

# Chapter 14

## Emigration, Friends, and Social Integration: The Determinants and Development of Friendship Network Size After Arrival



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### 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 ≤16	20.5%	17.2%
Couple with children >16	12.1%	0.9%
Couple with children (≤ 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	
$R^2$	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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