

Sallam, Hend

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## Holding the door slightly open: Germany's migrants' return intentions and realizations

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# Holding the door slightly open: Germany's migrants' return intentions and realizations

Hend Sallam

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German Socio-Economic Panel (SOEP)

DIW Berlin

Mohrenstrasse 58

10117 Berlin, Germany

Contact: [soeppapers@diw.de](mailto:soeppapers@diw.de)



# Holding the door slightly open: Germany’s migrants’ return intentions and realizations

Hend Sallam \*

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## Abstract

Return migration intentions are complex and are not necessarily followed by future return migration. Our study compares successful return or repeated migration with self-declared return intentions. We take advantage of the latest German Socio-Economic Panel survey dropout studies and fieldwork to observe a wider return migration window than reported in the literature to answer the question of whether return migration intentions eventually coincided with actual emigration behaviors. We also examine the validity of return migration estimates. This paper explores whether return intentions eventually materialize, whether they can eventually predict actual return behaviors, and if the determinants of actual and predicted return based on intentions are similar. Overall, our results support that migration intentions can predict actual return behavior. While our results show discrepancies in the predictors of return intentions and actual returns, they show emigration intentions as good predictors of actual future emigration. Moreover, we find that life satisfaction significantly impacts the individual intention to remigrate.

**JEL: F22, J61, I31**

**Keywords** return and repeat migration, emigration, self-selection, intentions and realizations, West Germany

## 1 Introduction

Germany is attempting to attract new labor to sustain its public finance amid increasing labor shortages. An equally important goal is to ensure that incoming migration flows do not eventually leave. However, most migrants spend only episodes of their lives in their host countries. Thus, not all people who migrate remain abroad (Bansak et al., 2021). Some migrants’ stays in the destination countries align with their initial stay plans, while for others, it might not necessarily

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\* Humboldt-Universität zu Berlin, [hend.sallam@hu-berlin.de](mailto:hend.sallam@hu-berlin.de)

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be the case. A crucial question is whether immigrants stay in the host countries and for how long. Two fundamental points related to return migration include the timing when immigrants departed the host country and how substantial was the share of returnees (outmigration rate). A wide knowledge gap concerns estimates of outmigration and how to differentiate between temporary and permanent migrants. Studies often rely on return intentions for such classifications. Disregarding the probability of return migration has meant that policies pertaining to the status of migrants, whether advocated or actually practiced, appear to have possibly erred not only in extent but also in direction (Galor and Stark, 1990). Commonly, the probability of return migration is not considered over time. Therefore, a major concern arising when measuring the impact of inward migration is that the impact of outward migration is often ignored (*see, e.g., Rowthorn, 2008*).

This analysis contributes to the return migration literature and is relevant to policymakers, particularly because new data are necessary to understand better the behaviors of migrant workers regarding their settlement or remigration. Moreover, new data are more generally needed to link remigration intentions with actual behaviors (Wanner, 2021), especially given that return migration is becoming more explicit (*see e.g., Wahba, 2015, also see Figure A4*). A large body of empirical research on return migration sheds light on different limitations to analyze the topic in detail (*see e.g., Constant and Massey, 2002; Reagan and Olsen, 2000; Wahba, 2021*). Moreover, limitations of the data available on return migration for comprehensive analysis are often cited in the existing literature (*e.g., Borjas and Bratsberg, 1996; Constant, 2020; Wahba, 2021, 2015; Wanner, 2021*). For example, analyzing such a topic based on national registers or survey data is challenging. As Borjas and Bratsberg (1996) discussed, no direct measures are found in Census-type data on the skill composition of return migration flows. In addition, return migration is not clearly understood because data that track immigrants across national boundaries are scarce (Reagan and Olsen, 2000). Among the limitations of studying return migration is the gap in the knowledge of the exact size of return migration and who returns and who does not (Wahba, 2021).

Little is known even today about emigration patterns, including knowledge of returnees' demographics (*see e.g., Borjas and Bratsberg, 1996; Constant and Massey, 2002*). Moreover, return migration is difficult to measure, which is one of the main constraints to studying emigration. Evidently, research on recent returns or repeated migration from Germany is scarce or limited. Return migration is a challenging research area and is sometimes not fully understood because of several data availability constraints impede analysis of the topic. For example, migrant outflow records might be undocumented (*see e.g., Erlinghagen, 2016*). Despite the German register requiring the person to de-register when leaving the host country, this might not happen. Also, data on these outflows are sometimes missing.<sup>1</sup>

Data unavailability poses itself as one of the major challenges for analyzing return migration topics.<sup>2</sup> This data unavailability exists despite member states' obligations to report the data sources used to Eurostat and provide the data to ensure statistical information completeness. All these reasons necessitate that both destination and source countries collect better data and statistics on return migration (*see Wahba, 2015*). To fill part of this research gap and improve the information on return migration behaviors and magnitude, we examine whether the return has eventually

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<sup>1</sup> For example, the Enforcement of the Immigration Legislation metadata information "EIL," which is collected by German Authorities in compliance with regulations on Community Statistics on Migration and International Protection, lacks information on outflows.

<sup>2</sup> For example, sometimes data are unavailable on third-country nationals who effectively returned to a third country (by type of return and citizenship) and third-country nationals who returned to a third country (by the destination country and citizenship). For this point, *see, e.g., [https://ec.europa.eu/eurostat/cache/metadata/EN/migr\\_eil\\_esqrs.de.htm](https://ec.europa.eu/eurostat/cache/metadata/EN/migr_eil_esqrs.de.htm)*

materialized, which will be checked against declared return intentions in the empirical part of this paper. Nevertheless, several data limitations exist in answering this question for recent migrants, which we subsequently address in the limitations section.

Our analysis is based on the German Socio-Economic Panel (SOEP) survey data and, in particular, panel attrition data related to reasons for moving abroad. This paper analyzes how the intention to return collected in the first wave (1984) is related to (a) subjective well-being and (b) actual return migration at years  $t + x$  (1985–2017). Also of interest is how substantial the outmigration is over a lengthy return window. Overall, our analysis contributes to the return migration literature. First, we attempt to understand the dynamics of return behavior by adding new evidence to how return intentions could signal actual future return decisions. Furthermore, this analysis sheds light on the relationship of return migration with subjective well-being and predicts the statistical probability of return or repeat migration to infer migrants’ selectivity (e.g., skill selection), which is crucial for many factors (e.g., assimilation, fiscal estimates). To the best of our knowledge, this is the first article that compares intended and realized return migration propensities for migrants in Germany over an extended observed return window.

This paper proceeds as follows: Section 2 provides the background, and Section 3 reviews the literature related to return intentions versus realizations, and the link between return migration and life satisfaction. Section 4 covers our empirical approach in this work and explores the association between return migration intentions, realizations, and life satisfaction. Section 5 presents descriptive results of return migration realizations and empirically tests whether return migration intentions can predict actual future return behaviors. Finally, Section 6 concludes the paper.

## 2 Background

Although the door for migration has never been completely shut in the United States, it has been only partially opened in varying degrees (Marcelli et al., 1998). In the EU, it was argued in the past that short-term migration seemed to be the only channel to open the door slightly, given the tight EU policies (Dustmann, 1996). Nevertheless, the slightly open door for Germany’s temporary labor migration has ended up being left open or partly open, unintentionally, or due to what has been considered a short-sighted policy for Germany’s guest-workers. The temporary nature of labor migration, seen as a haven in times of high demand for labor, could not be controlled for longer. Although the guest-worker system was planned to be only temporary, subsequent family arrivals and longer stays followed.<sup>3</sup>

Labor migration, which has contributed to Europe’s post-war economic development, was always intended to be temporary by the sending and receiving countries and, at least initially, by the migrants themselves (cf. Dustmann, 1996). It was disseminated that guest-workers should not overstay their welcome (Miller, 1981). The rotation principle’s basic assumption establishes that guest-workers would be mainly willing to accumulate savings and return afterward (Dustmann, 1996; Steiner and Velling, 1992; *see also* Galor and Stark, 1990, for the link between return migration and migrants’ savings). The expectation was that guest-workers came mainly to improve their living conditions and earn money (*see e.g.*, Reimann and Reimann, 1979). Nevertheless, the rotation principle, which seemed to be an insurance against the long stays of guest workers, ceased or failed

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<sup>3</sup> After all, the belief that guest-workers would be eventually returning home after their stays has been labeled the “myth of return” (Miller, 1981; Böhning, 1981), the “guests who did not go home,” or “the guest who stayed for dinner” (Mihajlovic, 1988).

to function after 1973 (*see e.g.*, Bansak et al., 2021; Schierup et al., 2006, for Germany’s guest-worker programs). Another issue was that a large rotating stock of foreign migrant workers might have created difficult social and administrative problems (Rowthorn, 2008).

One factor that might have worked against this rotation assumption is the 1973 ban on further labor recruitment, known as Anwerbestopp, which had deficiencies that unintentionally paved the way for forming stabilized or permanent immigrant minorities. The policy motivated the guest-workers who had already arrived to remain and bring their families. At the same time, bringing their families and stabilizing them was not easy either because the entry of dependents was discouraged during that time (Castles, 1986).

The guest-worker system has played a vital role in Europe and the Middle East and was expected to assume a significant role in the future in the United States and other economies (*see* Djajic, 1989). Part of the literature highlighted that using guest-worker programs might be more appealing, particularly with worries about the fiscal and social costs of immigration (Vargas-Silva, 2015). Such programs might be more palatable because the populist reaction seems to preclude continued immigration and settlement and favors new temporary contract-worker systems, which could be described as a revamped guest-worker system (Schierup et al., 2006).

Various uncertainties have affected guest-worker migrants. The period between 1981 and 1989 was characterized by high unpredictability to which guest-workers in Germany were exposed. These uncertainties prevailed amid the inability of migrants to bring their families and stay permanently. In 1982, the foreign population peaked at 4.7 million, of which one-third were Turks (Castles, 1986). Voluntary repatriation policies came into effect with the 1983 “Return Promotion Act” after the xenophobic wave between 1979 and 1982 (Dustmann, 1996; Green, 2001). Several uncertainties characterized guest-worker immigration periods during the 1960s, 1970s, and 1980s. It was evident that several uncertainties, vulnerabilities, and insecurities predominated during these times (*see* Castles, 1986; Castles et al., 1984). Against this background, these factors might have induced either shorter periods of stay in the host country or longer stays in case of more dominant uncertainties in their home countries. The effect of uncertainties might be ambiguous; however, it is likely to increase affected migrants’ desired stays in the host country in the case of more dominant uncertainties in the sending countries.

Guest-workers from politically disrupted areas or those coming to host countries from source countries lagging economically are assumed to be more constrained regarding their return or mobility choices. In this sense, the mobility of some guest-workers groups might not be as extensive as others (e.g., Yugoslav guest-workers). Moreover, highlighting the importance of the economic dimension, other studies found that immigrants tend to return to rich countries, not poor ones, and a key variable determining the outmigration rate is the per-capita GNP in the source country (Borjas and Bratsberg, 1996).

In light of the above discussion, one could expect a strong link between migrants’ subjective well-being and their return intentions, particularly for the refugees of the 1990s who came primarily from war-torn civil regions such as the former Yugoslavia (*see* Eisnecker et al., 2016). Yugoslavs were the second-largest contingent of European foreign workers and came from a country amid economic, social, and political upheaval (Mihajlovic, 1988). For all guest-worker ethnic groups, the deterioration of their labor market conditions was a significant catalyst for making guest-worker stays unwanted. This, in turn, might have paved the way for temporary workers to become new ethnic minorities (*see* Castles, 1986; Schierup et al., 2006).

Hostility, racism, and xenophobia from unemployment were found elsewhere in other countries, such as France (Dustmann, 1996; Green, 2001; van Mol and de Valk, 2016). These factors might

have induced a deterrence effect of restrictive immigration policies that increased when unemployment rates were high (*see* Helbling and Leblang, 2019). Unlike before, Germans’ jobs that had been previously bypassed had become more tempting during high unemployment times. However, it was expected that these positions would quickly be unwanted and rapidly be left out of natives’ pools of choices as soon as the economy prospered again (Dustmann, 1996; Mihajlovic, 1988). This dynamic is especially due to the rare acceptance of most nationals of low-paid, unskilled, and hazardous jobs, which likely explains why migrants’ specific sectoral employment distribution is shaped by jobs that would mostly be left to migrants (Eurofound, 2007). It was, however, expected that the demand for such jobs would drop again once the market and economic conditions improved.

Several anti-guest workers’ sentiments were echoed in the 1983 election theme “send them back home and give their jobs to unemployed Germans.” (Mihajlovic, 1988). The labor market segmentation was argued to be a product of a discriminatory guest-worker policy (Castles, 1986). However, unemployment should not necessarily be used as an argument against immigration. Jobs that were seen as unattractive for natives before economic slowdowns would be abandoned as soon as the economy recovered and natives had access to more alternatives (*see* Dustmann, 1996; Mihajlovic, 1988).

## 3 Literature review

### 3.1 Return intentions vs. realizations

Return migration and propensities of Germany’s guest-workers have been investigated in the literature (Constant and Massey, 2001; Dustmann, 1996, 2003a; Schmidt, 1994; Waldorf, 1995), showing that return propensities had decreased over time (Schmidt, 1994). Although guest-workers were never meant to settle, after labor recruitment was suspended in 1973, most migrant workers stayed on (cf. Castles, 1986). One reason behind their stays might be the ensuing family reunion, which stabilized and demographically normalized the immigrant population (Schierup et al., 2006). Despite the various existing studies on guest-workers’ return propensities, their return over an extended return span has not been observed.

Many European governments launched return programs in the past through financial incentives. These programs started in early 1980 and were called the “institutionalized return.” France and Germany followed a more laissez-faire policy, where the migrant determined the length of their stay (Dustmann, 1996).<sup>4</sup> The latter argued that although a substantial number of migrants under the laissez-faire policy had indeed returned, their self-determined return times were not necessarily compatible with the economic and political interests of the host country. For example, the financial incentive program caused the Turks’ outflows from Germany (*see* Riphahn et al., 2013). Nevertheless, in 2019, immigrants represent approximately 16 percent of the German population, and Turks account for approximately 15 percent of all foreigners in Germany (*see* Bansak et al., 2021).

Several studies have emphasized the role of return migration intentions in their analyses (e.g., Schiele, 2021; van Dalen and Henkens, 2013; Waldorf, 1995; Wanner, 2021). A contrasting strand of literature discussed the role of migrants’ return intentions. Return intentions were often used

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<sup>4</sup> Earlier research on guest-workers’ return from Germany by Dustmann (1996) identified 163 individuals who had *possibly* returned if they have stated an intention of return in 1984 and if this intention seems to have been realized over the next nine years (i.e., until 1993). The estimations were based on all-male individuals in the first wave (1984). In his later work, identifying attrition reasons, Dustmann (2003a, 2003b) used attrition information on persons who moved abroad.



as a proxy of actual return. Often debated is whether return intention should necessarily align with actual return realizations. On the one hand, whether intentions eventually materialize, it is often argued that return intentions are complex and are not necessarily followed by an actual return. Moreover, return migrations are subject to life cycle considerations and decisions. A study by Böhning (1981) demonstrated that variations in intentions would not predict each nationality’s actual return rate for West Germany.<sup>5</sup> Schmidt (1994), for example, showed discrepancies between intentions and actual return behaviors (i.e., wrong predictions made by migrants who intended to return but stayed).

On the other hand, some longitudinal studies that explored emigration intentions showed that they are a good predictor of actual future emigration. For example, van Dalen and Henkens (2013) found evidence of the link between intentions to migrate and actual moves. Similarly, Wanner (2021) with a two-year observation window following the stated return intention, found overall that return intentions were a good predictor of behaviors. However, intentions might have reflected migrants’ personal feelings at the time of the survey. Additionally, it was found that the variables influencing intentions and behaviors are almost the same (Wanner, 2021). Other studies have attempted to identify selection in observables among returnees (e.g., Bijwaard and Wahba, 2014). The authors estimated the impact of income earned in the host country on the return migration of labor migrants.

Few studies have compared intentions for future behaviors at an individual level (Wanner, 2021). One of the main highlights is the difficulties in performing such comparisons due to the lack of data that allows comparing behavioral intentions from a longitudinal perspective (*see* Wanner, 2021). Previous analyses on actual return migration and migration intentions have not exploited the SOEP’s *latest* fieldwork and register checks, which offer us a wider return observation window. It, therefore, corrects part of the erroneously coded cases as non-returnees in the previous literature estimates. In this paper, we investigate *who* returned and who stayed and *whether* return intentions materialize; whether temporary migration turned into a permanent one.<sup>6</sup> Such a comparison would enable us to shed light on how return intentions and reality might contradict. The comparison between emigration or return propensities based on intentions and actual return realizations is particularly interesting. Most often, out-migration is identified in survey data based on self-reported migration intentions or measures of sample attrition (Kuhlenkasper and Steinhardt, 2012). Our approach also considers the role of life satisfaction or subjective well-being (SWB) on return migration materializations or intentions. Earlier literature identified SWB as one of the main factors affecting return intentions and may also impact actual future return behaviors.

### 3.2 Return migration and life satisfaction

Previous empirical research shows an established link between return migration or emigration and life satisfaction. Emigration overlaps with one’s SWB, or life satisfaction.<sup>7</sup> This observation applies to first moves or outward migration after arrival in the host countries. Our descriptive results support the nexus between both factors (return migration intentions and SWB). Moreover, earlier literature also lent support to the strong effect of other satisfaction variables, such as satisfaction with job and residence, on return intention probabilities (*see* e.g., Waldorf, 1995).

(Dis)satisfaction impacts emigration decisions throughout different migratory phases. Dissat-

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<sup>5</sup> Reference was given to guest-workers admitted for work between 1961 and 1976.

<sup>6</sup> Temporary migration is defined here based on remigration intentions in the SOEP microdata.

<sup>7</sup> The terms “life satisfaction” and “subjective well-being” are used interchangeably in this paper.

isfaction might stimulate a first move to the host country (i.e., emigration from one’s country of origin to a host country). However, even after arriving in the host country, migrants might reverse their decision, either by returning to their country of origin or proceeding with an onward migration (i.e., to another host country). Migration decisions can be reversed for several reasons, including the migrant’s dissatisfaction with life in the host country. An intended return could signal lower life satisfaction (or a lower satisfaction with the host country) without necessarily being able to transform this emigration decision into action. Accordingly, in this case, an intention to emigrate will only mirror dissatisfaction. As such, return intentions can reflect migrants’ personal feelings at the time of the survey (*see* Wanner, 2021). By contrast, return intentions could also signal the transformation of intent into action through a later movement, that is, the so-called materialized return decision.

Studies have confirmed a strong link between life satisfaction and migration intentions in the destination country (*see*, e.g., Mara and Landesmann, 2013). (Dis)satisfaction can largely affect the migrant’s stay-or-leave decision or intention. A strand of the literature has emphasized this relationship (e.g., Erlinghagen, 2016; Mara and Landesmann, 2013; Otrachshenko and Popova, 2014). Otrachshenko and Popova (2014) analyzed European data and suggested that people dissatisfied with their lives have a greater intention to migrate, whether permanently or temporarily.

Current life satisfaction has often been used as a proxy for subjective well-being. For example, in an analysis of migration intentions, Migali and Scipioni (2018) found that being dissatisfied with one’s standard of living is associated with a higher probability of desiring to move, while the relation with actual migration is less clear. Similarly, Massey and Akresh (2006) argue that a key consideration in deciding whether to stay or return is satisfaction with life in the host country (referring to the United States). A life satisfaction indicator applied in a Steiner and Velling study (1992) showed a significant effect regarding Germany’s guest-workers.<sup>8</sup> Their earlier findings showed that the SWB of the guest-workers in Germany strongly affects their intention to stay.

Another study by Ivlevs (2015) analyzed the first moves of emigration (i.e., from the country of origin), and assessed the link between life satisfaction and emigration intentions. The author’s results suggest a U-shaped association between life satisfaction and emigration intentions: very life-satisfied and very life-unsatisfied people are the most likely to express an intention to move abroad in the following year, while people close to the middle of the life satisfaction distribution are the least likely to do so. Ivlevs aimed to address the endogeneity between the two variables by discussing instrumental variables to correct potential bias. The dependent variable in Ivlev’s study does not capture moves from destination countries (such as addressed in this work) but rather the willingness to migrate from the country of origin. However, both variables should capture similar behavior and moving aspirations. Other results by Shamsuddin and Katsaiti (2019), based on the SOEP survey, identified a negative relationship between individual well-being as a proxy for latent utility and the intention to out-migrate.

Overall, two empirical approaches in the literature seem to be followed in this respect. Some analyses excluded certain factors discussed in the literature as potential factors influencing return migration, such as life satisfaction or “feeling German” because of potential endogeneity (e.g., Sander, 2007). Other studies, by contrast, followed the strategy of controlling for SWB proxies, among other factors, in their analyses (e.g., Shamsuddin and Katsaiti, 2019). The endogeneity issue might occur due to potential simultaneity. Therefore, one should look for instrumental variables, “IVs,” that significantly affect life satisfaction but not migration intention (Mara and Landesmann,

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<sup>8</sup> Steiner and Velling (1992) generated two dummies, good subjective well-being (SWB), and another for bad SWB.

2013). Shamsuddin and Katsaiti (2019) instrumented life satisfaction using the average satisfaction with housework of Germans living in the same region with no migration background.<sup>9</sup> They argue that the average happiness of those living around individuals can affect the individuals' happiness; however, they would not expect the former factor to affect migration/stay intentions of those living around them. Addressing the endogeneity, the authors (2013) allowed for a correlation between life satisfaction in migration and intentions to stay (i.e., allowing for endogenous life satisfaction entering as an explanatory variable on the right-hand side of the migration equation). They instrumented immigrants' life satisfaction with one of the OECD's suggested indicators for well-being (i.e., voting in the local elections); however, no empirical evidence existed related to the impact of this instrument on migrants' preferences to stay or return.

In light of the above literature, this paper tests the following hypotheses: return intentions vs. realizations and return intentions vs. life satisfaction.

**H1:** Whether return intentions can predict actual return behaviors

**H2:** Whether life satisfaction impacts the migrant's intention or actual plan to remigrate

### 3.3 Return migration and fiscal effects

Despite its importance, return migration has not been fully integrated into fiscal calculations with precision. Return migration is a key facet of the fiscal effects of migration that is closely linked to the assessment of those fiscal effects (*see e.g.*, Constant and Massey, 2001; Vargas-Silva, 2015; Wahba, 2015). Moreover, return migration is relevant for policymakers in that it defines migrants' duration of stay in destination countries and affects the host country's incumbent population, and this latter factor affects the fiscal calculations of migration. Empirically, the rate of return migration is also needed for dynamic fiscal analysis because this rate represents one of the fiscal analysis of migration's assumptions (*see also*, Vargas-Silva, 2015). Nevertheless, accounting for return migration is not straightforward but rather complex because only the start of the temporary migration episode might be observed but not necessarily its end.

The determinants affecting the migrant's duration of stay and when and why migrants return are crucial for several reasons. First, knowledge of the determinants of migrants' durations of stay is vital for forecasting. Return migration estimates help predict actual migration and future migration flows. Therefore, return migration affects the current and long-term public finances and helps dynamically model long-term public finance and anticipate future economic trends. Second, monitoring who continues living in a host country and who leaves will help in understanding whether the turnover is influenced by selectivity (for instance, labor market or societal integration or being exposed to discrimination). Equally important, selective outmigration may bias various estimates, such as assimilation estimates (*see* Bansak et al., 2021). Also, return decisions might offer better insight into the behavior of migrants and welfare state effects (*see, e.g.*, Schuss, 2016). Consequently, accounting for return migration improves calculations of the fiscal impacts of immigration (Constant and Massey, 2001). Despite these advantages, studies have only recently started explicitly inputting these costs and benefits in fiscal terms (*see, e.g.*, Vargas-Silva, 2015, referring to migrant-sending countries). Data limitations on return migration pose a major challenge and might explain why forecasting future return migration rates is intractable.

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<sup>9</sup> Their region definition is, however, unclear whether they refer to municipalities, districts, or else. They explain that the average regional satisfaction of the German-born with housework is calculated by averaging the satisfaction with the amount of housework reported by those with no migration background living in the same region as the migrants in a given year.

## 4 Empirical approach

### 4.1 The SOEP sample

This study uses SOEP survey data to analyze how the intention to return collected in the first wave (1984) is related to (a) subjective well-being, and (b) actual return migration at years  $(t + x)$  (1985–2017).

The SOEP survey began in 1984 and was based on a representative sample of the resident German population. The 1984 survey consisted of two initial samples: West Germany’s resident population and selected groups of foreigners (*see* SOEP). Although our initial aim was to inspect the return of recent migrants, this objective encountered a limitation of unavailable data to cover recent migrant cohorts to compare their intentions with actual returns. This paper analyzes return intentions and realizations based on the SOEP first wave, which covers foreign guest workers, also known as sample B. This sample surveys foreigners in the Federal Republic of Germany ”FRG.” It consists of individuals in private households with a Turkish, Greek, Yugoslavian, Spanish, or Italian household head, who in 1984 constituted the main group of foreigners in the FRG (Table 1). Sample B included 1,393 households in the first wave (*see* SOEP). The sample consists of 3175 individuals. Our analyzed sample, the first wave of the SOEP panel, represented migrants to West Germany until 1984.

The first goal of this paper is to identify migrant returnees. One way to assess whether return intentions materialize is to identify those who had *moved abroad* by checking their status in national registers (*see* Kroh et al., 2021). To analyze return migration, we thus take advantage of the available SOEP information using the register-based dropout studies and the SOEP fieldwork information provided by the interviewer that identifies survey attritors living or moving abroad. These studies draw on official register data and allow us to determine whether a person is still living in Germany, is deceased, or has moved abroad since the last SOEP interview. All available information can be reported on the pre-and post-survey history of all persons who have ever been a member of a SOEP household (Kroh et al., 2021). Moving abroad is one of the listed reasons for the panel attrition. Therefore, the SOEP survey offers a better understanding of the factors influencing both intentions and actual behaviors. Moreover, SOEP reveals factors explaining the mismatch between the two dimensions, as tested by Wanner (2021), for example.

Following Dustmann (2003a or 2003b), who used information on moving abroad to identify return migration, we use *panel attrition* information because this category indicates that the person had already emigrated. ”Returnees” in this paper refers to persons who were part of a SOEP HH who were identified as having moved abroad directly afterward.<sup>10</sup> We focus on returnees following their SOEP survey participation. In particular, returnees are observed returnee individuals who had moved abroad *directly* following the spell of SOEP-participation starting in 1984 (*see* Table A7).<sup>11</sup>

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<sup>10</sup> To be clear, we use the following Stata code to define attrition based on the spell type: `gen attrition = spelltyp if spelltyp[_n - 1] == 2 pid == pid[_n - 1]`

<sup>11</sup> Our returnee identification is similar to that of Erlinghagen (2016) in that a person is considered to have emigrated when he or she had moved abroad and could not be reached in Germany to participate in further SOEP surveys, regardless of how long the individual was actually staying abroad.

## 4.2 Sample descriptives

Table 1 reports our sample characteristics and displays its composition. The descriptive results on return realizations using the years  $(t + x)$  are presented in Section 5.1.2. Descriptive results in Table 1 show a high share of reported return intentions that characterize this sample: 71% of the surveyed guest-workers (3001 persons) declared return intentions. Moreover, the subsamples had not expressed lengthy planned stays except for minor Yugoslav cases. However, the 10-year intended stay period has been cited quite frequently (more than one-fifth of the sample).

Most of the sample are household heads, and about half of the sample under analysis are males. The sample consists of 1,681 males and 1,494 female guest-workers, and is characterized by low school qualifications (i.e., visits or degrees). Immigrants in this sample are categorized according to their countries of origin. Five main groups are listed: Turks, Greeks, Yugoslavs, Spaniards, and Italians, and these countries of origin accounted for about three-quarters of the foreigners in Germany in 1984. About 39% of our sample respondents had visited compulsory schools with degrees. In comparison, slightly less than one-third (31%) had attended compulsory school without a degree. Moreover, most respondents had not visited a school in Germany. Only around 20% reported that they had acquired a school leaving degree from a German school at the survey time.

## 4.3 Empirical Strategy

Our regression sample is constrained to the same age restriction (individuals aged between 20–54) as in Dustmann’s (1996) analysis but is not limited to male guest-workers. We study the effects of SWB and return emigration intentions of individual  $i$  (guest-worker) at year  $(t = 1984)$  on actual future return at year  $(t + x)$  where  $x$  could range from 1–33 years as our observed return span is between 1985–2017. The first goal is verifying whether return intentions could be good predictors of future return behaviors. Once the return is intended, the successful return may take the probability of  $\pi_i \in [0, 1]$ . Second, we investigate the role of SWB on return intentions and actual future return propensity.

$$\begin{aligned} \text{Return intentions}_{i,1984} = & \delta_0 + \delta_1 \text{SWB}_{i,1984} + \delta_2(\text{individual controls}_{i,1984}) + \\ & \delta_3(\text{ethnic group dummies}_i) + \delta_4(\text{state dummies}_i) + \text{unobserved error term} \end{aligned} \quad (1)$$

$$\begin{aligned} \text{Actual return}_{i,t+x} = & \delta_0 + \delta_1 \text{SWB}_{i,1984} + \delta_2(\text{individual controls}_{i,1984}) + \delta_3(\text{ethnic group dummies}_i) \\ & \delta_4(\text{state dummies}_i) + \delta_5(\text{return intention}_{i,1984}) + \text{unobserved error term} \end{aligned} \quad (2)$$

To do so, we estimate models including current life satisfaction “SWB” as a predictor. The latter is defined on an 11-point scale from zero “completely dissatisfied” to ten “completely satisfied”. Life satisfaction has been measured annually since 1984. A coefficient  $\delta_1$  is different than zero might imply that one’s life satisfaction affects return decisions or intentions. Additionally, our actual return model accounts for declared return intentions in the first survey year, which is one of our parameters of interest ( $\delta_5$ ).

Regarding return intentions, the SOEP survey includes a question on the stay plans or the return intentions; this is “plans to return to the native country.” In Eq.1, return intentions as the outcome variable take 0: planning to stay in Germany (answer 3 of the SOEP Question) and 1: I intend to return within the next 12 months or / after a few years.

Table 1: Summary statistics of the 1984 SOEP wave (entire sample)

<b>Variable</b>	<b>Obs</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>
Years in Germany	2,855	13.65989	5.540662	0	34
Age at entry	2,855	23.52364	10.19003	0	67
School visited in Germany	3,162	0.260595	0.439029	0	1
Education (ISCED)	3,114	2.16185	1.091454	0	6
Years of education	3,051	8.946903	1.599528	7	18
Number of children	3,175	1.365984	1.285213	0	7
Actual return	3,175	.264252	.4410035	0	1
Intended return	3,001	.7134289	.4522348	0	1
Years of planned stay	1,635	7.355963	6.551969	0	99
<b>German (spoken)</b>					
Very good	3,048	0.143373	0.35051	0	1
Good	3,048	0.287074	0.45247	0	1
Relatively bad	3,048	0.17979	0.384076	0	1
Not at all	3,048	0.044291	0.205775	0	1
<b>Dummies</b>					
Working full-time	3,169	0.594194	0.491125	0	1
Inactive	3,169	0.264121	0.440934	0	1
Unemployed	3,169	0.057431	0.232702	0	1
Unemployed in the past	3,152	0.248096	0.431977	0	1
Male	3,169	0.52982	0.499189	0	1
Married	3,169	0.762701	0.425494	0	1
Spouse abroad	2,406	0.047797	0.213381	0	1
Parent abroad	3,167	0.044206	0.205585	0	1
Child abroad	3,047	0.107319	0.309569	0	1
Disability	3,162	0.036053	0.186452	0	1
<b>Relation to the HH head</b>					
Head	3,175	.4387402	.4963112	0	1
Partner	3,175	.3508661	.4773163	0	1
Child	3,175	.1855118	.3887734	0	1
Relative	3,175	.0214173	.1447937	0	1
Non-relative	3,175	.0034646	.0587678	0	1
<b>Sample</b>					
Turks	3,175	0.323465	0.467872	0	1
Yugoslavs	3,175	0.180158	0.384379	0	1
Greeks	3,175	0.147087	0.354248	0	1
Italians	3,175	0.211024	0.408099	0	1
Spaniards	3,175	.1382677	.3452351	0	1

A large and well-established literature analyzed return migration based on intentions. Among the early return analyses based on the SOEP data are those conducted by Dustmann (1996) or (2003a, 2003b), who conducted empirical analyses of Germany’s return behavior and policies by investigating return migration intentions and realizations. Dustmann’s (1996) or (2003a) is closely linked to our analysis. The author (1996) examined in a first step return intentions based on a longitudinal scope by pooling data for the available SOEP 10 waves (1984 – 1993). Furthermore, return realizations were investigated in the second part of the analysis.<sup>12</sup> Our paper observes emigrants beyond this previously observed return span until the survey year 2018.

#### 4.3.1 Estimation using binary probit and ordinary least squares regression

First, five regression models based on return intentions and actual return are estimated in the regression section (Section 5.2). The first three estimated models are probit models to predict return propensities based on actual return behaviors. The second and third models include the covariates of the previously declared return intention ( $t=1984$ ) and the log of years of planned stay for temporary stayers (those who intend to remain in Germany only temporarily), respectively. The fourth is a probit model where the dependent variable is the first survey year declared return intentions. Model 5 is our last estimated model for the log of planned stay (in years) in an ordinary least squares (OLS) estimation conditional on return migration. The question on the length of migrants’ prospective stay is only asked to those who intend to leave Germany in the years following the survey. Empirically, Model 2 is estimated by Eq.2, and Model 4 is estimated by Eq. 1.

A binary variable of intended return is generated to capture what might be described as temporary migration or, rather more precisely, the existence of temporary stay intentions (i.e., return intention = 1 if a desired permanent stay in the host country is eliminated). As discussed, we estimate one model based on return intentions as the outcome variable (Model 4). Return intentions and realizations are also evaluated across the different guest-workers ethnic groups to compare their return propensities based on the two dimensions.

The motivation for the covariates included in our analysis is largely drawn from previous studies on this topic. The following variables to analyze the determinants of return migration are included in our models; a set of variables testing the effect of demographics, integration level, and subjective well-being, among others, on (a) materialized future return migration and (b) the desire to return to one’s country of origin. The explanatory variables included in our models cover personal characteristics and human capital variables; for example, age at entry, residence years in Germany, education, language proficiency, labor force status dummies, variables describing the family environment of the migrant, and nationality, as well as controlling for gender. The job status-related indicators ”labor force status” dummies include unemployment, not being in the labor force, and working full-time. Another dummy variable indicates whether the person was registered unemployed during the last ten years. Moreover, the ethnic group or country of origin dummies should capture these sending countries’ economic, cultural, and institutional differences. To avoid small sample sizes in the actual return models, which includes the log of planned stay variable and when this latter variable is the outcome variable, we plug in a log planned stay of  $\log(100)$  for those who were planning to stay permanently in Germany, to reduce the number of missings.<sup>13</sup> In all our estimated models, as discussed above, the effect of SWB proxied by current life satisfaction is additionally tested. In this research, SWB and declared return intentions are the main variables of

<sup>12</sup> Additionally, parts of his analysis shed light on the 1984 wave separately.

<sup>13</sup> We owe this suggestion to Govert Bijwaard.

interest. And the models are estimated for individuals aged 20-54 years to allow comparison with earlier results of Dustmann (1996).

#### 4.4 Data limitations

The SOEP data is suitable for a return migration analysis based on intentions but only partly suitable for investigating actual return. One drawback of the data to inspect actual future returns is that no recent register-based dropout studies have been completed. The last SOEP dropout study was conducted in 2008 to identify panel attrition until 2006. Nevertheless, in SOEP’s last two dropout studies (i.e., 2006, 2008), either there is no information about emigration, or emigration is insufficiently captured. The latest SOEP dropout study in which emigration was covered sufficiently was conducted in 2001. This latter study covers the SOEP panel attritors between 1984 and 1998, which urges the need to conduct a recent one to allow for more studies to explain returnees’ behaviors and motivations and to estimate outmigration rates, especially for recent migrant cohorts, which is extensively constrained by this limitation.<sup>14</sup> Consequently, our analysis was confined to guest-workers because of this limitation. Another constraint is that return to the country of origin cannot be distinguished from a repeated migration spell. For simplicity, we denote these cases as returnees and assume that moving out of Germany and living abroad indicates a migrant’s return, although they might refer to repeated migration.

Furthermore, our estimates of actual returns are understated. One explanation is that they are based on survey attrition data, and there is no possibility of identifying all returnees, even through national registers. Not all returnees would necessarily de-register themselves from national registers before departing their destination countries. Furthermore, the attrition status could also be unavailable for all survey respondents who stopped participating (e.g., due to data missings in the attrition status variable). A further limitation relates to the inability to infer survey respondents’ voting behavior in the host country based on the SOEP data, which could generally be beneficial in exploring the nexus between life satisfaction and return migration. Potential endogeneity suggests using an econometric correction such as instrumental variable estimation or an “IV approach.” However, finding good candidates for instruments that correlate only with the individual’s SWB but not with stay or return intention is challenging.<sup>15</sup> Hence, this is considered one of our study’s limitations, especially because it deals with the first wave of the SOEP survey.<sup>16</sup>

Lastly, one cannot exclude the possibility that some survey respondents provided answers regarding their intentions that were influenced by their legally permitted stay rather than their personal desires (Wanner, 2021). The policy restrictions’ effect on migrants’ willingness to stay in the host country is ambiguous because individuals might report their eligible stay lengths or signal (un)satisfaction through their intended stay durations or decisions. Generally, the link between migration controls or restrictive migration policies and return propensities is not clearly understood.<sup>17</sup>

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<sup>14</sup> This aligns with Wahba’s (2015) suggestion that there is a need for better data and statistics on return migration.

<sup>15</sup> One candidate might be one’s satisfaction with household work, provided in the SOEP survey but not since it first started.

<sup>16</sup> We note, however, that we find no strong correlation between return intention and life satisfaction in the same year (or the following two years, see Table A8).

<sup>17</sup> One of the discussion points is whether migration controls have affected migrants’ return propensities. To illustrate, if the migrant is not certain about being allowed back into the host country, his propensity to return to his country of origin will obviously decline (see Dustmann, 1996). Therefore, one could not rule out that migration policies might have unintentionally diminished incumbent migrants’ return propensities (i.e., intensified their stay incentives), which could be seen as return migration incentive reversal. The effect of how such policy controls affect actual or intended returns is still somewhat ambiguous.



## 5 Results

### 5.1 Descriptive results

#### 5.1.1 Return intentions and life satisfaction

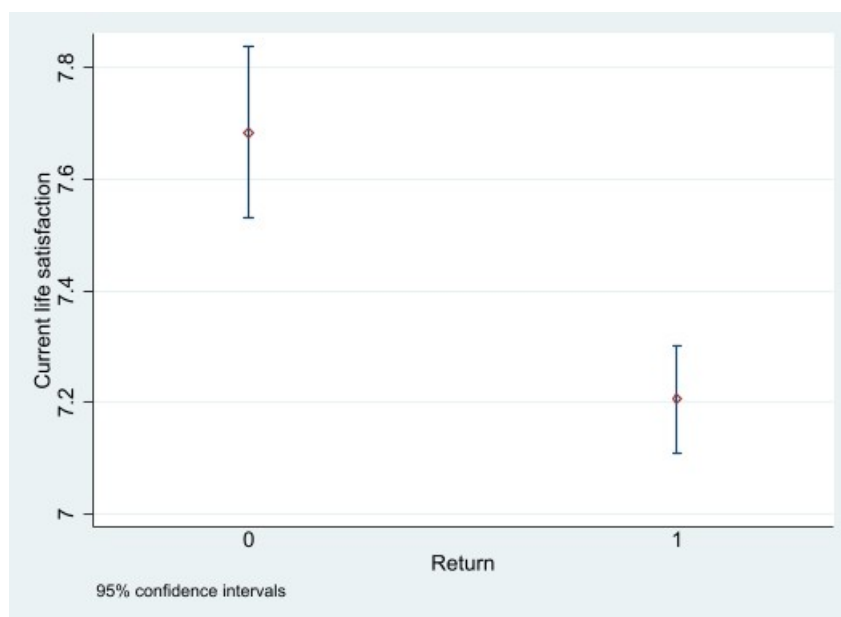


Figure 1: Confidence intervals of current life satisfaction "SWB" and return *intentions* in 1984

Figure 1 shows the 95% confidence intervals of current life satisfaction and the stay/return intention based on the first SOEP survey wave without country distinctions. Overall, a comparison between those migrants who intended to return and those who intended to stay shows no overlap between stayers and returnees according to their declared return intentions in the first survey year; the difference between the two groups is, therefore, significant.

Consistent with the theoretical expectation set in Ch. 3, our descriptive results support the existence of a strong connection between return plans and life satisfaction. Next, Figure 2 shows the interplay between migrants' return intentions and current life satisfaction, distinguished by guest-workers ethnic groups. The figure shows the nexus between the average life satisfaction of those intending to stay temporarily versus those who plan to stay permanently in the host country. It shows that, on average, current life satisfaction (estimated at  $t = 1984$ ) appears to be lower among the returnee group who intends to return to their countries of origin. Remarkably, Turks were overall unhappy irrespective of their return intention and this group showed the lowest mean of overall current life satisfaction across the different ethnic migrant groups. Moreover, our descriptive results suggest that the majority of Turks intended to leave Germany, and this group showed the lowest mean of SWB simultaneously (*see* Table A4, Fig.A3). These latter findings could be understood in light of what we discussed in the background section. Unlike other ethnic guest-workers, drastic cultural and religious differences existed between Turkey and Germany for

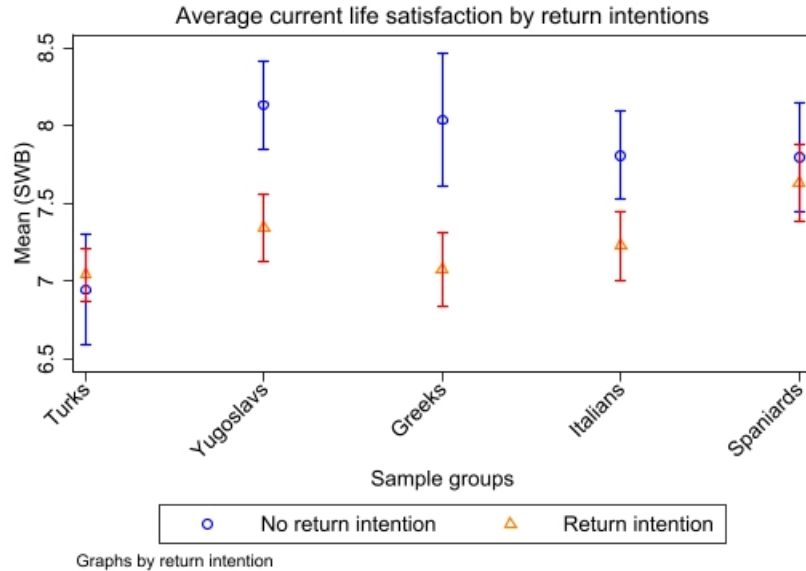


Figure 2: Average life satisfaction for German ethnic groups by return *intentions* with confidence intervals (CIs)

Turkish guest-workers, which were not as severe for most other European countries (*see* Merkle and Zimmermann, 1992). Furthermore, earlier research found that Turks had higher savings and remittances than other immigrants (compared to Italian, Greek, Spanish, and Yugoslav household heads). That explained it Turks faced more institutional pressure to return to their home country. By contrast, others discussed how the Italians and the Greeks were more easily accepted than the Turks.

Figure 3 plots the kernel density estimate of current life satisfaction by the intention to return/stay. The Kernel densities by intention to return do not show large differences between groups, but rather a more volatile density of those with an intention to return. Overall, Figure 3 – in addition to the two figures below in Figure 4– share two similarities with the figures of an earlier study by Shamsuddin and Katsaiti (2019); their analysis was for migrant groups surveyed between (1996-2010). The first similarity is that it is observed that the lower end of the distribution has few observations. Second, we find that those with higher life satisfaction were more inclined not to declare a return intention than those who intended to depart from Germany.<sup>18</sup>

<sup>18</sup> Kernel density estimate of life satisfaction levels across the different groups when restricted to the actual returnees group compared with when it does not look almost similar. (i.e., those living abroad *see* Figure A1, *compared to* Figure 3). The comparison shows that the shape of the figure does not change significantly. Only the pattern at the lower end of life satisfaction becomes more salient when limited to the returnees group, and shows return intentions to be of higher density.

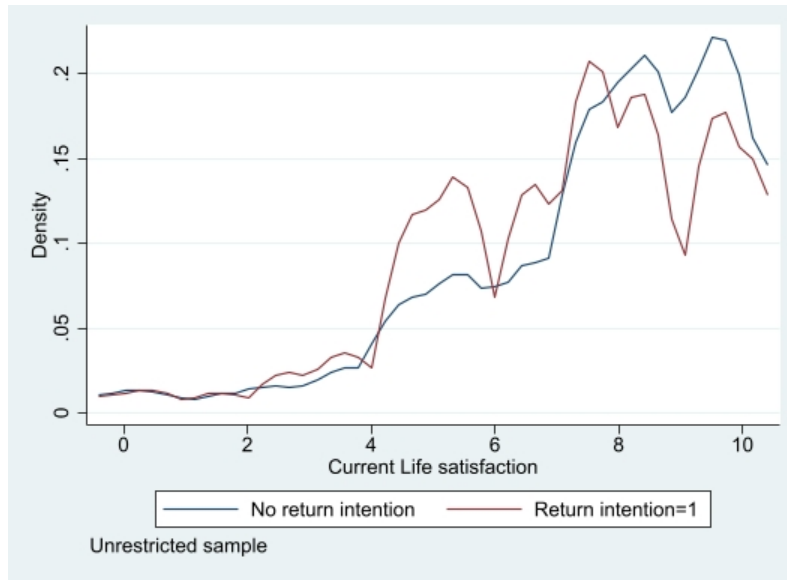


Figure 3: Kernel density estimate of current life satisfaction by the *intention* to return/stay - first survey wave

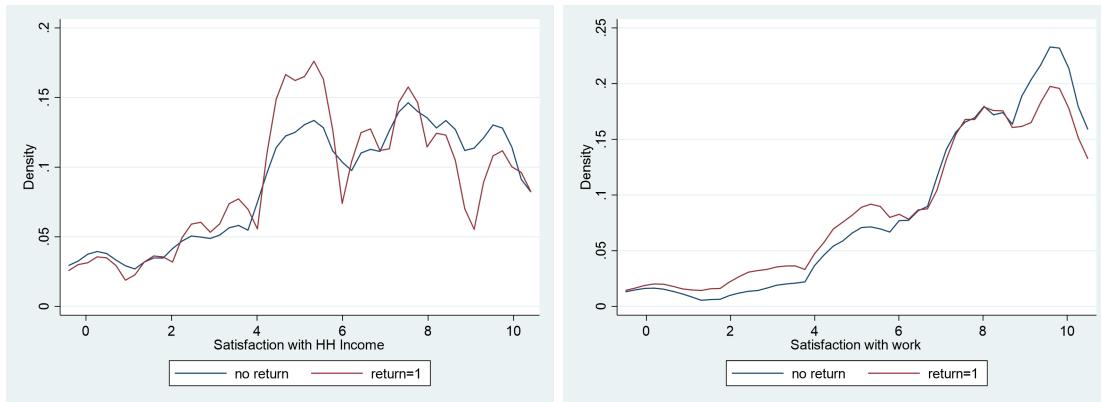


Figure 4: Kernel density estimate of satisfaction with household income and work by the *intention* to return/stay- first survey wave

There are different life domains such as satisfaction with life or job. The effect of the various satisfaction domains on return intention propensities was investigated earlier by Waldorf (1995), showing the significance of one’s satisfaction with work. Recently, Shamsuddin and Katsaiti (2019) estimated kernel density estimates of different SWB domains by migrants’ intention to stay. Figure 4 shows the kernel density estimates of the different domains of satisfaction by stay and return intentions. In all graphs above, higher life satisfaction is associated with higher stay intentions per our expectations and in light of the discussed literature on the nexus between the two dimensions.

### 5.1.2 Return realizations

As discussed, our results are based on tracing only the first wave to check whether return migration intentions eventually materialized and are inferred from the SOEP fieldwork and register studies (1992 and 2001 dropout studies).<sup>19</sup> The latter dropout study identifies panel attritors between 1985 and 1998. We found that most attrition results on those living abroad are remarkably deduced based on the SOEP fieldwork (*see* Table A1). Moreover, the variable that measures actual return over the life course of the panel might be censored.<sup>20</sup> The cases identified as living abroad in our underlying sample were mostly right-censored.<sup>21</sup> Therefore, this censored variable leads to an understatement of cases that remigrated. A substantial share, about 26% of our sample, represented an actual return to the home country or, more precisely, outmigration; namely 839 observations out of 3175.

Table 2 compares return intentions and actual return behaviors in the subsequent years (over our observed return window). The table shows two interesting results.<sup>22</sup> First, some divergence is seen between migrants' declared intentions and actual returns. Around 68% of those who stayed in Germany until 2017 had previously expressed a return intention (in 1984). Second, nevertheless, 82% of those who returned within our return observation window had already expressed a previous return intention in 1984. Furthermore, some shifts are evident in the stay plans. For example, when a stay intention transforms into a materialized return, only 18% of those who returned had originally expressed stay intentions in the host country; this is not a substantial percentage of deviation between return intentions and materialized returns. On average, an estimated four migrants in five who had departed the destination country (actual departures observed beyond 30 years of arrival)<sup>23</sup> had originally expressed return intentions in the past. Regarding the return realization rate of intended emigrations, 34% of those who had intended to emigrate in the past had emigrated within our observed 33-year follow-up period.<sup>24</sup>

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<sup>19</sup> Only a few cases were identified by the register studies of 1992 and 2001 (7 and 11 cases, respectively). The remaining cases (821) were identified to have left Germany by the SOEP fieldwork, which resulted in a total of 839 individuals living abroad (*see* Table A1). The later SOEP version v.36 shows slight differences (840 moved abroad cases).

<sup>20</sup> See Kroh et al. (2021) and Dustmann (2003a) for this.

<sup>21</sup> They mostly fall under the category "no information after SOEP," and a few minor cases were marked as "not censored."

<sup>22</sup> Check also, Table A9 for the results of guest-workers' return intentions cross-tabulations as reported in the first wave of the SOEP panel and their return intentions one year *before* their overseas moves.

<sup>23</sup> Our actual return observation window is between 1985 and 2017.

<sup>24</sup> Our inspection window is longer than this of van Dalen and Henkens (2008), who found that 34% of those who had declared an intention to emigrate actually did so within the 5-year follow-up period, which they interpreted as a relatively high percentage.

Table 2: Intended vs. actual return

Intended return (1984)	Actual return bet. 1985–2017 <sup>1</sup> (SOEP Fieldwork + Register data)		
	No	Yes	Total
<b>No</b>	613	145	758
Col. %	32.14	17.77	27.84
Row %	80.87	19.13	
<b>Yes</b>	1294	671	1965
Col. %	67.86	82.23	72.16
Row %	65.85	34.15	
<b>Total</b>	1907	816	2723

*Notes:* The above results are for the entire sample (SOEP wave 1) without any sample restrictions.

Table 3 compares actual vs. intended return estimates only for *male* respondents between the age of 20 and 54. Hence, it updates earlier literature’s estimates and is provided for comparison reasons. It shows that slightly less than one-third (31%) of those who envisaged a return in 1984 had indeed returned, according to the latest attrition information in 2017; *see* the second row), which is almost double the estimate reported previously by Dustmann (1996) (17%). However, these results are likely to understate the true extent of return (*see* e.g., Dustmann’s study’s limitations).<sup>25</sup>

Table 3: Replication of Table 2 only for male respondents aged 20–54

Return intended	Return realized				Total
	No		Yes		
	SOEP Fieldwork + Register data	D.	SOEP Fieldwork + Register data	D.	
<b>No</b>	292 (24.5%)	372 (30.5%)	66 (5.5%)	41 (3.4%)	
<b>Yes</b>	575 (48.2%)	667 (54.6%)	260 (21.8%)	140 (11.5%)	
<b>Total</b>	867		326		1193

*Notes:* All %s are shown relative to the cell total, only for males aged between 20 and 54, a replication of Table 3 in Dustmann (1996, p. 234). In his paper, return is measured in 1984 and is realized if the individual returned until 1998. D. refers to Dustmann’s results (1996) for 1984 - 1993 (1220 total observations). Our paper’s observed return window covers the survey waves 1984-2018. Total cases (1193) refer to the total of cross-tabulations of our study. Source: SOEP, v.(35), own calculations.

## 5.2 Return propensities regression results

Our regression results are summarized in this section. In this section, we estimate a series of multivariate regression models to analyze migrants’ self-selections and the predictors of actual return behaviors. Table 4 compares return intentions at the first survey wave ( $t = 1984$ ) with actual return behaviors in the subsequent years based on the SOEP panel attrition. The table

<sup>25</sup> For comparative actual returnee estimates previously estimated, one could refer, for instance, to Dustmann (2003a) or van den Berg and Weynandt (2012)/(2013). Hence, this paper additionally uses the same sample restrictions for a proper comparison with the former study’s estimates (*see* Table A3). We are, however, not fully certain about the methodology these studies followed for merging the spell data information from the SOEP.

depicts our regression results of the five estimated models described above (*see* Section 4.3.1). We interpret the results of Model (2) as the preferred probit model for actual return.

One finding is that previously declared return intentions in the first wave strongly predict actual future return migration probability. A declared return intention increases the probability of future emigration by 17.3 percentage points at a 1% significance level. Like van Dalen and Henkens (2013), or Wanner (2021) who showed emigration intentions to be a good predictor of actual future emigration, return intentions in the past can predict actual future returns based on the SOEP’s first wave results.

Repatriation programs based on incentive schemes to induce migrants to return finally might affect the well-being of the migrant positively or negatively (*see* Dustmann, 1996). In our findings, while current life satisfaction appears insignificant in the actual return models, it is highly significant in return intention models. This result means increasing life satisfaction by one point on the scale from 0 to 10 is associated with a 0.02 decrease in return intentions (*see* Model 4), and the effect is highly significant at a 1% significance level. The significance of the SWB covariate aligns with the previous empirical results emphasizing the link between satisfaction or current life satisfaction “SWB” and return intentions (e.g., Mara and Landesmann, 2013; Migali and Scipioni, 2018; Otrachshenko and Popova, 2014; Steiner and Velling, 1992; Waldorf, 1995 for guest-workers, in Germany, among others). At the same time, the SWB being insignificant in actual return models might be because it refers to the surveyed year ( $t = 1984$ ). Several years might have separated the measurement time of SWB and when the actual return behavior occurred.

Models 1 through 4 show that the probability of return migration decreases the more years the individual spends in Germany (i.e., the longer their stays are). This finding shows that the duration of stay in the host country positively affects the stay propensities holding all other variables constant, which aligns with a strand of the literature (cf., Brecht, 1994; Constant and Massey, 2003, among others). The effect is significant only in Model 4. At the same time, for temporary stayers, migrants’ duration of stay in Germany positively affects the remaining prospective period a person envisages spending in Germany, keeping years of residence constant.

The nationality dummies results are twofold. First, they show divergent return propensities across the various groups. This result was similarly found by Dustmann and Weiss (2007), who showed a substantial variation in return propensities across immigrants from different countries of origin. Second, when intentions are compared to return materializations, both dimensions show divergence within the same group. For example, Turkish guest-workers showed the highest return propensities when assessing the propensity to return by nationality and based on the intention model (*see* Model 4). This result aligns with what we discussed above regarding Turks’ conditions in Germany.

As Bansak et al. (2021) argued, both origin and destination countries care about whether return migrants are positively or negatively selected among immigrants in the destination. This is because there are policy implications associated with selective out-migration. Regarding return migration selectivity, we find that people with no German skills were less likely to actually depart from Germany (compared to those with a fair spoken German level). The return flow appears to have had a better German language skill composition, and the effect is strongly significant ( $-0.165$ , Model 2). Theoretically, Borjas and Bratsberg (1996) noted that if the immigrant flow is positively selected, the out-migrants will be less skilled (on average) than the immigrants who remain in the host country. Unlike census-type data, we could directly test this theoretical selectivity prediction because our analysis is based on microdata. In that we have the opposite case of them being negatively selected, returnees tend to be the best of the worst (*see* e.g., Constant and Massey, 2003). Moreover,

our results cannot support or refute selectivity based on education as the education coefficients appear insignificant in models predicting future emigration based on intentions or actual return. Similarly, the coefficients of the employment variables do not significantly affect the inclination to move abroad and depart from Germany.

Table 4 presents some significant predictors of future return. Among these are age at entry, number of children, having a spouse abroad, and lack of German speaking skills (compared to a fair German language level). Our results show that age at entry, for example, strongly impacts actual future return. A 10-year increase in the age at entry to Germany increases the probability of actual return by 11 percentage points (using column 2 specification), all else equal. Furthermore, children affect return migration in several ways. Results show that having more children, for example, induces more years of stay for those who intend to return, and the effect is highly significant. Our results are compatible with (Dustmann, 2003a) in that the number of children is associated with a reduced return propensity, all else equal. This finding holds in our return intention or realization models, and the coefficient is highly significant.

A family member living abroad is expected to affect actual and intended return behaviors. All the family member abroad respective covariates have a positive propensity on actual return materializations (spouse abroad, parent abroad, and child abroad, *see* the first three columns). Similarly, a positive return propensity for each variable is predicted based on migrants' declared return intentions. Unsurprisingly, having a child abroad negatively affects the remaining period spent in the host country for those who intend to return (Model 5) and increases the return propensity. The effect is positively significant based on the return intention model (Model 4). Thus, we find that having a family member living abroad positively affects return propensities (whether related to intentions or actual return models) irrespective of the significance level, and negatively impact the remaining period planned to be spent in Germany, which is expected. This result is consistent with Wanner's (2021) finding that migrants' choices to stay in the host country or leave were thus influenced by rational elements such as family constraints.

Finally, regarding the various groups' return intentions, Turkish guest-workers showed the highest return propensities when assessing the propensity to return by nationality. The result is in the context of intentions. In contrast, the opposite seems true for Yugoslavs. Despite insignificance, this latter group has shown the lowest relative propensity to leave. Moreover, the nationality dummies show divergent intentions across the different groups. As previously discussed, the dummies are assumed to capture the economic and cultural variations across the sending countries. For those who intended to return, the nationality differences dummies seem to have a strong significant effect for the Turkish and the Greek guest-workers on the length of stay or stay propensity in Germany compared to Spaniards (i.e., the reference group), *ceteris paribus*. This reference group is the same as (Dustmann, 2003a, 1996). Compared with their Spaniard counterparts, Yugoslavs have shown the lowest probability of intended return (highest propensity to stay in Germany); however, this effect is insignificant in the probit model. The OLS results for the Greek guest-workers show significantly negative results on the remaining intended stay length compared to their Spaniard counterparts.

Overall, our results suggest that migrants anticipating a positive return probability may actually depart the host country following their declared return intentions in the subsequent years. Moreover, the results shed light on the relation of return migration with migrants' subjective well-being.

Table 4: Regression results of return intentions *and* realizations

	Actual return in year ( $t + x$ )			Return intentions	Log planned stay
	Probit			OLS	
	1	2	3	4	5
Life satisfaction (1984)	-0.004	-0.002	-0.001	-0.020***	0.061**
Return <i>intention</i> (1984)		0.173***			
Log of planned stay			-0.044***		
<b>Other controls</b>					
Years of schooling	-0.019	-0.013	0	-0.029	0.054
Male	-0.034	-0.03	-0.036	-0.034	0.118
Number of children	-0.064***	-0.061***	-0.054***	-0.031**	0.136***
Spouse abroad	0.156**	0.151**	0.133*	0.048	-0.192
Parent abroad	0.052	0.037	0.062	0.083	-0.29
Child abroad	0.052	0.04	0.022	0.107**	-0.285*
Disability	-0.117	-0.124*	-0.133*	-0.016	0.015
Years in Germany	-0.002	-0.001	-0.002	-0.008***	0.029***
Age at entry	0.011***	0.011***	0.013***	0.002	-0.021**
School visited in Germany	-0.047	-0.057	-0.029	0.024	-0.218
<b>Education ISCED (ref. in school)</b>					
General elementary	0.067	0.055	0.048	0.068	-0.14
Middle vocational	0.047	0.038	0.02	0.051	0.034
Vocational + Abitur	0.104	0.108	0.06	-0.032	0.255
Higher vocational	0.051	0.027	0.159	0.048	-0.138
Higher educational	0.226	0.199	0.135	0.123	-0.245
<b>Spoken German (ref. fair level)</b>					
Very good	-0.07	-0.054	-0.083	-0.107	0.33
Good	-0.018	-0.012	-0.011	-0.036	0.084
Relatively bad	-0.019	-0.021	0.001	-0.003	-0.046
Not at all	-0.164***	-0.165***	-0.154***	0	0.103
<b>Labor-force status dummies</b>					
Working full-time	-0.009	-0.003	-0.008	-0.065	0.15
Inactive	0.03	0.049	0.008	-0.135*	0.464*
Unemployed	0.055	0.054	-0.064	0.024	-0.09
Registered unemployed in the past	0.034	0.029	0.053	0.014	-0.174
<b>Subsamples (ref. Spaniards)</b>					
Turks	-0.138**	-0.159***	-0.211***	0.104**	-0.608***
Yugoslavs	-0.273***	-0.277***	-0.251***	-0.047	0.017
Greeks	-0.038	-0.055	-0.06	0.088*	-0.497***
Italians	-0.065	-0.071	-0.059	0.027	-0.077
Constant					1.624*
N	1585	1585	1342	1585	1342

Notes: Marginal effects (MEs) estimated from binary probit estimations on return probabilities are calculated at sample means. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . The same age specification applies; results are for guest-workers aged between 20-54 years old. Robust standard errors were used for the OLS regression (Model 5). All estimations include state-of-residence dummies that are not reported here. Source: Own calculations based on the SOEP, v.(35), wave 1.



### 5.3 Robustness checks

This paper’s empirical results are also robust when the analysis is restricted only to male guest-workers. They still confirm return intentions to predict actual future return behaviors positively, and the effect remains highly significant. (*see* Table A6).

As an additional robustness check, rather than including SWB and return intentions as surveyed in 1984, we include a one-year lag of both variables before migrants depart from Germany (i.e., before they move abroad).<sup>26</sup> The year when the living abroad spell began in the SOEP survey is used as a proxy for the emigration year ( $t$ ) - after the person was interviewed in the SOEP. We are interested in the effect of the declared return intentions and SWB one year before emigration happens ( $t - 1$ ). Figure 5 displays the mean of SWB of the entire returnee sample by emigration years. Overall, we have 836 observations with a mean lagged life satisfaction before departure of 6.8.

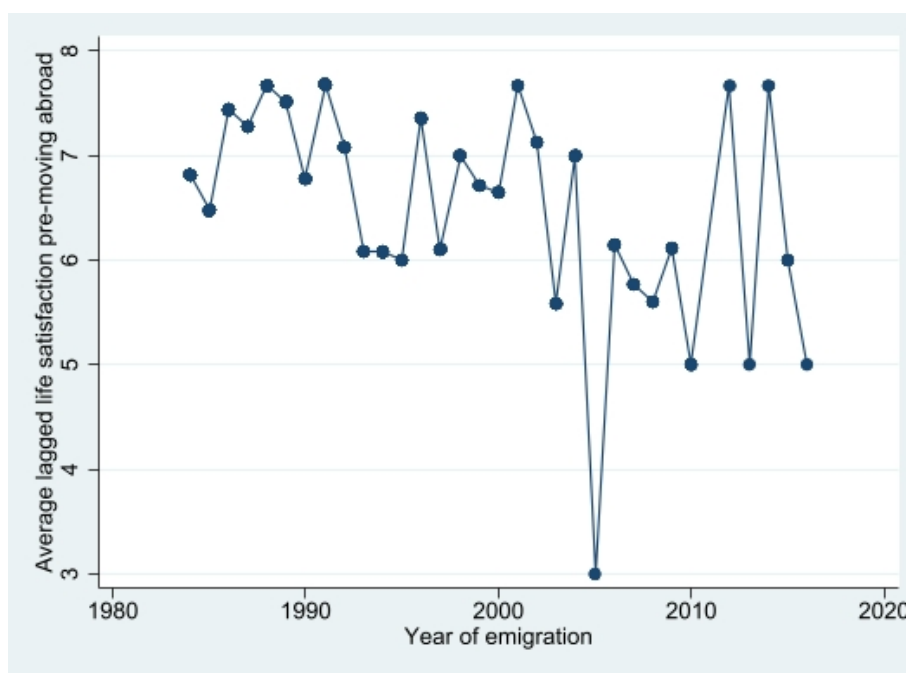


Figure 5: Means of one-year-lagged life satisfaction by year of emigration

One remarkable finding is that most returnees could speculate about their prospective moves or departures from Germany one year ahead. Our results in Table 5 show that about 90% of returnees who declared their intentions to remain temporarily in Germany had emigrated the following year (after reporting their last return intentions in their last SOEP survey participation).

<sup>26</sup> For working with the SOEP spell data, one suggestion is to refer to the do-files by Hamjediers et al. (2018).

Table 5: Cross-tabulation of cases who moved abroad and lagged return intentions before their moves

Actual return	One-year lagged return intention before departure		Total
	0	1	
<b>0</b>	29	59	88
	32.95	67.05	100.00
	34.12	10.24	13.31
<b>1</b>	56	517	573
	9.77	90.23	100.00
	65.88	89.76	86.69
<b>Total</b>	85	576	661
	12.86	87.14	100.00

Methodologically, it would be useful to include in surveys a question on migrants' satisfaction with the host country to disentangle both dimensions; general life satisfaction and satisfaction with the host country. In our univariate regression models, both the one-year-lagged SWB and the lag of declared return intention preceding departure are highly significant (*see* Table 6, Models 1 and 2) without controlling for observables. These models are shown for reference. It was argued earlier that there needs to be a clear conception of whether and how life satisfaction develops before emigration (Erlinghagen, 2016).

Repeated migration might be induced either by better opportunities or frustrated return decisions; thus, there are two expectations for the lagged SWB sign on actual return in this regard. One expectation is that persons who move abroad relocate to hunt better economic or social gains, which could be described as the "happy moves." Alternatively, migrants dissatisfied with the host country or those with unmet expectations are the ones who end up departing the host country. Either group reflect temporary migration with a contrasting SWB effect.

Table 6: Univariate regressions of the effect of migrants' lagged intentions to return to native country and their lagged life satisfaction before moving abroad on actual return migration decisions/emigration

Variable	Mod1	Mod2	Mod3
Lagged return (lreturn)	0.200***		0.199***
Lagged life satisfaction (ls)		0.030***	0.003
N	384	567	383

Notes: \* p<0.05; \*\* p<0.01; \*\*\* p<0.001.

## 6 Discussion and Conclusion

Many of the return migration work based their analyses on return migration intentions because of several data limitations. There has been, however, no consensus on whether return intentions could serve as proxies of or could signal actual future return behaviors. Thus, first, regarding our tested hypothesis of whether return intentions can predict actual future return, our findings related to Germany’s guest-workers show discrepancies between the return determinants based on return intentions and actual return models. However, they also show return intentions as good predictors of return or remigration behaviors; return intentions predict actual future returns significantly and positively. Over an extended return window, our findings confirmed that return intentions are good predictors of future emigration, consistent with earlier literature findings on this topic (e.g., van Dalen and Henkens, 2008; Wanner, 2021). Our results are based on the SOEP fieldwork and the register dropout studies to identify the whereabouts of panel attritors where such information lends itself to migration, particularly emigration research.

This article argues that there is an established link between migrants’ SWB and their return probability based on their intentions to remigrate. Our research provides empirical evidence of the impact of life satisfaction on individuals’ intentions to remigrate, which confirms the findings of Otrachshenko and Popova (2014), for example. Overall, our results show that current life satisfaction “SWB” estimated in the first survey year is a significant negative predictor of intended emigration propensities. After controlling for different observable factors, our results support that people with higher SWB are less likely to declare an intention to depart from the host country. Moreover, our descriptive results showed that life satisfaction is always lower on average among the groups who declared a return or remigration intention. We interpret our findings as indicative of the importance of migrants’ SWB. As such, one important policy-making tool is to ensure the better well-being of migrants in the host countries.

Second, a considerable share of survey respondents realized their declared return intentions. Based on the SOEP first wave results, we find that a reported return intention precedes 82% of actual returns (emigration). Moreover, around one-third (31%) of male guest-workers who envisaged a return in 1984 had indeed returned, double the figure previously estimated by Dustmann (1996). Nonetheless, these figures drawn on the SOEP panel attrition remain understated. Overall, our results underscore the importance of migrants’ declared return intentions.

Finally, tracing migrants over time to analyze returnees’ behaviors is a promising research avenue because information on return migration remains extensively limited, and information on outflow characteristics is scarce. Despite data limitations, this paper exploited the German SOEP panel attrition data on returnees as captured by the SOEP. Various factors that impact return migration were analyzed, including comparing intentions and actual return behaviors to see the extent of divergence in the results and whether intentions can be used as a proxy of actual future returns. A similar analysis for the recent migrant cohorts is needed. Nevertheless, based on German survey data, the constraint still applies that the German SOEP data is not yet extended to cover emigration beyond 1998 based on national register checks for tracing returnees or outmigrants. Due to this limitation, most return analyses based on the German SOEP survey are confined to analyzing the return behavior of early migrants to Germany. New register dropout studies should follow to fill the gap in knowledge about emigration or return migration. Official data should offer new possibilities for tracking returnees and link data on migrant outflows with their demographics. Without this latter information, incorporating valid, recent, or precise return migration estimates into fiscal calculations remains challenging.

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## Conflicts of interest

The author declares no known conflicts of interest.

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## A Appendix

### A.1 Examples of microdata options to work on return migration

#### 1. The SOEP

There are two possibilities, but they both have their own problems, making the data only partially suitable for assessing return migration.<sup>27</sup>

The first option is using Sample M1–M5, where individuals surveyed are asked once in the MIGSPELL data about their migration experience. Each Spell is a move that can be used to track how often people move back or to other places. However, the default is that they end up in Germany, where they are accepted into the SOEP. As soon as they return home, the SOEP loses them from its scope (non-responsive over the years).

Another option is analyzing the non-response in the gross data and possibly looking at the reasons for leaving the SOEP (panel attrition). In the yearly gross data of individuals, the SOEP documents up to 29 different reasons for non-response; some of these reasons lead to final dropout (deceased, moved abroad, explicit refusal), whereas other non-respondents are contacted the following year again, according to the tracking rules. A similar approach

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<sup>27</sup> We thank the SOEP team for suggestions on various possibilities to analyze return migration based on the SOEP data.

has been applied by Dustmann (2003b), who analyzed, using the SOEP, people who moved abroad within an observation window of 14 years (1985–1997). This latter analysis of return migrations was limited to male immigrants (288 cases); however, it reduced to 173 observations for estimating regressions of the total completed migration duration due to missing data. Also, Schuss (2016) analyzed return migration using a cox hazard model (317 cases).

2. The LFS

Another way is to work with the EU-LFS data, which provide quarterly and annual data from 35 participating countries. Depending on the labor status of the people surveyed (employed, unemployed, economically inactive), different variables are collected. Using LFS data, for example, Dustmann and Weiss (2007) analyzed return migration theory and empirical evidence.

Table A1: Tabulation of attrition information

Origin of spell information	Attrition				
	Living in Germany	Living Abroad	Deceased	Gap	Total
[1] SOEP Survey	0 0.00	0 0.00	5 3.18	0 0.00	5 0.16
[2] SOEP Fieldwork	867 42.73	821 97.85	140 89.17	0 0.00	1828 60.21
[3] Study 1992	32 1.58	7 0.83	0 0.00	0 0.00	39 1.2
[4] Study 2001	574 28.29	11 1.31	8 5.10	0 0.00	593 19.53
[5] Study 2006	5 0.25	0 0.00	0 0.00	0 0.00	5 0.16
[6] Study 2008	551 27.16	0 0.00	4 2.55	0 0.00	555 18.28
[7] No info	0 0.00	0 0.00	0 0.00	11 100.00	11 0.36
<b>Total</b>	2029 100.00	839 100.00	157 100.00	11 100.00	3036 100.00

\* *Notes:* The first row has frequencies and the second row has column percentages.



Table A2: Return realization frequency

<b>Return Year</b>	<b>85</b>	<b>86</b>	<b>87</b>	<b>88</b>	<b>89</b>	<b>90</b>	<b>91</b>	<b>92</b>	<b>93</b>	<b>94</b>	<b>95</b>
Freq.	173	66	64	70	50	33	23	29	28	36	26
%	20.62	7.87	7.63	8.34	5.96	3.93	2.74	3.46	3.34	4.29	3.10
<b>Return Year</b>	<b>96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>
Freq.	27	18	18	22	16	22	9	11	17	9	2
%	3.22	2.15	2.15	2.62	1.91	2.62	1.07	1.31	2.03	1.07	0.24
<b>Return Year</b>	<b>07</b>	<b>08</b>	<b>09</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
Freq.	10	14	9	9	9	4	4	1	5	4	1
%	1.19	1.67	1.07	1.07	1.07	0.48	0.48	0.12	0.60	0.48	0.12

\* *Notes:* Source: SOEP (v.35), own calculations.

Table A3: Return intentions vs. realizations for a restricted sample

<b>Return intended</b>	<b>Return realized</b>				<b>Total</b>
	<b>No</b>		<b>Yes</b>		
	<b>SOEP Fieldwork + Register data</b>	<b>D.</b>	<b>SOEP Fieldwork + Register data</b>	<b>D.</b>	
<b>No</b>	435 (32.10%)	665 (30.37%)	109 (16.47%)	98 (15.91%)	
<b>Yes</b>	920 (67.90%)	1525 (69.63%)	553 (83.53%)	518 (84.09%)	
<b>Total</b>	1355	2190	662	616	2,017

*Notes:* Results are restricted to migrants who were at least 18 years old when they entered the country. D. refers to Dustmann's (2003a, p.821) results shown in Table 2 with 2806 observations. We assume Table 2 in Dustmann (2003a) followed the above-specified sample restriction. While the divergence in percentages is not high, the discrete numbers imply a more pronounced variation. Source: SOEP, own calculations.

Table A4: Stay and return intentions by the sample group

<b>Return intention</b>	<b>Sample</b>					<b>Total</b>
	<b>Turks</b>	<b>Yugoslavs</b>	<b>Greeks</b>	<b>Italians</b>	<b>Spaniards</b>	
Return within the next 12 months	85	11	18	48	27	189
%	44.97	5.82	9.52	25.40	14.29	100.00
Stay for a few years	685	336	329	363	239	1,952
%	35.09	17.21	16.85	18.60	12.24	100.00
Stay forever in Germany	227	207	106	188	132	860
%	26.40	24.07	12.33	21.86	15.35	100.00
Total	997	554	453	599	398	3,001
%	33.22	18.46	15.09	19.96	13.26	100.00

\* *Notes:* The first row has frequencies, and the second has row percentages. Source: SOEP (v.35), own calculations.

Table A5: Descriptive statistics of the estimated probit regression sample (N= 1,585)

<b>Variable</b>	<b>Mean</b>	<b>Std. dev.</b>	<b>Min</b>	<b>Max</b>
Actual return	.3179811	.4658391	0	1
Return intention	.7520505	.4319587	0	1
Life satisfaction (t=1984)	7.304.732	2.23152	0	10
Years in Germany	1.445.552	5.398.695	0	32
Age at entry	29.14	6.716	20	54
School visited outside Germany	.0214511	.1449283	0	1
Years of schooling	864.795	152.826	7	18
Male	.5747634	.4945349	0	1
Number of children	1.389274	1.331158	0	7
Disability	.0479495	.2137269	0	1
<b>Education</b>				
General elementary	.2801262	.4492024	0	1
Middle vocational	.2567823	.4369962	0	1
Vocational + Abitur	.0422713	.2012709	0	1
Higher vocational	.0031546	.0560946	0	1
Higher educational	.0283912	.1661401	0	1
<b>Family abroad</b>				
Spouse abroad	.0574132	.232704	0	1
Parent abroad	.0403785	.1969076	0	1
Child abroad	.1457413	.3529581	0	1
<b>German language</b>				
Very good	.0529968	.2240979	0	1
Good	.2365931	.4251245	0	1
Relatively bad	.2561514	.4366442	0	1
Not at all	.0561514	.2302866	0	1
<b>Employment status dummies</b>				
Working full-time	.6769716	.467781	0	1
Inactive	.2347003	.4239451	0	1
Unemployed	.0498423	.2176877	0	1
Registered unemployed in the past	.2365931	.4251245	0	1
<b>Sample</b>				
Turks	.3274448	.4694292	0	1
Yugoslavs	.2277603	.4195194	0	1
Greeks	.1533123	.360402	0	1
Italians	.1652997	.371568	0	1

Table A6: Regression results of return intentions *and* realizations for *male* guest-workers

	1	2	3	4	5
Current life satisfaction (1984)	0	0.003	0.006	-0.025	0.081**
Return intention (1984)		0.183***			
Log planned stay			-0.047***		
<b>Other controls</b>					
Years of schooling	-0.047	-0.041	-0.029	-0.029	0.045
Number of children	-0.050***	-0.048**	-0.038*	-0.029	0.122**
Spouse abroad	0.203***	0.196**	0.169**	0.061	-0.191
Parent abroad	0.106	0.09	0.146	0.106	-0.396
Child abroad	0.052	0.042	0.049	0.094	-0.252
Disability	-0.150*	-0.162*	-0.169*	0.003	0.013
Years in Germany	-0.003	-0.002	0	-0.006	0.023*
Age at entry	0.013***	0.013***	0.015***	0.005	-0.032***
School visited in Germany	-0.061	-0.076	0	0.063	-0.395
<b>Education ISCED (ref. in school)</b>					
General elementary	0.157*	0.140*	0.143*	0.126	-0.336
Middle vocational	0.144	0.134	0.121	0.084	-0.086
Vocational + Abitur	0.186	0.198	0.179	-0.011	0.159
Higher vocational	0.214	0.189	0.343	0.051	-0.152
Higher educational	0.283	0.257	0.243	0.109	-0.12
<b>Spoken German (ref. fair level)</b>					
Very good	-0.089	-0.064	-0.098	-0.133	0.397
Good	-0.025	-0.012	0.006	-0.062	0.195
Relatively bad	-0.055	-0.05	-0.012	-0.036	0.053
Not at all	-0.179*	-0.173*	-0.087	-0.078	0.119
<b>Labor-force status dummies</b>					
Working full-time	-0.164	-0.141	-0.136	-1.24	0.415
Inactive	-0.025	0.03	-0.012	-1.375	1.069**
Unemployed	-0.023	-0.004	-0.07	-1.145	0.206
Registered unemployed in the past	-0.026	-0.023	-0.001	-0.062	0.075
<b>Subsamples (ref. Spaniards)</b>					
Turks	-0.173**	-0.197**	-0.233***	0.103	-0.590**
Yugoslavs	-0.313***	-0.326***	-0.291***	-0.01	-0.07
Greeks	-0.071	-0.096	-0.083	0.113	-0.576**
Italians	-0.111	-0.121	-0.094	0.031	-0.083
Constant					1.980*
N	911	911	783	911	783

Notes: Marginal effects were estimated from probit models at sample means. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$ . The same age specification applies as in Table 4; the results are shown for guest-workers aged between 20-54 years old. Robust standard errors were used for the OLS regression (Model 5). All estimations include state-of-residence dummies that are not reported here. MEs are calculated at sample means. Source: Own calculations based on the SOEP, v.(35), wave 1.

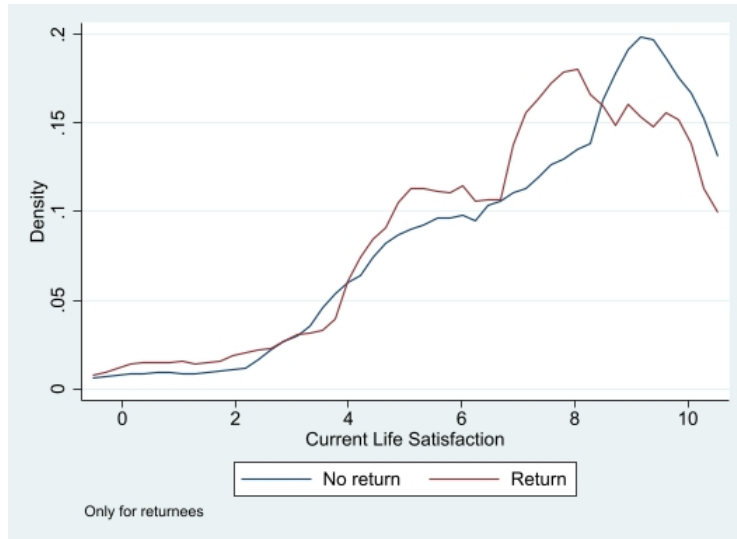


Figure A1: Kernel density estimate of current life satisfaction (first survey wave) by the *intention* to return/stay only for the returnee group

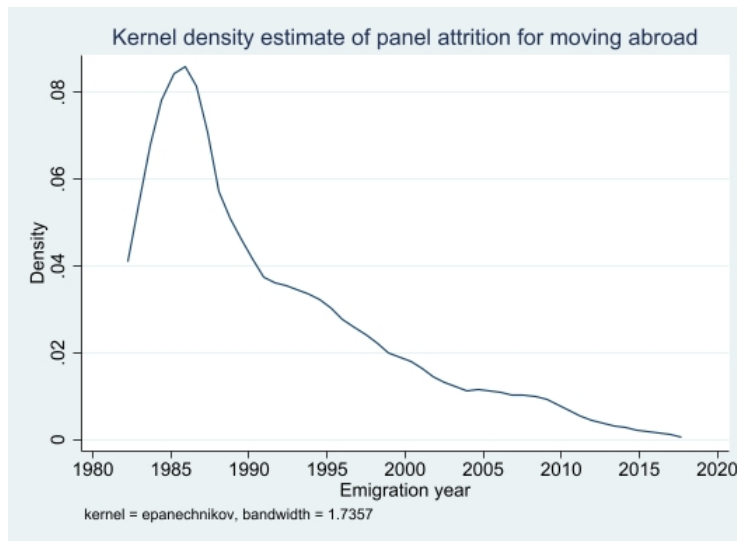


Figure A2: Kernel density estimate of panel attrition cases due to moving abroad by year of emigration

Table A7: Tabulation of actual return by spell type

Actual return	Type of spell		Total
	[2] SOEP	[4] Deceased	
0	2,334	2	2,336
1	839	0	839
Total	3,173	2	3,175

Notes: Above results are after merging spell data based on our attrition variable definition.

Table A8: Pairwise correlations between return intentions and current life satisfaction (ls) for survey years until 1986

Variables	(1) return intention (1984)	(2) ls1984	(3) ls1985	(4) ls1986
(1) return intention (1984)	1.000			
(2) ls1984	-0.095*** (0.000)	1.000		
(3) ls1985	-0.068*** (0.001)	0.445*** (0.000)	1.000	
(4) ls1986	-0.046** (0.029)	0.389*** (0.000)	0.477*** (0.000)	1.000

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

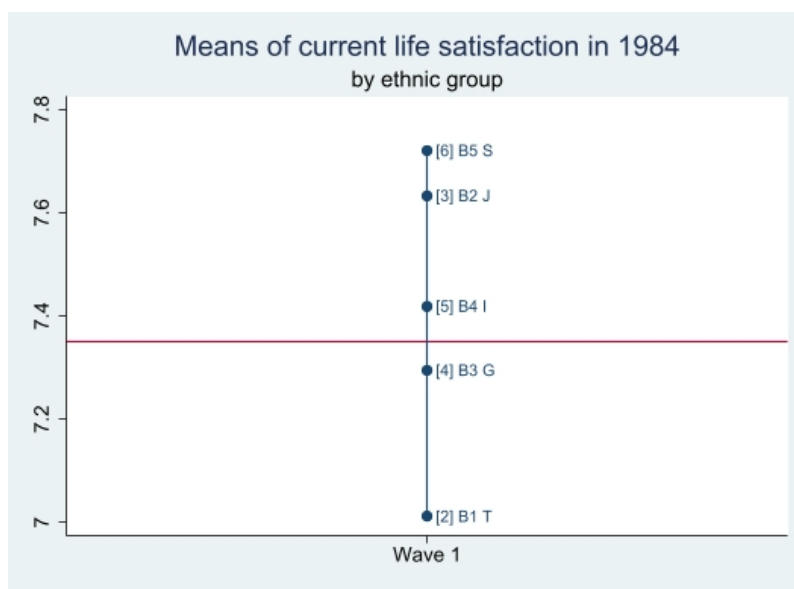


Figure A3: Means of current life satisfaction in 1984 by ethnic group  
(T:Turks, G:Greeks, I: Italians, J:Yugoslavs, S:Spaniards)

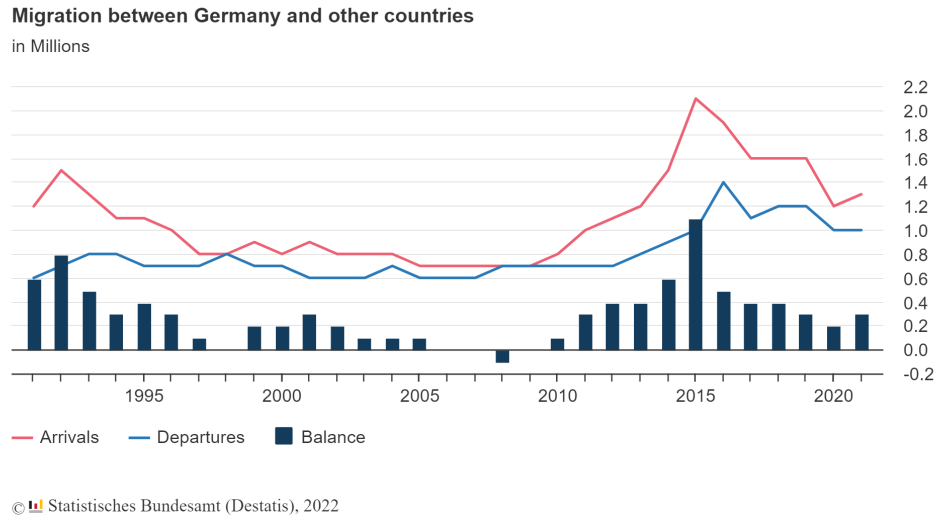


Figure A4: Immigration and emigration in Germany

Table A9: Cross-tabulation of native country return intentions and lagged return plans before moving abroad

Return intention (1984)	Lagged return intention before departure		Total
	0	1	
0	47	66	113
	41.59	58.41	100.00
	55.29	11.72	17.44
1	38	497	535
	7.10	92.90	100.00
	44.71	88.28	82.56
Total	85	563	648
	13.12	86.88	100.00
	100.00	100.00	100.00

Notes: Above results are displayed subsequently in frequencies, row, and column percentages.