $r^2 = 0.14$ ) in shaping patterns of emigration. Consequently, classic immigration countries such as the USA (10,500), Australia (3200), and Canada (2400) also attract substantial numbers of Germans who emigrate despite their distance to Germany (see Fig. 3.5).

Europe's position as the most important region of destination for German emigrants has only developed in recent decades. The emigration of Germans during the nineteenth century and up to the middle of the twentieth century had a strongly transatlantic character, while migration to other European states played only a subordinate role. The Europeanisation of emigration from Germany is thus still a relatively recent process that has only developed over the past few decades and is certainly influenced by the institutional changes within the EU during the last decade with the increasing free movement regime. Within Europe, however, certain shifts with respect to major countries of destination have emerged.



**Fig. 3.6** Development of major regions of destination of German emigrants, 1991–2018, in percent. (Source: Federal Statistical Office 2019, authors' calculations and presentation)

Figure 3.6 shows that the 14 EU member states have a relatively fixed yearly share of German emigrants ranging between 33.4% and 44.1% throughout the last three decades between 1991 and 2018. The share of the new member states joining the EU after 2004 as countries of destination for German emigrants fluctuated much more. Whereas their share increased in the long run from 5.2% in the early 1990s to 8.3% in 2018, it peaked at 14.3% in the year 2000. European countries outside of the European Union are of greatest importance for the more recent Europeanisation trend of German emigration, with Switzerland certainly being of greatest importance, but also Turkey now being one of the most important countries of destination. The Americas as a region of destination is continually losing its attractiveness for German emigrants: Its original share of 26.2% in the early 1990s decreased to 14.7% in 2018. This is only partly explained, however, by the United States, which remains one of the two major countries of destination throughout the entire last three decades (see Table 3.1).

The classic immigration countries such as Canada and Australia, but also countries such as Brazil and South Africa, have consistently lost importance. South Africa has no longer been one of the 15 most important destination countries since the early 1990s. Countries with particularly high numbers of ethnic Germans had gained in importance during the 1990s but this trend has come to end as well. In the case of Kazakhstan and the Russian Federation, for example, it can be assumed that Germans who originally arrived in Germany as ethnic Germans under resettlement

**Table 3.1** Development of major countries of destination of German emigrants, 1991–2018

Rank	1991–1997	1998–2004	2005–2011	2012–2018
1	USA	USA	Switzerland	Switzerland
2	France	Poland	USA	USA
3	Netherlands	Switzerland	Austria	Austria
4	Switzerland	Spain	Poland	United Kingdom
5	Poland	France	United Kingdom	Turkey
6	Spain	United Kingdom	Spain	Spain
7	Kazakhstan	Austria	France	France
8	Austria	Netherlands	Turkey	Poland
9	United Kingdom	Italy	Canada	Netherlands
10	Italy	Belgium	Netherlands	Australia
11	Belgium	Canada	Australia	China
12	Russian Federation	Australia	Italy	Canada
13	Canada	Kazakhstan	Russian Federation	Italy
14	Australia	Russian Federation	Belgium	Russian Federation
15	Brazil	Turkey	China	Belgium

Source: Federal Statistical Office 2019, authors' calculations and presentation

law regulations are now returning to their former home countries (Schönhuth 2008). The most recent developments of German emigration include the increasing flows towards Turkey and China, which can be attributed in particular to the economic development in both countries, but also to the increasing number of naturalised Turkish returnees. Furthermore, the German speaking countries of Switzerland and Austria have gained importance as countries of destination in recent years.

### 3.4 Demographic Structures of the Internationally Mobile Population

In addition to the specific geography of departure and arrival, the demography of emigration and remigration shows distinctive structures that are linked to the individual life course. Whereas all previous analyses in this chapter referred to administrative data from Germany's population statistics, all subsequent analyses refer to survey data. The German Emigration and Remigration Panel Study (GERPS) collected this data for the internationally mobile population, whereas data from the Socio-economic Panel (SOEP) is used for the internationally non-mobile population in Germany (for more information see Ette et al. 2021).

International migration is, in the first place, a domain of younger individuals (Rogers and Castro 1981; Plane 1993). This is the case because the process of family formation and educational and career-related events coincide between the age of 20 and 40 and often go hand in hand with a greater need or demand for spatial mobility (Mulder and Wagner 1993; Kulu and Billari 2004; Venhorst et al. 2011;

Bernard et al. 2014). In addition, younger individuals have less residence-related investments such as home ownership or strong social relationships with colleagues and neighbours, which increase the social costs of mobility for older individuals (DiPasquale and Glaeser 1999; Fischer and Malmberg 2001; David et al. 2010).

Compared to the non-mobile population in Germany, German emigrants and remigrants are significantly younger. Among older individuals, emigration becomes less prevalent as can be seen in the lower numbers compared to the non-mobile population (see Table 3.2). We see a comparable development with regards to remigration with slightly older remigrants on average (emigrants: 36.5 years, remigrants: 36.8 years). Furthermore, there are no substantial gender differences in emigration or remigration prevalence. However, female German emigrants as well as remigrants are on average about 2.5 years younger than internationally mobile males. This is in line with age-related gender differences regarding moves within Germany due to differences in career decisions and family formation processes, but also with regard to differences in preferences and attitudes between men and women (Kröhnert and Vollmer 2012; Bernard et al. 2014).

Marital status is another demographic aspect. Again, obvious differences between the internationally mobile and non-mobile population exist (see Table 3.2). Whereas about 55% of the German non-mobile population is married, only about 40% of emigrants and remigrants are married. Also, emigrants and remigrants show much higher numbers of unmarried individuals (53.1% and 51.9% vs. 31.6%). This largely reflects the age structures of migrants and the non-mobile population. Since the propensity of marriage increases with age but younger people are highly over-represented among international German migrants this finding is not surprising. This also explains the higher share of divorced and widowed individuals among the non-mobile population. Finally, we find a higher share of registered same-sex partnerships among the internationally mobile population.

Among emigrants and remigrants, we also find a comparable high share of Germans with migration background, which means that their parents or they themselves were born outside Germany (first or second-generation migrant). Table 3.2 shows that among non-mobile German citizens about 8% are first-generation migrants and about 5% are second-generation migrants. Among German emigrants the share of individuals with migration background is about 27% and among the remigrants it is even higher with 32%. In particular, the share of internationally mobile second-generation migrants is much higher compared to the non-mobile population. It can be assumed that these individuals can benefit from migration-specific human capital provided within their migration-experienced families. Furthermore, one could expect that first and second-generation migrants prefer to migrate to their own or to their parents' country of origin. This seems to be quite likely because we can assume that there is some origin-related transnational human capital (e.g. language skills) or transnational social capital (e.g. relatives) that can be utilised by emigrants. However, about three-quarters of German emigrants with a migration background move to other places than the country of their parents' origin (66.2% of the first-generation emigrants and 80.7% of the second-generation migrants). There are differences if we compare recent emigrants with recent



**Table 3.2** Socio-demographic structure of German emigrants and remigrants compared to the non-mobile population (aged 20–70 years), in per cent

	Emigrants	Remigrants	Non-mobile
<b>Gender</b>			
Male	52.6	51.4	50.1
Female	47.4	48.6	49.9
<b>Age</b>			
20–29	32.8	33.5	15.1
30–39	35.4	31.0	17.0
40–49	14.7	16.4	19.2
50–59	11.6	12.6	26.3
60–70	5.5	6.5	22.3
<b>Marital Status</b>			
Married	39.7	40.7	54.1
Unmarried	53.1	51.9	31.6
Divorced	3.8	5.0	11.0
Widowed	0.3	0.4	2.9
Registered same-sex partnership	3.1	2.0	0.4
<b>Migration background</b>			
No migration background	73.4	67.6	85.9
First-generation migrant	11.6	15.3	8.4
Second-generation migrant	13.1	15.4	5.7
Unspecified migration background	1.9	1.7	0.0

Source: GERPSw1 for emigrants and remigrants, SOEP2017 for the non-mobile population

remigrants but even among the latter, we see high shares of first-generation (50.7%) and second-generation migrants (75.4%) who have lived in other places than their parents' country of origin (Table 3.3).

In addition to these demographic structures, emigration and remigration are also linked to other transitions within the life course. One aspect concerns changes in the household composition. Frequently, long distance moves and particularly international migration of couples and families are not synchronised but follow a pattern of sequential moves with one partner leading and the other following or, alternatively, the development of transnational family constellations because of longer-term spatial separation. Indeed, emigration from and remigration to Germany is accompanied by at least short-time changes in household composition (see Table 3.4). Comparing the household situation three months before emigration (wave 0) to the situation shortly after arrival (wave 1), the results show that particularly couples with no children and couples with dependent children (younger than 16 years old) report quite stable household compositions. Nevertheless, even in those households, we observe dynamic changes in the composition affecting 10–25%. By contrast, a high number of adults living with no adult partner in the household three months before emigration report that they live together with an adult partner (again) in wave 1, indicating a sequential timing of migration of those couples in most of these cases. With regard to remigration we see quite similar patterns, although there are

**Table 3.3** Destination of German emigrants with migration backgrounds concerning their parent's origin, in per cent

	German emigrants with migration background			German remigrants with migration background		
	First gen.	Second gen.	Total	First gen.	Second gen.	Total
Lives/has lived in country of parent's origin	33.8	19.3	25.9	49.3	24.6	36.4
Lives/has lived in another country	66.2	80.7	74.1	50.7	75.4	63.6
Total	100	100	100	100	100	100

Source: GERPSw1

**Table 3.4** Changes in household composition of emigrants comparing three months before emigration (wave 0) and wave 1, in per cent

		After migration (wave 1)					N
		Single-person household	Couple, no child	Single parent	Couple, child <16	Other	
Before migration (wave 0)	Single-person household	<b>52.0</b>	34.9	0.3	3.6	9.3	1617
	Couple, no children	15.9	<b>73.5</b>	0.1	5.3	5.2	845
	Single parent	3.3	4.9	<b>32.8</b>	57.4	1.6	61
	Couple, child <16	5.2	0.2	1.3	<b>91.8</b>	1.5	478
	Other	33.3	32.3	0.4	5.8	<b>28.2</b>	694
	N	1232	1413	34	617	399	

Source: GERPSw1

Bold data indicate the percentage of a particular household composition not changing between the situation before and after migration, e.g. 52.0% of all interviewed persons who lived in a single-person household before migration still live in a single-person household also after migration

some indications of an overall lower dynamic of changes in the household composition (see Table 3.5).

Finally, we are interested in the links between migration and changes in relationship status. Overall, 15% of all emigrants and about 20% of all remigrants report a change in relationship status between three months before migration (wave 0) and the time of the interview after migration (wave 1) (see Table 3.6). Table 3.6 also shows the different timing patterns of migration for those emigrants and remigrants who report a stable relationship between wave 0 and wave 1. Only a minority of the migrating couples moved simultaneously (emigrants: 35.8%; remigrants: 45.7%). In almost 24% of emigrant couples and about 20% of remigrant couples the partner already lived abroad (emigrants) or in Germany (remigrants) when they met for the

**Table 3.5** Changes in household composition of remigrants comparing 3 months before emigration (wave 0) and wave 1, in per cent

		After migration (wave 1)					
		Single-person household	Couple, no children	Single parent	Couple, child <16	Other	<i>N</i>
Before migration (wave 0)	Single-person household	<b>64.6</b>	21.5	0.4	3.6	10.1	2059
	Couple, no children	21.0	<b>64.4</b>	0.7	6.4	7.6	1203
	Single parent	6.8	4.1	<b>55.4</b>	25.7	8.1	74
	Couple, child <16	3.6	0.7	6.7	<b>85.4</b>	3.7	1083
	Other	44.9	16.6	0.5	4.1	<b>33.9</b>	1364
<i>N</i>		2237	1454	136	1150	806	

Source: GERPSw1

Bold data indicate the percentage of a particular household composition not changing between the situation before and after migration, e.g. 64.6% of all interviewed persons who lived in a single-person household before migration still live in a single-person household also after migration

**Table 3.6** Relationship changes and timing of couples' migration for German emigrants and remigrants, in per cent

	Emigrants	Remigrants
Change in relationship	15.0	19.6
Permanent single	20.7	26.7
Permanent relationship	64.3	53.7
<i>Among those with permanent relationship</i>		
partner already lived abroad/in Germany when we met	23.9	19.5
partner moved abroad/to Germany in advance	15.7	9.8
partner moved abroad/to Germany later	10.5	12.8
simultaneous move	35.8	45.7
partner still lives in Germany/abroad	11.5	9.2
partner lives in another country	2.6	3.0

Source: GERPSw1

first time. Thus, in such cases migration is very likely to be a consequence of an initially bi-national or transnational relationship where the two partners now have decided to move in together at one place. Moreover, about 26% of emigrant and 21% of remigrant couples have obviously moved separately with one partner migrating in advance of their spouse. Finally about 14% of emigrants in a stable relationship have some kind of transnational relationship with the partner still living in Germany or in another country. The same holds true for about 12% of remigrants whose spouses are presently not living in Germany.

### 3.5 Individual Motives of International Mobility

Heterogeneity with respect to the geography of departure and arrival as well as the specific demographic structure of internationally mobile Germans are also reflected by the individual motives of migration. There is a growing body of qualitative research that points to the heterogeneity of migration motives regarding mobility within the European Union (e.g. Bruquetas-Callejo 2019; Bygnes 2017; Cook et al. 2011). However, these studies often concentrate on migration from East to West Europe and/or on particular migrant groups. Therefore, it is questionable whether these results can be generalised with regard to other destination contexts and to other migrant groups. Existing quantitative studies about reasons of migration are rare. They either concentrate on migration intentions (see Dommermuth and Klüsener 2019 for a comprehensive literature review) or on retrospectively reported motives of actual migration (e.g. Luthra et al. 2018; Zwysen 2019). Whereas GERPS principally adopts both approaches, the following analyses are based on the latter approach. All GERPS respondents were asked to rate the importance of eight possible migration motives for their own migration decision retrospectively including, for example, their own professional reasons, professional reasons of their partner or financial reasons (see Table 3.7 for a full list of motives). The six-point rating scale ranges from, ‘1’ (“not at all important”) to ‘6’ (“very important”). The GERPS participants not only could rate the importance of the different migration motives for their own decisions but can also indicate if any of the presented motives was not

**Table 3.7** Share of emigrants and remigrants indicating certain migration reasons as (very) important<sup>a</sup> in per cent

	Emigrants	Remigrants
Own professional reasons	57.5	40.1
Professional reasons of my partner	29.1	19.3
Other reasons regarding the partnership	25.6	18.0
Family reasons	20.8	39.7
Financial reasons	26.4	19.9
Dissatisfied with life in Germany / the country in which I lived	17.4	15.4
Educational or training-related reasons / academic studies	19.8	24.4
Reasons of personal lifestyle (e.g. better climate, new exper.)	45.1	21.5
Recent political developments in the country where I lived	–	13.5
Social security / support (e.g. healthcare, welfare, childcare)	–	25.4
The UK’s exit from the EU (Brexit) <sup>b</sup>	–	49.6

Source: GERPSw1

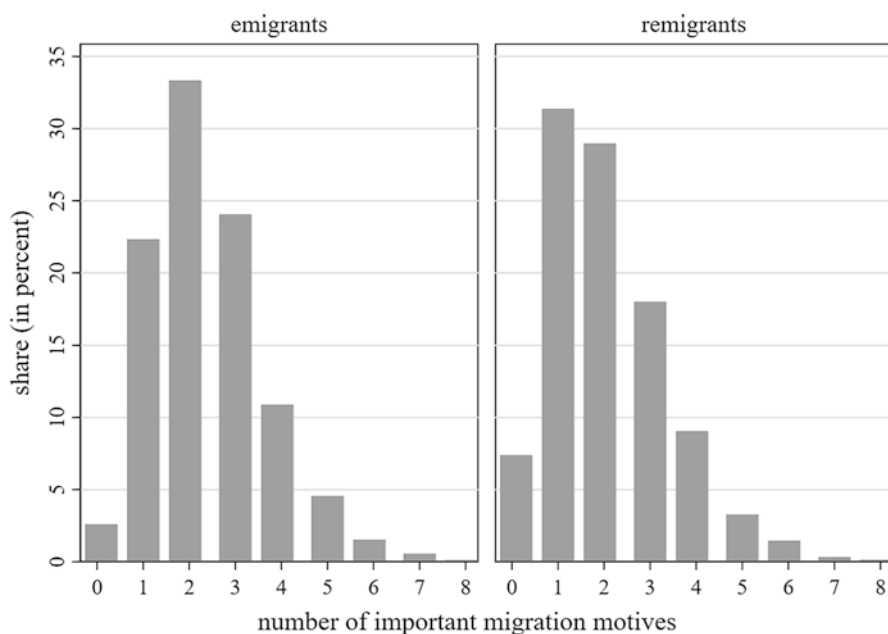
<sup>a</sup>Rating importance with 5 or 6 on a six-point scale

<sup>b</sup>Option only available for remigrants from the UK

applicable. In this case, we interpret non-applicability as an indication of non-importance of a certain motive.

Table 3.7 reports the share of all emigrants and remigrants who indicated that a certain motive was very important for their migration decision (ticking ‘5’ or ‘6’ on the six-point scale). For 57.5% of all emigrants, their own professional reasons were very important for their migration decision. Another important motive for emigration is a change in the personal lifestyle (45.1%). The other reasons are of minor importance with shares of 20–30%. Moreover, we can see that dissatisfaction with their life in Germany is of minor importance. Only 17.4% report that this reason was important for their emigration decision, whereas more than four-fifths of all German emigrants do not rate this as a crucial emigration reason. As for emigrants, their own professional reasons were also an important remigration motive with about 40% of all German remigrants reporting them as important. In contrast to emigration, a similar share of respondents indicates family reasons as crucial for their remigration decision. All other motives seem to be of minor importance with shares of about 20%. In addition, only a small minority of remigrants report dissatisfaction with life abroad (15.4%) or recent political developments in the host countries (13.5%) as decisive remigration motives. Remigrants from the UK are one exception as 46% of them stated that the UK’s exit from the European Union (“Brexit”) was an important reason for them to return to Germany.

Another finding is that for most of the internationally mobile individuals not one single reason but some bundle of motives was relevant with regard to their migration decision. Figure 3.7 shows the share of emigrants and remigrants who report none



**Fig. 3.7** Distribution of the number of important migration motives of German emigrants and remigrants, in per cent. (Source: GERPSw1)

to eight important motives for their migration decision. For remigrants, the calculations are restricted to the eight motive categories that are also presented to emigrants. The majority of all emigrants and remigrants report about two or more important migration motives. Only a minority of about 22% (emigrants) or 31% (remigrants) said that their decision relied on only one important migration motive. Interestingly, some of the internationally mobile population fail to indicate any of the presented categories to be an important migration motive for them (about 3% of emigrants and 7% of remigrants).

### 3.6 Conclusion

The aim of this chapter was to set the scene for the following chapters in this volume and to describe basic structures of emigration and remigration from Germany. While Germany has developed over recent decades into one of the world's most important countries of immigration, it also continues its tradition as an emigration country. The last three decades showed a slowly increasing level of international mobility among the German population. Compared to previous periods of emigration, Europe has stabilised as the major region of destination while emigration to the Americas and other traditional countries of immigration has continuously decreased.

The place of residence in Germany makes a clear difference with respect to the probability of becoming internationally mobile. The resulting geography of departure shows that residents of the old federal states are more likely to migrate abroad than people from the new federal states. Furthermore, residents from urban areas—and particularly those with larger well-qualified populations—are more likely to emigrate than people from rural districts. Additionally, residents from districts bordering the neighbouring countries in the south and the west have a higher probability of moving abroad.

Demographically, no substantial gender differences exist between emigrants and remigrants but in comparison to the non-mobile population in Germany, emigrants and remigrants are on average much younger. Additionally, internationally mobile females are even younger than their male counterparts. Former immigrants to Germany and their children (first or second-generation immigrant)—so-called German citizens with a migration background—have a higher prevalence of emigration and remigration compared to the population without a migration background. For those former immigrants to Germany and their children, the country of origin only plays a subordinate role. Particularly in the case of second-generation immigrants, more than three-quarters of them emigrated to or remigrated from another country than that of their parents' origins. Moreover, international mobility is accompanied by dynamics in household composition. Frequently, these changes in the household composition result from the non-synchronised timing of migrating couples and families. About 60–70% of emigrating and remigrating couples report

that one of both partners moved in advance or that the spouse is still living in Germany (emigrants) or the former destination country (remigrants).

The historical developments, geographical patterns, and demographic structures provide a highly heterogeneous picture of Germany's emigration and remigration experience. This impression is supported by a highly heterogeneous set of migration motives. Career-related motives are significant for emigrants as well as remigrants, but family-related motives are also of importance, particularly for remigrants. All in all, for most emigrants and remigrants international mobility is driven not by a single cause but is motivated by a bundle of heterogeneous reasons.

## References

- Bade, K. J. (Ed.). (1992). *Deutsche im Ausland—Fremde in Deutschland. Migration in Geschichte und Gegenwart*. München: C.H. Beck.
- Bade, K. J. (2004). *Sozialhistorische Migrationsforschung*. Göttingen: V&R unipress.
- BBSR. (2019). *Indikatoren und Karten zur Raum- und Stadtentwicklung—INKAR*. Bonn: Bundesinstitut für Bau-, Stadt- und Raumforschung (BBSR) im Bundesamt für Bauwesen und Raumordnung (BBR).
- Bernard, A., Bell, M., & Charles-Edwards, E. (2014). Life-course transitions and the age profile of internal migration. *Population and Development Review*, 40(2), 213–239.
- Bruquetas-Callejo, M. (2019). Long-term care crisis in the Netherlands and migration of live-in care workers: Transnational trajectories, coping strategies and motivation mixes. *International Migration*, 58(1), 105–118.
- Bygnes, S. (2017). Are they leaving because of the crisis? The sociological significance of Anomie as a motivation for migration. *Sociology*, 51(2), 258–273.
- Cook, J., Dwyer, P., & Waite, L. (2011). The experiences of accession 8 migrants in England: Motivations, work and agency. *International Migration*, 49(2), 54–79.
- David, Q., Janiak, A., & Wasmer, E. (2010). Social capital, mobility and unemployment in Europe. *Journal of Urban Economics*, 68(2), 191–204.
- Destatis. (2020). *Wanderungen zwischen Deutschland und dem Ausland: Deutschland, Jahre, Staatsangehörigkeit*. Wiesbaden: Statistisches Bundesamt.
- DiPasquale, D., & Glaeser, E. L. (1999). Incentives and social capital: Are homeowners better citizens? *Journal of Urban Economics*, 45, 354–384.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the german emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Federal Institute for Research on Building, Urban Affairs and Spatial Development. (2019). *Indikatoren und Karten zur Raum- und Stadtentwicklung: INKAR 2019*. Bonn: Federal Institute for Research on Building, Urban Affairs and Spatial Development.
- Federal Office of Administration. (2019). *Spätaussiedler und ihre Angehörigen*. Jahresstatistik (several volumes). Cologne: Federal Office of Administration.

- Federal Statistical Office. (2019). *Genesis-Online: Wanderungen zwischen Deutschland und dem Ausland*. Wiesbaden: Federal Statistical Office.
- Fischer, P. A., & Malmberg, G. (2001). Settled people don't move: on life course and (im-)mobility in Sweden. *International Journal of Population Geography*, 7, 357–371.
- Fischer, W. (Ed.). (1987). *Europäische Wirtschafts- und Sozialgeschichte vom Ersten Weltkrieg bis zur Gegenwart. Handbuch der Europäischen Wirtschafts- und Sozialgeschichte, Bd. 6*. Stuttgart: Klett-Cotta.
- Gatzweiler, H. P. (1975). *Zur Selektivität interregionaler Wanderungen. Ein theoretisch-empirischer Beitrag zur Analyse und Prognose altersspezifischer interregionaler Wanderungen*. Bonn: Bundesforschungsanstalt für Landeskunde und Raumordnung.
- Dommermuth, L., & Klüsener, S. (2019). Formation and realisation of moving intentions across the adult life course. *Population, Space and Place*, 25(5), e2212.
- Kröhnert, S., & Vollmer, S. (2012). Gender-specific migration from Eastern to Western Germany: Where have all the young women gone? *International Migration*, 50(5), 95–112.
- Kulu, H., & Billari, F. (2004). Multilevel analysis of internal migration in a transitional country: The case of Estonia. *Regional Studies*, 38(6), 679–696.
- Luthra, R., Platt, L., & Salamonska, J. (2018). Types of migration: the motivations, composition, and early integration patterns of 'new migrants' in Europe. *International Migration Review*, 52(2), 368–403.
- Marschalck, P. (1973). *Deutsche Überseewanderung im 19. Jahrhundert. Ein Beitrag zur soziologischen Theorie der Bevölkerung*. Stuttgart: Klett.
- Mulder, C. H., & Wagner, M. (1993). Migration and marriage in the life course: A method for studying synchronized events. *European Journal of Population*, 9(1), 55–76.
- OECD. (2019). *The new immigrants: Global trends in migration towards OECD countries between 2000/01 and 2015/16*. Paris: Organisation for Economic Co-Operation and Development.
- Oltmer, J. (2010). *Migration im 19. und 20. Jahrhundert. Enzyklopädie deutscher Geschichte, Band 86*. München: Oldenbourg Wissenschaftsverlag.
- Plane, D. A. (1993). Demographic influences on migration. *Regional Studies*, 27, 375–383.
- Röder, W. (1992). Die Emigration aus dem nationalsozialistischen Deutschland. In K. J. Bade (Ed.), *Deutsche im Ausland—Fremde in Deutschland. Migration in Geschichte und Gegenwart* (pp. 345–353). München: C.H. Beck.
- Rogers, A., & Castro, L. J. (1981). *Model migration schedules*. Laxenburg: International Institute for Applied System Analysis, Austria.
- Schlömer, C. (2009). *Binnenwanderungen in Deutschland zwischen Konsolidierung und neuen Paradigmen*. Bonn: Bundesinstitut für Bau-, Stadt- und Raumforschung.
- Schönhuth, M. (2008). Remigration von Spätaussiedlern: ethnowissenschaftliche Annäherungen an ein neues Forschungsfeld. *IMIS Beiträge*, 33(2008), 61–83.
- Steinert, J.-D. (1992). Drehscheibe Westdeutschland: Wanderungspolitik im Nachkriegsjahrzehnt. In K. J. Bade (Ed.), *Deutsche im Ausland—Fremde in Deutschland. Migration in Geschichte und Gegenwart* (pp. 386–392). München: C.H. Beck.
- Venhorst, V. A., van Dijk, J., & van Wissen, L. (2011). An analysis of trends in spatial mobility of Dutch graduates. *Spatial Economic Analysis*, 6(1), 57–82.
- Zwysen, W. (2019). Different patterns of labor market integration by migration motivation in Europe: The role of host country human capital. *International Migration Review*, 53(1), 59–89.



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# Chapter 4

## Brain Drain or Brain Circulation?

### Economic and Non-Economic Factors Driving the International Migration of German Citizens



Andreas Ette and Nils Witte

#### 4.1 Introduction

Economic disparities between world regions are major drivers of international migration. Challenging this core assumption of migration scholars, every year substantial numbers of migrants emigrate from the economically most highly developed welfare states. How can we understand international migration where economic disparities are absent? The classic canon of migration theories is relatively silent on those forms of international movements that certainly do not constitute their typical field of application (e.g. de Haas et al. 2020; Massey et al. 1993). Whereas the basic mechanisms that initiate and sustain migration flows are well understood, the international movements of people from countries with decent economic opportunities remain puzzling. Demographic aging in highly developed countries and the universal demand for highly skilled workforces underline the political and academic relevance of this subject (cf. Bijak et al. 2008; Shachar 2006). The major aim of this chapter is to analyse the driving factors of international migration from economically highly developed countries. Does the increasing international mobility of the populations in these countries lead to a permanent loss of migrants who are better qualified than the non-mobile population? This would constitute ‘brain drain’—a concept better known from the description of migration flows between developing and developed countries. Originally, however, the term developed in the early 1960s to describe the emigration of British scientists to the USA (Godwin et al. 2009) and in recent years, this term became popular again to describe emigration from industrialised countries (e.g. Burkhauser et al. 2016; Duch et al. 2019; Gibson and McKenzie 2012; Siekierski et al. 2018; Tritah 2008).

Despite a substantial migration volume, the long-term net migration of German citizens is only marginally negative with a yearly net average loss of 27,000 people

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throughout the past three decades (cf. Ette and Erlinghagen 2021 in this volume). However, if those who leave for good are the best and brightest, even slightly unbalanced net migration could cause substantial economic hazards. Permanent losses of people would tighten the situation on a labour market that is already running out of some wanted skills. According to the analysis of the Federal Employment Agency (BA 2019), there is a shortage of skilled employees in some technical occupations, in construction, health, and nursing professions and a 2019 survey by the German Chamber of Industry and Commerce (DIHK) reports that more than every second company considers skill shortages a serious business hazard (DIHK 2019). The consequences of international German mobility for the German labour market are poorly understood. Relevant studies are based on emigration intentions only (e.g. Samarsky 2020; Uebelmesser 2006), or focus on specific professions (e.g. Pantenburg et al. 2018; Verwiebe et al. 2010; but see Ette and Sauer 2010; OECD 2015b).

This chapter pursues two major aims. First, it comparatively analyses the economic and non-economic factors driving emigration and remigration. It contributes to the brain drain debate by providing individual-level data about the potential determinants of migration and goes beyond simple macro-level descriptions of disparate human capital flows between developing and developed countries (cf. Teney 2019; Williams and Baláz 2005). It does so by building a simple theoretical framework that starts linking otherwise disparate literatures on international and internal migration as well as the field of expatriates and global work experience (e.g. King and Skeldon 2010; Shaffer et al. 2012). Second, it contributes to recent debates by using data from general population surveys. Much of the existing literature on migration from economically highly developed welfare states is overwhelmingly qualitative in nature (e.g. Ryan and Mulholland 2014; Scheibelhofer 2018) or, if using quantitative data, is based on revealed preferences and intentions (e.g. Hadler 2006; Marrow and Klekowski von Koppenfels 2020; but see Kauppinen et al. 2019). Furthermore, the chapter avoids the inappropriate split between high-skilled and low-skilled migration as well as the selective focus on individual professions or specific countries of destination. Instead, it is interested in international migration from Germany in general. The resulting structure of the paper starts with a theoretical discussion of the drivers of emigration and remigration before presenting its analytical strategy and data. The empirical results provide evidence for highly selective international migration flows with respect to economic and non-economic factors but few indications of brain drain in Germany.

## 4.2 Drivers of Emigration and Remigration

The concept of ‘brain drain’ refers to the permanent or at least long-term international transfer of people and their incorporated human capital. Development economists use this term mainly to describe the negative repercussions of migration flows from less to more developed economies aggravating existing global inequalities. A

more positive scenario of the outcomes of international migration is described by the 'brain circulation' concept where stays abroad enhance migrants' human capital, which is effectively used after they return home. The scenario is one of temporary international migration, not permanent loss of human capital (cf. Docquier and Rapoport 2008; Gaillard and Gaillard 1997; Saxenian 2005). Applying these concepts to an empirical analysis of the international migration of German citizens results in a two-step analysis. First, we analyse the individual non-economic and in particular economic determinants of the decision for emigration to capture potential self-selection of the internationally mobile. Second, we analyse the determinants of the remigration decision along the same dimensions. Whereas insignificant or small effect sizes of the remigration decision are indications of brain circulation, more robust signs of less skilled migrants returning home are indications of brain drain. Testing these propositions, the theoretical framework starts linking existing theories about international and internal migration with studies about expatriates and focuses on five major drivers: expected financial returns, job satisfaction, social capital, mobility capital, and transnational professions. Existing theories about international migration form the blueprint for most theoretical approaches focusing on remigration. The following theoretical framework consequently treats both decisions largely analogously and considers the remigration decision a special case of the emigration decision (cf. Cassarino 2004; Massey and Espinosa 1997).

The basic neoclassical economic model explains emigration decisions as the outcome of cost-benefit calculations by rational actors. A person decides to emigrate if the financial returns in the destination country net of expected costs of migration are greater than returns to staying in the home country. Because migration is interpreted as an individual investment in human capital, individuals take into account that such gains may take some time to materialise and therefore calculate not only immediate but also expected future returns (cf. Sjaastad 1962; Todaro 1969).

A first expectation from this approach is related to the age of individuals. The longer potential migrants are expected to work in the future, the higher potential benefits of migration are. Consequently, younger individuals are more likely to emigrate. Furthermore, the better educated are more likely to emigrate because they are expected to have, on average, higher financial returns from spatial mobility. This positive self-selection with respect to education is supported by better international transferability of academic compared to non-academic degrees. Finally, individuals with higher levels of education are expected to have lower non-economic migration costs, due to, for example, broader friendship networks and a smoother adaptation process in the destination country (e.g. Chiswick 1999; van Dalen and Henkens 2013).

From the perspective of the neoclassical model, remigration decisions are the consequence of failed migration either arising from erroneous cost-benefit calculations from the outset or unexpected circumstances causing migration to not bear fruit (cf. Borjas and Bratsberg 1996; Jasso and Rosenzweig 1988). In the context of international migration from economically highly developed countries, however, previous studies showed that most migrants move on a temporary basis only. They want to acquire new skills—such as language or intercultural skills as well as all sorts of tacit knowledge—or use their stay abroad as a signalling device for employers in

order to gain a competitive edge on the labour market in the country of origin (Baláz et al. 2019; Crossman and Clarke 2010). From this perspective, “return migration is the outcome of an optimal human capital investment plan over the individual’s life-cycle” (Dustmann and Glitz 2011, p. 351). Consequently, the propensity for remigration will also decrease with greater age because the potential benefits of migration, particularly acquiring new skills, can already be reaped after a few years without any need for more permanent stays abroad. Similarly, the better educated are also more likely to return because, on average, they are expected to benefit more from their newly acquired skills on the labour market of their origin country (cf. Stark 2019; van Ham et al. 2001). Overall, we expect a positive relationship between economic returns and international mobility.

**H1** Higher levels of expected financial returns increase the propensity for emigration and remigration.

In addition to the expected financial returns, other economic returns might also lead persons to move internationally. Overall employment satisfaction—including job security and work-related well-being—is usually regarded an important trigger of migration. Worries about losing one’s job as well as the actual loss of employment are important drivers of migration. Similarly, previous unemployment and new employment are the most important motivations for changing residence (e.g. Kley 2013; Todaro 1969). There are indications that these findings are less relevant for international migration from economically highly developed countries (Liebau and Schupp 2011). They nevertheless constitute potential drivers for emigration and—in case of difficulties becoming established in the country of destination—for remigration.

A second important element of job satisfaction is the appropriate exploitation of one’s skills. If people are unable to put their full professional potential to use, they likely perceive their job as poorly suited, negatively affecting job satisfaction. Furthermore, the underutilisation of skills reduces the potential financial returns of one’s education (e.g. Hartog 2000; Wu et al. 2015). We define overeducation as a mismatch between actual and required education levels in a given occupation. Most authors analyse overeducation as an integration issue (e.g. Schmidtke 2013; Slack and Jensen 2007). In addition, it drives migration because mobility might help to avoid unfavourable job matches (cf. Melzer and Hinz 2019). Although spatial mobility can be a means of reducing overeducation, the empirical findings on internal as well as international migration are mixed (e.g. Iammarino and Marinelli 2015; Quinn and Rubb 2005). Overeducation is likely to reduce job satisfaction, which, in turn, we expect is a reason for emigration as well as for remigration. Overall, the resulting hypothesis anticipates a negative relationship between job satisfaction and migration propensities.

**H2** Lower job satisfaction increases the propensity for emigration and remigration.

The neoclassical economic model basically hints at several non-monetary costs, such as social ties or psychological attributes, which are less likely to cause

emigration decisions. The new economics of migration theory in particular stressed that migration decisions are taken not by individuals but within the household context and highlighted social capital considerations as important non-economic drivers of emigration (cf. Mincer 1978; Stark and Bloom 1985). Empirically, the existence of a spouse or children in the country of origin reduces the propensity for emigration because it basically raises the migration costs. Strong familial ties and responsibilities are also highlighted by theories about global work experience, arguing that they reduce the propensity for an expatriate assignment (e.g. Shaffer et al. 2012; Tharenou 2008). With respect to remigration decisions, families who moved abroad and now cohabit in the destination country might reverse this logic. The existence of spouse and children increase social integration in the destination country and thus reduce the propensity to remigrate. On the other hand, parents might want their children to grow up in the country of origin or at least to receive substantial parts of their education at home, which would increase the likelihood for remigration (cf. Bivand Erdal and Ezzati 2015; Dustmann 2003). Outside the household and family context, the existence of more social capital in the origin country, such as stronger embeddedness in social networks, reduces the likelihood for emigration but increases the propensity for remigration. Physical relocation would deprive migrants of their usual networks and induce social costs of migration (cf. Haug 2008; Huinink and Kley 2008).

**H3** Higher levels of social capital in the origin country decrease the propensity of emigration but increase the propensity for remigration.

Whereas social capital might hinder international migration, mobility capital increases the propensity for emigration. Based on the literature, we refer to mobility capital as the sum of experiences and skills that facilitate international mobility, such as foreign language skills, the willingness to take risks, or the ability to establish new social contacts (e.g. Kaufmann et al. 2004; Schäfer 2020). In addition, mobility capital can include social support from relatives and friends at possible destinations providing information and facilitating the movement (e.g. Epstein 2008; Haug 2008). Empirical research regularly demonstrates that former mobility is of particular relevance for later migration in the context of graduate mobility as well as for expatriates (e.g. Andresen et al. 2015; Haussen and Übelmesser 2018). A different form of mobility experience is provided by “family migration capital” (Ivlevs and King 2012). It refers to the intergenerational transmission of all sorts of biographical migration experienced by the parents and passed on to their children also increasing emigration propensities. Also with respect to the remigration decision, prior stays abroad increase the likelihood of leaving the destination country again because they indicate a more mobile lifestyle. In contrast, previous migration experiences as an immigrant or as a child of immigrant parents might fundamentally change this reasoning. In the case of emigration to the country of birth, or that of the parents, remigration is less likely (e.g. Kilinç and King 2017; Massey and Redstone Akresh 2006).

**H4** Higher mobility capital increases the propensity of emigration and remigration.

The hypotheses so far all highlight drivers of migration at the micro-level of the individual calculating the pros and cons of moving and returning. A macro-theoretical approach differentiates between different segments of the labour market and the requirements of the economy to explain migration decisions (Doeringer and Piore 1971). Its basic idea is that the contemporary highly developed global economy structurally needs a specific mobile workforce in the secondary, low-paid sector, which explains the international migration of low-skilled migrants. The global economy's demand for highly skilled labour and the flourishing research on transnational or global professions also underlines this phenomenon (e.g. Fourcade 2006; Harrington and Seabrooke 2020). Although there is no generally accepted typology of such transnational professions, the literature has come up with specific case studies and typologies highlighting some professions as more likely cases than others. Within the highly skilled category of migrants, Mahroum (2000), for example, highlights managers and executives, engineers and technicians, academics and scientists, as well as entrepreneurs as most likely cases for transnational professions. Being employed in one of these transnational professions increases the propensity for emigration and remigration (for an overview of all hypotheses see Table 4.1).

**H5** Being employed in a transnational profession increases the propensity for emigration and remigration.

### 4.3 Analytical Strategy and Operationalisation of Theoretical Constructs

The analysis of actual emigration and remigration processes poses high demands on empirical data. Ideally, emigration would be analysed on the basis of a probability sample of the German resident population that includes information about a sufficient number of German emigrants. In the real world, the information about emigration is either absent of most data or the number of emigrants within existing studies does not allow sufficiently detailed analyses (cf. Schupp et al. 2005). The absence of such data was a major motivation for the establishment of the German Emigration

**Table 4.1** Hypotheses on emigration and remigration decisions of international migrants from economically highly developed welfare states

	Emigration	Remigration
H1 Financial returns	+	+
H2 Job satisfaction	-	-
H3 Social capital	-	+
H4 Mobility capital	+	+/-
H5 Transnational profession	+	+

Source: Authors' presentation

and Remigration Panel Study (GERPS). From a methodological perspective, GERPS oversamples the internationally mobile population and provides data representative of German citizens who moved abroad in the years 2017 and 2018. In combination with the Socio-Economic Panel (SOEP), which provides information about the German resident population, this is an almost ideal basis for empirically modelling emigration decisions.

Consequently, our analysis of emigration decisions is based on pooled GERPS and SOEP data. The available information refers to the current living situation of non-migrants in the year 2017 based on SOEP as well as retrospective information about the living situation of the internationally mobile population 3 months before emigration based on GERPS. Furthermore, the analytical sample is restricted to German citizens between 19 and 70 years of age who emigrated no more than 3 years before the time of the interview (cf. Ette et al. 2021 in this volume). For the estimation of emigration probability, the dependent variable is defined as “1” if the person lived abroad at the time of the GERPS survey (‘emigrants’). The dependent variable takes the value “0” if the person is part of the SOEP sample (‘non-migrants’) (see Fig. 4.1 for an overview of the analytical strategy).

The analysis of the remigration decision would, ideally, refer to the German population currently living abroad—irrespective of the duration of stay in their countries of destination—combined with information about a sufficient number of remigrants who recently returned to Germany. Although some statistical information about diaspora populations are available (e.g. OECD 2015a), they provide at best rough estimates of basic socio-demographic information and a probability-based sample of this scattered population is rather unlikely. In absence of such data, GERPS provides a representative sample of German remigrants who returned during the years 2017 and 2018. The analyses of the remigration decisions are based on pooled data from the first wave of GERPS including the sample of German emigrants and remigrants. The available information refers to the current living

Emigration	Remigration
<p><b>Probability sample of the German resident population</b></p> <p><b>“0” Non-migrants in Germany</b> Information about current living situation in Germany of non-migrated respondents in SOEP</p> <p><b>“1” Recent German Emigrants</b> Retrospective information of emigrated respondents in GERPS about their living situation in Germany three months before emigration</p>	<p><b>Probability sample of the German population abroad</b></p> <p><b>“0” German Emigrants living abroad</b> Information about current living situation abroad of emigrated respondents in GERPS</p> <p><b>“1” Recent German Remigrants</b> Retrospective information of remigrated respondents in GERPS about their living situation abroad three months before remigration</p>

**Fig. 4.1** Analytical strategy modelling emigration and remigration of internationally mobile German citizens. (Source: Authors’ presentation)



situation of emigrants at the time of the first survey wave as well as retrospective information about the living situation of remigrants 3 months before returning to Germany, when they still lived abroad. Although recent emigrants surveyed in GERPS are not representative of the complete German population living abroad—particularly because they have only been in their destination countries for a relatively short time—the data is applied as an approximation of this population for the following analyses. In line with the procedure on the emigration decision, the analytical sample is restricted again to German citizens in the same age range. For the estimation of remigration probability, the dependent variable is defined as “1” if the person lived in Germany at the time of the GERPS survey (‘remigrants’) and “0” if the person was living abroad at the time of the first wave GERPS survey (‘emigrants’).

The two remaining samples include 16,470 individuals for the analysis of the emigration decision (non-migrants: 13,053; emigrants: 3417) and 8754 individuals for the analysis of the remigration decision (emigrants: 3377; remigrants: 5377). Applying the theoretical approach to analyse the economic and non-economic drivers of international movements of German citizens, a first step focuses on all respondents, irrespective of their current labour force status (‘complete sample’). In a second step, a more elaborate theoretical model (‘employed sample’) focuses only on those respondents who are active in the labour market (see Table 4.2). Since the dependent variable is binary (“0” non-migration, “1” migration), separate binary logistic regressions are estimated for the emigration and remigration decision. To ease interpretation and comparability of different models (cf. Best and Wolf 2015), average marginal effects (AME) are provided in addition to logits. The AME expresses the average influence of a model variable over all observations—given their characteristics—on the probability of the outcome  $P(y = 1 | x)$ .

The theoretical framework is operationalised by several covariates including gender, age, marital status, presence of minor children in the household, migration background, number of close friends, education, (previous) stays abroad, unemployment status, labour income, occupational sector, and overeducation. The first hypothesis on financial returns is operationalised by age as a continuous and centred variable. The information is variable over time and derived from year of birth, year of migration, and year of the interview. The educational level is measured in years following the procedure by Zielonka and Pelz (2015) and considered time constant. Because human capital also includes skills and tacit knowledge unmeasured by educational credentials (e.g. Lulle et al. 2019), the monthly net labour income is included as a measure to account for unobserved heterogeneity. It is a categorical variable (tertiles) available for the employed sample only. For an overview of the distribution of all variables for all four groups used to model the emigration and remigration decision see Table 4.2.

Job satisfaction is operationalised by two dummy variables with the first accounting for unemployment status and the second for overeducation. The second indicates the match between formal education and occupational skill requirements. Its construction follows the “realised matches approach” (cf. Boll et al. 2016) with individuals being categorised as overeducated if their educational level measured in

**Table 4.2** Means of independent variables by sample

	Emigration decision		Remigration decision	
	Non-migrants	Emigrants (before migration)	Emigrants (after migration)	Remigrants (before migration)
Women	56%	51%	51%	50%
Age (mean)	48.3	34.7	35.4	36.3
Years of education (mean) <sup>a</sup>	13.9	16.5	16.5	16.2
Married	62%	30%	36%	34%
Children in household	43%	15%	18%	21%
Close friends in Germany <sup>a</sup>	16%	31%	31%	32%
(Previous) stays abroad <sup>a</sup>	12%	65%	65%	64%
Migration background <sup>a</sup>	11%	26%	26%	30%
Unemployed	4%	4%	2%	2%
<i>N</i> (complete sample)	13,053	3417	3377	5377
Monthly net labour income				
First tertile	32%	13%	30%	36%
Second tertile	35%	30%	34%	33%
Third tertile	32%	57%	36%	32%
Overeducated	21%	13%	57%	53%
Occupational sector				
Production of goods	30%	29%	13%	14%
Personal services	32%	42%	29%	28%
Business admin.	5%	11%	42%	45%
IT sector and nat. Sciences	12%	4%	13%	8%
Commercial services	16%	51%	4%	5%
<i>N</i> (employed sample)	8955	2069	2175	2765

Descriptive statistics in the first part of the table are based on the model including all participants ('complete sample'). The second part of the table refers only to the 'employed sample' and presents only the variables used in the more detailed analyses. Sources: GERPSw1, SOEP2017; authors' calculation

<sup>a</sup>Time constant variables

years of education is more than one standard deviation above the average education for a particular occupational segment (see also Verdugo and Verdugo 1989, p. 632).

Three variables account for social capital. The existence of a partner is measured by a dummy variable indicating whether the individual is married (including registered same sex partnerships but excluding separated partners) or not. An additional

variable provides information about the presence of children below the age of 18 in the household. Finally, the number of close friends relies on the following question: “What would you say: How many friends do you have?” A dummy variable indicates whether individuals have more or less than six close friends in Germany. We include information about the current living situation—on average 12 months after the migration event—because retrospective measures of the number of friends are unavailable.

Mobility capital is operationalised by two different variables with the first providing binary coded information about international migration experiences. Non-migrants from the SOEP sample were asked during the 2014 survey, “Have you ever lived abroad for more than 3 months for professional or personal reasons?” An adjusted question was also included in the GERPS questionnaires to inquire about previous stays abroad. We include a dummy variable that indicates (previous) stays abroad. Furthermore, family migration capital is measured by the concept of migration background. It is based on the information about the respondents’ country of birth as well as their parents’ countries of birth and covers first and second-generation migrants.

Finally, we measure employment in a transnational profession in terms of the occupational sector. Our measure is based on the classification of occupations (KldB2010) and differentiates between occupations in the production of goods, occupations in personal services, occupations in business administration and other business related services, service occupations in the IT sector and the natural sciences, and other occupations in commercial services.

#### 4.4 Disparities Between Drivers of Emigration and Remigration

We estimate two separate sets of models to test the applicability of brain drain and brain circulation concepts to international migration from Germany. The first set of models estimates the propensity of emigration vs. non-migration (‘emigration decision’) whereas the second set estimates the propensity of remigration vs. emigration (‘remigration decision’). Focusing on the emigration decision first, there are obvious differences between the living situation of emigrants (before they left Germany) and non-migrants. Accordingly, test statistics of the models shown in Table 4.3 indicate a good model fit documented by a high McFadden’s Pseudo  $R^2$ .

The results of the logistic regression document that women have an overall lower probability for emigration than men. With respect to the first hypothesis, the findings are in line with the theoretical expectations on financial returns (H1). The assumption of positive self-selection of emigrants along human capital characteristics is affirmed for the population in general but also if we focus only on the economically active population. The probability of emigration decreases with age—an effect that becomes even stronger for people of higher ages. Similarly, individuals with higher educational credentials are more likely to emigrate than those with

lower ones. The average marginal effect shows that persons with an academic degree have a significantly higher probability of emigration than those with basic educational qualifications. The effect of labour income supports this finding and

**Table 4.3** Coefficients and average marginal effects of logistic regressions on emigration

	Complete sample		Employed sample	
	Logits	AME	Logits	AME
Women (ref. men)	-0.264*** (-4.83)	-0.022*** (-4.83)	-0.285*** (-3.80)	-0.023*** (-3.80)
Age	-0.091*** (-28.16)	-0.006*** (-27.59)	-0.101*** (-20.71)	-0.006*** (-21.81)
Age <sup>2</sup>	-0.001*** (-6.40)		-0.002*** (-6.10)	
Education	0.308*** (25.57)	0.025*** (27.56)	0.185*** (8.44)	0.015*** (8.52)
Partner (ref. none)	-0.177** (-2.60)	-0.015** (-2.58)	-0.330*** (-4.05)	-0.027*** (-4.00)
Minor children (ref. none)	-1.787*** (-24.09)	-0.153*** (-25.19)	-1.769*** (-19.44)	-0.147*** (-20.25)
Many close friends (ref. few)	0.601*** (9.47)	0.052*** (9.03)	0.665*** (8.58)	0.057*** (8.10)
Stays abroad (ref. none)	1.981*** (33.36)	0.216*** (28.78)	2.004*** (26.88)	0.213*** (23.27)
Migration background (ref. none)	0.544*** (7.80)	0.047*** (7.40)	0.486*** (5.49)	0.041*** (5.21)
Unemployed	0.366** (2.65)	0.031* (2.54)		
Net labour income (ref. second tertile)				
First tertile			-0.208* (-2.02)	-0.015* (-2.04)
Third tertile			0.633*** (7.54)	0.053*** (7.53)
Overeducation			0.236* (2.36)	0.019* (2.29)
Occupational sector (ref. business administration)				
Production of goods			-0.580*** (-5.60)	-0.047*** (-5.76)
Personal services			-0.284** (-3.14)	-0.024** (-3.16)
IT/natural sciences			-0.013 (-0.10)	-0.001 (-0.10)
Commercial services			-0.707*** (-4.66)	-0.056*** (-4.99)
Constant	-6.491*** (-32.37)		-4.714*** (-14.52)	
Observations	16,470		11,024	
Pseudo R <sup>2</sup>   Adj. Pseudo R <sup>2</sup>	0.467   0.465		0.449   0.444	

z statistics in parentheses. Sources: GERPSw1, SOEP2017

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

documents that the highly skilled are those who are emigrating. The descriptive findings showed that 57% of emigrants belong to the top tertile of the income distribution compared to a third among non-migrants.

Multivariate findings also support our theoretical assumptions about job satisfaction (H2). In contrast to previous analyses, being unemployed increases the probability of emigration by about 3 percentage points. Focusing on the economically active sample only, overeducation-although statistically significant at the 95% level only-is also a driver of emigration. Those with a better match between their educational level and their occupation are correspondingly less likely to move.

The findings on social capital as a driver of emigration are mixed (H3). In line with our expectations, having a partner reduces the probability of emigration but only by 1.5 percentage points. The effects of minor children in the household are more pronounced. The existence of children reduces the likelihood of emigration on average by 15 percentage points. Other forms of social capital are measured by the number of close friends. The descriptive findings show that the percentage of emigrants with a higher number of close friends in Germany is twice as large as among non-migrants. Multivariate findings corroborate these descriptive distributions, contradicting our expectation that social ties in the residence country decrease international mobility.

Mobility capital-either acquired through intergenerational transmission from parental immigration experiences or through previous temporary stays abroad-is a highly relevant predictor of emigration (H4). German citizens with migration backgrounds are on average 4.7 percentage points more likely to emigrate than those without biographical migration experiences. Furthermore, persons with previous temporary stays abroad are even 22 percentage points more likely to emigrate.

Finally, employment in occupational sectors that are closely related to transnational professions is associated with a higher likelihood of emigration (H5). Business administration, information technologies, and natural sciences are potential drivers of emigration, whereas employment in the other occupational sectors reduces the probability of international mobility.

The descriptive statistics presented in Table 4.2 indicate that there are few socioeconomic differences between the German population living abroad and recent remigrants. The multivariate models presented in Table 4.4 lend further support to this finding and resulting fit statistics are comparatively poor. This provides initial evidence that self-selection is of reduced relevance for the remigration decision. The emigrating population matches the remigrating population in many respects, contradicting the brain drain assumption.

The models estimating the remigration decision reveal hardly any gender differences. Multivariate results partly support our theoretical expectations on financial returns. In line with the first hypothesis (H1), age is not a significant driver of the remigration decision of the internationally mobile population. Remigrants mirror the age structure of the population living abroad, supporting the brain circulation assumption. However, the descriptive findings as well as the results of the logistic regression contradict our hypothesis on education and income. Although the German population living abroad as well as recent remigrants show a high educational level on average, higher formal skills as well as higher income are negatively associated

**Table 4.4** Coefficients and average marginal effects of logistic regressions on remigration

	Complete sample		Employed sample	
	Logits	AME	Logits	AME
Women (ref. men)	-0.040 (-0.89)	-0.009 (-0.89)	-0.100 (-1.58)	-0.023 (-1.58)
Age	0.002 (0.67)	0.000 (0.44)	0.043*** (9.24)	0.010*** (9.58)
Age <sup>2</sup>	0.000* (2.32)		-0.001** (-2.98)	
Education	-0.056*** (-5.11)	-0.013*** (-5.14)	-0.065** (-3.00)	-0.015** (-3.01)
Partner (ref. none)	-0.275*** (-4.87)	-0.065*** (-4.86)	-0.004 (-0.06)	-0.001 (-0.06)
Minor children (ref. none)	0.403*** (6.06)	0.091*** (6.34)	0.349*** (4.08)	0.081*** (4.14)
Many close friends (ref. few)	0.131** (2.72)	0.030** (2.74)	0.130* (2.01)	0.030* (2.02)
Stays abroad (ref. none)	-0.018 (-0.37)	-0.004 (-0.37)	0.007 (0.11)	0.002 (0.11)
Migration background (ref. none)	0.202*** (3.99)	0.047*** (4.04)	0.137* (1.97)	0.032* (1.98)
Unemployed	0.000 (0.00)	0.000 (0.00)		
Net labour income (ref. second tertile)				
First tertile			0.281*** (3.74)	0.065*** (3.76)
Third tertile			-0.255*** (-3.44)	-0.060*** (-3.46)
Overeducation			0.080 (0.92)	0.019 (0.92)
Occupational sector (ref. business administration)				
Production of goods			-0.130 (-1.39)	-0.030 (-1.39)
Personal services			-0.068 (-0.84)	-0.016 (-0.84)
IT/natural sciences			-0.547*** (-5.23)	-0.130*** (-5.26)
Commercial services			0.094 (0.61)	0.022 (0.61)
Constant	1.287*** (6.85)		1.314*** (3.86)	
Observations	8754		4940	
Pseudo R <sup>2</sup>   Adj. Pseudo R <sup>2</sup>	0.009 0.006		0.038 0.030	

z statistics in parentheses; Sources: GERPSw1, SOEP2017

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

with remigration decisions. Similarly, higher net monthly income decreases the likelihood of return by 6 percentage points and increases it by roughly the same size for individuals in the lower income tertile. Both findings support the brain drain

assumption and question the hypothesis that anticipates higher financial returns for temporary stays abroad.

Other economic returns are of little relevance for the remigration decision. Neither descriptively nor on the basis of the multivariate analyses does being unemployed increase the propensity of remigration (although results have to be interpreted carefully because of small case numbers). Similarly, overeducation has no significant impact on remigration. Whereas the emigration decision is driven by job dissatisfaction, the remigration decision is rather unrelated to the employment conditions abroad (H2).

The empirical results about the impact of social capital and family ties provide a mixed picture. Whereas having a partner reduces the propensity for remigration, minor children in the household increase the likelihood of return. This is potentially explained by parents' interest in the German educational and childcare system. The empirical results on other forms of social capital outside the family are in line with expectations: More close friends in Germany make remigration more likely—although the effect is small at only 3 percentage points (H3).

With respect to mobility capital, again, few differences exist between the German population living abroad and recent remigrants. Approximately two-thirds of all internationally mobile people had migration experiences before their present stay abroad. These results lend support to the brain circulation concept, presenting international migrants as an overall highly mobile population with a predominant interest in temporary migration. Against theoretical expectations, this also includes family migration capital because having a migration background increases rather than decreases the propensity for remigration (H4).

Finally, employment in transnational professions shows marginal effects on the remigration decision. With one exception—persons working in the IT and natural science sectors—all other occupations have no significant impact on returning home. Descriptive analyses demonstrate a rather balanced distribution of emigrants and remigrants along many professions, affirming the brain circulation assumption. Negative migration balances exist, however, for occupations in computer science and information technologies. Along our assumptions of the brain drain concept, employment in this sector significantly decreases the probability of return (H5).

## 4.5 Conclusions

The aim of this chapter was to analyse the driving economic and non-economic factors of international migration from economically highly developed welfare states. Based on a simple theoretical framework linking largely disparate literatures on international and internal migration as well as the field of expatriates, it analysed the international mobility of German citizens. The empirical results demonstrate that emigration from economically highly developed welfare states is a highly selective process. The framework focusing on expected financial returns, job satisfaction, social capital, mobility capital, and the employment in specific occupational sectors

explains much of the variance and sheds light on the underlying decision-making process. It presents emigration as a path-dependent process with previous mobility experiences entailing additional episodes across the life course as well as the importance of individual educational and employment conditions causing people to move. Future analyses should continue to disentangle this decision-making process. Our results suggest more fine-grained analyses attaching greater emphasis to different transition processes along the life course, the individual evaluation of employment conditions, and gender-specific analyses to differentiate intra-familial dynamics.

The theoretical equation of remigration and emigration that we proposed is only partly supported by our empirical results. Basically, remigration is a far less selective process than emigration and the economic and non-economic drivers analysed in this chapter hardly account for the great individual variability of international migration processes. Consequently, it is of even greater importance to deepen the theoretical and empirical understanding of remigration decision-making processes. Substantially, the chapter adds new details to the discussion about potential brain drain in Germany. The results show that the international migration of German citizens is best understood along the brain circulation concept. Emigration of Germans is mostly temporary and emigrants are similar to remigrants along many theoretical dimensions. Nevertheless, some indications for a potential loss of human capital through international migration do exist, adding to existing evidence (e.g. OECD 2015b). These include return migrants' lower educational levels, lower net income, and employment in specific occupational sectors. In particular the longitudinal design of the German Emigration and Remigration Panel Study (GERPS) will help to substantiate these findings and to better understand the sources of potential imbalances.

Setting the results on the human capital balances of German international migrants into the context of Germany's overall international migration volume—including the mobility of German as well as non-German citizens—makes concerns of brain drain seem exaggerated. The volume of immigration and the proportion of highly qualified immigrants during recent decades (cf. Seibert and Wapler 2020) presents international migration as a highly positive experience, at least from a human capital and labour market perspective. The political and public debate about emigration from Germany is well advised to focus less on a potential loss of human capital. Instead, the individual consequences of international mobility—for German as well as non-German citizens—should take up more space in these debates. The chapters in this volume hopefully contribute to these debates by offering new information about the economic and non-economic returns of international migration across individual life courses.



## References

- Andresen, M., Biemann, T., & Pattie, M. W. (2015). What makes them move abroad? Reviewing and exploring differences between self-initiated and assigned expatriation. *The International Journal of Human Resource Management*, 26(7), 932–947.
- BA. (2019). *Blickpunkt Arbeitsmarkt: Fachkräfteengpassanalyse*. Nürnberg: Bundesagentur für Arbeit.
- Baláž, V., Williams, A. M., Moravčíková, K., & Chrančoková, M. (2019). What competences, which migrants? Tacit and explicit knowledge acquired via migration. *Journal of Ethnic and Migration Studies*, 1–17.
- Best, H., & Wolf, C. (2015). Logistic regression. In H. Best & C. Wolf (Eds.), *The SAGE handbook of regression analysis and causal inference*. London: SAGE Publications.
- Bijak, J., Kupiszewska, D., & Kupiszewski, M. (2008). Replacement migration revisited: Simulations of the effects of selected population and labor market strategies for the aging Europe, 2002–2052. *Population Research and Policy Review*, 27, 321–342.
- Bivand Erdal, M., & Ezzati, R. (2015). ‘Where are you from’ or ‘when did you come’? Temporal dimensions in migrants’ reflections about settlement and return. *Ethnic and Racial Studies*, 38(7), 1202–1217.
- Boll, C., Leppin, J. S., & Schömann, K. (2016). Who is overeducated and why? Probit and dynamic mixed multinomial logit analyses of vertical mismatch in East and West Germany. *Education Economics*, 24(6), 639–662.
- Borjas, G. J., & Bratsberg, B. (1996). Who leaves? The outmigration of the foreign-born. *Review of Economics and Statistics*, 78, 165–176.
- Burkhauser, R. V., Hahn, M. H., Hall, M., & Watson, N. (2016). Australia Farewell: Predictors of emigration in the 2000s. *Population Research and Policy Review*, 35(2), 197–215.
- Cassarino, J.-P. (2004). Theorising return migration: the conceptual approach to return migrants revisited. *International Journal on Multicultural Societies (IJMS)*, 6(2), 253–279.
- Chiswick, B. R. (1999). Are immigrants favorably self-selected? *The American Economic Review, Papers and Proceedings*, 89, 181–185.
- Crossman, J. E., & Clarke, M. (2010). International experience and graduate employability: stakeholder perceptions on the connection. *Higher Education*, 59(5), 599–613.
- de Haas, H., Castles, S., & Miller, M. J. (2020). *The age of migration: international population movements in the modern world* (6th ed.). London: Red Globe Press.
- DIHK. (2019). *Konjunktur auf Talfahrt. DIHK-Konjunkturumfrage Herbst 2019*. Berlin: Deutscher Industrie- und Handelskammertag.
- Docquier, F., & Rapoport, H. (2008). Brain drain. In S. N. Durlauf & L. E. Blume (Eds.), *The new palgrave dictionary of economics online*, o. S. Palgrave Macmillan.
- Doeringer, P. B., & Piore, M. J. (1971). *Internal labour markets and manpower analysis*. London: Sharpe.
- Duch, R. M., Laroze, D., Reinprecht, C., & Robinson, T. S. (2019). Where will the british go? and why? *Social Science Quarterly*, 100(2), 480–493.
- Dustmann, C. (2003). Children and return migration. *Journal of Population Economics*, 16, 815–830.
- Dustmann, C., & Glitz, A. (2011). Migration and Education. In E. A. Hanushek, S. Machin, & L. Woessmann (Eds.), *Handbook of the economics of education* (pp. 327–439). Amsterdam: Elsevier.
- Epstein, G. S. (2008). Herd and network effects in migration decision-making. *Journal of Ethnic and Migration Studies*, 34(4), 567–583.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: the experiences of the german emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.

- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Fourcade, M. (2006). The construction of a global profession: The transnationalization of economics. *American Journal of Sociology*, 112(1), 145–194.
- Gaillard, J., & Gaillard, A. M. (1997). Introduction: The international mobility of brains: Exodus or circulation? *Science Technology and Society*, 2(2), 195–228.
- Gibson, J., & McKenzie, D. (2012). The economic consequences of ‘Brain Drain’ of the best and brightest: Microeconomic evidence from five countries. *The Economic Journal*, 122(560), 339–375.
- Godwin, M., Gregory, J., & Balmer, B. (2009). The anatomy of the brain drain debate, 1950-1970s: Witness seminar. *Contemporary British History*, 23(1), 35–60.
- Hadler, M. (2006). Intentions to migrate within the European Union: A challenge for simple economic macro-level explanations. *European Societies*, 8(1), 111–140.
- Harrington, B., & Seabrooke, L. (2020). Transnational professionals. *Annual Review of Sociology*, 46(1), 1–19.
- Hartog, J. (2000). Over-education and earnings: where are we, where should we go? *Economics of Education Review*, 19(2), 131–147.
- Haug, S. (2008). Migration networks and migration decision-making. *Journal of Ethnic and Migration Studies*, 34(4), 585–605.
- Haussen, T., & Übelmesser, S. (2018). Job changes and interregional migration of graduates. *Regional Studies*, 52(10), 1346–1359.
- Huinink, J., & Kley, S. (2008). Regionale Kontexte und Migrationsentscheidungen im Lebensverlauf. In F. Kalter (Ed.), *Migration und Integration (Kölner Zeitschrift für Soziologie und Sozialpsychologie, Sonderheft 48/2008)* (pp. 162–184). Wiesbaden: VS Verlag.
- Iammarino, S., & Marinelli, E. (2015). Education–Job (Mis)Match and interregional migration: Italian University Graduates' transition to work. *Regional Studies*, 49(5), 866–882.
- Ivlevs, A., & King, R. M. (2012). Family migration capital and migration intentions. *Journal of Family and Economic Issues*, 33(1), 118–129.
- Jasso, G., & Rosenzweig, M. R. (1988). How well do U.S. immigrants do? Vintage effects, emigration selectivity, and occupational mobility. *Research in Population Economics*, 6, 229–253.
- Kaufmann, V., Bergman, M. M., & Joye, D. (2004). Motility: Mobility as capital. *International Journal of Urban and Regional Research*, 28(4), 745–756.
- Kauppinen, I., Nikolka, T., & Poutvaara, P. (2019). *Self-selection and motivations of emigrants from a welfare state*. München: Ifo Institute for Economic Research.
- Kilinc, N., & King, R. (2017). The quest for a ‘better life’: Second-generation Turkish-Germans ‘return’ to ‘paradise’. *Demographic Research*, 36, 1491–1514.
- King, R., & Skeldon, R. (2010). ‘Mind the Gap!’: Integrating approaches to internal and international migration. *Journal of Ethnic and Migration Studies*, 36(10), 1619–1646.
- Kley, S. A. (2013). Migration in the face of unemployment and unemployment risk: A case study of temporal and regional effects. *Comparative Population Studies—Zeitschrift für Bevölkerungswissenschaft*, 38(1), 109–136.
- Liebau, E., & Schupp, J. (2011). *Considering emigration: German university graduates are moving abroad—but only temporarily*. Berlin: Deutsches Institut für Wirtschaftsforschung (DIW).
- Lulle, A., Janta, H., & Emilsson, H. (2019). Introduction to the special issue: European youth migration: Human capital outcomes, skills and competences. *Journal of Ethnic and Migration Studies*.
- Mahroum, S. (2000). Highly skilled globetrotters: mapping the international migration of human capital. *R&D Management*, 30(1), 23.

- Marrow, H. B., & Klekowski von Koppenfels, A. (2020). Modeling American migration aspirations: How capital, race, and national identity shape Americans' ideas about living abroad. *International Migration Review*, 54(1), 83–119.
- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Edward Taylor, J. (1993). Theories of international migration: A review and appraisal. *Population and Development Review*, 19(3), 431–466.
- Massey, D. S., & Espinosa, K. (1997). What's driving Mexico-U.S. migration? A theoretical, empirical and policy analysis. *American Journal of Sociology*, 102(4), 939–999.
- Massey, D. S., & Redstone Akresh, I. (2006). Immigrant intentions and mobility in a global economy: The attitudes and behavior of recently arrived U. S. immigrants. *Social Science Quarterly*, 87(5), 954–971.
- Melzer, S. M., & Hinz, T. (2019). The role of education and educational– occupational mismatches in decisions regarding commuting and interregional migration from eastern to western Germany. *Demographic Research*, 41(16), 461–476.
- Mincer, J. (1978). Family migration decisions. *Journal of Political Economy*, 86(5), 749–773.
- OECD. (2015a). *Connecting with emigrants. A global profile of diasporas 2015*. Paris: OECD Publishing.
- OECD. (2015b). *Talente im Ausland: Ein Bericht über deutsche Auswanderer*. Paris: OECD Publishing.
- Pantenburg, B., Kitzke, K., Lupp, M., König, H.-H., & Riedel-Heller, S. G. (2018). Physician emigration from Germany: insights from a survey in Saxony, Germany. *BMC Health Services Research*, 18, 1–10.
- Quinn, M. A., & Rubb, S. (2005). The importance of education-occupation matching in migration decisions. *Demography*, 42(1), 153–167.
- Ryan, L., & Mulholland, J. (2014). Trading places: French highly skilled migrants negotiating mobility and emplacement in London. *Journal of Ethnic and Migration Studies*, 40(4), 584–600.
- Samarsky, E. (2020). *Who is thinking of leaving Germany? The role of postmaterialism, risk attitudes, and life-satisfaction on emigration intentions of German Nationals*. Berlin: Deutsches Institut für Wirtschaftsforschung (DIW).
- Saxenian, A. (2005). From brain drain to brain circulation: Transnational communities and regional upgrading in India and China. *Studies in Comparative International Development*, 40(2), 35–61.
- Schäfer, G. (2020). Accumulation of mobility capital over the life course of mobile doctoral candidates. *Applied Mobilities*.
- Scheibelhofer, E. (2018). Shifting migration aspirations in second modernity. *Journal of Ethnic and Migration Studies*, 44(6), 999–1014.
- Schmidtke, O. (2013). Wasting newcomers' human capital? Cultural capital and the integration of skilled migrants into the British and German labor markets. In T. Triadafilopoulos (Ed.), *Wanted and welcome? immigrants and minorities, politics and policy* (pp. 287–304). New York: Springer.
- Schupp, J., Söhn, J., & Schmiade, N. (2005). Internationale Mobilität von deutschen Staatsbürgern. *Zeitschrift für Bevölkerungswissenschaft*, 30(2–3), 279–292.
- Seibert, H., & Wapler, R. (2020). *Viele Hochqualifizierte, aber auch viele Ungelernte*. Nürnberg: Institut für Arbeitsmarkt- und Berufsforschung.
- Shachar, A. (2006). The race for talent: Highly skilled migrants and competitive immigration regimes. *New York University Law Review*, 81(1), 148–206.
- Shaffer, M. A., Kraimer, M. L., Chen, Y.-P., & Bolino, M. C. (2012). Choices, challenges, and career consequences of global work experiences: A review and future agenda. *Journal of Management Studies*, 38(4), 1282–1327.
- Siekierski, P., Lima, M. C., & Borini, F. M. (2018). International mobility of academics: Brain drain and brain gain. *European Management Review*, 15(3), 329–339.

- Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy*, 70(5), 80–93.
- Slack, T., & Jensen, L. (2007). Underemployment across immigrant generations. *Social Science Research*, 36(4), 1415–1430.
- Stark, O. (2019). Behavior in reverse: reasons for return migration. *Behavioural Public Policy*, 3(1), 104–126.
- Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review*, 75(2), 173–178.
- Teney, C. (2019). Immigration of highly skilled European professionals to Germany: intra-EU brain gain or brain circulation? *Innovation: The European Journal of Social Science Research*.
- Tharenou, P. (2008). Disruptive decisions to leave home: Gender and family differences in expatriation choices. *Organizational Behaviour and Human Decision Processes*, 105, 183–200.
- Todaro, M. P. (1969). A model of labor migration and urban unemployment in less developed countries. *The American Economic Review*, 59, 138–148.
- Tritah, A. (2008). The brain drain between knowledge-based economies: The European human capital outflow to the US. *Économie internationale*, 115, 65–108.
- Uebelmesser, S. (2006). To go or not to go: Emigration from Germany. *German Economic Review*, 7(2), 211–231.
- van Dalen, H. P., & Henkens, K. (2013). Explaining emigration intentions and behaviour in the Netherlands, 2005–10. *Population Studies*, 67(2), 225–241.
- van Ham, M., Mulder, C. H., & Hooimeijer, P. (2001). Spatial flexibility in job mobility: Macrolevel opportunities and microlevel restrictions. *Environment and Planning A*, 33(5), 921–940.
- Verdugo, R. R., & Verdugo, N. T. (1989). The impact of surplus schooling on earnings: Some additional findings. *The Journal of Human Resources*, 24(4), 629.
- Verwiebe, R., Mau, S., Seidel, N., & Kathmann, T. (2010). Skilled German migrants and their motives for migration within Europe. *Journal of International Migration and Integration/Revue de l'integration et de la migration internationale*, 11(3), 273–293.
- Williams, A. M., & Baláž, V. (2005). What human capital, which migrants? Returned skilled migration to Slovakia from the UK. *International Migration Review*, 39(2), 439–468.
- Wu, C.-H., Luksyte, A., & Parker, S. K. (2015). Overqualification and subjective well-being at work: The moderating role of job autonomy and culture. *Social Indicators Research*, 121, 917–937.
- Zielonka, M., & Pelz, S. (2015). *NEPS Technical Report: Implementation of the ISCED-97, CASMIN and Years of Education Classification Schemes in SUF Starting Cohort 3*. Bamberg: Leibniz Institute for Educational Trajectories (LIfBi).

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# Chapter 5

## Comparing the Risk Attitudes of Internationally Mobile and Non-Mobile Germans



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### 5.1 Introduction

Moving particularly to a new country is a risky endeavour. People who choose to migrate are often thought to be more adventurous and risk-loving than their non-mobile counterparts. Robust empirical evidence on the risk attitudes of migrants is limited, however, particularly for migrants originating from high-income countries such as Germany. This study examines whether the risk attitudes of internationally mobile Germans ('movers') indeed differ significantly from those of their non-mobile counterparts ('stayers'), and whether significant differences can be observed in the risk attitudes of emigrants and remigrants. We also examine the effect of geographical and cultural distance between Germany and the destination country, predicting that it takes more courage to move to a more distant country.

Living and working abroad is becoming an increasingly important feature of individual careers at least in highly developed democratic welfare states (Erlinghagen et al. 2009). International mobility seems to be positively associated with increases in salaries (see Witte and Guedes Auditor 2021) and subjective well-being (see Guedes Auditor and Erlinghagen 2021). Some socio-economic and socio-demographic determinants of international mobility (e.g. education, gender; see Ette and Erlinghagen 2021) are also known to be general determinants of social inequality. If the propensity for international mobility is socially stratified, and if international mobility experiences independently increase individual life chances, international mobility may function as a catalyst for social inequality.

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The decision to migrate and the choice of where to move is highly complex; it depends on a wide range of contextual and individual factors (Massey et al. 1994). In the economic literature, migration is generally conceptualised as an investment decision informed by the expected costs and benefits of migration (Massey et al. 1994; Sjaastad 1962). Migration from (and return migration to) high-income countries is not primarily driven by the aspiration to escape poverty and disadvantage (van Dalen and Henkens 2007). Socio-psychological approaches such as subjective expected utility (SEU; see Fischhoff et al. 1981; Fishburn 1981) and social production function theory (SPF; Lindenberg and Frey 1993; Ormel et al. 1999) broaden the perspective on the costs and benefits of migration to cover non-monetary aspects, including social and emotional determinants. Psychological determinants may also help to explain why some individuals decide to migrate while others do not. To date, however, little is known about the psychological determinants of international migration. Boneva and Frieze (2001) have argued that there is a kind of ‘migrant personality’ that differentiates those who leave their country from those who stay at home. Higher risk affinity may be one aspect of such a personality, with migrants being more adventurous and risk-loving than non-migrants. Against this background, this chapter aims to contribute to the debate on the psychological determinants of international migration by investigating whether, how, and to what extent psychological differences between individuals can help to understand individual migration propensities.

## 5.2 Theoretical Considerations and Current State of Research

Risky behaviours are those whose outcome is not known beforehand; they afford both the opportunity for reward and the possibility of loss or failure (Mata et al. 2018, p. 156). Risk attitude is a well-established construct, used primarily by psychologists and economists in the analysis of risky behaviours. We conceptualise an individual’s risk attitude (also called risk preference or risk orientation) as their general willingness to take risks (Dohmen et al. 2011; Mata et al. 2018). People vary in their appetite for risk; risk-averse individuals prefer to avoid risks, whereas risk-affine individuals are willing to take risks or even enjoy doing so.

A further distinction can be drawn between risk and uncertainty. In risky situations, such as a game of roulette, the probabilities of different outcomes are known or knowable. In uncertain situations, such as moving abroad, in contrast, those probabilities are unknown (Williams and Baláz 2012). In most real-life situations, the future is not predictable. Accordingly, the focus of studies in the social sciences tends to be on cases of uncertainty. It seems reasonable to assume that risk-affine individuals will be more likely than risk-averse individuals to engage in uncertain behaviours. Various empirical studies have indeed demonstrated the behavioural consequences of risk attitudes across contexts such as financial investments, careers,

and health. The tendency to take risks has been shown to correlate with behaviours including educational choices (Obermeier and Schneider 2015), smoking and specific sport and leisure activities (Dohmen et al. 2011), and job mobility (van Huizen and Alessie 2019).

### ***5.2.1 Risk Attitude and the Propensity to Migrate***

Individual risk attitude has also been suggested to influence the propensity to migrate (Bonin et al. 2009; Huber and Nowotny 2018; Jaeger et al. 2010). People who decide to leave their familiar surroundings to live and work abroad face substantial changes and challenges. Migration tends to be motivated by the aspiration to improve one's living conditions. Success in this endeavour cannot be guaranteed, however. There is always the risk of failure, even if the move is well informed and well planned. Migrants' knowledge of the destination country, its opportunities and conditions, is imperfect, causing uncertainty (Williams and Baláz 2012). Leaving family, friends, and neighbours can result in a loss of instrumental and psychological support, causing further uncertainty. In addition, migrants leave familiar legal frameworks and cultural institutions (e.g., languages and patterns of everyday social interaction) behind them and are often no longer covered by social security provisions (e.g. health insurance). Against this background, it seems reasonable to assume that migrants originating from high-income countries such as Germany, whose decision to migrate is not driven primarily by the aspiration to escape poverty and disadvantage (van Dalen and Henkens 2007), are especially adventurous and risk-loving.

Although Boneva and Frieze (2001) have proposed a 'migrant personality' that might explain why some people decide to migrate while others do not, little is known about the psychological determinants of international migration. As noted above, in the neoclassical economic literature, migration is conceptualised as an investment decision informed by the expected costs and benefits of migration (Massey et al. 1994; Sjaastad 1962). Individuals decide to migrate when the benefits of migration (e.g. a better standard of living) outweigh its costs (e.g., the expenses of moving and setting up a new home, but also social and emotional costs). Both costs and benefits are uncertain, especially when the destination is unfamiliar. Individual risk attitudes may affect the weight that people give to these costs and benefits and thus influence the migration decision. More adventurous and risk-loving individuals may be more willing than risk-averse people to accept higher costs in order to improve their chances of success.

To date, only a few studies have empirically analysed the impact of individual risk attitudes on the propensity to migrate. These studies have examined different migrant groups and obtained mixed results. Jaeger et al. (2010) studied internal migrants in Germany. Controlling for a range of demographic characteristics, they found that individuals who were more willing to take risks were more likely to migrate (for similar results, see Bauernschuster et al. 2014). The results of a study

on the risk attitudes of migrants to Germany suggest the opposite: Bonin et al. (2009) found that first-generation immigrants were, on average, less willing to take risks than German natives. This result needs to be interpreted with caution, however: Immigrants were defined retrospectively by citizenship (and not by actual migration experience), meaning that the analysis was limited to a well-defined but selective group of immigrants. It is possible that more risk-affine migrants had already moved on to other countries.

Another problem with the Bonin et al. (2009) study is that they compared the risk attitudes of migrants with those of the population of the receiving country. Given findings of substantial cross-national variation in risk appetite (Falk et al. 2018), it would make more sense to compare the risk attitudes of migrants with those of compatriots who stayed in the country of origin. A recent study by Huber and Nowotny (2018) attempted to overcome this limitation. Using data from 30 mostly post-communist and emerging countries, they investigated the correlation between migration intention and individual risk attitudes. Across all countries, more risk-affine individuals were more likely to be willing to migrate, whether within the country or abroad. Furthermore, the results suggested that potential emigrants from wealthier countries were particularly adventurous and risk-loving. Likewise, Williams et al. (2018) studied the migration intentions of young adults in Europe. Their findings again identified individual risk attitude as an important determinant of the willingness to migrate. Moreover, they found that this personality trait played a more important role in Germany and UK than in Eastern European countries. Note, however, that both studies investigated migration intentions rather than actual migration behaviour.

Our study was designed to overcome the limitations of these previous analyses. It drew on new data from the German Emigration and Remigration Panel Study (GERPS) in combination with data from the German Socio-Economic Panel Study (SOEP). Our analyses considered actual migration behaviour rather than migration intentions and compared the risk attitudes of German emigrants and remigrants ('movers') with those of the non-mobile population ('stayers').

Research has found consistent differences in risk attitudes along socio-demographic lines. Men tend to be more willing to take risks than women; risk affinity declines with age and is positively correlated with educational level (Dohmen et al. 2011). In addition, the uncertainty of international migration can be expected to decrease as a function of the resources available to an individual: resources like economic, human, and social capital can buffer the possible negative consequences of migration. To exclude the possibility that differences in key socio-demographic or socio-economic characteristics are at the root of differences in risk affinity, we controlled for current age and age<sup>2</sup>, gender, household composition, labour force status, education, and subjective health status and migration background.

Accordingly, we formulated the following general hypothesis about the risk attitudes of German migrants:

**H1** Internationally mobile individuals are more willing to take risks than are non-mobile individuals staying in Germany (controlling for a variety of socio-demographic and socio-economic characteristics).



In contrast to what is commonly assumed in migration theory, migration is not necessarily a linear movement from one location to a permanent new destination. Remigration to the home country is also an important feature of international migration, as is moving on to another country (Constant and Zimmermann 2013). However, it is unclear whether—and if so, how—risk attitudes affect this kind of circular migration.

Remigration might be assumed to involve less uncertainty than emigration: (potential) remigrants know much more about the living conditions in their country of origin and may still have support networks there (e.g. family and friends). Yet a certain level of risk remains: Remigrants have to leave their workplaces, neighbourhoods, and the social networks they have built up while living abroad. It remains uncertain whether their reintegration in Germany will succeed. We therefore formulated the following hypothesis on the risk attitudes of remigrants:

**H2** The risk attitudes of remigrants do not differ from those of emigrants (controlling for a variety of socio-demographic and socio-economic characteristics).

### 5.2.2 *Risk Attitude and Choice of Where to Move*

Risk attitude might affect not only the decision to migrate but also the choice of where to move. The costs and risks of international migration depend to some extent on the distance between the country of origin and the destination, in both geographical and cultural terms. The further away the destination, the higher the costs of relocating, the more difficult it is to obtain information about the destination in advance, and the greater the challenges of keeping in touch with family and friends back home. Probably more importantly, larger differences in culture, language, institutions, values, and norms require greater adaptation. Migrants not only need to learn a new language, they also need to get used to another way of life.

Much research has shown that migration flows decrease with geographical distance, indicating that geographical and cultural differences are a main migration barrier (Belot and Edrveen 2012; Hofstede 2001). Little is known, however, about individual differences in the propensity to migrate to geographically and culturally distant countries. One might expect more adventurous and risk-loving individuals to be more willing to accept (or even actively seek out) cultural differences. The findings of Bauernschuster et al. (2014) on moves within Germany point in this direction, showing that more risk-affine individuals were mobile over longer distances and more likely to cross cultural boundaries within Germany (as measured by historical dialect data). The same can be expected to apply to international migration. To our knowledge, however, no previous study has investigated this relationship.

Geographical and especially cultural distance between countries is hard to define and even harder to measure in a valid manner. As a first, rough approximation, we distinguished between countries neighbouring Germany, other European countries, and non-European countries. The neighbouring countries were further divided in

two groups: (primarily or partly) German-speaking countries (Austria, Switzerland, and Luxembourg) and (primarily) non-German-speaking countries (France, Belgium, Netherlands, Denmark, Poland, and the Czech Republic). We would expect the costs of migration to (partly) German-speaking neighbouring countries to be lowest, followed by non-German speaking neighbouring countries, other European countries, and finally non-European countries. We worked on the assumption that European countries are culturally closer to Germany than are non-European countries not least due to the process of European integration, which offers a common economic, political, and legal institutional framework.

Against this background, we formulated the following hypothesis:

**H3** Migrants to geographically and culturally more distant countries are more risk-affine than are migrants to geographically and culturally less distant countries.

The costs and risks of international migration can be minimized in various ways. Language competence is a key factor here. Migrants with at least a basic knowledge of the language spoken in the destination country should find it easier to adapt and settle in. Those with poor or no language skills face higher cultural barriers and thus need to be more risk-affine. Previous migration experience can also be expected to reduce uncertainty; experienced migrants are more aware of the challenges and difficulties of international migration. We therefore hypothesized the following:

**H4** Migrants with no or low language competence are more risk-affine than migrants with good language competence; migrants with no previous migration experience are more risk-affine than migrants with previous migration experience.

The costs and insecurity associated with remigration depend primarily on whether migrants have maintained connections to the country of origin during their stay abroad. Remigration should be easier for migrants who have kept up family and friendship ties and stayed informed about developments in their country of origin. We captured these connections to the home country by remigrants' emotional attachment to Germany and the duration of stay abroad. We hypothesized the following:

**H5** Remigrants who stayed abroad for longer are more risk-affine than are those who were not away for so long; remigrants who feel less attached to Germany are more risk-affine than those who still have friendship ties with Germany.

### 5.3 Data and Methods

We drew on two data sources: the German Emigration and Remigration Panel Study (GERPS), which assesses internationally mobile Germans, and the German Socio-Economic Panel Study (SOEP), which covers Germany's non-mobile population. GERPS is based on a random sample drawn from local population registers and covers 20–70 year old German nationals who either emigrated from or remigrated

to Germany between July 2017 and June 2018 (see Ette et al. 2021 in this volume). We use data from GERPS wave 1, which contains information on 11,897 individuals (4928 emigrants and 6969 remigrants). The German Socio-Economic Panel Study (SOEP) is a wide-ranging representative multi-cohort study of the population living in Germany. Every year, around 30,000 persons in about 15,000 households are surveyed (Goebel et al. 2019). The SOEP provides a control sample of internationally non-mobile Germans, allowing us to assess differences in risk attitudes between movers and stayers. We used data from 2017 (v34), limiting the dataset to German citizens. We also excluded all individuals who had moved 20 kilometers or more within Germany between 2015 and 2017, resulting in a study sample of 20,134 German stayers.

Individual risk attitudes were assessed in terms of self-reported general willingness to take risks. Respondents to both GERPS and SOEP were asked: “Are you generally a person who is willing to take risks or do you try to avoid taking risks?” Responses were given on a scale from 0 (‘not at all willing to take risks’) to 10 (‘very willing to take risks’). This self-report measure has proved to be a valid indicator of risk attitude that is strongly associated with actual behaviour (Dohmen et al. 2011; Mata et al. 2018). We estimated multivariate OLS regressions on individual risk attitudes; as control variables, we included age and age2, gender, household composition, labour force status, education, subjective health status, and migration background, and different more migration specific explanatory variables such as self-rated language competence, and previous migration experience. Table 5.1 reports the descriptive statistics for the variables included in our analyses; Table 5.2 provides descriptive statistics for further independent variables included in later analyses (regressions of geographical/cultural distance on risk attitude).

## 5.4 Results

Figure 5.1 shows the distribution of the general willingness to take risks among German emigrants, remigrants, and stayers. For the stayers, the findings are consistent with the results of other studies (e.g. Dohmen et al. 2011, p. 527). Risk attitude was distributed widely across the entire scale, but clearly peaked at the mid-point 5. The picture emerging for movers is completely different: they were much more willing to take risks than stayers, and the distributions for emigrants and remigrants were highly congruent, peaking at point 7. Table 5.3 confirms these descriptive findings: Under statistical control for key socio-demographic and socio-economic variables, both emigrants and remigrants reported significantly higher risk affinity than stayers (Model 1). This finding supports our first hypothesis, confirming that internationally mobile individuals are more willing to take risks than are their counterparts who stayed in Germany.

Furthermore, there was no significant difference in the risk attitudes of emigrants and remigrants (Model 2 in Table 5.3). Individuals who returned to Germany were not more or less risk-affine than German emigrants who had recently moved abroad.

**Table 5.1** Descriptive statistics used in mover–stayer comparisons

	Proportion in % or mean (SD)		
	Stayers (SOEP)	Emigrants (GERPS)	Overall
<b>Dependent variables</b>			
Risk attitude (11-point scale)	4.8 (2.3)	6.0 (2.2)	5.2 (2.4)
<b>Socio-demographic variables</b>			
Male	45.9%	46.1%	46.0%
Female	54.1%	47.4%	51.6%
Age (in years)	50.5 (18.1)	36.7 (11.33)	45.5 (17.3)
No migration background	83.6%	62.7%	75.9%
1st generation migrant	9.5%	12.6%	10.6%
2nd generation migrant	6.9%	13.8%	9.5%
Couple without children	31.5%	27.0%	29.8%
Couple with child(ren)	40.1%	17.4%	31.7%
Lone parent	9.3%	2.0%	6.6%
Single household	14.6%	32.5%	21.3%
Other household composition	1.9%	9.1%	4.6%
<b>Socio-economic variables</b>			
Post-sec. Education & lower	71.7%	27.2%	55.2%
Bachelor degree	14.3%	14.2%	14.3%
Master degree or higher	9.6%	52.1%	25.4%
(Self-)employed	51.8%	61.0%	55.2%
Unemployed	4.8%	4.5%	4.7%
Not in employment	40.0%	28.8%	36.4%
<b>Subjective health status</b>			
(Very) good	46.6%	74.8%	57.1%
Satisfactory	33.4%	13.4%	26.0%
(Very) bad	17.5%	5.0%	12.8%
N	20,134	11,897	32,031

Sources: GERPSw1, SOEP2017

This finding suggests that individual risk attitude affects the decision to emigrate but does not have an additional impact on the decision to remigrate. This may be because remigration is less risky than emigration: remigrants are much more knowledgeable about the living conditions in their country of origin and can often rely on an established support network (e.g. family members) when returning to Germany.

Finally, we ran a separate estimation for German stayers only (Model 3) to compare patterns of correlation between the control variables and risk attitudes in this group and in the group of German migrants (Model 2). Overall, the pattern of coefficients for the stayers (Model 3) was similar to that observed in previous studies (e.g. Dohmen et al. 2011; Halek and Eisenhauer 2001): Females had lower risk attitudes than men; willingness to take risks declined with age and was positively correlated with educational level. In addition, couples with children were less risk-affine than were individuals living in single households. Finally, there was a significant negative relationship between health and risk attitude.

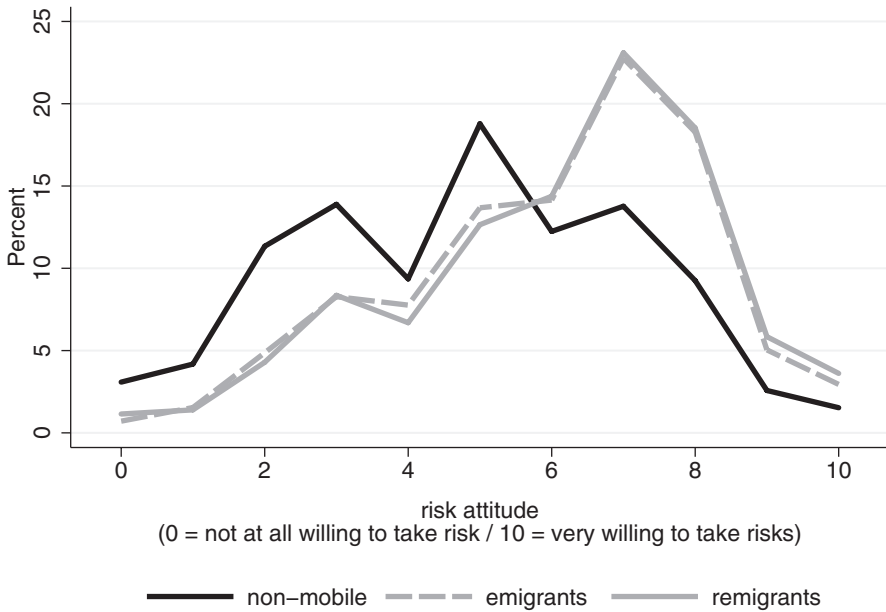
**Table 5.2** Descriptive statistics used in analyses on geographical/cultural distance

	Proportion in %		
	Emigrants	Remigrants	Overall
<b>Previous migration experience</b>			
Less than 1 year abroad		13.7%	
1–2 years abroad		14.6%	
2–5 years abroad		26.8%	
More than 5 years abroad		38.5%	
Always in Germany	36.3%		
1 times abroad	27.0%		
2 times abroad	16.0%		
3 or more times abroad	16.2%		
<b>Geographical distance</b>			
Switzerland, Austria, Luxembourg	32.1%	18.0%	23.9%
Neighbouring country	16.8%	13.4%	14.8%
Other European country	24.8%	25.8%	25.4%
Non-European country	25.5%	41.3%	34.5%
<b>Language competence</b>			
Mother tongue	32.9%	28.0%	30.0%
Very good	29.7%	37.5%	34.2%
Quite good	10.3%	9.9%	10.1%
So-so	9.0%	8.4%	8.7%
(Very) poor	12.3%	12.1%	12.2%
<b>Emotional attachment to Germany</b>			
(Rather) attached	63.1%	60.9%	61.8%
(Rather) not attached	30.2%	31.8%	31.3%
<i>N</i>	4997	6900	11,897

Source: GERPSw1

Comparison with the estimation for internationally mobile Germans (Model 2) shows that migrants' risk attitudes only partly followed the patterns observed for stayers. As for stayers, we found a negative relationship between health and willingness to take risks, and women had significantly lower risk attitudes than men. However, no age or education effects emerged. The model fit of Model 2 was considerably lower than that of Model 3 ( $R^2$ : 0.019 vs. 0.076), indicating that our standard socio-economic and socio-demographic control variables correlated much better with stayers' risk attitudes than with movers'.

We now turn to the relationship between migrants' risk attitude and their choice of where to move. We expected more risk-affine migrants to be more likely to move to geographically/culturally more distant countries. As described above, we distinguished between German-speaking neighbouring countries (as the reference group), non-German-speaking neighbouring countries, other European countries, and non-European countries, assuming this differentiation to capture increasing geographical/cultural distance.



**Fig. 5.1** Distribution of general willingness to take risks for German stayers, emigrants, and remigrants. (Sources: GERPSw1, SOEP2017)

Table 5.4 displays the results of regressions of country of destination on individual risk attitude separately for emigrants and remigrants, controlling for the variables analysed in Table 5.3. For emigrants, risk attitude was positively associated with geographical/cultural distance: Emigrants moving to non-European countries were significantly more risk-affine than those moving to German-speaking neighbouring countries. The same held for emigrants to European countries that do not neighbour Germany. There was, however, no significant difference in the risk attitudes of emigrants to German- versus non-German-speaking neighbouring countries. This finding suggests that language does not seem to be the main migration barrier for German emigrants. Note, however, that the lion’s share of German emigration was to German-speaking neighbouring countries (see Ette and Erlinghagen 2021). For remigrants, we again observed a positive relationship between risk attitude and geographical/cultural distance. Remigrants returning from non-European countries reported highly significantly higher risk attitudes. These results confirm our hypothesis that geographical/cultural distance of the destination country is positively related to risk-affinity.

In a final step, we investigated the role of other factors that might increase or decrease the costs of international migration (Table 5.5): language competence, previous migration experience, duration of stay abroad, and emotional attachment to Germany. We assumed that speaking the language of the destination country reduces feelings of insecurity. Consequently, we expected emigrants with good language skills to report a lower willingness to take risks than emigrants with no or poor

**Table 5.3** Coefficients and standard errors (in parentheses) of the OLS regressions on migration and willingness to take risks

	Model (1): Full model	Model (2): Movers	Model (3): Stayers
Stayers	Ref.	–	
Emigrants	0.876*** (0.046)	ref. –	
Remigrants	0.976*** (0.042)	0.081 (0.043)	
Age	–0.001 (0.005)	0.006 (0.010)	–0.021*** (0.006)
Age <sup>2</sup>	–0.000* (0.000)	0.000 (0.000)	0.000 (0.000)
Female (ref. male)	–0.714*** (0.026)	–0.311*** (0.043)	–0.896*** (0.033)
<b>Household composition (ref. single household)</b>			
Couple without children	–0.101** (0.037)	–0.259*** (0.053)	–0.010 (0.051)
Couple with child(ren)	–0.145*** (0.039)	–0.290*** (0.062)	–0.147** (0.054)
Lone parent	0.013 (0.059)	–0.078 (0.148)	0.009 (0.070)
Other household composition	0.143* (0.066)	0.127 (0.076)	0.285* (0.126)
<b>Labour force status (ref. (self-)employed)</b>			
Unemployed	0.248*** (0.062)	0.117 (0.101)	0.273*** (0.078)
Not in employment	–0.056 (0.033)	–0.195*** (0.050)	–0.014 (0.044)
<b>Highest educ. Qualification (ref. post-sec. Education &amp; lower)</b>			
Bachelor degree	0.120** (0.038)	0.091 (0.068)	0.130** (0.047)
Master degree or higher	–0.040 (0.036)	–0.026 (0.050)	–0.018 (0.056)
<b>Migration background (ref. no migration background)</b>			
1st generation migrant	–0.033 (0.041)	–0.198** (0.061)	0.099 (0.055)
2nd generation migrant	0.221*** (0.046)	0.116* (0.059)	0.254*** (0.070)
<b>Subjective health status (ref. (very) good)</b>			
Satisfactory	–0.263*** (0.032)	–0.291*** (0.060)	–0.237*** (0.038)
(Very) bad	–0.603*** (0.042)	–0.321*** (0.095)	–0.622*** (0.047)
Constant	5.791*** (0.108)	6.163*** (0.211)	6.393*** (0.145)
Observations	29,852	10,466	19,386
R <sup>2</sup>	0.116	0.019	0.076

Sources: GERPSw1, SOEP2017, \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001

**Table 5.4** Coefficients (and standard errors) of the OLS regressions of destination on risk attitude

	Emigrants	Remigrants
Switzerland, Austria, Luxembourg	Ref.	Ref.
Other neighbouring country	-0.024 (0.093)	-0.130 (0.097)
Other European country	0.222** (0.083)	0.051 (0.082)
Non-European country	0.446*** (0.083)	0.313*** (0.077)
Constant	5.855*** (0.311)	6.155*** (0.278)
Observations	4639	6358
$R^2$	0.032	0.025

Both models control for age, age<sup>2</sup>, gender, family composition, labour force status, highest educational qualification, migration background, and subjective health status. Source: GERPSw1  
 \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

language skills. Indeed, multivariate results suggest that emigrants with lower than mother tongue skills, are more willing to take risks than native speakers. There are, however, no differences between those who report good, mediocre, and poor skills. Pairwise comparisons (not reported in Table 5.5) corroborate the finding that each single category is associated with higher risk propensity than the reference category of native speakers. Thus, all non-native speaking emigrants seems to have a significantly higher appetite for risk than native speakers do.

Some correlations between the number of previous stays abroad (of 4 months or more) and risk attitudes also emerged, but in an unexpected direction. Instead of the expected negative correlation, the willingness to take risks increased with the number of previous stays abroad. Within the narrow economic theory of migration, this finding could be interpreted as evidence that voluntary emigration from high-income countries like Germany is only partly motivated by the aspiration to better one’s living conditions or attributable to available resources; rather, it seems to be simply a matter of risk appetite. Thus, (repeated) emigration seems to be a matter of personality and an expression of a more adventurous lifestyle.

For remigrants, we considered emotional attachment to Germany and duration of stay abroad as factors that could potentially affect the insecurity associated with a return to Germany. As expected, remigrants who felt less attached to Germany were more risk-affine than those who felt more attached. This could be because the risks of remigration are lower for those who feel attached to Germany. For the same reasons, we predicted that the risks of remigration would increase as a function of the length of the stay abroad. However, the data did not confirm that remigrants who had stayed abroad for longer were also more risk-affine than those who were not away for so long. If anything, the opposite was true: there was a weak but significant negative correlation between risk attitude and a length of stay abroad exceeding 3 years.



**Table 5.5** Coefficients and standard errors (in brackets) of the OLS regressions on language competence, previous migration experience, emotional attachment to Germany, and duration of stay abroad on risk attitude

	Emigrants	Remigrants
<i>Language competence</i>		
Mother tongue	Ref.	
Very good	0.289*** (0.077)	
Quite good	0.203 (0.108)	
So-so	0.265* (0.114)	
(Very)Poor	0.296** (0.102)	
<i>Previous migration experience</i>		
Always in Germany	Ref.	
1 time abroad ≥4 months	0.180* (0.080)	
2 times abroad ≥4 months	0.301** (0.094)	
3 or more times abroad ≥4 months	0.578*** (0.095)	
<i>Emotional attachment to Germany</i>		
Rather attached		Ref.
Rather not attached		0.198*** (0.058)
<i>Duration of stay abroad</i>		
<1 year		Ref.
1–2 years		–0.085 (0.102)
3–5 years		–0.222* (0.093)
More than 5 years		–0.196* (0.090)
Constant	5.717*** (0.310)	6.157*** (0.277)
Observations	4639	6358
R <sup>2</sup>	0.037	0.022

Both models control for age, age<sup>2</sup>, gender, family composition, labour force status, highest educational qualification, migration background, and subjective health status. Sources: GERPSw1, SOEP2017

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

## 5.5 Summary and Conclusion

This study with German respondents examined whether the risk attitudes of internationally mobile individuals ('movers') differed significantly from those of non-mobile individuals ('stayers'), and whether there were significant differences in the risk attitudes of emigrants and remigrants. The study also asked whether the willingness to take risks was associated with the geographical/cultural distance to the destination country.

We were able to overcome the limitations of previous studies—i.e., focusing on migration intentions rather than actual moves; comparing migrants' risk attitudes with those of the native population—by analysing data from the German Emigration and Remigration Panel Study (GERPS) in combination with data from the German Socio-Economic Panel Study (SOEP). We considered actual moves rather migration intentions and compared the individual risk attitudes of German emigrants and remigrants ('movers') with those of the non-mobile German population ('stayers').

Our results show that movers were more willing to take risks than stayers. Contrary to our expectations, there was no difference in the risk attitudes of emigrants and remigrants. Migrants who moved to geographically/culturally more distant countries were more risk-affine than those who moved to less distant countries. Interestingly, migrants' risk affinity increased with the number of previous emigration episodes. Taken together, our results suggest that international mobility of citizens of high-income countries seems to be a matter of personality and an expression of a more adventurous lifestyle—particularly for those moving (repeatedly) to distant non-European countries.

Although our findings provide interesting new evidence on the relationship between risk attitudes and international migration, at least two limitations warrant consideration. First, we relied on risk attitudes reported shortly after migrants had arrived in their new home. It is possible that individual risk attitudes change during the migration process. In that case, our finding of higher risk-affinity among movers would be a (temporary) effect of migration itself. Specifically, increased willingness to take risks after migration would not reflect psychological differences between movers and stayers, but would be an effect of increased self-esteem through recent migration events. It will be possible to investigate such changes in individual risk attitudes during the migration process when data from the third wave of GERPS are available. Second, our measure of cultural distance through geographical distance is a very rough indicator. Future research should include more sophisticated, regional indexes of cultural distance (see Hofstede 2001). However, beside these limitations and given the scarce empirical evidence on the relationship between international migration and risk attitudes, our study contributes to the debate about the psychological determinants of international migration.

## References

- Bauernschuster, S., Falck, O., Heblich, S., Suedekum, J., & Lameli, A. (2014). Why are educated and risk-loving persons more mobile across regions? *Journal of Economic Behavior & Organization*, 98, 56–69.
- Belot, M., & Ederveen, S. (2012). Cultural barriers in migration between OECD countries. *Journal of Population Economics*, 25(3), 1077–1105.
- Boneva, B. S., & Frieze, I. H. (2001). Toward a concept of a migrant personality. *Journal of Social Issues*, 57(3), 477–491.
- Bonin, H., Constant, A., Tatsiramos, K., & Zimmermann, K. F. (2009). Native-migrant differences in risk attitudes. *Applied Economics Letters*, 16(15), 1581–1586.
- Constant, A., & Zimmermann, K. F. (Eds.). (2013). *International handbook on the economics of migration*. Cheltenham: Edward Elgar.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual risk attitudes: measurement, determinants and behavioral consequences. *Journal of the European Economic Association*, 9(3), 522–550.
- Erlinghagen, M., Stegmann, T., & Wagner, G. G. (2009). Deutschland ein Auswanderungsland? *DIW Wochenbericht*, 39(2009), 663–669.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Falk, A., Becker, A., Dohmen, T., Enke, B., Huffman, D., & Sunde, U. (2018). Global evidence on economic preferences\*. *The Quarterly Journal of Economics*, 133(4), 1645–1692.
- Fischhoff, B., Goitein, B., & Shapira, Z. (1981). Subjective expected utility: A model of decision-making. *Journal of the American Society for Information Science*, 32(5), 391–399.
- Fishburn, P. C. (1981). Subjective expected utility: A review of normative theories. *Theory and Decision*, 13(2), 139–199.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German Socio-Economic Panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik*, 239(2), 345–360.
- Guedes Auditor, J., & Erlinghagen, M. (2021). The happy migrant? Emigration and its impact on social wellbeing. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Halek, M., & Eisenhauer, J. G. (2001). Demography of risk aversion. *The Journal of Risk and Insurance*, 68(1), 1.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks [u.a.]: SAGE Publ.
- Huber, P., & Nowotny, K. (2018). *Risk aversion and the willingness to migrate in 30 countries*. Wien: Österreichisches Institut für Wirtschaftsforschung.
- Jaeger, D. A., Dohmen, T., Falk, A., Huffman, D., Sunde, U., & Bonin, H. (2010). Direct evidence on risk attitudes and migration. *Review of Economics and Statistics*, 92(3), 684–689.
- Lindenberg, S., & Frey, B. S. (1993). Alternatives, frames, and relative prices: A broader view of rational choice theory. *Acta Sociologica*, 36(3), 191–205.

- Massey, D. S., Arango, J., Hugo, G., Kouaouci, A., Pellegrino, A., & Taylor, J. E. (1994). An evaluation of international migration theory: The North American case. *Population and Development Review*, 20(4), 699.
- Mata, R., Frey, R., Richter, D., Schupp, J., & Hertwig, R. (2018). Risk preference: A view from psychology. *Journal of Economic Perspectives*, 32(2), 155–172.
- Obermeier, V., & Schneider, T. (2015). Educational choice and risk preferences: How important is relative vs. individual risk preference? *Journal for Educational Research Online*, 7(7), 99–128.
- Ormel, J., Lindenberg, S., Steverink, N., & Verbrugge, L. M. (1999). Subjective well-being and social production functions. *Social Indicators Research*, 46(1), 61–90.
- Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy*, 70(5), 80–93.
- van Dalen, H. P., & Henkens, K. (2007). Longing for the good life: Understanding emigration from a high-income country. *Population and Development Review*, 33(1), 37–65.
- van Huizen, T., & Alessie, R. (2019). Risk aversion and job mobility. *Journal of Economic Behavior & Organization*, 164, 91–106.
- Williams, A. M., & Baláz, V. (2012). Migration, risk, and uncertainty: theoretical perspectives. *Population, Space and Place*, 18(2), 167–180.
- Williams, A. M., Jephcote, C., Janta, H., & Li, G. (2018). The migration intentions of young adults in Europe: A comparative, multilevel analysis. *Population, Space and Place*, 24(1), e2123.
- Witte, N., & Guedes Auditor, J. (2021). Affluent lives beyond the border? Individual wage change through migration. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of german migrants. Consequences of international migration across the life course*. Cham: Springer.

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# Chapter 6

## Settlement or Return? The Intended Permanence of Emigration from Germany Across the Life Course



Andreas Ette, Lenore Sauer, and Margit Fauser

### 6.1 Introduction

“While ‘winners’ settle, ‘losers’ return” (Haas et al. 2015, p. 416) is the quintessential neo-classical formula used to explain return migration. From this perspective, economically successful and socio-culturally integrated migrants settle permanently in their country of immigration whereas temporary migration and subsequent remigration takes place only if the previous cost-benefit calculation has not materialised and expectations have not been fulfilled (cf. Borjas and Bratsberg 1996; Constant and Massey 2002). This formula was turned upside down by the new economics of labour migration (NELM) assuming that households send out the most capable individuals to gain an income elsewhere in order to spread household income risks. In line with neo-classical thinking, NELM also assumes that migrants want to increase their income by optimising their economic performance. But the resulting better structural integration will not result in permanent settlement because migrants—once their goals have been fulfilled—return home (cf. Stark and Bloom 1985; Taylor 1999). Recently, the transnational perspective added a more dynamic view to this debate and suggested the consideration of individuals’ embeddedness in the social contexts of multiple countries. From this perspective, remigration takes place within systems of transnational interconnectedness between places of origin and destination, including ties, practices, and continued mobility, and does not necessarily constitute the end of a migration process. It is thus also not merely a result of economic and socio-cultural experiences in the destination country (cf. Fauser and Anghel 2019; Cassarino 2004).

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These theoretical debates continue to inspire analyses concerned with migration systems that display larger economic development differentials (e.g. Haas and Fokkema 2011; Lindstrom 1996) and not least those between former guest worker sending and European receiving countries (e.g. Diehl and Liebau 2015; Waldorf 1995). Instead, studies dealing with migrants from economically highly developed countries are scarce and the emerging literature on privileged migration—e.g. on expatriates and lifestyle seekers—rarely touches the question of the permanence of emigration (for exceptions see, for example, Bygnes and Erdal 2017; Fauser 2020; Konzett-Smoliner 2016; Steiner 2019). Existing studies that include migrant groups from economically less and more developed countries demonstrate largely different remigration behaviour (e.g. Khoo 2003; Diehl and Preisendörfer 2007). Overall, it is fair to state that we know rather little about the permanence of emigration from economically highly developed countries.

Do German emigrants intend to settle permanently abroad, or do they plan to return home after some time abroad? The few empirical studies on permanent settlement or return of German migrants thus far arrive at largely different conclusions. A study of German scientists in the United States concluded that 66% are planning to stay permanently (Buechtemann 2001) and an analysis among German emigrants on the Spanish island of Mallorca found that 78% of the respondents wished to remain there (Kaiser 2011). These numbers are in line with the 80% of former respondents of the Socio-economic Panel now living abroad who also intend to settle permanently abroad (Erlinghagen et al. 2009). In contrast to these findings, the official migration statistics of Germany show that between the years 1991 and 2018, overall 3.3 million German citizens resettled abroad. Yet, taking remigration of 2.5 million Germans into account, average yearly net migration was only  $-27,100$  German migrants. These numbers demonstrate a relatively high international migration volume of German citizens but an actually rather low migration intensity because within those three decades, approximately three-quarters of all emigrants might have returned (cf. Ette and Erlinghagen 2021). This finding fits the analyses by Ette and Sauer (2010) who, on the basis of completed employment career data of the German statutory pension insurance, showed that 80% of male employees who ever worked abroad during their career actually did return to Germany.

In light of these inconclusive findings, this chapter aims to provide a better understanding of the permanence of emigration from economically highly developed countries. Based on the German Emigration and Remigration Panel Study (GERPS) it provides initial evidence of those individual circumstances that shape German migrants' intentions to return after a temporary stay abroad compared to those who intend to settle permanently. The ideal research design would try to analyse actual migration behaviour. However, permanent settlement is an unfinished process par excellence because throughout the life course, return could always occur. Therefore, we would need data about an emigrant cohort who already lived abroad for an extended period together with data about those who had remigrated from this very same cohort. Because such data is not available, this study, as most other research on this topic, follows a stated-preference approach. Although migration intentions will not precisely match actual behaviour, research shows that

intentions constitute a good predictor of future behaviour (e.g. Ajzen 1991; van Dalen and Henkens 2013). For an analysis of stated preferences, GERPS provides data about a sample of emigrants who left Germany on average 12 months before the interview. Many existing surveys on settlement or return behaviour are carried out among migrants who have already stayed abroad for substantial periods. Whereas such studies are confronted with serious problems of selective remigration, GERPS offers information about intentions across a sample of recent emigrants, thus providing insights into aspects of their migration projects otherwise regularly overlooked.

In contrast to the traditional theoretical approaches discussed before, we argue that individual migration projects—particularly of migrants from economically highly developed countries (but perhaps from others, too)—are embedded within transitions in the individual life course (cf. Elder 1985; Bailey and Mulder 2017). Consequently, settlement and return intentions are, firstly, best understood by taking into account the interdependencies between migration and other domains of the individual life course, for example employment and working life, together with the linked lives of partners and other family members. Secondly, migration intentions develop as a response to the inherent path dependency of individual life courses including previous migration experiences and their embeddedness within broader institutional structures. This theoretical approach to study settlement and return intentions of emigrants from Germany will be discussed in the next section before the third section provides the empirical approach as well as descriptive information about the migration projects of our sample. Finally, the fourth section provides the results of multinomial logistic regressions differentiating between those who intend to stay permanently abroad and those who intend to return, in addition to those who were still undecided at the time of the survey. The final section concludes with a discussion about the potential of the life-course perspective for understanding individual migration intentions and migration projects more broadly.

## 6.2 Theoretical Considerations about the Permanence of Emigration

The individual intention of immigrants to return to their countries of origin or to settle permanently in their destination country depends on a variety of factors. Yet disagreement about the major drivers prevails, even for the case of traditional migration systems. German emigrants are a particularly highly qualified population and their intentions to settle or return might not be shaped so much by rather narrow economic assumptions driving return: either because of success (NELM) or failure (neo-classic). While not directly contradicting a transnational perspective, a life-course approach provides a way to conceptualise the intentions to stay on or move back as influenced by further career plans, changing family obligations, health and well-being as well as other transitions in their life course (e.g. Favell 2008; Massey

and Redstone Akresh 2006). The argument put forward here is that a life-course perspective provides an alternative way to predict migration intentions of persons from economically highly developed countries compared to existing approaches. The life-course perspective has established itself as an adequate theoretical framework for migration research (e.g. Geist and McManus 2008; Mulder and Wagner 1993) and the number of empirical studies has recently increased substantially (e.g. Falkingham et al. 2016; Dommermuth and Klüsener 2019) but mostly focused on internal migration. This study therefore joins recent attempts to apply the approach to international migration (but see Bettin et al. 2018; Kōu et al. 2015).

Life-course analyses do not share a concise set of testable propositions. They instead work through certain research perspectives, two of which are of particular relevance for the context of international migration: The first stipulates interdependencies between migration and other domains of the individual life course as well as with the life course of linked partners and further family members. Enrolling in further education and professional training, entering the labour market, partnership formation and dissolution, to name only a few, have all been found to influence migration intentions (e.g. Kley and Mulder 2010; Bettin et al. 2018). Three domains of the life course seem particularly relevant for the purpose of this study: (1) employment and working life; (2) partnership and family life; (3) well-being and social life. Second, migration is a self-perpetuating process that unfolds path dependencies throughout life courses, which are themselves embedded in broader institutional structures (cf. Elder 1985; Mayer 2009). Early events within the life course, for example previous stays abroad or immigration experiences of the parents, are linked with later events in the life course and subsequently shape current migration projects. Furthermore, the living conditions within different destination countries but also existing residence rights provide institutional structures along which migrants make their decisions.

*Employment and working life:* A first life-course domain concerns the position of an individual within working life. Most theoretical approaches focusing on settlement or return migration put emphasis on employment and the main activity status because of its fundamental importance for other spheres of life. In contrast to traditional theories—which come to different conclusions with respect to the role of working life—we expect a negative relationship between the job skill level and the intended length of stay in the case of overwhelmingly highly skilled international migrants from economically developed countries. Consequently, we expect the more qualified to return and the less qualified to be more likely to settle permanently. Highly skilled jobs require more flexibility and regularly demand the acquisition of new skills to enhance one's career, both making a stay abroad more likely than in less qualified jobs. However, as soon as those skills are acquired and the career demands for spatial flexibility end, migrants will return home because they have no interest in permanent settlement (cf. Stark 2019; van Ham et al. 2001). Next to the qualification of a job, individual employment status shapes migration intentions. Dependent employment—particularly as an expatriate moving abroad within the institutional context of a transnational company—is related with less personal investment compared to those owning their own business abroad. Acquiring skills



abroad is also a major motivation for all migrants who are still in education or training. With the institutional structures of academic mobility focusing mainly on temporary exchanges, international students are also more likely to express remigration intentions (cf. Hazen and Alberts 2006; Tharenou and Caulfield 2010). Finally, neo-classical approaches associate a worsening of individual economic performance with higher intentions to return. From a life-course perspective, unemployment or non-employment might not be related to remigration intentions since they are not understood from an individual perspective only. Instead, the life course of the partner or other family members might explain why setbacks for one partner might be accepted because of improvements for the other. Similarly, migrants' transition to retirement is regularly associated with higher intentions to return to the country of origin. Seen from the perspective of a traditional immigration country, the same argument would then predict permanent settlement intentions of older German emigrants with a migration background. But also German retirees without migration backgrounds might intend permanent settlement abroad—particularly those suffering from financial constraints (cf. Hayes 2014; Waldorf 1995).

*Partnership and family life:* The partner and family constitute a second domain of the life course closely linked to migration intentions. However, it is not so much the partnership and marital status as such, but the particular family arrangement that matters. When a partner is remaining in the origin country or other family obligations exist, this is likely to be linked to more temporary stays abroad. The opposite are partners originating from the current destination country. In this case, the couple unites abroad, which is a high incentive for more permanent settlement intentions (cf. Carling and Pettersen 2014; Konzett-Smoliner 2016). The household context in the destination country is expected to show more ambivalent results with respect to migration intentions. Generally, a family and in particular children in the destination country might increase social integration and thus the wish to stay permanently. Definitely the investment required of a family moving together abroad will be much greater compared to families living separately for a certain time. On the other hand, parents might want their children to grow up in the country of origin or at least to spend substantial parts of their education at home, which would reduce permanent settlement intentions (cf. Bivand Erdal and Ezzati 2015; Dustmann 2003). From a life-course perspective, partnership is also relevant because of the interdependence between the lives of both partners. A first consequence concerns the status of the partner in different domains of the life course potentially affecting one's own migration intention. A second consequence concerns the decision-making processes. Whereas a temporary stay abroad might be overwhelmingly shaped by the interests of one partner only, crucial biographical turning points like settling abroad permanently affect both partners and are more likely to be taken together.

*Well-being and social life:* A third domain of the life course affecting settlement or return intentions concerns the personal well-being and health situation as well as social interactions and integration. Although empirical results on traditional migrant groups are inconclusive, it is expected that migrants will prefer to return if their health status is deteriorating (cf. Arenas et al. 2015; Bettin et al. 2018). With respect to life satisfaction, the link to migration intentions is expected to be less linear.

Some studies suggest that less satisfied people are more willing to migrate because they have the most to gain. Others show that the more satisfied migrants choose to stay permanently, whereas the less satisfied return home (cf. Mara and Landesmann 2013; Otrachshenko and Popova 2014). Following propositions from socio-cultural integration theories, it can be assumed that social interactions with others and participation in the societies at destination and origin, e.g. having friends in the destination country or speaking its language, affect settlement and return migration intentions (cf. Diehl and Preisendörfer 2007; Steinmann 2019).

*Migration process:* A final dimension of the life course linked with settlement and return migration intentions are former experiences with migration. In line with the path-dependent logic inherent in many life-course approaches, one would expect that the longer migrants stay in the destination country, the more they will intend to settle permanently. Furthermore, prior stays abroad increase the likelihood to leave the destination country again because they indicate a mobile lifestyle. In contrast, previous migration experiences as an immigrant or as a child of immigrant parents might fundamentally change this reasoning. In this case, (biographical) migration experiences might result in an emigration to the country of birth, or that of the parents, making more permanent settlement intention more likely (cf. Kiliç and King 2017; Massey and Redstone Akresh 2006). The embeddedness of the migration process within institutional structures is more difficult to assess and the legal residence status has been found to have an ambiguous effect on the intention to settle permanently (cf. Carling and Pettersen 2014; Ette et al. 2016). With respect to the reception climate in the destination country, there is abundant literature documenting such effects on the integration of migrants but hardly any research exists about destination country effects on settlement or return intentions. Furthermore, existing studies provide plenty of evidence of migrant groups in the same country of destination who show very different settlement and return migration intentions. Generally, one would expect that a destination country with a high living standard and more amenities is more attractive for permanent stays. On the other hand, life in such a country may be more costly, potentially increasing return migration intentions.

### 6.3 Operationalisation of Theoretical Constructs

The following analyses use data from the first wave of the German Emigration and Remigration Panel Study (for more detailed information about the data source see Ette et al. 2021 in this volume). The sample is restricted to international migrants with German citizenship aged between 20 and 70 years who were living abroad at the time of the interview (between November 2018 and February 2019). It comprises 3554 emigrants who have lived abroad, on average, for 12 months and excludes individual cases falling out of the sampling frame who have stayed abroad already for more than 36 months (cf. Table 6.1 for an overview of dependent and independent variables).

**Table 6.1** Descriptive statistics of dependent and independent variables

Variable	Per cent/mean (SD)	Variable	Per cent/mean (SD)
<b>Dependent variable</b>		<i>Partner and family life</i>	
Migration intention		Partner in Germany (yes = 1)	6.4
Remigration	49.9	Partner from CoD (yes = 1)	15.8
Undecided	27.9	Children in HH (yes = 1)	18.5
Permanent settlement	22.2	Not decided together (yes = 1)	29.0
<b>Independent variables</b>		<i>Well-being and social life</i>	
Female (yes = 1)	51.1	Happiness	7.8 (1.6)
Age (in years)	35.3 (10.1)	Health (satisfactory/better = 1)	96.2
<i>Employment and working life</i>		Relative before mig. (yes = 1)	67.6
Education		Friends in CoD (yes = 1)	66.0
Higher tertiary	58.4	Language	
Lower tertiary	17.0	German in CoD	28.1
General maturity certificate	7.9	Mother tongue or good	48.1
Vocational certificate	7.5	Poor	23.8
Lower certificate	9.2	<i>Migration process</i>	
Employment status		Time since mig. (in years)	1.0 (0.5)
Employed	66.2	Mig. background (yes = 1)	27.3
Self-employed	7.5	Previous stay abroad (yes = 1)	64.8
Unemployed	2.2	Human Devel. Index in CoD	90.0 (7.1)
Retired	2.1	Residence status	
In education	11.0	Free movement	44.7
Not employed	11.0	Temporary residence title	37.8
Expatriate (yes = 1)	9.2	Permanent residence title	17.5

Source: GERPSw1

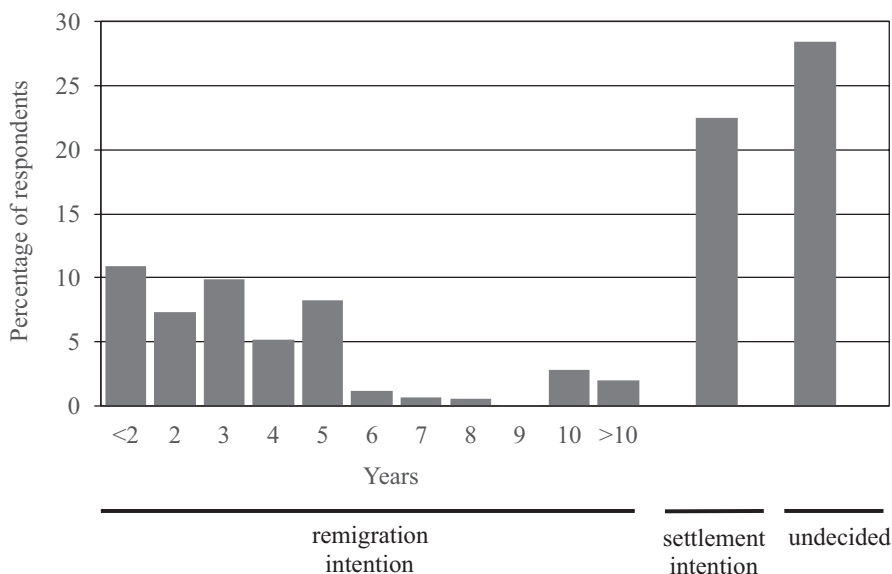
CoD country of destination

N = 3554

The literature has come up with different approaches to measure migration intentions (for an overview see Kley 2017). GERPS decided to adopt an approach followed by several new immigrant surveys and in particular by the IAB-SOEP Migration Sample (Brücker et al. 2014). In consequence, all respondents in GERPS living abroad at the time of the interview were asked: “How long do you want to stay in the country where you currently live?” They had to choose between the following categories: “a maximum of one more year,” “a few more years,” “forever,” and “don’t know yet.” For the multivariate analyses, we collapsed the first two categories into one category. This represents the intention to return after a couple of

years abroad, which is compared to those respondents who intend to settle permanently in the current destination country and—usually not regarded in most other studies (but see Di Barbiano Belgiojoso 2016; Tezcan 2018)—persons who are undecided about the length of their stay (dependent variable). The descriptive results show that 49.9% intend to remigrate, 27.9% have not yet decided about the permanence of their emigration, and 22.2%—although they have been living abroad only a relatively short time—intend to settle permanently. Additionally, a follow-up question asked all respondents stating that they are intending to stay a few more years: “How many years do you plan to stay in the country where you currently live?” The results of both questions show that among those who intend to stay temporarily, 84.5% expect to return to Germany within the next five years and only 10.1% plan to stay for ten or more years (see Fig. 6.1).

As covariates, we include variables along the four theoretical dimensions of the life course discussed in our theoretical approach together with controlling for sex, age, and—to represent a non-linear relationship between age, settlement, and return intentions—a quadratic age term. With respect to the first dimension—the individual employment situation—we control for the educational status of the respondents by applying the CASMIN classification (Brauns et al. 2003). Having its roots in social stratification research, it is a certificate-oriented classification, which focuses on educational signals for utilisation on the labour market and distinguishes general and vocational education. Because of the overall high educational background of internationally mobile Germans, lower and middle secondary education are collapsed into one category. Additionally, we consider the present employment status



**Fig. 6.1** Intentions about the permanence of global lives of German emigrants and the intended length of stay (in years) of those emigrants reporting to remigrate. (Source: GERPSw1)

of the respondents, differentiating between employed, self-employed, unemployed, retired, not employed, and presently enrolled in education, to test for structural integration into the labour market. Finally, we also take into account whether a migrant is an expatriate sent by his or her company because this type of international mobility is by definition planned for a temporary duration only.

The partnership and family dimension of the life course uses four variables. The first accounts for a family arrangement where the partner of the respondent still lives in Germany and a second for arrangements where one partner already lived in the destination country. The third variable reflects negotiations within the partnership and accounts for a situation where either the respondent or their partner was the driving force in the decision to move abroad, compared to situations in which such a decision is taken jointly by both partners. Finally, the household composition is taken into account by a dummy variable testing for the influence of children up to the age of 16 years present in the household.

The social life and well-being is included as the third dimension in our life-course approach. Social contacts are represented by two dummy variables with the first measuring whether contacts to relatives or friends in the country of destination existed before emigration and a second measuring whether respondents indicate that they have at least one close friend in the destination country. Speaking the language of the destination country is a crucial condition for meeting and mating with others (Martinovic et al. 2009). The categorical variable differentiates between three groups: those living in a country with German as a major language, those with at least good language abilities or speaking the language of the destination country as mother tongue, and those with only poor language abilities. Personal well-being is operationalised through several well-established items. This includes overall happiness, measured by the question “How satisfied are you with your life, all things considered” as a continuous variable with an eleven-point scale. The potential effect of deteriorating health as a reason for return migration is measured by the self-rated health accounting for overall physical or psychological health problems (Simon et al. 2005).

Finally, path dependency of the individual migration process is tested by the influence of five variables. Although GERPS focuses on recent emigrants only, a first variable controls for the time elapsed since the time of emigration and the time of the interview as a continuous variable. Secondly, a dummy variable differentiates between respondents with a migration background—either first or second generation—compared to respondents without biographical experiences as an immigrant in Germany. Information about previous stays abroad is included as a second dummy variable. It is based on the question whether respondents always lived in Germany before the recent emigration or whether they lived elsewhere at previous times, referring to continuous stays of more than 3 months in other countries. Furthermore, two variables control for the institutional context of the destination country. First, the general level of development of the destination country measured by the human development index and, second, the information provided by the respondents about their legal residence status, differentiating between temporary and permanent

residence permit, and free movement rights as a German citizen, for example for a stay within another member state of the European Union.

In our analyses, we concentrate on investigating differences in migration intentions of recent emigrants using multinomial logistic regression models. The dependent variable differentiates between three groups: those respondents who intend to return to Germany and opt for a temporary stay only, the undecided who have not made up their mind about the length of their stay, and those who intend to settle permanently. To understand how status differences across various dimensions of the life course contribute to those different migration intentions, we estimate multivariate regression models testing the influence of each dimension of the life course separately as well as a full model including all dimensions simultaneously and calculate average marginal effects (output for the different dimensions as well as average marginal effects available on request from the authors). In all analyses, the base outcome is temporary migration intentions and the estimated coefficients were transformed to relative risk ratios. We performed several robustness checks by employing linear and ordinal regression models. These models include the information on the intended duration of stay as a linear or categorical variable and principally support the findings of the multinomial logistic regressions. Furthermore, alternative multinomial logistic regressions have been estimated, separating different cut-off points of short or long durations of stay. Because of small case numbers for respondents intending to stay more than 5 years but less than permanently, these models have been not included in the final version but are available on request.

#### **6.4 Settlement and Remigration Intentions Across the Life Course**

The results of the multinomial logistic regression models are displayed in Table 6.2. They show that, overall, significant differences exist between the three groups: Migrants who indicate that they intend to return contrast with those who intend to settle permanently abroad while the group of undecided migrants is situated somewhere in between. Whereas hardly any gender difference exists, the data show a rather linear effect of age on settlement and remigration intentions. Older migrants have higher probabilities to settle permanently—while at the age of 30 every fifth German living abroad reports permanent settlement intentions, this share increases to every third person at the age of 60—a strong indication that the life course is of major relevance in understanding migration intentions.

The empirical results support several of the theoretical expectations. For the mostly highly skilled emigrants from Germany, there is a negative relationship between qualification and the intended length of stay. Those emigrants with an academic degree (completed higher or lower tertiary education) show a significantly reduced risk of permanent settlement intentions compared to return migration intentions, but also compared to those migrants still undecided. The relative risk ratio of

**Table 6.2** Multinomial logistic regressions on settlement and remigration intentions

	Undecided vs. return	Settlement vs. return	Settlement vs. undecided
Female (ref. male)	1.286** (0.114)	1.113 (0.117)	0.866 (0.093)
Age	1.027*** (0.007)	1.046*** (0.008)	1.019* (0.008)
Age <sup>2</sup>	0.999** (0.000)	0.999+ (0.000)	1.000 (0.000)
Education (ref. lower certificate)	–	–	–
Higher tertiary education	0.394*** (0.069)	0.215*** (0.039)	0.546*** (0.091)
Lower tertiary education	0.547** (0.105)	0.254*** (0.052)	0.464*** (0.088)
General maturity certificate	0.608* (0.137)	0.332*** (0.083)	0.545* (0.131)
Vocational maturity certificate	0.787 (0.177)	0.561* (0.131)	0.714 (0.152)
Employment status (ref. employed)	–	–	–
Self-employed	1.556* (0.268)	1.570* (0.294)	1.009 (0.179)
Unemployed	1.339 (0.390)	1.514 (0.495)	1.131 (0.344)
Retired	1.914 (1.020)	6.092*** (2.828)	3.183** (1.392)
Education or training	0.536*** (0.083)	0.300*** (0.065)	0.561* (0.128)
Not employed	0.563*** (0.087)	0.639** (0.109)	1.134 (0.209)
Expat (ref. no)	0.376*** (0.068)	0.103*** (0.039)	0.275** (0.110)
Partner in Germany (ref. no)	0.555** (0.109)	0.599* (0.146)	1.079 (0.293)
Partner from CoD (ref. no)	1.832*** (0.242)	3.627*** (0.495)	1.980*** (0.255)
Not decided together (ref. no)	0.745** (0.070)	0.769* (0.084)	1.032 (0.116)
Children in household (ref. no)	0.830 (0.103)	1.016 (0.140)	1.224 (0.176)
Happiness	0.938* (0.025)	1.246*** (0.045)	1.329*** (0.048)
Health (ref. poor)	0.965 (0.223)	0.855 (0.249)	0.886 (0.252)
Relatives in CoD before mig. (ref. no)	1.352** (0.131)	2.207*** (0.285)	1.633*** (0.222)
Friends in CoD (ref. no)	1.119 (0.104)	1.564*** (0.178)	1.397** (0.162)
Language of CoD (ref. very good)	–	–	–
German in CoD	1.486*** (0.155)	1.609*** (0.194)	1.083 (0.130)
Poor	0.805+ (0.092)	0.805 (0.113)	1.000 (0.148)
Time since migration	0.999 (0.091)	0.924 (0.101)	0.925 (0.103)
Migration background (ref. no)	1.134 (0.111)	1.289* (0.147)	1.137 (0.132)
Previous stays abroad (ref. no)	0.847+ (0.081)	0.773* (0.086)	0.913 (0.103)
Human Development Index of CoD	1.028*** (0.008)	1.034*** (0.010)	1.005 (0.010)
Residence status (ref. free movement)	–	–	–
Temporary residence title	0.708*** (0.069)	0.590*** (0.070)	0.834 (0.102)
Permanent residence title	1.052 (0.133)	1.460** (0.198)	1.387* (0.187)
Constant	0.114** (0.087)	0.049** (0.045)	0.429 (0.424)
McFadden's pseudo R <sup>2</sup>	0.15		
N	3554		

Exponentiated coefficients (relative risk ratios); Standard errors in parentheses. Source: GERPSw1, authors' calculations

CoD country of destination

+ < 0.1, \* $p$  < 0.05, \*\* $p$  < 0.01, \*\*\* $p$  < 0.001

migrants with higher tertiary education compared to those with a secondary educational certificate is 0.215 for being in the settlement vs return migration group (0.546 for settlement vs undecided).

Most likely, the higher educational level increases employment opportunities in the current destination country but also back home, potentially reducing the intention to settle. Overall, the highly qualified show little interest in permanent settlement, but for them international migration is a more functional biographical trajectory to acquire certain skills. The results for individual employment status support some of the theoretical assumptions: Whereas the additional investments of the self-employed increase their risk for permanent over temporary settlement, status as a student who is still in education or training reduces this risk significantly. In addition, the results for not being employed seem to be strongly related with an intention to return whereas this effect could not be confirmed for unemployment. Although the size of this group is relatively small and the effects are not statistically significant at conventional levels, unemployment even has a positive effect on the risk for more permanent settlement intentions. The findings on retirement provide a new perspective: Retired emigrants show a high risk of settling abroad permanently. Additional analyses show that this is true for both former immigrants to Germany as well as persons without migration backgrounds.

With respect to the effect of the partner and family life, the empirical results overall confirm theoretical considerations. Having a partner still living in Germany significantly reduces the risk of permanent settlement as well as of being undecided compared to return migration. In contrast, comparing the risks of those with permanent settlement intentions versus those having not yet made a decision, however, further supports the argument that a partner in Germany is a strong incentive to return. In addition, the expectation that a partner originating from the destination country reduces return intentions is supported. Based on the analysis of the average marginal effects, the probability of intending to settle permanently is 33.0% – more than double compared to other partnership arrangements. The expected ambivalent results about the household context and the presence of children are also confirmed. The presence of children has no significant effect on settlement or return intentions. Alternative models focusing on children of younger ages do not change those results and support the overall finding that the actual effect of the presence of children in the households on the probabilities to settle or return are small. Interestingly, the effects show that children make respondents' intentions more pointed and the risk of being undecided decreases. Finally, the indicator testing for decision-making is also in line with theoretical predictions: Individually taken migration decisions increase the risk of only temporary stays abroad whereas the intention for permanent settlement is preceded by joint decision-making.

Compared to the internationally non-mobile population, the physical and mental health status of German emigrants is much better (see Table 6.1 and see Stawarz et al. 2021 in this volume). Our results are statistically not significant. Nevertheless, it must be mentioned that in contrast to theoretical expectations, the healthier



migrants want to return whereas the unhealthier want to settle permanently. Overall satisfaction with life has a stronger association with remigration intentions. Here, the literature review provided different expectations about its effect with a linear but also a curvilinear u-shaped relationship. The empirical models tested several relationships (not shown in Table 6.2) but demonstrate a rather linear link between happiness and permanent settlement. The more satisfied migrants are more likely to settle permanently, whereas the less satisfied intend to return home. The undecided emigrants seem to be less satisfied, which explains the negative relation between the undecided and the remigration group. The remaining variables largely follow the theoretical expectations: Having relatives and friends in the destination country before emigration from Germany increases the risk to intend to settle permanently as does having close friends in the destination country. Further personal investments in the destination country, however, show more results that are inconclusive. Living in a German-speaking country, e.g. Austria or Switzerland, has a positive effect on the risk of settling permanently. However, poor language abilities in non-German speaking countries are hardly relevant for the intention to return or to settle (only the risk of being undecided compared to return increases). This finding either might be caused by the very recent emigration and consequently short duration of stay, or it is a potential indication of comparatively low social involvement of German emigrants in the local context of the destination country.

One key advantage of GERPS compared to many other migrant samples is its focus on recent emigrants who migrated on average only 1 year ago. Not surprisingly, the duration of stay in the destination country shows no significant and only weak effect. Other variables taking account of the migration process are in line with theoretical expectations: Prior stays abroad increase the likelihood to leave the destination country again whereas previous migration experiences as an immigrant or as a child of immigrant parents increases the risk for permanent compared to return migration. Furthermore, the residence title is closely related to settlement or remigration intentions. Although causality in cross-sectional analyses might generally be bi-directional, in the case of residence titles this is particularly obvious. The fact that a temporary title reduces the risk of permanent settlement might also be explained by a high interest in return migration. Nevertheless, it is a first indication that the “context of reception” (Luthra et al. 2018) in the destination country is relevant for further intentions even for emigrants from Germany. This is also supported by the positive effect of the human development index showing that a higher standard of living in the destination country increases the risk of settling permanently compared to return migration as well as in the comparison between undecided emigrants and those intending to return. This finding is robust in separate analyses excluding neighbouring countries like Switzerland or Austria. It confirms the assumption that destination countries with a high living standard and more amenities are more attractive for permanent settlement intentions of emigrants from economically highly developed countries.

## 6.5 Conclusion

The aim of this chapter was to analyse the intended permanence and length of migration projects of recent German emigrants. The results show that emigration from Germany is a predominantly temporary phenomenon with 49.9% intending to return, most of them within a relatively short period of only a few years. Furthermore, the chapter aimed to identify major drivers of the intentions to settle or to return in order to get a better picture of the characteristics of those migrants who want to stay abroad permanently and those who might come back to Germany. First, the empirical findings reveal that there is a negative relationship between the level of qualification of migrants and their intended permanence of migration. The most qualified tend to stay abroad only on a temporary basis and intend to return in the near future. Second, the results show that the settlement or return migration intentions are hardly explained by a neo-classical “winners” or “losers” dichotomy. Instead, migration intentions are closely linked to the individual status within several domains of individual life courses.

On the one hand, this chapter has demonstrated that a life-course perspective is better able to explain return and settlement intentions of migrants from economically highly developed countries. The interdependencies between different domains of the life course, the linked lives between respondents and their partner as well as the inherent path dependency within life courses fit settlement and remigration intentions better than overarching, mainly economical approaches. On the other hand, the chapter falls short of exploiting the full potential of this new perspective. The focus of the presented approach was on the effect of statuses in different life-course domains but hardly touched on the effect of events in different domains on migration intentions. The focus of life-course approaches on events, transitions, and trajectories has not yet been exploited but will become increasingly possible within the further development of GERPS as a panel study. The panel design of GERPS will also unlock further potentials and help to increasingly see migration beyond a singular event. On the one hand, it will provide the opportunity to analyse how intentions to stay permanently are implemented in practice and settlement solidifies. On the other hand, the panel will allow analyses about the influence of life-course events on changing previously stated intentions. Furthermore, the presented approach has accounted for mutual dependencies of the life courses of interacting individuals as linked lives. It has not fully recognised the embeddedness of individual migration processes in more superordinate social contexts, especially the crucial influence of different countries of destination. The findings on the human development status hint at obvious destination country effects, which need to be analysed in greater depth in future.

## References

- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behaviour and Human Decision Processes*, 50, 179–211.
- Arenas, E., Goldman, N., Pebley, A. R., & Teruel, G. (2015). Return migration to Mexico: Does health matter? *Demography*, 52(6), 1853–1868.
- Bailey, A., & Mulder, C. H. (2017). Highly skilled migration between the Global North and South: Gender, life courses and institutions. *Journal of Ethnic and Migration Studies*, 43(16), 2689–2703.
- Bettin, G., Cela, E., & Fokkema, T. (2018). Return intentions over the life course: Evidence on the effects of life events from a longitudinal sample of first- and second-generation Turkish migrants in Germany. *Demographic Research*, 39(38), 1009–1038.
- Bivand Erdal, M., & Ezzati, R. (2015). ‘Where are you from’ or ‘when did you come’? Temporal dimensions in migrants’ reflections about settlement and return. *Ethnic and Racial Studies*, 38(7), 1202–1217.
- Borjas, G. J., & Bratsberg, B. (1996). Who leaves? The outmigration of the foreign-born. *The Review of Economics and Statistics*, 78(1), 165–176.
- Brauns, H., Scherer, S., & Steinmann, S. (2003). The CASMIN educational classification in International Comparative Research. In J. H. P. Hoffmeyer-Zlotnik & C. Wolf (Eds.), *Advances in cross-national comparison. A European working book for demographic and socio-economic variables* (pp. 221–244). New York: Kluwer Academic.
- Brücker, H., Kroh, M., Bartsch, S., Goebel, J., Kühne, S., Liebau, E., Trübswetter, P., Tucci, I., & Schupp, J. (2014). *The new IAB-SOEP Migration Sample: an introduction into the methodology and the contents: SOEP Survey Papers 216. Series C—Data Documentations*. Berlin: DIW—Deutsches Institut für Wirtschaftsforschung.
- Buechtemann, C. F. (2001). Deutsche Nachwuchswissenschaftler in den USA: Ergebnisse der Vorstudie. In BMBF (Ed.), *Deutsche Nachwuchswissenschaftler in den USA. Perspektiven der Hochschul- und Wissenschaftspolitik* (pp. 19–89). Bonn: BMBF.
- Bygnes, S., & Erdal, M. B. (2017). Liquid migration, grounded lives: considerations about future mobility and settlement among Polish and Spanish migrants in Norway. *Journal of Ethnic and Migration Studies*, 43(1), 102–118.
- Carling, J., & Pettersen, S. (2014). Return migration intentions in the integration-transnationalism matrix. *International Migration*, 52(6), 13–30.
- Cassarino, J.-P. (2004). Theorising return migration: The conceptual approach to return migrants revisited. *International Journal on Multicultural Societies (IJMS)*, 6(2), 253–279.
- Constant, A., & Massey, D. S. (2002). Return migration by German guestworkers: neoclassical versus new economic theories. *International Migration*, 40(4), 5–38.
- Di Barbiano Belgiojoso, E. (2016). Intentions on desired length of stay among immigrants in Italy. *Genus: Journal of Population Science*, 72(1), 1–22.
- Diehl, C., & Liebau, E. (2015). Turning back to Turkey—Or turning the back on Germany? *Zeitschrift für Soziologie*, 44(1), 22–41.
- Diehl, C., & Preisendörfer, P. (2007). Gekommen um zu bleiben? Bedeutung und Bestimmungsfaktoren der Bleibeabsicht von Neuzuwanderern in Deutschland. *Soziale Welt*, 58, 5–28.
- Dommermuth, L., & Klüsener, S. (2019). Formation and realisation of moving intentions across the adult life course. *Population, Space and Place*, 25(5), e2212.
- Dustmann, C. (2003). Children and return migration. *Journal of Population Economics*, 16, 815–830.
- Elder, G. H. (1985). *Life course dynamics: trajectories and transitions, 1968–1980*. Ithaca, New York: Cornell University Press.
- Erlinghagen, M., Stegmann, T., & Wagner, G. G. (2009). Deutschland ein Auswanderungsland? *DIW Wochenbericht*, 39(2009), 663–669.

- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Heß, B., & Sauer, L. (2016). Tackling Germany's demographic skills shortage: Permanent settlement intentions of the recent wave of labour migrants from non-European countries. *Journal of International Migration and Integration*, 17(2), 429–448.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Falkingham, J., Sage, J., Stone, J., & Vlachantoni, A. (2016). Residential mobility across the life course: Continuity and change across three cohorts in Britain. *Advances in Life Course Research*, 30, 111–123.
- Fausser, M. (2020). *Mobile citizenship. Spatial privilege and the transnational lifestyles of senior citizens*. London: Routledge.
- Fausser, M., & Anghel, R. G. (2019). Introduction: A meso-level approach to linking transnational return and social change. In R. G. Anghel, M. Fausser, & P. Boccagni (Eds.), *Transnational return and social change. Hierarchies, identities and ideas* (pp. 1–21). London: Anthem.
- Favell, A. (2008). *Eurostars and eurocities. Free movement and mobility in an integrating Europe*. Oxford: Blackwell.
- Geist, C., & McManus, P. A. (2008). Geographical mobility over the life course: Motivations and implications. *Population, Space and Place*, 14(4), 283–303.
- Haas, H. d., & Fokkema, T. (2011). The effects of integration and transnational ties on international return migration intentions. *Demographic Research*, 25(24), 755–782.
- Haas, H. d., Fokkema, T., & Fihri, M. (2015). Return migration as failure or success?: The determinants of return migration intentions among moroccan migrants in Europe. *Journal of International Migration and Integration / Revue de l'integration et de la migration internationale*, 16(2), 415–429.
- Hayes, M. (2014). 'We gained a lot over what we would have had': The geographic arbitrage of North American lifestyle migrants to Cuenca, Ecuador. *Journal of Ethnic and Migration Studies*, 40(12), 1953–1971.
- Hazen, H. D., & Alberts, H. C. (2006). Visitors or immigrations? International students in the United States. *Population, Space and Place*, 12, 201–216.
- Kaiser, C. (2011). *Transnationale altersmigration in Europa: Sozialgeografische und gerontologische Perspektiven*. Wiesbaden: VS Verlag.
- Khoo, S.-E. (2003). Sponsorship of relatives for migration and immigrant settlement intention. *International Migration*, 41(5), 177–199.
- Kilingç, N., & King, R. (2017). The quest for a 'better life': Second-generation Turkish-Germans 'return' to 'paradise'. *Demographic Research*, 36, 1491–1514.
- Kley, S. (2017). Facilitators and constraints at each stage of the migration decision process. *Population Studies*, 71(S1), 35–49.
- Kley, S., & Mulder, C. (2010). Considering, planning, and realizing migration in early adulthood. The influence of life-course events and perceived opportunities on leaving the city in Germany. *Journal of Housing and the Built Environment*, 25, 73–94.
- Konzett-Smoliner, S. (2016). Return migration as a 'family project': exploring the relationship between family life and the readjustment experiences of highly skilled Austrians. *Journal of Ethnic and Migration Studies*, 42(7), 1094–1114.

- Kōu, A., van Wissen, L., van Dijk, J., & Bailey, A. (2015). A life course approach to high-skilled migration: Lived experiences of Indians in the Netherlands. *Journal of Ethnic and Migration Studies*, 41(10), 1644–1663.
- Lindstrom, D. P. (1996). Economic opportunity in Mexico and return migration from the United States. *Demography*, 33(3), 357–374.
- Luthra, R., Soehl, T., & Waldinger, R. (2018). Reconceptualizing context: A multilevel model of the context of reception and second-generation educational attainment. *International Migration Review*, 52(3), 898–928.
- Mara, I., & Landesmann, M. (2013). *Do I stay because I am happy or am I happy because I stay? Life satisfaction in migration, and the decision to stay permanently, return and out-migrate*. Norface Migration Discussion Paper No. 2013-08. Vienna.
- Martinovic, B., van Tubergen, F., & Maas, I. (2009). Dynamics of interethnic contact: A panel study of immigrants in the Netherlands. *European Sociological Review*, 25(3), 303–318.
- Massey, D. S., & Redstone Akresh, I. (2006). Immigrant intentions and mobility in a global economy: The attitudes and behavior of recently arrived U.S. Immigrants. *Social Science Quarterly*, 87(5), 954–971.
- Mayer, K. U. (2009). New trends in life course research. *Annual Review of Sociology*, 35, 493–514.
- Mulder, C. H., & Wagner, M. (1993). Migration and marriage in the life course: A method for studying synchronized events. *European Journal of Population*, 9(1), 55–76.
- Otrachshenko, V., & Popova, O. (2014). Life (dis)satisfaction and the intention to migrate: Evidence from Central and Eastern Europe. *Journal of Behavioral and Experimental Economics (formerly The Journal of Socio-Economics)*, 48, 40–49.
- Simon, J. G., de Boer, J. B., Joung, I. M. A., Bosma, H., & Mackenbach, J. P. (2005). How is your health in general? A qualitative study on self-assessed health. *European Journal of Public Health*, 15(2), 200–208.
- Stark, O. (2019). Behavior in reverse: reasons for return migration. *Behavioural Public Policy*, 3(1), 104–126.
- Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review*, 75(2), 173–178.
- Stawarz, N., Ette, A., & Rüger, H. (2021). Healthy migrants? Comparing subjective health of German emigrants, remigrants and non-migrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Steiner, I. (2019). Immigrants' intentions—leaning towards remigration or naturalization? In I. Steiner & P. Wanner (Eds.), *Migrants and expats: the Swiss migration and mobility Nexus* (pp. 293–314). Cham: Springer.
- Steinmann, J.-P. (2019). One-way or return? Explaining group-specific return intentions of recently arrived Polish and Turkish immigrants in Germany. *Migration Studies*, 7(1), 117–151.
- Taylor, E. J. (1999). The new economics of labour migration and the role of remittances in the migration process. *International Migration*, 37(1), 63–88.
- Tezcan, T. (2018). 'I (do not) know what to do': how ties, identities and home states influence Mexican-born immigrants' return migration intentions. *Migration and Development*, 7(3), 388–411.
- Tharenou, P., & Caulfield, N. (2010). Will I stay or will I go? Explaining repatriation by self-initiated expatriates. *Academy of Management Journal*, 53(5), 1009–1028.
- van Dalen, H. P., & Henkens, K. (2013). Explaining emigration intentions and behaviour in the Netherlands, 2005-10. *Population Studies*, 67(2), 225–241.
- van Ham, M., Mulder, C. H., & Hooimeijer, P. (2001). Spatial flexibility in job mobility: Macrolevel opportunities and microlevel restrictions. *Environment and Planning A*, 33(5), 921–940.
- Waldorf, B. (1995). Determinants of international return migration intentions. *The Professional Geographer*, 47(2), 125–136.

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**Part III**  
**Employment and Social Mobility**

# Chapter 7

## Affluent Lives Beyond the Border? Individual Wage Change Through Migration



Nils Witte and Jean Guedes Auditor

### 7.1 Introduction

Individual labour market outcomes of migration are a core interest of migration research. Several studies have analysed the consequences of migration in terms of individual socio-economic outcomes. They aim to describe mobile populations in terms of their socio-economic background and the socio-economic consequences. These studies analysed the outcomes of migration in terms of occupational achievement (Mulder and van Ham 2005), occupational status (Akresh 2006; Chiswick et al. 2005), or wages (Lersch 2014; Newbold 1996). Methodologically, researchers have increased efforts to establish causal relationships between spatial mobility and labour market outcomes. They use panel analyses to estimate the individual wage consequences of migration (Lersch 2014; McKenzie et al. 2010; Newbold 1996). However, this research often deals with internal migration in developed countries. Emigration from developed countries and labour market outcomes of these emigrants are blind spots. This chapter responds to this gap by analysing wage changes of German emigrants and their determinants in various destination countries.

The majority of research on individual labour market outcomes of migration has dealt with migration from less to more developed countries. The availability of immigrant surveys in host countries in the global North and the scale of immigration from the global South are crucial reasons for the focus of past research. However, migration flows exist between developed countries as well (Favell et al. 2007). Emigration from industrial countries and its individual consequences have gained more attention recently (Borjas et al. 2018; Gould and Moav 2016; Pary et al. 2017). However, the focus often lies with the self-selection of emigrants. These studies either compare pre-migration wages of emigrants and non-migrants in the origin country or they compare wages of emigrants in various destination

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countries. This chapter looks at migration from Germany, a highly developed country, to a variety of other countries. The hope for a better life and career options are major motives for emigrants to leave high-income countries (Engler et al. 2015; van Dalen and Henkens 2007). We examine whether migrants' wage prospects are fulfilled abroad. As a reference, we compare their wage change with that among the German resident population in a similar time frame.

We contribute to the literature on migrant selectivity and labour market outcomes by analysing changes in net hourly wages before and after emigration from Germany. Our analysis relies on present and retrospective wage information of individuals who emigrated between July 2017 and June 2018. Furthermore, we compare emigrants' wage changes with the wage changes among non-migrants. The analysis is based on the first wave of the novel German Emigration and Remigration Panel Study (GERPS) and on the 2016 and 2017 waves of the German Socio-Economic Panel Study (SOEP v34). In this way, we connect the idea of selectivity and the analysis of labour market outcomes.

## 7.2 Theoretical Perspectives on Migration and Wage Change

Much literature analyses migrants' labour market outcomes in terms of employment and remunerations (Adsera and Chiswick 2007; Chiswick 1978; Buzdugan and Halli 2009; Kogan 2011). These studies explore the implications of migration for individual human capital (Sjaastad 1962). Migration may devalue origin country-specific human capital resulting in deskilling (e.g. Salmonsson and Mella 2013) and it can be seen as a process that involves investment into individual human capital (Duleep and Regets 1999; Nowicka 2014). In other words, this literature aims at explaining to what extent human capital is transferable to other countries (Friedberg 2000). However, this literature is mostly concerned with migration from less developed to developed countries like the US, Australia, or European countries. Also, these studies usually compare labour market outcomes of immigrants and the native population in the destination country. The unavailability of data from an origin country perspective impairs the separation of wage changes owed to migration from wage changes owed to the selectivity of migrants.

Research has highlighted the highly selective nature of emigration (e.g. Borjas 1991, 1987; Chiquiar and Hanson 2005; Dumont and Lemaître 2005; Pary et al. 2017; see also Ette and Witte 2021 in this volume). These studies aim to determine whether immigrants are positively or negatively selected from the origin population regarding their skills and wages. In the German context, various studies have investigated the composition of emigrants in terms of their education and occupations (Diehl and Dixon 2005; Enders and Bornmann 2002; Engler et al. 2015; Erlinghagen 2011; Ette and Sauer 2010; Kopetsch 2009; Mau et al. 2008). Restrictive policies of destination countries are one reason for this selectivity, but higher human capital may also reduce the adaptation costs in foreign labour markets (Heath and Yu 2005).

We investigate the wage consequences of migration against the background of the human capital perspective. Labour market outcomes of migrants are often understood in terms of individual human capital and its transferability abroad (Friedberg 2000). From a human capital perspective, labour migration can be conceptualised as an investment in individual human capital (Mincer 1974; Sjaastad 1962). As such, (international) migration is associated with costs and returns that can be monetary or non-monetary. We focus on monetary returns, since actual individual costs and non-monetary costs are not captured by the GERPS survey.

Human capital theory suggests decreased hourly wages after migration because human capital is lost to some extent. Empirically, wage increases are more likely, because career prospects are key drivers of voluntary migration (Engler et al. 2015; van Dalen and Henkens 2007). First, this increase could be owed to wage-level differences between countries, which may raise wages regardless of human capital devaluation. Second, the increase could be owed to higher remuneration of transferable human capital abroad. The universality of the English language in high-level business and academic jobs assures the transferability of human capital among the highly skilled. We therefore expect average hourly wages to increase after migration and this increase must be higher than among non-migrants in order to incentivise labour emigration from a highly developed country.

Average wage changes after migration are not uniform across German emigrants. We therefore seek to understand the variation of wage changes between migrants. However, most existing theory is tailored to migration from less to more developed countries. As a consequence, we formulate research questions rather than hypotheses. We investigate to what extent the wage changes vary by human capital endowments and their transferability.

The transferability of human capital is likely to be high in regions where emigrants can apply their language skills (Fuller and Martin 2012; McManus et al. 1983). Although there is no direct measure for language skills and language use at work in GERPS, German and English skills are likely to be high in our selective group. Therefore human capital transferability will be higher in countries like Austria, Switzerland, the UK, and the USA. In addition, English skills are more likely to be useful in large companies than in small ones. Some employers deploy their employees abroad. In such cases, employers are apparently interested in the transfer of human capital from Germany to another country.

Since specific knowledge is desirable in these transfers, such deployment yields the wage benefits of internal labour markets (Doeringer and Piore 1971). Given companies' interest in this knowledge transfer, they are likely to offer wage premiums to incentivise deployment.

Human capital transfers are further indicated by supervisory responsibilities of emigrants. Only if their human capital is transferable will employers assign migrants to supervisory functions. If their leadership skills are valued, the number of supervised employees may increase abroad and is likely to be compensated financially. Thus, we would expect wages to be relatively higher in German and English speaking countries, in larger compared to smaller companies, for posted workers

compared to self-initiated movers, and for workers with (increased) supervisory responsibilities.

The level of human capital endowments could moderate the relationship between emigration and labour market outcomes potentially through one of two mechanisms. One is a process of cumulative advantage (CA) as expressed in Mincer's human capital earnings function (Mincer 1974). According to this model, wages grow through investment in human capital and positive rates of return on such investment. A source of potential CA arises if these rates of return on resources and investments diverge between groups (DiPrete and Eirich 2006). This simple form of CA should be sufficient to analyse whether emigrants with higher human capital endowments benefit from disproportional wage increases compared with emigrants who have lower endowments.<sup>1</sup>

If instead there is no CA, emigration generates equal returns on emigration for individuals with various individual or firm characteristics (e.g. human capital endowments, firm-size). If that were the case, less qualified individuals would benefit as much as more qualified individuals and employees in small firms would benefit as much as employees in large firms. We aim to explore whether emigration is a CA process or not. One limitation is that we focus on short term consequences, while CA processes usually unfold over extended periods (see e.g. Fuller 2015).

In the following sections, we empirically test wage changes after migration. Furthermore, we investigate to what extent the transferability of human capital and returns on human capital endowments vary among German emigrants.

### 7.3 Data and Methods

We use data from the first wave of GERPS (Ette et al. 2021) and 2016 and 2017 waves from the German Socio-Economic Panel (SOEP) (Goebel et al. 2019). Our GERPS sample is restricted to employees, workers, and civil servants who held a job before and after emigration and who provided information about their net income both before and after emigration. Additional restrictions for our analysis refer to the time since arrival and age. We are interested in the relationship between migration and income change. The more years passed since migration, the more fuzzy this relationship becomes. Because some interviewees have stayed for extended periods in their destination country, we restrict our emigrant sample to individuals who arrived no longer than 2 years before the survey. The age range is restricted to individuals between 20 and 70 years old. Furthermore, the analytical sample is restricted to observations without any missing values on our models' variables to ease comparisons between models ( $N = 1275$ ).

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<sup>1</sup>We acknowledge that our group is not unlikely to host highly talented individuals that imply CA processes of the kind described in Rosen's 1981 model of superstars. However, such cases are inherently difficult to assess with general surveys since they would appear as outliers while we are concerned with population means.

For the Difference-in-Difference estimation (DiD) we construct a reference sample from 2016 and 2017 SOEP data. That allows us to measure the net income difference between 2016 and 2017. The sample is restricted to employees, workers, and civil servants who held a job in 2016 and 2017 and who provided information about their net income and working hours in 2016 and 2017 to match the GERPS emigrant sample. The age range is restricted to individuals between 20 and 70 years old. Furthermore, the analytical SOEP sample is restricted to cases without any missing values on the variables that we include in our multivariate model ( $N = 8289$ ). We must keep in mind that our descriptive figures refer to a very particular group of emigrants whose main activity was employment both before and after emigration.

### 7.3.1 Variables

The dependent variable is the difference between log net hourly wage 3 months before migration and at the time of the interview. We rely on net rather than gross wages because tax and welfare systems vary between Germany and destination countries. The change in net wages is therefore a more relevant outcome from the perspective of emigrants. We proceed as follows to obtain valid wage information.

First, negative net monthly incomes are recoded as missing values. Second, we impute net incomes for those who indicate categories instead of concrete values. The imputation relies on median values of those respondents who report exact values in the respective category range. To transform this grouped information into pseudo-exact information, we calculate the median-separately for employed and self-employed-for each particular income group based on the exact observations in the dependent variable for the corresponding income groups. Finally, all participants with grouped net wage information are assigned to this estimated group median.

Third, some respondents apparently reported their yearly income where we asked for monthly incomes in the retrospective question owed to a misleading wording of the item.<sup>2</sup> We exclude respondents whenever the following two conditions apply: the objective income decreases in spite of a subjective income increase and the retrospective monthly income has at least five digits which suggests that participants reported yearly incomes.

Finally, we calculate hourly wages by dividing monthly wages by the average weeks per month (4.345) and the actual weekly working hours. Further, we bottom- and top-code values that are lower than the first percentile value or higher than the 99th percentile value. Then, we take the natural logarithm at both times and calculate the difference. Furthermore, we match price level ratios of PPP conversion factors to market exchange rates to destination countries to control for country

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<sup>2</sup>Questionnaire-item: "Please indicate your average net monthly labour earnings in the year before you moved." (*Wie hoch war Ihr durchschnittlicher monatlicher Netto-Arbeitsverdienst im Jahr vor Ihrem Umzug?*)

differences (Worldbank 2019). We use indicators for the reference year 2018 throughout.

We treat all covariates as time constant. Where we have information referring to both points in time, we include variables that indicate the change in the respective characteristic. Gender is coded one for women and zero for men, and present age is coded in years. To measure labour market skills we include a condensed ISCED scale that differentiates the following four categories: post-secondary education or less, bachelor's degrees or equivalents, master's degrees or equivalents, and doctoral degrees. In terms of human capital we further control for present work experience in years, which we derive from the first year of the employment career (if known) and education years respectively.

Furthermore, we account for the change in the number of supervisees as an indicator for managerial responsibilities. The change is included as a categorical variable indicating decreases, null changes, and increases. Also, we include two dummy variables indicating whether German or English are official languages in the respective countries of destination. Further, we include a dichotomous measure for stays abroad during school or during occupational training of 1-month minimum.

Finally, we include several control variables. Since we focus on dependent workers, just two employment statuses remain: workers or employees, and civil servants. We account for firm size through a dummy indicating whether the company has more or less than 2000 employees. We include a control for the difference between present weekly working hours and working hours before emigration. Restricted to GERPS, we include a dichotomous measure of employer deployment and one for cities with more than one million inhabitants.

### 7.3.2 *Methods*

We proceed in two steps. First, we compare mean wage changes among emigrants with wage changes among non-migrants using DiD estimations. In a second step, we explore the variance of wage changes among German emigrants using linear regressions on wage changes (OLS).

The basic idea of the DiD is one of counterfactual causality. The aim is to calculate a treatment effect and to interpret it as a causal relation (Gangl 2010; Gangl and DiPrete 2004; Morgan and Winship 2015; Rubin 1974). In our context, emigration represents the treatment and non-migrants are the counterfactual group. We want to approximate the effect of the treatment on net hourly wages. For this purpose, we compare emigrants' net hourly wage change with that of non-migrants to estimate a relation between emigration and wages. In other words, the approach corrects the wage change in the treatment group by the wage change of non-migrants to control for confounding unobservable time-invariant heterogeneities and period-specific effects (Angrist and Pischke 2008; Gangl 2006; Halaby 2004). Thus, in theory, the DiD allows us to estimate the average wage change of German emigrants net of the average wage change they would have experienced had they remained in Germany.

The DiD relies on income information for two groups measured at two points in time. For emigrants, the income information refers to the time 3 months before migration (retrospective) and to the time of the survey. In our control group, we stick to 2017 as a reference for the time of the survey and to 2016 as a reference for the income 3 months before migration. The time span for the control group is aligned with our analytical sample of the treatment group, where the median time since arrival is 11.4 months.

The DiD approach is prone to self-selection in the treatment on observable and unobservable characteristics. To reduce selection on observable characteristics, we adjust the non-migrant sample to the distribution of our analytical GERPS sample through entropy balancing (Hainmueller 2012) using Hainmueller and Xu's (2013) Stata implementation *ebalance*. It has been designed as a more effective alternative to matching procedures. This method aims to achieve covariate balance in observational studies with binary treatments. As mentioned above, emigration is highly selective in terms of several socio-economic characteristics and not 'assigned' at random. By balancing the control group according to characteristics of the treatment group, we aim to control for this selectivity. The covariate moments for our reweighting procedure include age in years and its squared and cubed terms, education measured by our condensed ISCED variables, and gender.

When all observable and unobservable characteristics are controlled, DiD-matching allows us to estimate a causal treatment effect of emigration on wages. However, we only account for some key observable socio-economic characteristics to account for the self-selection of German emigrants and neglect other relevant observable and unobservable characteristics that potentially influence the 'treatment assignment.' Therefore, in the following analysis we refer to a non-causal treatment effect of emigration on wage.

## 7.4 Findings

### 7.4.1 Descriptives

Table 7.1 shows the distribution of characteristics in our two analytical samples. Average wage increases are more pronounced in the emigrant sample compared with non-migrants. The mean change in net monthly labour income suggests that workers, employees, and civil servants earn on average 1495 euros more after emigration than before. This figure is considerably lower in the reference population (73 euros). Average net hourly wages increase by 8.60 euros after migration, which corresponds to a monthly wage of 1376 euros for an individual working 40 h a week. In the reference group, the average net hourly wages increase by 0.46 euros, which corresponds to a monthly wage of 80 euros for a person working 40 h a week. The respective figures are slightly higher after PPP adjustments.

**Table 7.1** Variable means for emigrants and stayers

	Emigrants		Stayers	
	Mean	SD	Mean	SD
Change in net hourly wage (euros)	+8.6	16.6	+0.46	4.1
Change in net hourly wage (euros), PPP-corrected	+9.4	22.5	+0.51	4.5
Female	42%		53%	
Age in years ( $t_1$ )	36.1	8.3	46.0	10.5
ISCED ( $t_1$ )				
(1) Post-secondary, short-cycle tertiary or less	15%	–	66%	–
(2) Bachelor's degree or equivalent	24%	–	21%	–
(3) Master's degree or equivalent	44%	–	12%	–
(4) Doctoral or equivalent	18%	–	1%	–
Work experience ( $t_1$ )	11.8	8.8	21.9	11.1
Weekly working hours ( $t_1$ )	44.6	9.6	36.5	11.7
Weekly working hours ( $t_0$ )	45.1	9.8	36.4	11.9
Change in no. of supervisees ( $t_1 - t_0$ )				
(1) fewer than before	19%	–	–	–
(2) same number as before	57%	–	–	–
(3) more than before	24%	–	–	–
German official language in destination	37%	–	–	–
English official language in destination	24%	–	–	–
Spent 1+ month abroad during school/training	60%	–	–	–
Employment status ( $t_1$ )				
(1) Employee or worker	96%	–	91%	–
(2) Civil servant	4%	–	9%	–
Company size 2000+ ( $t_1$ )	48%	–	30%	–
Expat status: Deployed (ref. self-initiated)	19%	–	–	–
>1 mil. Inhabitants in destination place	32%	–	–	–
<i>N</i>	1275		8289	

GERPSw1 (Emigrants); only individuals who are employed before and after migration. SOEP 2016/2017 (Stayers); only individuals who are employed 2016 and 2017

Women constitute 42% of the emigrant sample and the mean age is 36 years (median 34). Among non-migrants the proportion of women (52%) and the average age (46 years) are much higher.

The sample is highly selective regarding skills. Twenty-four per cent of the emigrants in the analytical sample have BA degrees and 44% have MA degrees. Eighteen per cent of emigrants in our sample have doctoral degrees and only 15% have post-secondary degrees, short-cycle tertiary degrees or lower ones. The majority of our sample are employees or workers (96%) and the remaining 4% are civil servants. In contrast to the emigrants, 66% of the stayers in the analytical sample have a post-secondary or a short-cycle tertiary degree, whereas 21% have a bachelor's degree and 12% a master's degree. Only 1% of the stayers finished their education with a doctoral or equivalent degree. The majority of the stayers are employees or workers (91%) and 9% are civil servants. Thus, civil servants are slightly under-represented among emigrants.

Non-migrants have 9 years more of work experience (21 years) than emigrants (12). This is mostly explained by differences in age and education. Emigrants tend to be younger and on average they have spent more years in the educational system.

The average weekly working time is above the German average (36.5 h) and decreases slightly from 45.1 in Germany to 44.6 h abroad. This indicates that the majority of our sample worked full time before and after migration. Additional analyses show that roughly 90% worked 35 h or more and 50% worked 44 h or more before migration. These descriptive statistics indicate that part time work is the exception in our highly selective analytical sample of emigrants who had employment before and after migration. On average, weekly working hours are slightly reduced after migration for women (-1.4 h) and similar for men (+0.3 h). Among non-migrants, 90% worked 20 h or more and 50% worked 40 h or more weekly. In contrast to the emigrants, these results indicate that part time work is more common among stayers. Weekly working hours among stayers remained unchanged.

Almost every second emigrant works for a company that has more than 2000 employees, which is much higher than in the source population where less than a third work for such companies (SOEP 2017: 30%). Four in five individuals going abroad are self-initiated movers and the others have been deployed by the employer they had before migration (19%).

## 7.4.2 Multivariate Analyses

Table 7.2 presents the final results of the treatment effect of emigration on the net hourly wage differential between the present and before emigration. The model structure is based on that of the previous descriptive analysis (Table 7.1) and is

**Table 7.2** Difference-in-Difference estimation

	Unadjusted		PPP-adjusted	
Before migration ( $t_0$ )				
Mean net hourly wage stayers	14.1		15.8	
Mean net hourly wage emigrants	21.8		24.3	
Difference net hourly wage (T-C)	7.7***	(0.68)	8.5***	(0.73)
After migration ( $t_1$ )				
Mean net hourly wage stayers	14.9		16.6	
Mean net hourly wage emigrants	30.4		33.7	
Difference net hourly wage (T-C)	15.5***	(0.68)	17.1***	(0.73)
Difference-in-Difference ( $\Delta t_1 - \Delta t_0$ )	7.8***	(0.96)	8.6***	(1.04)
Observations	9564		9564	
Control	8289		8289	
Treatment	1275		1275	

Standard errors in parentheses. Balanced sample. Sources: GERPSw1, SOEP2016/17

\*\*\* $p < 0.001$



compatible with the following multivariate regression analysis. In the DiD analysis, only individuals without missing values on independent variables are retained for the analysis. The model includes 1275 emigrants who reported net hourly wages before and after migration and 8289 non-migrants with wage information for the reference years 2016 and 2017.

The first three rows of Table 7.2 illustrate the mean net hourly wage of emigrants and of the weighted sample of non-migrants at the time before migration occurs. The weighted group of non-migrants is comparable to the analytical emigrant sample in terms of gender, age, and education. Before migration, German emigrants' average net hourly wage is 21.8 euros and German non-migrants' wage is 14.1 euros. Thus, before migration German emigrants' net hourly wage is on average 7.7 euros higher than among non-migrants ( $t_0$ ). This wage increases to 14.9 euros among non-migrants and to 30.4 euros among emigrants after emigration ( $t_1$ ). That amounts to an average difference of 15.5 euros in favour of emigrants and results in a DiD of 7.8 euros. In other words, the average net hourly wage gain of German emigrants is 7.8 euros compared with individuals staying in Germany. Model 2 is based on PPP-adjusted net hourly wages. The PPP adjustment increases the variance resulting in increased mean wages and wage differences and an average treatment effect of 8.6 euros. This lends initial support to our expectation of wage increases after migration.

The DiD estimation indicates a high positive treatment effect of emigration on net hourly wages. This finding holds for samples balanced by education, gender, and age. We performed several additional robustness checks. First, we calculated fixed-effects regressions (FE) of the treatment on the net hourly wage. The FE estimates intra-individual changes of the net hourly wage and controls for time-constant heterogeneity between both groups (Gangl 2010). Our FE regression on net hourly wages includes the treatment variable and period dummy variables as covariates. The effect of the treatment is 8.12 (SE 0.22) and the effect of the period is 0.46 (SE 0.08). Both effects are statistically significant and indicate no large difference between the FE result and the DiD result.

Second, we performed the analysis on several subsamples to deal with the large variance of net hourly wages before migration. We restricted the sample to individuals with low, middling, or high hourly wages before migration. We used three definitions including less than 10 euros, between 10 and 20 euros, and more than 20 euros. Results are similar for the first and second subsamples. For low earners, the treatment effect is 6.41 (SE 0.24) and for middling earners it is 6.81 (SE 0.28). The treatment effect for high earners is higher 12.96 (SE 7.63), but is only statistically significant at the 10% level. These results indicate positive wage changes after migration in each respective group. However, the increase is most pronounced among high wage earners.

Third, we excluded all emigrants to Switzerland. This country is a popular destination for German emigrants and wages are, partly owed to currency strength, comparatively high. Migrants destined to Switzerland therefore have a strong positive influence on the wage change. The treatment effect in this reduced sample is 5.70 euros (SE 0.87) and statistically significant. Compared to the effect in our baseline

model, the effect decreases slightly, but the net wage change remains high and positive. Table 7.3 shows beta coefficients and standard errors from a linear regression on the net hourly wage differential between present wage and wage before migration. *Ceteris paribus*, the wage difference is 4% smaller for women than for men. Thus, women benefit less than men from the potential for wage growth that comes with migration. This is an indication that emigration increases women's existing wage disadvantage, but the coefficient is not statistically significant. We should keep in mind, though, that women are more likely to be tied movers and are therefore also more likely to become inactive abroad (Boyle et al. 2001) and thus dropped from the analytical sample. Age is negatively correlated with the wage change. With each age year, the wage change decreases by 1%.

Differences in the wage change in educational groups do not diverge significantly from the wage change of master's degree holders. Similarly, the coefficient for work experience is zero. These results do not indicate unequal returns to emigration for individuals with varying human capital endowments. Thus, our results do not support the notion that emigration is a process of cumulative (dis)advantage in terms of wages.

**Table 7.3** Linear regression on log net hourly wage change ( $t_1 - t_0$ )

	Unadjusted change		PPP-adjusted change	
	$\beta$	SE	$\beta$	SE
Gender woman	-0.04	(0.03)	-0.03	(0.03)
Age ( $t_1$ )	-0.01*	(0.00)	-0.01	(0.00)
ISCED (ref. MA degree)				
(1) Post-secondary, short-cycle tert. or less	0.05	(0.05)	0.07	(0.05)
(2) BA degree or equivalent	-0.01	(0.03)	0.02	(0.04)
(3) MA degree or equivalent	-	-	-	-
(4) Doctoral or equivalent	0.03	(0.04)	-0.00	(0.04)
Work experience in years	0.00	(0.00)	0.00	(0.00)
Change in no. of supervisees (ref. none)				
Fewer supervisees	0.01	(0.03)	0.05	(0.04)
More supervisees	0.06	(0.03)	0.13***	(0.03)
German official language in destination	0.30***	(0.03)	-0.05	(0.03)
English official language in destination	0.10**	(0.03)	-0.18***	(0.04)
Stay abroad during school +1 month	0.02	(0.03)	0.03	(0.03)
Civil servant (ref. employee/worker)	0.08	(0.07)	0.01	(0.07)
More than 2000 employees (ref. < 2000)	0.09***	(0.03)	0.07*	(0.03)
Expat status: Deployed (ref. self-initiated)	0.19***	(0.04)	0.27***	(0.04)
>1 mil. inhabitants in destination place	0.01	(0.03)	0.21***	(0.03)
Constant	0.40**	(0.12)	0.42**	(0.13)
Observations	1275		1275	
Adjusted $R^2$	0.095		0.132	

Standard errors in parentheses. Sources: GERPSw1, SOEP2016/17

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

There is some evidence that changes in supervisory responsibilities do affect average wage changes. For those who are responsible for more supervisees after migration than before migration the average wage increases by 6% compared with those without change in the supervisory power. However, the correlation is not statistically significant. For those whose responsibility shrinks in terms of the number of supervisees, the model indicates a small non-significant wage improvement.

Countries where German is an official language are associated with an average hourly wage benefit of 30%. The association for English-speaking countries is also positive but smaller at 10%. Both findings are statistically significant. The coefficient for stays abroad during school, our indicator for transnational human capital, is small and not statistically significant.

The mean wage differential between civil servants and employees and workers is not statistically significant. The wage differential is high and positive for those working in big companies compared with smaller employers (+9%) and for those who were posted by their employers (+19%) compared with self-initiated movers. Both coefficients are statistically significant. Both premiums indicate CA since employees in large firms (Troske 1999) and multinational companies (Schröder 2018) are known to enjoy wage premiums regardless of migration, taking expat status as an indicator of multinational employer activity. The expat premium indicates that the transferability of human capital indeed is associated with higher wage growth among emigrants.

Finally, we consider average wage differences by urbanity. Results suggest that the average wage change for those going to cities with more than one million inhabitants is not different from smaller places.

We replicated the analysis using PPP-adjusted wages to account for costs of living. PPP-adjusted wages have a higher variance between countries. The changes in coefficients compared to the raw wage measures indicate several systematic variations between emigration countries (and their respective PPP indicators) and our covariates. In general, we recommend treating the adjusted wage estimates carefully. They obscure vast variation of PPPs within countries. While country averages could be indicative in some countries, they can be misleading in others. For example, identical incomes could translate into very different purchasing powers in rural China and Beijing while the country average is in between. The changes of the 'German language' and 'English language' coefficients may have substantial meanings because identical wages may grant much lower purchasing power in English- and German-speaking countries compared with Germany. However, when it comes to the increased correlation for large cities, we would be more cautious with substantial interpretations. Within-country variation of PPPs, which our country-level measure does not account for, could partly account for these changes in coefficients.

## 7.5 Discussion and Conclusion

Our analyses lend initial support to the expectation of wage increases through migration among German emigrants. We calculated DiD estimates to examine the association between emigration and wage change by comparing wage changes of emigrants and non-migrants. Wage increases are on average 8 euros higher among emigrants than among the reference population. Our calculations are based on a reweighted SOEP sample that assures balance in terms of gender, age, and education. In this way, we account for the selectivity of emigration from Germany since emigrants are on average younger and have higher education levels (Ette and Witte 2021). Furthermore, men are overrepresented in our analytical sample owed to the restriction to individuals who were employed both before and after emigration. Although our weights do account for crucial correlates of emigration, they could be improved. Therefore, future studies should account for a refined set of covariates for the generation of balancing weights. There are indications that the likelihood of emigration correlates with several other observable and unobservable characteristics like health (Stawarz et al. 2021), family status (Baykara-Krumme et al. 2021; Erlinghagen 2021), and risk affinity (Lübke et al. 2021). This is beyond the scope of this chapter but should be the next step of analysis.

Our multivariate regressions aim to explain the quality of wage changes among emigrants by their varying characteristics. There is no indication of systematic correlations between socio-demographic characteristics and the wage change. The wage change seems to be uncorrelated with gender and formal skills. This finding holds when we calculate models based on PPP-corrected wages. Age is negatively correlated with the wage change, meaning that the wage gain through emigration decreases by 10% for 10 years of age. Characteristics of the employer and the employment are fairly stable. Those working for employers with more than 2000 employees and those deployed by their employers are consistently shown to receive higher returns than the respective reference groups. Some findings are sensitive to the change from raw wage changes to PPP-wage changes. Our measures of the transferability of human capital indicate positive associations in the model based on raw wages, but negative associations in the model based on PPP wages. This is an indication that raw wage increases are relatively high in German- and English-speaking countries. However, PPP-adjusted wages could result in wages below the German level. For example, raw wage increases may be higher for emigrants in Switzerland, USA, and the UK compared with other destination countries. Net of purchasing power, however, wages are apparently lower in these countries compared with other destinations. Overall, this evidence shows how the implications of the human capital perspective are sensitive to the way we deal with purchasing power differences.

Migrants may benefit from language skill regardless of the official destination country language. Future studies should therefore include better indicators of human capital transfer. Actual language skills and the use of specific languages at work would be such indicators. Moreover, we find some indications that employer

characteristics like firm size and multinational employer activity foster cumulative advantages, whereas individual human capital endowments do not. Transnational human capital measured by stays abroad during school is uncorrelated with the wage change according to our models. This does not support the assumption of transnational human capital (Gerhards and Hans 2013).

We want to mention three directions where research should expand in the future. First, we considered short-term changes in wages. Recently, several studies have pointed to the variation between short-term and long-term consequences of migration (Lersch 2014; McKenzie et al. 2010; Mulder and van Ham 2005; Newbold 1996). This chapter used information from the first wave of GERPS. In the near future, it will cover a longer period of up to 4 years and invites additional analyses that exploit these longitudinal data to analyse mid-term and long-term consequences of migration.

Second, the improvement of living standards is a major motive for emigration. Therefore, wage changes are a crucial and personally relevant indicator of labour market consequences of migration. Our analysis of wage changes through emigration from a highly developed country adds a stone to the mosaic. However, there are quite a few alternative labour market outcomes that are potentially affected by international migration. GERPS yields information about occupations, industries, and social classes in the first wave. Consecutive waves complete the picture by providing information about social origin (see Witte et al. 2021 in this volume), first job, unemployment, and occupational closure.

Third, this chapter concentrates on labour market outcomes of emigrants. The case of Germany contributes important insights in a field that has almost exclusively focused on emigration from developing countries and internal migration in developed countries. At the same time, we know very little about the labour market outcomes of return migrants in their countries of origin. GERPS provides a wealth of information about returnees' labour market participation both before and after their return. Furthermore, these data allow for comparisons of return migrants with the non-migrant population through linkage with the SOEP.

This chapter exemplarily shows how GERPS and its linkage with SOEP can be exploited to analyse wage changes among German emigrants. Our analysis indicates that emigration from Germany is beneficial in terms of wages. While individuals with varying human capital seem to benefit similarly, there is evidence that women benefit less than men and certain categories of workers like those in big companies enjoy premiums. We need more research to understand whether and how migration relates to labour market outcomes and how this may spur or mitigate inequalities in the country of origin.

## References

- Adsera, A., & Chiswick, B. R. (2007). Are there gender and country of origin differences in immigrant labor market outcomes across European destinations? *Journal of Population Economics*, 20, 495–526.
- Akresh, I. R. (2006). Occupational mobility among legal immigrants to the United States. *International Migration Review*, 40(4), 854–884.
- Angrist, J. D., & Pischke, J.-S. (2008). *Mostly harmless econometrics: An Empiricist's companion*. Princeton, NJ: Princeton University Press.
- Baykara-Krumme, H., Erlinghagen, M., & Mansfeld, L. (2021). Disruption of family lives in the course of migration: 'Tied Migrants' and partnership breakup patterns among German (r) emigrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Borjas, G. J. (1987). Self-selection and the earnings of immigrants. *The American Economic Review*, 77(4), 531–553.
- Borjas, G. J. (1991). Immigration and self-selection. In J. M. Abowd & R. B. Freeman (Eds.), *Immigration, trade and the labor market* (pp. 29–76). Chicago: University of Chicago Press.
- Borjas, G. J., Kauppinen, I., & Poutvaara, P. (2018). Self-selection of emigrants: Theory and evidence on stochastic dominance in observable and unobservable characteristics. *The Economic Journal*, 129(617), 143–171.
- Boyle, P., Cooke, T. J., Halfacree, K., & Smith, D. (2001). A cross-national comparison of the impact of family migration on women's employment status. *Demography*, 38(2), 201–213.
- Buzdugan, R., & Halli, S. S. (2009). Labor market experiences of Canadian immigrants with focus on foreign education and experience. *International Migration Review*, 43(2), 366–386.
- Chiquiar, D., & Hanson, G. H. (2005). International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States. *Journal of Political Economy*, 113(2), 239–281.
- Chiswick, B. R. (1978). The effect of Americanization on the earnings of foreign born men. *Journal of Political Economy*, 86(5), 897–922.
- Chiswick, B. R., Lee, Y. L., & Miller, P. W. (2005). Longitudinal analysis of immigrant occupational mobility: A test of the immigrant assimilation hypothesis. *International Migration Review*, 39(2), 332–353.
- Diehl, C., & Dixon, D. (2005). Zieht es die Besten fort? Ausmaß und Formen der Abwanderung deutscher Hochqualifizierter in die USA. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 57(4), 714–734.
- DiPrete, T. A., & Eirich, G. (2006). Cumulative advantage as a mechanism for inequality: A review of theoretical and empirical developments. *Annual Review of Sociology*, 32, 271–297.
- Doeringer, P. B., and Piore, M. J. (1971). *Internal labor markets and manpower analysis*. London: Sharpe.
- Duleep, H., & Regets, M. C. (1999). Immigrants and human capital investment. *American Economic Review*, 89(2), 186–190.
- Dumont, J.-C., & Lemaître, G. (2005). Counting immigrants and expatriates in OECD countries. *OECD Social, Employment and Migration Working Papers* 25. Paris.
- Enders, J., & Borrmann, L. (2002). Internationale Mobilität bundesdeutscher Promovierter—Eine Sekundäranalyse der Kasseler Promoviertenstudie. *Mitteilungen aus der Arbeitsmarkt- und Berufsforschung*, 35, 60–73.
- Engler, M., Erlinghagen, M., Ette, A., Sauer, L., Scheller, F., Schneider, J., & Schultz, C. (2015). *International Mobil: Motive, Rahmenbedingungen und Folgen der Aus- und Rückwanderung deutscher Staatsbürger*. Berlin: Sachverständigenrat deutscher Stiftungen für Integration und Migration (SVR).
- Erlinghagen, M. (2011). Nowhere better than here? The subjective well-being of German emigrants and remigrants. *Comparative Population Studies*, 36(4), 899–926.

- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The Global lives of German migrants. consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS.
- Ette, A., & Witte, N. (2021). Brain drain or brain circulation? Economic and non-economic factors driving the international migration of German citizens. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Favell, A., Feldblum, M., & Smith, M. P. (2007). The human face of global mobility: A research agenda. *Society*, 44(2), 15–25.
- Friedberg, R. M. (2000). You can't take it with you? Immigrant assimilation and the portability of human capital. *Journal of Labor Economics*, 18(2), 221–251.
- Fuller, S. (2015). Do pathways matter?: Linking early immigrant employment sequences and later economic outcomes: Evidence from Canada. *International Migration Review*, 49(2), 355–405.
- Fuller, S., & Martin, T. F. (2012). Predicting immigrant employment sequences in the first years of settlement. *International Migration Review*, 46(1), 138–190.
- Gangl, M., and DiPrete, T. A. (2004). Kausalanalyse durch Matchingverfahren. *DIW Berlin Discussion Papers*.
- Gangl, M. (2006). Scar effects of unemployment: An Assessment of institutional complementarities. *American Sociological Review*, 71(6), 986–1013.
- Gangl, M. (2010). Causal inference in sociological research. *Annual Review of Sociology*, 36, 21–47.
- Gerhards, J., & Hans, S. (2013). Transnational human capital, education, and social inequality. Analyses of international student exchange. *Zeitschrift für Soziologie*, 42(2), 99–117.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German Socio-Economic Panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik*, 239(2), 345–360.
- Gould, E. D., & Moav, O. (2016). Does high inequality attract high skilled immigrants? *The Economic Journal*, 126(593), 1055–1091.
- Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis*, 20, 25–46.
- Hainmueller, J., & Xu, Y. (2013). ebalance: A stata package for entropy balancing. *Journal of Statistical Software*, 54(7), 1–18.
- Halaby, C. N. (2004). Panel models in sociological research: Theory into practice. *Annual Review of Sociology*, 30(1), 507–544.
- Heath, A., & Yu, S. (2005). Explaining ethnic minority disadvantage. In A. Heath & S. Yu (Eds.), *Understanding social change* (pp. 187–224). Oxford: Oxford University Press.
- Kogan, I. (2011). New immigrants—old disadvantage patterns? Labour market integration of recent immigrants into Germany. *International Migration*, 49(1), 91–117.
- Kopetsch, T. (2009). The migration of doctors to and from Germany. *Journal of Public Health*, 17(1), 33–39.
- Lersch, P. M. (2014). *Residential relocations and their consequences: Life course effects in England and Germany*. Wiesbaden: Springer.
- Lübke, C., Décieux, J. P., Erlinghagen, M., & Wagner, G. G. (2021). Comparing the risk attitudes of internationally mobile and non-mobile Germans. In M. Erlinghagen, A. Ette, N. F. Schneider,

- & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Mau, S., Verwiebe, R., Kathmann, T., & Seidel, N. (2008). Die Arbeitsmigration von Deutschen in Europa : erste Ergebnisse einer qualitativen Untersuchung. In K.-S. Rehberg (Ed.), *Die Natur der Gesellschaft: Verhandlungen des 33. Kongresses der Deutschen Gesellschaft für Soziologie in Kassel 2006. Teilbd. 1 u. 2* (pp. 4471–4481). Frankfurt am Main: Campus Verlag.
- McKenzie, D., Stillman, S., & Gibson, J. (2010). How Important is Selection? Experimental vs. Non-Experimental Measures of the Income Gains from Migration. *Journal of the European Economic Association*, 8(4), 913–945.
- McManus, W., Gould, W., & Welch, F. (1983). Earnings of Hispanic Men: The Role of English Language Proficiency. *Journal of Labor Economics*, 1(2), 101–130.
- Mincer, J. (1974). *Schooling, experience, and earnings*. New York, London: Columbia University Press.
- Morgan, S. L., & Winship, C. (2015). *Counterfactuals and causal inference: Methods and principles for social research*. New York: Cambridge University Press.
- Mulder, C. H., & van Ham, M. (2005). Migration histories and occupational achievement. *Population, Space and Place*, 11, 173–186.
- Newbold, K. B. (1996). Income, self-selection, and return and onward interprovincial migration in Canada. *Environment & Planning A*, 28(6), 1019–1034.
- Nowicka, M. (2014). Migrating skills, skilled migrants and migration skills: The influence of contexts on the validation of migrants' skills. *Migration Letters*, 11(2), 171–186.
- Parey, M., Ruhose, J., Waldinger, F., & Netz, N. (2017). The selection of high-skilled emigrants. *The Review of Economics and Statistics*, 99(5), 776–792.
- Rosen, S. (1981). The economics of superstars. *The American Economic Review*, 71(5), 845–858.
- Rubin, D. B. (1974). Estimating causal effects of treatments in randomized and nonrandomized studies. *Journal of Educational Psychology*, 66(5), 688–701.
- Salmonsson, L., & Mella, O. (2013). Cultural demands on skilled immigrants, a devaluation of human capital: The case of immigrant physicians in Sweden. *Nordic Journal of Migration Research*, 3(1), 3–9.
- Schröder, S. (2018). *Wage inequality and the role of multinational firms: evidence from German linked employer-employee data*. Edinburgh. <https://freit.org/WorkingPapers/Papers/ForeignInvestment/FREIT1435.pdf>. Accessed 1 Oct 2020.
- Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy*, 70(5), 80–93.
- Stawarz, N., Ette, A., & Rüger, H. (2021). Healthy migrants? Comparing subjective health of German emigrants, remigrants and non-migrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Troske, K. R. (1999). Evidence on the employer size-wage premium from worker-establishment matched data. *Review of Economics and Statistics*, 81(1), 15–26.
- van Dalen, H. P., & Henkens, K. (2007). Longing for the good life: Understanding emigration from a high-income country. *Population and Development Review*, 33(1), 37–65.
- Witte, N., Pollak, R., & Ette, A. (2021). Social origins of German emigrants: Maintaining social status by international mobility? In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. consequences of international migration across the life course*. Cham: Springer.
- Worldbank. (2019). *Price level ratio of PPP conversion factor (GDP) to market exchange rate*. <https://data.worldbank.org/indicator/PA.NUS.PPPC.RF>. Accessed 26 Jan 2021.



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# Chapter 8

## Social Origins of German Emigrants: Maintaining Social Status Through International Mobility?



Nils Witte, Reinhard Pollak, and Andreas Ette

### 8.1 Introduction

The question of intergenerational social mobility is a central concern in sociology. It describes the association between the socio-economic status of parents and the status their children attain as adults. Investigations of social mobility are inherently comparative, because no standard benchmark exists. The strength of the intergenerational correlation is always relative to specific reference groups or times. Most studies evaluate social mobility by the dynamic of this association over time and between generations, between (ethnic) groups within countries or between countries. The availability of more and better data over extended periods has boosted social mobility research in recent decades (Ganzeboom et al. 1991; Breen and Jonsson 2005). Several encompassing projects have studied intergenerational social mobility in the Western world (Breen 2004; Breen and Müller 2020a; Erikson and Goldthorpe 1992) but they continue to focus on the constellation within the nation state (Beck 2007; Weiß 2017). This chapter contributes to recent debates in social mobility research by analysing the impact of international spatial mobility on social mobility and the life chances of individuals. It compares German citizens who recently moved abroad ('emigrants') with the internationally non-mobile population in Germany ('non-migrants'). Since these emigrants move to various countries, this chapter also extends the geographical dimension of social mobility. Building on

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findings about intragenerational wage mobility by Witte and Guedes Auditor (2021) in this volume, this chapter investigates class mobility between generations.

The prospect of upward social mobility is a central motive for spatial mobility and migration. Curiously, the nexus of spatial and social mobility attracted attention only relatively late. The potential existence of escalator regions within nation states sparked scholarly interest in the link of spatial and social mobility. The idea was that specific regional labour markets provided migrants with resources missing in their regions of origins and consequently increased their intra- and intergenerational mobility (Fielding 1992; Savage 1988). In the context of international migration, however, much research has investigated intragenerational mobility, whereas intergenerational social mobility has received less attention. Those who do analyse intergenerational mobility are often concerned with mobility between the first and second generation of migrants (Yaish 2002; Platt 2005). Accordingly, these studies have usually explored migrants' social mobility from a destination country perspective. Only more recently, studies in the context of intra-European mobility have analysed the spatial and social mobility of Europeans from various origins in several countries of destination (Recchi 2009; Favell and Recchi 2011). This chapter contributes to the literature on migration and social mobility by investigating the intergenerational social mobility from the perspective of the country of origin like the study by Zuccotti et al. (2017) does.

The chapter is organised around two sets of questions. The first one is concerned with the social origins of German emigrants and asks whether international mobility is the privilege of those from higher class origins as research in the European context suggests (Recchi 2009; Favell and Recchi 2011). How do existing social inequalities affect the opportunities to migrate internationally?

The second set of questions centres on the nexus between spatial and social mobility. Are relative rates of social mobility (often called social fluidity) about the same magnitude for emigrants and for non-migrants? Is emigration associated with downward mobility in terms of social classes as has been found for first generation Turkish emigrants in Europe (Zuccotti et al. 2017)? Or is migration more often associated with upward mobility as has been found at the sub-national level in industrialised countries like Germany and the USA (Reichelt and Abraham 2017; Yankow 2003; Waibel 2019)?

The chapter is structured as follows. We start by deriving tentative hypotheses from the literature on transnational human capital and on social mobility in Germany. Then we describe our data and analytical strategy before we present descriptive findings on absolute social mobility and log-linear models on relative rates of social mobility. We conclude with a short discussion of our findings and ideas for expanding our research.

## 8.2 Linking Spatial and Social Mobility

International mobility offers migrants resources to maintain or even to improve their social status. Consequently, the positive selection of emigrants with respect to education and occupation is unsurprising (Borjas 1987, 1991; Dumont and Lemaître 2005; Parey et al. 2017; Chiquiar and Hanson 2005). As Ette and Witte (2021) find in this volume, Germany is no exception to the rule of positive selection by education. What is missing from these analyses is the social origin of migrants. A study on German students by Gerhards and Hans (2013) finds cultural and economic resources of parents to affect their offspring's likelihood to go abroad during school. Parents' cultural and economic resources matter, because early educational decisions and capital endowments create path dependencies that are difficult to reverse later in life. According to Carlson et al. (2017), German upper middle class families are more supportive of the generation of transnational cultural capital for their offspring compared with lower middle class families. From their perspective, the international experiences provide their children with resources to maintain or even improve their social status. The social difference in international spatial mobility is likely to continue during university. Indeed, university students whose parents hold tertiary degrees are more likely to go abroad than students whose parents hold lower degrees. This has been shown for several countries including Switzerland (Messer and Wolter 2007), Austria (Euler et al. 2013), and Germany (Lörz and Krawietz 2011). Path dependencies are likely to result in social selectivity of international mobility at later stages in life. Against this background, we would expect that German emigrants are more likely to originate from parents with academic educations than non-migrants are.

The selectivity of international mobility by social origin is relevant once we conceive of international mobility as an asset that defines opportunities and social outcomes (Bilecen and van Mol 2017). There is evidence that international mobility experiences improve labour market outcomes, at least for specific groups. Based on propensity score matching, one study finds positive labour market returns for graduates from occupationally unspecific fields in Germany (Waibel et al. 2018). Another study in the German context finds positive lagged effects of international mobility on the wage level 5 years after graduation (Kratz and Netz 2018). Positive wage effects are also found for students from other countries of origin (see Waibel et al. 2017 for an overview). Cross-national comparisons suggest positive labour market returns, which are larger in countries with poorer university quality and higher graduate unemployment (Jacob et al. 2019). Overall, there is evidence that international mobility is indeed conducive to various labour market outcomes including occupational status and wages.

A second perspective linking spatial and social mobility starts from the rigid German labour market (Breen and Luijkx 2004a, b). Early school-tracking is a central feature of the German education system that impairs social mobility (Büchler 2016; Bol and van de Werfhorst 2013). In addition, strong standardisation of occupational training and school-to-work linkages reduce occupational mobility during

the later career compared with other countries (Allmendinger 1989; DiPrete et al. 2017; Witte 2020). Although social fluidity in Germany has increased in recent decades, it remains relatively low compared to the Scandinavian countries or Poland and Hungary (see Breen and Jonsson 2005 for an overview). Women in particular have benefitted from educational expansion and from increased demand for qualified personnel in the growing service sector (Müller and Pollak 2004, 2015; Hertel 2017; Pollak and Müller 2020). However, there are indications that opportunities for upward mobility have decreased again in the most recent cohorts (Mayer and Aisenbrey 2007; Klein 2011). Against the background of these findings, labour emigration from Germany is a potential pathway for upward social mobility. If the German labour market is rigid in international comparison, the obstruction of upward mobility is a potential motive for emigration. This would be in line with research findings that interregional mobility functions as a substitute for occupational mobility (Reichelt and Abraham 2017).

### 8.3 Data and Analytical Strategy

Our empirical analysis of the nexus between spatial and social mobility is based on the German Emigration and Remigration Panel Study (GERPS) (Ette et al. 2021). The first two waves provide detailed information about the social origin of internationally mobile German citizens as well as their own occupational careers. We draw equivalent information about the internationally non-mobile population from the German Socio-Economic Panel (SOEP) as the longest running longitudinal data infrastructure in Germany (Goebel et al. 2019). We restrict the analytical samples to persons in the age between 19 and 70 years and include only persons with non-missing information about social class origin and destination. Furthermore, emigrants who arrived in their country of residence more than 2 years before the interview are excluded.

The analyses on social origins and intergenerational social mobility follow the class scheme provided by Erikson, Goldthorpe and Portocarero (EGP) as the de facto European standard in intergenerational mobility research. For the assignment of observations to EGP classes, we rely on Jann's (2019) Stata tool *iscogen*. GERPS and SOEP provide detailed information about the occupation of participants and their parents based on the International Standard Classification of Occupations (ISCO-08). Instead of information about the number of supervisees, however, we use information differentiating the parental occupational position (*berufliche Stellung*). We impute median values for each occupational position of the 2017 wave from the SOEP (v34). Since we collapse the EGP classes into their seven main classes, this inaccuracy does not affect our results. Parental class status stems from retrospective questions and refers to their occupation when respondents were 15 years old. When both parents were active in the labour market during respondents' youth, we let the maximum social class position of father and mother define the social class origin.

Since class V “Manual workers with supervisory status” is undefined for non-migrants in the SOEP, we collapse classes V and VI (skilled and semi-skilled manual) to facilitate comparisons between migrants and non-migrants. Furthermore, we subsume class IIIb (lower services) under unskilled labour as is common practice in social mobility research (Breen and Müller 2020b, p. 12). Diverging from the literature and due to small case numbers, we do not differentiate the self-employed with and without employees (IVab, IVc). Our final scheme includes the following six EGP classes: (I) Higher controllers, (II) Lower controllers, (IIIa) Routine non-manuals, (IV) Self-employed with and without employees, (V/VI) Manual supervisors and skilled workers, and (VII/IIIb) Unskilled workers, lower sales services, and farm labour.

The analysis of the social origin of emigrants and non-migrants is based on absolute and relative rates of social mobility across different mobility tables. The starting point are mobility tables in which we arrange the classes of origin in the rows and the destination classes in the columns. Using column and row percentages, we can address the questions of which origin classes contribute to the composition of a given destination class (column percentages) and in which destination classes offspring from given origins end up (row percentages). These observed (absolute) mobility rates tell us something about the mobility experiences of emigrants and non-migrants. The composition of these two groups at stake differs markedly, so parts of the observed mobility rates are due to selection processes. In order to account for these compositional differences, we model relative rates of social mobility (social fluidity). We start again with the mobility tables and use log-linear models to simplify the task of comparing the odds of ending up in one social class rather than in another class (odds ratios) over all origin-destination pairs. We try to come up with a parsimonious log-linear model that reproduces the observed mobility tables as closely as possible. To assess whether our models generate fitted values of the observed values in our mobility tables we use goodness-of-fit statistics (Breen 2020). The goodness-of-fit statistics include the deviance ( $G^2$  or  $L^2$ ) relative to the model parameters and the Bayesian Information Criterion (BIC). For the comparison of social fluidity, we use a model of *uniform difference* (unidiff) between mobility tables of emigrants and non-migrants (Erikson and Goldthorpe 1992; Xie 1992). Its basic idea is that the associations (measured in logged odds ratios) between origin and destination classes form a certain empirical pattern, for example a strong association of upper service class vs. unskilled labour positions, but a weak association between skilled labour vs. unskilled labour positions. Such an empirical pattern is assumed to be the same between the two tables that are compared, but the strength of the given associations is allowed to differ *uniformly* by a single factor between the two tables. The goodness-of-fit measures inform us whether the empirical fit improves once we allow the strength of the association patterns to differ between the two groups.

A final step of the analysis takes account of the positive selection of emigrants along various characteristics (cf. Ette and Witte 2021). For a better judgment of mobility processes, we account for this selectivity by forming two comparable groups. We adjust the non-migrant sample to the distribution of relevant

characteristics in our analytical GERPS sample through entropy balancing (Hainmueller 2012) using Hainmueller and Xu's (2013) Stata implementation *ebalance*. The method has been designed as a more efficient alternative to matching procedures. We balance the non-migrant sample according to characteristics of the migrant sample in order to control for this selectivity. The covariate moments for our reweighting procedure include age in years and its squared and cubed terms, six dummies for social origin classes, and gender.

## 8.4 Social Origins of German Emigrants

Comparing the parental education of emigrants and non-migrants already provides first evidence that emigrants originate from higher social backgrounds compared with non-migrants (see Table 8.1). Parents' educational degrees are on average much higher among emigrants compared with non-migrants. While fathers and mothers without degrees are rare in both groups and intermediate degrees similarly common in both groups, lower secondary degrees are more common among non-migrants' parents. About 54% of non-migrants mothers and fathers, but just 18% of emigrants' parents, hold lower secondary degrees. For higher secondary degrees it is the opposite case. Just 11% of non-migrants' mothers and 17% of their fathers hold higher secondary degrees. These shares are much higher among emigrants. Almost half of emigrants' mothers and 55% of their fathers hold higher secondary degrees. The social background gap between emigrants and non-migrants is even more pronounced once we consider academic degrees. While 16% of non-migrants

**Table 8.1** Parental education of emigrants and non-migrants (in %)

	Non-migrants	Emigrants
Mother schooling <sup>a</sup>		
No degree	3	1
Lower secondary	54	18
Intermediate	27	30
Higher secondary	11	47
Father schooling <sup>a</sup>		
No degree	2	1
Lower secondary	54	18
Intermediate	19	20
Higher secondary	17	55
Academic degree parents		
None	84	43
One	11	28
Both	5	30

Sources: SOEP2017 (weighted), GERPSw1

<sup>a</sup>Sums diverging from 100% are caused by missing values, unspecified categories, or rounding

have at least one parent with an academic degree, this is the case for 58% of emigrants. Thus, emigrants are 3.6 times more likely to have academic parents than non-migrants are. Overall, these descriptive findings suggest that emigrants are more likely to come from higher social backgrounds compared with non-migrants.

This finding based on parental education is even more pronounced once social class origins are taken into account. Table 8.2 shows the proportion of individuals in destination classes coming from each origin class for non-migrants (Panel A) and emigrants (Panel B). Eighty-six per cent of emigrants originate from the two highest service classes. About equal proportions of emigrants come from each of the highest social classes. Among non-migrants, about one third originates from the top classes while just as many originate from the low manual classes. While one in ten non-migrants originates from the Unskilled Service class, almost none of the emigrants originate from this class. Only the proportion originating from class IV of the Self-employed is similar in both groups. When it comes to securing class positions, the heritability is particularly strong in the upper service classes. Almost one in three non-migrants and one in two emigrants secures their higher service class positions. Class inheritability among non-migrants, however, is strongest for the lowest manual classes, where 37% inherited that class from their parents. Overall, these statistics indicate that German emigrants are indeed strongly positively selected by their social class origin.

Finally, Table 8.3 shows how individuals from each class origin distribute over destination classes. Panel A shows outflows of non-migrants and Panel B shows outflows of emigrants. More than half of non-migrants are destined for the three

**Table 8.2** Intergenerational social mobility of (A) non-migrants and (B) emigrants (inflows, column per cent)

Origin class	Destination class						Total
	I	II	IIIa	IV	V/VI	VII/ IIIb	
<i>(A) Non-migrants</i>							
I	<b>30</b>	20	14	10	9	9	16
II	29	<b>26</b>	20	20	13	14	21
IIIa	9	11	<b>12</b>	9	9	10	10
IV	5	4	5	<b>10</b>	6	5	5
V/VI	12	17	18	20	<b>26</b>	25	20
VII/IIIb	16	22	31	31	36	<b>37</b>	28
Total	100	100	100	100	100	100	100
<i>(B) Emigrants</i>							
I	<b>46</b>	40	22	34	15	24	41
II	41	<b>48</b>	57	45	58	44	45
IIIa	–	–	<b>1</b>	3	–	–	–
IV	6	4	8	<b>7</b>	3	12	6
V/VI	3	5	7	3	<b>21</b>	9	5
VII/IIIb	3	3	5	7	3	<b>12</b>	3
Total	100	100	100	100	100	100	100

$N_{\text{non-migrants}} = 13,652$ ,  $N_{\text{emigrants}} = 1523$ . Sources: SOEP2017 (weighted), GERPSw1



**Table 8.3** Intergenerational social mobility of (A) non-migrants and (B) emigrants (outflows, row per cent)

Origin class	Destination class						Total
	I	II	IIIa	IV	V/VI	VII/IIIb	
<i>(A) Non-migrants</i>							
I	<b>27</b>	36	12	3	7	15	100
II	20	<b>35</b>	14	4	8	18	100
IIIa	12	30	<b>16</b>	4	12	26	100
IV	14	20	15	<b>8</b>	16	27	100
V/VI	9	24	13	4	<b>17</b>	34	100
VII/IIIb	8	21	15	5	17	<b>34</b>	100
Total	15	28	14	4	13	27	100
<i>(B) Emigrants</i>							
I	<b>56</b>	38	3	2	1	1	100
II	45	<b>42</b>	6	2	3	2	100
IIIa	43	29	<b>14</b>	14	0	0	100
IV	55	30	7	<b>2</b>	1	5	100
V/VI	36	42	7	1	<b>10</b>	4	100
VII/IIIb	42	33	9	4	2	<b>9</b>	100
Total	50	39	5	2	2	2	100

$N_{\text{non-migrants}} = 13,652$ ,  $N_{\text{emigrants}} = 1523$ . Sources: SOEP2017 (weighted), GERPSw1

higher classes (I, II, IIIa), while just 40% end up in the lower classes. Emigrants are even more concentrated at the top of the social class hierarchy. Nine in ten emigrants are in the top service classes. Just 4% of emigrants belong to the manual classes. Along these lines, one third of non-migrants' lower manual class parents bestow their position to their offspring while that is true for just 9% of emigrants. Conversely, more than half of emigrants' parents bestow their higher service class membership to their offspring, while just 27% of non-migrants do. Overall, these descriptive findings about class destinations indicate that German emigrants are also positively selected by their present social class membership.

## 8.5 International Migration and Social Fluidity

Next to the social origins of the internationally mobile population, we are interested in the association of spatial mobility and social mobility. Descriptive findings indicate that social mobility is higher among non-migrants compared with emigrants (see Table 8.4). One fourth of non-migrants remain in the same social class as their parents, while the same is true of 43% of emigrants. One reason is the higher proportion of top class members among emigrants compared with non-migrants that we documented above. Those originating from the highest class cannot be upwardly mobile per definition. However, emigrants originating from the top service classes (I, II) are more likely to secure their class position than non-migrants whose parents

**Table 8.4** Overall intergenerational mobility of emigrants and non-migrants based on unbalanced and balanced samples (column per cent)

	Emigrants	Non-migrants	
		Unbalanced	Balanced <sup>a</sup>
Upward mobility	33	39	17
Non-mobility	43	27	34
Downward mobility	25	34	50
Thereof ...			
Short-distance upward mobility	21	14	12
Long-distance upward mobility	12	26	5
Short-distance downward mobility	19	16	23
Long-distance downward mobility	6	17	27
Total	100	100	100

$N_{\text{non-migrants}} = 13,652$ ,  $N_{\text{emigrants}} = 1523$ . Inaccuracies owed to rounding. Sources: SOEP2017 (weighted), GERPSw1

<sup>a</sup>Adjusted to emigrant sample through entropy balancing

belong to these social classes. Among non-migrants, 27% with parents from class I and 35% with parents from class II inherit their class position (see Table 8.3). Among emigrants, the respective figures are distinctly higher with 56% and 42% securing their class position respectively.

Table 8.4 further differentiates long and short-distance social mobility. Short distances are defined as mobility to neighbouring classes, while long distances are more than one class apart. Long-distance social mobility is remarkably low among emigrants from all class origins. The proportion of long-distance downward mobility is 6% among emigrants compared to 17% among non-migrants. Similarly, long-distance upward mobility is half as frequent among emigrants (12%) as among non-migrants (26%).

In both groups, more individuals are upwardly mobile than downwardly mobile. 39% of non-migrants and 33% of emigrants are upwardly mobile. One relevant difference between non-migrants and emigrants in this respect is that emigrants reach the two highest service classes more often than non-migrants do. However, emigrants originate from these classes more often. Non-migrants are also more often downwardly mobile (34%) than emigrants are (25%). Overall, there is more social mobility among non-migrants than among emigrants.

Social mobility among non-migrants changes radically once we adjust the sample of non-migrants to relevant distributions of emigrants. Through entropy balancing according to social class origin, age, and gender we enable comparisons of samples with similar distributions of key characteristics in both samples. On average, non-migrants with similar characteristics as emigrants are less class mobile than non-migrants in general. About one third secures the class position of their parents, given the selective favourable class background of emigrants. Interestingly, non-mobility rates are still nine percentage points lower compared to 43% among emigrants. Emigration seems to suppress (downward) social mobility, it keeps emigrants in the mostly favourable class of origin. In sharp contrast, non-migrants with

comparable characteristics as emigrants face much higher rates of downward mobility; the rate increases to 50%. Both, short-distance and long-distance downward mobility, increase for this analytical group. Overall, comparable non-migrants are twice as often downwardly mobile as emigrants, and the differences are particularly pronounced with respect to long-distance downward mobility.

At the same time, upward mobility rates are much lower for the balanced sample of non-migrants. Even though emigrants are already a positively selected group, they benefit with respect to upward mobility. They are twice as often upwardly mobile (33%) as non-migrants in the balanced sample. The upshot is that the positive association of emigration and upward social mobility and the negative association with downward mobility become stronger once we take non-migrants with similar characteristics as emigrants as our reference.

Table 8.5, Panel A, shows the results of log-linear models of the two-way association between origins and destinations (OD) for the two groups of emigrants and non-migrants. We test Erikson and Goldthorpe's (1992) unidiff model against the common social fluidity model based on Vermunt's (1997) software *lem* to fit the models. The unidiff model does not describe the data better judged by the higher BIC and it is not significantly better than the baseline model according to a Chi-square test on the difference in the  $G^2$ . The unidiff model reduces the deviance by just 3.1% ( $(27.5-28.4)/28.4$ ) compared with the common social fluidity model. The results indicate that social mobility among emigrants is not different from social mobility among non-migrants. Furthermore, we fit a more flexible version of the unidiff model to account for the concentration of observations in the higher service class origins and destinations. For variation of the unidiff model, we estimated two separate unidiff parameters for mobility between the service classes and for the rest of the table. However, neither are these changes a statistically significant improvement of the baseline model.

Table 8.5, Panel B, shows the results of log-linear models applying entropy balancing to adjust the non-migrant distribution of key characteristics to the distribution of emigrants. However, the results are rather similar to the ones obtained without adjusted samples. The unidiff model does not fit the data better than the

**Table 8.5** Goodness of fit of models of common social fluidity and unidiff of emigrants and non-migrants for (A) unbalanced and (B) balanced samples

		$G^2$	df	p	Diss. index	Delta $G^2$	BIC	p vs. 1
<b>(A) Unbalanced sample</b>								
ODM	Com. social fluidity	28.4	25	0.2894	0.0059		-212	
	Unidiff	27.5	24	0.2795	0.0058	0.9	-203	0.3428
	Unidiff-2	27.2	23	0.2455	0.0058	1.2	-194	0.5488
<b>(B) Balanced sample</b>								
ODM	Com. social fluidity	31.4	25	0.1750	0.0072		-209	
	Unidiff	28.3	24	0.4261	0.0058	3.1	-203	0.0783
	Unidiff-2	28.2	23	0.2091	0.0056	3.2	-193	0.2019

$N_{\text{non-migrants}} = 13,652$ ,  $N_{\text{emigrants}} = 1523$ . O = Origin; D = Destination; M = Migration status. Sources: SOEP2017, GERPSw1

constant fluidity model. This finding also holds for the variation of the unidiff model where we estimate two separate unidiff parameters for mobility between the service classes and for the rest of the table. Results presented in panel B thus corroborate the finding that social mobility is not systematically different between non-migrants and emigrants.

The results of the unidiff model exercise are evident by all conventions. Neither the model fit with respect to  $G^2$  nor the BIC measure suggest a robust difference in social fluidity between emigrants and non-migrants. The results may surprise at first glance, since we did see favourable patterns of emigration for more upward and less downward mobility. Yet, the number of observations in our analysis might be (yet) too low and the (conventional) unidiff model too coarse to detect the differences between the groups. Per se, the mobility patterns and the strength of the association between social origin and destination class seem to be similar. The main finding is that offspring from favourable classes are able to maintain their favourable class positions. This is true for the (non-migrant) population per se, and this is in particular true for the group of emigrants.

## 8.6 Discussion and Conclusion

This chapter aimed to describe the social origins of German emigrants and to explore differences in social mobility between these emigrants and German non-migrants. Our results indicate that German emigrants are positively selected both with respect to their social origin class and with respect to their present social class. In other words, German emigrants are more likely to come from privileged educational backgrounds. On average, emigrants' parents hold higher school degrees and are more often in possession of tertiary degrees compared with non-migrants' parents. This is in line with earlier findings that studying abroad is more likely when parents hold academic degrees (Lörz and Krawietz 2011; Messer and Wolter 2007; Euler et al. 2013). Furthermore, emigrants are more likely to originate from higher social classes than non-migrants and they are more likely to presently belong to these classes. This is an indication that international mobility throughout the career mirrors the class dependency of studying abroad during school (Carlson et al. 2017).

We find no difference in social fluidity between emigrants and non-migrants. Our finding is robust to sensitivity tests that account for the concentration of emigrants in the upper service classes. Furthermore, it is robust to balancing the non-migrant sample according to the distribution of key characteristics among emigrants. This finding is in line with research in the context of EU mobility showing that the inter-generational mobility of intra-European movers does not differ significantly from that of stayers (Recchi 2009; Favell and Recchi 2011). However, it contradicts our tentative hypothesis that emigration facilitates sidestepping the rigidity of the German labour market. While wage mobility could be an incentive for German emigration (Witte and Guedes Auditor 2021), vertical social mobility apparently is not. Furthermore, Favell and Recchi's (2011) ESS-based analyses show that EU

migrants are more likely to end up in higher than lower class destinations and that this positive association is particularly strong among German emigrants.

Overall, the findings in this chapter indicate that international mobility and migration from Germany is the prerogative of the higher classes providing them with additional resources to maintain their social status. That underlines the importance international migration has for intergenerational social mobility in economically highly developed countries. Future research should expand on our findings in at least two directions. First, we did not address the crucial influence of education for social mobility (e.g. Breen and Müller 2020b). The inclusion of education and other mediating forces like cohort effects are next on the agenda. Second, separate analyses for men and women could reveal different mechanisms of social mobility by gender. Such additional analyses should also account for eventual periods of inactivity that “tied movers” (Erlinghagen 2021) are likely to experience immediately after migration. If women are disproportionately affected by this phenomenon, the class scheme must account for inactive persons to avoid gender bias in the mobility results (see Beller 2009). We need more research to establish the consequences of spatial mobility in early life for both spatial and social mobility through the life course.

## References

- Allmendinger, J. (1989). Educational systems and labour market outcomes. *European Sociological Review*, 5(3), 231–250.
- Beck, U. (2007). Beyond class and nation: Reframing social inequalities in a globalizing world. *The British Journal of Sociology*, 58(4), 679–705.
- Beller, E. (2009). Bringing intergenerational social mobility research into the twenty-first century: Why mothers matter. *American Sociological Review*, 74, 507–528.
- Bilecen, B., & van Mol, C. (2017). Introduction: International academic mobility and inequalities. *Journal of Ethnic and Migration Studies*, 43(8), 1241–1255.
- Bol, T., & van de Werfhorst, H. G. (2013). Educational systems and the trade-off between labor market allocation and equality of educational opportunity. *Comparative Education Review*, 57(2), 285–308.
- Borjas, G. J. (1987). Self-selection and the earnings of immigrants. *The American Economic Review*, 77(4), 531–553.
- Borjas, G. J. (1991). Immigration and self-selection. In J. M. Abowd & R. B. Freeman (Eds.), *Immigration, trade and the labor market* (pp. 29–76). Chicago: University of Chicago Press.
- Breen, R. (2004). *Social mobility in Europe*. New York: Oxford University Press.
- Breen, R. (2020). Methodological preliminaries. In R. Breen & W. Müller (Eds.), *Education and intergenerational social mobility in Europe and the United States* (pp. 20–28). Stanford: Stanford University Press.
- Breen, R., & Jonsson, J. O. (2005). Inequality of opportunity in comparative perspective: Recent research on educational attainment and social mobility. *Annual Review of Sociology*, 31(1), 223–243.
- Breen, R., & Luijkx, R. (2004a). Conclusions. In R. Breen (Ed.), *Social mobility in Europe* (pp. 383–410). New York: Oxford University Press.
- Breen, R., & Luijkx, R. (2004b). Social mobility in Europe between 1970 and 2000. In R. Breen (Ed.), *Social mobility in Europe* (pp. 37–76). New York: Oxford University Press.

- Breen, R., & Müller, W. (Eds.). (2020a). *Education and intergenerational social mobility in Europe and the United States*. Stanford: Stanford University Press.
- Breen, R., & Müller, W. (2020b). Introduction: Social mobility and education in the 20th century. In R. Breen & W. Müller (Eds.), *Education and intergenerational social mobility in Europe and the United States* (pp. 1–19). Stanford: Stanford University Press.
- Büchler, T. (2016). Schulstruktur und Bildungsungleichheit: Die Bedeutung von bundeslandspezifischen Unterschieden beim Übergang in die Sekundarstufe I für den Bildungserfolg. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 68(1), 53–87.
- Carlson, S., Gerhards, J., & Hans, S. (2017). Educating children in times of globalisation: Class-specific child-rearing practices and the acquisition of transnational cultural capital. *Sociology*, 51(4), 749–765.
- Chiquiar, D., & Hanson, G. H. (2005). International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States. *Journal of Political Economy*, 113(2), 239–281.
- DiPrete, T. A., Bol, T., Eller, C. C., & van de Werfhorst, H. G. (2017). School-to-work linkages in the United States, Germany, and France. *American Journal of Sociology*, 122(6), 1869–1938.
- Dumont, J.-C., & Lemaître, G. (2005). Counting immigrants and expatriates in OECD countries. *OECD Social, Employment and Migration Working Papers 25*. Paris.
- Erikson, R., & Goldthorpe, J. H. (1992). The constant flux. In *A study of class mobility in industrial societies*. Oxford: Clarendon Press.
- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of german migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Witte, N. (2021). Brain drain or brain circulation? Economic and non-economic factors driving the international migration of german citizens. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of german migrants. Consequences of international migration across the life course*. Cham: Springer.
- Euler, H. P., Rami, U., Glaser, E., Reber, G., & Bacher, J. (2013). Lohnt sich ein Auslandsaufenthalt während des Studiums?: Ergebnisse der Evaluierung eines Förderprogrammes. *DBW Die Betriebswirtschaft*, 73(5), 425–446.
- Favell, A., & Recchi, E. (2011). Social mobility and spatial mobility: Chapter 3. In A. Favell (Ed.), *Sociology of the European Union* (pp. 50–75). Basingstoke: Palgrave Macmillan.
- Fielding, A. J. (1992). Migration and social mobility: South East England as an escalator region. *Regional Studies*, 26(1), 1–15.
- Ganzeboom, H. B. G., Treiman, D. J., & Ultee, W. C. (1991). Comparative intergenerational stratification research: Three generations and beyond. *Annual Review of Sociology*, 17(1), 277–302.
- Gerhards, J., & Hans, S. (2013). Transnational human capital, education, and social inequality. Analyses of international student exchange. *Zeitschrift für Soziologie*, 42(2), 99–117.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German socio-economic panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik*, 239(2), 345–360.
- Hainmueller, J. (2012). Entropy balancing for causal effects: A multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis*, 20, 25–46.
- Hainmueller, J., & Xu, Y. (2013). ebalance: A stata package for entropy balancing. *Journal of Statistical Software*, 54, 7.
- Hertel, F. R. (2017). *Social mobility in the 20th century: Class mobility an occupational change in the United States and Germany*. Wiesbaden: Springer Fachmedien.

- Jacob, M., Kühhirt, M., & Rodrigues, M. (2019). Labour market returns to graduates' international experience: Exploring cross-country variation in Europe. *European Sociological Review*, 35(4), 491–505.
- Jann, B. (2019). *ISCOGEN: Stata module to translate ISCO codes*. Boston College Department of Economics.
- Klein, M. (2011). Trends in the association between educational attainment and class destinations in West Germany: Looking inside the service class. *Research in Social Stratification and Mobility*, 29(4), 427–444.
- Kratz, F., & Netz, N. (2018). Which mechanisms explain monetary returns to international student mobility? *Studies in Higher Education*, 43(2), 375–400.
- Lörz, M., & Krawietz, M. (2011). Internationale Mobilität und soziale Selektivität: Ausmaß, Mechanismen und Entwicklung herkunftsspezifischer Unterschiede zwischen 1990 und 2005. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 63(2), 185–205.
- Mayer, K. U., & Aisenbrey, S. (2007). Variations on a theme: Trends in social mobility in (West) Germany for cohorts born between 1919 and 1971. In S. Scherer, R. Pollak, G. Otte, & M. Gangl (Eds.), *From origin to destination. Trends and mechanisms in social stratification research* (pp. 125–154). Frankfurt am Main/New York: Campus.
- Messer, D., & Wolter, S. C. (2007). Are student exchange programs worth it? *Higher Education*, 54(5), 647–663.
- Müller, W., & Pollak, R. (2004). Social mobility in West Germany: The long arms of history discovered? In R. Breen (Ed.), *Social mobility in Europe* (pp. 77–113). New York: Oxford University Press.
- Müller, W., & Pollak, R. (2015). Bildung und soziale Mobilität in Deutschland. *AStA Wirtschafts- und Sozialwissenschaftliches Archiv*, 9, 5–26.
- Parey, M., Ruhose, J., Waldinger, F., & Netz, N. (2017). The selection of high-skilled emigrants. *The Review of Economics and Statistics*, 99(5), 776–792.
- Platt, L. (2005). The intergenerational social mobility of minority ethnic groups. *Sociology*, 39(3), 445–461.
- Pollak, R., & Müller, W. (2020). Education as an equalizing force: How declining educational inequality and educational expansion have contributed to more social fluidity in Germany. In R. Breen & W. Müller (Eds.), *Education and intergenerational social mobility in Europe and the United States* (pp. 122–149). Stanford: Stanford University Press.
- Recchi, E. (2009). The social mobility of mobile Europeans. In E. Recchi & A. Favell (Eds.), *Pioneers of European integration: Citizenship and mobility in the EU* (pp. 72–97). Edward Elgar Publishing, Incorporated.
- Reichelt, M., & Abraham, M. (2017). Occupational and regional mobility as substitutes: A new approach to understanding job changes and wage inequality. *Social Forces*, 95(4), 1399–1426.
- Savage, M. (1988). The missing link? The relationship between spatial mobility and social mobility. *The British Journal of Sociology*, 39(4), 554–577.
- Vermunt, J. K. (1997). *LEM 1.0: A general program for the analysis of categorical data*. Tilburg: Tilburg University.
- Waibel, S. (2019). Does spatial mobility in young adulthood matter? Indirect and direct effects of spatial mobility during education on occupational status. *BiB Working Paper*. Wiesbaden.
- Waibel, S., Petzold, K., & Rüger, H. (2018). Occupational status benefits of studying abroad and the role of occupational specificity—A propensity score matching approach. *Social Science Research*, 74, 45–61.
- Waibel, S., Rüger, H., Ette, A., & Sauer, L. (2017). Career consequences of transnational educational mobility: A systematic literature review. *Educational Research Review*, 20, 81–98.
- Weiß, A. (2017). *Soziologie Globaler Ungleichheiten*. Berlin: Suhrkamp.
- Witte, N. (2020). Have changes in gender segregation and occupational closure contributed to increasing wage inequality in Germany, 1992–2012? *European Sociological Review*, 36(2), 236–249.

- Witte, N., & Guedes Auditor, J. (2021). Affluent lives beyond the border? Individual wage change through migration. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Xie, Y. (1992). The log-multiplicative layer effect model for comparing mobility tables. *American Sociological Review*, 57(3), 380–395.
- Yaish, M. (2002). The consequences of immigration for social mobility: The experience of Israel. *European Sociological Review*, 18(4), 449–471.
- Yankow, J. J. (2003). Migration, job change, and wage growth: A new perspective on the pecuniary return to geographic mobility. *Journal of Regional Science*, 43(3), 483–516.
- Zuccotti, C. V., Ganzeboom, H. B. G., & Guveli, A. (2017). Has migration been beneficial for migrants and their children?: Comparing social mobility of Turks in Western Europe, Turks in Turkey, and Western European Natives. *International Migration Review*, 51(1), 97–126.

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**Part IV**  
**Partner and Family**

# Chapter 9

## Migration Motives, Timing, and Outcomes of Internationally Mobile Couples



Marcel Erlinghagen

### 9.1 Introduction

The migration of couples should be understood as a product of bilateral negotiations between two partners rather than independent decisions of socially unbounded, isolated actors (Abraham and Nisic 2012; Coulter et al. 2012). However, it is very likely that the results of such negotiation processes are not gender-neutral. According to the traditional male breadwinner model, couples' migration decisions should be particularly affected by men's career prospects and women are take the role of the "trailing wife" who follows her husband(e.g. Bielby and Bielby 1992; Boyle et al. 2001; Clerge et al. 2017). Even if there is ample evidence for the trailing wife phenomenon with regard to internal residential moves, little is known about whether and how these gender-linked patterns also occur in international migration. Based on data from the first wave of the German Emigration and Remigration Panel Study (GERPS), the current chapter presents an exploration of data addressing these questions, examining findings regarding gender-linked differences in migration motives, in migration patterns, and in migration outcomes of recently emigrated or remigrated couples. It partly refers to and overlaps with my previously published more detailed paper (Erlinghagen 2020).

Findings uncovered in these data will contribute to the ongoing debate about tied movers and family-related inequalities of migration. Since most research deals with internal migration, we bring new evidence to these discussions by investigating international migration. The data discussed in this chapter also help to broaden our understanding of gender-linked factors in migration because much of the previous work on international family migration has come from less egalitarian and less economically developed countries, whereas the data in this study come from Germany,

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where by global standards both gender equality and living standards are comparatively high.

## 9.2 Theoretical Background

In the context of migration research, there is a long tradition of relying on arguments from human capital theory (Becker 1964; Mincer 1962) and conceptualising migration as a joint household decision (Mincer 1978; Sandell 1977). These arguments have been extended by arguments from bargaining theory, claiming that the partner with the greatest bargaining power is predicted to prevail such that the weaker partner (who has less bargaining power) follows the migration preferences of his or her spouse (Abraham et al. 2010; Jacobsen and Levin 2000; Lundberg and Pollak 1996). Another strand of argumentation stresses the importance of gender roles for understanding the migration of couples (Bielby and Bielby 1992; Duncan and Perrucci 1976; Jürges 2006). More recently these approaches have been criticized because of their narrow focus on career opportunities as the main drivers of couples' or families' migration. It is argued that the life course perspective (cf. Elder 2003; Mayer 2009) could broaden our understanding of the complex migration decision process by taking previous experiences (e.g. former migration episodes), major life events (e.g. marriage, widowhood, birth of a child), and interrelations between different spheres of life (e.g. family, education, labour market) into account (e.g. Clark and Davies Withers 2007; Cooke 2008; Geist and McManus 2008). In the present chapter, we take these lines of thought together in a combined theoretical approach including human capital and bargaining arguments, aspects of gender roles, and a dynamic life course perspective.

## 9.3 State of Research

With regard to gender differences in the context of couples' migration there is ample empirical evidence for the trailing wife phenomenon and its complex causes and consequences (e.g. Bielby and Bielby 1992; Boyle et al. 2001; Clerge et al. 2017). The couples' migration decisions are dominated by men's career prospects. Women typically play the part of the trailing or tied partner who either follows her husband ("tied mover") or stays with her husband ("tied stayer"; Cooke 2013). In addition to the question of who dominates couples' migration decisions, there are also many analyses that focus on the consequences of spatial mobility on men's and women's careers. Evidence has repeatedly indicated that female spouses experience earning losses as well as lower labour market prospects after moving (e.g. Boyle et al. 2001; Lersch 2016; McKinnish 2008).

However, this research has some important limitations. First, most research on the migration of couples has been restricted to internal residential mobility. In the case of quantitative research, this is mainly because representative large data sets are only available on a national scale. Information about the process of international migration (e.g. family information before and after border crossing) is lacking (e.g. Vermeulen 2010). National surveys and panels usually only reflect migration processes within national borders. As a result, it is unknown whether the observed pattern of internal mobility generalises to international migration of couples. Second, compared to the manifold research on objective outcome differences of migration for male or female spouses, there is to the best of our knowledge no quantitative comparable research that addresses possible gender differences regarding the consequences of couples' migration in terms of subjective well-being. Third—as discussed by Amcoff and Niedomysl (2015)—quantitative as well as qualitative research on migration of couples generally neglects the phenomenon of remigration, which may have different motives and possibly causes different consequences for families and couples compared to emigration. Third, the results of existing qualitative research on international migration of couples support the trailing-wife-hypothesis. However, this research relies mostly on interviews of small numbers of migrants (e.g. King-O'Riain 2015) and/or of very specific groups of migrants (e.g. highly skilled expatriates; Cangia et al. 2018). In addition, such research is mainly restricted to migration from particular regions or countries of origin to particular regions or countries of destination (e.g. Willis and Yeoh 2010; Schmalzbauer 2009; Kōu et al. 2015; Mayes and Koshy 2017). Thus, even for specific subgroups of migrants it remains unclear whether and to what extent such findings can be generalised.

## 9.4 Data and Methods

### 9.4.1 Data

Data from the first wave of the German Emigration and Remigration Panel Study (GERPS) (Ette et al. 2021) are examined in the following analyses. We are interested in recently migrated individuals, so all respondents who reported emigrating or remigrating prior to 2017 were excluded from further analyses. In addition, we excluded any participants whose interviews were incomplete. Under these conditions data from 3647 emigrants and 6150 remigrants were retained for further analyses.

In GERPS all respondents were asked questions about their romantic relationship or partnership status 3 months before they moved and whether this relationship has continued after migration. Although we concentrated exclusively on recently migrated individuals, several months to 2 years could have elapsed between the

event of migration and the time of the interview. In GERPS (wave 1) the minimum time elapsed between the reported event of migration and the interview date was 0 months and the maximum was 25 months (mean: 11.7 months; median: 12.0 months). Those respondents who reported a partnership at the time of migration were also asked if this relationship was intact at the time of the interview. The following analyses only include migrants who reported a stable and continuing partnership throughout the whole migration process (3 months before migration up to the interview in wave 1; for migration related separations see Baykara-Krumme et al. 2021). In addition, we deleted cases with no valid gender information and also individuals who reported a same-sex marriage. Under these conditions, data from 2257 emigrants and 3191 remigrants remained in our data set.

## **9.4.2 *Dependent Variables***

A variety of dependent variables are examined in order to address the various research questions we want to answer in this chapter. Below, we describe how these dependent variables are derived from GERPS data. Next, we discuss the selection of different regression techniques suited to each type of variable and analysis conducted. Finally, the regression results are presented and interpreted.

### **9.4.2.1 Migration Motives**

The GERPS participants were asked about the importance of several possible migration motives for their own migration decision, and responses were given using a seven-point Likert scale ranging from (1) “not important at all” to (7) “very important”. In the following sections, we concentrate on three motives, “career of the partner”, “own career prospects”, and “family reasons”, because we can assume these domains of motives in particular are strongly connected to gender role beliefs and attitudes.

### **9.4.2.2 Migration Pattern**

We considered whether a spouse is trailing or leading the migration process in two different ways: First, we looked at which partner (male or female) was the driving force behind the couple’s migration decision. Second, we examined the timing of individual migration. For our analyses we distinguish not just trailing and non-trailing spouses, but three groups: (1) trailing spouses, (2) leading spouses, and (3) egalitarian spouses.

We gained insight into the driving force behind each couple’s migration decision through answers to the following GERPS question: “If you remember your migration decision: Who has been the driving force? You or your partner?” The

participants were given the following response categories: (1) “my partner”, (2) “I myself”, (3) “Both in equal shares”, and (4) “don’t know”. We identify a participant as a “trailing spouse” if he or she chooses category (1). If he or she chooses category (2), we identify the person as a “leading spouse”. If participants select category (3) or (4), we define them as “egalitarian spouses”.

To learn more about the timing of migration, we rely on the following GERPS question: “What was the timing of your migration like: Which of you migrated first or did you migrate together?” The participants could choose among the following categories: (1) “My partner already lived there at the time we met”, (2) “My partner migrated first”, (3) “My partner migrated after me”, (4) “We migrated at the same time”, (5) “My partner is still living in Germany” [emigrants only] / “...in the country I have lived before” [remigrants only], and (6) “My partner lives in another country”. We define a participant as a “trailing spouse” if he or she chooses category (1) or (2). If he or she chooses category (3), (5), or (6) we consider the participant to be a “leading spouse”. Participants who selected category (4) were defined as “egalitarian spouses”.

#### 9.4.2.3 Migration Outcomes

Based on previous research (e.g. Boyle et al. 2001; Lersch 2016; McKinnish 2008), we also expected gender differences in migration outcomes for male and female spouses. There are several areas of life to consider when looking at possible outcome differences. We will concentrate on one objective and two subjective measures. These measures are (1) objective changes in individual employment status comparing status 3 month prior to migration to the time of the interview, (2) subjective assessment of social isolation at the time of the interview as measured by an additive isolation index with values from 3 (very low feeling of isolation) to 15 (very high feeling of isolation), and finally (3) the subjective rating of overall life satisfaction (11-point scale). We made separate estimations for trailing partners, partners from egalitarian couples, and leading partners.

#### 9.4.3 Explaining and Control Variables

Gender is the central explaining variable in all our models since we are interested in possible differences between male and female partners in migration motives, migration patterns, and migration outcomes. Later, we control for age and include information about individual migration experiences. Although GERPS is restricted to German citizens it is possible that some participants had previous experience with migration as they may have migrated from abroad to Germany (“first generation migrant”) or at least one of their parents may have moved to Germany before the participant was born (“second generation migrant”). In our analyses of migration

motives and migration pattern, we also ask whether children were part of emigrant's or remigrant's household 3 month before migration. In contrast, the estimations regarding migration outcomes take into account whether children were part of emigrant's or remigrant's household at the time of the (post-migration) interview. In both cases, we distinguish among households with at least one child below the age of 7 years, households with children between 7 and 16 years of age, and households with no children below the age of 17 years. In addition, we include a control that indicates whether the partner currently lives in the same household like the interviewed migrant or if the two partners are currently living at different locations. The estimations regarding life satisfaction and social isolation as an outcome of migration both control for migration motives and for participants' current main activity status (employed, self-employed, not employed, in education and training, and other activities). The estimations on migration motives and patterns control for the main activity status 3 month before migration. We further control for current educational status measured by the highest occupational degree ("no degree", "completed vocational training", and "college or university degree"). We also include proxy-information about the relative educational status of the not-interviewed partner and differentiate the three categories "partner has a lower degree", "partner has an equal degree", and "partner has a higher degree". To reflect differences in personality traits we include a self-reported measure of risk attitudes. Each respondent was asked to indicate on an 11-point scale (ranging from 0 = "not at all willing to take risks" to 10 = "very willing to take risks") if he or she is someone who is willing to take risks (see Lübke et al. 2021 for analyses on emigrants' and remigrants' risk tolerance).

## 9.5 Results

### 9.5.1 Migration Motives

Table 9.1 shows the results of Generalised Ordered Logit Regressions (GOLRs; Williams 2018) on gender effects and differences between emigrants and remigrants regarding different migration motives controlling for other relevant independent variables. In addition, we include an interaction effect for female remigrants. Including this interaction effect enables us to investigate whether there is an additional effect for female remigrants on the self-perceived importance of selected migration motives beside a basic gender effect and a basic effect of remigration. In general, GOLR accounts for the ordinal scale of our dependent variable but can relax the parallel odds assumption (Williams 2016). Instead of one coefficient as in standard ordinal regression estimations, GOLR provides single coefficients (here: 6) each estimating the effect of the independent variable of interest (here: gender and emigration or remigration) on a further one-point increase in the dependent ordinal variable (here: importance of selected migration motives on a 7-point scale).

**Table 9.1** Effect of type of migration, gender, and the interaction effect for on different migration motives (coefficients of Generalised Ordered Logit Regressions)

		Importance of motives (1 = "not important" to 6 = "very important")					
		1	2	3	4	5	6
Own career	Remigrant vs. Emigrant	0.238	-0.099	-0.140	-0.183*	-0.281***	-0.511***
	Female vs. Male	-0.579***	-0.880***	-0.808***	-0.847***	-0.771***	-0.737***
	Remigrant x Female	0.057	0.493***	0.424***	0.333**	0.334**	0.468***
	Partners' career	0.020	0.077	-0.074	-0.124	-0.248**	-0.331**
Family	Remigrant vs. Emigrant	0.489***	0.858***	0.950***	0.984***	0.953***	1.028***
	Female vs. Male	-0.282	-0.566***	-0.497***	-0.521***	-0.469***	-0.406**
	Remigrant x Female	0.718***	1.468***	1.337***	1.192***	0.934***	0.645***
	Remigrant vs. Emigrant	-0.178	0.321***	0.376***	0.416***	0.512***	0.474***
	Remigrant vs. Emigrant	0.486**	-0.010	-0.063	-0.052	-0.159	-0.112

Controls: age, migration experience, children in household, main activity status, educational status, spouse's relative educational status, risk tolerance.

Source: GERPSw1

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$



Table 9.1 shows that emigrants reported significantly higher importance for career-related migration motives than remigrants reported. In contrast, family-related migration motives were more relevant for remigrants than for emigrants. In addition, there were clear basic gender differences in migration motives that follow the traditional gender role model of the male breadwinner. For female participants, own career prospects were significantly less important as migration motives than for male participants. In contrast, the spouse's career and family-related reasons had significantly greater importance as migration motives for female migrants compared to males. The coefficients of the interaction term for female remigrants showed that when such basic gender and remigration effects were controlled for, the importance of female remigrants' own career prospects significantly increased and the importance of their partner's career prospects significantly decreased. "These results mean that although migrating females generally followed the same traditionally gendered motive pattern, the male breadwinner model decreased in relevance for remigrating female spouses compared to emigrating females.

### 9.5.2 *Migration Pattern*

Our next questions were whether and how gender affects individual propensity to become a trailing or leading spouse during emigration and remigration (see also Erlinghagen 2020). For this purpose, we estimated multinomial logistic regressions (Hosmer et al. 2013, pp. 269–311). As described above, we derived two different dependent variables from GERPS. The first variable is a measure of which partner (male or female) was the driving force behind couple's migration decision. The second variable contains information about which, if either, spouse (male or female) moved first (timing). For these migration pattern analyses, the reference was "egalitarian spouse" with "trailing spouse" and "leading spouse" as the competing patterns. The results are presented as relative risk ratios (RRR). Separated models for emigrant and for remigrant participants were estimated. The results provide evidence regarding individual propensities to be a trailing spouse or a leading spouse compared to egalitarian spouses, controlling for demographic and social-structural variables as well as for individual differences in migration motives and personality traits.

Table 9.2 provides RRRs of female emigrants and remigrants compared to males with respect to (a) the migration decision and (b) the timing of migration. For remigration decisions, we found a gender effect in only one specific situation: Remigrating women in stable partnerships had a significantly higher propensity to become a leading spouse compared to men. In other words, women were more likely than men to be the leading force in the decision making of couples who remigrated. Looking at the timing of remigration we find a similar pattern: Women were more likely than men to move first and to be followed by their trailing husbands. However, the results for the timing of emigration were completely different. When couples emigrated, women were indeed the trailing partners (RRR = 1.702) and

**Table 9.2** Relative Risk Ratios (RRR) of female emigrants and remigrants compared to men to be a trailing or leading spouse regarding (a) migration decision (ref.: egalitarian decision) and (b) timing of migration (ref.: migration at the same point in time)

	<b>(a) Migration decision</b>			
	<b>Emigrants</b>		<b>Remigrants</b>	
	<b>trailing spouse</b>	<b>leading spouse</b>	<b>trailing spouse</b>	<b>leading spouse</b>
	<b>RRR</b>	<b>RRR</b>	<b>RRR</b>	<b>RRR</b>
Male	ref.	ref.	ref.	ref.
Female	1.011	0.818	0.904	1.416***
R <sup>2</sup>	0.200		0.120	
LR chi <sup>2</sup>	925.48		751.35	
N	2208		3171	
	<b>(b) Timing of migration</b>			
	<b>Emigrants</b>		<b>Remigrants</b>	
	<b>trailing spouse</b>	<b>leading spouse</b>	<b>trailing spouse</b>	<b>leading spouse</b>
	<b>RRR</b>	<b>RRR</b>	<b>RRR</b>	<b>RRR</b>
Male	ref.	ref.	ref.	ref.
Female	1.702***	0.679**	0.908	1.598***
R <sup>2</sup>	0.208		0.130	
LR chi <sup>2</sup>	989.24		877.07	
N	2210		3169	

Controls: age, age<sup>2</sup>, migration experience, children in household, main activity status, educational status, spouse’s relative educational status, risk tolerance, migration motives. Source: GERPSw1  
 \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

they were significantly less likely to lead the emigration process (RRR = 0.679). However, the decision towards and the timing of remigration within couples is led by women independent of age, education, migration experience, migration motives, and personality traits.

### 9.5.3 Migration Outcomes

The result of different regression analyses on three important outcome variables are presented in Table 9.3. With regard to overall life satisfaction (11-point scale) and social isolation (13-point index), we conduct rating scale regressions with Bernoulli quasi maximum likelihood estimations (Studer and Winkelmann 2016) using the glm command in STATA as recommended in Studer and Winkelmann (2011, p. 8). The results on employment continuity (0 = no/1 = yes) relies on binary logistic regression (Hosmer et al. 2013, pp. 35–47).

With regard to employment continuity, there do not appear to be negative outcomes for male or female trailing partners compared to couples reporting egalitarian migration decisions and synchronised timing patterns of migration—and this held

**Table 9.3** Correlations between gender, the decision and timing patterns of migration, and outcome variables

Decision			Continues employment	Overall life satisfaction <sup>1</sup>	Social isolation index <sup>2</sup>
Emigrants	male	trailing	-0.524	-0.182*	0.105
		leading	0.771*	-0.080	0.021
	female	trailing	-0.325	-0.222***	0.145**
		leading	0.934***	-0.090	0.009
Remigrants	male	trailing	-0.298	-0.077	0.062
		leading	0.172	-0.086	0.068*
	female	trailing	-0.307	-0.353***	0.098*
		leading	-0.017	-0.024	0.063
Timing			Continues employment	Overall life satisfaction <sup>1</sup>	Social isolation index <sup>2</sup>
Emigrants	male	trailing	-0.026	-0.119	0.067
		leading	1.055**	-0.068	0.028
	female	trailing	0.482*	-0.089	0.021
		leading	1.290**	-0.063	-0.085
Remigrants	male	trailing	0.363	-0.027	-0.016
		leading	0.094	-0.170**	0.143**
	female	trailing	0.297	0.034	-0.024
		leading	-0.276	0.009	0.027

Controls: age, migration experience, children in household, partner lives in household, educational status, spouse's relative educational status, risk tolerance.<sup>1,2</sup> Further controls: main activity status, migration motives. Source: GERPSw1

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

true for both emigration and remigration. Instead, we found a positive correlation for leading emigrating spouses: The leading spouses who emigrated showed a higher propensity for employment continuity during the migration process than individuals in partnerships that were egalitarian with respect to migration decision and timing. This pattern is fully consistent with our results on migration motives, since career-related motives play a much greater role in understanding emigration than remigration. In light of the trailing wife hypothesis, we did not observe a negative burden of emigration or remigration on employed women with regard to employment discontinuity. However, it is quite possible that women who trail their partners when migrating face job and career challenges or setbacks in terms of working conditions, wages, or career opportunities after migration. Future analyses are needed to further investigate the possible gender-related impacts on employment penalties of migration.

In contrast, when we looked at overall life satisfaction and social isolation we found evidence of a psychological burden for women who followed their partners. These trailing women reported significantly lower overall life satisfaction and a

significantly higher perceived social isolation in both the recently emigrated or remigrated groups. For male migrants living in stable partnerships, no such correlations were found. Instead, results suggested that leading male remigrants pay another kind of psychological toll for migration. The results indicated that not trailing but leading remigrating husbands experienced significantly lower life satisfaction and a significant higher perceived social isolation. This seems particularly true when we look at timing of migration: Men who moved before their partners reported lower life satisfaction and increased feelings of social isolation even if their partners had since also remigrated and when other important covariates were controlled for.

## 9.6 Discussion

This chapter presented analyses of data from the first wave of the German Emigration and Remigration Panel Study (GERPS) to explore the role of gender differences in migration motives, patterns, and outcomes in recently emigrated or remigrated couples. The analyses are theoretically framed by the so called trailing wife hypothesis that suggests a clear gender-related migration pattern following traditional gender roles. Based on this hypothesis, men are expected to lead the decision as well as the timing of migration and women are expected take the role of the trailing spouse who follows.

There is ample evidence that supports the trailing wife hypothesis, but only for internal residential mobility within certain countries. However, up until now there has been limited and ambiguous evidence regarding whether and how emigration of couples follows the same patterns as internal moves. In addition, almost nothing is known about the remigration of couples, although there are substantial theoretical arguments that remigration follows somewhat different patterns than emigration.

There are certain limitations to keep in mind for the research presented in this chapter as well. The study presented here is of couples but is based on a survey of individuals. Thus, all relevant information on partners' status or behaviour relies on proxy reports given by the interviewed partner. This could lead to biased results since a respondent may not know or may not want to report the actual answer to a certain question regarding his or her partner. There is an ongoing debate about the assets and drawbacks of proxy versus self-report measures (e.g. Lee and Lee 2012; Moore 1988). One disadvantage of self-report measures in household or multi-actor surveys is, however, the danger of nonresponse and possible selectivity bias (e.g. Havermans et al. 2015; Kalmijn and Liefbroer 2011; Schröder et al. 2012). Ultimately, we cannot be certain if and how our results are systematically biased by our use of proxy information. However, GERPS is unique and seems to be the only available database that enables us to conduct longitudinal analyses to investigate migration trajectories of internationally mobile couples. It has to remain an open research question if future analyses relying on (not yet existing) more sophisticated

multi-actor surveys will lead to different, maybe less biased results. In addition, it must be clear that the results are based on data for emigration from and remigrating to Germany as one of the world's leading economies and best developed democratic welfare states. Thus, the findings cannot be generalised to migration trajectories of couples emigrating from or remigrating to poorer and much more insecure world regions of the "global south" to the highly developed economies of the "global north".

Despite such limitations, the paper provides new insights into migration trajectories of internationally mobile couples. First, the presented analyses showed that emigration and remigration motives of German couples follow clear traditional gender roles. In line with the male breadwinner model, womens' own career prospects are less important to women as a migration motive. Instead, their partner's career prospects as well as family-related reasons are more important as motives for female emigration as well as remigration.

The evidence indicated that the timing of couples' emigration followed the traditional trailing wife pattern. Specifically, women were more likely have followed their partners who had already moved abroad. Women were also less likely to take on the role of the leading spouse by emigrating in advance of their partners. However, our results also revealed different patterns among emigrating and remigrating couples. Women were more likely to remigrate, or move back to Germany, in advance of their male partners, even controlling for age, individual migration experiences, education, partner's relative education, individual risk attitudes, and migration motives. Furthermore, when looking at migration decisions, we found no significant gender effect for emigration but a greater tendency for women to be the leading force in the remigration decision making of couples.

Turning to migration outcomes, we find evidence for at least some psychological burden for women. If women are the trailing partner with respect to emigration or remigration decisions, this is obviously correlated with a decrease in overall life satisfaction as well as an increase in perceived social isolation after migration. However, under some circumstances men also suffer psychologically. Specifically, male partners who have remigrated in advance of their female partners report a lower life satisfaction and a higher perceived isolation.

We can conclude that emigration and remigration *motives* are strongly gendered consistent with traditional male breadwinner norms. However, *actual migration decision and timing* only partly follow such trajectories. With regard to emigration, we have evidence supporting the trailing wife hypothesis. But it also turns out that remigration obviously follows (at least partly) other rules. To some extent, gender norms lose their importance for couples who are returning to Germany. Focusing on possible gender effects in *migration outcome*, it is apparent that gender effects diminish even further. There are no effects on employment continuity of male and female migrants living in stable partnerships. However, female migrants experience some psychological burden if they are the following partner in migration decisions. To be the trailing wife seems to result in lower life satisfaction and higher perceived social isolation. In contrast, leading men seems to suffer from lower life satisfaction

and higher perceived isolation if they have remigrated before their partners. The coincidence of suffering trailing wives and suffering leading husbands fits traditional gender role expectations in which women are expected or even forced to follow their male partners, and men are forced to temporarily leave their families because of their perceived responsibility for their families' subsistence.

Since the aim of this chapter was to provide first explorative overview of possible gender differences in migration motives, patterns, and outcomes of couples, future research should undertake analyses to look at these variables in more detail. GERPS provides a database very well suited to these purposes, particularly once further waves become available during the coming years.

## References

- Abraham, M., Auspurg, K., & Hinz, T. (2010). Migration decisions within dual-earner partnerships: A test of bargaining theory. *Journal of Marriage and Family*, 72(4), 876–892.
- Abraham, M., & Nisic, N. (2012). A simple mobility game for couples' migration decisions and some quasi-experimental evidence. *Rationality and Society*, 24(2), 168–197.
- Amcoff, J., & Niedomysl, T. (2015). Is the tied returnee male or female? The trailing spouse thesis reconsidered. *Population, Space and Place*, 21(8), 872–881.
- Baykara-Krumme, H., Erlinghagen, M., & Mansfeld, L. (2021). Disruption of family lives in the course of migration: 'Tied Migrants' and partnership breakup patterns among German (r) emigrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis, with special reference to education*. New York: Columbia University Press.
- Bielby, W. T., & Bielby, D. D. (1992). I will follow him: Family ties, gender-role beliefs, and reluctance to relocate for a better job. *American Journal of Sociology*, 97(5), 1241–1267.
- Boyle, P., Cooke, T. J., Halfacree, K., & Smith, D. (2001). A cross-national comparison of the impact of family migration on women's employment status. *Demography*, 38(2), 201–213.
- Cangia, F., Levitan, D., & Zittoun, T. (2018). Family, boundaries and transformation. The international mobility of professionals and their families. *Migration Letters*, 15, 1.
- Clark, W. A. V., & Davies Withers, S. (2007). Family migration and mobility sequences in the United States. *Demographic Research*, 17, 591–622.
- Clerge, O., Sanchez-Soto, G., Song, J., & Luke, N. (2017). 'I would really like to go where you go': Rethinking migration decision-making among educated tied movers. *Population, Space and Place*, 23(2), e1990.
- Cooke, T. J. (2008). Migration in a family way. *Population, Space and Place*, 14(4), 255–265.
- Cooke, T. J. (2013). All tied up: Tied staying and tied migration within the United States, 1997 to 2007. *Demographic Research*, 29, 817–836.
- Coulter, R., Ham, M., & Feijten, P. (2012). Partner (dis)agreement on moving desires and the subsequent moving behaviour of couples. *Population, Space and Place*, 18(1), 16–30.
- Duncan, R. P., & Perrucci, C. C. (1976). Dual occupation families and migration. *American Sociological Review*, 41(2), 252.
- Elder, G. H. (2003). The life course in time and place. In W. R. Heinz & V. W. Marshall (Eds.), *Social dynamics of the life course: Transitions, institutions, and interrelations* (pp. 57–71). New York: de Gruyter.
- Erlinghagen, M. (2020). Love in motion: Migration patterns of internationally mobile couples. *Population, Space and Place* Online First.

- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. consequences of international migration across the life course*. Cham: Springer.
- Geist, C., & McManus, P. A. (2008). Geographical mobility over the life course: Motivations and implications. *Population, Space and Place*, 14(4), 283–303.
- Havermans, N., Vanassche, S., & Matthijs, K. (2015). Methodological challenges of including children in family research: Measurement equivalence, selection bias and social desirability. *Child Indicators Research*, 8(4), 975–997.
- Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression*. Hoboken: Wiley.
- Jacobsen, J. P., & Levin, L. M. (2000). The effects of internal migration on the relative economic status of women and men. *The Journal of Socio-Economics*, 29(3), 291–304.
- Jürges, H. (2006). Gender ideology, division of housework, and the geographic mobility of families. *Review of Economics of the Household*, 4(4), 299–323.
- Kalmijn, M., & Liefbroer, A. C. (2011). Nonresponse of secondary respondents in multi-actor surveys: Determinants, consequences, and possible remedies. *Journal of Family Issues*, 32(6), 735–766.
- King-O'Riain, R. C. (2015). Emotional streaming and transconnectivity: Skype and emotion practices in transnational families in Ireland. *Global Networks*, 15(2), 256–273.
- Kōu, A., van Wissen, L., van Dijk, J., & Bailey, A. (2015). A life course approach to high-skilled migration: Lived experiences of Indians in the Netherlands. *Journal of Ethnic and Migration Studies*, 41(10), 1644–1663.
- Lee, J., & Lee, S. (2012). Does it matter who responded to the survey? Trends in the U.S. gender earnings gap revisited. *Industrial Relations Review*, 65, 148–160.
- Lersch, P. M. (2016). Family migration and subsequent employment: The effect of gender ideology. *Journal of Marriage and Family*, 78(1), 230–245.
- Lübke, C., Décieux, J. P., Erlinghagen, M., & Wagner, G. G. (2021). Comparing the risk attitudes of internationally mobile and non-mobile Germans. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. consequences of international migration across the life course*. Cham: Springer.
- Lundberg, S., & Pollak, R. A. (1996). Bargaining and distribution in marriage. *Journal of Economic Perspectives*, 10(4), 139–158.
- Mayer, K. U. (2009). New directions in life course research. *Annual Review of Sociology*, 35, 413–433.
- Mayes, R., & Koshy, P. (2017). Transnational labour migration and the place of reproductive labour: Trailing wives and community support in Boddington. *Work, Employment and Society*, 32(4), 670–686.
- McKinnish, T. (2008). Spousal mobility and earnings. *Demography*, 45(4), 829–849.
- Mincer, J. (1962). On-the-job training: Costs, returns, and some implications. *Journal of Political Economy*, 70(suppl), 50–79.
- Mincer, J. (1978). Family migration decisions. *Journal of Political Economy*, 86(5), 749–773.
- Moore, J. C. (1988). Self proxy response status and survey response quality—a review of the literature. *Journal of Official Statistics*, 4(2), 155–172.
- Sandell, S. H. (1977). Women and the economics of family migration. *The Review of Economics and Statistics*, 59(4), 406–414.
- Schmalzbauer, L. (2009). Gender on a new frontier: Mexican migration in the rural mountain west. *Gender & Society*, 23(6), 747–767.
- Schröder, J., Castiglioni, L., Brüderl, J., & Krieger, U. (2012). The influence of relationship quality on the participation of secondary respondents: Results from the German family panel. *Comparative Population Studies*, 37(3–4), 591–614.

- Studer, R., and Winkelmann, R.. (2016) Econometric analysis of ratings with an application to health and wellbeing. *SSRN Electronic Journal*.
- Studer, R., & Winkelmann, R. (2011). *Specification and estimation of rating scale models—with an application to the determinants of life satisfaction*. Berlin: SOEPPapers.
- Vermeulen, H. (2010). Segmented assimilation and cross-national comparative research on the integration of immigrants and their children. *Ethnic and Racial Studies*, 33(7), 1214–1230.
- Williams, R. (2016). Understanding and interpreting generalized ordered logit models. *The Journal of Mathematical Sociology*, 40(1), 7–20.
- Williams, R. (2018). Generalized ordered logit/partial proportional odds models for ordinal dependent variables. *The Stata Journal: Promoting Communications on Statistics and Stata*, 6(1), 58–82.
- Willis, K. D., & Yeoh, B. S. A. (2010). Gender and transnational household strategies: Singaporean migration to China. *Regional Studies*, 34(3), 253–264.

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# Chapter 10

## Disruption of Family Lives in the Course of Migration: ‘Tied Migrants’ and Partnership Breakup Patterns Among German (R)emigrants



Helen Baykara-Krumme, Marcel Erlinghagen, and Lisa Mansfeld

### 10.1 Introduction

In classical migration theories, family dynamics play an important role for describing mobility patterns (Lee 1966), and the introduction of the family life course perspective to mobility and migration research has increased attention towards this interdependence of family and migration (Kley 2011; Kulu and Milewski 2007). The prevailing perspective considers family events as critical determinants of residential relocations and international migrations. It suggests strong associations between, e.g., the timing of a marriage, parenthood, childbirth, or divorce and the timing of spatial mobility. Spatial mobility here basically functions as a mechanism for adjusting to changing household and family situations (Vidal and Huinink 2019, p. 596), and this may include within- or across-country migration processes. Another perspective of this interdependence entails the effects of migration on family events such as partnership formation patterns, parenthood, or union dissolution. Moving is a potentially stressful life event and challenging circumstances of the migration or the settlement process may lead to changes in partnership and family life (Boyle et al. 2008; Cooke 2008).

The current chapter deals with this latter perspective, focusing on partnership dissolution in the course of an international migration. Thus, different from research studying mobility outcomes following the dissolution of a partnership (see e.g. Cooke et al. 2016; Mikolai and Kulu 2018; Wall and von Reichert 2013), we ask under which conditions an international migration increases the risk of separation among couples. In our exploratory analyses, our specific interest lies in the impact of the couples’ migration patterns and the way the migration decision was made by the couple, with reference to the concept of the “tied migrant” (Mincer 1978). Our

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sample includes individuals in marital or non-marital relationships. So far, the role of family migration on the subsequent stability of a union is largely underexplored; existing knowledge is surprisingly scarce as only a handful of studies have addressed this issue at all. In light of increasing international mobility and related demands on the labour market, however, it seems highly crucial to shed more light on this topic. In the remainder of this chapter, we outline the theoretical background and discuss existing findings, then we turn to our data and models, and ultimately describe and discuss the findings. The chapter ends with concluding remarks.

## 10.2 Theoretical Background

Studies on divorce summarise numerous predictors such as a young age at marriage, low educational resources, unemployment, parental divorce experiences, higher-order or interethnic relationships, as well as relationship characteristics such as frequent conflict or low levels of trust (Amato 2010, pp. 651–652; Wu and Penning 2018). The underlying mechanisms can be specified with reference to the two theoretical approaches of social exchange theory and the micro-economic theory of marital instability (Hill and Kopp 2015; Wagner and Weiß 2003). Social exchange theory suggests that all social relationships, including partnerships, entail the exchange of material (e.g. money) and immaterial (e.g. care, love) resources as well as certain costs (e.g. conflicts), and in micro-economic theory the focus is on the partnership utility for the individual (Becker et al. 1977). Based on these perspectives, partnership stability (or its dissolution) can be considered as the result of perceived alternatives to the partnership and the partnership quality, i.e. the net benefit of the beneficial resources and the costs of the partnership. Partnership quality itself varies depending on the matching of the two partners, the investments of the partners in the relationship (e.g. the existence of children, the degree of institutionalisation, the division of household labour) and the relational maintenance (e.g. interaction patterns and conflicts).

International migration is rarely addressed in research on partnership stability. One argument refers to higher risks of union dissolution in case of stressful events and the proposition that moving across borders is such a stressful event (Boyle et al. 2008). Accordingly, the need for changes in routines, roles, and identities in the acculturation process (Berry 1997) or the lack of social networks and support following migration (Nauck 2007) put a strain on the couple. Alternative explanations suggest that higher dissolution risks may result from freeing the couple from those social networks that discouraged separation, from acculturation processes in new contexts in which separation is more common and socially acceptable, or from the better opportunities for new partner choice in the new place of residence (Boyle et al. 2008).

Another line of argument stresses increasing differences and inequalities between the partners in the course of a migration. Accordingly, spatial relocations and international migrations are often undertaken primarily for the benefit of one partner (see

Erlinghagen 2021). Whereas this partner’s career is enhanced, the career of the “tied spouse” might suffer. Mincer (1978) was the first to examine the phenomena of “tied moving” and “tied staying”. He defined “tied” persons in the family as those whose gains from migration were dominated by gains or losses of the spouse, i.e. by net personal loss but net family gain (Mincer 1978, p. 751). In such cases of “tied migration”, the partners may experience their new lives differently, including differences in enthusiasm about the new context, different hardships in the course of acculturation, and diverging experiences in establishing new social networks. This inequality in the context of “tied migration” might put strain on the relationship (Boyle et al. 2008; Cooke 2008). A specific situation prevails when the couple is geographically separated following migration of one partner. Partners then spend less time with each other, and the perception of alternatives to the partnership may change, resulting in higher dissolution risks (Caarls et al. 2015; Vidal and Huinink 2019).

In the following, we aim to address the above-mentioned “tied migrant” hypothesis in an exploratory analysis for explaining union dissolution in the course of an international migration. The human capital approach considers migration as an investment that is undertaken if the expected value of benefits exceeds the costs, and the spouse with the greater earning potential will have the greatest influence in the migration decision. Thus, one partner, the lead migrant, initiates a migration, while the other partner, the “tied migrant”, follows, despite potential penalties to his or her career. Given the still-prevalent gender differences in the domestic division of labour, careers, and earnings, “tied migrants” are mostly women (Cooke 2008), even though recent research suggests that rates of “tied migration” are becoming more similar for men and women (Cooke 2013; see also Erlinghagen 2021). Clearly, with increasing women’s employment, occupational characteristics of women may play an increasing role in family migration decisions (Shapira et al. 2019).

Research shows that “tied migrants”, specifically those with higher labour market resources, suffer from career and income losses after relocation (see the literature review in Vidal and Huinink 2019). Anticipating these disadvantages, spouses may refrain from migrating altogether. Research suggests, for instance, that families have a lower probability of moving when the wife is employed and the couple shares egalitarian gender role attitudes (Cooke 2008). Cooke (2013) further shows that this kind of “tied staying” is indeed more common than “tied migration”. Alternatively, spouses may decide that one spouse stays behind (resulting in a transnational relationship) or to somehow deal with this migration-caused asymmetry and migrate subsequently or together.

We argue that it is reasonable to assume that migration decisions will be negotiated between the spouses rather than automatically structured by the labour market characteristics of one spouse or the couple’s established gender roles (Shapira et al. 2019, p. 3). In line with the family micro-economy theory, and depending on the individual resources and the bargaining power of both spouses, couples may unanimously decide in favour of the migration even if their anticipated individual gains differ, accepting (temporary) career and income disadvantages and gender-specific divisions of labour due to overall higher family utilities.

When the migration decision has not been made unanimously, however, we assume a specific pattern of “tied migration” with problematic differences in commitments, diverging motivations for migration between the spouses, and a strain on the spousal relationship, resulting in higher risks of union dissolution (Boyle et al. 2008; Shapira et al. 2019). Thus, by reference to the ways a) the migration decision was made (egalitarian or non-egalitarian) and b) the migration itself was patterned (synchronised or non-synchronised), we suggest a way to identify “tied migrants” “who moved but did not want to” (Cooke 2013, p. 817) and we aim to test the influence of this pattern of “tied migration” on union dissolution.

Accordingly, we hypothesised that those couples in which the driving force behind the migration decision was primarily one spouse (non-egalitarian) would display higher risks of union dissolution following international migration than couples in which the migration decision was made by both spouses (egalitarian) (hypothesis 1a). Furthermore, we predicted that couples who migrated subsequently and remained separated transnationally (non-synchronised) would display higher risks of dissolution than couples who migrated together (synchronised) (hypothesis 1b).

Moreover, we assumed certain differences of the “tied-migrant effect” by gender. Despite large progress in gender equality and widespread egalitarian attitudes, gender inequality patterns are still widespread, both in terms of a gender gap in labour force participation patterns and income levels, and in the division of household labour among couples (Wrohlich 2017). In line with the argument of higher divorce risks in hypergamous marriages, i.e. in those couples in which—against the “traditional” pattern—wives have an educational or occupational advantage (Grow et al. 2017; Schwartz and Han 2014), we assumed that union dissolution risks are higher when the female partner initiated and pushed the migration decision compared to those couples in which the migration decision was made by both partners, and we expected no differences when the male partner was the driving force (hypothesis 2a). Likewise, we assumed that the separation risk increases when the female partner was the first to migrate, but we expected no differences when the male partner migrated first (hypothesis 2b). Given the different contexts of emigration and remigration decisions (see Erlinghagen 2021), we conducted separate analyses for emigrants and remigrants.

### 10.3 Empirical Background

Most research on the association between a migration experience and union dissolution focuses on internal migration. One of the most-cited studies is an analysis on internal long-distance migration and short-distance residential mobility of the Austrian Family and Fertility Survey from 1995/96, which included detailed retrospective partnership and residential histories (Boyle et al. 2008). These findings suggest that union dissolution was affected by multiple migrations and residential moves, whereas the first migration did not show any effect and the first residential

move even decreased the risk of union dissolution. The authors argued that the power imbalance between the partners may widen as the number of moves made by a couple (to support one spouse's career) increases, potentially increasing levels of stress and dissatisfaction. In a similar study on internal migration in Russia this finding was confirmed (Muszynska and Kulu 2007). Couples who moved frequently over long distances (within one country) had a significantly higher risk of union dissolution than couples who did not move or who moved only once. The authors referred to the high costs for women in the course of repeated adjustments. A similar study in Great Britain supports the finding that geographically mobile couples are at higher risk of union dissolution, with long-distance internal migration and frequent moves increasing the risk and short-distance residential moves being associated with greater union stability (Shapira et al. 2019).

In research on the effects of international migrations, a main focus is on transnationally separated couples and their union dissolution risks in this specific situation. For instance, Davis and Jennings (2018) found for ever-married emigrant men from Nicaragua that migration and a separation from their spouses, and even more importantly, the duration of the separation increases the dissolution risk. Previously, the widespread migrant narrative of "the spousal desertion" triggered research on Mexican couples by Frank and Wildsmith (2005), who found that shorter separations do not increase divorce risks compared to non-migrants, but longer stays abroad do increase risks. Caarls et al. (2015) focused on different spousal migration patterns in the Ghanaian-European migration context. They showed that divorce risks were higher when couples migrated jointly and when the wife emigrated by herself, whereas risks were similar to those of non-migrant couples when only the male partner migrated or the wife followed later, which was explained with the specific cultural contexts of origin and destination.

Moreover, a couple of studies focused on expatriate families who migrated in the context of job assignments. According to a brief literature overview by McNulty (2015), the familial challenges of international relocation are a main reason for assignment refusal and assignment failure (see also Cole and Nesbeth 2014). Yet she stated that "there is not one academic study yet published on expatriate divorce" (McNulty 2015, p. 107). In her own qualitative study she disentangled the reasons that resulted in divorce or separation, including diverging acculturation patterns (to an expatriate culture) resulting in alienation between the partners. A number of other qualitative studies have shown how both men and women deal with their lives as trailing spouses (e.g. Cangìà 2018), and Kōu and Bailey (2014) stressed how joining spouses among highly skilled Indians in Europe are no longer passive movers but active agents in the migration process, challenging the notion of tied or "trailing wives" (see also Kōu et al. 2015). So far, however, there does not seem to be any statistical evidence of dissolution rates in these couples.

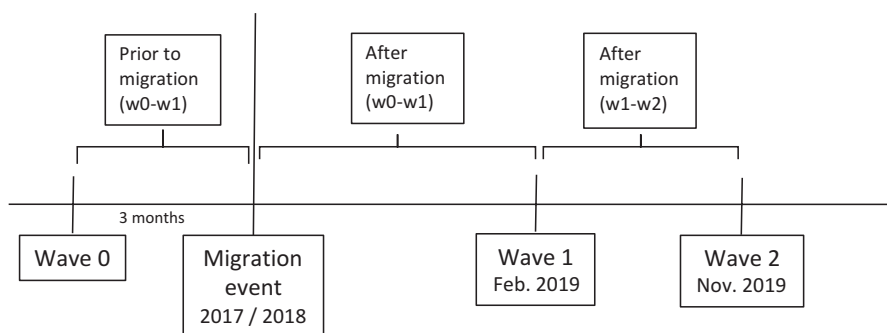
This brief research overview indicates that migration and spatial mobility do not per se increase the risk of union dissolution, but that the specific characteristics of the migration experience and the union relationship as well as the broader (cultural) context of the migration and union systems have to be considered to understand the underlying mechanisms. With this exploratory analysis, we aim to contribute to this research field with a specific focus on the migrating couple, the relevance of the

spousal migration decision-making process, and migration patterns in the context of emigration from and remigration to Germany.

## 10.4 Data and Methods

Our analyses are based on the first two waves of the German Emigration and Remigration Panel Study (GERPS) (Ette et al. 2021). This pooled data set contains 11,897 observations with information about 4928 German emigrants and 6969 remigrants. The data set used for analyses includes only completed online interviews, and respondents who emigrated or remigrated prior to 2017 are excluded because we wanted to concentrate on recently migrated individuals. Furthermore, we excluded respondents with missing information regarding their sex, age, or the dependent variable. In addition, the sample is restricted to migrants with heterosexual relationships that started prior to migration and survived the migration event. In wave 1, 5752 GERPS participants retrospectively reported that they were in a relationship 3 months prior to migration (emigrants: 2334; remigrants: 3418). However, 105 of those also reported that they had separated already prior migration (emigrants: 40; remigrants: 65). Under these conditions, data from 2292 emigrants and 3352 remigrants remained in our data set.

Until now, there has been only two waves of interviews after migration. However, via retrospective questions, it is possible to get information about the relationship status of the emigrants and remigrants 3 month before the migration event (wave 0). Figure 10.1 shows the resulting time-dimensions in GERPS. They include one interval prior to migration (between wave 0 and 1) and two intervals after migration (between migration and wave 1, and between wave 1 and wave 2, respectively). Due to the chosen restriction of our data set to people with partnerships that survived the migration event, we assess separation in the two time intervals after migration. These are the basis for our dependent variable, which takes on the value 1 if a separation occurred in one of these two time intervals and 0 if respondents are in a



**Fig. 10.1** Timeline of interview waves and construction of time intervals in GERPS. (Source: authors' presentation)

permanent partnership between wave 0 and wave 2. Consequently, union dissolution is a binary measure. Therefore, binary logistic regression is the appropriate analyses strategy for our purpose (cf. Wooldridge 2009).

With regard to our hypotheses formulated at the outset, the two main explanatory variables in our analyses are “migration decision” and “timing of migration”. These variables are based on the following questions:

Migration decision: “If you remember your migration decision: Who has been the driving force? You or your partner?” The participants were given the following response categories: (1) “my partner”, (2) “I myself”, (3) “Both in equal shares”, and (4) “don’t know”.

Timing of migration: “What was the timing of your migration like? Which one of you migrated first or did you migrate together?” The participants could choose among the following categories: (1) “My partner already lived there at the time we met”, (2) “My partner migrated first”, (3) “My partner migrated after me”, (4) “We migrated at the same time”, (5) “My partner is still living in Germany” [emigrants only] / “...in the country I have lived before” [remigrants only], and (6) “My partner lives in another country”.

Table 10.1 shows that these two variables, although related, measure different phenomena. Although 53.3% of the respondents who made an egalitarian decision to migrate with their partner also moved at the same time, 41.1% moved subsequently and 5.5% still lived in different countries (transnational relationship). Similarly, when one partner was the driving force, the largest percentage of spouses fell into subsequent migration (47.2%) and 22.5% of respondents still lived in another country than their partners. However, 30.3% moved at the same time even though the decision was primarily shaped by one partner.

Additional to these explanatory variables, further control variables were considered. These included current migration status (emigrant vs. remigrant), gender, age, prior migration background (foreign roots vs. no foreign roots), main activity (economically active vs. not economically active), educational attainment (primary and secondary education vs. post-secondary/short-cycle tertiary education vs. bachelor’s or higher), whether there are children living in the household, and the spatial distance between Germany and the (former) host country (outside Europe vs. within Europe, but not neighbouring vs. within Europe and neighbouring). Descriptive statistics of variables used in this analysis are provided in Table 10.2.

**Table 10.1** Relationship between the driving force of migration and the actual course of migration (shares in %)

		Driving force of migration	
		Egalitarian decision	One driving force
Timing of migration	Migration at the same time	53.3	30.3
	Subsequent migration	41.1	47.2
	Transnational relationship	5.5	22.5
	Observations	2510	3062

Sources: GERPSw1, GERPSw2

**Table 10.2** Distribution of variables by migration status (percentages)

	Emigrant	Remigrant
Separation	5.2	7.4
No separation	94.8	92.6
Egalitarian migration decision	43.8	45.0
Migration decision by one partner	55.8	53.4
Synchronised migration	35.3	44.1
Subsequent migration	48.5	41.5
Transnational relationship	16.1	14.2
Female	51.6	47.5
Male	48.4	52.5
18–29 years	30.0	22.8
30–39 years	42.8	40.0
40–49 years	14.5	21.8
50 years and older	12.6	15.4
Foreign roots	24.6	27.3
No foreign roots	74.0	71.6
Low education (primary and secondary education)	5.4	8.3
Medium education (post-secondary/short-cycle tertiary education)	15.5	15.4
High education (bachelor's or higher)	78.8	75.9
No children in household	71.3	60.4
Children under 6 years in household	18.5	23.2
Children 6–16 years in household	9.6	15.8
Economically active	73.3	71.4
Not economically active	26.2	28.4
Host country: Outside Europe	25.1	45.6
Host country: Europe (not neighbouring)	22.7	22.7
Host country: Europe (neighbouring)	52.2	31.5

Percentages may not sum up to 100 due to missing information. Sources: GERPSw1, GERPSw2

## 10.5 Results

In model 1 in Table 10.3, we pooled the data of remigrants and emigrants. Results suggested a lower propensity of union dissolution for emigrants compared to remigrants. Moreover, Table 10.3 shows that female remigrants had a higher risk of separation compared to males but that there was no evidence for any gender effect on emigrants' propensity for separation (model 2). These findings were stable even after controlling for certain decision patterns and timing patterns of migration in our extended model 3. With regard to the other control variables, younger remigrants under the age of 30 years showed increased separation risks. In addition, relationship breakup was more likely for remigrants with a medium educational degree compared to remigrants with a bachelor's degree or higher. However, the presence of children under the age of 17 lowered the separation risk for remigrants. The same



**Table 10.3** Logit regression on separation by gender and migration status

	Model 1	Model 2		Model 3	
	All	Emigrants	Remigrants	Emigrants	Remigrants
<b>Sample (ref. remigrants)</b>					
Emigrants	-0.536***	–	–	–	–
<b>Gender (ref. male)</b>					
Female	0.201*	-0.128	0.379***	0.121	0.287*
<b>Age (ref. 30–39 years)</b>					
18–29 years	0.344**	0.400*	0.401**	0.225	0.397**
40–49 years	-0.131	-0.243	-0.027	-0.146	-0.082
50–75 years	-0.314	-0.504	-0.360	-0.310	-0.276
<b>Foreign origin (ref. no foreign roots)</b>					
Foreign roots	0.125	0.111	0.273*	0.056	0.167
<b>Employment (ref. not active)</b>					
Economic active	-0.170	-0.244	-0.242	-0.226	-0.154
<b>Education (ref. high)</b>					
Low	0.333*	0.185	0.554***	0.387	0.34
Medium	0.314**	-0.125	0.377**	0.098	0.441**
<b>Children in household (ref. no children)</b>					
Children (<6 years)	-1.069***	-1.678***	-1.669***	-1.000**	-1.102***
Children (6–16 years)	-0.521**	-0.662	-0.959***	-0.401	-0.576**
<b>(Former) destination region (ref. outside Europe)</b>					
Europe (neighbouring)	-0.151	0.413	-0.2	0.185	-0.294*
Europe (not neighbouring)	-0.168	0.266	-0.186	0.162	-0.263
<b>Driving force of migration (ref. egalitarian decision)</b>					
One partner	0.670***			0.837***	0.583***
<b>Timing pattern of migration (ref. at the same time)</b>					
Subsequently	0.911***			0.891**	0.961***
Transnational relationship	2.241***			2.474***	2.129***
Observations	5644	2255	3352	2245	3352
Pseudo R-squared	0.172	0.050	0.084	0.174	0.172

Number of cases can vary because some cases were omitted due to structural zeros when controlling for missing observations (West et al. 2008, p. 527). Sources: GERPSw1, GERPSw2

\*\*\* $p < 0.001$ ; \*\* $p < 0.01$ ; \* $p < 0.05$

held true for emigrants but only if children were younger than 6 years. Furthermore, non-egalitarian migration decisions were associated with an increased risk of relationship dissolution for both emigrants and remigrants (model 3), which corroborates hypothesis 1a. In addition and in line with hypothesis 1b, for both emigrating and remigrating couples a subsequent timing of migration or a transnational relationship further increased separation risk compared to couples in which both partners migrated at the same time.

The results presented in Table 10.3 point to the general importance of couples' migration decision process as well as of couples' migration timing pattern as potential union destabilising factors. However, we had predicted that in addition to such overall correlations there should be gender differences with regard to the correlation

between decision and timing patterns of couples' migration on the one hand and separation risks on the other hand (hypotheses 2a and 2b). Therefore, we analysed whether decision and timing patterns are of the same relevance for both male and female migrants' relationship stability (Table 10.4). First, we estimated separate models, each including either information on the migration decision pattern or information on the migration timing pattern of couples (models 1 and 2). Then, we estimated a full model that included both types of information (model 3).

As shown in Table 10.4, it makes no difference whether the male or the female partner was the driving force of couples' migration decision. In any case, non-egalitarian decisions were associated with higher separation risks after migration. This result conflicts with hypothesis 2a, which predicted no increased separation risks if the male partner led the migration decision. However, hypothesis 2b was partly corroborated. At least in the case of emigration, the data showed higher separation risks if women moved in advance of their partners, but no such effect (as expected) if men migrated first. But when it comes to remigration, there are no such gender differences, which does not support our related hypothesis. In addition, there are also no gender differences in transnational couples: Regardless of whether the male or the female partner still lives in Germany (emigrants) or abroad (remigrants), couples' separation risks are significantly increased.

**Table 10.4** Logit regression on separation by gender differences in migration decision or timing pattern

	Model 1		Model 2		Model 3	
	Emig.	Remig.	Emig.	Remig.	Emig.	Remig.
<b>Driving force of migration (ref. egalitarian decision)</b>						
Driving force: man	1.159***	0.919***			0.760**	0.499**
Driving force: woman	1.627***	1.174***			0.964***	0.653***
<b>Timing pattern of migration (ref. at the same time)</b>						
Man moved first			0.507	1.051***	0.436	0.934***
Woman moved first			1.725***	1.104***	1.584***	0.984***
Man still lives there/ In another country			2.635***	2.313***	2.274***	2.053***
Woman still lives there/ In another country			2.958***	2.390***	2.712***	2.212***
Observations	2246	3352	2253	3352	2245	3352
Pseudo R-squared	0.095	0.112	0.172	0.164	0.186	0.172

Same controls as in Table 10.3. Number of cases can vary because some cases were omitted due to structural zeros when controlling for missing observations (West et al. 2008, p. 527). Sources: GERPSw1, GERPSw2

\*\*\*p<=0.001; \*\*p<=0.01; \*p<=0.05

## 10.6 Conclusion

This chapter has focused on partnership dissolution in the course of an international migration. Rather than studying mobility outcomes following the dissolution of a partnership, we asked under which conditions international migration increases the risk of separation among couples. Our sample included individuals in both marital and non-marital relationships who had recently left Germany and moved to another country or who had recently remigrated to Germany. We were particularly interested in the so-called “tied migrant” phenomenon and its relevance for union dissolution. According to this concept, partners may have diverging motivations for migration. Partners who expect to suffer from career and income losses after relocation may be less inclined to migrate and only follow (later) as “tied migrants” (Cooke 2013). These “tied” persons in a family do not directly benefit from the migration themselves, benefiting only in terms of family gains, which might put strain on the migration experience and the spousal relationship (Shapira et al. 2019). We defined couples with “tied migrants” as those cases in which the migration decision was made in a non-egalitarian manner and in which the migration itself did not take place simultaneously. We argued that this situation included additional strain on the spousal relationship, resulting in higher risk of union dissolution: Accordingly, we hypothesised that couples in which the driving force behind the migration decision was primarily only one partner would display higher risks of union dissolution following international migration than couples in which the migration decision was made by both spouses. Furthermore, we predicted that couples who migrate subsequently and/or remain separated transnationally would display higher risks of dissolution than couples who migrate together.

Moreover, we assumed certain differences in the “tied-migrant effect” by gender. Despite large progress in gender equality and widespread egalitarian attitudes, gender inequality patterns are still widespread. In line with the argument of higher divorce risks in hypergamous marriages, we assumed union dissolution risks to be higher when the female partner was the driving force of migration, compared to those couples in which the migration decision was made by both partners. When the male partner initiated and pushed the migration, we expected no difference. Likewise, we assumed that separation risk would increase when the female partner was the first to migrate, but we expected no differences when the male partner migrated first.

Referring to data from the first two waves of GERPS, we found that emigration is accompanied by a lower separation risk than remigration. Whereas previous research has started to differentiate between varying lengths of spousal separation, showing that union dissolution outcomes are more likely in case of longer separations, we can add that emigration and remigration contexts differ as well, with the latter being more prone to result in union dissolution. These findings underscore that research on family dynamics must differentiate carefully between “directions of migration” and increase efforts to better understand the underlying mechanisms (see also Erlinghagen 2021).

The main finding of the presented analyses, however, is that non-egalitarian, non-synchronised migration patterns are important predictors of union dissolution for male and female emigrants and remigrants. In cases of “tied migrants” the risk of a dissolution is significantly higher. Thus, our results mainly support our hypotheses and stress the importance of the pre-migration spousal negotiation process as well as the migration patterns (timing of migration) for the understanding of changing family dynamics in migration contexts. In addition, the data showed that it makes no difference whether the male or the female partner was the driving force or the person who moved first. Although women are still more often “tied movers” than men, we can conclude that tied moving is significantly correlated with a higher risk of partnership dissolution for both gender groups. This holds particularly true for non-egalitarian migration decisions but to some extent also for non-synchronised migration patterns. However, we find one interesting gender difference: Only among emigrating couples in which the man moved first we do not find increased dissolution risks compared to couples who emigrated together. This effect even remains when we control for the decision-making process. This finding may hint at a certain persistence of traditional gender norms in shaping the timing patterns of emigrating couples and may indicate that traditional gender norms help couples to cope with uncertainty in the emigration process (cf. Erlinghagen 2020). Women, even if they are “tied movers”, may not feel additional strains on their relationship.

Beyond these rather general statements we can only speculate about the reasons for the observed patterns. Since we do not have information on pre-migration partnership quality or prior spousal conflicts, we cannot rule out that the couples’ migration decision processes as well as their migration patterns are consequences of relationship strain rather than its causes. If this is the case, it is not the dissolution which follows the migration. Rather, changes in family dynamics (here: lower partnership quality and spousal conflicts) result in specific (r)emigration mobility patterns and subsequent union dissolution.

Although these exploratory analyses provide some interesting new findings, further research is needed to better understand the determinants of partnership dissolution in the context of migration. First, future analyses should include more information on the characteristics of the two partners (e.g. their human capital resources, pre- and post-migration economic situation, gender role attitudes) to test whether the observed pattern applies to all couples with “tied migrants” alike or whether risks of dissolution vary by the partner’s resources, attitudes, and inter-spousal patterns of homogamy and heterogamy. Second, a comparison between emigrants, remigrants, and non-mobile couples (“stayers”) would help to address the issue of selectivity, namely whether migrants have higher separation risks per se due to certain personality traits and individual characteristics that have an impact on the propensity to migrate and on the propensity to split up at the same time (cf. Shapira et al. 2019). Further research may then address possible consequences of union dissolution for the two partners (in terms of labour market outcome, subjective well-being, new partnerships, subsequent mobility, etc.), and shed further light on the short-term and long-term impact of an international migration on family lives and individual life courses.

Given the little existing scientific knowledge on the complex interplay of family dynamics and international migration processes, the data of GERPS offers a new, great opportunity to improve our understanding of family- and partnership-related issues. The analytical potential of GERPS will further increase with the subsequent third and fourth waves that will become available in 2020/2021. This is a major opportunity because migration-related panel studies are still extraordinarily rare. Both the future panel data and the option to consider comparisons with the non-migrant population will allow a rich contribution to the research field of determinants and consequences of family dynamics in the course of migration.

## References

- Amato, P. R. (2010). Research on divorce: Continuing trends and new developments. *Journal of Marriage and Family*, 72(3), 650–666.
- Becker, G. S., Landes, E. M., & Michael, R. T. (1977). An economic analysis of marital instability. *Journal of Political Economy*, 85(6), 1141–1187.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34.
- Boyle, P. J., Kulu, H., Cooke, T. J., Gayle, V., & Mulder, C. H. (2008). Moving and union dissolution. *Demography*, 45(1), 209–222.
- Caarls, K., Mazzucato, V., & Richou, C. (2015). La migration internationale est-elle un facteur de divorce? Les couples ghanéens au Ghana et à l'étranger. *Population*, 70(1), 135–161.
- Cangia, F. (2018). Precarity, imagination, and the mobile life of the 'trailing spouse'. *Ethos*, 46(1), 8–26.
- Cole, N., & Nesbeth, K. (2014). Why do international assignments fail? *International Studies of Management & Organization*, 44(3), 66–79.
- Cooke, T. J. (2008). Migration in a family way. *Population, Space and Place*, 14(4), 255–265.
- Cooke, T. J. (2013). All tied up: Tied staying and tied migration within the United States, 1997 to 2007. *Demographic Research*, 29, 817–836.
- Cooke, T. J., Mulder, C., & Thomas, M. (2016). Union dissolution and migration. *Demographic Research*, 34, 741–760.
- Davis, J., & Jennings, E. A. (2018). Spatial and temporal dimensions of migration on union dissolution. *International Migration*, 56(6), 136–152.
- Erlinghagen, M. (2020). Love in motion: Migration patterns of internationally mobile couples. *Population, Space and Place* Online First.
- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Frank, R., & Wildsmith, E. (2005). The grass widows of Mexico: Migration and union dissolution in a binational context. *Social Forces*, 83(3), 919–947.
- Grow, A., Schnor, C., & van Bavel, J. (2017). The reversal of the gender gap in education and relative divorce risks: A matter of alternatives in partner choice? *Population Studies*, 71(sup1), 15–34.
- Hill, P. B., & Kopp, J. (2015). Theoretische Ansätze der Familiensoziologie. In P. B. Hill & J. Kopp (Eds.), *Handbuch Familiensoziologie*. Wiesbaden: Springer Fachmedien Wiesbaden.
- Kley, S. (2011). Explaining the stages of migration within a life-course framework. *European Sociological Review*, 27(4), 469–486.

- Kōu, A., & Bailey, A. (2014). Movement is a constant feature in my life': Contextualising migration processes of highly skilled Indians. *Geoforum*, 52, 113–122.
- Kōu, A., van Wissen, L., van Dijk, J., & Bailey, A. (2015). A life course approach to high-skilled migration: Lived experiences of Indians in the Netherlands. *Journal of Ethnic and Migration Studies*, 41(10), 1644–1663.
- Kulu, H., & Milewski, N. (2007). Family change and migration in the life course. *Demographic Research*, 17, 567–590.
- Lee, E. S. (1966). A theory of migration. *Demography*, 3(1), 47.
- McNulty, Y. (2015). Till stress do us part: The causes and consequences of expatriate divorce. *Journal of Global Mobility: The Home of Expatriate Management Research*, 3(2), 106–136.
- Mikolaj, J., & Kulu, H. (2018). Divorce, separation, and housing changes: A multiprocess analysis of longitudinal data from England and Wales. *Demography*, 55(1), 83–106.
- Mincer, J. (1978). Family migration decisions. *Journal of Political Economy*, 86(5), 749–773.
- Muszynska, M., & Kulu, H. (2007). Migration and union dissolution in a changing socio-economic context. *Demographic Research*, 17, 803–820.
- Nauck, B. (2007). Immigrant families in Germany: Family change between situational adaptation, acculturation, segregation and remigration. *ZfF—Zeitschrift für Familienforschung/Journal of Family Research*, (19).
- Schwartz, C. R., & Han, H. (2014). The reversal of the gender gap in education and trends in marital dissolution. *American Sociological Review*, 79(4), 605–629.
- Shapira, M., Gayle, V., & Graham, E. (2019). Moving on and moving out: The implications of socio-spatial mobility for union stability. *Population, Space and Place*, 25(2), e2180.
- Vidal, S., & Huinink, J. (2019). Introduction to the special collection on spatial mobility, family dynamics, and gender relations. *Demographic Research*, 41, 593–616.
- Wagner, M., & Weiß, B. (2003). Bilanz der deutschen Scheidungsforschung. Versuch einer meta-analyse/a meta-analysis of German research on divorce risks. *Zeitschrift für Soziologie*, 32(1), 3.
- Wall, T., & von Reichert, C. (2013). Divorce as an influence in return migration to rural areas. *Population, Space and Place*, 19(3), 350–363.
- West, B. T., Berglund, P., & Heeringa, S. G. (2008). A closer examination of subpopulation analysis of complex-sample survey data. *The Stata Journal*, 8, 520–531.
- Wooldridge, J. (2009). *Introductory econometrics: A modern approach*. Mason: Cengage Learning.
- Wrohlich, K. (2017). There is a lot left to do to reach gender equality in Germany. *DIW Economic Bulletin*, 7, 427–428.
- Wu, Z., & Penning, M. J. (2018). Marital and cohabiting union dissolution in middle and later life. *Research on Aging*, 40(4), 340–364.

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**Part V**  
**Wellbeing and Health**

# Chapter 11

## The Happy Migrant? Emigration and its Impact on Subjective Well-Being



Jean Guedes Auditor and Marcel Erlinghagen

### 11.1 Introduction

Leaving their old home and settling in a new place is an event that could be accompanied by far reaching changes in individuals' life courses (cf. Williams and Baláž 2012). Presumably people decide to move when they expect an improvement in living conditions. This should particularly be the case when people migrate to other countries. And indeed, emigration is, for example, often accompanied by a gain in wages and income (see Witte and Guedes Auditor 2021 in this volume). However, objective gains of migration are possibly counterbalanced through certain costs that may accompany migration. In this sense, costs primarily not only refer to financial expenses for traveling and moving. There are also immaterial costs of adaptation as emigrants have to accustom themselves to a new neighbourhood and probably unfamiliar habits and customs (see Stawarz et al. 2021 in this volume). They also have to face the challenge of leaving old friends and family members behind (see Mansfeld 2021 in this volume).

Against this background of possible gains and losses that could be accompanied by emigration, this chapter asks about the impact of migration on individuals' subjective well-being (SWB). SWB can be understood as an overall indicator of the condition and state an individual is in. Therefore, SWB is, among other things (e.g. wages, living standard, occupational status, health), a suitable measure of the individual consequences of migration (cf. Preston and Grimes 2019; Shamsuddin and Katsaiti 2019). It is therefore not surprising that in recent years there has been a strong increase in research regarding the SWB of migrants (see Simpson 2013 for

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an overview). Although our knowledge has grown rapidly in this field, research on SWB as an outcome of international migration is still in its beginnings. With the German Emigration and Remigration Panel Study (GERPS), new possibilities emerge enabling us to make innovative contributions with the potential to learn more about the interrelations between migration and SWB. We combine the emigration sample of GERPS with a sample of internationally non-mobile Germans provided by the Socio-Economic Panel Study (SOEP) and use propensity score matching methods and difference-in-difference analyses to learn more about possible causal effects of migration on SWB, measured by overall self-reported satisfaction with life in general.

The chapter proceeds as follows: First, we present some theoretical considerations and give a brief overview of the state of research. Second, we describe the data and methods used in our analyses. Then we present our findings. The chapter ends with a summary of the main results and a discussion of the resulting consequences and challenges for future research in the light of certain limitations.

## 11.2 Theoretical Considerations and State of Research

Changes in employment, income, or family status that occur in the course of migration are important outcomes of international mobility processes. However, cognitive and affective well-being, expressed in satisfaction and emotions are at least equally important as objective living conditions. Following the social production function (SPF) theory (cf. Lindenberg and Frey 1993; Ormel et al. 1999), people strive to increase or at least to maintain their overall SWB as the ultimate aim of life. At the same time, we know that SWB is unequally distributed along certain individual socio-demographic and socio-economic characteristics. Previous empirical research has repeatedly shown that SWB (mostly measured as cognitive subjective well-being, as in this article) is correlated with age (cf. Blanchflower and Oswald 2008; Brockmann 2009; Brüderl et al. 2019; Easterlin 2006), employment status (cf. Lucas et al. 2004; Winkelmann and Winkelmann 1998), income (cf. Blanchflower and Oswald 2000; Shields and Price 2005), or skill level (cf. Dolan et al. 2008). There is also evidence for a correlation between SWB and personality traits (cf. Lucas and Diener 2015). In addition, international comparisons provided evidence that differences in culture and institutions can also have an impact on individuals' SWB (Diener et al. 2003; Haller and Hadler 2006; Veenhoven 2009).

There has been a lengthy debate over how certain life events or external shocks affect SWB (see Headey et al. 2010 and Plagnol 2010 for an overview). Some authors claim that there is an individual baseline SWB, which could be temporarily disturbed but that will be reached again after a certain period of adaptation ("set point theory"). Indeed, there is evidence that some life events cause temporary changes in SWB (e.g., marriage, death of a partner, birth of a child). However, the set point theory has been criticised as a number of studies have found that there are certain life events (e.g., the death of a child, chronic diseases) that cause

long-lasting permanent changes in SWB (for a literature review, see Headey et al. 2013). In sum, it has become evident that certain life events can lead to long-lasting changes in SWB, while other events do not (for a meta-analysis on SWB and the adaptation of life events, see Luhmann et al. 2012).

Although the number of papers dealing with SWB in the course of migration has recently increased (see Simpson 2013 for a literature review), evidence on the correlation between international migration and SWB is still limited and shows ambiguous results. Even though there are different possible theoretical scenarios on how SWB could evolve in the course of migration (Erlinghagen 2016), there is no clear evidence of which of those scenarios fits best. As a result, it cannot be said whether emigration has temporary or long-lasting effects on SWB if at all yet. Safi (2010) and Bartram (2010) find migrants to have lower life satisfaction levels compared to natives in the receiving country. However, Erlinghagen et al. (2009) found no difference between the life satisfaction of emigrants and the non-mobile population (“stayers”) at the time of migration, whereas Baykara-Krumme and Platt (2018) even found an increased SWB among Turkish emigrants compared to stayers in Turkey. Several authors provided evidence that satisfaction levels differ according to immigrant’s place of origin (Amit 2010; Bartram 2010). There is also some initial evidence that the life satisfaction of emigrants increases when the periods before and after emigration are compared (Erlinghagen et al. 2009). This is in line with recent methodically more complex analyses on the development of life satisfaction in the process of internal mobility in Germany (Fuchs-Schündeln and Schündeln 2009; Melzer and Muffels 2012; Erlinghagen et al. 2019), in Sweden (Switek 2016), the United Kingdom (Nowok et al. 2013; Nowok et al. 2018), and Australia (Preston and Grimes 2019). Moreover, compared to people who remained in their home country, life satisfaction of emigrants seems to even increase along with the time they have lived abroad (Erlinghagen 2011; Bartram 2013). Given these scarce and ambiguous results, it remains unclear whether there is a (causal) effect of migration on SWB. Therefore, the following analyses can be understood as an explorative enterprise to shed more light on this under-investigated phenomenon. Besides new interesting results on how SWB is influenced by migration, the chapter also shows the potential of GERPS to investigate the development of SWB in the course of migration in more depth.

### 11.3 Data and Methods

Our analyses rely on the first wave of GERPS covering German citizenship between 20 and 70 years (see Ette et al. 2021 in this volume). Because we are interested in the causal relationship between migration and SWB and in order to avoid positively biased results, we restrict our sample to individuals who emigrated in the years 2017 and 2018. First, the original GERPS emigrant sample was drawn based on our sample members having declared their migration during the years 2017 and 2018 by notifying their local registration office. However, there is obviously a small and

selective group of original sample members who officially declared their emigration during that period even though they actually lived abroad for a much longer time for unknown reasons. The second reason for restricting our analytic sample is that we expect biased results if we would leave emigrants in our sample who emigrated years or even decades ago but still live abroad. It can be hypothesised that unsatisfied emigrants have a higher remigration propensity, which leads to a positive bias regarding the average SWB of emigrants because unsatisfied emigrants are more likely to have already returned home when GERPS started and are therefore not observed in our sample. In addition, we rely only on data from emigrants who emigrated for the first time to make sure that our results are indeed related to their recent migration and are not influenced by past emigration experiences. Furthermore, we exclude all observations with missing values in any of the variables we rely on in our analyses. Under these conditions we include 1193 first-time emigrants in our investigations.

Empirical research on the causal relationship between migration and SWB have to take into account that both SWB and the individual migration decision itself are influenced by socio-economic and socio-demographic determinants as well as by certain context factors. Therefore, any analysis that aims for a better understanding of causal relationships between migration and SWB has to take this selectivity into account. To avoid biased results and to determine whether migration has a causal impact on the development of SWB, we need information about non-mobile individuals (“stayers”) as a reference group to obtain an appropriate counterfactual. For this purpose we combine GERPS with data from the German Socio-Economic Panel Study (SOEP) (Goebel et al. 2019). We use the currently available SOEP data from 2016 and 2017 (version v34) and include stayers who provided information about their current life satisfaction to match the GERPS emigrant sample. Furthermore, the stayer sample is, like GERPS, limited to individuals with German citizenship between the ages of 20 and 70 years. Moreover, we excluded individuals who reported a residential move of a distance of more than 20 km during the two years before 2016. Under these conditions, we include SOEP data from 13,171 stayers in our analyses.

### ***11.3.1 Methods***

In social sciences, empirical investigations of causal relationships are a very ambitious enterprise (Hedström and Ylikoski 2010). Because of ethical as well as practical reasons, data acquisition in laboratory experiments is often considered an unsuitable strategy in the social sciences (cf. Hooghe et al. 2010; Levitt and List 2007; but see Falk and Heckman 2009). Therefore, as social scientists we could at best rely on quasi-experimental longitudinal data that allows a one-to-one comparison of two groups of individuals. One group faces a certain experience or event (“treated”) whereas the other group does not (“untreated”). Such quasi-experiments require that individuals are assigned to these two groups entirely at random. Under

these conditions, difference-in-difference (DID) calculations can be made to identify possible treatment effects (Lechner 2011). However, quasi-experimental data is actually rare because it is often produced as a kind of by-product of policy programs or administrative procedures. Thus, the collection of quasi-experimental data is mostly process-produced and therefore not knowledge-driven as it is not primarily induced due to or motivated by certain research questions. This is why certain alternative methods have been developed within the social sciences allowing us to determine possible treatment effects by using data from standard population surveys to build “quasi-counterfactuals” (Contini and Pusch 2018). Data from population surveys have the advantage that their content suits certain research questions better because their collection was knowledge-driven and customised for researchers’ interests and needs.

These methods include DID models relying on propensity score matching (PSM) estimations, which are applied to create a control group that is fully comparable, based on observables, with the treatment group (Caliendo and Kopeinig 2008). The propensity score is a balancing score including a function of the observed covariates, which displays a conditional probability of the assignment to the treatment (Gangl 2010; Gangl and DiPrete 2004; Morgan and Winship 2015; Rosenbaum and Rubin 1983; Winship and Sobel 2001). PSM matches all treatment and control cases with (nearly) the same propensity score as a kind of “virtual twins” (Foster et al. 2011) for the calculation of the average treatment effect. The advantage of the propensity score is that it reduces the dimensionality of matching on a single dimension (Abadie and Imbens 2016; Blundell et al. 2005).

Multiple studies have reported self-selection of emigrants by education and income (Borjas 1987, 1991; Borjas et al. 2018; Chiquiar and Hanson 2005; Pary et al. 2017). We implement PSM to account for this self-selection by adapting the sample of the stayers to the emigrants through several observable characteristics. PSM allows us to estimate the average difference in the SWB of emigrants’ net of the average SWB they would have experienced had they remained in Germany. We conduct not only an overall analysis comparing the SWB of emigrants and stayers; since it is argued that different subgroups differ in their emigration motives (see Ette and Erlinghagen 2021) we compare men and women, individuals with and without academic degrees as well as German citizens with and without foreign roots.

For analysing the treatment effect of emigration on life satisfaction, we decided to implement PSM with a nearest neighbour matching algorithm with caliper radius option (tolerance level of the maximum PS distance imposed at 0.01) because it outperformed the other algorithms in balancing observables (Gebel 2010). We use nearest neighbour with replacement and five neighbours to decrease potential bias in particular if the propensity score distribution is different between treatment and control. Moreover, where appropriate we use the trimming procedure to define the common support region where both groups have a positive density within each propensity score (Caliendo and Kopeinig 2008).

### 11.3.2 Variables

In GERPS and in SOEP, SWB is measured by asking the participants to rate their current overall life satisfaction on an eleven-point scale from ‘0’ (completely dissatisfied) to ‘10’ (completely satisfied). The related question at the very end of the questionnaire is: “In conclusion, we would like to ask you about your satisfaction with your life in general. How satisfied are you with your life, all things considered?” For PSM we use matching variables that were measured identically in both datasets (see Table 11.1 for descriptives). We include time constant socio-demographic variables, namely gender, year of birth, and migration background (German vs. non-German roots). Because of differences in personality traits between migrants and stayers (see Lübke et al. 2021 in this volume), we include the self-rated risk attitude as a further matching variable measured on an eleven-point scale from ‘0’ (“not at all willing to take risks”) to ‘10’ (“very willing to take risks”). This self-reported measure has proven to be a valid indicator of risk attitude strongly connected to actual individual behaviour (Dohmen et al. 2011; Mata et al. 2018) and it is “moderately stable over time and sufficiently persistent to be considered an individual trait” (Schildberg-Hörisch 2018, p. 142).

To match stayers observed in SOEP data with emigrants observed in GERPS, we rely on SOEP data from 2016 and GERPS emigrants’ retrospective information regarding their living conditions three month before they left Germany to ensure that we are really measuring a treatment effect of emigration on SWB. Besides time-invariant characteristics like gender, age, migration background (“foreign roots”), and risk appetite, we also use the following variables as matching variables in the PSM procedure:

- Educational level, measured as a condensed CASMIN classification with five categories: (1) no degree, (2) no vocational training, (3) lower secondary, intermediate or higher secondary, (4) tertiary degree finished in the university of applied sciences, and (5) tertiary degree finished in college and higher
- Employment status, measured in eight categories: (1) employed, (2) self-employed, (3) civil servant, (4) unemployed, (5) retired, (6) in education and training, (7) not employed, and (8) other
- Household status, measured in eight categories: (1) one person household, (2) couple without children, (3) single parent, (4) couple with children younger than 17 years, (5) couple with children older than 16 years, (6) couple with children younger as well as older than 16 years, (7) multiple generation-household, and (8) other combination

Table 11.1 provides descriptive findings on the distribution of SWB and on the distribution of our matching variables for first-time emigrants as well as for stayers. The emigrants are highly selective regarding their education and much younger than stayers. Additionally, emigrants are willing to take more risks. Most of the emigrants live alone or in a relationship without any children and a slightly higher proportion have a migration background (“foreign roots”).

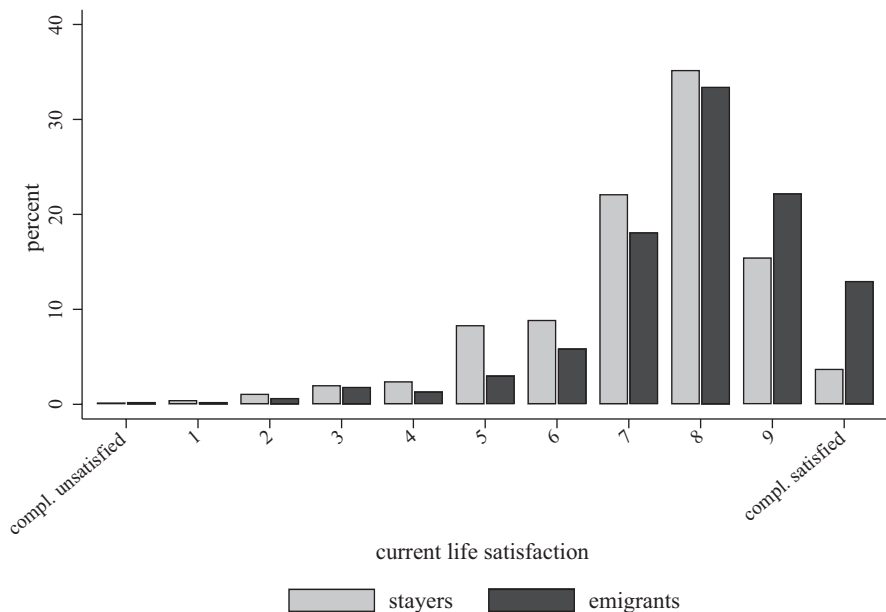
**Table 11.1** Summary descriptive statistics (mean/proportion)

Variables	First time emigrants		Stayers	
	Mean	SD	Mean	SD
Life satisfaction	7.9	(1.6)	7.2	(1.7)
Female	48%	–	50%	–
Age	35.7	(11.2)	47.8	(13.2)
Migration background	19%	–	13%	–
Risk-appetite (0–10)	5.8	(2.2)	4.8	(2.3)
<i>Employment status</i>				
Employed	61%	–	60%	–
Self-employed	6%	–	7%	–
Civil servant	2%	–	6%	–
Unemployed	3%	–	5%	–
Retired	3%	–	13%	–
In education & training	17%	–	4%	–
Not employed	4%	–	5%	–
Other	4%	–	–	–
<i>Education</i>				
No degree	0%	–	1%	–
No vocational degree	10%	–	10%	–
Lower secondary and vocational training	2%	–	22%	–
Intermediate/higher secondary and vocational training	26%	–	41%	–
Tertiary (university of applied sciences)	20%	–	9%	–
Tertiary (college)	42%	–	17%	–
<i>Household status</i>				
One-person household	46%	–	22%	–
Couple without children	23%	–	34%	–
Single parent	3%	–	6%	–
Couple with children <16 years	10%	–	18%	–
Couple with children >= 16 years	1%	–	15%	–
Couple with children <16 and >= 16 years	1%	–	4%	–
Multiple generation household	–	–	1%	–
Other combination	16%	–	1%	–
<i>N</i>	1193		13,171	

Sources: GERPSw1, SOEP2017, authors' calculations. Standard deviation in parentheses

## 11.4 Findings

Figure 11.1 displays the distribution of life satisfaction of the emigrants and the stayers. In both groups, the distribution is skewed to the right. However, and as already seen in Table 11.1, the emigrants are on average more satisfied with their lives than the non-migrants. We have to ask if this difference in SWB is really a result of emigration or if this result only reflects selectivity effects caused by different group compositions between emigrants and stayers. To answer this question, we



**Fig. 11.1** Distribution of life satisfaction of emigrants and stayers. (Sources: GERPSw1, SOEP2017, authors’ calculations)

**Table 11.2** Average Treatment Effect (ATT) of emigration on SWB

Emigrants		Stayers		Not in common support			
N	SWB	N	SWB	N	ATT	se	
1145	7.9	13,157	7.4	48	0.5	0.08***	

Sources: GERPSw1, SOEP2017. Based on nearest neighbour (5) matching with caliper radius (propensity score 0.01) and trimming (propensity score  $\leq 0.7$ )

\* $p < 0.05$ , \*\* $p < 0.001$ , \*\*\* $p < 0.001$

conduct PSM and estimate the mean differences between the emigrants (treated) and non-mobile stayers (untreated). Table 11.2 presents the results of this procedure as Average Treatment Effects (ATT) under the assumption that the PSM approach allows causal inference. It turns out that emigration increases SWB significantly. Compared to stayers, emigration increases SWB on average by 0.5 points (or 7 percent) on the underlying 11-point-scale.

Table 11.3 provides the ATT for several subgroups. It turns out that emigration leads to a significant increase in SWB regardless of gender or educational degree. However, the size of the treatment effect varies between an average increase of 0.3 (or  $0.3/7.5 = 4\%$ ) for women to 0.7 (or 10%) for lesser-educated individuals with no academic degree. The only exceptions are German first-time emigrants with migration backgrounds (“foreign roots”). In this group, we do not find any treatment effect on SWB. In contrast, SWB of Germans without foreign roots increases significantly by 0.6 points (or 8 percent) due to emigration (Table 11.3).

**Table 11.3** Average Treatment Effect (ATT) of emigration on SWB for different subgroups

	Emigrants		Stayers		Not in common support	ATT	se
	N	SWB	N	SWB	N		
Males	569	7.9	5904	7.3	48	0.7	0.10***
Females	525	7.8	7253	7.5	51	0.3	0.10**
No academic degree	393	7.9	8740	7.2	23	0.7	0.11***
Academic degree <sup>a</sup>	754	7.9	4416	7.5	23	0.4	0.10***
No migration background	917	7.9	11,088	7.3	51	0.6	0.09***
Migration background	203	7.6	2069	7.4	22	0.2	-0.18

Based on nearest neighbour (5) matching with caliper radius (propensity score 0.01) and trimming (propensity score  $\leq 0.7$ ) except <sup>a</sup>Without caliper radius and trimming to guarantee better covariance balancing test. Sources: GERPSw1, SOEP2017

\* $p < 0.05$ , \*\* $p < 0.001$ , \*\*\* $p < 0.001$

## 11.5 Conclusions

This chapter asks about possible causal effects of migration on SWB, measured here by overall life satisfaction. By combining the German Emigration and Remigration Panel Study (GERPS) with a quasi-counterfactual sample of internationally non-mobile Germans provided by the Socio-Economic Panel Study (SOEP) and based on propensity score matching, the difference-in-difference analyses show that emigration is actually accompanied by an increase in SWB. Compared to non-mobile German stayers, first-time emigrants with German citizenship show a significant increase in SWB shortly after arrival in their host country. It becomes obvious that although migration is accompanied by certain economic and social costs, German first-time emigrants perceived this important event of settling in another country as positive and life enhancing. On a broader perspective, this finding underscores that emigration from a highly developed, democratic welfare state like Germany is foremost a voluntary decision and driven by opportunities and not by threats. For most emigrants, migration may not only pay off with respect to wages or income (see Witte and Guedes Auditor 2021 in this volume) but also with regard to life satisfaction.

However, the meaningfulness of the evidence presented is restricted by a number of limitations. For the analyses presented it was impossible to identify whether the increase of migrants' SWB is really a direct effect of migration or if it is caused by changes of employer, an increase in income, family-related events (like a marriage or family reunion), or a change in housing quality that could simultaneously arise in the course of moving from Germany to another country. Because of this shortcoming it is not possible to explain why the SWB of German first-time movers with foreign roots do not increase whereas all other inspected emigrant subgroups (male, female, no university degree, university degree and Germans without foreign roots) profit from a gain in SWB. Perhaps the emigration of Germans with foreign roots is accompanied by different experiences in the course of migration over a lifetime, which results in a diverging development of SWB compared to other subgroups.



Moreover, the presented analyses assume that there is no anticipation of SWB during a period in which emigrants prepare to leave the country. However, the few existing studies on the development of migrants' SWB prior to migration produce at least partly ambiguous results. It is possible that emigrants' SWB had already increased as they prepared for their international move while still living in Germany. Erlinghagen et al. (2019) found some evidence for an increase in SWB prior to internal moves in Germany. By contrast, Erlinghagen (2016) found some evidence for a decrease in SWB one to two years before emigration from Germany. Nowok et al. (2013), Nowok et al. (2018) as well as Preston and Grimes (2019) also find a similar drop in SWB prior to migration for internal moves in Britain and Australia. In that case it seems doubtful whether our quasi-counterfactual comparison with stayers is appropriate because such stayers by definition cannot face any anticipation effect of SWB and thus would not be an adequate reference group.

Moreover, it is possible that optimism and happiness are personality traits that foster individual emigration decisions. In that case, the higher SWB of emigrants compared to stayers could be an artefact and may be caused by unobserved heterogeneity between these two groups that has not yet been sufficiently captured by the matching variables we used in the presented models. And finally, it remains unclear to what extent the presented results can be assigned to emigrants from other developed welfare states besides Germany. The few existing studies on migrants' SWB have produced ambiguous results for different nationalities and originating contexts so far. It remains unclear if such ambiguities really reflect context differences or if they are statistical artefacts caused by data limitations or methodically inappropriate research strategies.

Despite these limitations, this chapter has certainly improved our knowledge of the under-investigated relationship between migration and SWB. The chapter indicates that as a consequence of international mobility, individual SWB seems to increase in the course of emigration. Interestingly, there are no gender- or education-related differences. With regard to education this could be because emigrants benefit from their international mobility per se. As Witte and Guedes Auditor (2021) show, emigrants of all skill levels realise considerable increases in their wages after arrival. However, the result that there are no gender differences in SWB after migration is more surprising because women have a higher propensity to be the trailing partner and report psychological burdens caused by emigration more often. Female emigrants in stable relationships report a decrease in overall life satisfaction as well as an increase in perceived social isolation after migration (Erlinghagen 2021 in this volume). But this does not necessarily mean the results are contradictory. For one thing, the analyses by Erlinghagen (2021) concentrate on a specific group of emigrants living in stable relationships throughout the migration process. In addition, whereas Erlinghagen (2021) relies on emigrants' self-reported comparisons of their current SWB with their retrospective, remembered SWB shortly before migration, we conducted a quasi-counterfactual DID analyses relying on actual observed SWB measures of stayers and emigrants. Our chapter has not only provided new evidence with regard to the development of SWB in the course of migration. Maybe even more importantly, it gives rise to further questions that have to be addressed by future research and that could rely on information from upcoming waves of GERPS.

## Appendix

Tables 11.4 and 11.5 illustrate whether the matching procedure was successful in pairing emigrants and stayers and reports the summarized mean standardized bias before and after matching for different matching algorithm. They clearly show that each algorithm is able to reduce the standardized bias (Table 11.4). However, only for the nearest neighbour approaches with five neighbours is the bias reduced below the threshold of 5%, which is considered to be sufficient to balance the difference between the treatment and control group (Caliendo and Kopeinig 2008).

Table 11.5 shows the impact of matching on the distribution of the covariates as well as on the propensity score. The change of the propensity score before and after matching indicates that the assignment to the treatment (being emigrant instead of non-migrant) occurs now quasi-randomly because the values are almost the same. In the end, we decided to choose the nearest neighbour (5) with the radius caliper (0.01) and trim option (0.7) because this procedure also reduces the mean standardized bias for each covariate below 5% (see Table 11.5). Therefore, we suggest that remaining differences in life satisfaction between emigrants and stayers should be a function of the emigration event.

**Table 11.4** Mean standardized bias before and after matching

Gaussian kernel		Nearest neighbour (1)		Nearest neighbour (5)		Nearest neighbour (5) <sup>a</sup>	
Before	After	Before	After	Before	After	Before	After
46.5	5.4	46.5	8.1	46.5	2.3	46.5	2.2

<sup>a</sup>Nearest neighbour matching imposes a radius caliper of 0.01 and trimming option on 0.7. Sources: GERPSw1, SOEP2017, authors' calculations

**Table 11.5** Covariate balancing: Mean differences before and after matching, nearest neighbour (5) radius caliper (0.01) with trim option on 0.7

		Treated	Control	Bias (%)	Reduction in bias
Propensity Score	Unmatched	0.41	0.05	162	
	Matched	0.39	0.38	0.2	99.9
Female	Unmatched	0.48	0.55	-13.7	
	Matched	0.49	0.48	2.8	80
Age	Unmatched	35.67	47.52	-99.9	
	Matched	35.95	36.04	-0.7	99.3
Migration background	Unmatched	0.19	0.16	8.3	
	Matched	0.19	0.21	-4.6	45.1
Risk-appetite (index)	Unmatched	5.84	4.76	45.6	

(continued)

**Table 11.5** (continued)

		Treated	Control	Bias (%)	Reduction in bias
	Matched	5.78	5.87	-4.3	90.6
Employment status <sup>a</sup>					
Self-employed	Unmatched	0.06	0.07	-4.4	
	Matched	0.06	0.07	-3.5	21.3
Civil servant	Unmatched	0.03	0.06	-16.3	
	Matched	0.03	0.04	-4.5	72.4
Unemployed	Unmatched	0.03	0.05	-8.1	
	Matched	0.03	0.03	3.7	54.7
Retired	Unmatched	0.03	0.05	-8.1	
	Matched	0.03	0.03	-0.8	97.7
Education & training	Unmatched	0.17	0.04	44.8	
	Matched	0.16	0.16	-0.5	98.9
Not employed	Unmatched	0.04	0.06	-9.1	
	Matched	0.04	0.04	1	89
Other	Unmatched	0.03	0.003	22.8	
	Matched	0.02	0.02	-1.6	93.1
Education (CASMIN)	Unmatched	4.81	4.03	61.1	
	Matched	4.78	4.74	3	95
Household status <sup>b</sup>					
One-person household	Unmatched	0.46	0.12	81.5	
	Matched	0.47	0.49	-4.2	94.8
Couple, no child	Unmatched	0.23	0.29	-14.7	
	Matched	0.24	0.22	3.1	79.3
Single parent	Unmatched	0.03	0.09	-24	
	Matched	0.04	0.03	0.4	98.5
Couple, child(ren) <=16 years	Unmatched	0.1	0.28	-47.1	
	Matched	0.1	0.1	1.9	95.9
Couple, child(ren) >16 years	Unmatched	0.01	0.12	-46	
	Matched	0.01	0.02	-2.4	94.9
Couple, child(ren) <=16 years & > 16 years	Unmatched	0.01	0.08	-37.9	
	Matched	0.01	0.01	-2	94.6
Other combination	Unmatched	0.16	0.01	54.5	
	Matched	0.14	0.13	2.2	96

The variables age<sup>2</sup> and age<sup>3</sup> are included in the calculation but not presented. "Bias (%)" denotes the standardized percentage bias. Sources: GERPSw1, SOEP2017, authors' calculations

<sup>a</sup>Reference is "employed"

<sup>b</sup>Reference is "multiple generation household"

## References

- Abadie, A., & Imbens, G. W. (2016). Matching on the estimated propensity score. *Econometrica*, 84(2), 781–807.
- Amit, K. (2010). Determinants of life satisfaction among immigrants from Western countries and from the FSU in Israel. *Social Indicators Research*, 96(3), 515–534.
- Bartram, D. (2010). Economic migration and happiness: Comparing immigrants' and natives' happiness gains from income. *SSRN Electronic Journal*.
- Bartram, D. (2013). Happiness and 'economic migration': A comparison of Eastern European migrants and stayers. *Migration Studies*, 1(2), 156–175.
- Baykara-Krumme, H., & Platt, L. (2018). Life satisfaction of migrants, stayers and returnees: reaping the fruits of migration in old age? *Ageing and Society*, 38(4), 721–745.
- Blanchflower, D., and Oswald, A. (2000). Well-being over time in Britain and the USA. *NBER Working Paper No. 7487*.
- Blanchflower, D., & Oswald, A. (2008). Is well-being U-shaped over the life cycle? *Social Science & Medicine*, 66(8), 1733–1749.
- Blundell, R., Dearden, L., & Sianesi, B. (2005). Evaluating the effect of education on earnings: models, methods and results from the National Child Development Survey. *Journal of the Royal Statistical Society*, 168(3), 473–512.
- Borjas, G. J. (1987). Self-selection and the earnings of immigrants. *The American Economic Review*, 77(4), 531–553.
- Borjas, G. J. (1991). Immigration and self-selection. In J. M. Abowd & R. B. Freeman (Eds.), *Immigration, trade and the labor market* (pp. 29–76). Chicago: University of Chicago Press.
- Borjas, G. J., Kauppinen, I., & Poutvaara, P. (2018). Self-selection of emigrants: Theory and evidence on stochastic dominance in observable and unobservable characteristics. *The Economic Journal*, 129(617), 143–171.
- Brockmann, H. (2009). Why are middle-aged people so depressed? Evidence from West Germany. *SSRN Electronic Journal*.
- Brüderl, J., Kratz, F., & Bauer, G. (2019). Life course research with panel data: An analysis of the reproduction of social inequality. *Advances in Life Course Research*, 41, 100247.
- Caliendo, M., & Kopeinig, S. (2008). Some practical guidance for the implementation of propensity score matching. *Journal of Economic Surveys*, 22(1), 31–72.
- Chiquiar, D., & Hanson, G. H. (2005). International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States. *Journal of Political Economy*, 113(2), 239–281.
- Contini, B., & Pusch, T. (2018). Identifying bounded rationality with panel data: evidence from the labor markets of Italy and Germany. *Mind & Society*, 17(1–2), 71–84.
- Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being: emotional and cognitive evaluations of life. *Annual Review of Psychology*, 54, 403–425.
- Dohmen, T., Falk, A., Huffman, D., Sunde, U., Schupp, J., & Wagner, G. G. (2011). Individual risk attitudes: measurement, determinants and behavioral consequences. *Journal of the European Economic Association*, 9(3), 522–550.
- Dolan, P., Peasgood, T., & White, M. (2008). Do we really know what makes us happy? A review of the economic literature on the factors associated with subjective well-being. *Journal of Economic Psychology*, 29, 94–122.
- Easterlin, R. A. (2006). Life cycle happiness and its sources: Intersections of psychology, economics, and demography. *Journal of Economic Psychology*, 27(4), 463–482.
- Erlinghagen, M. (2011). Nowhere better than here? The subjective well-being of German emigrants and remigrants. *Comparative Population Studies*, 36(4), 899–926.
- Erlinghagen, M. (2016). Anticipation of life satisfaction before emigration: Evidence from German Panel data. In T. Tachibanaki (Ed.), *Advances in happiness research. A comparative perspective* (pp. 229–244). Tokyo: Springer.

- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Erlinghagen, M., Kern, C., & Stein, P. (2019). *Internal migration, social stratification and dynamic effects on subjective well-being*. Berlin: DIW.
- Erlinghagen, M., Stegmann, T., & Wagner, G. G. (2009). Deutschland ein Auswanderungsland? *DIW Wochenbericht*, 39(2009), 663–669.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Falk, A., & Heckman, J. J. (2009). Lab experiments are a major source of knowledge in the social sciences. *Science*, 326(5952), 535–538.
- Foster, J. C., Taylor, J. M. G., & Ruberg, S. J. (2011). Subgroup identification from randomized clinical trial data. *Statistics in Medicine*, 30(24), 2867–2880.
- Fuchs-Schündeln, N., & Schündeln, M. (2009). Who stays, who goes, who returns?: East-West migration within Germany since reunification. *The Economics of Transition*, 17(4), 703–738.
- Gangl, M., and DiPrete, T. A.. 2004. Kausalanalyse durch Matchingverfahren. *DIW Berlin Discussion Papers*.
- Gangl, M. (2010). Nichtparametrische Schätzung kausaler Effekte mittels Matchingverfahren. In C. Wolf & H. Best (Eds.), *Handbuch der sozialwissenschaftlichen Datenanalyse* (pp. 931–961). Wiesbaden: VS Verlag.
- Gebel, M. (2010). Early career consequences of temporary employment in Germany and the UK. *Work, Employment and Society*, 24(2), 641–660.
- Goebel, J., Grabka, M. M., Liebig, S., Kroh, M., Richter, D., Schröder, C., & Schupp, J. (2019). The German socio-economic panel (SOEP). *Jahrbücher für Nationalökonomie und Statistik*, 239(2), 345–360.
- Haller, M., & Hadler, M. (2006). How social relations and structures can produce happiness and unhappiness: An international comparative analysis. *Social Indicators Research*, 75(2), 169–216.
- Headey, B., Muffels, R., & Wagner, G. G. (2010). Long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *Proceedings of the National Academy of Sciences of the United States of America*, 107(42), 17922–17926.
- Headey, B., Muffels, R., & Wagner, G. G. (2013). Choices which change life satisfaction: Similar results for Australia, Britain and Germany. *Social Indicators Research*, 112(3), 725–748.
- Hedström, P., & Ylikoski, P. (2010). Causal mechanisms in the social sciences. *Annual Review of Sociology*, 36(1), 49–67.
- Hooghe, M., Stolle, D., Mahéo, V.-A., & Vissers, S. (2010). Why can't a student be more like an average person?: Sampling and attrition effects in social science field and laboratory experiments. *The Annals of the American Academy of Political and Social Science*, 628(1), 85–96.
- Lechner, M. (2011). The estimation of causal effects by difference-in-difference methods. *Foundations and Trends in Econometrics*, 4(3), 165–224.
- Levitt, S. D., & List, J. A. (2007). What do laboratory experiments measuring social preferences reveal about the real world? *Journal of Economic Perspectives*, 21(2), 153–174.
- Lindenberg, S., & Frey, B. S. (1993). Alternatives, frames, and relative prices: a broader view of rational choice theory. *Acta Sociologica*, 36(3), 191–205.
- Lübke, C., Décieux, J. P., Erlinghagen, M., & Wagner, G. G. (2021). Comparing the risk attitudes of internationally mobile and non-mobile Germans. In M. Erlinghagen, A. Ette, N. F. Schneider,

- & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, *15*(1), 8–13.
- Lucas, R. E., & Diener, E. (2015). Personality and subjective well-being: Current issues and controversies. In M. Mikulincer, P. R. Shaver, M. Lynne Cooper, & R. J. Larsen (Eds.), *APA handbook of personality and social psychology, Volume 4: Personality processes and individual differences* (pp. 577–599). Washington, DC: American Psychological Association.
- Luhmann, M., Hofmann, W., Eid, M., & Lucas, R. E. (2012). Subjective well-being and adaptation to life events: a meta-analysis. *Journal of Personality and Social Psychology*, *102*(3), 592–615.
- Mansfeld, L. (2021). Out of sight, out of mind? Frequency of emigrants' contact with friends in Germany and its impact on subjective well-being. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Mata, R., Frey, R., Richter, D., Schupp, J., & Hertwig, R. (2018). Risk preference: A view from psychology. *Journal of Economic Perspectives*, *32*(2), 155–172.
- Melzer, S. M., & Muffels, R. J. (2012). *Migrant's pursuit of happiness: The impact of adaption, social comparison and relative deprivation; evidence from a "natural" experiment*. Berlin: DIW.
- Morgan, S. L., & Winship, C. (2015). *Counterfactuals and causal inference: Methods and principles for social research*. New York: Cambridge University Press.
- Nowok, B., Findlay, A., & McCollum, D. (2018). Linking residential relocation desires and behaviour with life domain satisfaction. *Urban Studies*, *55*(4), 870–890.
- Nowok, B., van Ham, M., Findlay, A. M., & Gayle, V. (2013). Does migration make you happy? A longitudinal study of internal migration and subjective well-being. *Environment and Planning A: Economy and Space*, *45*(4), 986–1002.
- Ormel, J., Lindenberg, S., Steverink, N., & Verbrugge, L. M. (1999). Subjective well-being and social production functions. *Social Indicators Research*, *46*(1), 61–90.
- Parey, M., Ruhose, J., Waldinger, F., & Netz, N. (2017). The selection of high-skilled emigrants. *The Review of Economics and Statistics*, *99*(5), 776–792.
- Plagnol, A. (2010). Subjective well-being over the life course: Conceptualizations and evaluations. *Social Research: an international quarterly of the social sciences*, *77*(2), 749–768.
- Preston, K., & Grimes, A. (2019). Migration, gender, wages and wellbeing: Who gains and in which ways? *Social Indicators Research*, *144*(3), 1415–1452.
- Rosenbaum, P. R., & Rubin, D. B. (1983). The central role of the propensity score in observational studies for causal effects. *Biometrika*, *70*(1), 41–55.
- Safi, M. (2010). Immigrants' life satisfaction in europe: Between assimilation and discrimination. *European Sociological Review*, *26*(2), 159–176.
- Schildberg-Hörisch, H. (2018). Are risk preferences stable? *Journal of Economic Perspectives*, *32*(2), 135–154.
- Shamsuddin, M., & Katsaiti, M.-S. (2019). Migration and happiness: Evidence from Germany. *Journal of Happiness Studies*, *21*, 2931. online first.
- Shields, M. A., & Price, S. W. (2005). Exploring the economic and social determinants of psychological well-being and perceived social support in England. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, *168*(3), 513–537.
- Simpson, N. (2013). Happiness and migration. In A. Constant & K. F. Zimmermann (Eds.), *International handbook on the economics of migration* (pp. 393–408). Cheltenham: Edward Elgar.
- Stawarz, N., Ette, A., & Rüger, H. (2021). Healthy migrants? Comparing subjective health of German emigrants, remigrants and non-migrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Switek, M. (2016). Internal migration and life satisfaction: Well-being paths of young adult migrants. *Social Indicators Research*, *125*(1), 191–241.

- Veenhoven, R. (2009). Well-being in nations and well-being of nations. *Social Indicators Research*, 91(1), 5–21.
- Williams, A. M., & Baláz, V. (2012). Migration, risk, and uncertainty: Theoretical perspectives. *Population, Space and Place*, 18(2), 167–180.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica*, 65(257), 1–15.
- Winship, C., and Sobel, M. E. (2001). *Causal inference in sociological studies*: Mimeo.
- Witte, N., & Guedes Auditor, J. (2021). Affluent lives beyond the border? Individual wage change through migration. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.

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# Chapter 12

## Healthy Migrants? Comparing Subjective Health of German Emigrants, Remigrants, and Non-Migrants



Nico Stawarz, Andreas Ette, and Heiko Rüger

### 12.1 Introduction

Migration studies are generally focused on the economic implications of international migration, for example for national labour markets (e.g. “brain drain”) or for individual occupational careers (Ette and Witte 2021; Witte and Guedes Auditor 2021). In addition to this perspective, more and more research is being conducted that gives insights into the non-economic consequences of migration, for instance for family lives (Baykara-Krumme et al. 2021) or life satisfaction (Hendricks 2015; Guedes Auditor and Erlinghagen 2021 in this volume). This chapter contributes to this second strand of research by investigating self-rated health, which refers to the physical and mental health situation of individuals (e.g. Simon et al. 2005), and measures aspects of their present quality of life. However, health is not only a consequence of international migration, but also a factor that may influence whether and possibly also why individuals move (e.g. van Dalen and Henkens 2013).

A close link between international migration and health has already been established. The so-called “healthy migrant paradox” states that migrants often show better health (e.g. in terms of self-rated health, mortality, Body Mass Index) compared to native-born individuals, also after controlling for socio-economic characteristics. This paradox has been established in investigations mainly focusing on persons that migrate from low-income to high-income countries (Fennelly 2007; Lu and Zhang 2016). Generally, it is explained by selective immigration or return migration (e.g. Constant 2017), with the former regularly being discussed as the more important factor (Jasso et al. 2004; Kennedy et al. 2015). While it is often assumed that better health at the time of migration can be ascertained for immigrants in the USA, Canada and Australia, the results for Europe are more heterogeneous (Huijts and Kraaykamp 2012; Markides and Rote 2019; Nielsen and Krasnik

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2010). A closer look at the literature, however, reveals that this may depend on the origin and destination context as well as on migration motives (e.g. flight and displacement vs. economic reasons) (McKay et al. 2003; Rechel et al. 2013). Therefore, for certain groups of migrants some studies show no health advantages or even poorer health compared to the population in the receiving country (e.g. Constant et al. 2018; Jatrana et al. 2018). Furthermore, initial health advantages disappear over time, for example due to adopting a less healthy lifestyle (e.g. nutrition, less physical exercise) in the most developed countries, bad working conditions, discrimination, cultural differences, language barriers, and loss of social networks (Ahonen et al. 2007; Lassetter and Callister 2009; Lubbers and Gijsberts 2019). However, there are also studies reporting possible long-term health improvements by adopting a healthier life style (Hedlund et al. 2007; Guo et al. 2014) and short-term increases in self-rated health directly after the migration (Erlinghagen et al. 2009; Jasso et al. 2004).

Existing investigations studying the health status of migrants predominantly focus on migration from low-income countries, whereas analyses focusing on high-income countries are largely lacking in the literature. Studies dealing with this topic show that immigrants from Europe, the USA, Canada, the UK, and Australia report better health than people born in the destination or origin population (Huang et al. 2011; Kennedy et al. 2015), but immigrants from high-income countries living in Sweden report poorer health compared to Swedes (Lindström et al. 2001). Moreover, German emigrants and remigrants report better self-rated health than people permanently living in Germany and health seems to improve after migration (Erlinghagen 2011; Erlinghagen and Stegmann 2009; Engler et al. 2015). Finally, studies focusing on migration intentions of Europeans show no effect of health on short-term emigration intentions (migration within 1 year or the near future) but on long-term (within the next 5 years) intentions (van Dalen and Henkens 2007; Williams et al. 2017). Additionally, those emigrants with better health are more likely to translate their intention into actual migration behaviour (van Dalen and Henkens 2013).

This study investigates the self-rated health of German emigrants and remigrants using the first wave of the German Emigration and Remigration Panel Study (GERPS). First, these data enable the investigation of self-rated health in the context of an economically highly developed country. Second, the vast majority of existing studies compare migrants with the population in the destination country, regularly resulting in several methodological shortcomings. In line with the overall conceptual framework of the GERPS study (see Erlinghagen et al. 2021 on the DOM-approach), this paper compares self-rated health of migrants with that of the origin population. It combines the GERPS sample with data of the general (non-migrant) population living in Germany from the German Socio-Economic Panel (SOEP) and highlights one of the theoretical and methodological advantages of this new data infrastructure. Third, because the interviews took place shortly after emigration, potential bias on the average self-rated health of emigrants due to selective return migration to Germany is minimised. Fourth, little is known about the immediate effects of a migration event on health. By using a measure for the self-assessed

changes in the health (present situation vs. situation before migration), we are also able to shed some light on this issue.

The following section deals with the theoretical background and Sect. 3 describes the data and methods. The empirical results are presented in Sect. 4. The chapter concludes with a summary and discussion of the central findings.

## 12.2 Theoretical Background

The healthy migrant effect generally refers to better health of migrants (e.g. Constant 2017; Lu and Zhang 2016). This is paradoxically also true for migrants from low-income countries who usually have lower socio-economic status than the population in the destination country. Indeed, there are at least two groups for comparisons with migrants: persons in the sending and in the receiving society, while the comparison with those living in the receiving country is the most common in the literature. In this paper, we compare German emigrants and remigrants with internationally non-mobile people living in Germany. Comparing migrants with non-migrants from the country of origin has the advantage that potential biases due to the differences in the average health level between the sending and receiving country can be excluded. Additionally, analysing the selectivity of migrants in this group is a more appropriate counterfactual (Kennedy et al. 2015; Razum 2009). Furthermore, we have to consider several mechanisms that contribute to the health of migrants: selection of those who emigrate and those who remigrate, effects of the migration event, and changes in health during the stay in the receiving country (Jasso 2013; Lu and Zhang 2016).

In our theoretical considerations we focus on two distinct groups (emigrants and remigrants) and address the underlying mechanisms that possibly lead to differences in self-rated health compared with Germans living in Germany.

### 12.2.1 German Emigrants

We first focus on the decision to emigrate, which is mostly driven by the motive to improve an existing (possibly dissatisfying) situation, for example due to job or family-related reasons, the desire to experience something new, or to increase the quality of life in general (Engler et al. 2015; Tabor et al. 2015; van Dalen and Henkens 2007). Migration, however, can involve complex decisions. It can be a lengthy process with different phases and negotiations with the partner and the family in which information about the requirements for the move and the destination country are gathered (De Jong 2000; Mincer 1978; Stark and Bloom 1985; Tabor et al. 2015). Despite this complex decision-making process the decision to move may be driven by the fact that subjectively perceived benefits of the move are greater

than the costs—including monetary (e.g. income) as well as non-monetary (e.g. quality of life, health care, or social contacts) costs and benefits (Sjaastad 1962; Hoppe and Fujishiro 2015). If migration is mainly motivated by economic reasons (income, career opportunities), we can assume that young and highly educated individuals in particular migrate because the benefits of migration as well as the time in which the investment pays off is greater for these groups (Ette and Sauer 2010; Niefert et al. 2001; Uebelmesser 2006). Bringing health into this equation, Jasso et al. (2004) argue that health is positively related to income, because health increases one's individual skill level and skill utilisation as stated in the human capital theory (Grossman 1972). Since human capital and health are positive correlated, this consequently leads to a selection of healthy labour migrants. From another perspective, the decision to migrate itself can be challenging because it binds resources, for example to search for information, to prepare the move, or for the negotiation process with partner and family. Thus personal traits like self-efficacy, which influence how individuals cope with situations, may play an important role (Hoppe and Fujishiro 2015; van Dalen and Henkens 2007). Moreover, the study by van Dalen and Henkens (2013) shows that healthier persons are more likely to transform their migration intentions into migration behaviour.

Against this background, the study by Kennedy et al. (2015) on emigrants from the USA, the UK, Canada, and Australia reveals positive health selection compared to the non-mobile counterparts living in the country of origin. Since German emigrants are positively selected regarding age and educational level (Ette and Sauer 2010; Erlinghagen and Stegmann 2009), the studies by Engler et al. (2015) and (Erlinghagen 2011) show better self-rated health of German migrants. This argumentation leads to the following hypothesis:

**H1.1** German emigrants have better self-rated health compared to internationally non-mobile Germans.

Furthermore, age and health are negatively correlated (e.g. House et al. 1990). However, little is known about potential variations in the health selectivity of emigrants by age. Lu and Zhang (2016, p. 23) argue that older migrants are negatively selected on health because they emigrate to find better health care or to move closer to relatives who can take care of them.<sup>1</sup> However, since the quality of the German health care system is relatively high (Reibling et al. 2019) it is more appropriate to assume that individuals with poor health or health problems stay in Germany.<sup>2</sup> In keeping with this, the analysis by Hall (2016) suggests that retirement emigrants coming from the UK and living in Spain are fit and healthy. In sum, the selection effect might become stronger for older migrants because those who need medical assistance stay in Germany. This leads us to the next hypothesis:

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<sup>1</sup> The results of van Diepen and Mulder (2009) for older Dutch internal migrants do not suggest that they move closer to relatives because of health problems.

<sup>2</sup> The results of Sander (2007) suggest such an effect for immigrants living in Germany.

**H1.2** The health advantage of German emigrants compared with their non-migrant counterparts living in Germany becomes stronger with increasing age at migration.

If individuals decide to move, they are faced with impacts of the migration event itself and with the situation of living in another country. Migration is a challenging, major life event (Constant 2017; Friis et al. 1998) that often means visa stress, living separated from partner, family, and friends. It can also lead to unforeseen psychological and monetary costs. Therefore, we can assume that such burdens may lead to mental health issues (e.g. homesickness, loneliness, depression). Moreover, with increasing time after migration language barriers, cultural distance, discrimination, lack of social and emotional support, discrepancies of expectations and success, adopting an unhealthier lifestyle, or limited health care can reduce migrants' health (Bhugra and Becker 2005; Delavari et al. 2013; Huijts and Kraaykamp 2012). Having social contacts in the destination country can mitigate negative effects (Finch and Vega 2003; Lubbers and Gijsberts 2019). In contrast, migration may also lead to health improvements due to higher quality of life and standard of living (e.g. income increases) (Lu and Zhang 2016). Against this background, existing studies often show long-term (over about 10 years) and slow reduction of the initial health advantage of migrants (Constant 2017; Lassetter and Callister 2009).

Furthermore, investigations that focus on short-term changes in health (after 1 year since migration) find that self-rated health in the year after migration increases (Erlinghagen et al. 2009; Jasso et al. 2004). This short-term health improvement may also be a return effect to the "normal" health level before migration, which was reduced because of the dissatisfying situation before migration as well as being exposed to different stressors during the decision-making process and the migration event.<sup>3</sup> Furthermore, personal traits that help to cope with the stressors in the migration situation may be another reason why the comparatively negative impact of the migration event is weak over a short period (Bhugra 2004; Kuo and Tsai 1986; van Dalen and Henkens 2007). German emigrants are also positively selected in their personal traits and happier than their German counterparts living in Germany (Engler et al. 2015; Erlinghagen 2011). Taken together, we can assume the following:

**H2** German emigrants report mainly stable or slightly increasing health directly after migration.

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<sup>3</sup>Evidence that this may be the case comes from two studies dealing with rural-to-urban migration, which show a positive selection of migrants regarding their physical health, but poorer mental health compared to those who stayed (Lu 2010; Nauman et al. 2015). Additionally, while there is almost no effect of migration on physical health, migrants show improvements in mental health over a period of three years up and above the level of rural non-migrants and remigrants.

### 12.2.2 *German Remigrants*

In migration research comparatively little is known about return migration (Salaff 2013). This makes it challenging to make assumptions about returnees' health. Largely in line with economic hypotheses about the intensifying effect of return migration on the original self-selection of emigrants (Borjas and Bratsberg 1996), the so-called Salmon bias is a well-established assumption in the context of migration and health. It explains the healthy migrant paradox by referring to selective return migration of (relatively) ill immigrants to their home countries (Constant 2017). Evidence for negative selection is found, for example, for Turkish migrants remigrating from Germany and for Mexicans remigrating from the USA (Razum et al. 1998; Arenas et al. 2015). Additionally, as Ette and Sauer (2010) show, the age profile of German return migrants and emigrants largely matches, but there is a non-negligible group returning at retirement age. Therefore, we assume that a share of the return migrants may move because of their worsening health. However, that does not lead directly to the conclusion that remigrants have poorer health compared to people living in their country of origin. Return migrants may even have better health and move back to their home country due to (minor) health changes that need medical assistance (Hall 2016).

Beyond this, if emigration motives that are important for the remigration intention and decision are taken into account (Salaff 2013; Steiner 2019), we see that international students and highly educated individuals from Germany have an increased rate of remigration to their country of origin (Ette and Sauer 2010). Moreover, in the context of the human capital theory (Becker 1975) we can argue that studying as well as working abroad is an investment in human capital. Since the investment needs to pay off on the national labour market in the long run (Waibel et al. 2017), we can assume that those groups of return migrants are relatively young. Since—as argued above—education is positively correlated with health, another share of return migrants should show good health. Against this background and as tentative results from Engler et al. (2015) and Erlinghagen (2011) suggest, German remigrants have better health compared to non-migrants living in Germany, but their health compared to German emigrants is poorer.

**H3** German remigrants have better self-rated health than non-mobile Germans, but poorer health than German emigrants.

In the following, we focus on health changes among remigrants around the time of the migration event. For those who migrate because of their need for medical care, we can assume health improvements or at least not further declining health if they are treated. On the contrary, there might be further health decline (reported) when more ailments are diagnosed (Steiner 2019). Further important motives for return migrants are to be closer to relatives and friends or being dissatisfied with their life abroad (Engler et al. 2015; Steiner 2019). The strains of living separately from close social contacts should disappear for those who remigrate and,

consequently, health should improve. On the other hand, the decision to remigrate, the migration event itself (see above) as well as (short-term) re-adjustment problems after returning to the country of origin (e.g. Szkudlarek 2010) could lead to strains. However, since the most important reason to remigrate is social contacts, health improvements would make more sense. This leads us to the final hypothesis:

**H4** German remigrants report mainly stable or slightly improving health directly after migration.

### 12.3 Data and Methods

The following analyses use data from the first wave of the German Emigration and Remigration Panel Study (GERPS) and the German Socio-Economic Panel (SOEP) to compare emigrants and remigrants with non-mobile Germans (see Ette et al. 2021).<sup>4</sup> The samples are restricted to respondents aged between 20 and 70 due to the sample frame of the GERPS data.

Using GERPS and SOEP, we are able to differentiate three distinct groups that are important for the following analyses: emigrants, remigrants, and non-migrants. Emigrants refer to German citizens who deregistered from Germany between July 2017 and June 2018 stating that they moved abroad. In turn, remigrants registered in Germany during the same period stating that they previously lived abroad. The data were collected between November 2018 and February 2019. At this time, on average the emigrants had been abroad for 12.6 months and the remigrants returned on average 11.6 months previous.<sup>5</sup> The sub-sample of non-migrants was drawn from German citizens who were interviewed in 2017 in the context of the SOEP (irrespective of any stays abroad throughout their biography).

As dependent variable we employ the self-rated health of the respondents and the subjectively assessed changes in the health status. Self-rated health is a well-established single-item scale to measure the general health of a person. Studies show that self-rated health is a good predictor for mortality among adults (e.g. Burström and Fredlund 2001), it correlates with objective health (Wu et al. 2013), and captures both physical as well as mental health (Simon et al. 2005). In the GERPS and SOEP questionnaires the respondents were asked to rate their current health from 0, very good, 1, good, 2, satisfactory, 3, poor to 4, bad. For the analysis, we turned high into low values, and vice versa.

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<sup>4</sup>Socio-Economic Panel (SOEP), v34, SOEP, 2019, doi: <https://doi.org/10.5684/soep.v34>

<sup>5</sup>Population registers are administrative data sources that do not perfectly match the actual life courses of the registered population. Therefore, GERPS also includes emigrants with substantially longer stays abroad as well as remigrants who returned before July 2017. For a more detailed discussion of this issue, see Chap. 2 in this volume. Because the time elapsed since the migration event potentially influences subjective health, we only consider those cases whose emigration or remigration took place at most 36 months before the date of the interview.

The second item focuses on self-assessed short-term changes in health during the context of international migration. To measure this, the respondents were asked on a single-item scale to compare their current personal health situation with that before they migrated on a scale reaching from 1, much better, 2, better, 3, about the same, 4, worse to 5, much worse. For the analysis, we recoded the item so that it ranges from  $-2$ , worse to 2, much better. Even though there is no direct measurement of health at the time before migration, the item offers the opportunity to study the dynamics of health around the time of the migration event.

As covariates, we include sex and age of the respondent. Regarding age, we use polynomials up to the fourth degree to represent non-linear relationships of age and health. Moreover, we consider the migration background, which measures whether a person is born abroad and migrated to Germany during his or her biography but holds German citizenship when the sample was drawn. Furthermore, we control for the socio-economic status of a person using the years of education. Additionally, we consider the present labour force status of the respondents, differentiating between employed, self-employed, unemployed, retired, not employed, and presently enrolled in education. We also take into account whether a migrant is an expatriate or not, based on the question: "Have you been sent by your employer?" We also account for the personality of the respondents considering the locus of control (internal and external) (Rotter 1966), which strongly correlates with other personal traits like self-efficacy or self-esteem (Judge et al. 2002). To operationalise how people believe that they can determine their own life course, we use four of the seven original items from Specht et al. (2013) (Kovaleva et al. 2012). The respondents were asked to rate on a 7-point scale (from 1, not at all to 7, absolutely) to what degree they personally agree with the following statements: "How my life goes depends on me.", "One has to work hard in order to succeed.", "I frequently have the experience that other people have a controlling influence over my life.", and "What a person achieves in life is above all a question of fate or luck." The first two items refer to internal locus of control, the latter two measure the external dimension. Finally, to account for the general level of development of recent (emigrants) and former (remigrants) host countries, which may explain variation in changes in self-rated health of the migrants, we use the human development index (HDI) (UNDP 2019).

In our analysis, we first investigate the health differences between our analytical groups (emigrants, remigrants, non-migrants) using descriptive statistics and linear regression models. To research how the self-selection of emigrants and remigrants contributes to the health differences, we control for demographic, socio-economic and psychological characteristics in the linear regression models. The dependent variable self-rated health can also be regarded as an ordinal response, therefore we performed robustness checks by employing ordered logit models (Long 2015), with similar results. In a second step, we analyse the self-assessed changes in health around the time of the migration event using ordered logit models.

## 12.4 Results

### 12.4.1 Current Health Status

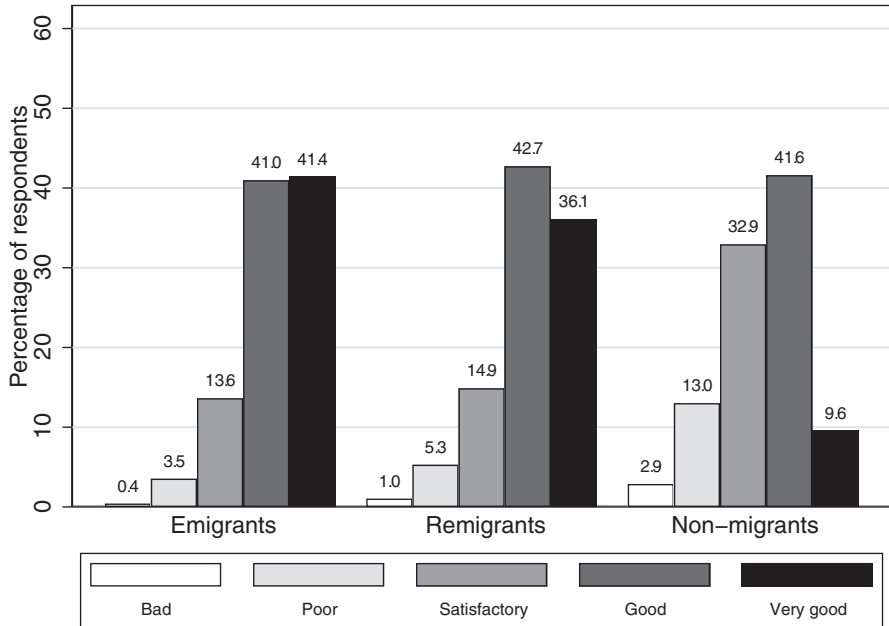
Table 12.1 contains the means of all variables differentiated by our three analytical groups: emigrants, remigrants, and non-migrants. The results show that German emigrants and remigrants on average report better self-rated health, which is around 0.8 and 0.7 points better than that of non-migrants, respectively. In Fig. 12.1, the distribution of self-rated health is shown for each group. One can see that 41.4% of the emigrants and 36.1% of the remigrants rate their health as very good, while only 9.6% of non-mobile Germans do. Instead, non-migrants state much more often that their health is satisfactory, while this is true for only 14–15% of the migrants. The other categories are more similar distributed, but a higher percentage of the non-migrants (2.9%) state that their health is bad, in contrast to 0.4% of emigrants and 1.0% of the remigrants. Furthermore, Table 12.1 reveals that our samples consist to equal parts of women and men. Moreover, emigrants and remigrants have a migration background slightly more often and are around 10 years younger than non-migrants. German migrants show higher educational levels than non-migrants. Regarding labour force status, emigrants are less often unemployed or retired, but more often enrolled in education or not employed than non-migrants. For the remigrants we find that a lower percentage is employed or retired compared to non-migrants, while there is a higher share of unemployed, not employed, or persons in education. Furthermore, migrants and non-migrants express similar values

**Table 12.1** Descriptive statistics by migration status of German citizens, means and standard deviations in parentheses

Variables	Emigrants	Remigrants	Non-migrants
Self-rated health (0 = bad, ..., 4 = very good)	3.20 (0.83)	3.08 (0.90)	2.41 (0.93)
Sex (0 = male, 1 = female)	0.51	0.50	0.55
Age in years (min. 20/ max. 70)	35.58 (10.52)	36.50 (11.12)	46.95 (13.23)
Education in years (min. 8/ max. 18)	16.48 (2.14)	16.19 (2.34)	13.83 (2.59)
Employed (1 = employed, 0 = other)	0.66	0.59	0.66
Self-employed (1 = self-employed, 0 = other)	0.07	0.06	0.07
Unemployed (1 = unemployed, 0 = other)	0.02	0.07	0.05
Retired (1 = retired, 0 = other)	0.03	0.03	0.12
Education/training (1 = education/training, 0 = other)	0.11	0.17	0.04
Not employed (1 = not employed, 0 = other)	0.11	0.08	0.06
Migration background (first generation) (0 = other, 1 = first migration generation)	0.12	0.14	0.11
Internal locus of control (min. 0/max. 7)	5.76 (0.93)	5.63 (1.06)	5.73 (0.93)
External locus of control (min. 0/max. 7)	2.64 (1.04)	2.78 (1.11)	3.27 (1.28)
N	3646	5730	14,646

Sources: GERPSw1, SOEP2017, authors' calculations

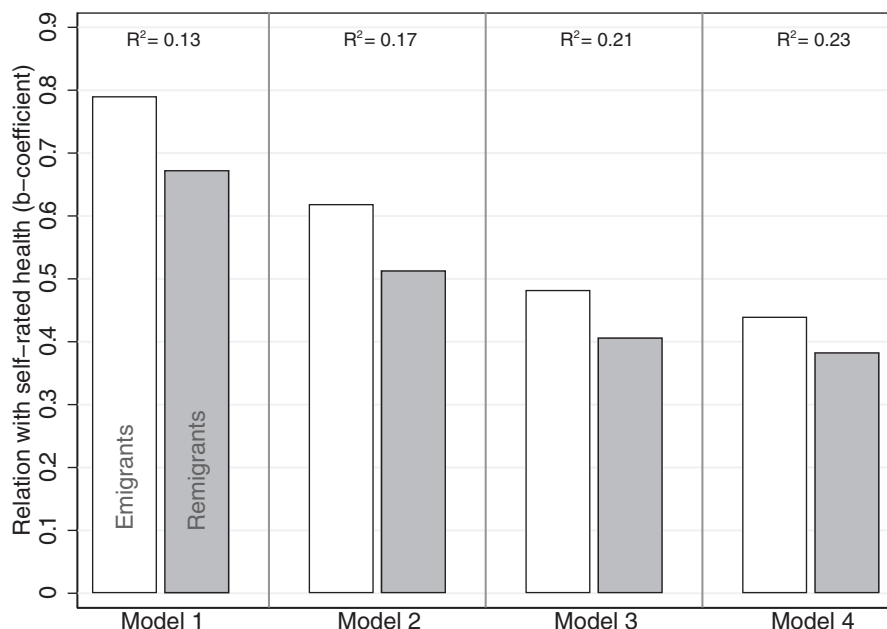




**Fig. 12.1** Self-rated health by migration status, in per cent. (Sources: GERPSw1, SOEP2017,  $N = 24,022$ , authors’ calculations)

regarding their internal locus of control. However, emigrants and remigrants feel that their life is controlled by external factors less often than non-mobile Germans.

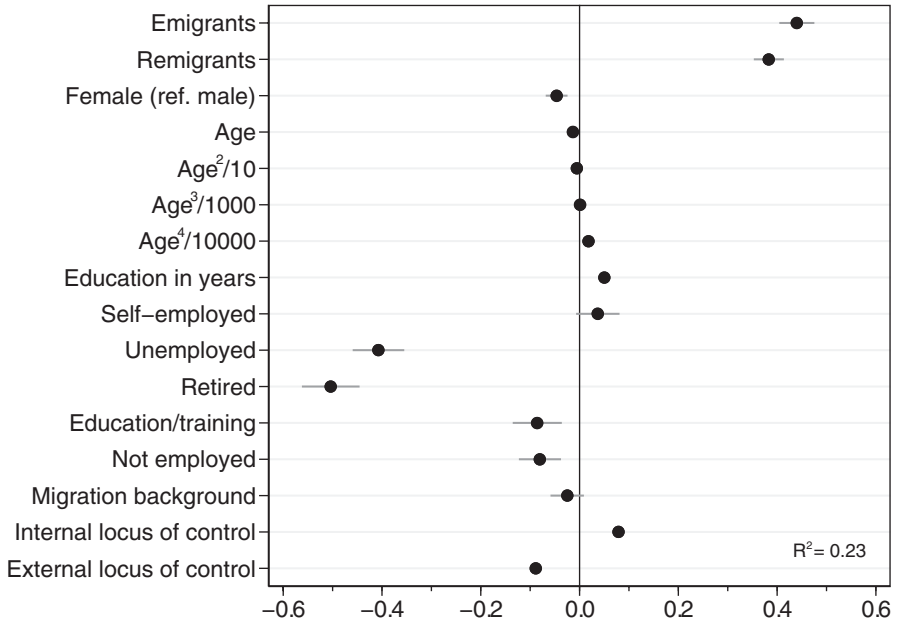
In the next step, we conduct regression analyses to check the selectivity of demographic, socio-economic and psychological characteristics. Figure 12.2 shows the changes of the estimated health differences between migrants and non-migrants, when controlling for sets of covariates. Figure 12.3 shows the coefficients and standard errors of the full model (all values can be found in Table 12.2 in the appendix). Figure 12.2, model 1 shows that, on average, emigrants ( $B = 0.79$ ,  $SE = 0.017$ ,  $p \leq 0.001$ ) and remigrants ( $B = 0.67$ ,  $SE = 0.014$ ,  $p \leq 0.001$ ) rate their health significantly better than non-migrants. The migration status variable explains around 13% of the variance in health. From model 2 (Fig. 12.2), we can see that the effect diminishes when the sex of the respondent, age, and migration background are controlled. A more detailed analysis reveals that the health difference is reduced due to controlling for age differences (migrants are on average younger). In model 3 (Fig. 12.2), the educational level and the labour force status are additionally controlled. Here, detailed analysis reveals that emigrants and remigrants have greater values in self-rated health because they have higher educational levels. Additionally considering the psychological characteristics of the respondents in model 4 (Fig. 12.2) again diminishes the estimated health differences. The reason for this is that migrants have lower values for external locus of control. In sum, the health advantage of German emigrants and remigrants compared to non-migrants reduces by more than



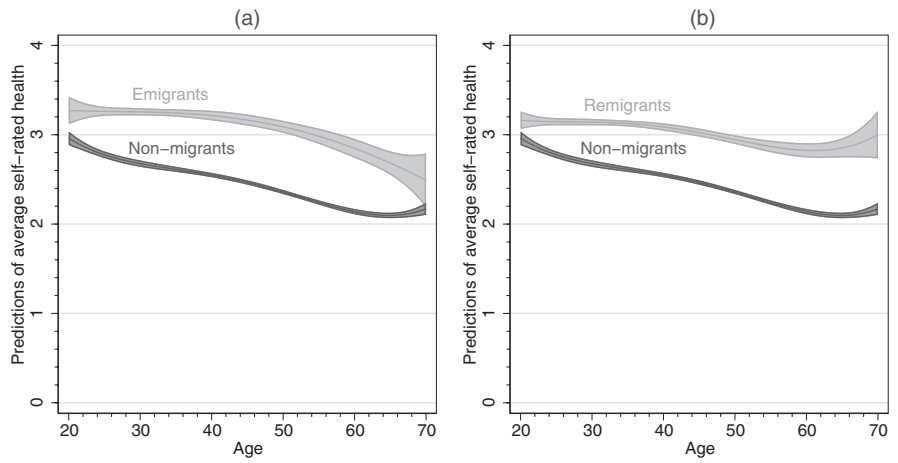
**Fig. 12.2** Changes in the estimated health differences between emigrants, remigrants and non-migrants (ref. non-migrants). (Sources: GERPSw1, SOEP2017,  $N = 24,022$ , authors' calculations). Notes: Model 1: migration status; Model 2: as model 1 + sex, age and migration background; Model 3: as model 2 + education and labour force status. Model 4: as model 3 + internal and external locus of control

50%, when demographic, socio-economic and psychological characteristics are controlled. However, it remains a health advantage for emigrants ( $B = 0.44$ ,  $SE = 0.018$ ,  $p \leq 0.001$ ) and remigrants ( $B = 0.38$ ,  $SE = 0.016$ ,  $p \leq 0.001$ ) that is relevant in size and significance (model 4, Figs. 12.2 and 12.3; Table 12.2).

As mentioned, Fig. 12.3 displays the results from the full linear regression model for all covariates, which are mainly in line with the literature on self-rated health and not discussed in detail here. For example, a higher educational level increases self-rated health as well as higher values of internal locus of control. Increased values of external locus of control reduce self-rated health (Furnée et al. 2008; Mackenbach et al. 2002). However, how the health advantage of migrants compared to non-migrants varies with age is of special interest. Figure 12.4 shows the estimated means of self-rated health over age for the three analysed groups from a model that controls for migration status and four polynomials of age as well as interaction effects between both. For emigrants (Fig. 12.4a) these estimates show that self-rated health is around 0.3 points higher at the age of 20 compared to non-migrants. This health advantage peaks at the ages 50 and 60 where self-rated health is around 0.7 points higher. After the age of 60, differences become smaller. Note that the health difference is not significant at an age of 70, which may be a result of the small number of cases. Moreover, for remigrants (Fig. 12.4b) we find that the



**Fig. 12.3** Coefficient plots of OLS regressions on self-rated health. (Sources: GERPSw1, SOEP2017,  $N = 24,022$ , authors' calculations). Notes: Ref. for the labour force status is 'employed'



**Fig. 12.4** Conditional effects of age on self-rated health comparing emigrants (a) and remigrants (b) with non-migrants. (Sources: GERPSw1, SOEP2017,  $N = 24,022$ , authors' calculations)

health advantage compared to non-migrants becomes greater over age continuously. The difference at age 20 is 0.2 and this advantage increases until the ages 60 and 70 to 0.7 and 0.8 points respectively.

### 12.4.2 Short-Term Changes in Health Around the Time of the Migration Event

Figure 12.5 shows the distribution of the self-assessed health changes around the time of the migration event. The vast majority of emigrants and remigrants report that their health is about the same as before migration. Interestingly, 34.3% of the emigrants and 29.7% of remigrants report health improvements compared to the situation before. However, remigrants (14.1%) report health declines more often than emigrants (8.8%). We conducted ordered logistic regression models to research the self-assessed health changes in detail (see Table 12.3 in the appendix). These models show that socio-demographic characteristics do not explain the reported health changes. The time since emigration or remigration also does not explain the self-assessed health changes. However, for remigrants with migration backgrounds, we find higher odds ( $B = 1.37$ ,  $SE = 0.104$ ,  $p \leq 0.001$ ) for reporting a health

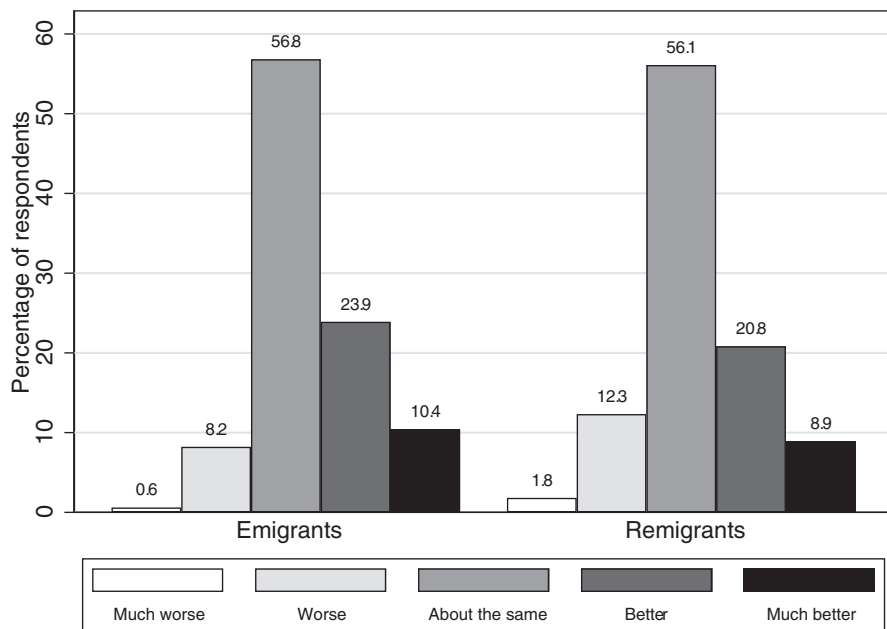


Fig. 12.5 Self-assessed changes in health in the context of international migration, in per cent. (Sources: GERPSw1,  $N = 9870$ , authors' calculations)

improvement compared to persons without a migration background. Furthermore, self-employed ( $B = 1.90$ ,  $SE = 0.252$ ,  $p \leq 0.001$ ) and retired ( $B = 2.16$ ,  $SE = 0.581$ ,  $p = 0.004$ ) emigrants report improved health while expatriates ( $B = 0.51$ ,  $SE = 0.064$ ,  $p \leq 0.001$ ) are more likely to exhibit declining health. Psychological characteristics are also relevant for explaining health changes. Emigrants with higher values of internal locus of control show a higher probability ( $B = 1.10$ ,  $SE = 0.041$ ,  $p = 0.009$ ) of reporting improved health, while those with greater external locus of control are more likely to report declines in health ( $B = 0.93$ ,  $SE = 0.031$ ,  $p = 0.041$ ). Moreover, the destination country also seems to play an important role. Emigrants in countries with a higher human development index (HDI) are more likely to report increased health ( $B = 1.02$ ,  $SE = 0.005$ ,  $p = 0.001$ ), while remigrants from countries with higher HDI have higher odds to report diminished health ( $B = 0.98$ ,  $SE = 0.002$ ,  $p \leq 0.001$ ), which also means that remigrants from countries with lower HDI report health increases.

## 12.5 Conclusion and Discussion

This study aimed to research the self-rated health and the self-assessed health changes of German emigrants and remigrants. For this, we used the first wave of the German Emigration and Remigration Panel Study (GERPS). Deploying this data enables us to address questions about the so-called healthy migrant effect in the context of migration from a high-income country, a topic that is largely absent from the literature (Markides and Rote 2019). Since interviews took place shortly after the migration event, the effect of selective return migration of ill persons (Salmon effect) is minimised and is not expected to bias the results. Additionally, the health of the individuals returning to Germany is also investigated. Moreover, by using the German Socio-Economic Panel (SOEP) as sub-sample, we were able to compare German migrants with non-migrants in the origin country, which are more appropriate counterfactuals as the destination population (Jasso et al. 2004; Razum 2009). Finally, using an item that measures self-assessed health changes around the time of the migration event (comparison of the present situation with that before the migration) allows us to shed some light on the health dynamics during the international migration, a topic on which almost nothing is known.

Corresponding with our expectations, we find a healthy migrant effect for German emigrants (H1.1) and remigrants (H3) compared to non-migrants living in Germany. These findings are in line with other studies focusing on German migrants (Engler et al. 2015; Erlinghagen 2011). The analysis revealed that the health advantage of German migrants in contrast to non-migrants can be partly explained by their younger age, their higher education and their lower values of external locus of control. Therefore, as theoretically expected, the self-selectivity of German migrants partly accounts for their better self-rated health (Ette and Sauer 2010; Erlinghagen et al. 2009; Jasso et al. 2004). Interestingly, a considerable health advantage remains after controlling for relevant covariates. A reason for this might be that relevant

factors were not observed or because health slightly increases around the time of the migration event. However, as the results of van Dalen and Henkens (2013) suggest, health seems to be important in terms of translating migration intentions into behaviour. Therefore, *ceteris paribus*, better health can make migration more likely.

Furthermore, our results show that the health advantage of emigrants and remigrants do not disappear with age (H1.2) as Lu and Zhang (2016) assume. In contrast, while the relationship for emigrants seems to be an inverted parabolic (the advantage first increases and then decreases), for remigrants a continuous increase in the health advantage can be found. This may be due to Germans being less likely to move to other countries to search for better health care because the quality of the German health system is already relatively high (Reibling et al. 2019). For the remigrants, we can assume that they initially are positively selected with regard to their health, but may move back to Germany in the case of (minor) declines in health (Hall 2016). Moreover, emigrants of younger ages have better self-rated health compared to remigrants, which supports the idea that a negatively selected group of migrants returns to their country of origin (Borjas and Bratsberg 1996). However, at higher ages remigrants tend to report greater values of self-rated health compared to emigrants.

The analyses of the health dynamics around the time of the migration event provide only weak evidence of a negative effect of migration on health. The analyses instead reveal that more than 50% report that their health did not change, while around 30% report health improvements. This result is in line with our theoretical expectations (H2 and H4) and existing findings (Erlinghagen et al. 2009; Jasso et al. 2004). Notably, expatriates are more likely to report declines in health after emigration. This finding is consistent with the literature documenting adjustment problems, especially in the period shortly after arrival, and poorer health in specific aspects (e.g. infectious diseases) among expatriates (Anderzén and Arnetz 1999; Foyle et al. 1998; Patel 2011). Moreover, the general level of development of the (former) destination country as well as personal traits also play a role in explaining health changes around migration (Bhugra 2004; McKay et al. 2003; van Dalen and Henkens 2007).

Several limitations of the study should be addressed here. First, our results should be interpreted carefully in terms of causality as all analyses are cross-sectional. Second, in the first wave of GERPS only the global self-rated health is available as measure of current health. However, as mentioned in our theoretical section and suggested by research on internal migration (Lu 2010; Nauman et al. 2015), migration may have different effects on mental and physical health. Third, we can only research short-term changes in global health using self-assessed retrospective ratings. In future research it would be interesting to see how self-rated health changes in the long-term, for example is there further improvement due to fitting in over time or does health decline after a brief “happiness effect”. Fourth, our results suggest that the health advantage of emigrants and remigrants varies with the destination context. Therefore, it may be fruitful to research this in more detail, for example by considering the spatial and cultural distance. Finally, future studies should examine

if the health advantage of migrants differs with regard to different life course statuses and transitions.

Altogether, this study expands the existing literature by researching the health of emigrants and remigrants from a high-income country by comparing it with the health of the origin population. We also provide insights with regard to health changes around the time of the migration event. Furthermore, we demonstrated the possibilities of researching health in the context of international migration using the German Emigration and Remigration Panel Study (GERPS). Future investigations deploying this data will be able to research health changes of emigrants and remigrants prospectively over a period of at least 2 years (four panel waves). Moreover, it will be possible to differentiate between physical and mental health to shed even more light on the relationship between international migration and health.

## Appendix

**Table 12.2** OLS regression on self-rated health

Variable	<i>B</i>	SE	Beta
Non-migrants	–	–	–
Emigrants	0.44***	0.018	0.16
Remigrants	0.38***	0.016	0.17
Female (ref. male)	–0.05***	0.011	–0.02
Age	–0.01***	0.001	–0.18
Age2/10	–0.01***	0.001	–0.11
Age3/1000	0.00	0.003	0.01
Age4/10000	0.02***	0.002	0.20
Education in years	0.05***	0.002	0.14
Employed	–	–	–
Self-employed	0.04	0.022	0.01
Unemployed	–0.41***	0.027	–0.09
Retired	–0.50***	0.030	–0.15
Education/training	–0.09***	0.025	–0.02
Not employed	–0.08***	0.022	–0.02
Migration background	–0.03	0.017	–0.01
Internal locus of control	0.08***	0.006	0.08
External locus of control	–0.09***	0.005	–0.11
Constant	2.43***	0.041	
<i>R</i> <sup>2</sup>	0.23		
<i>N</i>	24,022		

Sources: GERPSw1, SOEP2017, authors' calculations

\*\*\**p* < 0.001

**Table 12.3** Ordered logistic regression on self-assessed health changes, odds ratios and standard errors in parentheses

Variable	Emigrants		Remigrants	
	<i>B</i>	SE	<i>B</i>	SE
Time since migration	1.00	(0.006)	1.00	(0.005)
Female (ref. male)	0.93	(0.064)	1.00	(0.054)
Migration background	0.84	(0.087)	1.37***	(0.104)
Age	1.01	(0.004)	1.00	(0.003)
Age2/10	1.00	(0.003)	1.00	(0.002)
Expatriate	0.51***	(0.064)	0.94	(0.082)
Employed	–	–	–	–
Self-employed	1.90***	(0.252)	1.06	(0.118)
Unemployed	1.01	(0.233)	0.94	(0.107)
Retired	2.16**	(0.581)	1.02	(0.214)
Education/training	0.81	(0.098)	0.85	(0.078)
Not employed	0.92	(0.105)	1.12	(0.111)
Education in years	0.91***	(0.015)	1.00	(0.012)
Internal locus of control	1.10**	(0.041)	1.05	(0.027)
External locus of control	0.93*	(0.031)	0.97	(0.024)
HDI * 100	1.02**	(0.005)	0.98***	(0.003)
R2 (McFadden)	0.03		0.01	
N	3619		5672	

Sources: GERPSw1, authors' calculations

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

## References

- Ahonen, E. Q., Benavides, F. G., & Benach, J. (2007). Immigrant populations, work and health—a systematic literature review. *Scandinavian Journal of Work, Environment & Health*, 33(2), 96–104.
- Anderzén, I., & Arnetz, B. B. (1999). Psychophysiological reactions to international adjustment. Results from a controlled, longitudinal study. *Psychotherapy and Psychosomatics*, 68(2), 67–75.
- Arenas, E., Goldman, N., Pebley, A. R., & Teruel, G. (2015). Return migration to Mexico: Does health matter? *Demography*, 52(6), 1853–1868.
- Baykara-Krumme, H., Erlinghagen, M., & Mansfeld, L. (2021). Disruption of family lives in the course of migration: 'Tied migrants' and partnership breakup patterns among German (r) emigrants. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Becker, G. S. (1975). *Human capital*. New York: National Bureau of Economic Research.
- Bhugra, D. (2004). Migration and mental health. *Acta Psychiatrica Scandinavica*, 109(4), 243–258.
- Bhugra, D., & Becker, M. A. (2005). Migration, cultural bereavement and cultural identity. *World Psychiatry*, 4(1), 18–24.
- Borjas, G. J., & Bratsberg, B. (1996). Who leaves? The outmigration of the foreign-born. *The Review of Economics and Statistics*, 78(1), 165–176.



- Burström, B., & Fredlund, P. (2001). Self rated health: Is it as good a predictor of subsequent mortality among adults in lower as well as in higher social classes? *Journal of Epidemiology and Community Health*, *55*, 836–840.
- Constant, A. F. (2017). The healthy immigrant paradox and health convergence. *ifo DICE Report*, *15*(3), 20–25.
- Constant, A. F., García-Muñoz, T., Neuman, S., & Neuman, T. (2018). A "healthy immigrant effect" or a "sick immigrant effect"? Selection and policies matter. *The European Journal of Health Economics*, *19*(1), 103–121.
- De Jong, G. F. (2000). Expectations, gender, and norms in migration decision-making. *Population Studies*, *54*(3), 307–319.
- Delavari, M., Sönderlund, A. L., Swinburn, B., Mellor, D., & Renzaho, A. (2013). Acculturation and obesity among migrant populations in high income countries—a systematic review. *BMC Public Health*, *13*, 458.
- Engler, M., Erlinghagen, M., Ette, A., Sauer, L., Scheller, F., Schneider, J., & Schultz, C. (2015). *International Mobil: Motive, Rahmenbedingungen und Folgen der Aus- und Rückwanderung deutscher Staatsbürger*. Berlin
- Erlinghagen, M., and Stegmann, T. (2009). Goodbye Germany – und dann? SOEPPapers on Multidisciplinary Panel Data Research 193.
- Erlinghagen, M. (2011). Kein schöner Land? Glück und Zufriedenheit deutscher Aus- und Rückwanderer. *Comparative Population Studies—Zeitschrift für Bevölkerungswissenschaft*, *36*(4), 869–898.
- Erlinghagen, M., Ette, A., Schneider, N. F., & Witte, N. (2021). Between origin and destination: German migrants and the individual consequences of their global lives. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Erlinghagen, M., Stegmann, T., & Wagner, G. G. (2009). Deutschland ein Auswanderungsland? *DIW Wochenbericht*, *39*(2009), 663–669.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Sauer, L. (2010). *Auswanderung aus Deutschland. Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS.
- Ette, A., & Witte, N. (2021). Brain drain or brain circulation? Economic and non-economic factors driving the international migration of German citizens. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Fennelly, K. (2007). The Healthy Migrant Phenomenon. In P. F. Walker & E. D. Barnett (Eds.), *Immigrant medicine: A comprehensive reference for the care of refugees and immigrants* (pp. 19–26). Philadelphia, PA: Saunders Elsevier.
- Finch, B. K., & Vega, W. A. (2003). Acculturation stress, social support, and self-rated health among Latinos in California. *Journal of Immigrant Health*, *5*(3), 109–117.
- Foyle, M. F., Dominic Beer, M., & Watson, J. P. (1998). Expatriate mental health. *Acta Psychiatrica Scandinavica*, *97*(4), 278–283.
- Friis, R., Yngve, A., & Persson, V. (1998). Review of social epidemiologic research on migrants' health: findings, methodological cautions, and theoretical perspectives. *Scandinavian Journal of Social Medicine*, *26*(3), 173–180.
- Furnée, C. A., Groot, W., & Brink, H. v. d. M. (2008). The health effects of education: a meta-analysis. *European Journal of Public Health*, *18*(4), 417–421.
- Grossman, M. (1972). *The demand for health—A theoretical and empirical investigation*. New York: National Bureau of Economic Research.

- Guedes Auditor, J., & Erlinghagen, M. (2021). The happy migrant? Emigration and its impact on social wellbeing. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of german migrants. Consequences of international migration across the life course*. Cham: Springer.
- Guo, S., Lucas, R. M., Joshy, G., & Banks, E. (2014). Cardiovascular disease risk factor profiles of 263,356 Older Australians according to region of birth and acculturation, with a focus on migrants born in Asia. *PLoS One*, *10*(2), e0115627.
- Hall, K. (2016). Retirement migration and health: growing old in Spain. In F. Thomas (Ed.), *Handbook of migration and health* (pp. 402–418). Cheltenham: Edward Elgar.
- Hedlund, E., Kaprio, J., Lange, A., Koskenvuo, M., Jartti, L., Rönnemaa, T., & Hammer, N. (2007). Migration and coronary heart disease: A study of Finnish twins living in Sweden and their co-twins residing in Finland. *Scandinavian Journal of Public Health*, *35*(5), 468–474.
- Hendricks, M. (2015). The happiness of international migrants: A review of research findings. *Migration Studies*, *3*(3), 343–369.
- Hoppe, A., & Fujishiro, K. (2015). Anticipated job benefits, career aspiration, and generalized self-efficacy as predictors for migration decision-making. *International Journal of Intercultural Relations*, *47*, 13–27.
- House, J. S., Kessler, R. C., Regula Herzog, A., Mero, R. P., Kinney, A. M., & Breslow, M. J. (1990). Age, socioeconomic status, and health. *The Milbank Memorial Fund*, *68*(3), 383–411.
- Huang, C., Mehta, N. K., Elo, I. T., Cunningham, S. A., Stephenson, R., Williamson, D. F., & Venkat Narayan, K. M. (2011). Region of birth and disability among recent U.S. immigrants: Evidence from the 2000 census. *Population Research and Policy Review*, *30*(3), 399–417.
- Huijts, T., & Kraaykamp, G. (2012). Immigrants' health in Europe: A cross-classified multilevel approach to examine origin country, destination country, and community effects. *International Migration Review*, *46*(1), 101–137.
- Jasso, G. (2013). Migration and health. In S. J. Gold & S. J. Nawyn (Eds.), *The routledge international handbook of migration studies* (pp. 366–379). Milton Park, Abingdon: Routledge.
- Jasso, G., Massey, D. S., Rosenzweig, M. R., & Smith, J. P. (2004). Immigrant health: Selectivity and acculturation. In N. B. Anderson, R. A. Bulatao, & B. Cohen (Eds.), *Critical perspectives on racial and ethnic differences in health in late life* (pp. 227–266). Washington, DC: National Academy Press.
- Jatrana, S., Richardson, K., & Pasupuleti, S. S. R. (2018). Investigating the dynamics of migration and health in Australia: A longitudinal study. *European Journal of Population*, *34*(4), 519–565.
- Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology*, *83*(3), 693–710.
- Kennedy, S., Kidd, M. P., McDonald, J. T., & Biddle, N. (2015). The healthy immigrant effect: Patterns and evidence from four countries. *Journal of International Migration and Integration*, *16*(2), 317–332.
- Kovaleva, A., Beierlein, C., Kemper, C. J., and Rammstedt, B. (2012). Eine Kurzsкала zur Messung von Kontrollüberzeugung: Die Skala Internale-Externale- Kontrollüberzeugung-4 (IE-4). *GESIS-Working Papers* (19).
- Kuo, W. H., & Tsai, Y.-M. (1986). Social networking, hardiness and immigrant's mental health. *Journal of Health and Social Behavior*, *27*(2), 133–149.
- Lassetter, J. H., & Callister, L. C. (2009). The impact of migration on the health of voluntary migrants in Western Societies. *Journal of Transcultural Nursing*, *20*(1), 93–104.
- Lindström, M., Sundquist, J., & Östergren, P. O. (2001). Ethnic differences in self reported health in Malmö in southern Sweden. *Journal of Epidemiology and Community Health*, *55*, 97–103.
- Long, S. J. (2015). Regression Models for Nominal and Ordinal Outcomes. In W. Henning Best & Christof (Eds.), *The SAGE handbook of regression analysis and causal inference* (pp. 173–204). Los Angeles: Sage.
- Lu, Y. (2010). Rural-urban migration and health: Evidence from longitudinal data in Indonesia. *Social Science & Medicine*, *70*(3), 412–419.

- Lu, Y., & Zhang, A. T. (2016). The link between migration and health. In F. Thomas (Ed.), *Handbook of migration and health* (pp. 19–43). Cheltenham: Edward Elgar.
- Lubbers, M., & Gijsberts, M. (2019). Changes in self-rated health right after immigration: A panel study of economic, social, cultural, and emotional explanations of self-rated health among immigrants in the Netherlands. *Frontiers in Sociology*, 4.
- Mackenbach, J. P., Simon, J. G., Looman, C. W. N., & Joung, I. M. A. (2002). Self-assessed health and mortality: could psychosocial factors explain the association? *International Journal of Epidemiology*, 31(6), 1162–1168.
- Markides, K. S., & Rote, S. (2019). The healthy immigrant effect and aging in the United States and other Western Countries. *Gerontologist*, 59(2), 205–214.
- McKay, L., Macintyre, S., & Ellaway, A. (2003). *Migration and health: A review of the international literature*. Occasional Paper. 12. MRC Social & Public Health Sciences Unit.
- Mincer, J. (1978). Family migration decisions. *Journal of Political Economy*, 86(5), 749–773.
- Nauman, E., VanLandingham, M., Anglewicz, P., Patthavanit, U., & Punpuing, S. (2015). Rural-to-urban migration and changes in health among young adults in Thailand. *Demography*, 52(1), 233–257.
- Niefert, M., Ott, N., & Rust, K. (2001). Willingness of Germans to move abroad. In R. Friedmann, L. Knüppel, & Lütkepohl (Eds.), *Econometric studies* (pp. 317–333). Münster: LIT.
- Nielsen, S. S., & Krasnik, A. (2010). Poorer self-perceived health among migrants and ethnic minorities versus the majority population in Europe: a systematic review. *International Journal of Public Health*, 55(5), 357–371.
- Patel, D. (2011). Occupational travel. *Occupational Medicine*, 61(1), 6–18.
- Razum, O. (2009). Migration, Mortalität und der Healthy-migrant-Effekt. In M. Richter & K. Hurrelmann (Eds.), *Gesundheitliche Ungleichheit. Grundlagen, Probleme, Perspektiven* (pp. 267–282). Wiesbaden: VS.
- Razum, O., Hajo Zeeb, H. S. A., & Yilmaz, S. (1998). Low overall mortality of Turkish residents in Germany persists and extends into a second generation: merely a healthy migrant effect? *Tropical Medicine and International Health*, 3(4), 297–303.
- Rechel, B., Mladovsky, P., Ingleby, D., Mackenbach, J. P., & McKee, M. (2013). Migration and health in an increasingly diverse Europe. *The Lancet*, 381(9873), 1235–1245.
- Reibling, N., Ariaans, M., & Wendt, C. (2019). Worlds of healthcare: A healthcare system typology of OECD countries. *Health Policy*, 123(7), 611–620.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General and Applied*, 80(1), 1–28.
- Salaff, J. W. (2013). Return migration. In S. J. Gold & S. J. Nawyn (Eds.), *The Routledge International Handbook of Migration Studies* (pp. 460–468). Milton Park, Abingdon: Routledge.
- Sander, M. (2007). Return Migration and the “healthy immigrant effect”. *SOEPpapers on Multidisciplinary Panel Data Research* (60).
- Simon, J. G., de Boer, J. B., Joung, I. M. A., Bosma, H., & Mackenbach, J. P. (2005). How is your health in general? A qualitative study on self-assessed health. *European Journal of Public Health*, 15(2), 200–208.
- Sjaastad, L. A. (1962). The costs and returns of human migration. *Journal of Political Economy*, 70(5), 80–93.
- Specht, J., Egloff, B., & Schmukle, S. C. (2013). Everything under control? The effects of age, gender, and education on trajectories of perceived control in a nationally representative German sample. *Developmental Psychology*, 49(2), 353–364.
- Stark, O., & Bloom, D. E. (1985). The new economics of labor migration. *The American Economic Review*, 75(2), 173–178.
- Steiner, I. (2019). Settlement or mobility? Immigrants’ remigration decision-making process in a high-income country setting. *Journal of International Migration and Integration*, 20(1), 223–245.

- Szkudlarek, B. (2010). Reentry-A review of the literature. *International Journal of Intercultural Relations*, 34(1), 1–21.
- Tabor, A. S., Milfont, T. L., & Ward, C. (2015). International migration. Decision-making and destination selection among skilled migrants. *Journal of Pacific Rim Psychology*, 9(1), 28–41.
- Uebelmesser, S. (2006). To go or not to go: Emigration from Germany. *German Economic Review*, 7(2), 211–231.
- UNDP (2019). Human Development Index and its components. <http://hdr.undp.org/en/composite/HDI>, accessed 1 October 2020.
- van Dalen, H. P., & Henkens, K. (2007). Longing for the good life: Understanding emigration from a high-income country. *Population and Development Review*, 33(1), 37–65.
- van Dalen, H. P., & Henkens, K. (2013). Explaining emigration intentions and behaviour in the Netherlands, 2005–10. *Population Studies*, 67(2), 225–241.
- van Diepen, A. M. L., & Mulder, C. H. (2009). Distance to family members and relocations of older adults. *Journal of Housing and the Built Environment*, 24(1), 31–46.
- Waibel, S., Rügger, H., Ette, A., & Sauer, L. (2017). Career consequences of transnational educational mobility: A systematic literature review. *Educational Research Review*, 20, 81–98.
- Williams, A. M., Jephote, C., Janta, H., and Li, G. (2017). The migration intentions of young adults in Europe: A comparative, multi-level analysis. *Population, Space and Place* 24.
- Witte, N., & Guedes Auditor, J. (2021). Affluent lives beyond the border? Individual wage change through migration. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Wu, S., Wang, R., Zhao, Y., Ma, X., Wu, M., Yan, X., & He, J. (2013). The relationship between self-rated health and objective health status: a population-based study. *BMC Public Health*, 13, 320.

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**Part VI**  
**Friends and Social Integration**

# Chapter 13

## Out of Sight, out of Mind? Frequency of Emigrants' Contact with Friends in Germany and its Impact on Subjective Well-Being



Lisa Mansfeld

### 13.1 Introduction

Migration provides people with new opportunities. For example, migration can be beneficial for an individual's career by bringing about income gains (Clemens 2013; Gibson and McKenzie 2012; Gibson et al. 2018; Hendricks and Schoellman 2018). However, migration also brings about costs. By definition, moving across borders implies financial costs. These include costs shortly before or during the migration event, such as costs for transportation, visa fees, or new furniture. Furthermore, financial costs can arise after migration (e.g. travel costs to visit friends and family at home). However, migration might not only be costly in terms of economic capital. For example, human capital could be devaluated as it might not be applicable to the labour market in the destination country (Chiswick 1978; Chiswick and Miller 2007). In this context, Chiswick and Miller (2007) talk about "less-than-perfect transferability of skills acquired on the job or through formal schooling" (p. 2) to underline that this devaluation not only refers to language skills. Furthermore, social networks might be broken, leading to a loss of social capital (Lesage and Ha 2012; Wahba and Zenou 2012). In particular, accessibility of social capital is crucial for its mobilisation (Lin 1999), which might be hindered after international migration.

Social capital understood as interpersonal ties (Granovetter 1973) involves both instrumental and emotional support. With international migration and, thus, increased geographical distance, the loss of instrumental support seems plausible. However, emotional support is also important to analyse as O'Flaherty et al. (2007, p. 819) point out that "migrants are often in the situation where many of their most emotionally significant relationships are conducted internationally" (p. 819). To what extent and by what means migration affects emotional support appears unclear as only a few qualitative studies exist (see e.g. Baldassar 2007; Guo et al. 2009).

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These studies focus on family relationships. Migration, however, also implies friendships across borders. There is even less scientific knowledge concerning these friendships than transnational family relationships. This lack of understanding of a potentially impactful social experience provides the starting point for this chapter, which asks three research questions:

- (a) How does the quality of relationships with friends in Germany differ from the quality of other relationships after migration?
- (b) How is friendship quality after migration related to socio-demographic or socio-economic factors?
- (c) Is there a link between friendship quality and the subjective well-being of emigrants?

The first question can be seen as the starting point and can be answered using descriptive statistics thus providing the basis of this analysis. The second question builds on the first. To address the second question, determinants of friendship quality are identified by applying multivariate regressions. Finally, the third question looks at correlations between friendship quality and different aspects of subjective well-being. Subjective well-being can be conceptualised as an important outcome variable of the migration event (Bartram 2013; Baykara-Krumme and Platt 2018; Erlinghagen 2011; Guedes Auditor and Erlinghagen 2021; Safi 2010). With this in mind, by focussing on friendship quality the third research question takes a step towards analysing differences in subjective well-being between emigrants. In doing so, this article provides new insights concerning individual psychosocial consequences of emigration from industrialised countries as data from German emigrants is used.

The remainder of this chapter is structured as follows. First, I outline some theoretical considerations concerning determinants of contact frequency and its link with subjective well-being. This is followed by a short overview of (both qualitative and quantitative) findings concerning these factors. Then, I describe the methodology and outline the sets of variables used to answer the three research questions. Next, the research questions are answered in sequence. Finally, I discuss the findings and draw a conclusion.

## 13.2 Theory

### 13.2.1 *Determinants of Friendship Quality*

Friendships can be defined as voluntary, informal and intimate social relationships (Bowlby 2011). Friendship quality, in turn, can be conceptualised as the quality of relationships with friends. Relationship quality is usually measured by contact frequency, whereby scholars assume that ties are closer the higher the contact frequency (Bauernschuster et al. 2010; Blömers and Letschert 2011) This contact

frequency can encompass different modes of contact: personal visits, calls, messages, etc. Although the German Emigration and Remigration Panel Study (GERPS) includes all modes of contact in their frequency measures, some scholars focus on one aspect, for example personal visits. Below, I summarise theoretical considerations concerning different modes of contact frequency.

O'Flaherty et al. (2007) assume that economic integration (wealth, income, economic status, education, etc.) has a positive impact on visits to one's own home country as financial resources are crucial for travel opportunities. Still, some aspects of economic integration that are time-consuming appear to work in the opposite direction: someone who has a full-time job and thus a limited number of days of annual leave might be less likely to return home frequently than a student or a pensioner who has fewer obligations in the host country. Also, higher economic integration increases the attractiveness of staying in the host country (Portes et al. 1999). Concerning other forms of contact (letters, information and communication technologies or ICTs, etc.), the direction of the effect is not so clear either. Education might, in general, be correlated with higher ICT handling skills and thus foster contact using this channel. However, given that the overall level of education in the GERPS sample is already very high, education might rather correlate with employment obligations and thus have the opposite effect. Furthermore, it might foster the speed of overall integration (Guarnizo et al. 2003) and thus negatively impact contact frequency. Social integration implies closer ties to the host country's society and thus is assumed to have a negative impact on frequency of contact with friends in the home country. Furthermore, social integration is likely to negatively affect intentions to remigrate, and not intending to remigrate is assumed to decrease contact with friends in the home country.

Individual characteristics that have been considered include gender, age, and foreign roots. O'Flaherty et al. (2007) find that women are more likely than men to visit home. They argue that this finding might reflect expectations concerning gender roles: women are traditionally expected to do caregiving and provide emotional support but men focus on political and economic concerns. In line with this argumentation, Kaasa and Parts (2008) argue that it is easier for women to find emotional support, for example when depressed. This would imply that they not only invest but also receive more in terms of social support. Age might increase contact frequency as older people are usually more attached to their home country (Iarmolenko et al. 2016). Also, the nature of friendship changes while aging: Fox et al. (1985) state that, with age, men develop more concern and thoughtfulness regarding friends and women become more tolerant and less confrontational. Different behaviour or attitudes towards friends might also impact contact frequencies in friendships. Additionally, foreign roots might play a role in defining contact behaviour. In this context, 'foreign roots' refers to having a migration background in Germany and not in the host country as German emigrants by definition have a migration background if they have moved abroad. In order to prevent confusion, I use the term foreign roots. For example, Iarmolenko et al. (2016) hypothesise that differences in home visits among ethnic Germans, Russian Jews, and Turkish people living in Germany depend on distinct exit and entry conditions. Consequently,



as resources are limited, these differences might in turn affect home visits in Germany (and thus contact frequency with friends living there).

Distance to the home and time in the host country are assumed to affect contact frequency. In particular, I hypothesise that contact frequency decreases with distance. This is for two reasons: first, travel costs increase with distance, making home visits more expensive. Second, a longer distance is associated with a larger time difference, which narrows possible time slots for communication and thus complicates transnational contact (Ryan et al. 2015). Connections with the home country decrease with time in the host country, and this holds especially true for friends (Ryan et al. 2015). Thus, length of stay is assumed to decrease contact frequency.

Number of friends is assumed to play a crucial role as having a large number of friends simply provides more opportunities for contact frequency. Furthermore, partnership, marital status, and household size (i.e. whether there are children in the household) might be important. Ryan et al. (2015) argue that family obligations negatively impact the likelihood of home visits, one possible mode of contact. Such obligations are higher for people with a partner and/or children and with the presence of the respective person(s) in the household. Furthermore, family obligations might affect network size, which is consistent with the finding that married persons have fewer informal networks (Kaasa and Parts 2008).

### ***13.2.2 Contact, Friendship, and Subjective Well-Being***

Prilleltensky (2008) analyses different risk and protective factors of migrants' subjective well-being. Friendship is categorised as being protective and thus assumed to positively affect subjective well-being. But what exactly is the link between these two phenomena? Lee and Ishii-Kuntz (1987) argue that individuals choose their friends and at the same time are chosen as friends. The latter demonstrates to the individuals that they possess positive attitudes or qualities that are valued. This is assumed to have a positive impact on subjective well-being (Lee and Ishii-Kuntz 1987). Furthermore, friendship is linked to subjective well-being via support and disclosure (Cuadros and Berger 2016) and mediated via loneliness—a subjective feeling of social integration (Liang et al. 1980). The latter motivates the inclusion of different loneliness measures to assess the link between friendship and migrants' subjective well-being. Furthermore, contact with friends in the home country might correlate not only with overall life satisfaction, but also with satisfaction concerning different life domains.

### 13.3 Literature Review

In general, literature on cross-border relationships of emigrants mainly focusses on Asia and Latin America (Apitzsch 2014) and economically disadvantaged groups (e.g. Berítez 2012; Madianou and Miller 2011). If Germany is the subject of study, literature usually approaches it as a destination country (Baykara-Krumme 2014; Pusch 2013). This means that the behaviour of migrants in Germany, not German emigrants, is analysed. Two exceptions exist. First, Décieux and Mörchen (2021) analysed differences regarding the number of close friends between German emigrants and non-mobiles, including both cross-border and within-country friendships as they assessed the overall number of friendships. Second, Mau and Mewes (2007) studied transnational social relationships but focused only on non-mobile individuals living in Germany and their contact with people living abroad. Also, not much research has been published with respect to other industrialised countries. Still, it was found that 98 per cent of Irish migrants in Melbourne have contact with their family in Ireland (O'Connor 2010). The same holds for 93 per cent of migrants of English-speaking background and 91 per cent of migrants of non-English-speaking background in Australia (Ang et al. 2002) and 95.4 per cent of migrants from different countries in Vancouver, Canada (Hiebert 2003).

#### 13.3.1 *Determinants of Contact*

Literature on the determinants of contact with people in the home country has focused primarily on contact with relatives and has mainly examined either home visits or contact using information and communication technologies (ICTs). Furthermore, research on transnational relationships of relatively affluent migrants is limited (O'Flaherty et al. 2007). However, some exceptions exist: Major between-group differences for migrants in Australia were found concerning migrants' visits home (O'Flaherty et al. 2007). In particular, they report differences with respect to visa category, country of origin, sex, age, relative life satisfaction in Australia and aspirations to gain Australian citizenship, English language skills, income, housing situation, home ownership, education, financial aid from overseas, and financial aid from within Australia. Also looking at migrants' visits home, Iarmolenko et al. (2016) assessed different determinants of transnational activity of female migrants in Germany. They found that determinants vary by ethnic background, for example the financial situation is significant for Turkish immigrants but not so for ethnic Germans and Russian Jews. Determinants that are statistically significant (for some female migrant groups) but not considered by O'Flaherty et al. (2007) are length of stay, discrimination, thoughts about returning to the home country, as well as several acculturation, identification, and social network measures. Analysing contact behaviour of highly skilled American and French migrants in London, Ryan et al. (2015) found that geographical distance matters: French people could visit their

home country more frequently than Americans. Also, the authors identified competing family obligations as being crucial for determining home visits.

Given that transnational contact became easier with the surge of ICTs (Bacigalupe and Cámara 2012; Pajnik and Bajt 2012) one might assume that economic status (i.e. income, home ownership, financial aid, etc.) is less crucial for ICT-based contact. However, the availability of these new technologies differs (Wilding 2006). Bryceson and Vuorela (2002) showed that indeed income and material assets are crucial determinants. Analysing phone and e-mail contacts of migrants in the Netherlands, Schans (2009) identified similar influencing factors as those for home visits. Furthermore, she added age at migration to the list of determinants.

### ***13.3.2 Cross-Border Contacts and Subjective Well-Being***

Even though transnational ties are crucial for the emotional well-being of every migrant (Ryan et al. 2015), literature on the link between cross-border contacts and subjective well-being has focused mainly on migrant parents and left-behind children (e.g. Dito et al. 2017). One exception is O’Flaherty et al. (2007), who found a significant effect of relative life satisfaction in Australia on the odds of home visits.

More generally and without focusing on migration, there appears to be a relationship between friendship and subjective well-being (Heady et al. 1991). Among children, Gauze et al. (1996) found that friendship and subjective well-being were correlated. More specifically, Cuadros and Berger (2016) found that two aspects of friendship (support and disclosure) affect subjective well-being of female children. Concerning elderly people, friendship significantly increases morale and decreases loneliness, with effects being stronger than those associated with family (Lee and Ishii-Kuntz 1987).

## **13.4 Data and Methods**

In order to answer the three research questions, I present analyses of data from the first wave of GERPS. GERPS assesses consequences of international migration of German citizens and is based on a random sample drawn from local population registers (Ette et al. 2021). It covers both German emigrants and remigrants but for this analysis only emigrants are considered. Additionally, only respondents who indicated both their sex and age and who emigrated from Germany in either 2017 or 2018 were included. The latter facilitates focusing the analysis on short-term effects of migration. In total, 3536 observations remained.

Friendship quality is measured using contact frequency with friends who still live in Germany. This approach is common in literature (see e.g. Bauernschuster et al. 2010; Blömers and Letschert 2011). Contact frequency is measured not only with friends, but also with seven groups of relatives, allowing for comparisons

between types of relationships. In particular, GERPS respondents are asked to indicate their contact frequency with (a) partner/spouse, (b) parents/parent-in-law, (c) siblings, (d) children, (e) grandchildren, (f) grandparents, (g) other relatives (e.g. aunts, uncles, cousins), and (h) close friends. If respondents were in contact with more than one person in one category (e.g. siblings, friends), they were asked to answer the question based on the person with whom contact is most frequent. The resulting measures include different modes of contact (e.g. visits, phone calls, messages). Contact frequency is measured on a four-point scale and was rescaled so that higher values indicate more frequent contact:

How often are you in contact with the following people in Germany?

- Daily
- At least once a week
- At least once a month
- Less than once a month

Thus, contact frequency is an ordered categorical variable. Often with categorical variables, ordered logit models are estimated. These models rest on the proportional odds assumption that does not hold in this sample. This is not surprising as scholars argue that it almost always needs to be rejected, especially with many explanatory variables (Brant 1990), the inclusion of continuous explanatory variables, and a large sample (Allison 2012; Brant 1990; Clogg and Shihadeh 1994; O'Connell 2006). Consequently, I estimated generalised ordered logit, which allows the coefficients to differ across categories of the dependent variable. For each variable, the auto-fit option—in an iterative process—tests whether its coefficients actually differ across categories and Stata estimates only one coefficient if this is not the case (Williams 2006).

Table 13.1 describes the coding and underlying classification of each explanatory variable used to assess the second research question. It also shows summary statistics.

In order to address the third research question, different measures of subjective well-being were taken into account:

- (1) Individual items of the GSOEP loneliness scale
  - Miss the company of others
  - Feel left out
  - Feel isolated
- (2) GSOEP loneliness scale overall
- (3) General life satisfaction
- (4) Perceived change in the quality of different life domains

The inclusion of (1) and (2) in this list is based on the findings by Liang et al. (1980) concerning the mediating effects of loneliness on subjective well-being. In the present study, first, participants' responses to the individual items of the GSOEP loneliness scale, including "miss the company of others," "feel left out," and "feel isolated" were analysed. These items cover different dimensions of loneliness and

**Table 13.1** Descriptions, coding, and summary statistics of explanatory variables

Variable name	Description	<i>N</i>	Mean	SD	Min	Max
Gender	Dummy: 1 = male, 0 = female	3536	0.49	0.5	0	1
Age	Age at the time of the interview (years)	3536	35.84	10.69	19	71
Foreign roots	Dummy: 1 = foreign roots (direct, indirect, not differentiable migration background in Germany), 0 = no foreign roots. Classification congruent to GSOEP's MIGBACK variable.	3536	0.27	0.44	0	1
Length of stay	Time between the migration event and the interview (months)	3536	11.98	4.43	0.3	25.1
Intention to remigrate	Dummy: 1 = yes, 0 = no. Based on the question of whether the respondent seriously thought about remigrating to Germany.	3536	0.36	0.48	0	1
Europe	Dummy: 1 = respondent lives in Europe 0 = respondent lives outside Europe	3531	0.75	0.44	0	1
Main activity	Categorical: 2 = (self-)employed, civil servant; 1 = education/training; 0 = not employed, unemployed, retired	3394	1.62	0.71	0	2
Bachelor's degree or higher	Dummy: 1 = bachelor's, master's, doctoral (or equivalents); 0 = in school, primary education; lower-, upper- and post-secondary education; short-cycle tertiary education.	3536	0.75	0.43	0	1
Friends	Number of close friends	3536	8.24	6.51	1	90
Partner	Dummy: 1 = no partner, 0 = partner (irrespective of civil status and living arrangement). Classification based on PARTZA (generated partner indicator for the time of the interview, congruent to GSOEP)	3536	0.74	0.44	0	1
Household constellation	Categorical: 0 = single-person household, 1 = couple without children, 2 = couple with children, 3 = others.	3425	1.04	0.96	0	3

Source: GERPSw1

are measured on a five-point scale, ranging from 1 (never) to 5 (very often). Second, the three-item GSOEP loneliness scale, which was developed building on the 20-item UCLA loneliness scale (Luhmann and Hawkey 2016) is included. It is based on the three single items in (1). Scholars have shown its strong correlation with the original scale (Hughes et al. 2004) as well as the validity of the German version (Hawkey et al. 2016). The overall score is computed as the sum of the individual items. Third, general life satisfaction as a measure of subjective well-being is considered. Respondents were asked about their overall satisfaction level on a scale from 0 to 10. Fourth, changes in the quality of different aspects of life are considered. These include changes in family life, the situation with friends, health, and neighbours. Respondents were asked to compare the situation before migration to the present situation and indicate whether it got better or worse. In particular, respondents could answer on a five-point scale ranging from 1 (much better than in Germany) to 5 (much worse than in Germany).

As with contact frequency, these measures are categorical variables. As explained above, ordered logit models rest on the proportional odds assumption, which in most cases does not hold. However, the measures of subjective well-being consist of 5–15 categories, which would lead to a very high number of equations to be estimated as well as a very low number of observations included in each estimation equation. When pooling these categories, information would be lost. Furthermore, the third research question is not so much about how exactly different determinants affect subjective well-being but rather whether or not there is a link between friendship quality and different dimensions of subjective well-being. Thus, I stick to simple ordered logit regression and interpret estimation coefficients as “average effects” of contact frequency on subjective well-being (keeping in mind that this effect might differ across the categories of subjective well-being and that causality cannot be established).

## 13.5 Results

### 13.5.1 *Patterns of Contact Frequency*

Table 13.2 shows emigrants' contact frequencies with different relatives as well as friends living in Germany. Overall, frequency of contact with friends fell in the middle of this frequency scale, with most of the respondents having contact with their friends on a weekly (41.1%) or monthly (37.7%) basis. A total of 10.8 and 10.4 per cent accrue to the two extreme response options, less than once a month and daily, respectively. Contact was most frequent with the partner (if he or she stayed in Germany), followed by children and parents (including parents-in-law). Least frequent contact was observed to be with other relatives, followed by grandparents and grandchildren. The differences in the numbers of observations are also

**Table 13.2** Contact frequency by types of relatives and friends (in per cent)

Contact with	Less than once a month	At least once a month	At least once a week	Daily	<i>N</i>
Partner	2.4	3.0	8.3	86.4	873
Children	5.6	11.2	34.2	49.0	447
Parents (in-law)	5.1	23.2	57.0	14.7	3058
Friends	10.8	37.7	41.1	10.4	3406
Siblings	19.4	38.7	34.1	7.8	2778
Grandchildren	38.8	29.8	26.5	5.0	121
Grandparents	50.5	37.0	11.5	1.1	1457
Other relatives	72.1	22.1	5.0	0.8	2754

Partner includes both spouses and unmarried partners and parents also includes parents-in-law. Contact frequencies as described in Sect. 13.4. Ranking is based on mean contact frequency. Source: GERPSw1

noteworthy, which stem from the fact that not all respondents had all different types of relatives and/or a partner living in Germany.

Descriptive statistics for contact frequency with friends in Germany also show distinct patterns by socio-demographic and socio-economic variables (Table 13.3). Female migrants had more contact with friends in Germany than male migrants did. In particular, female migrants were more likely to have daily or weekly contact. Contact frequency decreased with age: the lowest contact category (less than once a month) increased, but both daily and at least once a week decreased with age. Regarding foreign roots, only minor differences in contact frequency were observed: People with foreign roots were somewhat more likely to give extreme answers (daily or less than once a month). Similarly, small differences were found concerning the length of stay: Contact frequency appears to decrease with the length of stay. Given that the maximum length of stay in this data set is 25.1 months, even short-term differences could be identified. Contact frequency was slightly higher for emigrants who reported thinking about returning to Germany. The same held for emigrants who live in Europe—which can be seen as a proxy for distance. However, contact frequency was lower for people who reported being employed or holding a bachelor's or higher degree. Contact frequency increased with the number of friends between one and 20. Having more than 20 friends, however, did not further increase contact frequency. Comparing respondents with more than 20 friends with those having six to 10 or 11 to 20 friends, it is furthermore noteworthy that people with more than 20 friends were more likely to give extreme answers, i.e. have contact daily or less than once a month. Furthermore, respondents who had a partner showed lower levels of contact frequency with friends than those who did not have a partner. A similar picture can be drawn when looking at household constellations: Respondents in single-person households had more contact with friends than did people living with their partner but without children, who in turn have more contact than people living with their partner and children.

### ***13.5.2 Estimation Results: Determinants of Contact Frequency***

Generalised ordered logit regression draws a detailed picture of how different factors affect contact frequency (Table 13.4). Its coefficients need to be interpreted as follows (cf. Williams 2006): A positive (and statistically significant) sign implies that a higher value of the explanatory variable increases the likelihood that the respondent is in a higher category of contact frequency than the present one. In contrast, the probability of being in the present or lower category of contact frequency increases with higher values of the explanatory variable if the estimated coefficient is negative. For several explanatory variables (foreign roots, length of stay, intention to remigrate, Europe, main activity, and household constellation), the proportional odds assumption is not violated (i.e. coefficients are the same throughout the categories of the dependent variable). Thus, following Williams (2016), only one coefficient is shown in the first row, which can be interpreted as a coefficient

**Table 13.3** Contact frequency with friends by explanatory variables (%)

Variable	Category	Less than once a month	At least once a month	At least once a week	Daily	N
Sex	Female	7.1	33.3	47.7	11.9	1794
	Male	14.6	42.3	34.1	8.9	1742
Age group	20–29 years	6.6	32.8	44.7	15.9	1098
	30–39 years	9.4	38.3	42.8	9.6	1398
	40–49 years	15.8	43.4	35.5	5.3	468
	50–59 years	19.1	43.8	32.2	4.9	304
	60 years and older	24.1	38.7	32.9	4.4	137
Foreign roots	Yes	11.8	35.8	41.4	11.0	898
	No	10.5	38.2	41.1	10.2	2458
Length of stay	Less than 6 months	6.8	35.4	45.1	12.7	308
	6 to less than 12 months	9.3	37.6	42.0	11.1	1439
	12 to less than 18 months	12.7	38.2	39.9	9.3	1449
	18 or more months	13.8	39.1	36.2	11.0	210
Intention to remigrate	Yes	9.5	36.7	42.1	11.7	1251
	No	11.6	38.3	40.4	9.7	2147
Europe	Yes	9.9	37.0	42.2	10.9	2525
	No	13.4	39.7	37.8	9.1	876
Main activity	Econ. Active	11.0	38.7	40.2	10.1	2484
	Education/training	6.5	36.9	42.3	14.4	355
	Other	9.2	41.7	38.3	10.8	120
	Not active	14.3	32.8	44.7	8.2	427
Education	Bachelor or higher	10.8	39.8	40.4	9.1	2580
	Lower	10.6	31.2	43.2	14.9	810
Number of friends	1–5	14.4	37.9	39.4	8.3	1461
	6–10	8.0	38.0	43.6	10.4	1343
	11–20	7.6	37.0	41.0	14.4	486
	More than 20	11.2	36.2	31.9	20.7	116
Partner	No partner	9.1	29.8	46.0	15.1	843
	Partner	11.5	40.6	39.1	8.8	2524
Household constellation	Single-person household	7.9	33.5	44.7	13.9	1114
	Couple w/o children	9.5	40.8	40.5	9.2	1279
	Couple with children	18.6	43.8	32.5	5.2	576
	Other	11.8	31.0	43.7	13.6	332

Source: GERPSw1



**Table 13.4** Estimation results for contact frequency applying a generalised ordered logistic model using the auto-fit option

	1L vs 2M, 3W, 4D	1L, 2M vs 3W, 4D	1L, 2M, 3W vs 4D
Male (ref. female)	-0.652***	-0.588***	-0.211*
Age	-0.040***	-0.030***	-0.051***
Foreign roots (yes vs. no)	-0.098		
Length of stay	-0.029***		
Intention to remigrate (yes vs. no)	0.085		
Europe (ref. outside Europe)	0.176**		
Main activity (ref. not active)			
Econ. active	-0.237**		
Educ./training	-0.501***		
Other	-1.499***		
Bachelor's or higher (ref. lower)	-0.028	-0.343***	-0.578***
Number of friends	0.043***	0.019***	0.041***
Partner (yes vs. no)	0.145	-0.248**	-0.278**
Household constellation (ref. single-person household)			
Couple without children	-0.257***		
Couple with children	-0.704***		
Other	-0.227*		
Constant	4.284***	2.392***	0.553*
Observations	3401		
Pseudo R-Squared	0.053		

Categories of the explanatory variable: 1L = less than once a month, 2M = at least once a month, 3W = at least once a week, 4D = daily. Models include controls for missing values of categorical/binary variables, which are not displayed in this table. Missing and improbable values concerning the number of friends and length of stay are replaced by the respective mean of the variable and a flag variable is used in order to indicate if values are real or imputed. Following Williams (2016), if variables meet the proportional odds assumption (and thus estimated coefficients are the same across categories of the dependent variable) only one coefficient is reported for the respective explanatory variable in the first row. Source: GERPSw1

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

from estimating a simple ordered logit model. As for the other variables, the effect differs throughout the categories of the dependent variable and thus different coefficients are reported.

Being male increases the likelihood of being in the present or a lower category of contact frequency, but this effect decreases with increasing categories of contact frequency. Similarly, age has a negative impact on contact frequency, but the effect is strongest for the highest category of the dependent variable, followed by the lowest category. For the next five variables, the proportional odds assumption holds and thus the effect is constant across the categories of the dependent variables. Although foreign roots and intention to remigrate appear to not be statistically significant,

significant effects can be found for length of stay, Europe, and main activity. The longer the length of stay in the host country, the less frequently emigrants were in contact with friends in Germany. This effect is noteworthy as—due to the recentness of the study plus the fact that only respondents who left Germany in either 2017 or 2018 were included—the overall level of length of stay is still relatively low (see descriptive statistics in Table 13.1). Staying in Europe was associated with more frequent contact with friends and being economically active (employed, self-employed, or civil servant) and being in training were associated with decreased contact compared to not being active (unemployed, not employed, or retired). Holding a bachelor's or higher degree was associated with decreased contact frequency. This effect is stronger for higher categories of the dependent variable (and it is not statistically significant for the lowest category). The number of friends had a positive impact on contact frequency, which is strongest for the lowest and highest category and weaker in the second column of the table (less than once a month and monthly vs weekly and daily). In contrast, having a partner (both married and unmarried) was negatively associated with contact frequency, with the effect being stronger for higher categories of the dependent variable (it even ceases to be statistically significant for the lowest category). Last, not living in a single-person household was associated negatively with contact frequency.

### ***13.5.3 Contact Frequency and Well-Being***

Table 13.5 shows estimation coefficients of contact frequency on different indicators of subjective well-being. The major finding is that a link between contact frequency and different indicators of subjective well-being exists. In particular, two individual items of the GSOEP loneliness scale, the composite GSOEP loneliness scale, general life satisfaction, and two indicators comparing changes in different life domains before and after migration (“situation has worsened with respect to...”) show statistically significant estimation coefficients. Concerning the GSOEP loneliness scale indicators, statistically significant negative coefficients with respect to “feel left out” and “feel isolated” as well as the composite indicator were found. These variables were coded such that higher values indicate stronger feelings of loneliness. Thus, a negative correlation indicated that higher contact frequency correlated with weaker feelings of loneliness. There were also statistically significant effects concerning general life satisfaction: more contact with friends corresponded to higher levels of general life satisfaction. Additionally, changes in two of the four analysed life domains show statistically significant estimation coefficients: a worsening of the situation with respect to friends and neighbours. Low values of these variables indicate that the situation now is much better than it was in Germany (improvement) and high values indicate that the situation now is much worse than it was in Germany (worsening). Both changes in the area of friends and neighbours have positive signs, implying that more contact with friends in Germany corresponded with a worsening of the situation. In other words, people who still have

**Table 13.5** Regression coefficients for contact frequency with friends on different subjective indicators of well-being estimating ordered logistic models

	Contact frequency (estimation coefficient)	<i>N</i>	Pseudo <i>R</i> -squared
Miss company of others	-0.022	3368	0.037
Feel left out	-0.214***	3365	0.037
Feel isolated	-0.179***	3365	0.039
GSOEP loneliness scale	-0.151***	3401	0.031
General life satisfaction	0.077*	3377	0.027
Change family life	0.037	3383	0.06
Change friends	0.162***	3387	0.036
Change health	-0.032	3391	0.026
Change neighbours	0.076*	3394	0.016

In contrast to regular presentations of regression results, in this table different models are displayed one below the other (and not next to each other). The first column shows the respective dependent variable. The coefficient of the main explanatory variable (contact frequency with friends) is shown in the second column. As controls, all explanatory variables from estimating contact frequency (Table 13.4) are used. For reasons of parsimony, they are not displayed but can be provided upon request. Source: GERPSw1

\* $p < 0.1$ , \*\* $p < 0.05$ , \*\*\* $p < 0.01$

strong ties to their friends in Germany reported feeling that the situation concerning friends and neighbours after migration was worse than it was in Germany.

## 13.6 Discussion and Conclusion

At least in the short term, out of sight does not mean out of mind: German emigrants maintain contact with different types of relatives and friends in Germany. In particular, contacts with friends fall in the middle of this frequency scale: It is less frequent than contact with the partner, children, and parents, but more frequent than contact with siblings, grandchildren, grandparents, and other relatives who remained in Germany.

Several determinants of this contact frequency with friends could be identified. In line with the theoretical considerations outlined earlier, staying within Europe and a higher overall number of friends was associated with increased contact with friends in Germany. The Europe dummy is used as a proxy for distance to Germany and the finding can be explained as follows: Contact decreases with distance as travel costs and time difference increase. Having more friends simply provides more opportunities for contact and thus increases contact frequency. In contrast, being male, increasing age, length of stay, holding a bachelor's or higher degree, having a major activity, being in a relationship, and not living in a single-person household were associated with decreases in emigrants' contacts with friends in Germany. Except for age, these effects are also consistent with the theoretical considerations outlined earlier. Different models regarding gender roles, associating women with being more involved with emotional support than men (O'Flaherty

et al. 2007), might explain why being male is associated with lower frequency of contact with friends. Both length of stay and education are likely to foster integration, making contact with people in the host country relatively more attractive. Having a major activity, being in a relationship, and not living in a single household appear to influence contact frequency similarly. They not only increase the relative attractiveness of the host country, but are also time-consuming and imply more obligations in the host country. In contrast, previous literature suggested that contact frequency might increase with age as older people are more attached to their home country (Iarmolenko et al. 2016) and friendship was assumed to strengthen as people grow older (Fox et al. 1985). However, in the present analyses I found that contacts with friends decreased with age. A potential explanation is that younger people are more affluent with ICT-based communication and that this type of communication represents an important way of staying in touch. Furthermore, age might correlate with obligations other than those covered: having a major activity, partnership status, and household composition. Assuming that all types of obligations in the host country are associated with decreased contact frequency with friends in the home country, this might further explain the negative effect of age.

Correlations between different indicators of subjective well-being and contact frequencies exist. More contacts with friends implied weaker feelings of loneliness and higher life satisfaction. However, not all individual items of the GSOEP loneliness score correlated with emigrants' contact frequency with friends in Germany. This emphasises that different aspects of loneliness possibly exist, and the different aspects might have different determinants and consequences. This finding therefore calls for further research. The fact that a perceived worsening in different life areas (compared to the situation in Germany) corresponds to more contacts with friends in Germany appears plausible. Respondents might try to compensate for the lack of friends or contacts with neighbours in the new country of residence with friends in Germany. However, it poses the question of the direction of this relationship. In this chapter, I assumed contact frequency to affect subjective well-being and thus estimated coefficients using subjective well-being as the dependent variable. However, to some extent it might also be the other way around. In particular, the questions are the following: Do people stay in touch because they perceive different aspects of their new lives as being worse than in Germany? Are they unhappy and seeking social support from friends left behind in Germany? Or is it the other way around and more contacts remind people of the positive aspects of their life in Germany and thus lead to glorification? With the next wave of data becoming available in 2020, further investigations regarding the causal relationship between contact with friends in Germany and emigrants' integration into host country societies will be possible by estimating a model assessing causality using three survey waves (Heady et al. 1991).

As stated earlier, "migrants are often in the situation where many of their most emotionally significant relationships are conducted internationally" (O'Flaherty et al. 2007, p. 819). Thus, analysing these relationships is an important task when assessing migrants' social capital. In this context, this article helps understand the phenomenon of cross-border friendship and takes a first step towards analysing the link between friendship and migrants' subjective well-being.

## References

- Allison, P. D. (2012). *Logistic regression using SAS: Theory and application* (2nd ed.). Cary, NC: SAS Institute.
- Ang, I., Brand, J. E., Noble, G., & Wilding, D. (2002). *Living diversity: Australia's multicultural future*. Artarmon, NSW: Special Broadcasting Service Corporation.
- Apitzsch, U. (2014). Transnationale familienkooperation. In T. Geisen, T. Studer, & E. Yildiz (Eds.), *Migration, familie und gesellschaft. Beiträge zu theorie, kultur und politik* (pp. 13–26). Wiesbaden: VS Verlag.
- Bacigalupe, G., & Cámara, M. (2012). Transnational families and social technologies: Reassessing immigration psychology. *Journal of Ethnic and Migration Studies*, 38(9), 1425–1438.
- Baldassar, L. (2007). Transnational families and the provision of moral and emotional support: the relationship between trust and distance. *Identities*, 14(4), 385–409.
- Bartram, D. (2013). Happiness and 'economic migration': A comparison of Eastern European migrants and stayers. *Migration Studies*, 1(2), 156–175.
- Bauernschuster, S., Falck, O., & Wößmann, L. (2010). Schadet internetnutzung dem sozialkapital? *ifo Schnelldienst*, 63, 11–17.
- Baykara-Krumme, H. (2014). Tarnnationalität im intergenerationalen Wandel: Grenzüberschreitende Bindungen zum "Herkunftsland" Türkei in der dritten Generation. *Journal of Diskurs Kindheits- und Jugendforschung/Discourse*, 9, 269–284.
- Baykara-Krumme, H., & Platt, L. (2018). Life satisfaction of migrants, stayers and returnees: reaping the fruits of migration in old age? *Ageing and Society*, 38(4), 721–745.
- Berítez, J. L. (2012). Salvadoran transnational families: ICT and communication practices in the network society. *Journal of Ethnic and Migration Studies*, 38, 1439–1449.
- Blömers, B., & Letschert, S. (2011). Flüchtige Bekannte, Freunde in der Ferne: Nutzerbefragung III: StudiVZ im Vergleich mit anderen Kommunikationskanälen. In C. Neuberger & V. Gehrau (Eds.), *StudiVZ: Diffusion, Nutzung und Wirkung eines sozialen Netzwerks im Internet* (pp. 140–161). Wiesbaden: VS Verl. für Sozialwiss.
- Bowlby, S. (2011). Friendship, co-presence and care: neglected spaces. *Social & Cultural Geography*, 12(6), 605–622.
- Brant, R. (1990). Assessing proportionality in the proportional odds model for ordinal logistic regression. *Biometrics*, 46, 1171–1178.
- Bryceson, D., & Vuorela, U. (2002). Transnational families in the twenty-first century. In D. Bryceson & U. Vuorela (Eds.), *The transnational family: New European Frontiers and Global Networks* (pp. 3–30). Oxford: Berg.
- Chiswick, B. R., and Miller, P. W. (2007). The international transferability of immigrants' human capital skills. *IZA Discussion Papers* (2670).
- Chiswick, B. R. (1978). The effect of Americanization on the earnings of foreign born men. *Journal of Political Economy*, 86(5), 897–922.
- Clemens, M. A. (2013). Why do programmers earn more in Houston than Hyderabad? Evidence from randomized processing of US Visas. *American Economic Review*, 103(3), 198–202.
- Clogg, C. C., & Shihadeh, E. S. (1994). *Statistical models for ordinal variables*. Sage Publications, Inc.
- Cuadros, O., & Berger, C. (2016). The protective role of friendship quality on the wellbeing of adolescents victimized by peers. *Journal of Youth and Adolescence*, 45(9), 1877–1888.
- Décieux, J. P., & Mörchen, L. (2021). Emigration, friends, and social integration: The determinants and development of friendship network size after arrival. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Dito, B. B., Mazzucato, V., & Schans, D. (2017). The effects of transnational parenting on the subjective health and well-being of Ghanaian migrants in the Netherlands. *Population, Space and Place*, 23(3), e2006.

- Erlinghagen, M. (2011). Nowhere better than here? The subjective well-being of German emigrants and remigrants. *Comparative Population Studies—Zeitschrift für Bevölkerungswissenschaft*.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Fox, M., Gibbs, M., & Auerbach, D. (1985). Age and Gender dimensions of friendship. *Psychology of Women Quarterly*, 9, 489–502.
- Gauze, C., Bukowski, W. M., Aquan-Assee, J., & Sippola, L. K. (1996). Interactions between family environment and friendship and associations with self-perceived well-being during early adolescence. *Child Development*, 67, 2201–2216.
- Gibson, J., & McKenzie, D. (2012). The economic consequences of 'brain drain' of the best and brightest: Microeconomic evidence from five countries. *The Economic Journal*, 122(560), 339–375.
- Gibson, J., McKenzie, D., Rohorua, H., & Stillman, S. (2018). The long-term impacts of international migration: Evidence from a lottery. *The World Bank Economic Review*, 32(1), 127–147.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.
- Guarnizo, L. E., Portes, A., & Haller, W. (2003). Assimilation and transnationalism: Determinants of transnational political action among contemporary migrants. *American Journal of Sociology*, 108(6), 1211–1248.
- Guedes Auditor, J., & Erlinghagen, M. (2021). The happy migrant? Emigration and its impact on social wellbeing. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Guo, M., Arranda, M. P., & Silverstein, M. (2009). The impact of out-migration on the intergenerational support and psychological wellbeing of older adults in rural China. *Ageing and Society*, 29(7), 1085–1104.
- Hawkley, L. C., Duvoisin, R., Ackva, J., Murdoch, J. C., and Luhmann, M. (2016). Loneliness in older adults in the USA and Germany: Measurement invariance and validation. *Working Paper Series, NORC at the University of Chicago*.
- Heady, B., Veenhoven, R., & Wearing, A. (1991). Top-down versus bottom-up theories of subjective well-being. *Social Indicators Research*, 24, 81–100.
- Hendricks, L., & Schoellman, T. (2018). Human capital and development accounting: New evidence from wage gains at migration\*. *The Quarterly Journal of Economics*, 133(2), 665–700.
- Hiebert, D. (2003). Characteristics of immigrant transnationalism in Vancouver. *Vancouver Centre of Excellence*.
- Hughes, M. E., Waite, L. J., Hawkley, L. C., & Cacioppo, J. T. (2004). A short scale for measuring loneliness in large surveys: Results from two population-based studies. *Research on Aging*, 26(6), 655–672.
- Iarmolenko, S., Titzmann, P. F., & Silbereisen, R. K. (2016). Bonds to the homeland: Patterns and determinants of women's transnational travel frequency among three immigrant groups in Germany. *International Journal of Psychology: Journal Internationale de Psychologie*, 51(2), 130–138.
- Kaasa, A., & Parts, E. (2008). Individual-level determinants of social capital in Europe. *Acta Sociologica*, 51(2), 145–168.
- Lee, G. R., & Ishii-Kuntz, M. (1987). Social interaction, loneliness, and emotional well-being among the elderly. *Research on Aging*, 9, 459–482.
- Lesage, J. P., & Ha, C. L. (2012). The impact of migration on social capital: do migrants take their bowling balls with them? *Growth and Change*, 43, 1–26.
- Liang, J., Dvorkin, L., Kahana, E., & Florence, M. (1980). Social integration and morale: A re-examination. *Journal of Gerontology*, 35, 746–757.

- Lin, N. (1999). Building a network theory of social capital. *Connect*, 22(1), 28–51.
- Luhmann, M., & Hawkey, L. C. (2016). Age differences in loneliness from late adolescence to oldest old age. *Developmental Psychology*, 52, 943.
- Madianou, M., & Miller, D. (2011). Mobile phone parenting: Reconfiguring relationships between Filipina migrant mothers and their left-behind children. *New Media & Society*, 13(3), 457–470.
- Mau, S., & Mewes, J. (2007). Transnationale soziale Beziehungen. Eine Kartographie der deutschen Bevölkerung. *Soziale Welt*, 58(2), 203–222.
- O’Connell, A. A. (2006). *Logistic regression models for ordinal response variables*. London: SAGE.
- O’Connor, P. M. (2010). Bodies in and out of place: embodied transnationalism among invisible immigrants—the contemporary Irish in Australia. *Population, Space and Place*, 16, 75–83.
- O’Flaherty, M., Skrbis, Z., & Tranter, B. (2007). Home visits: Transnationalism among Australian migrants. *Ethnic and Racial Studies*, 30(5), 817–844.
- Pajnik, M., & Bajt, V. (2012). Migrant women’s transnationalism: Family patterns and policies. *International Migration*, 50(5), 153–168.
- Portes, A., Guarnizo, L. E., & Landolt, P. (1999). The study of transnationalism: Pitfalls and promise of an emergent research field. *Ethnic and Racial Studies*, 22(2), 217–237.
- Prilleltensky, I. (2008). Migrant well-being is a multilevel, dynamic, value dependent phenomenon. *American Journal of Community Psychology*, 42(3–4), 359–364.
- Pusch, B. (Ed.). (2013). *Transnationale migration am Beispiel Deutschland und Türkei*. Wiesbaden: Springer VS.
- Ryan, L., von Koppenfels, A. K., & Mulholland, J. (2015). ‘The distance between us’: a comparative examination of the technical, spatial and temporal dimensions of the transnational social relationships of highly skilled migrants. *Global Networks*, 15(2), 198–216.
- Safi, M. (2010). Immigrants’ life satisfaction in Europe: Between assimilation and discrimination. *European Sociological Review*, 26(2), 159–176.
- Schans, D. (2009). Transnational family ties of immigrants in the Netherlands. *Ethnic and Racial Studies*, 32(7), 1164–1182.
- Wahba, J., & Zenou, Y. (2012). Out of sight, out of mind: Migration, entrepreneurship and social capital. *Regional Science and Urban Economics*, 42(5), 890–903.
- Wilding, R. (2006). ‘Virtual’ intimacies? Families communicating across transnational contexts. *Global Networks*, 6(2), 125–142.
- Williams, R. (2006). Generalized ordered logit/partial proportionalodds models for ordinal dependent variables. *The Stata Journal*, 6, 58–82.
- Williams, R. (2016). Understanding and interpreting generalized ordered logit models. *The Journal of Mathematical Sociology*, 40(1), 7–20.

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# Chapter 14

## Emigration, Friends, and Social Integration: The Determinants and Development of Friendship Network Size After Arrival



Jean Philippe Décieux and Luisa Mörchen

### 14.1 Introduction

Friendships are intimate social relationships that can be defined as an interpersonal relationship between two or more people (Bowlby 2011). A specific characteristic of friendships is that they have no clear formal status and a non-binding character. They are voluntarily entered and, similarly, may be dissolved voluntarily. Thus, friendships are often less stable than, for example, marriages, which are usually formalised through contracts (Bowlby 2011). For this reason, friendships can be seen as amorphous social bonds (Bunnell et al. 2012). However, as Granovetter (1973) emphasizes, friendships are “indispensable to individuals’ opportunities and to their integration into communities” (Granovetter 1973, p. 1378). In this perspective, the size, the quantitative development of the size, and the quality of friendship networks are interesting issues for migration research.

When focusing on the quality of friendships, usually strong and weak ties are differentiated. Dyads with strong ties are e.g. emotionally closer to each other and more likely to spend time together, and weakly tied dyads are not that closely connected and normally provide the exchange of information (Elmer et al. 2017; Granovetter 1973). However, both strongly and weakly tied friends are important for migrants’ social interaction, which has manifold positive consequences on well-being (Akaeda 2018; van der Horst and Coffé 2012). Moreover, friends should be of decisive importance particularly for migrants, because friends can make it easier to set foot in, socially integrate into, and have access to broader opportunities in the emigration country (Elmer et al. 2017; Larrison 2019; Pratsinakis et al. 2017; Ryan 2011).

Even though friendships are important for individual societal integration and therefore are strongly related to individual well-being, migration research has

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treated friendships largely as a side issue. Hence, much remains to be learned about network structures of migrants per se and especially concerning differences in network size compared to non-mobile individuals (Bahns 2019; Guveli et al. 2016; Tropp et al. 2014; Turner and Cameron 2016). To the best of our knowledge, migration research has not yet assessed the size of emigrants' friendship networks within their new home country as a main phenomenon (dependent variable). Therefore, this chapter focuses on the quantitative size of the friendship networks of emigrants who moved abroad from a highly developed country, namely Germany. Based on the innovative GERPS data, this chapter's major contribution is to reflect which individual and contextual factors of the emigration country affect the number of close friends emigrants have and the emigrants' social integration within the emigration country. The focus here is on emigrants' strong ties. In addition, the chapter will also investigate the development of the size of emigrants' friendship networks during the first 2 years after arrival because the early years of settlement are suggested to be particularly important for emigrants' social integration and the development of their social networks (e.g. Martinovic et al. 2015; Ryan 2011; Sime and Fox 2015).

## 14.2 State of Research

During the migration process, migrants reconfigure and reorganise their social relationships. These processes are complex and refer to a multitude of sequential activities and decisions about personal investments, which are usually guided by needs and habits (Schacht et al. 2014). Furthermore, decisions of friendship formation and maintenance are embedded in different contexts. For example, an emigrant can focus on maintaining already existing friendships e.g. in the home country (see Mansfeld 2021), or on the establishment of new relationships within the emigration country (Ryan 2011; Guveli et al. 2016). Several factors that can ease or hamper migrants' friendship formation are suggested and can be localised on three different levels: the macro level, referring to the institutional context; the micro level, focusing on individual attributes, preferences, and their compatibilities; and a level taking relevant individuals into account that can act as mediator or cultural broker forming a bridge between the emigrants and their home country (Bahns 2019; Kalmijn 1998; Schacht et al. 2014; Vertovec 2004).

### 14.2.1 Contextual Factors and Friendships

The macro level focuses on institutions, mechanisms, opportunities, and limitations of migrants choosing or making (interethnic) relationships (Schacht et al. 2014). For example, contact opportunities in the sense of the chances for making friends are an important factor for the possibility of grooming new friends within the new

home society (Blau 1994; Feld 1981). Existing research on friendship formation has suggested that these opportunities typically arise in institutions of social life such as neighbourhoods, (sports) clubs, in the workplace, etc. (Décieux et al. 2018; Schroedter and Kalter 2009). In addition, the general sociodemographic composition of a region seems to play an important role: The relative group size and the spatial distribution of groups within the population of a region can determine how likely it is to have social contact with people of different origins. Concerning group size, research has suggested that diverse friendships are more likely to be formed in smaller than larger spatial entities (e.g. villages vs. metropolises) (Bahns 2019; Cheng and Xie 2013).

### ***14.2.2 Individual Attributes Affecting Friendship Formation on a Micro Level***

We can distinguish different main factors that are expected to have an impact on friendship formation and development on the micro level. For the approach of this chapter (a) individual personality traits and the intension to stay, and (b) availability of resources, are especially relevant.

- (a) Individual personality traits and the intension to stay: friendships are made through inter-individual interactions and require active participation. An open, risk-averse, and extroverted personality usually facilitates friendship formation and development and may also reduce burden and expenses on possible partners within the interaction processes that form the friendship (Harris and Vazire 2016; Wrzus and Neyer 2017; Wrzus et al. 2017). Also, the intention to stay longer within the emigration country seems to play an important role. This might be because both parties of the dyadic decision to become friends—the people in the host society and the emigrant—prefer to invest in a friendship that is built on a stable base and which as a result might require fewer resources to maintain in the long term (Güngör and Tansel 2014; Haug 2008; Martinovic et al. 2015; de Vroome and van Tubergen 2014).
- (b) Availability of resources: individuals are balancing costs, returns, expenses, and revenues of friendship formation and maintenance (Bahns 2019; Elmer et al. 2017; Schacht et al. 2014). Individuals are more often perceived as potential friends if they seem to be attractive, meaning that they have resources, such as social status or prestige, that can be used to achieve one's own central goals (McPherson et al. 2001; Schroedter and Kalter 2009; Smith 2018).

### ***14.2.3 Existing Contacts as Bridge Between Emigrant and Host Society***

Third parties such as children, parents, and peers who are already friends play an important role in friendship formation (Schaeffer 2013; Sime and Fox 2015). This perspective on processes of friendship development takes into account that in case of emigrants these third parties can act as a mediator, bridge, or “cultural broker” (Fong and Isajiw 2000; Sime and Fox 2015) between the emigrant and the host society. With “cultural brokers”, migrants might be more motivated to learn the emigration country’s language and contact with the emigration country’s society might be facilitated (Schaeffer 2013; Sime and Fox 2015). However, following the thoughts of social identity theory (Tajfel and Turner 1986), third parties can also encourage emigrants to make friends only with suitable individuals in order to protect ethnic cohesion and maintain group traditions (Sime and Fox 2015).

### ***14.2.4 Empirical Evidence***

Empirical investigations regarding connections between migration, friendship formation, and friendship development are comparatively sparse. Sime and Fox (2015) have shown in their qualitative study with Eastern European children that migration diversifies and reshapes the structure and the quality of friendship networks, however, the authors did not pay much attention to the size of friendship networks within the emigration country. Concerning the factors positively affecting the formation of friendships, especially language skills and the neighbourhood seem to play an important role (Guveli et al. 2016; Pratsinakis et al. 2017; Sime and Fox 2015). The study from Guveli et al. (2016) found—contrary to their first expectation—no difference concerning the general friendship network size between international mobiles and their non-mobile counterparts.

## **14.3 Data**

The analysis is based on the first two waves of the GERPS, which is based on a random sample drawn from local population registers and covers 20- to 70-year-old German nationals who either emigrated from or re-migrated to Germany during the period between July 2017 and June 2018 (Ette et al. 2021). A pooled (unbalanced) dataset includes information on 11,897 people, including 4928 emigrants and 6969 remigrants. For our analysis, only the subsample of the emigrants was used that—due to missing answers in the dependent variable—consisted of 4469 emigrants. For the longitudinal approach reflecting developments in the number of close friends

between wave 1 and 2 of GERPS, we used a subsample of wave 1 emigrants who stayed in the emigration country. This sample consisted of 2907 “Stayer emigrants”.

Additionally, we used data from the German Socio-Economic Panel (SOEP), which is a wide-ranging, representative longitudinal study of private German households. Every year in Germany, around 30,000 respondents in nearly 11,000 households are interviewed (Wagner et al. 2007; Goebel et al. 2018). With its focus on “living in Germany”, the SOEP allows building a control sample of internationally non-mobile Germans (“German stayers”) to assess differences in friendship patterns and network size between mobile and non-mobile samples. We used data from 2017 (version v34) and included German citizens only. To only rely on non-mobile Germans, we excluded all individuals (668 respondents) who moved 20 km or more within Germany between 2015 and 2017. A total of 19,248 German stayers who indicated a valid number of close friends were included in our further analyses.

### ***14.3.1 Dependent Variables***

In the analyses presented in this chapter, we examined three different dependent variables. The first dependent variable we used was the open-ended question “How many close friends do you have overall?” which is traditionally asked within the SOEP questionnaire as well as in all waves of GERPS. This variable was used to compare the overall number of close friends reported by emigrants and by German stayers. As in SOEP, within the sample of GERPS, participants with an overall number of more than 50 close friends (38 cases) were excluded from the analysis.

Second, to reflect the network size of the emigrants within their emigration country directly after migration, we made use of another dependent variable: the self-reported “number of close friends within the emigration country” which was operationalised in all waves of GERPS in addition to the traditional SOEP question. Here GERPS respondents were asked: “How many close friends do you have in the country you are currently living in?”

The number of close friends in the emigration country of international mobile respondents was also used to elucidate possible development in the network size of the emigrants between the first two waves of GERPS, which were conducted at an interval of 6 months. For this, we calculated a third dependent variable based on the quotient of the answers representing the number of close friends in the emigration country in wave 2 and 1. To calculate this quotient, we divided the answer in wave 2 by the answer in wave 1. Values lower than 1 indicated a shrinking of the circle of friends, values equal to 1 specified no change in the number of friends, and values above 1 implied an increase. For the analysis, emigrants who moved to another country between wave 1 and 2, respondents who stated either 0 or more than 50 friends within the emigration country in one of the two waves, and respondents who did not respond to the items were excluded from the analysis. A total of 1194 cases were eliminated. Thus, the analysis of the developments between the first two waves of GERPS is based on 1701 “Stayer emigrants”.

### ***14.3.2 Explanatory and Control Variables***

For all research questions in this paper we calculated Ordinary Least Squares (OLS) regressions (Seber and Lee 2012) to estimate the influences of different explanatory and control variables on the different dependent variables: overall number of close friends, number of close friends within their emigration country, and development of the friendship network size between the waves. In all models, we controlled for respondent characteristics (sociodemographic: age, age<sup>2</sup>, gender, household composition, employment status, education, risk attitude, subjective health status). Furthermore, in all models comparing geographical subgroups robust standard errors are estimated, due to the risk of heteroscedasticity (Hoechle 2007).

Moreover, the analyses of friendship networks of emigrants within their emigration country relies on further explaining variables. We controlled for the spatial context and geographical distance by distinguishing between neighbouring countries, other European countries, and Non-European countries. Additionally, we used the self-reported language competence of emigrants as a proxy for cultural distance between the emigrant and natives from their current emigration country. Values included 1 “native speaker”, 2 “(very) good”, 3 “medium”, and 4 “(very) bad”. Another explanatory variable focussed on respondents’ intention to stay in the emigration country and ranged from less than 1 year to some years to forever. Also, we included emigrants’ identification with the emigration country that was measured with the values 1 “(strongly) not identifying” and 2 “(strongly) identifying”. A variable asking about previous migration experiences was also added as an explanatory variable. Respondents could either indicate that they had always lived in Germany, or had lived abroad once, twice, or three or more times before the current emigration. Another explanatory variable addressed whether a respondent had contact with another person from the emigration country before they migrated to it. People either did or did not have such contacts. For the longitudinal model, the variable “number of close friends within the emigration country in wave 1” was added as an additional control variable. This is because it can be expected that people who have already reported many friends at the time of wave 1 will tend to have a smaller increase of new friends between the waves, since the basic need to make new friendships is not so strong. Table 14.1 provides descriptive statistics for all variables included in our analyses.

**Table 14.1** Descriptive statistics

	Share in % or mean (SD)	
	German Stayers (SOEP)	Emigrants (GERPS)
<b>Dependent variables</b>		
Number of close friends	3.9 (3.2)	8.2 (6.5)
Number of close friends abroad		3.2 (3.7)
<b>Socio-demographic variables</b>		
Male	45.7%	49.2%
Female	54.3%	50.8%
Age	50.5 (18.0)	36.4 (11.0)
1-person household	15.1%	31.5%
Couple without children	32.0%	37.0%
Single parent	9.6%	1.4%
Couple with children $\leq 16$	20.5%	17.2%
Couple with children $> 16$	12.1%	0.9%
Couple with children ( $\leq$ and $> 16$ )	8.6	0.7%
Multi-generation household	0.8%	0.0%
Other combination	1.1%	8.4%
<b>Socio-economic variables</b>		
Less than BA	72.8%	24.1%
BA or equivalent	14.7%	16.3%
Master's or higher	9.9%	59.2%
Employed/self-employed	53.1%	69.7%
Unemployed	4.8%	2.0%
Education & training	2.7%	10.4%
Not employed or other	39.4%	17.3%
<b>Health and risk aversion</b>		
Risk attitude	4.8 (2.3)	6.0 (2.1)
(Very) good health	47.8%	82.1%
Average health	34.3%	13.5%
(Very) bad health	17.8%	3.8%
<b>Geographical distance/Emigration country</b>		
Neighbouring country		50.6%
Other European country		25.2%
Non-European country		23.9%
<b>Cultural distance/Emigration country's language competence</b>		
Native language		35.7%
(Very) good		41.3%
Medium		9.8%
(Very) bad		13.2%
<b>Previous migration experience</b>		
Always lived in Germany		36.5%

(continued)

**Table 14.1** (continued)

	Share in % or mean (SD)	
	German Stayers (SOEP)	Emigrants (GERPS)
1 time abroad		27.9%
2 times abroad		17.3%
3 or more times abroad		18.2%
<b>Settlement intention</b>		
A maximum of one more year		9.5%
A few more years		37.9%
Forever		24.1%
Don't know		28.2
<b>Identification with Germany</b>		
(Strongly) not identifying		9.0%
(Strongly) identifying		51.2%
<b>Contact with people in emigration country before migration</b>		
No		74.6%
Yes		25.4%
<b>Number of close friends at wave 1</b>		
Middle quartile		23.9%
Lower quartile		47.6%
Upper quartile		28.5%
<i>N</i>	19,227	4469

Sources: GERPSw1, SOEP2017

## 14.4 Results

### 14.4.1 *A Comparison of the Overall Size of Close Friendship Networks of German Emigrants and Stayers*

Descriptive analysis showed that emigrants reported a larger average number of close friends ( $8.2 \pm 6.5$ ) than individuals did who stayed in Germany ( $3.9 \pm 3.2$ ) (see Table 14.1 above). Thus, emigrants have almost twice as many friends as the non-mobile respondents. However, previous research has shown that friendship formation is often affected by different individual characteristics and contextual factors, which were thus controlled for in the following OLS regressions. Table 14.2 shows three different models, the first reflecting the relationship between different individual respondent characteristics and the reported size of the network of close friends across both samples, the German stayer and emigrant sample. The second model shows these relationships only for the German stayer sample. The third model shows the relationships within the emigrant sample.

In model 1 the significant difference between German stayers and emigrants concerning the overall number of close friends holds is apparent, even when controlling for sociodemographic attributes as well as for personality and health

**Table 14.2** Effects of international mobility on the overall no. of close friends

	(1)	(2)	(3)
	Overall model	German stayer	Emigrant
Emigrants (ref. stayer Germany)	3.508*** (0.089)		
Age	-0.015 (0.009)	-0.035*** (0.008)	-0.111 (0.068)
Age 2	0.000 (0.000)	0.000** (0.000)	0.001* (0.000)
Female	0.233*** (0.054)	0.164*** (0.047)	0.582** (0.200)
<b>Household composition (ref. 1-person household)</b>			
Couple without children	-0.057 (0.077)	0.086 (0.071)	-0.443 (0.238)
Single parent	-0.422*** (0.117)	-0.514*** (0.098)	0.493 (0.855)
Couple with children ≤16	-0.508*** (0.093)	-0.550*** (0.085)	-0.548 (0.312)
Couple with children >16	0.063 (0.108)	-0.021 (0.090)	2.684* (1.082)
Couple with children ≤ and > 16	-0.265* (0.122)	-0.419*** (0.102)	4.451*** (1.15)
Multi-generation household	-0.564 (0.325)	-0.565* (0.256)	
Other combination	0.319 (0.181)	-0.050 (0.230)	0.425 (0.384)
<b>Employment status (ref. employed/ self-employed)</b>			
Unemployed	-0.494*** (0.133)	-0.571*** (0.110)	-0.0109 (0.697)
Education & training	0.544*** (0.144)	0.149 (0.155)	0.922* (0.358)
Not employed or other	0.148* (0.072)	0.097 (0.063)	-0.005 (0.285)
<b>Education (ref. less than BA)</b>			
BA or equivalent	0.304*** (0.076)	0.346*** (0.065)	0.389 (0.318)
Master's or higher	0.683*** (0.080)	0.513*** (0.078)	1.129*** (0.244)
<b>Foreign roots (ref. no foreign roots)</b>			
1st generation foreign roots	-0.201* (0.088)	-0.302*** (0.077)	0.179 (0.310)
2nd generation foreign roots	0.0577 (0.102)	0.0322 (0.098)	0.0267 (0.284)
Risk attitude	0.132*** (0.012)	0.097*** (0.010)	0.275*** (0.046)

(continued)



**Table 14.2** (continued)

	(1)	(2)	(3)
	Overall model	German stayer	Emigrant
<b>Health status (ref. (very) good)</b>			
Average	-0.387*** (0.062)	-0.249*** (0.052)	-1.250*** (0.288)
(Very) bad	-0.698*** (0.081)	-0.590*** (0.066)	-1.309* (0.512)
<b>Constant</b>	3.803*** (0.243)	4.658*** (0.216)	7.486*** (1.404)
Observations	23,696	19,227	4469
$R^2$	0.169	0.027	0.033

Standard errors in parentheses; Sources: GERPSw1, SOEP2017

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

situation. Being an emigrant increases the number of close friends—of about four friends—almost twice.

Additionally, several respondent characteristics seem to be related to the number of close friends. Here it becomes noticeable that most control variables show similar patterns across the different samples. Being female, having achieved a high education status (especially Master's or higher), children living in a household, a positive risk attitude, and good health status appear to be positively related with the overall number of close friends for emigrants as well as for non-mobile stayers.

The results in Table 14.2 show migration to be positively related to the number of close friends, as German emigrants reported significantly higher overall numbers of close friends than German stayers even under control for several individual characteristics. Moreover, it becomes obvious that patterns of these control variables are similar in most cases and differ only in specific subcategories. Only in case of foreign roots and children in the household a difference between stayers and emigrants can be found concerning their relation to the number of close friends. While first generation foreign roots correlate negatively with the number of close friends, no significant relation can be found within the emigrant model. Moreover, the role of children in the household matters. We found that the presence of younger children in the household correlates negatively with the number of close friends in case of German stayers and is uncorrelated with emigrants' number of close friends. However, for emigrants, children over 16 seem to be positively correlated with the number of close friends, while these are not correlated for German stayers, except if there is as well a child aged less than 16.

### 14.4.2 *Factors Related to Emigrants' Close Friends Network Size within the Emigration Country*

Research on the integration of emigrants suggests that the period directly after migration is especially important for the process of social integration. Therefore, in the following section, we focus on friendship network size directly after moving to another country, using the emigrant sample from GERPS. Following our theoretical framework, we examined the relationships between the number of close friends within the new emigration country and different micro-level, macro-level, and possible third-party factors such as existing contacts within the emigration country, children, or a partner who for example act as “cultural brokers” (see Table 14.3).

We found a significant difference concerning the number of reported friends between emigrants who moved to a neighbouring country and those who moved longer distances. More precisely, respondents who moved to non-neighbouring

**Table 14.3** Effects of different explanatory variables on the number of close friends of emigrants within the emigration country

	(4) Emigrant only	
<b>Emigration Country (ref. neighbouring)</b>		
Other European country	0.837***	(0.195)
Non-European	0.713***	(0.177)
<b>Previous migration experience (ref. always lived in Germany)</b>		
1 time abroad	0.150	(0.153)
2 times abroad	-0.242	(0.154)
3 or more times abroad	-0.066	(0.191)
<b>Language competence (ref. native speaker)</b>		
(Very) good	-0.605***	(0.178)
Medium	-1.235***	(0.191)
(Very) bad	-1.260***	(0.174)
<b>Settlement intention (ref. a maximum of one more year)</b>		
A few more years	0.201	(0.166)
Forever	0.906***	(0.256)
Don't know	0.468*	(0.189)
<b>Identification with emigration country (ref. (strongly) not identifying)</b>		
(Strongly) identifying	1.391***	(0.134)
<b>Contact with people in emigration country before migration (ref. no)</b>		
Yes	-0.043	(0.131)
<b>Constant</b>	4.565***	(0.961)
Observations	3691	
$R^2$	0.118	

Standard errors in parentheses; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , all models control for age, age<sup>2</sup>, gender, household composition, employment status, education, risk attitude, and health status. Source: GERPSw1

countries in Europe or a Non-European country reported higher numbers of close friends than those who moved into a neighbouring country. Moreover, a significant relationship was found between language competence as an indicator of cultural distance and the number of close friends: non-native speakers reported fewer friends within their current emigration country than native speakers. For measures of settlement intention and identification with the current emigration country, we also found significant patterns. Concerning emigrants' settlement intention measured by planned duration of the stay abroad, the intention to stay forever within the current emigration country and having no clear and concrete thought about this intention ("don't know" answer category) were significantly positively related with the number of close friends. These respondents reported a significantly higher number of close friends in their current emigration country compared to those who indicated they plan to stay less than 1 year. Moreover, we found a highly significant relationship between identification with the current emigration country and the number of close friends there. Having contact with friends or other relatives within the emigration country prior to migration as well as previous migration experience had no significant effect.

#### ***14.4.3 Development of the Size of Friendship Networks in the First Month after Arrival***

Integration research suggests that the first years of the settlement are especially important for social integration and the development of social networks of new emigrants (e.g. Martinovic et al. 2015). As GERPS offers the opportunity to reflect such developments in the size of friendship networks of emigrants, our analytical approach next took a longitudinal perspective on development of number of close friends of emigrants within the emigration country into account. We were able to determine how the number of close friends within the emigration country developed in the 6 months between the first two waves of GERPS: Although 34 per cent of Stayer emigrants reported the same number of close friends in wave 1 and wave 2, 36 per cent report a decrease, and 30 per cent reported an increase in number of close friends during that period.

The results of our OLS regression in Table 14.4 show that neither specific individual factors nor measures of cultural and geographical distances or the settlement intention in wave 1 played a role in development of the size of migrants' friendship networks within the first years after arrival.

Additionally, it becomes obvious that the intention or plan to stay within the emigration country seems to be positively related to the development of the number of close friends within the emigration country. As the intention to stay some years or longer or having no clear thought about the intended duration of the stay (answer category "don't know") was significantly related to a higher number of close friends compared to those with the intention to stay for 1 year or less in the emigration

**Table 14.4** Effects of different explanatory variables on the development of number of close friends of emigrants within their emigration country between wave 1 and wave 2 of GERPS

	(5) Stayer emigrants	
<b>Emigration country (ref. neighbouring)</b>		
Other European country	0.072	(0.061)
Non-European	0.067	(0.061)
<b>Previous migration experience (ref. always lived in Germany)</b>		
1 time abroad	-0.086	(0.048)
2 times abroad	0.144	(0.083)
3 or more times abroad	-0.063	(0.057)
<b>Language competence (ref. native speaker)</b>		
(Very) good	-0.031	(0.051)
Medium	0.093	(0.102)
(Very) bad	0.016	(0.109)
<b>Settlement intention (ref. a maximum of one more year)</b>		
A few more years	0.157*	(0.070)
Forever	0.206**	(0.074)
Don't know	0.214**	(0.080)
<b>Identification with emigration country (ref. (strongly) not identifying)</b>		
(Strongly) identifying	0.039	(0.049)
<b>Contact with people in emigration country before migration (ref. no)</b>		
Yes	-0.123*	(0.053)
<b>Number of close friends at wave 1 (ref. middle quartiles)</b>		
Lowest quartile	0.536***	(0.049)
Highest quartile	-0.187***	(0.039)
<b>Constant</b>	1.246***	(0.294)
Observations	1701	
R <sup>2</sup>	0.145	

Standard errors in parentheses; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , all models control for age, age<sup>2</sup>, gender, household composition, employment status, education, risk attitude, and health status.  
Source: GERPSw1

country. Moreover, having had contact with people in the emigration country before moving had a slightly negative relationship with the number of close friends.

And finally, we found a significant relationship between the number of close friends in the emigration country that was reported in wave 1 and the development of this number between the waves. Here we first found that respondents who reported a lower number of close friends in wave 1 more often had an increase in their number of close friends from wave 1 to wave 2. Second, it was clear that among those with a larger close friend network in wave 1, more often a decrease in the number of close friends in the emigration country could be detected. Both groups compared with those who reported a medium number of close friends within emigration country in wave 1.

## 14.5 Discussion

The mayor aims of this chapter were to elucidate the relationship between friendship network size and emigration, and to open the black box of the developments in friendship networks shortly after migration. In a first step, we compared the friendship network size of German emigrants and their non-mobile counterparts. We found, contrary to findings in previous studies (e.g. Guveli et al. 2016), that friendship networks of international mobiles are larger than those of non-mobiles. This pattern persisted even when different respondent characteristics were controlled for within multivariate models. This might be due to the pervasive drive of human beings to form and maintain at least a minimum quantity of interpersonal relationships in their direct environment that has to be restored after migration (Baumeister and Leary 1995). Thus, emigrants tend to build such a minimum quantity of interpersonal relationships in their new environment, within the new host society. Concerning possible explanations for the discrepancy of our results compared to the results of Guveli et al. (2016), which compared Turkish migrants and Turkish stayers, we can only speculate. However, there is much to suggest that this difference is more likely to be explained by differing cultural behaviour in the non-mobile population. As the authors pointed out, Turks in general—so, mobiles as well as non-mobiles—tend to have larger networks than in other cultures.

Furthermore, we found that besides individual characteristics on the micro level, macro-level factors such as geographical and especially cultural distance between migrant and host society seem to be related significantly to the number of close friends within the emigration country. Additionally, settlement intention as well as cultural identification were significantly related to the number of friends within the emigration country. Although the intention to stay longer within the country signals potential sustainable benefits for friends, a high identification with the host society might be associated with cultural knowledge, and skills that facilitate contact with individuals of the host society (McPherson et al. 2001; Schroedter and Kalter 2009; Smith 2018).

When focusing on the development of number of close friends over time, it was apparent that neither individual factors nor factors such as geographical or cultural distance were related to an increase or decrease in the number of close friends within the emigration country between wave 1 and 2. However, the number of close friends within the emigration country reported in wave 1 and the identification with the emigration country seemed to play the most important role in the development of a circle of friends within the first year after migration. Based on our categorization differentiating among “higher numbers of close friends in the emigration country”, “medium numbers of close friends in the emigration country”, and “lower number of close friends in the emigration country”, it becomes obvious that respondents who had reported a lower number of close friends in wave 1 significantly more often experienced an increase in the number of close friends compared to respondents who reported a medium number of close friends. Moreover, respondents who reported a relatively high number of close friends in wave 1 significantly

more often had a decrease in number of close friends. One interpretation of this result is that there was a balancing effect so that emigrants' move towards having an "optimal number" of close friends in the emigration country. This interpretation can be statistically corroborated by a decrease of the standard deviation of the number of close friends reported by emigrants in wave 2 compared to wave 1 (the standard deviations in wave 1 was 3.9 and in wave two it was 3.3). Beside this statistical clue, this interpretation of a balancing effect is also in line with studies about optimal network size, stating that there is a distinct upper bound on total network size concerning the absolute number of individuals that an individual ego can maintain in a network (e.g. Roberts et al. 2009). Moreover, this balancing effect can also be interpreted from the perspective of social identity theory (Tajfel and Turner 1986): emigrants with a certain number of existing friends seem to be encouraged only to pick "suitable" friends, for example, individuals who protect ethnic cohesion and maintain group structures and conformity of existing networks (Sime and Fox 2015).

Additionally, settlement intention seems to foster the development of a bigger network of close friends within the emigration country. This is in line with our previous results and can again be explained with the sustainable benefits of a bond perceived by both parties, emigrant and host society members.

A methodological limitation of the results is that the data source consists of only two waves and several more powerful analyses require three or more waves. Thus, our results might be subject to unobserved heterogeneity. This means that the result might, at least partly, be influenced by factors that are not controlled for within these models. In the future, with more waves of GERPS, longitudinal fixed-effect panel regressions can help to follow up on these results and to separate actual effects from influence of potential unobserved third variables (Hamaker and Muthén 2019; Hsiao 2014). Concerning the operationalisation of different constructs, there might be potential for improvement of their validity. Robustness checks using different operationalisation to assess the change in friendship network size supported the presented results. However, given that the underlying measures used self-reports, the argument that changes might be overestimated must be considered (Jäckle and Eckman 2019; Perales 2014; Trahms et al. 2016). Still, this approach can be seen as a first step assessing the development of friendships after migration. Also, the not-existing effect of cultural distance in the longitudinal perspective might be caused by the roughness of language competence as indicator for cultural distance. A more sensitive indicator that allows, for example, differentiation between collectivistic versus individualistic host societies (Hofstede 1983) may find the expected relationship that collectivistic attitudes are more likely to disapprove friendships with emigrants (Smith 2018).

Further analysis should focus on the qualitative factors of friendships and should take characteristics of close friendships into account. It may be especially interesting whether friends within the host society are migrants themselves or whether these friends originate from the host-population. Moreover the intensity of the ties of friendships within and across borders (Guveli et al. 2016) as well as the practices to maintain friendships to overcome geographical distance are areas where research is sparse or missing up until now. For example, digitalisation and social media

might play an important role (Bunnell et al. 2012; Décieux et al. 2018). These limitations can potentially be overcome with data from the third GERPS wave as it has a stronger emphasis on family, relationships, and networks.

However, despite the outlined limitations, this chapter sheds some light into the black box of the relationship between migration and friendship. The results presented in this chapter bridge initial gaps between theory and empirical research and identify starting points for future research on friendship networks of migrants. By focusing on emigrants' number of close friends, it was possible to identify factors affecting the overall size of the networks of migrants, compared to non-mobiles and within their emigration country. Moreover, we were able to elucidate developments concerning the number of close friends within the first year after migration. In the future, with new wave of GERPS becoming available, we will be able to assess within-person effects of the different explaining variables affecting migrants' number of close friends in more detail.

## References

- Akaeda, N. (2018). Social contact with family and relatives and happiness: Does the association vary with defamilialization? *European Sociological Review*, 34(2), 157–168.
- Bahns, A. J. (2019). Preference, opportunity, and choice: A multilevel analysis of diverse friendship formation. *Group Processes & Intergroup Relations*, 22(2), 233–252.
- Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.
- Blau, P. M. (1994). *Structural contexts of opportunities*. Chicago: University of Chicago Press.
- Bowlby, S. (2011). Friendship, co-presence and care: neglected spaces. *Social & Cultural Geography*, 12(6), 605–622.
- Bunnell, T., Yea, S., Peake, L., Skelton, T., & Smith, M. (2012). Geographies of friendships. *Progress in Human Geography*, 36(4), 490–507.
- Cheng, S., & Xie, Y. (2013). Structural effect of size on interracial friendship. *Proceedings of the National Academy of Sciences*, 110(18), 7165–7169.
- de Vroome, T., & van Tubergen, F. (2014). Settlement intentions of recently arrived immigrants and refugees in the Netherlands. *Journal of Immigrant & Refugee Studies*, 12(1), 47–66.
- Décieux, J. P., Heinen, A., & Willems, H. (2018). Social media and its role in friendship-driven interactions among young people: A mixed methods study. *Young*, 27(1), 18–31.
- Elmer, T., Boda, Z., & Stadtfeld, C. (2017). The co-evolution of emotional well-being with weak and strong friendship ties. *Network Science*, 5(3), 278–307.
- Ette, A., Décieux, J. P., Erlinghagen, M., Guedes Auditor, J., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Feld, S. L. (1981). The focused organization of social ties. *American Journal of Sociology*, 86(5), 1015–1035.
- Fong, E., & Isajiw, W. W. (2000). Determinants of friendship choices in multiethnic society. *Sociological Forum*, 15(2), 249–271.
- Goebel, J., Grabka Markus, M., Liebig, S., Kroh, M., Richter, D., Schröder, C., and Schupp, J. (2018). The German Socio-Economic Panel (SOEP). doi: <https://doi.org/10.1515/jbnst-2018-0022>.

- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*, 78(6), 1360–1380.
- Güngör, N. D., & Tansel, A. (2014). Brain drain from Turkey: Return intentions of skilled migrants. *International Migration*, 52(5), 208–226.
- Guveli, A., Ganzeboom, H. B. G., Platt, L., Nauck, B., Baykara-Krumme, H., Eroğlu, Ş., Bayrakdar, S., Sözeri, E. K., & Spierings, N. (2016). *Intergenerational consequences of migration. Socio-economic, family and cultural patterns of stability and change in Turkey and Europe*. Basingstoke: Palgrave Macmillan.
- Hamaker, E. L., & Muthén, B. (2019). The fixed versus random effects debate and how it relates to centering in multilevel modeling. *Psychological Methods*, 25, 365.
- Harris, K., & Vazire, S. (2016). On friendship development and the Big Five personality traits. *Social and Personality Psychology Compass*, 10(11), 647–667.
- Haug, S. (2008). Migration networks and migration decision-making. *Journal of Ethnic and Migration Studies*, 34(4), 585–605.
- Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal*, 7(3), 281–312.
- Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, 13(1–2), 46–74.
- Hsiao, C. (2014). *Analysis of panel data*. Cambridge University Press.
- Jäckle, A., & Eckman, S. (2019). Is that still the same? Has that changed? On the accuracy of measuring change with dependent interviewing. *Journal of Survey Statistics and Methodology*, 8, 706.
- Kalmijn, M. (1998). Inter-marriage and homogamy: Causes, patterns, trends. *Annual Review of Sociology*, 24(1), 395–421.
- Larrison, J. (2019). Integrating Immigrants into Local Communities. *Journal of Public Administration Research and Theory*, 29(4), 640–642.
- Mansfeld, L. (2021). Out of sight, out of mind? Frequency of emigrants' contact with friends in Germany and its impact on subjective well-being. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Martinovic, B., van Tubergen, F., & Maas, I. (2015). A longitudinal study of interethnic contacts in Germany: Estimates from a multilevel growth curve model. *Journal of Ethnic and Migration Studies*, 41, 83.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: Homophily in social networks. *Annual Review of Sociology*, 27(1), 415–444.
- Perales, F. (2014). How wrong were we? Dependent interviewing, self-reports and measurement error in occupational mobility in panel surveys. *Longitudinal and Life Course Studies*, 5(3), 299–316.
- Pratsinakis, M., Hatziprokopiou, P., Labrianidis, L., & Vogiatzis, N. (2017). Living together in multi-ethnic cities: People of migrant background, their interethnic friendships and the neighbourhood. *Urban Studies*, 54(1), 102–118.
- Roberts, S. G. B., Dunbar, R. I., Pollet, T. V., & Kuppens, T. (2009). Exploring variation in active network size: Constraints and ego characteristics. *Social Networks*, 31(2), 138–146.
- Ryan, L. (2011). Migrants' social networks and weak ties: Accessing resources and constructing relationships post-migration. *The Sociological Review*, 59(4), 707–724.
- Schacht, D., Kristen, C., & Tucci, I. (2014). Interethnische Freundschaften in Deutschland. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 66, 445–458.
- Schaeffer, M. (2013). Inter-ethnic neighbourhood acquaintances of migrants and natives in Germany: On the brokering roles of inter-ethnic partners and children. *Journal of Ethnic and Migration Studies*, 39(8), 1219–1240.
- Schroedter, J., & Kalter, F. (2009). Binationale Ehen in Deutschland. Trends und Mechanismen der sozialen Assimilation. In F. Kalter (Ed.), *Migration und Integration. Sonderheft 48/2008 der Kölner Zeitschrift für Soziologie und Sozialpsychologie* (pp. 351–379). Wiesbaden: Springer.



- Seber, G. A. F., & Lee, A. J. (2012). *Linear regression analysis*. John Wiley & Sons.
- Sime, D., & Fox, R. (2015). Home abroad: Eastern European children's family and peer relationships after migration. *Childhood*, 22(3), 377–393.
- Smith, S. (2018). Befriending the same differently: ethnic, socioeconomic status, and gender differences in same-ethnic friendship. *Journal of Ethnic and Migration Studies*, 44(11), 1858–1880.
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. G. Austin (Eds.), *The social psychology of intergroup relations* (pp. 7–24). Monterey: Brooks/Cole.
- Trahms, A., Matthes, B., & Ruland, M. (2016). Collecting life-course data in a panel design: Why and how we use proactive dependent interviewing. In H.-P. Blossfeld, J. von Maurice, M. Bayer, & J. Skopek (Eds.), *Methodological issues of longitudinal surveys: The example of the national educational panel study* (pp. 349–366). Wiesbaden: Springer Fachmedien Wiesbaden.
- Tropp, L. R., O'Brien, T. C., & Migacheva, K. (2014). How peer norms of inclusion and exclusion predict children's interest in cross-ethnic friendships. *Journal of Social Issues*, 70(1), 151–166.
- Turner, R., & Cameron, L. (2016). Confidence in contact: A new perspective on promoting cross-group friendship among children and adolescents. *Social Issues and Policy Review*, 10(1), 212–246.
- van der Horst, M., & Coffé, H. (2012). How friendship network characteristics influence subjective well-being. *Social Indicators Research*, 107(3), 509–529.
- Vertovec, S. (2004). Cheap calls: the social glue of migrant transnationalism. *Global Networks*, 4(2), 219–224.
- Wagner, G. G., Frick, J. R., & Schupp, J. (2007). *The German Socio-economic panel study (SOEP)—Evolution, scope and enhancements*. Berlin: DIW Berlin / SOEP.
- Wrzus, C., Zimmermann, J., Mund, M., & Neyer, F. J. (2017). Friendships in young and middle adulthood: Normative patterns and personality differences. *The Psychology of Friendship*, 21–38.
- Wrzus, C., & Neyer, F. J. (2017). Co-development of personality and friendships across the lifespan. *European Psychologist*, 21(4), 254–273.

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# Chapter 15

## Sense of Belonging: Predictors for Host Country Attachment Among Emigrants



Jean Philippe Décieux and Elke Murdock

### 15.1 Introduction

The twenty-first century has been described as the age of migration (Castles and Miller 2009). Germany has been affected by this trend, both as a target country for inward migration, and also as a country of emigration. Over the past decade, on average 180,000 persons with German citizenship have left the country (Ette and Erlinghagen 2021) and one in five Germans has lived at least three months abroad (Erlinghagen et al. 2021).

Yet the experiences of migrants from highly developed countries moving to different parts of the world are not well researched (Ette and Erlinghagen 2021). For this particular group of emigrants, the decision to leave is largely self-initiated as opposed to forced migration. The emigrants in our study voluntarily leave Germany, a developed country, mainly for work, lifestyle, or family reasons (Erlinghagen 2021). The German passport is the second most powerful passport in the world according to the Henley Passport Index allowing travel to 188 countries in the world without a visa or with visa-on-arrival (Visa-Germany 2020). Emigrants from Germany thus enjoy extensive freedom of travel and the vast majority of persons included in our sample have access to the host country's labour market (see Table 15.1). The emigrants included in our study thus face fewer barriers in terms of freedom of travel and labour market integration than forced migrants do. However, the self-initiated migrants will nevertheless need to adapt to life in their new, host society. Research shows that the experience of culture contact prompts reflection on

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**Table 15.1** Descriptive statistics

	% or mean (SD)		% or mean (SD)
<b>Dependent variables</b>		<b>Socio-economic variables</b>	
Feeling little or no attachment with the host country	50.0%	No degree, drop out, or other	3.4%
Feeling attachment or strong attachment with the host country	50.0%	Secondary Education	2.4%
<b>Socio-demographic variables</b>		Intermediate School Degree	7.9%
Male	48.9%	Upper Secondary Degree	86.1%
Female	50.7%	Employed	61.1%
Age (years)	36.5 (11.1)	Self-employed	8.5%
Non-Migrant	71.3%	Civil servant	3.3%
Migrant (first Generation)	11.4%	Unemployed	2.1%
Migrant (second Generation)	14.2%	Retired	3.5%
Migration background undifferentiable	1.5%	Education & training	10.3%
Single household	31.6%	Not employed	7.2%
Couple household	36.9%	Other	3.3%
Single parent	1.4%	<b>Geographical Distance</b>	
Couple with children <=16	17.0%	German-speaking neighbour country	33.4%
Couple with children >16	0.9%	Non-German-speaking neighbour country	14.2%
Couple with children <= and > 16	0.7%	Other European country	25.1%
Other combination	8.3%	Non-European country	23.8%
<b>Health and locus of control</b>		<b>Language competence</b>	
Internal locus of control	2.7 (1.0)	Rather bad	22.5%
External locus of control	5.7(1.0)	Rather good	41.3%
Health (very) good	82.2%	Native speaker	35.8%
Health satisfying	13.3%	<b>Number of close friends within the host country</b>	
Health (very) bad	3.9%	Lowest quartile	29.1%
<b>Prior contacts within the host country</b>		Middle quartiles	27.2%
No	25.1	Highest quartile	25.2%
Yes	74.9	<b>Previous migration experience</b>	
<b>Difficulty of the transition</b>		No	36.6%
Rather difficult	20.1%	Yes	63.2%
Rather easy	79.4%	<b>Intention to stay</b>	
Rather easy	79.4%	A maximum of one more year	9.6%
<b>Development of the situation in the circle of friends after emigration</b>		A few more years	37.6%
Rather easy	79.4%	Forever	24.2%
Worse	36.1%	Don't know	28.4%

Percentages may not sum up to 100 due to missing information. Source: GERPSw1, N = 4545

one's own cultural traditions, as behaviours one is accustomed to may no longer be appropriate. This may be followed by a phase in which a reconciliation of differences is attempted, and this phase may culminate in a feeling of belonging in the host country (Tadmor and Tetlock 2006). Within this chapter, we explore this development of attachment to the host country and aim to identify factors contributing to this sense of belonging.

This is an important question, as “research on international assignments highlights psychological or sociocultural adjustment as *the* vital construct underlying the rewards and costs of experiences to individuals, their families, and their firms” (Bhaskar-Shrinivas et al. 2005, p. 257, italics in original). Based on data from the first wave of the German Emigration and Remigration Panel Study (GERPS), this chapter explores these patterns of belonging of recent emigrants from Germany with a focus on belonging in the host country. As research on international adjustment is still fragmented, this research makes an important contribution to understanding the sociocultural processes with regard to the emotional attachment towards the host country.

## 15.2 Theoretical Background

As noted in a recent Council of Europe Report (Barrett 2016), increased migration, growing diversity, and globalisation have a profound effect on people's identities. The emigrants included in our study are an example for this increase in migration and we investigated how their migration experiences affect their sense of belonging. In the following sections, we first briefly describe the concepts of need to belong and national identity. We then explore the culture contact situation in more depth and describe factors influencing the acculturation process and contributing to a sense of belonging in the host country.

### 15.2.1 *The Need to Belong*

In their seminal article on the need to belong, Baumeister and Leary (1995) stated that “much of what people do is done in the service of belongingness” (p. 498). Human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships. Relationships and groups are fundamental for survival. The importance of group membership was stressed in Tajfel et al. (1986) Social Identity Theory (SIT). Social identity is understood as that part of an individual's self-concept, which derives from the knowledge of being a social group member together with the value and emotional significance attached to that membership. Belonging to a group helps people survive psychologically and physically (Fiske 2010). Ashmore et al. (2004) introduced the term collective identity to describe categorical group membership. *I am German*—may be

a categorical answer to the question *Who are you?* Membership in this group can be ascribed (born into) or achieved (acquisition of citizenship). Objective criteria such as a passport indicate a formal link to a group, and this group membership can be accompanied by a strong affective component (negative or positive) and vary in centrality for the person. In a qualitative study among native Luxembourgers the authors showed that the theme of belongingness and emotional attachment to the homeland was particularly strong for the older generation (Bichler et al. 2020). Being German might or might not be important to an individual's sense of identity. The participants in our study formally belong to the category "German" and had decided to leave this country. We aimed to assess to what extent the emigrants developed a sense of belonging in the host country and what factors may predict this bond with the host country. They might not formally belong to this host country, but might develop an affective bond.

Nationality is of course a complex collective category. Unifying objective criteria such as language, religion, or geography cannot be used to predict where state boundaries are: psychological considerations are decisive (Billig 1995). As Arts and Halman (2005) explained, national identity refers to "perceived distinctiveness, a possibility to distinguish oneself or a group from others" (p. 73). Thus national identity explains the ways in which members of a national group reflexively understand themselves (Condor 2011). Nations are in fact "imagined communities" (Anderson 2006). The imagery and imaginaries of islander identity was in fact explored by Burholt et al. (2013) through in-depth interviews with older residents of Irish island communities. The narratives showed that islanders apply over-arching categories forming a hierarchy in assigning islander status. Geertz (1973) described a nation as a group based on primordial affiliations, reflecting an understanding based on ancestry. Yet most historians would agree that nations themselves are constructed (Péporté 2011). Most theories of nations converge on two dimensions -- a model based on ancestry (ethnic models) or the civic, socially-constructed model (Brubaker 2009; Weinreich and Saunderson 2005). The former bases citizenship on ancestry (*Jus sanguinis*), whereas the latter is based on certain political structures and social contracts, which are in principal open to all.

Germany is often cited as an example for ethnic national identity, as ancestry has played a large role in who can become a German citizen (Brubaker 1996). However, Germany also has a conflicted history with ethnic-based nationalism and less restrictive citizenship laws have been introduced in the immigration reform in 2000. Today, the macro-level discourse in Germany offers competing narratives (Ditlmann et al. 2011). National-level belonging is a multifaceted field with added complexity for the German context. It is therefore interesting to explore how German nationals integrate as emigrants to new host societies.

### ***15.2.2 The Process of Acculturation***

Even though the migration experience of participants included in this survey can be classified as privileged mobility because it takes place by choice, as emigrants they are expected to have nevertheless faced immigration-based acculturation challenges (Chen et al. 2008). All participants will have spent a significant part of their lives in their country of origin, which in this case was Germany. They will have been socialised and enculturated into this society and now live in a different country with different institutions, values, cultures, and systems. Although research on migrants to Germany exists (e.g. Maehler and Schmidt-Denter 2012), to date the acculturation experience of German citizens moving to other countries has been neglected, as noted above.

Acculturation describes the process when individuals are exposed to prolonged culture contact (Celenk and van de Vijver 2014). The cultural practices or reference points individuals may have held prior to departure might only become apparent when exposed to a different cultural frame of reference (Straub 2003). The effect of second culture exposure as a central catalyst for self-reflection lies at the core of the acculturation complexity model (ACM) introduced by Tadmor and Tetlock (2006). These authors noted that the exposure to another culture leads initially to an increased attention scope. People may become sensitized to their own values. This host country culture exposure thus prompts reflection at first. Second, the negotiation of value conflicts between their own and the new culture of the host society may follow. The outcome of this negotiation process depends on what the authors have termed “accountability pressures”. These refer to the need to justify one’s own thoughts and actions to significant others. It is possible that an individual becomes attached to two cultures (e.g. bicultural).

The ACM model works best when the differences between two cultures are large enough to be challenging, but are not so large as to be overwhelming. As Tadmor and Tetlock (2006) noted, there appears to be an inverted U-shaped relationship between the size of the cultural differences experienced and the amount of cognitive effort expended in negotiating the difference. At the extreme difference end, the differences may be too large to be integrated. At the low difference end, the differences may be too subtle to be noted. These findings have implications for the relationship between the host country and emigrant’s sense of belonging: If the cultural distance is large, it will be more difficult to develop a strong sense of belonging. If the countries are very similar, the emigrant will also be less likely to develop attachment to the host country.

### ***15.2.3 Models of Adjustment***

The acculturation challenges of expatriates, specifically employees sent to work abroad for long periods of time, were the focus of the international adjustment model developed by Black et al. (1991). This model is most frequently cited within the body of research on emigrant adjustment and one contribution of this model is its multifaceted conceptualisation of the adjustment process. According to the authors, adjustment comprises cultural, interaction, and work adjustment. Cultural adjustment refers to comfort with the general living conditions of the host society. Interaction refers to the perceived quality of contacts with the host society. Finally, work adjustment refers to all aspects pertaining to the professional engagement. There is some overlap of these facets of adjustment with the seminal work on migration by Esser (1980). Esser distinguished between four dimensions of integration: (1) Structural factors (“Platzierung”) overlaps with Black et al.’s work adjustment as it refers to access to the labour market, but goes further to include education, legal status, etc.; (2) cognitive factors (“Kulturation”) refer to competences such as language ability and knowledge about local customs, encompassing Black et al.’s cultural adjustment.; (3) social factors (“Interaktion”) refer mainly to relationships, signifying social contacts, networks, and relationships, which corresponds to Black et al.’s interaction adjustment category. However, Esser distinguished a further dimension, namely (4) emotional integration (“Identifikation”) denoting an attachment or sense of belonging.

For the purpose of the present analysis, we were not interested in the specifics of work adjustment/labour market integration and structural integration. Rather, we were interested in the cultural and social factors of adjustment and their relationship with the fourth component, the emigrants’ identification with or emotional attachment to their host country. In their meta-analytic review of empirical evidence regarding international adjustment, Bhaskar-Shrinivas et al. (2005) pointed out that especially anticipatory factors such as previous experience and language ability, individual-level factors (i.e. traits such as self-efficacy and relational skills), and non-work-related factors such as culture novelty are important for overall adjustment. Apart from these factors, which will be explained in more detail below, time plays an important role in the adjustment process. Bhaskar-Shrinivas et al. (2005) identified a side-ways “S” as the best fitting model for time adjustment. After the traditional “honeymoon” period in the first few months, a period of disorientation followed. After three years, the curve bottoms out, adjustment levels rise again and stay elevated. This pattern is important, as most of the participants in our study are fairly recent emigrants and may still find themselves in the honeymoon period in terms of adjustment. Nevertheless, we present analyses below to address this question of whether the participants’ have developed feelings of belonging in the host country after the relatively short duration of time living in that country.

### ***15.2.4 Anticipatory Factors***

Black et al. (1991) first identified anticipatory factors that refer to pre-departure experiences that impact adjustment. These factors include for example language ability or previous international experience. The meta-analytic review by Bhaskar-Shrinivas et al. (2005) confirmed that the ability to speak the host country language facilitates host country adjustment. In line with that finding, Selmer and Lauring (2015) investigated the relationship between the difficulty of the language of a host country and emigrants' adjustment. As language affects almost all aspects of everyday life, the ability to use the host country language may ease the emigrant's adjustment. In host countries with languages that are challenging in terms of complexity and phonetics, few emigrants may be able to achieve mastery. However, greater skill using the host country's language might foster emigrants' adjustment and attachment. If a host country language is relatively easy to learn, proficiency can be gained relatively quickly, which will also ease adjustment, but the attachment may not go as deep. As Selmer and Lauring (2015) summarized, "... the benefits of language proficiency for ... adjustment may be contingent on the difficulty of the host country language" (p. 402). Moreover, the authors demonstrated that language difficulty indeed moderated socio-cultural adjustment. In case of mastery of a difficult host country language, emigrants had a stronger positive association and socio-cultural adjustment, compared to cases of mastery of a relatively easy host country language.

Apart from language competence, international experience may also ease adjustment. Following Rudmin (2009), who framed acculturation as a learning process, it can also be inferred that certain competences are required and can be learned in order to successfully operate in a new environment. Therefore, repeated movers should find it easier to adjust to new environments as it can be assumed that they have acquired the necessary competences required for adjustment. However, results from the meta-analytic review showed that previous migration experience only had a very small effect and the authors stated that previous experience had little practical use as predictive tool (Bhaskar-Shrinivas et al. 2005). Examining the time spent on overseas assignment is suggested as a more promising route. For the purposes of our analysis we take this suggestion into consideration by looking at the intended length of stay. We assume that with increasing intended permanence, level of identification with the host country will rise.

### ***15.2.5 Individual-Level Factors***

Black et al. (1991) suggest self-efficacy and relational skills as individual-level factors facilitating adjustment. Self-efficacy refers to belief in one's own abilities to execute plans of action and is closely related to internal control conviction. For the process of acculturation, agency plays an important role. In fact, Chirkov (2009)



described acculturation at the individual level as “... a process that is executed by an agentic individual (it is not a process that happens to an individual) that takes place on entering a new cultural community” (Chirkov 2009, p. 94). We can infer that individuals who believe that events in their lives derive from their own actions, who have a strong internal locus of control, may adjust better to their new environments. Relational skills refer to the repertoire in forming interpersonal relationships. As noted above, being able to form relationships is central to survival. If the emigrant is able to form ties and relationships with members of the host culture, this will facilitate the adjustment process, as the emigrants will gain information also about the customs and acceptable behaviours of the host culture and will ultimately feel more at home.

### ***15.2.6 Cultural Distance***

The ease of adjustment may also be influenced by the cultural distance of the host country. Cultural distance refers to the perceived similarity between the home and host country. Cultural distance does not refer to the geographic distance, but rather the distance in terms of values (Inglehart and Welzel 2005). Context factors are also taken into consideration in Black et al. (1991)’s model and culture novelty was identified as an important factor in the adjustment process in the meta-analytic study by Bhaskar-Shrinivas et al. (2005). As the authors point out, smaller perceived differences between host and native cultures fosters adaptation. This sheds new light on the previously held assumption that cultural exposure should be exhilarating and uplifting (Harrison et al. 2004).

### ***15.2.7 Analytical Approach of this Chapter***

These theoretical deliberations and prior empirical findings highlight the idea that several factors predict host country adjustment. We presumed that these factors would also play a role in developing a sense of belonging to the host country and aimed to test several hypotheses. Starting with anticipatory factors referring to pre-departure experiences, we made the following assumptions:

**H1** Since acculturation is framed as a learning processes, we assumed that prior international experience facilitates the adjustment process and thereby positively contributes to host country belonging.

**H2** Host country language competence facilitates the sense of belonging.

**H3** The intended length of stay, as a form of agency, plays an important role in the development of a sense of belonging. We assumed a significant positive relationship between the intention to stay “forever” and host country sense of belonging.

Regarding individual level factors, we derived the following hypotheses:

**H4** Higher traits of internal locus of control help the adjustment process—as the migrant feels agency.

**H5** Being socially integrated facilitates adjustment. Therefore, we assumed that emigrants who develop friendship networks in their host country develop a stronger sense of belonging to that host country.

Finally, the target country or rather the cultural distance of the host country to the home country also plays an important role. We assumed a U-shaped relationship such that a sense of belonging is stronger in those countries that provide some cultural novelty but are not too distant in terms of values from the home country.

**H6** Specifically, we predicted that emigrants to German-speaking neighbouring countries would express lower levels of sense of belonging, as the culture contact experience is too similar.

## 15.3 Data and Methods

The analysis is based on the first wave of GERPS. For this study a random sample is drawn from local population registers and covers 20- to 70-year-old German nationals who either emigrated from or re-migrated to Germany during the period between July 2017 and June 2018 (Ette et al. 2021). For the analysis of this chapter we only focus on emigrants from Germany and drew a sub-sample consisting of 4545 individuals.

### 15.3.1 Measures

The selection of measures was guided by the multidimensional adjustment model developed by Black et al. (1991), the dimensions suggested by Esser (1980), and insights from acculturation research.

The dependent variable in this chapter is emigrants’ attachment to the new host country and refers to Esser (1980)’s fourth dimension of identification. Within GERPS, respondents had to answer the question “How strongly do you feel attached to the country you are currently living in: the country as a whole and its citizens?” on a four-point Likert scale from 1 “Strongly identify” to 4 “Don’t identify at all”. The answers are mainly found in the two middle categories “rather connected” and “rather not connected”. For this reason, we dichotomized the scale and calculated

logit models were chosen for ease of interpretation. Respondents who stated that they did rather weakly identify or not identify at all were coded as 0 and respondents who strongly or rather strongly identified with their host country were coded as 1. However, we also calculated generalised ordered logit models based on the categorical variable as robustness check, which led to comparable results.

Consistent with the analytical strategy of this chapter, the explanatory variables can be divided into the three different dimensions. The first dimension refers to anticipatory factors as identified by Black et al. (1991) and include factors such as previous migration experience. Previous migration experience was captured by the question of whether respondents had always lived in Germany prior to the present migration, or had migrated once before, twice, or three or more times. Participants were also asked about their prior contact with people within the host country. Participants could indicate if they had known persons (e.g. family, friends, colleagues) in their host country before migration. Participants also rated the self-perceived difficulty of the transition to the emigration country on a scale from 1 “very difficult” to 6 “very easy”. The scale was then transformed into a two-point scale of 1 “rather difficult” and 2 “rather easy”. Language competence is another important anticipatory factor. Participants rated their host country language competence on a scale from 1 “native speaker” to 3 “rather bad”.

The second dimension addresses individual factors and focuses on emigrants’ personality traits and social integration. Regarding personality factors, we assessed internal and external locus of control convictions. Internal and external locus of control were measured using the ID-4 scale developed by Kovaleva et al. (2012). Social integration was measured by analysing the size and the subjectively perceived developments within emigrants’ friendship networks. Friendship network size is based on emigrants’ self-reported number of close friends within their host country. Based on the answers, respondents were assigned a quartile position. This was with the values 0 “Lowest quartile” for those reporting a relatively low number of close friends, 1 “Middle quartiles” for those reporting a number around the average, and 2 “Highest quartile” respondents reporting high numbers of close friends within the emigration country. A second self-report question addressed the subjectively perceived development of the size of the circle of friends after emigration.

The final dimension captures cultural distance between Germany and the host countries. Here we distinguish between German-speaking and non-German-speaking neighbour countries, other European countries, and non-European countries. Within two sub-models (model 2a and 2b), we further separate the analysis into only non-German-speaking neighbour countries in model 2a and German-speaking neighbour countries in model 2b (see also the method section of this paper).

Moreover, all models are controlled for different respondents’ characteristics (sociodemographic variables: age, age<sup>2</sup>, gender, household status, employment status, education, migration background, subjective health status). Table 15.1 provides the descriptive statistics for all variables included in our analyses.

### 15.3.2 Method

For all models in this chapter, binary logistic regression models (logit models) were calculated to estimate the influence of different explaining and controlling variables on the dependent variable, which is the attachment to the emigration country. Within these the average marginal effects (AME) were interpreted as these allow comparison between different models or even random samples (Auspurg and Hinz 2011; Mood 2010). The AME expresses the average influence of a model variable over all observations-given their characteristics-on the probability of the outcome  $P(y = 1 | x)$  (Best and Wolf 2015). In all models, we controlled for different respondent characteristics (sociodemographic variables: age, age<sup>2</sup>, gender, household composition, employment status, education, migration background, risk attitude, subjective health status).

In all models comparing geographical subgroups robust standard errors were estimated due to the risk of heteroscedasticity (Hoechle 2007). As a large subset of our sample emigrated to German-speaking neighbour countries, we calculated two separate models. In model 2a German-speaking neighbour countries were omitted. Model 2b includes only on the sub-sample of respondents who moved to a German-speaking country. Moreover, we excluded language competence in model 2 and 2b due to high risks of multicollinearity (Midi et al. 2010).

## 15.4 Results

The descriptive statistics in Table 15.1 show that about 50% of our respondents were identifying with their new, current host country. Thus, half of our participants expressed a sense of belonging in their host country. Below, we aim to identify the factors that contributed to this emotional attachment.

In a first step, we focused on a base model consisting of all our control variables that measured the sociodemographic background of our respondents as well as their health status and locus of control.

Table 15.2 shows that several individual factors are significantly related to expressing attachment to the new host country. Age, upper secondary school degree, not being employed, and medium or poor health seem to be negatively related to attachment to the emigration country. On the other hand, being female, second generation migration status in Germany, being self-employed, and being of rather good health appear to be positively related to attachment to the new host country. However, as indicated by the low pseudo  $R^2$  0.03, most control variables appear to be only weakly related to emotional attachment.

In the next step, we therefore focused on more specific explanatory variables and their relationship to the emotional attachment to the emigration country. Table 15.3

**Table 15.2** Logit model reflecting the relationship between emotional attachment to the host country and the control variables

	AME
Age	-0.017** (0.004)
Age <sup>2</sup>	0.000*** (0.000)
Female (ref. male)	0.048** (0.002)
<b>Migration background (ref. no migration background)</b>	
1st Generation	0.033 (0.163)
2nd Generation	0.049* (0.022)
Migration background, not differentiable	0.083 (0.166)
<b>Household composition (ref. 1-person household)</b>	
Couple without Children	-0.003 (0.860)
Single Parent	0.028 (0.669)
Couple with children <= 16	-0.015 (0.524)
Couple with children >16	0.090 (0.299)
Couple with children <= and > 16	0.071 (0.415)
Other combination	0.087** (0.002)
	AME
<b>Education (ref. no degree, drop out, or other)</b>	
Secondary Education	0.004 (0.953)
Intermediate School Degree	0.037 (0.440)
Upper Secondary Degree	-0.086* (0.038)
<b>Employment status (ref. employed)</b>	
Self-employed	0.117*** (0.000)

(continued)

**Table 15.2** (continued)

	AME
Civil servant	-0.072 (0.082)
Unemployed	0.017 (0.748)
Retired	0.020 (0.728)
Education & training	0.013 (0.630)
Not employed	-0.073* (0.017)
Other	-0.105** (0.009)
<b>Health status (ref. rather good)</b>	
Medium	-0.094*** (0.000)
Rather bad	-0.178*** (0.000)
Observations	4524
Pseudo $R^2$	0.033

Standard errors in parentheses; Source: GERPSw1

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

shows two different logit regression models focusing on factors that may be related to the emotional attachment to the host country.

When comparing the three models as presented in Table 15.3 it is notable that the patterns of relationships are very similar across all three models with one exception, namely the measure of geographical distance. When focusing on *all* host countries (model 2), we see a significant positive relationship with attached to other European countries and a slight positive relationship with attachment to non-European countries. This effect disappears when focusing only on non-German-speaking countries (model 2a). In model 2a, no significant relationship between geographical distance and identification can be found and the polarity of the coefficients associated with this relationship are reversed.

Respondents' language competence appears to play an important role in feeling attached to the host country. In model 2a, we observed a highly significant, positive relationship between emigrants' indicating that they speak the language at least rather well and their reported host country attachment. The relationship between country attachment and language competence is particularly strong for native speakers in non-European host countries. The findings suggest that language competence and emotional attachment are positively related such that the greater language competence in the host country language is, the stronger identification with the host country, and vice versa. Moreover, we found a relationship between locus of control and host country attachment. Although we only found a negative relationship between external locus of control and emotional attachment to the host country in

**Table 15.3** Logit models reflecting the relationship of different influential variables and the attachment to the host country (Showing the AMEs)

	(2) All host countries	(2a) Non-German-speaking countries	(2b) German-speaking neighbour countries
<b>Cultural distance (ref. German-speaking neighbour country)</b>			
Neighbour country	0.077*** (0.000)	Ref.	
Other European country	0.097*** (0.000)	-0.003 (-0.120)	
Non-European country	0.087*** (0.000)	-0.024 (-1.040)	
<b>Language competence (ref. (rather) bad)</b>			
(Rather) good		0.124*** (6.160)	
Native speaker		0.198*** (6.140)	
<b>Prior contacts within the host country (ref. no)</b>			
Yes	0.052** (0.001)	0.058** (2.950)	-0.007 (-0.230)
<b>Number of close friends within the host country (ref. middle quartiles)</b>			
Lower quartile	-0.092*** (0.000)	-0.090*** (-3.840)	-0.062* (-1.990)
Higher quartiles	0.080*** (0.000)	0.072** (3.000)	0.0769* (2.31)
<b>Previous migration experience (ref. no)</b>			
Yes	0.000 (0.978)	0.010 (0.520)	-0.008 (-0.310)
<b>Intention to stay (ref. a maximum of one year)</b>			
A few more years	0.114*** (0.000)	0.119*** (4.170)	0.144* (2.010)
Forever	0.354*** (0.000)	0.322*** (9.730)	0.397*** (5.580)
Don't know	0.174*** (0.000)	0.152*** (5.010)	0.220** (3.080)
<b>Development of the situation in the circle of friends after emigration (ref. equal)</b>			
Better	0.036 (0.063)	0.0218 (0.930)	0.054 (1.710)
Worse	-0.122*** (0.000)	-0.128*** (-6.28)	-0.096*** (-3.46)

(continued)

**Table 15.3** (continued)

	(2) All host countries	(2a) Non-German-speaking countries	(2b) German-speaking neighbour countries
<b>Difficulty of the transition (ref. rather difficult)</b>			
Rather easy	0.094*** (0.000)	0.0733*** (3.430)	0.111*** (3.380)
<b>External locus of control</b>	-0.013 (0.054)	-0.021** (0.010)	0.002 (0.866)
<b>Internal locus of control</b>	0.019* (0.011)	0.020* (0.030)	0.021 (0.123)
Observations	4524	3010	1513
Pseudo $R^2$	0.135	0.160	0.134

Standard errors in parentheses; \* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ , model controlled as well for age, age<sup>2</sup>, gender, household composition, employment status, education, migration status, and health status. Source: GERPSw1

model 2, which included all host countries, we detected a significant positive relationship between emotional attachment to the host country and both traits of locus of control, internal and external locus, in model 2a that was restricted to only non-German speaking countries. Additionally, in model 2b that only included German-speaking neighbour countries, no significant relationship between locus of control and emotional attachment to the host country was found. Furthermore, being socially integrated seems to be an important explanatory construct that is positively related to the emotional attachment of emigrants to their host countries. Respondents who had a relatively high number of friends within the host country and respondents who expressed ease at the host country transition also reported higher levels of attachment to their emigration country. Furthermore, respondents who specified that the development of their circle of friends has become worse compared to the situation before their emigration and respondents with a quantitatively lower reported number of close friends within the host country also expressed a lower level of attachment to their host country in all three models, as shown in Table 15.3.

Contact with individuals within the host country prior to emigration seemed to be an important variable for emigrants in non-German-speaking countries, as we found a significant relationship between prior contacts and emigrants' emotional attachment to the host country only in models (2) and (2a). For model (2b), which included only emigrants within German-speaking countries, we observed a negative relationship that was non-significant. Finally, although previous migration experience played only a negligible role in relation to forming attachment to the emigration country, the intention to stay within the host country was significantly related to it. The intention to stay for at least for a few more years, but also indecisive responses (e.g. "don't know yet") were positively linked with attachment. However, the strongest association with host country attachment was found for those who stated that they intended to stay forever. These findings suggest that permanence, or the intention to stay forever, is an important factor for the development of host country attachment.



## 15.5 Conclusion

As (Connolly 2020) recently observed “When we think about movements of population, we tend to mean from poorer countries to richer ones in search of a better life. Things are more complex if it’s between countries with roughly similar levels of prosperity.” One complex area that is not yet well researched is the question of belonging for emigrants who leave a developed country voluntarily. Do these migrants develop a feeling of belonging to their chosen host country? What are the factors influencing the development of host country attachment? These are questions we set out to answer in this chapter.

In contrast to most previously studied emigrant groups, the vast majority of our emigrants were highly skilled and educated and as German citizens they have permission to travel (Visa-Germany 2020). The majority of the emigrants in our study were employed in the host country. When these factors are taken together, settlement into the new environment may be relatively easy. Therefore, it is especially interesting to explore if and how this specific group of self-initiated emigrants emotionally identifies with the new host society.

The first question is answered easily: On average, our sample participants had spent around 12 months in their destination country at the time of the interview and 50% expressed a feeling of attachment to their new host country. Thus, half of our participants expressed a sense of attachment to their host country. Most of our emigrants were at an early stage of their migration process and—as indicated within the theoretical framework—research points out that acculturation and identification are considered to be a dynamic result of cultural contact and interaction of individuals with their social contexts (Celenk and van de Vijver 2014). There may be two plausible explanations for these results. First, the emigrants might still find themselves in the honeymoon period of adjustment, which is often observed within the first few months after migration (Bhaskar-Shrinivas et al. 2005). Another plausible explanation might be that these emigrants already felt connected to their host destination before their current migration. Possibly, this pre-existing connection with or affinity for the emigration country may have been an important motive for the voluntary emigration to that country. The first explanation we can only test in future surveys and through exploration of the shape of the curve of adjustment over time. For the second explanation, we require more data on the “pre-migration history” referring to processes directly before and leading up to the migration decision. For future waves, this will be possible to elucidate based on data regarding respondents’ becoming internationally mobile again and by this multiple migrants, e.g. remigrants who migrate abroad again and are considered to be “panel-emigrant”, emigrants who migrate back to Germany and are tracked as “panel-remigrant”, or emigrants who move on to another country abroad and get the status of a panel-migrant. For those respondents, the level of information concerning their life situation, motivation for migration, and the “pre-migration history” is much more detailed.

Having established that our participants indeed develop an attachment to their host country, we now turn to the factors having a potential bearing on this process, starting with anticipatory factors. In line with other findings in the adjustment literature, our data show that prior migration experience plays only a minor role (H 1) (Bhaskar-Shrinivas et al. 2005). Language is of course a key vehicle that allows the migrant to access and experience different facets of the host society and we did find a relationship between language competence and sense of belonging (H 2). However, the findings in relation to language are more complex. Emigrants' self-reported language competence does foster attachment to the host country, however the relationship is strongest for native language competence in a non-German context. This finding is in line with Selmer and Lauring (2015) finding that language difficulty is related to adjustment. Mastery of a difficult host country language was positively associated with host country adjustment. As proposed in H3, intended length of stay in the host country is an important predictor for host country attachment. The intention to stay "forever" was strongly and positively related to a feeling of attachment to the host country. The importance of agency in the acculturation process is stressed by Chirkov (2009) and we can infer that persons who self-initiate a move with an intention to stay permanently may also invest more emotionally in this new host country as it was their decision to leave their previous country and settle there. Thus, the development of attachment to the new host country after a relatively short time spent in the new country may be a unique finding related to our sample of self-initiated migrants.

In terms of individual difference factors and the relationship assumed in H 4, high levels of internal locus of control and low levels of external locus of control seemed to be related to stronger emotional attachment and again especially important in non-German-speaking countries. Thus, as proposed by Chirkov (2009), self-initiative and active agency seems to be required within the process of emotional attachment especially in more culturally distant countries. Moreover, in line with Black et al. (1991) and H 5, we also found that relational factors played an important role. Our data clearly show that socially integrated emigrants reported higher emotional attachment to the host country. This relationship is stronger for non-German-speaking host countries. This is an interesting finding that may be related to the dynamics regarding cultural distance captured in H 6.

Acknowledging in H 6 that the cultural distance of a host country may play a role in the attachment process (Inglehart and Welzel 2005), we explored this cultural distance by distinguishing German-speaking neighbour countries, non-German-speaking neighbour countries, other European countries, and non-European countries. We did find that cultural distance matters: Emigrants living in German-speaking countries reported the lowest level of attachment to their host countries. However, if a country is different (i.e. not a German-speaking country) but not too culturally different, participants are more likely to develop attachment to the host country. In that sense, we were able to replicate the U-shaped relationship between the size of the cultural differences experienced and the amount of cognitive effort expended in negotiating the difference, as proposed by (Tadmor and Tetlock 2006). If the differences between countries are too small to be noted (i.e. German speaking

neighbours) lower levels of emotional attachment will be developed. In countries that are very different it might be also more challenging to establish a sense of home. However, in the current model the country classification is not very refined. In the future a more fine-grained indicator based for example on the dimensions of (Hofstede 1983) might help to elaborate this finding.

In this chapter we set out to examine the development of host country attachment of emigrants from Germany, motivated by the finding that half of our respondents expressed an attachment to their host society. We identified important factors related to the development of host country attachment that mirror findings in the adjustment literature. Not surprisingly, the permanence of the intended stay was the strongest predictor. Social integration also plays an important role. Host country language competence is of course important for the adjustment and identification processes, but our data also replicate previous research findings, highlighting the role of language complexity. Attachment was stronger where German was not the local language. This dovetails into the finding of the U-shaped relationship regarding cultural distance. Some cultural novelty facilitates adjustment. As noted above, the classification of countries regarding cultural distance should be elaborated in future research. In the present study we only examined host country attachment after a relatively short time, on average 12 months, in the host country. Future GERPS study waves will allow us to monitor the attachment curves over time. Another interesting question is the relationship between home and host country attachment. As set out in the fourfold theory of acculturation by (Berry 1974, 1997), immigrants have the choice between the adoption of the host culture or maintenance of the heritage culture. Integration refers to the simultaneous attempt to retain attachment to the heritage culture, while adopting elements of the host culture. Assimilation refers to the adoption of the host culture and rejection of the heritage culture. The opposite is the case for the separation. When both cultures are rejected we speak about marginalisation. Building on this framework, we intend in a next step to focus on different attachment groups, i.e. those who indicate they feel attached to home and host country, those who express attachment to neither, or those who only identify with Germany. Using a multi-sited approach (FitzGerald 2012; Wimmer and Glick Schiller 2002), we aim to identify the factors contributing to mono-cultural attachment towards Germany or the host country, attachment to neither, or those who feel attached to both countries. A further question is whether the latter can be characterized as bi-cultural (Murdock 2016, 2017). Thus, the data presented in this chapter are only a first step in a much wider research frame. In terms of general methodological limitation of the results, we would like to point out that the data source in this chapter is only a cross-sectional sample with unobserved heterogeneity. This means that the results might, at least partly, be influenced by factors that are not controlled for within these models. In the future, with more waves of GERPS, longitudinal fixed-effect panel regressions can help to follow up these results and to separate actual effects from influence of potential unobserved third variables (Hamaker and Muthén 2019; Hsiao 2014).

Despite these limitations, this chapter allows us to empirically reflect on the development of host country attachment of an under-researched group of

self-initiated, highly qualified emigrants. We identified important factors related to host country attachment that mirror findings in the adjustment literature. One important factor for the development of attachment is the emigrants' intention to stay—and this is probably a feature of the particular target group included in our sample—the self-initiated migrants. The data also show that there is a complex relationship between the cultural characteristics of the target country and the factors related to an emotional settlement in these differing cultural contexts, and these patterns of findings point to future avenues of research.

## References

- Anderson, B. (2006). *Imagined communities: Reflections on the origin and spread of nationalism*. London: Verso books.
- Arts, W., & Halman, L. (2005). National identity in Europe today: What the people feel and think. *International Journal of Sociology*, 35(4), 69–93.
- Ashmore, R. D., Deaux, K., & McLaughlin-Volpe, T. (2004). An organizing framework for collective identity: articulation and significance of multidimensionality. *Psychological Bulletin*, 130(1), 80.
- Auspurg, K., & Hinz, T. (2011). Gruppenvergleiche bei Regressionen mit binären abhängigen Variablen: Probleme und Fehleinschätzungen am Beispiel von Bildungschancen im Kohortenverlauf. *Zeitschrift für Soziologie*, 40(1), 62–73.
- Barrett, M. D. (2016). *Competences for democratic culture: Living together as equals in culturally diverse democratic societies*. Strasbourg, France: Council of Europe Publishing. Retrieved from <http://www.coe.int/en/web/education/competences-for-democratic-culture>. Accessed 1 October 2020.
- Baumeister, R., & Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529.
- Berry, J. W. (1974). Psychological aspects of cultural pluralism: unity and identity reconsidered. *Topics in Culture Learning*, 2, 17–22.
- Berry, J. W. (1997). Immigration, acculturation, and adaptation. *Applied Psychology*, 46(1), 5–34.
- Best, H., & Wolf, C. (2015). Logistic regression. In H. Best & C. Wolf (Eds.), *The SAGE handbook of regression analysis and causal inference*. London: SAGE Publications.
- Bhaskar-Shrinivas, P., Harrison, D. A., Shaffer, M. A., & Luk, D. M. (2005). Input-based and time-based models of international adjustment: Meta-analytic evidence and theoretical extensions. *Academy of Management Journal*, 48(2), 257–281.
- Bichler, S., Albert, I., Barros, S., & Murdock, E. (2020). Exploring cultural identity in a multicultural context—the special case of Luxembourg. *Human Arenas*, 3(3), 310–330.
- Billig, M. (1995). *Banal nationalism*. London: SAGE.
- Black, J. S., Mendenhall, M., & Oddou, G. (1991). Toward a comprehensive model of international adjustment: An integration of multiple theoretical perspectives. *Academy of Management Review*, 16(2), 291–317.
- Brubaker, R. (1996). *Citizenship and nationhood in France and Germany*. Harvard: Harvard University Press.
- Brubaker, R. (2009). Ethnicity, race, and nationalism. *Annual Review of Sociology*, 35, 21–42.
- Burholt, V., Scharf, T., & Walsh, K. (2013). Imagery and imaginary of islander identity: Older people and migration in Irish small-island communities. *Journal of Rural Studies*, 31, 1–12.
- Castles, S., & Miller, M. J. (2009). *The age of migration: International population movements in the modern world*. Houndmills: Palgrave Macmillan.

- Celenk, O., and van de Vijver, F. J. R. (2014). Assessment of psychological acculturation and multiculturalism: An overview of measures in the public domain. *The Oxford Handbook of Multicultural Identity* 205–226.
- Chen, S. X., Benet-Martínez, V., & Bond, M. H. (2008). Bicultural Identity, bilingualism, and psychological adjustment in multicultural societies: immigration-based and globalization-based acculturation. *Journal of Personality*, 76(4), 803–838.
- Chirkov, V. (2009). Critical psychology of acculturation: What do we study and how do we study it, when we investigate acculturation? *International Journal of Intercultural Relations*, 33(2), 94–105.
- Condor, S. (2011). Towards a social psychology of citizenship? Introduction to the special issue. *Journal of Community & Applied Social Psychology*, 21(3), 193–201.
- Connolly, K. (2020). Wir sind Deutschbriten. [https://www.bbc.co.uk/news/extra/DXCo3FluNz/we\\_are\\_british\\_germans](https://www.bbc.co.uk/news/extra/DXCo3FluNz/we_are_british_germans). Accessed 1 October 2020.
- Ditlmann, R. K., Purdie-Vaughns, V., & Eibach, R. P. (2011). Heritage- and ideology-based national identities and their implications for immigrant citizen relations in the United States and in Germany. *International Journal of Intercultural Relations*, 35(4), 395–305.
- Erlinghagen, M. (2021). Migration motives, timing, and outcomes of internationally mobile couples. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Erlinghagen, M., Ette, A., Schneider, N. F., & Witte, N. (2021). Between origin and destination: German migrants and the individual consequences of their global lives. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Esser, H. (1980). *Aspekte der Wanderungssoziologie. Assimilation und Integration von Wanderern, ethnischen Gruppen und Minderheiten. Eine handlungstheoretische Analyse*. Darmstadt, Neuwied: Luchterhand.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., & Erlinghagen, M. (2021). Structures of German emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Fiske, S. T. (2010). *Social beings: Core motives in psychology*. Hoboken, NJ: Wiley.
- FitzGerald, D. (2012). A comparativist manifesto for international migration studies. *Ethnic and Racial Studies*, 35(10), 1725–1740.
- Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.
- Hamaker, E. L., & Muthén, B. (2019). The fixed versus random effects debate and how it relates to centering in multilevel modeling. *Psychological Methods*, 25, 365.
- Harrison, D. A., Shaffer, M. A., & Bhaskar-Shrinivas, P. (2004). Going places: Roads more and less traveled in research on expatriate experiences. *Research in Personnel and Human Resources Management*, 23, 199–247.
- Hoechle, D. (2007). Robust standard errors for panel regressions with cross-sectional dependence. *The Stata Journal*, 7(3), 281–312.
- Hofstede, G. (1983). National cultures in four dimensions: A research-based theory of cultural differences among nations. *International Studies of Management & Organization*, 13(1-2), 46–74.
- Hsiao, C. (2014). *Analysis of panel data*. Cambridge University Press.
- Inglehart, R., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequence*. Cambridge University Press.
- Kovaleva, A., Beierlein, C., Kemper, C. J., and Rammstedt, B. (2012). Eine Kurzsкала zur Messung von Kontrollüberzeugung: Die Skala Internale-Externale-Kontrollüberzeugung-4 (IE-4).

- Maehler, D., & Schmidt-Denter, U. (2012). *Migrationsforschung in Deutschland: Leitfaden und Messinstrumente zur Erfassung psychologischer Konstrukte*. Wiesbaden: VS Verlag.
- Midi, H., Sarkar, S. K., & Rana, S. (2010). Collinearity diagnostics of binary logistic regression model. *Journal of Interdisciplinary Mathematics*, 13(3), 253–267.
- Mood, C. (2010). Logistic regression: Why we cannot do what we think we can do, and what we can do about it. *European Sociological Review*, 26(1), 67–82.
- Murdock, E. (2016). *Multiculturalism, Identity and Difference*. London: Palgrave Macmillan.
- Murdock, E. (2017). Identity and Its Construal: Learning from Luxembourg. *Integrative Psychological and Behavioral Science*, 51(2), 261–278.
- Péporté, P. (2011). *Constructing the middle ages: Historiography, collective memory and nation-building in Luxembourg*. Leiden: Brill.
- Rudmin, F. (2009). Constructs, measurements and models of acculturation and acculturative stress. *International Journal of Intercultural Relations*, 33(2), 106–123.
- Selmer, J., & Lauring, J. (2015). Host country language ability and expatriate adjustment: The moderating effect of language difficulty. *The International Journal of Human Resource Management*, 26(3), 401–420.
- Straub, J. (2003). Psychologie und die Kulturen in einer globalisierten Welt. A. Thomas (Hg.): *Kulturvergleichende Psychologie*, Göttingen 543–566.
- Tadmor, C. T., & Tetlock, P. E. (2006). Biculturalism: A model of the effects of second-culture exposure on acculturation and integrative complexity. *Journal of Cross-Cultural Psychology*, 37(2), 173–190.
- Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1986). An integrative theory of intergroup conflict. In S. Worchel & W. G. Austin (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey: Brooks/Cole.
- Visa-Germany. (2020). German passport holders can visit 188 countries without a prior visa. <https://www.germany-visa.org/news/german-passport-holders-can-visit-188-countries-without-a-prior-visa/>, accessed 1 October 2020.
- Weinreich, P., & Saunderson, W. (2005). *Analysing identity: Cross-cultural, societal and clinical contexts*. New York: Routledge.
- Wimmer, A., & Glick Schiller, N. (2002). Methodological nationalism and beyond: nation-state building, migration and the social sciences. *Global Networks*, 2(4), 301–334.

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**Part VII**  
**Survey Design for Internationally Mobile**  
**Populations**

# Chapter 16

## Setting up Probability-Based Online Panels of Migrants with a Push-to-Web Approach: Lessons Learned from the German Emigration and Remigration Panel Study (GERPS)



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### 16.1 Introduction

Surveying international migrants is a complex endeavour with various pitfalls. It is challenging to survey emigrants and remigrants from one country of origin. Emigrants are more difficult to sample than the resident population because they are more spatially dispersed. Moreover, emigrants and remigrants are more difficult to survey than the non-migrated resident population because migrants are likely to be mobile again (Di Pietro 2012; Oosterbeek and Webbink 2011; Kodrzycki 2001). The difficulty is even greater in panel surveys because they have to deal with ongoing migration. The approach we followed in the German Emigration and Remigration Panel Study (GERPS) is an immediate response to these methodological issues. GERPS realises a probability sample of German emigrants and remigrants by exploiting public register information in the country of origin. The study surveys emigrants and remigrants shortly after migration and follows them over a minimum period of 2 years. It provides us with the opportunity to analyse consequences of international migration from at least two perspectives—shortly after emigration to destination countries and shortly after return to the country of origin. This research design makes GERPS a panel with globally highly dispersed sample members (see Ette et al. 2021 in this volume), suggesting an online survey as the most appropriate survey mode for controlling survey costs and ensuring participant contact. Due to the register-based sampling frame, however, we were only able to recruit participants via postal invitation. We therefore realised a “recruit-and-switch” design

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(Sakshaug 2013) by motivating our GERPS members via postal letters to fill out a web survey (“push-to-web”).

This chapter investigates the applicability of our research design by analysing two crucial challenges when setting up a probability-based online panel of internationally mobile populations. The first challenge concerns potential effects of GERPS’ push-to-web approach during the survey recruitment phase. Some studies indicate that online survey techniques negatively affect unit response in combination with more traditional recruitment methods (Millar and Dillman 2012; Hardigan et al. 2016; Tai et al. 2018). Section 16.2 investigates the consequences of our push-to-web design for unit nonresponse. The analyses draw on a split ballot experiment that offered two remigrant sub-samples an optional paper and pencil interview (PAPI) at different stages in the field process. The second challenge for setting up a probability-based online panel like GERPS is panel attrition. Blom et al. (2015) argue that motivating respondents for future survey participation constitutes one of the greatest challenges when conducting longitudinal online surveys. In Sect. 16.3, we therefore assess the challenge of panel attrition by investigating determinants of respondents’ consent to be contacted in the forthcoming waves of GERPS (henceforth called “panel consent”). The empirical analyses in Sect. 16.3 are also restricted to the sample of return migrants.

## 16.2 Dealing with the First Recruitment Challenge: Online Survey Participation

One crucial design element of GERPS is its push-to-web design in dealing with international migrants as a rare and hard-to-reach population (Lynn et al. 2018). GERPS follows a push-to-web approach for its practical survey implementation, combining postal invitation and two reminder letters with online surveying of respondents. One difficulty of this approach is its mode switch. Scholars assume that mode switching generally increases the burden to participate in a survey, consequently increasing the risk of losing survey participants (Groves et al. 2000). In our context, switching from offline recruiting mode to an online survey mode is a particularly critical event. It increases the complexity for survey participants and makes participation more burdensome as they need to enter a survey link on an electronic device and to log in with their code before being able to take part in the survey (Dillman 2017).

Although some argue that push-to-web may represent a critical event for potential participants of online surveys in general (Millar and Dillman 2012; Hardigan et al. 2016; Tai et al. 2018), it is reasonable to assume that push-to-web is especially problematic for responses from specific groups of invitees. Responses in push-to-web surveys might be particularly affected by spatial and social selectivity. One general problem of online panels is that individuals without internet access cannot participate. Internet access may be problematic for potential survey participants

living in remote areas lacking network coverage (Couper 2000; OECD 2018). Unit nonresponse may, however, not only be dependent on remoteness, but also on digital literacy, indicating social selectivity (Mohorko et al. 2013; Herzing and Blom 2018). Lesser educated and older survey participants in particular likely have less access to digital devices or may lack digital competence, complicating device handling (Schmidt-Hertha 2014).

Since GERPS constitutes a push-to-web survey, we are interested in finding out whether pushing invitees to our online survey is related with general unit nonresponse and with nonresponse of specific respondent groups. We conducted a split ballot experiment within GERPS to address these questions. The idea of the experiment was to give two randomly sampled experimental groups of remigrants at different stages in the field process the opportunity to either participate offline (via PAPI) or online.

- The first experimental group followed a concurrent (CC) mixed-mode survey design, offering sample members different survey possibilities simultaneously (De Leeuw and Berzelak 2016). 1000 randomly selected remigrants therefore received push-to-web invitation letters with enclosed paper questionnaires. Invitees with pending responses received a first reminder without a paper questionnaire, reminding them of the opportunity to participate either online or by PAPI. We enclosed another paper questionnaire in the second reminder letter.
- The second experimental group followed a sequential (SQ) mixed-mode survey design, offering sample members different survey possibilities successively (De Leeuw and Berzelak 2016). Here, 1000 randomly selected remigrants received push-to-web invitation letters and, if necessary, a first reminder that were identical to the letters in the control group. Those with pending responses received a second reminder letter with enclosed paper questionnaire and stamped response envelope, offering them the opportunity to participate online or via PAPI.

By testing these two experimental groups against a control group (CG) with push-to-web-only design, we were able to investigate potential differences in survey-mode-dependent responses.

Drawing on the general assumption of increased unit nonresponse in case of mode switching, our first Hypothesis states that

**H2.1** GERPS invitees in the experimental groups (i.e. with the optional PAPI offer) are more likely to respond than in the control group (i.e. push-to-web-only).

Regarding the argument on spatial selection, network coverage still differs in Germany in urban and more rural areas (BMVI 2019; Jacob et al. 2019). Remoteness could therefore still pose a problem for online surveys conducted in Germany. Accordingly, the second Hypothesis posits that

**H2.2** The more remote the residences of invitees, the more likely GERPS invitees in the experimental groups are to respond compared with the control group.

The affinity for participating online also depends on potential participants' education. We assume thirdly that

**H2.3** Lesser-educated GERPS invitees in the experimental groups are more likely to respond than in the control group.

The assumption that older persons have limited digital competencies leads us to expect that

**H2.4** Older GERPS invitees in the experimental groups are more likely to respond than in the control group.

### 16.2.1 Data and Methods

This Section's analyses rely on population register data from respondents and non-respondents of the first wave of the German Emigration and Remigration Panel Study (GERPS). GERPS is based on a random sample drawn from local population registers and comprises information on 20–70 year old German nationals who either emigrated from or remigrated to Germany between July 2017 and June 2018 (Ette et al. 2021). The sample data enable the calculation of response rates and nonresponse analyses. We further enriched information on non-respondents by purchasing proxy information from Microm, a German micro- and geo-marketing agency. We matched this data with addresses in our gross sample (see Ette et al. 2020 for more information).

We conducted the split ballot experiment only with German remigrants. The following analysis includes three groups:  $n = 5999$  remigrants from the control group,  $n = 1000$  remigrants from the CC group, and  $n = 1000$  remigrants from the SQ group. This leaves us with a final sample of  $N = 7999$  remigrants. All members of each group received a 10-Euro conditional incentive to ensure same survey conditions. Our dependent dichotomous variable *response* indicates whether potential survey participants responded (1) or not (0). Unit (non)response is thereby defined according to AAPOR (2016) standards: Sample members are labelled as respondents if they answered 50 per cent to 100 per cent of all applicable questions. If sample members filled out less than 50 per cent, they are treated as “break-off” and are defined as non-respondents together with those sample members who did not even start the questionnaire. The key explanatory variable is the *survey mode*, indicating push-to-web control group (0), the CC group (1), and the SQ group (2). Further explanatory variables for investigating selection effects include remigrants' region of residence (*urbanity*), measured in three categories (0 = “metropolitan region,” 1 = “regiopolitan region,” 2 = “rural region”) and their *social status* (0 = “low status,” 1 = “medium status,” 2 = “increased status,” 3 = “high status”). Urbanity and social status were generated by the geo-marketing agency Microm. Microm derives status information by comparing individuals' micro-cell-level with nation-level information on education and income. It draws on municipality information from the Federal Office for Building and Regional Planning (BBR) to provide data on a region's degree of urbanity. *Age* is introduced three times in its linear, quadratic, and cubic function in order to capture non-linear relationships with unit

response as known from survey research (Lynn 2003; Durrant and Steele 2009; Goyder 1987; Groves and Couper 1998). Since many argue that women have a higher response probability than men (e.g. Groves and Couper 1998), we additionally control for *gender* (0 = “male,” 1 = “female”).

We calculate descriptive statistics and employ multiple logistic regressions with robust standard errors. The regressions aim at investigating potential spatial and social selection effects on unit response. We report average marginal effects (AMEs) instead of logits because they facilitate the interpretation. The AME expresses the average influence of a model variable over all observations—given their characteristics—on the probability of the outcome  $P(y = 1 | x)$  (see Best and Wolf 2015).

The analytical strategy is as follows: First, we study survey-mode-dependent unit response by comparing response rates among the three groups. Second, we investigate selectivity of response by conducting comparative unit nonresponse analyses among the groups.

## 16.2.2 Survey Mode and Unit Response

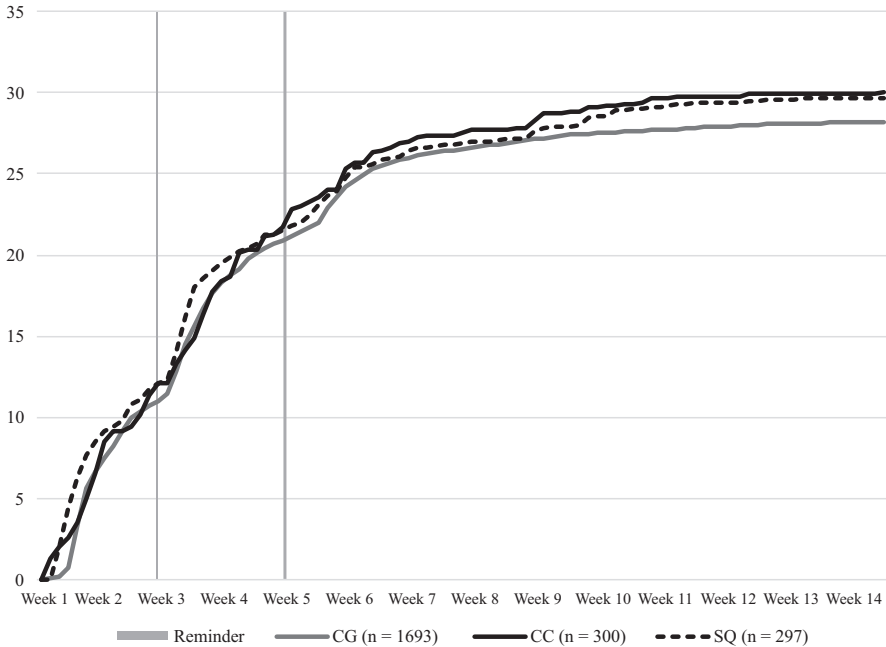
We compare final response rates among our three groups according to AAPOR RR2 standard (AAPOR 2016).<sup>1</sup> There are slightly higher response rates in the CC and SQ groups compared to the control group. While we obtained an RR2 of 28.2 per cent in the control group, the response rates in the CC and SQ groups were 30.0 per cent and 29.7 per cent respectively. These results indicate some but no statistically significant support for H2.1 (CG and CC response rates:  $t(6,997) = -1.15$ ,  $p = 0.25$ ; CG and SQ response rates:  $t(6,997) = -0.96$ ,  $p = 0.33$ ).

Figure 16.1 depicts RR2 response rates over field time for each group. The survey started on 8 November 2018 when we sent the invitation to participate in GERPS. The field process lasted over 14 weeks (until 11 February 2019). Two vertical lines indicate the days of the first reminder (left; 21 November 2018) and of the second reminder (right; 5 December 2018).

The response rate developments are very similar in all three groups, with the control group showing a slightly lower response rate towards the end of the survey time. There are remarkable and similar increases in survey participation after the survey invitation and the first reminder. The second reminder increases survey participation as well, but comparably less. The increase in response rates seems slightly delayed, which is likely correlated with the beginning of Christmas holidays shortly after week 6. The increase may mark a period of doing unfinished business before holidays. It especially persists in the CC and SQ groups, for which we observe another increase in week 9. This period marks the end of the festive season and thus probably the end of mail delivery issues.

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<sup>1</sup>GERPS refers to AAPOR standards for calculating response rates; see AAPOR (2016, p. 61). We calculate AAPOR’s “response rate 2” (RR2) by dividing the number of complete and partial interviews by the gross sample size for each group under consideration.



**Fig. 16.1** Response Rates (RR2, in per cent) over field time by group. (Source: GERPSw1, authors' calculations). *CG* control group, *CC* concurrent mixed-mode group, *SQ* sequential mixed-mode group

Next, we report differences in AMEs of response probability for our three experimental groups to investigate potential selection issues (see Table 16.1). The AMEs are based on multiple logistic regressions with robust standard errors. Note that we only consider cases without missing information for the analysis in order to increase comparability between the models.<sup>2</sup>

A first model (not shown) investigates general mixed survey-mode effects on unit response (see H2.1). Models 2 to 7 specifically test for mode-driven spatial and social selection effects on sample members' response by interacting survey mode with urbanity, status group, and age (H2.2 to H2.4). All models additionally control for gender. With the rather simple architecture of the regression models, we avoid capturing mediator effects between survey mode and unit response. This allows us to investigate overall effects, including direct and indirect effects on unit response.

<sup>2</sup>We also employed logistic regression models in which we considered cases with partially missing information. We did not find substantial differences in response probability compared to the complete case models. Thus, dropping cases with missing values did not change the interpretation of our estimates on sample members' response.

The assumed negative effect of mode switching on unit response (H2.1) is not supported in Model 1 ( $n = 7658$ , McFadden's pseudo- $R^2 = 0.3\%$ ). Sample members from the experimental groups are only 1.2 percentage points more likely to respond compared to those in the control group ( $SE = 0.01$ ,  $z = 1.32$ ,  $p = 0.19$ ). Table 16.1 depicts AME coefficients of logistic regression models that test for survey-mode-driven spatial selectivity (Models 2 and 3) and social selectivity (Models 4–7) in unit response.

Models 2 and 3 show that in less urbanised regions, individuals in the experimental group tend to respond more often than those in the control group (H2.2).<sup>3</sup> The effects are, however, not statistically significant. The case numbers in the category “rural region” are too low for reliable interpretation ( $n = 30$  in the CC group;  $n = 50$  in the SQ group).

Models 4 and 5 show survey-mode-driven social selection with regard to education by using proxy information on individuals' status group. Status-dependent differences in response probability between the different survey mode groups are small. No systematic relationship between survey mode and status group can be observed. This finding does not support our Hypothesis on digital competence (H2.3).

Models 6 and 7 also deal with social selection. In contrast to Models 5 and 6, however, they investigate whether coverage of older individuals improved in the experimental groups compared to the control group (H2.4). The empirical findings do not support this Hypothesis. In the SQ group and especially in the CC group, sample members of middle age (i.e. around 30–50 years) are roughly 2–5 percentage points more likely to respond than sample members in the control group. The age-dependent responses thus rather resemble a pattern that is regularly found in population surveys, indicating an underrepresentation of younger and older individuals (e.g. Gigliotti and Dietsch 2014; Herzog and Rodgers 1988; Cull et al. 2005; Kaldenberg et al. 1994).

However, the results in Table 16.1 only represent outcomes at the group level. We cannot deduce whether we are able to address response issues related to remote living, lower status, and old age with our paper questionnaires. For example, middle-aged sample members may not necessarily show higher response rates because they like participating by PAPI. Instead, their participation could be particularly positively influenced by our PAPI offer, but prompt them to participate online nevertheless. In this case, the paper questionnaire may just provide them a more reliable and meaningful image of GERPS.

We therefore used an explorative approach to additionally test whether remoteness, status group, and age of individuals in the experimental groups affect their

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<sup>3</sup>To ensure that the tendency is not due to relatively poor individuals living in more remote areas, we further controlled for sample members' status group (not shown here). The tendency weakens but remains visible.

**Table 16.1** Average marginal effects (AMEs) on unit response (= 1) based on multiple logistic regressions

	CC response compared to CG response	SQ response compared to CG response
	<b>Model 2</b>	<b>Model 3</b>
Metropolitan region	0.006 (0.018)	0.011 (0.018)
Regiopolitan region	0.061 (0.039)	0.018 (0.037)
Rural region	0.044 (0.082)	0.049 (0.073)
Observations	6689	6684
McFadden's pseudo- $R^2$	0.003	0.003
	<b>Model 4</b>	<b>Model 5</b>
Low status	0.018 (0.031)	-0.004 (0.029)
Medium status	0.022 (0.032)	0.017 (0.033)
Increased status	-0.015 (0.037)	-0.017 (0.036)
High status	0.024 (0.028)	0.041 (1.44)
Observations	6689	6684
McFadden's pseudo- $R^2$	0.011	0.012
	<b>Model 6</b>	<b>Model 7</b>
20 years old	-0.053 (0.041)	-0.006 (0.046)
30 years old	0.015 (0.024)	0.018 (0.023)
40 years old	0.049* (0.025)	0.028 (0.025)
50 years old	0.042 (0.031)	0.020 (0.030)
60 years old	0.016 (0.034)	-0.004 (0.034)
70 years old	-0.010 (0.091)	-0.044 (0.090)
Observations	6689	6684
McFadden's pseudo- $R^2$	0.007	0.007

Standard errors in parentheses. Estimated with robust standard errors. All models additionally control for gender. AME coefficients in models 6 and 7 combine linear, squared and cubic age terms. Source: GERPSw1, authors' calculations

\* $p < 0.05$

chosen response mode (0 = "CAWI," 1 = "PAPI").<sup>4</sup> The results (not shown here) are partly in line with the findings from Table 16.1. Sample members' response mode choice is not affected by remoteness or age. Sample members' status group, however, slightly affects response mode choice: Individuals of high status are 1.3 percentage points more likely to respond via PAPI than individuals of low status.<sup>5</sup>

<sup>4</sup>We employed separate logistic regression models with robust standard errors and additionally controlled for gender.

<sup>5</sup>We also controlled for individuals' age in another model (not shown here). The status effect on response mode choice persisted.

Offering PAPI thus rather increases selection issues among our already better educated German migrants (see Ette et al. 2020).

### 16.3 Dealing with the Second Recruitment Challenge: Participation in Online Panels

In Sect. 16.3, we investigate the challenge of recruiting our participants from wave 1 for future waves of GERPS in order to set up an online migrant panel. Fortunately, research suggests that individuals who cooperated at least once tend to be likely to do so again (Lynn 2018). However, there are always sample members who are not willing to cooperate. This reduces the statistical power of data and might cause systematic selectivity biases. Therefore, panel researchers are inevitably confronted with the question of dealing with (non-)responding participants over the course of every consecutive wave of a panel survey (Roßmann and Gummer 2015). When focussing on unit response, researchers often distinguish three main components (Lepkowski and Couper 2002):

1. successful or failed localisation of the sample units,
2. successful or failed contact approaches,
3. and successful or failed cooperation.

The third component addresses the question whether researchers succeed in motivating respondents for future participation. Scholars describe it as the greatest challenge in setting up longitudinal online surveys, since online panels are often less confronted with failed localisation and failed contact (Blom et al. 2015). Thus, Section 16.3 focuses on panel consent as the third main component regarding issues with unit response. The focus here lies on two aspects: the individual respondent level (e.g. sociodemographic or personal characteristics) and the survey design level (e.g. survey modes and incentive schemes) (Lynn 2018).

At the individual level, sample members' sociodemographic characteristics affect panel participation. For example, studies show that sample members' willingness tends to decrease with increasing age (Schnell et al. 2013). This leads us to the following Hypothesis:

**H3.1** Respondents' willingness to further participate in GERPS decreases with increasing age.

Moreover, researchers found that female respondents more often agree to participate in surveys (Jacob et al. 2019). Thus, we assume that

**H3.2** Female respondents are more willing to further participate in GERPS.



The previously mentioned studies also show that individuals with higher social status are more willing to participate in surveys (Schnell et al. 2013; Jacob et al. 2019). However, a more detailed analysis suggests that the effect of social status is primarily an educational effect (Haunberger 2011). We therefore expect that

**H3.3** Higher educated respondents are more willing to further participate in GERPS.

Moreover, personality traits and individual dispositions such as feelings of social isolation may influence willingness to participate in a survey (Groves and Couper 2012; Saßenroth 2012). Adapting this finding to panel consent, we hypothesise that

**H3.4** The stronger respondents' feelings of isolation, the less they are willing to further participate in GERPS.

Respondents' survey attitude and motivation to participate strongly correlate with the saliency of a survey (Groves et al. 2000; Blom et al. 2015; Sischka et al. 2020). Survey managers are therefore interested in designing surveys that increase respondents' willingness to participate. Information on such survey factors in GERPS are mainly derived from paradata collected during the survey (for detailed information see Décieux 2021 in this book). Roßmann and Gummer (2015) already showed that survey-related data improves our understanding of unit nonresponse in surveys and attrition in panels. An important piece of information in this regard is respondents' questionnaire completion time in wave 1. Respondents' completion time in the first wave may indicate how burdensome respondents experienced the first survey. By participating in the first wave, sample members may anticipate what it will be like to participate in the panel survey (Lynn 2018), which is a unique feature of panel surveys. Respondents' perception of the content (e.g. topic sensitivity of the questions), the necessary time and burden of participation or the design are very likely to have a direct impact on the likelihood of continued participation (Gummer and Daikeler 2020; Leeper 2019), and thus on respondents' panel consent after having answered the questionnaire in wave 1. We therefore propose that

**H3.5** Respondents with a higher interview duration (and thus higher burden) are less willing to further participate in GERPS.

As mentioned above, we realised GERPS as a push-to-web panel, allowing respondents to answer the survey via mobile and stationary devices. Gummer and Roßmann (2015) and Couper and Peterson (2017) suggest that it is more convenient to answer a survey on a computer than on a mobile device. Their corresponding findings are based on meta-analyses, showing shorter response times for computer users than for users of mobile devices. However, other studies have shown that these differences in response time decrease significantly in mobile-friendly survey environments (Schlosser and Mays 2018; Couper and Peterson 2017). GERPS therefore uses responsive design to adapt its survey layout to the device of the respondents. We thus expect participation via mobile device to be similarly convenient as participation via computer.

**H3.6** Respondents who answered the first survey via mobile and stationary device do not significantly differ in their willingness to further participate in GERPS.

Incentives are used to motivate potential respondents to take part in a survey thus constituting strategies to directly counter unit nonresponse (e.g. Göritz and Neumann 2016; Krieger 2018; Lipps et al. 2019; Spreen et al. 2020). Previous research (e.g. Göritz and Neumann 2016, Krieger 2018; Lipps et al. 2019; Spreen et al. 2020) as well as our incentive experiments in wave 1 (Ette et al. 2020) showed that incentives can positively affect survey response rates. The findings mostly suggest that prepaid incentives perform superiorly to all other incentive schemes. Furthermore, post-paid incentives were usually found to perform better than lotteries, which are deemed the least successful incentive schemes. Scholars also assume that incentives positively affect respondents' panel consent within longitudinal surveys (Göritz and Neumann 2016). However, research on how incentive strategies relate to panel consent and on how successful they are in the long run is sparse. We therefore investigate whether our incentive schemes in wave 1 affect respondents' willingness to become a GERPS panel member.

**H3.7** Respondents in the prepaid incentive scheme are more willing to further participate in GERPS compared to respondents in the post-paid and lottery incentive schemes.

Concerning different survey modes, the physical presence of the paper questionnaire and individuals' related opportunity to customise their participation may positively affect their attitude towards the survey (De Leeuw 2018, Sakshaug et al. 2019). Therefore, offering different survey modes may likely increase panel consent rates as well. We assume that

**H3.8** Respondents from the SQ and CC groups are more willing to further participate in GERPS than respondents in the control group.

### 16.3.1 Data and Methods

This section's analyses are based on the first wave of GERPS (Ette et al. 2021). In accordance with Sect. 16.2, only the remigrant subsample was used in the following analysis. If applicable, the analysis was conducted for all remigrants, including the sample of the split ballot experiment (henceforth "experiment sample"). This resulted in two estimation samples of 6395 and 2130 remigrants.

Our dependent dichotomous variable *panel consent* indicates whether potential survey participants are willing to participate in future waves of GERPS (=1) or not (=0). The explanatory variables are divided into two groups, individual and survey-related factors. We differentiate the following individual-level factors: *age*, *gender* (0 = "male," 1 = "female"), *educational level*, measured in three categories (1 = "no degree," 2 = "intermediate level degree," 3 = "upper level degree"), and a measure of *self-rated social isolation* (1 = "(very) often," 2 = "sometimes," 3 = "rarely or

never”). Regarding survey-related factors, we computed a *response speed index* for every respondent on the basis of their overall survey completion time, using the Stata module `RSPEEDINDEX` (Roßmann 2015). We distinguished different response speed categories by assigning respondents to different quartiles of the speed index (0 = lower quartile, 1 = middle quartiles, 2 = upper quartile), thereby mitigating the impact of outliers. We further identified the *device* our respondents used to participate in GERPS from the User Agent String by using the Stata module `PARSEUAS` (Roßmann and Gummer 2016). We clustered the device types in two groups (0 = “Computer,” 1 = “Mobile”). The variable *incentive scheme* was measured in three categories (1 = “prepaid incentive,” 2 = “post-paid incentive,” 3 = “lottery”). The last two explanatory variables refer to the *survey mode* and the *response mode* and are only included in analyses of the experiment sample. In accordance with Sect. 16.2 the survey mode depicts push-to-web mode (= 0, “CG”), concurrent mixed-mode (= 1, “CC”) and sequential mixed-mode (= 2, “SQ”). The response mode indicates whether respondents answered the survey via CAWI (= 0) or via PAPI (= 1). Besides descriptive statistics, we employ multiple logistic regressions since our dependent variable is dichotomous. We report average marginal effects (AME).

### 16.3.2 *Individual-Level and Survey-Related Correlates of Panel Consent*

Overall, the willingness to participate in future waves of GERPS was high. In total, 92.8% of all remigrants gave panel consent. Table 16.2 exhibits how respondents’ willingness for future participation is related to their individual characteristics.

Remigrants’ willingness to participate in future waves of GERPS is hardly affected by the sociodemographic factors depicted in Table 16.3. Probably, this finding is owed to the high overall willingness to participate in the future surveys. H3.1, H3.2 and H3.4 are not supported: We neither find significant effects of respondents’ age and gender, nor of their feelings of isolation on panel consent. We only find that respondents with an upper level school degree are more willing to participate in the panel survey than respondents without a school degree. This finding is in line with theory and our Hypothesis 3.3.

Table 16.3 shows how respondents’ willingness for future participation is related to survey-related factors. While the patterns of the control variables (in this case the individual level factors) remained stable across all models, it becomes obvious that only respondents’ completion time (Model 1) shows a significant relationship with panel consent. Respondents with short interview duration are less willing to participate in future surveys of GERPS. This finding is not in line with Hypothesis 3.5, suggesting lower panel consent among respondents with longer interview duration.<sup>6</sup>

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<sup>6</sup>This effect remains significant if we additionally control for incentive scheme and device used.

**Table 16.2** AMEs of individual characteristics on panel consent (=1) based on multiple logistic regressions

	Full sample	Experiment sample
Female ( <b>ref.: male</b> )	0.003 (0.006)	-0.000 (0.012)
Age	0.000 (0.002)	-0.004 (0.003)
Age <sup>2</sup>	-0.000 (0.000)	0.000 (0.000)
<b>School degree (ref.: no degree)</b>		
Intermediate level degree	-0.002 (0.015)	0.004 (0.029)
Upper level degree	0.034** (0.013)	0.041 (0.026)
<b>Social isolation (ref.: (very) often)</b>		
Sometimes	-0.005 (0.012)	0.008 (0.020)
Rarely or never	-0.009 (0.007)	-0.014 (0.013)
Observations	6395	2140
McFadden's pseudo- $R^2$	0.015	0.022

Standard errors in parentheses. Estimated with robust standard errors. Source: GERPSw1

\*\* $p < 0.01$

Model 2 shows that the device respondents used to fill out the questionnaire is not significantly related with their willingness to become participant of the GERPS panel. Hypothesis 3.6 is thus not supported by our data. In Model 3, we see that respondents in different incentive schemes do not significantly differ in their panel consent rates. Incentive schemes thus do not seem to have “a long-term effect” on participation rates, which does not support H3.7.

Model 4 examines the relationship between different survey modes and panel consent in the experiment sample we focused on in Sect. 16.2. We see that panel consent rates do not differ between SQ and control group. However, respondents in the CC group are significantly less willing to give their panel consent than respondents in the control group. Thus, our proposed H3.8 indicating higher panel consent rates in the experimental groups cannot be validated. The results point in the opposite direction: CC mode seems to decrease panel consent rates. We elaborated on this effect by investigating the influence of response mode on respondents' panel consent (Model 5). PAPI respondents are significantly less likely to give their panel consent than online respondents, indicating that the lower panel consent rate may not depend on respondents' survey mode but on their response mode. We added response mode in Model 4 and interacted it with respondents' survey mode to test this assumption (model not shown). Indeed, the influence of respondents' survey mode (CC and SQ combined) on their panel consent disappears, while PAPI respondents remain significantly less likely than online respondents to give their panel consent.

**Table 16.3** AMEs of survey-related factors on panel consent (=1) based on multiple logistic regressions

	Full sample	Experiment sample
<b>Model 1: Interview duration (ref.: medium response speed)</b>		
Fast respondent	-0.151*** (0.033)	-
Slow respondent	0.003 (0.009)	-
Observations	6395	-
McFadden's pseudo-R <sup>2</sup>	0.027	-
<b>Model 2: Device used (ref.: computer)</b>		
Mobile device	-0.008 (0.007)	-
Observations	6395	-
Pseudo R-squared	0.027	-
<b>Model 3: Incentive mode (ref.: Post-paid)</b>		
Prepaid	0.013 (0.010)	-
Lottery	0.012 (0.007)	-
Observations	6395	-
McFadden's pseudo-R <sup>2</sup>	0.016	-
<b>Model 4: Survey mode (ref.: push-to-web)</b>		
Sequential mode	-	-0.011 (0.018)
Concurrent mode	-	-0.046* (0.020)
Observations	-	2140
McFadden's pseudo-R <sup>2</sup>	-	0.022
<b>Model 5: Response mode (ref.: CAWI)</b>		
PAPI	-	-0.137*** (0.014)
Observations	-	2140
McFadden's pseudo-R <sup>2</sup>	-	0.056

Standard errors in parentheses. Estimated with robust standard errors. All Models control for individual characteristics. Source: GERPSw1

\* $p < 0.05$ , \*\*\* $p < 0.001$

## 16.4 Lessons Learned by Implementing a Probability-Based Online Panel of Internationally Mobile Individuals

This chapter studied two crucial challenges of GERPS on its way to setting up a probability-based online panel of internationally mobile individuals. The first challenge was to motivate sample members by postal invitation to participate in an online survey (“push-to-web”). We aimed at assessing the consequences of push-to-web for unit response since scholars often disagree about response rates in push-to-web and traditional surveys. Therefore, GERPS included a split ballot experiment in wave 1, providing two remigrant sub-samples with an optional paper and pencil interviewing (PAPI) opportunity at different stages in the field process. The second

recruitment challenge concerned panel attrition. Survey organisers' task of motivating respondents for future survey participation arguably constitutes one of the greatest challenges for longitudinal online surveys (Blom et al. 2015). We therefore studied how individual-level and survey-related factors are related to respondents' consent to be contacted in the forthcoming waves of GERPS.

Our survey mode experiment proved push-to-web to be a viable strategy for achieving high response rates and high panel consent rates among internationally mobile individuals. First, our results contradict the argument that survey outcomes in push-to-web surveys have an increased risk to be biased. Internationally mobile individuals indeed make use of the PAPI offer. However, the additional option to participate with PAPI only seems to have a small positive effect on response rates in the later field process, independent of previous PAPI offers. Eventually, an optional PAPI offer does not result in substantial response changes among these hard-to-survey individuals—neither overall, nor for specific selection factors such as remoteness, education, and age. Contrary to our expectations, the optional PAPI offer increases response in favour of status-higher participants. However, education was measured by a proxy indicator based on aggregate-level geo data, as was the case for remoteness. Our results on spatial and educational selectivity may therefore be biased. Second, individuals who answered the survey via PAPI were significantly less ready to give panel consent than those who answered online. This might be due to a higher burden for respondents who answered in PAPI mode. While online participation is straightforward, PAPI mode is onerous and requires that the completed questionnaire be in an envelope and taken to a letterbox. Why these participants still chose to answer in PAPI mode remains open.

Furthermore, we found no differences in panel consent regarding incentive value, device type, and most of the analysed individual-level factors. This is likely to result from generally high panel consent among remigrants surveyed in the first wave of GERPS. Only respondents with an upper level school degree expectedly showed an increased willingness to participate in future waves of GERPS. The opposite was the case for fast responding individuals: They were less likely to give their panel consent than individuals with average responding speed. Fast responding individuals are likely affected by “satisficing.” Satisficing describes a response behaviour where individuals only make a minimum effort to generate a satisfactory response (Krosnick 1991; Roberts et al. 2019). For example, respective individuals may only opt for the incentive and click themselves through to the end of the online questionnaire. Satisficing might be an explanation for the lower panel consent rate among fast responding individuals, since it is usually associated with lower motivation and interest. A second explanation could be that we surveyed some individuals whose personal situation did not match with the group of internationally mobile individuals for which we designed our questions (e.g. globetrotters). Consequently, these individuals were unable to give meaningful answers to a large number of questions in our survey. In such a specific group, it is very likely that respondents do not feel addressed by the survey and therefore reject participation in future waves (Brower 2018; Lipps and Pollien 2019).

However, despite our very encouraging results on panel consent, the intention to participate in future GERPS waves is only a first indication regarding panel attrition. Psychological research in the tradition of Ajzen and Fishbein (1977) often demonstrated that attitudes and behaviour are only conditionally related. A possible gap between attitude and behaviour may have multiple causes. Possible overestimations of participation rates may stem from general known factors affecting unit non-response and panel attrition (e.g. Plutzer 2019; De Leeuw and Hox 2018; Weigold et al. 2018). Overestimations are also caused by traditional factors that bias response behaviour, such as social desirability bias or satisficing behaviour (e.g. Deol et al. 2017; Groves et al. 2000, Roßmann 2017; Andersen and Mayerl 2017). The actual participation rate of wave 2 will give a less biased impression and will provide us with further validations for the attitude-behaviour distance.

In sum, we learned two major lessons by addressing push-to-web and panel consent in the context of surveying internationally mobile individuals. While an optional PAPI offer only slightly promoted response rates, it clearly lowered respondents' willingness to participate in our panel. This suggests a trade-off scenario, either to the detriment of response rates or panel participation rates. If we contrast both issues, we conclude that there is hardly any justification for adding additional survey modes next to CAWI. This is particularly the case if we take into account practical and methodological issues with mixed survey mode designs: They increase survey costs, potentially entail mode effects on unit response, and impair the feasibility of filter questions. Thereby, they inhibit surveys' feasibility and threaten survey quality. Nevertheless, researchers must bear in mind that we assessed push-to-web in a migrant panel with individuals from an economically highly developed country living in an economically highly developed country. Applying push-to-web in panels with migrants originating from or living in economically less developed countries may cause more issues regarding response rates and panel participation rates.

## References

- AAPOR. (2016). *Standard definitions. Final dispositions of case codes and outcome rates for surveys*. (9th Edn). AAPOR.
- Ajzen, I., & Fishbein, M. (1977). Attitude-behavior relations: A theoretical analysis and review of empirical research. *Psychological bulletin*, 84(5), 888.
- Andersen, H., & Mayerl, J. (2017). Social Desirability and undesirability effects on survey response latencies. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, 135(1), 68–89.
- BMVI. (2019). *Aktuelle Breitbandverfügbarkeit in Deutschland (Stand Mitte 2019). Erhebung der atene KOM im Auftrag des BMVI*. Hg. v. Bundesministerium für Verkehr und digitale Infrastruktur. Bundesministerium für Verkehr und digitale Infrastruktur.
- Best, H., & Wolf, C. (2015). Logistic Regression. In H. Best & C. Wolf (Eds.), *The SAGE handbook of regression analysis and causal inference*. London: SAGE.
- Blom, A. G., Gathmann, C., & Krieger, U. (2015). Setting up an online panel representative of the general population: The German internet panel. *Field Methods*, 27(2), 391–408.

- Brower, C. K. (2018). *Too long and too boring: The effects of survey length and interest on careless responding*. Dissertation. Wright State University, Department of Psychology.
- Couper, M. P. (2000). Web surveys: A review of issues and approaches. *Public Opinion Quarterly*, 64, 464–494.
- Couper, M. P., & Peterson, G. J. (2017). Why do web surveys take longer on smartphones? *Social Science Computer Review*, 35(3), 357–377.
- Cull, W. L., O'Connor, K. G., Sharp, S., & Tang, S.-f. S. (2005). Response rates and response bias for 50 surveys of pediatricians. *Health Services Research*, 40(1), 213–226.
- Deol, R., Hibbing, M. V., Mondak, J. J., Cawvey, M., & Bloeser, A. J. (2017). The relationship between personality and response patterns on public opinion surveys: The big five, extreme response style, and acquiescence response style. *International Journal of Public Opinion Research*, 31(1), 161–177.
- De Leeuw, E. D. (2018). Mixed-mode: Past, present, and future. *Survey Research Methods*, 12(2), 75–89.
- De Leeuw, E., & Berzelak, N. (2016). Survey mode or survey modes? In C. Wolf, D. Joye, T. W. Smith, & Y.-c. Fu (Eds.), *The sage handbook of survey methodology* (pp. 142–156). London: SAGE Publications.
- De Leeuw, E. D., & Hox, J. J. (2018). International nonresponse trends across countries and years: An analysis of 36 years of labour force survey data. *Survey Insights: Methods from the Field*.
- Décieux, J. P. (2021). Is there more than the answer to the question? Device use and completion time as indicators for selectivity bias and response convenience in online surveys. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Di Pietro, G. (2012). Does studying abroad cause international labor mobility? Evidence from Italy. *Economics Letters*, 17(3), 632–635.
- Dillman, D. A. (2017). The promise and challenge of pushing respondents to the Web in mixed-mode surveys. *Survey Methodology*, 43(1), 3–30.
- Durrant, G. B., & Steele, F. (2009). Multilevel modelling of refusal and noncontact in household surveys: Evidence from six UK government surveys. *Journal of the Royal Statistical Society: Series A*, 172(2), 361–381.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Genoni, A., Auditor, J. G., Knirsch, F., Kühne, S., Mörchen, L., Sand, M., Schneider, N. F., & Witte, N. (2020). *German emigration and Remigration Panel Study (GERPS): Methodology and data manual of the baseline survey (wave 1)*. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.
- Gigliotti, L., & Dietsch, A. (2014). Does age matter? The influence of age on response rates in a mixed-mode survey. *Human Dimensions of Wildlife: An international Journal*, 19(3), 280–287.
- Goyder, J. (1987). *The silent minority: Nonrespondents on sample surveys*. Cambridge: Polity Press.
- Göritz, A. S., & Neumann, B. P. (2016). The longitudinal effects of incentives on response quantity in online panels. *Translational Issues in Psychological Science*, 2(2), 163–73.
- Groves, R. M., & Couper, M. P. (1998). *Nonresponse in household interview surveys*. New York: Wiley.
- Groves, R. M., & Couper, M. P. (2012). *Wiley series in survey methodology: Nonresponse in household interview surveys* (1st ed.). Hoboken: John Wiley.
- Groves, R. M., Singer, E., & Corning, A. (2000). Leverage-saliency theory of survey participation: Description and an illustration. *Public Opinion Quarterly*, 64(3), 299–308.
- Gummer, T., & Daikeler, J. (2020). A note on how prior sSurvey experience with self-administered panel surveys affects attrition in different modes. *Social Science Computer Review*, 38(4), 490–498.



- Gummer, T., & Roßmann, J. (2015). Explaining interview duration in web surveys: A multilevel approach. *Social Science Computer Review*, 33(2), 217–234.
- Hardigan, P. C., Popovici, I., & Carvajal, M. J. (2016). Response rate, response time, and economic costs of survey research: A randomized trial of practicing pharmacists. *Research in Social and Administrative Pharmacy*, 12(1), 141–148.
- Haunberger, S. (2011). *Teilnahmeverweigerung in Panelstudien*. Wiesbaden: Springer.
- Herzing, J. M. E., & Blom, A. G. (2018). The influence of a person's digital affinity on unit non-response and attrition in an online panel. *Social Science Computer Review*, 37(3), 404–424.
- Herzog, A. R., & Rodgers, W. L. (1988). Age and response rates to interview sample surveys. *Journal of Gerontology*, 43(6), 200–205.
- Jacob, R., Heinz, A., & Décieux, J. P. (2019). *Umfrage: Einführung in die Methoden der Umfrageforschung*. München: Walter de Gruyter.
- Kaldenberg, D. O., Koenig, H. F., & Becker, B. W. (1994). Mail survey response rate patterns in a population of the elderly. *Public Opinion Quarterly*, 58, 68–76.
- Kodrzycki, Y. (2001). Migration of recent college graduates: Evidence from the National Longitudinal Survey of Youth. *New England Economic Review*, 1, 13–34.
- Krieger, U. (2018). *A Penny for your thoughts. The use of cash incentives in face-to-face surveys*. Dissertation. University of Mannheim.
- Krosnick, J. A. (1991). Response strategies for coping with the cognitive demands of attitude measures in surveys. *Applied Cognitive Psychology*, 5(3), 213–236.
- Lepkowski, J. M., & Couper M. P. (2002). Nonresponse in the second wave of longitudinal household surveys. In R. M. Groves, D. A. Dillman, J. L. Eltinge, & R. J. A. Little (Eds.), *Survey nonresponse* (pp. 259–272). Wiley.
- Leeper, G. T. (2019). Where have the Respondents Gone? Perhaps we ate them all. *Public Opinion Quarterly*, 83(S1), 280–288.
- Lipps, O., & Pollien, A. (2019). Effects of topic distribution and topic importance on interest and follow-up response. *FORS Working Paper Series*.
- Lipps, O., Herzing, J. M. E., Pekari, N., Stähli E. M., Pollien, A., Riedo, G., & Reveilhac, M. (2019). Incentives in surveys. In Swiss Centre of Expertise in the Social Sciences FORs (Ed.), *FORS Guide No. 08*. Lausanne.
- Lynn, P. (2003). PEDAKSI: Methodology for collecting data about survey non-respondents. *Quality and Quantity*, 37(3), 239–261.
- Lynn, P. (2018). Tackling panel attrition. In D. L. Vannette, & J. A. Krosnick (Eds.), *The Palgrave handbook of survey research* (pp. 143–153). Springer International Publishing.
- Lynn, P., Nandi, A., Parutis, V., & Platt, L. (2018). Design and implementation of a high-quality probability sample of immigrants and ethnic minorities: Lessons learnt. *Demographic Research*, 38, 513–548.
- Millar, M., & Dillman, D. (2012). Do mail and internet surveys produce different item nonresponse rates? An experiment using random mode assignmentmode assignment. *Survey Practice*, 5, 2.
- Mohorko, A., De Leeuw, E., & Hox, J. (2013). Internet coverage and coverage bias in Europe: Developments across countries and over time. *Journal of Official Statistics*, 29(4), 609–622.
- OECD (2018). *Bridging the rural digital divide: OECD Digital Economy Papers*.
- Oosterbeek, H., & Webbink, D. (2011). Does studying abroad induce a brain drain? *Economica*, 78(310), 347–366.
- Plutzer, E. (2019). Privacy, sensitive questions, and informed consent: Their impacts on total survey error, and the future of survey research. *Public Opinion Quarterly*, 83(S1), 169–184.
- Roberts, C., Gilbert, E., Allum, N., & Eisner, L. (2019). Research synthesis: Satisficing in surveys: A systematic review of the literature. *Public Opinion Quarterly*, 83(3), 598–626.
- Roßmann, J. (2015). *RSPEEDINDEX. Stata module to compute a response speed index and perform outlier identification*. Boston College Department of Economics (Statistical Software Components, s458007).
- Roßmann, J. (2017). *Satisficing in Befragungen: Theorie, Messung und Erklärung*. Wiesbaden: Springer.

- Roßmann, J., & Gummer, T. (2015). Using Paradata to predict and correct for panel attrition. *Social Science Computer Review*, 34(3), 312–332.
- Roßmann, J., & Gummer, T. (2016). *PARSEUAS. Stata module to extract detailed information from user agent strings*. Boston College Department of Economics (Statistical Software Components, S457937).
- Sakshaug, J. (2013). Using paradata to study response to within-survey requests. In F. Kreuter (Ed.), *Improving surveys with paradata. Analytic uses of process information* (pp. 171–190). Hoboken, New Jersey: John Wiley & Sons.
- Sakshaug, J., Cernat, A., & Raghunathan, T. E. (2019). Do sequential mixed-mode surveys decrease nonresponse bias, measurement error bias, and total bias? An experimental study. *Journal of Survey Statistics and Methodology*, 7(4), 545–571.
- Schlosser, S., & Mays, A. (2018). Mobile and dirty: Does using mobile devices affect the data quality and the response process of online surveys? *Social Science Computer Review*, 36(2), 212–230.
- Spren, T. L., House, L. A., & Gao, Z. (2020). The impact of varying financial incentives on data quality in web panel surveys. *Journal of Survey Statistics and Methodology*, 8(5), 832–850.
- Saßenroth, D. (2012). The impact of personality traits on the willingness to cooperate in surveys: evidence from the German General Social Surveys in 2004, 2006, and 2008. *Methoden—Daten—Analysen*, 6(1), 21–44.
- Schmidt-Hertha, B. (2014). Technologiebasierte Problemlösekompetenz. In J. Friebe, B. Schmidt-Hertha, & R. Tippelt (Eds.), *Kompetenzen im höheren Lebensalter. Ergebnisse der Studie "Competencies in Later Life" (CiLL)* (pp. 99–111). Bielefeld: Bertelsmann Verlag.
- Schnell, R., Hill, P. B., & Esser, E. (2013). *Methoden der empirischen Sozialforschung*. München: Oldenbourg.
- Sischka, P. E., Décieux, J. P., Mergener, A., Neufang, K. M., & Schmidt, A. F. (2020). The impact of forced answering and reactance on answering behavior in online surveys. *Social Science Computer Review*, 26, 1–21.
- Tai, X., Smith, A. M., McGeerm, A. M., Dubé, E., Holness, D. L., Katz, K., Hall, L. M. G., McNeil, S. A., Powis, J., & Coleman, B. L. (2018). Comparison of response rates on invitation mode of a web-based survey on influenza vaccine adverse events among healthcare workers: a pilot study. *BMC Medical Research Methodology*, 18, 59.
- Weigold, A., Weigold, I. K., & Natera, S. N. (2018). Response rates for surveys completed with paper-and-pencil and computers: Using meta-analysis to assess equivalence. *Social Science Computer Review*, 37(5), 649–668.

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# Chapter 17

## Is There More Than the Answer to the Question? Device Use and Completion Time as Indicators for Selectivity Bias and Response Convenience in Online Surveys



Jean Philippe Décieux

### 17.1 Introduction

The major aim of the German Emigration and Remigration Panel Study (GERPS) is to establish a longitudinal data set that offers information on life trajectories of international migrants. In addition to content-related questions, many methodological questions can also be answered with the help of GERPS. Among other things, this is done using paradata that are passively collected during the survey in order to obtain meta-information on respondents' survey participation.

Kreuter (2013) defines "paradata as additional data that can be captured during the process of producing a survey statistic. Those data can be captured at all stages of the survey process and with very different granularities." This form of survey-related meta-information can help to optimize data quality within nearly all stages of the survey process, starting with the design approach then the pretest and ending in weighting and data cleaning based on the analysis of respondent attributes and response behaviour (Diedenhofen and Musch 2017; Verbree et al. 2019; Yan and Olson 2013).

In contrast to other forms of survey meta data such as interviewer comments and observations, computer programs of online and computer assisted surveys (CATI, CAPI) unobtrusively collect a large amount of paradata without impacting the respondents' experience while they answer the survey questions without drawing any attention to the collection of the paradata. Therefore, collecting paradata simultaneous to the actual survey data has no actual disadvantage within computer-administered surveys—apart from minimal effects on processing and transmission times. Thus, from an information efficiency perspective, paradata are auxiliary information almost free of charge. They do not consume additional survey resources

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in terms of added respondent burden or extra survey time. Furthermore, paradata are non-reactive and therefore an objective form of data (for example compared to self-reports or interviewer data) (Jacob et al. 2019; Kreuter 2013; McClain et al. 2019).

Within GERPS, a vast amount of survey paradata were gained (Ette et al. 2020) that can be used to reflect data quality and to learn more about the response process and the response behaviour in general and under specific conditions. One of these specific conditions for online surveys is the question of which device the respondents used while completing the questionnaire. Mobile devices have become extremely popular and are used with increasing frequency for survey participation (Gummer et al. 2019). Previous studies have shown that the relative share of mobile respondents varies according to the composition of the sample and therefore results concerning device usage are rather inconclusive (see above). As systematic differences between groups could come across with method selection effects (Décieux and Hoffmann 2014). And these may come across with an increased risk of a selectivity bias between the different device modes. Therefore, the present study investigates whether device use is systematically caused by sociodemographic attributes of the respondents by addressing the first research question: What are the determinants of device choice?

Moreover, survey navigation significantly differs between mobile and desktop devices: An online survey on a traditional desktop device takes place on a big screen, with a mouse and keyboard and strong processing power, but survey navigation on mobile devices usually proceeds on the small screen with a touchpad and less processing power (Herzing 2019; Mergener and Décieux 2018; Schlosser and Mays 2018). Therefore, most of the existing research suggests that the completion times increase due to the choice of using a mobile device for proceeding through the questionnaire. In addition, this can be particularly problematic especially in case of panel surveys as increased response times are used as an indicator for increased survey burden, which increases the danger of selective dropouts and decreasing data quality (Groves et al. 2000; Mancosu et al. 2019; Montgomery and Rossiter 2020; Tourangeau et al. 2000; Ward and Meade 2018). However, more nuanced approaches point out that the differences in response times due to the device decrease when a mobile-optimized design is used (Höhne and Schlosser 2018). As GERPS used a mobile-optimized design, the second research question focusses on response time differences between the desktop and mobile modes: Is there a response time difference between mobile and desktop respondents?

## 17.2 The Rising Importance of Paradata for Survey Research

At least within the last 20 years, the use of paradata in surveys has become increasingly important. The underlying causes are heterogeneous. Even if paradata had already been used in other survey modes, for example if call record data were used

to optimize timing of calls for telephone surveys (see e.g. Durrant et al. 2013), a crucial factor is the technological developments of digitization and the rise of computer-administered and especially online surveys, as these developments substantially simplified the collection of paradata. The modern computer programs of online and computer assisted surveys (CATI, CAPI) are able to unobtrusively collect a large amount of paradata while the respondents are answering the survey without adding respondent burden or survey time or affecting response behaviour (McClain et al. 2019; Kreuter 2013; Jacob et al. 2019).

Apart from these technological possibilities, McClain et al. (2019) mention two additional developments that are primarily responsible for the increasing importance of paradata: First, the growing need to understand and classify the ways in which respondents access web surveys. This includes the route into the survey, e.g. using a QR code, a link in an e-mail or on a homepage, as well as the device that is used to complete the survey such as mobile or desktop devices (e.g. Couper and Peterson 2017; Höhne and Schlosser 2018). Second, the renewed focus on the usability and response quality of web surveys. For these purposes, paradata offer objective indicators of response behaviour, data quality, and usability of the survey (e.g. Antoun and Cernat 2019; Brockhaus et al. 2017; Couper and Peterson 2017; Mayerl and Giehl 2018; McClain et al. 2019; Roßmann and Gummer 2016; Sendelbah et al. 2016). Moreover, paradata can be used to reflect and interpret responses from a content perspective (Yan and Olson 2013) or to classify respondents' personalities based on indicators of response behaviour (Stieger and Reips 2010).

### **17.3 State of Research on Selectivity of Device Use and Response Time Differences**

At the beginning of the era of online surveys, these were programmed to be answered as easily as possible using desktop or laptop computers with a mouse and keyboard. At that time, survey methodology mainly focused on the functionality and convenience of surveys within different browsers and operating systems (Couper 2008). However, due to technical development such as the increasing role of mobile devices (e.g., smartphones, tablets) as an element of the ongoing global digitalisation (Décieux et al. 2018; Erzen et al. 2019; Turkle 2017), studies of online survey research detect an increase of online questionnaires that are answered on mobile devices. Longitudinal analyses of device use show clear patterns: Although the desktop device option is still the most frequent mode, the share of mobile respondents is increasing within large panel studies. Increasing mobile device shares can for example be found in the Netquest Panel (Revilla et al. 2016), the GESIS Panel (Haan et al. 2019), and for the German Longitudinal Election Study (Gummer et al. 2019).

This increasing tendency towards mobile device usage in web surveys has led to a new demand in survey research (Gummer et al. 2019; Wenz et al. 2019). It has become increasingly important to learn more about the factors that explain device usage and device choice as these can lead to a selectivity bias between these modes. Moreover, interacting with surveys on mobile devices is done differently than on desktop computers. Navigation of the survey on a mobile device uses a touch screen rather than the traditional mouse and keyboard. In addition, devices differ concerning their processing power. The processing power of desktop devices is usually superior to that of mobile devices (Schlosser and Mays 2018). Therefore it became important to gather information on how respondents proceed through an online survey on a mobile device and to elucidate differences in response behaviour (e.g. Andreadis 2015; Lee et al. 2018; Mergener and Décieux 2018; Schlosser and Mays 2018).

### ***17.3.1 Factors Affecting (Selectivity of) Device Choice***

Research on specific effects of determinants (such as sociodemographic variables) of the choice of device to use when completing an online survey is rather inconclusive. Concerning the effect of gender, Cook (2014) found that females tend to participate more often on a mobile device. However, other studies found no clear effect of gender on device usage (Revilla et al. 2016; Schlosser and Mays 2018). Results regarding age and education have also been inconsistent. Numerous studies have concluded that younger respondents tend to use mobile devices more often for survey participation (e.g. Lambert and Miller 2015; Couper et al. 2017; Gummer et al. 2019) and others found at least inconsistent effects for age across different countries (Revilla et al. 2016). Concerning education, de Bruijne and Wijnant (2013) found that more educated individuals tend to use mobile devices more often for answering surveys. However, results from seven different countries examined by Revilla et al. (2016) and across 18 pooled web surveys Gummer et al. (2019) challenged these results, increasing doubts about the effect. Moreover, individuals living in a single-person household were found to use mobile devices more often for survey participation (Cook 2014; Haan et al. 2019). Taken together, this research on contextual factors affecting device usage shows inconclusive results and no clear selectivity pattern.

### ***17.3.2 Response Time as an Indicator for Survey Burden Analysis***

Response times are often used as an indicator to compare survey burden and survey convenience across modes, which are central to predicting current and future drop-outs in a panel survey (Antoun and Cernat 2019). The longer a survey takes, the

higher is the survey burden. High survey burden negatively affects the respondents' perceived convenience and propensity for continuous, current and future participation (Gummer and Roßmann 2015; Peytchev 2009; Rolstad et al. 2011; Villar et al. 2013) and also the quality of the answers such that behaviours like satisficing and careless responding are more likely (Gibson and Bowling 2020; Leiner 2019; Roßmann et al. 2018).

Nearly all previous studies comparing response times across desktop and mobile device modes have found that web surveys take longer to complete on mobile devices than on desktop devices (Andreadis 2015; Antoun and Cernat 2019; Couper and Peterson 2017; Schlosser and Mays 2018). Moreover, meta analyses of 21 studies (Gummer and Roßmann 2015) and 26 studies (Couper and Peterson 2017) corroborate these results. However, in a closer look at the technical terms of survey completion, other studies have shown that these differences in response time significantly decrease in mobile-friendly survey environments. These studies, for example, show that response time differences significantly decrease in mobile optimized designed surveys, due to technically advanced smartphones or when responding being connected to WiFi (Schlosser and Mays 2018; Couper and Peterson 2017). Therefore, it can be concluded that most of the additional time needed on mobile devices is caused by additional scrolling (Couper and Peterson 2017).

### ***17.3.3 Research Questions***

As pointed out before, mobile devices have become increasingly popular and available “anywhere and anytime” (Thulin 2018). Hence, they represent an actual alternative that is increasingly used for survey participation (Gummer et al. 2019). Moreover, the GERPS sample consists of internationally mobile respondents, a group that usually shows an increased affinity for the internet and mobile devices (Ette and Sauer 2010). GERPS respondents tend to be younger and better educated than the German population as a whole (Ette and Erlinghagen 2021). Therefore, we expected a large number of mobile device respondents for GERPS. As a result, there may be an increased risk of selectivity biases as a consequence of the systematic device use. To address these questions, the aim of this paper is twofold. The first aim of this study is to identify the variables linked to device choice. As already described before, existing research found inconclusive results concerning the determinants of device choice. Any systematic differences between groups of mobile and desktop users would come across with method selection effects (Décieux and Hoffmann 2014), as specific individuals are, for example, more prone to use a mobile device to complete an online questionnaire. Such systematic selectivity would increase risk of a selectivity bias between the different device modes, especially if contextual variables would have a strong explanatory power for the mode choice. Therefore, the present study investigates factors affecting device choice for answering a survey by trying to answer the following research question: What are the determinants of device choice? Here, it is elucidated whether device choice can be comprehensively

explained by the sociodemographic characteristics of the respondent such as age, gender, and so on.

Moreover, research focusing on differences in the response process of the different modes of online surveys mostly suggests that completion times increase due to the choice of using a mobile device for proceeding through the questionnaire. However, more nuanced approaches point to decreasing differences of response times when using a mobile-optimized design. Therefore, survey participation was made at least as convenient as possible for the respondents, e.g. by developing a mobile-optimized design (for more information see Ette et al. 2020). This mobile-optimized design should ensure the highest possible practicability on mobile devices (Andreadis 2015; Herzing 2019; Schnell et al. 2013). Thus, the second aim of the paper is to compare the response times of mobile and desktop respondents within the mobile-optimized design: Is there a response time difference between mobile and desktop respondents? When comparing the mode-specific response times, a large difference between mobile and desktop groups could for example point to a selective increase of survey burden due to device choice, which in turn can result in increasing dropouts. For a panel survey such as GERPS, an accumulation of selective dropouts due to device-specific survey burden in wave 1 would be especially impactful because when an individual drops out of participating in the survey, there is no possibility of asking the respondents about their willingness to be re-surveyed in the following waves. Due to its importance for ongoing data collection, the comparison of mode-specific response times is usually one of the initial steps when considering sample and data quality.

## 17.4 Data and Measures

### 17.4.1 Data and Data Cleaning

This chapter presents analyses of data from the first wave of the GERPS. This data set is based on a random sample drawn from local population registers and includes 20- to 70-year-old German nationals who either emigrated from or remigrated to Germany in the last 2 years (see Ette et al. 2021 in this volume). Overall, the first wave of GERPS provides information on 11,897 individuals (6487 from the remigrant sample and 4578 from the emigrant sample). Within an experimental approach of GERPS, a small number of paper-pencil interviews were conducted and coded to the data set. There is no valid information on completion times for these interviews available, so these 196 cases were dropped from the analysis of all research questions (Decieux et al. 2019; Erlinghagen et al. 2019). Information on device use was based on a JavaScript (see measures section), so respondents who had deactivated JavaScript ( $n = 96$ ) were also dropped from analyses. Moreover, respondents who did not answer any of the questions focused on the determinants of device use ( $n = 888$ ) were also excluded. After these exclusions, we had an overall sample of  $N = 10,813$  respondents to analyse in addressing research question 1.



Given that online surveys are self-administered, there is an increased risk of distractions and respondents' doing secondary activities while doing a survey, which may strongly impact the effect of survey response time (Antoun et al. 2017; Gibson and Bowling 2020; Höhne and Schlosser 2018; Sendelbah et al. 2016; Zwarun and Hall 2014). Therefore, for the analysis addressing research question 2, both samples were separately cleaned for response time outliers using the STATA module *RSPEEDINDEX* (Roßmann 2015). This module computes a response speed index for every respondent on the basis of the overall survey completion time. The values of the index can be interpreted as a measure of the mean response speed of survey respondents. An index value of 1 means that respondent's response speed is equivalent to the mean response speed in the selected sample of respondents. Index values close to 0 indicate a very fast mean response speed, whereas values close to 2 indicate a very slow mean response speed of the individual respondent. Based on this index it was possible to flag response speed outliers in the lower (i.e., fast respondents) and the upper deviations (i.e., slow respondents) based on absolute cutoff values of the response speed index. Since no generally accepted cut-off criterion for this response speed index has been established, a threshold of 0.5 above and below the mean response time (response speed index of 1) of the emigrants and the remigrant sample was chosen. In the emigrant sample, 589 respondents had a response speed index value smaller than 0.5 and were flagged as fast responders (speeders), and 303 respondents had a value above 1.5 and were flagged as slow respondents. Within the remigrant sample, 810 respondents were flagged as speeders and 436 as slow respondents. All flagged respondents were excluded from the analysis for research question 2. Consequently, the cleaned, final sample for the analysis to address research question 2 consisted of 9563 respondents.

## 17.4.2 Measures

### 17.4.2.1 Dependent Variables

As mentioned above, we concentrate on two paradata measures, namely device type and completion time, as dependent variables in the following analyses. To assess which device respondents used to complete the survey, we drew on the user agent strings that the survey software collected as paradata. By using the STATA module *PARSEUAS* (Roßmann and Gummer 2016), these user agent strings were parsed into useable information that allowed us to determine whether respondents used a personal computer, tablet, or smartphone to complete the survey. Based on this information, a binary variable was created to code use of a mobile device ("No = 0" and "Yes = 1"). The overall completion time is used as an indicator of survey burden. For this article, response time was assessed as the server-side completion time measured in seconds and collected within survey paradata was used. For the analysis, these times were converted to minutes.

### 17.4.2.2 Independent Variables

Our analyses also examined other different independent variables that have been tested in previous literature and can be interpreted as determinants of device usage and survey completion time. These are the common sociodemographic variables. The current age of the respondent at the time of wave 1 based on the question of the year of birth in the questionnaire was categorized into four groups specified as “20–29 years”, “30–39 years”, “40–49 years”, and “50 years and older.” In addition, respondents’ gender was included in the analysis as a control variable. Male respondents were coded as “1” and female respondents as “2”. Moreover, respondents’ education was measured by the highest vocational or college degree attained. The response options were 1 = “No degree”, 2 = “Intermediate Degree”, 3 = “Upper Degree”, and 4 = “other”. The analysis of the household status is based on the generated variable “household status after migration” in the GERPS data set, which consists of eight different values 1 = “One-person Household”, 2 = “Couple without children”, 3 = “Single parent”, 4 = “Couple with Children LE 16”, 5 = “Parents and adult children”, 6 = “Adults with parents”, 7 = “Multi-generation household” and 8 = “Other combinations”. This variable was dichotomized to the variable single-person household 1 = “Yes” for value 1 “One-person household” and 0 = “No” for all values from 2 to 8.

## 17.5 Results

### 17.5.1 Selectivity of Mode Choice

As mentioned above, we expected a large number of respondents to have used a mobile device for completing the survey in both samples and therefore we tried to make smartphone and other mobile device usage more convenient, e.g. by including a QR code in the invitation letter and programming a mobile-optimized survey design. As Table 17.1 shows, both the emigrant and the remigrant samples consisted of about 30% individuals who completed the survey on a mobile device.

**Table 17.1** Device usage within the different samples

	Emigrants	Remigrants	Total
Desktop Devices	3186 70.0%	4423 70.7%	7609 70.4%
Mobile Devices	1368 30.0%	1836 29.3%	3204 29.6%
Total	4554	6259	10,813

Phi = -0.008;  $p = 0.427$

Source: GERPSw1

No significant differences concerning device use can be found in the t-test, testing response time differences between the samples of GERPS. Thus, data from completion of GERPS corroborate the notion of a high rate of mobile respondents and show similar patterns to those found in existing literature (Gummer et al. 2019; Haan et al. 2019; Revilla et al. 2016).

Table 17.2 shows two different logistic regression models investigating the determinants of device choice where “desktop” is coded as 0 and “mobile” is coded as 1. The models control for possible predictors that may theoretically affect device choice: gender, age, education, and living in a single-person household. Model 1 tests the effects within the emigrant sample and model 2 within the remigrant sample.

Concerning age, a significant difference in device usage can be found in both samples. Compared to 50+, younger age groups are significantly more likely to have used a mobile device to complete the survey. This result is consistent with previous literature (e.g. Couper et al. 2017; Gummer et al. 2019; Lambert and Miller 2015). Moreover, in both samples gender appears to be an important determinant of device use. Female respondents tended to use mobile devices more often for survey participation than males did. Again these findings are in line with previous research (Cook 2014). Furthermore, we found a significant effect for education. Respondents with

**Table 17.2** Mobile device use for completing the web survey: Results from logistic regressions in the GERPS samples

	M1: Emigrant sample	M2: Remigrant sample
	AME	AME
<i>Current Age (ref. 50 years and older)</i>		
20–29 years	0.079*** (0.020)	0.019 (0.018)
30–39 years	0.115*** (0.020)	0.070*** (0.018)
40–49 years	0.064** (0.024)	0.055** (0.020)
Female (ref. male)	0.049*** (0.014)	0.043*** (0.012)
<i>Education (ref. no degree)</i>		
Intermediate degree	0.042 (0.034)	0.012 (0.024)
Upper degree	–0.108*** (0.029)	–0.096*** (0.020)
<i>Single-person household (ref. no)</i>		
Yes	–0.021 (0.015)	–0.047*** (0.012)
Observations	4310	5829
Pseudo R <sup>2</sup>	0.021	0.013

AME average marginal effect; standard errors in parentheses; Source: GERPSw1

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

higher education degrees used a mobile device remarkably less frequently than respondents with lower degrees. This challenges the findings from de Bruijne and Wijnant (2013) who found an increasing tendency of highly educated respondents to use a mobile device for survey participation as the effect is exactly the other way around. The education effect in our samples corroborate the interpretation of Revilla et al. (2016) and Gummer et al. (2019), who stated that the effect of education on device usage seems to be inconsistent or inconclusive within different samples of populations. Concerning household size, a significant effect of household structure can only be found in the remigrant sample. Here, respondents living in a single-person household tended to use mobile devices less often for survey participation. Thus, the findings of previous studies that respondents living in single-person households tend to use mobile devices more often for survey participation (Cook 2014; Haan et al. 2019) is challenged by the data of the remigrant sample.

To conclude, when controlling for the generally selected mode selection effects in GERPS, in both samples we detected results that were consistent with some and in contrast with other previous findings. Our data showed the commonly found effects concerning age and gender, but a significant effect of education on device use that is contrary to the results in most existing studies. Moreover, living in a single-person household had a significant relationship with device use within the remigrants sample such that remigrants in single-person households were less likely to have used a mobile device to complete the survey, which challenges the results of previous studies. However, the strength of a systematic selection effect of the device choice is indicated by the model fit indices of the models (Gummer et al. 2019). Here it becomes clear that these have only a very slight explanatory power in both samples, which means that there is only an incidental selectivity effect of device choice within the GERPS data.

### 17.5.2 Analysis of Survey Burden Across Survey Modes

Research question 2 focusses on the analysis of response survey burden based on the overall survey completion time. This measure is an established and objective indicator for an analysis of survey burden. In a first step, an independent t-test was calculated in order to determine if there were differences in response times based on the device respondents used (desktop or mobile device) (Table 17.3).

**Table 17.3** Independent t-test comparing mean response times per device

Group	Observations	Mean	SE
Desktop Device	6378	24.16	.10
Mobile Device	2711	24.74	.15
Combined	9089	24.33	.08

$t = -3.12; p = .001$

Source: GERPSw1

Although on their face the mean response times may seem very similar, the results of the t-test showed that participants using a desktop device had statistically significantly lower response times ( $24.16 \pm 0.10$  min) compared to respondents answering the survey on the mobile device ( $24.74 \pm 0.15$  min). However, as survey participation is shaped by different respondent-related attributes, the differences in interview duration is also tested within logistic regression models to control for different respondents' characteristics in both samples. To assess the effect of the device we fitted separate Ordinary Least Squares (OLS) regression models with "completion time" as the dependent variable. Table 17.4 shows two different regression models focusing on factors that might affect completion times: device used, gender, age, education, and single-person household. The rows display the contextual factors and the columns display the completion times within the different samples. Model 1 and Model 3 are the baseline models covering the bivariate effect of the device on the completion times (Model 1 of the emigrant sample, and Model 3 of the remigrant sample) and Model 2 and Model 4 control determinants of response

**Table 17.4** The effect of mobile device usage on survey completion time: Results from OLS regressions in the GERPS samples

	Emigrant sample		Remigrant sample	
	(1)	(2)	(3)	(4)
	Coeff.	Coeff.	Coeff.	Coeff.
Mobile device (ref. desktop device)	0.362	0.319	0.724**	0.645**
	(0.284)	(0.291)	(0.241)	(0.249)
Current age (ref. 50 years and older)				
20–29 years		–3.184***		–3.016***
		(0.422)		(0.370)
30–39 years		–2.229***		–2.283***
		(0.408)		(0.349)
40–49 years		–1.095*		–1.864***
		(0.495)		(0.403)
Female (ref. male)		1.067***		0.538*
		(0.265)		(0.225)
Education (ref. no degree)				
Intermediate Degree		1.006		0.118
		(0.598)		(0.430)
Upper Degree		0.114		–0.045
		(0.520)		(0.367)
Single-person household (ref. no)		–0.969***		–1.059***
		(0.282)		(0.234)
Constant	24.40***	26.05***	23.99***	26.30***
	(0.156)	(0.611)	(0.131)	(0.472)
Observations	3818	3717	5271	5015
R <sup>2</sup>	0.000	0.028	0.002	0.022

Standard errors in parentheses; Source: GERPSw1

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$

time other than device within the emigrant sample (Model 2) and within the remigrant sample (Model 4).

Concerning response times, we found a difference between mobile devices and desktop users only in the remigrant sample. Among the remigrant sample, respondents answering the survey on a mobile device took significantly longer than desktop respondents. In practice, this means a 44 s (2.4% longer compared to the mean response time) longer spent on survey completion in the baseline model and 39 s (2.4% compared to the mean response time) longer when other determinants were controlled for. Although the emigrant sample showed similar patterns, among the emigrant sample no significant effect of the survey mode on the completion time of the survey (in the baseline model as well as in the model controlled for respondent related factors) was found. Thus, the results of this study show a slight tendency that the response process takes longer on mobile devices, which is consistent with previous research. However, as suggested by previous studies (Höhne and Schlosser 2018; Schlosser and Mays 2018) these differences are not strong. The effects weakness might be due to the mobile-friendly design used within GERPS. In both the remigrant and emigrant samples only slight differences in response times can be found, and in the emigrant sample (columns 1 and 2) these were not statistically significant. In both cases, the effect of the control variables such as age, gender, or single-person household status were much stronger.

## 17.6 Conclusion

Today an increasing number of online surveys are completed on mobile devices, which brings possible problems of selectivity effects and differences in how the respondents perceive survey burden, both factors that can affect data quality especially in a panel survey such as GERPS. Within GERPS more than one-third of the respondents used a mobile device to answer the questionnaire. Compared to other projects, the frequency is in the upper range, but not surprisingly high. However, having different groups of respondents who navigate through a questionnaire in a completely different way, always comes across with the risk of a selectivity biases and differences in previewed survey burden. Both were reflected by the research questions of this paper.

Concerning selectivity biases due to device use, it can be assumed that after controlling for the commonly investigated determinants of device use, the GERPS samples include only very slightly sociodemographic selectivity bias due to device use. Moreover, concerning differences in response burden, we found only a very small effect of response mode when response burden is measured by overall response time. This was especially the case within the remigrant sample.

Still, future studies should put a stronger emphasis on the difference between the emigrant and remigrant samples concerning the significance of the response time differences to elucidate whether the mobile friendly design had the desired effect of adjusting the response time differences between mobile design and pc use. Contrary

to the expectations based on previous literature, response times did not differ significantly between mobile and desktop device groups in the emigrant sample. Therefore, a more differentiated perspective may help to elucidate the determinants and drivers of this missing difference (Struminskaya et al. 2015). For example, it might be interesting to investigate whether this missing effect is driven by specific patterns of mobile device type usage (smartphone vs. tablet) compared to the emigrant sample or due to better or worse quality of the internet connection abroad compared to within Germany (Schlosser and Mays 2018). A more advanced response time outlier definition, e.g. taking on-device distractions into account, could possibly substantiate the foundation of the results (Höhne and Schlosser 2018; Antoun et al. 2017). In addition, the GERPS sample may also provide a potential opportunity to make cross-national comparisons regarding device use and response time differences of German citizens within different regions of the world.

## References

- Andreadis, I. (2015). Web surveys optimized for smartphones: Are there differences between computer and smartphone users? *Methods, Data, Analyses*, 9(2), 213–228.
- Antoun, C., & Cernat, A. (2019). Factors affecting completion times: A comparative analysis of smartphone and PC web surveys. *Social Science Computer Review*, 38, 477.
- Antoun, C., Couper, M. P., & Conrad, F. G. (2017). Effects of mobile versus PC web on survey response quality: A crossover experiment in a probability web panel. *Public Opinion Quarterly*, 81(S1), 280–306.
- Brockhaus, S., Keusch, F., Henninger, F., Horwitz, R., Kieslich, P., Kreuter, F., and Schierholz, M. (2017). *Learning from mouse movements: Improving web questionnaire and respondents' user experience through passive data collection*. Miami.
- Cook, W. A. (2014). Is mobile a reliable platform for survey taking? Defining quality in online surveys from mobile respondents. *Journal of Advertising Research*, 54(2), 131–148.
- Couper, M. P. (2008). *Designing effective web surveys*. Cambridge: Cambridge University Press.
- Couper, M. P., Antoun, C., & Mavletova, A. (2017). Mobile web surveys: A total survey error perspective. In P. P. Biemer, E. De Leeuw, S. Eckman, B. Edwards, F. Kreuter, L. E. Lyberg, C. Tucker, & B. T. West (Eds.), *Total survey error in practice* (pp. 133–154). Hoboken, NJ: John Wiley & Sons, Inc.
- Couper, M. P., & Peterson, G. J. (2017). Why do web surveys take longer on smartphones? *Social Science Computer Review*, 35(3), 357–377.
- de Bruijne, M., & Wijnant, A. (2013). Comparing survey results obtained via mobile devices and computers: An experiment with a mobile web survey on a heterogeneous group of mobile devices versus a computer-assisted web survey. *Social Science Computer Review*, 31(4), 482–504.
- Décieux, J. P. P., Witte, N., Ette, A., Erlinghagen, M., Guedes Auditor, J., Sander, N., and Schneider, N. (2019). *Individual Consequences of Migration in a Life Course Perspective: Experiences of the First Two Waves of the New German Emigration and Remigration Panel Study (GERPS)*. European Survey Research Association (ESRA) Conference, Zagreb, 2019.
- Décieux, J. P., Heinen, A., & Willems, H. (2018). Social media and its role in friendship-driven interactions among young people: A mixed methods study. *Young*, 27(1), 18–31.
- Décieux, J. P. P., & Hoffmann, M. (2014). Antwortdifferenzen im junk & crime survey: Ein Methodenvergleich mit goffmanscher Interpretation. In M. Löw (Ed.), *Vielfalt und Zusammenhalt: Verhandlungen des 36. Kongresses der Deutschen Gesellschaft für Soziologie in Bochum und Dortmund 2012*. Frankfurt am Main, New York: Campus.

- Diedenhofen, B., & Musch, J. (2017). PageFocus: Using paradata to detect and prevent cheating on online achievement tests. *Behavior Research Methods*, *49*, 1444–1459.
- Durrant, G. B., D'Arrigo, J., & Müller, G. (2013). Modelling call recorded data: Examples from cross-sectional and longitudinal surveys. In F. Kreuter (Ed.), *Improving surveys with paradata. Analytic uses of process information* (pp. 281–308). Hoboken, NJ: John Wiley & Sons.
- Erlinghagen, M., Ette, A., Schneider, N. F., Witte, N., & Décieux, J. P. (2019). Internationale migration zwischen hochentwickelten Staaten und ihre Konsequenzen für den Lebensverlauf. In N. Burzan (Ed.), *Komplexe Dynamiken globaler und lokaler Entwicklungen*. Essen: DGS.
- Erzen, E., Odaci, H., & Yeniçeri, İ. (2019). Phubbing: Which personality traits are prone to phubbing? *Social Science Computer Review*.
- Ette, A., & Erlinghagen, M. (2021). Structures of German Emigration and remigration: Historical developments and demographic patterns. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *Consequences of International Migration across the Life Course: Global Lives of German Migrants*. Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Auditor, J. G., Sander, N., Schneider, N. F., & Witte, N. (2021). Surveying across borders: The experiences of the German emigration and remigration panel study. In M. Erlinghagen, A. Ette, N. F. Schneider, & N. Witte (Eds.), *The global lives of German migrants. Consequences of international migration across the life course*. Cham: Springer.
- Ette, A., Décieux, J. P., Erlinghagen, M., Genoni, A., Auditor, J. G., Knirsch, F., Kühne, S., Mörchen, L., Sand, M., Schneider, N. F., & Witte, N. (2020). *German emigration and remigration panel study (GERPS): Methodology and data manual of the baseline survey (wave 1)*. Wiesbaden: Bundesinstitut für Bevölkerungsforschung.
- Ette, A., & Sauer, L. (2010). Auswanderung aus Deutschland. In *Daten und Analysen zur internationalen Migration deutscher Staatsbürger*. Wiesbaden: VS Verlag.
- Gibson, A. M., & Bowling, N. A. (2020). The effects of questionnaire length and behavioral consequences on careless responding. *European Journal of Psychological Assessment*, *36*, 410–420.
- Groves, R. M., Singer, E., & Corning, A. (2000). Leverage-saliency theory of survey participation: Description and an illustration. *Public Opinion Quarterly*, *64*(3), 299–308.
- Gummer, T., Quöß, F., & Roßmann, J. (2019). Does increasing mobile device coverage reduce heterogeneity in completing web surveys on smartphones? *Social Science Computer Review*, *37*(3), 371–384.
- Gummer, T., & Roßmann, J. (2015). Explaining interview duration in web surveys: A multilevel approach. *Social Science Computer Review*, *33*(2), 217–234.
- Haan, M., Lugtig, P., & Toepoel, V. (2019). Can we predict device use? An investigation into mobile device use in surveys. *International Journal of Social Research Methodology*, *22*(5), 517–531.
- Herzing, J. M. E. (2019). Mobile web surveys. In F. O. R. S. Guide (Ed.), *Swiss Centre of Expertise in the Social Sciences FORS*. Lausanne: FORS.
- Höhne, J. K., & Schlosser, S. (2018). Investigating the adequacy of response time outlier definitions in computer-based web surveys using paradata SurveyFocus. *Social Science Computer Review*, *36*(3), 369–378.
- Jacob, R., Heinz, A., & Décieux, J. P. (2019). *Umfrage: Einführung in die Methoden der Umfrageforschung*. Walter de Gruyter: Oldenburg.
- Kreuter, F. (Ed.). (2013). *Improving surveys with paradata. Analytic uses of process information*. Hoboken, NJ: John Wiley & Sons.
- Lambert, A. D., & Miller, A. L. (2015). Living with smartphones: Does completion device affect survey responses? *Research in Higher Education*, *56*(2), 166–177.
- Lee, H., Kim, S., Couper, M. P., & Woo, Y. (2018). Experimental comparison of PC web, smartphone web, and telephone surveys in the new technology era. *Social Science Computer Review*, *37*(2), 234–247.
- Leiner, D. J. (2019). Too fast, too straight, too weird: Non-reactive indicators for meaningless data in internet surveys. *Survey Research Methods*, *13*(3), 229–248.



- Mancosu, M., Ladini, R., & Vezzoni, C. (2019). 'Short is better'. Evaluating the attentiveness of online respondents through screener questions in a real survey environment. *Bulletin of Sociological Methodology/Bulletin de Méthodologie Sociologique*, 141(1), 30–45.
- Mayerl, J., & Giehl, C. (2018). A closer look at attitude scales with positive and negative items. Response latency perspectives on measurement quality. *Survey Research Methods*, 12(3), 193–209.
- McClain, C. A., Couper, M. P., Hupp, A. L., Keusch, F., Peterson, G. J., Piskorowski, A. D., & West, B. T. (2019). A typology of web survey paradata for assessing total survey error. *Social Science Computer Review*, 37(2), 196–213.
- Mergener, A., & Décieux, J. P. P. (2018). Die “Kunst” des Fragenstellens. In B. Keller, H.-W. Klein, & T. Wirth (Eds.), *Qualität und Data Science in der Marktforschung: Prozesse, Daten und Modelle der Zukunft* (pp. 81–97). Wiesbaden: Springer Fachmedien Wiesbaden.
- Montgomery, J. M., & Rossiter, E. L. (2020). So many questions, so little time: Integrating adaptive inventories into public opinion research. *Journal of Survey Statistics and Methodology*, 8(4), 667–690.
- Peytchev, A. (2009). Survey breakoff. *The Public Opinion Quarterly*, 73(1), 74–97.
- Revilla, M., Toninelli, D., Ochoa, C., & Loewe, G. (2016). Do online access panels need to adapt surveys for mobile devices? *Internet Research*, 26(5), 1209–1227.
- Roßmann, J. (2015). *RSPEEDINDEX: Stata module to compute a response speed index and perform outlier identification*.
- Rolstad, S., Adler, J., & Rydén, A. (2011). Response burden and questionnaire length: Is shorter better? A review and meta-analysis. *Value in Health*, 14(8), 1101–1108.
- Roßmann, J., & Gummer, T. (2016). Using paradata to predict and correct for panel attrition. *Social Science Computer Review*, 34(3), 312–332.
- Roßmann, J., Gummer, T., & Silber, H. (2018). Mitigating satisficing in cognitively demanding grid questions: Evidence from two web-based experiments. *Journal of Survey Statistics and Methodology*, 6(3), 376–400.
- Schlosser, S., & Mays, A. (2018). Mobile and dirty: Does using mobile devices affect the data quality and the response process of online surveys? *Social Science Computer Review*, 36(2), 212–230.
- Schnell, R., Hill, P. B., & Esser, E. (2013). *Methoden der empirischen Sozialforschung* (10th ed.). München: Oldenbourg.
- Sendelbah, A., Vehovar, V., Slavec, A., & Petrovčič, A. (2016). Investigating respondent multitasking in web surveys using paradata. *Computers in Human Behavior*, 55, 777–787.
- Stieger, S., & Reips, U.-D. (2010). What are participants doing while filling in an online questionnaire: a paradata collection tool and an empirical study. *Computers in Human Behavior*, 26(6), 1488–1495.
- Struminskaya, B., Weyandt, K., & Bosnjak, M. (2015). The effects of questionnaire completion using mobile devices on data quality. Evidence from a probability-based general population panel. *Methods, Data, Analyses*, 9(2), 261–292.
- Thulin, E. (2018). Always on my mind: How smartphones are transforming social contact among young swedes. *Young*, 26(5), 465–483.
- Tourangeau, R., Rips, L. J., & Rasinski, K. (2000). *The psychology of survey response*. Cambridge: Cambridge University Press.
- Turkle, S. (2017). *Alone together: Why we expect more from technology and less from each other*. New York: Basic Books.
- Verbree, A.-R., Toepoel, V., & Perada, D. (2019). The effect of seriousness and device use on data quality. *Social Science Computer Review*, 38, 720.
- Villar, A., Callegaro, M., & Yang, Y. (2013). Where am I? A meta-analysis of experiments on the effects of progress indicators for web surveys. *Social Science Computer Review*, 31(6), 744–762.
- Ward, M. K., & Meade, A. W. (2018). Applying social psychology to prevent careless responding during online surveys. *Applied Psychology*, 67(2), 231–263.

- Wenz, A., Jäckle, A., & Couper, M. P. (2019). Willingness to use mobile technologies for data collection in a probability household panel. *Survey Research Methods*, *12*(1), 1–22.
- Yan, T., & Olson, K. (2013). Analyzing paradata to investigate measurement error. In F. Kreuter (Ed.), *Improving surveys with paradata. Analytic uses of process information* (pp. 73–96). Hoboken, NJ: John Wiley & Sons.
- Zwarun, L., & Hall, A. (2014). What's going on? Age, distraction, and multitasking during online survey taking. *Computers in Human Behavior*, *41*, 236–244.

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