

Return Migration of Low- and High-Skilled Immigrants from Germany*

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Abstract

Studies on the net fiscal impact of immigration usually assume that migrants move permanently to the destination country. Using data from the German Socio-Economic Panel (1984-2003) we show that the length of stay as well as the probability of return migration differs with regard to the educational background of the migrant. The probability of high-skilled return migration is significantly inferior to that of the low-skilled. However, given the return migration high-skilled foreigners show shorter stays in Germany than less educated foreigners. Comparing out-migration propensity between EU nationals and migrants from third countries we find the latter to display the lowest return probability.

Keywords: Return Migration, Migration Duration, Skills

JEL-Classification: C25, F22, J61

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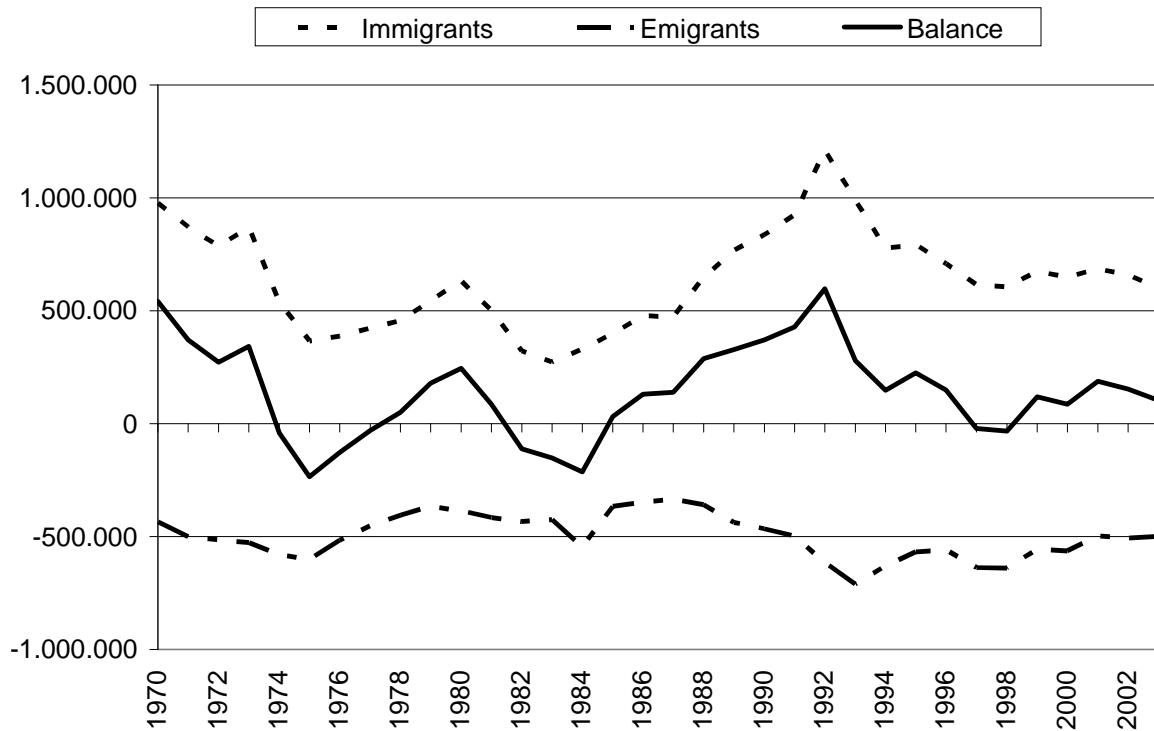
1 Introduction

The share of the foreign population has been increasing in Germany in the aftermath of World War II. Due to the shortage of labor during the "Wirtschaftswunder" the German government established a guest-worker system. Contracts for recruitment with countries from the Mediterranean such as Italy, Spain and Turkey were concluded in order to meet the demand for low-skilled workers in the prospering economy. Originally, employees from these countries were supposed to follow a rotation principle. Initially, they were issued with work and residence permits valid for a limited time only. Whereas some migrants did in fact return to their country of origin others preferred to stay due to favourable living and working conditions in Germany [Werner (2001)]. Residence permits were usually prolonged for these foreigners since employers favoured extended migration durations as well. They were provided with scarce and cheap workforce. In the surge of the first oil crisis the government imposed a recruitment stop for foreign workers from Non-EU Member Countries in 1973.

Family members of migrants already settled in Germany were however allowed to immigrate. As a result of these contradictory policy decisions the stock of immigrants continued to increase. Within the 1970s the share of the foreign population in Germany rose from 4.5 % to 7.4 %. In the early 1980s, the German government initiated a return program for foreigners from Non-EU countries. The outflow of migrants was promoted by setting financial incentives for the repatriates. However, since an acceptance of this offer implied a non-return clause the program did not entail a reduction of the foreign population. Due to a higher living standard in Germany migrants from third countries decided to stay instead of returning to the home country. In addition, because of the collapse of the Soviet Union in 1989 frontiers to Central and Eastern European Countries became more permeable. Immigrants with German ancestors ("Aussiedler") as well as individuals with foreign citizenship moved to the West. At the end of 2003 over 7.3 Million foreigners were living in Germany representing 8.9 % of its population.

Currently some branches face a lack of (high-) skilled workers as the Council (2004) concludes in its latest annual report. Demographic change in Germany causes a shortage of qualified workers. Hence, this problem will worsen in the near future. At the same time the demand for highly qualified employees will increase due to skill biased technical change

Figure 1: Migration of Foreigners to and from Germany



[Acemoglu (2002)]. Immigration may help to overcome this bottleneck. Since the welfare effect of immigration is predominantly subject to the labor market participation of (high-skilled) migrants it is essential to have an appropriate immigration policy. Studies on the net fiscal impact of immigration usually assume that migrants move permanently from their country of origin to a host economy [e.g. Bonin (2002)] However, although net immigration was positive in most years during 1970 – 2003 many foreigners have left Germany (see Figure 1). Gross flows show that annually over 500.000 foreigners out-migrate while 640.000 migrants have moved to Germany per year.

Since these statistics do not provide detailed information on the socioeconomic characteristics of the leaving foreigners they have been neglected in the migration discourse so far [Council (2004)]. In this paper we focus on remigration of foreigners from Germany. Using data from the German Socioeconomic Panel (1984-2003) we show that the length of stay as well as the probability of return migration differs with regard to the educational background of the migrant. The probability of high-skilled return migration is significantly inferior to

that of the low-skilled. However, given the return migration high-skilled foreigners show shorter stays in Germany than less educated foreigners. Comparing out-migration propensity between EU nationals and migrants from third countries we find the latter to display the lowest return probability. Furthermore, whereas welfare recipients from EU Member States tend to return to the home economy, those from third countries are inclined to stay in Germany.

The remainder of this paper is organized as follows. In Section 2 the relevant literature on return migration is reviewed. Section 3 provides a description of the data set and gives an overview of the characteristics of the sample population. Section 4 introduces the methodology by which the question whether migration durations differ between low- and high-skilled immigrants is analyzed and presents our estimation results. Section 5 summarizes the findings and concludes with regard to policy implications.

2 Related Literature

In the theoretical literature migration decisions are supposed to be predominantly influenced by wage differentials between source and destination country [Sjaastad (1962)]. Only if the expected net present value of migrating exceeds the expected net present value of staying plus migration costs¹, an individual will leave the home country. In this decision process employment opportunities in home and host country are taken into consideration as well [Harris and Todaro (1970)]. Thereby, it is assumed that migrants will stay the rest of their life in the host country once they have left their home country.

However, the length of stay may differ among foreigners for several reasons. Some foreigners are issued with temporary residence and working permits only while others stay in the host economy without any restrictions and move back to their home country by purpose. Different reasons for voluntary return migration have been identified in the theoretical remigration literature. As in permanent migration models differences in wages between host and home economy primarily determine the (return) migration decision. In addition, migrants are

¹Migration costs are monetary costs such as transportation as well as psychic costs such as leaving the familiar environment and overcoming cultural barriers.

supposed to have a preference for their home country. By assumption, the marginal utility of consumption in the country of origin is always higher than that in the host country given the same rate of consumption.

Djajic and Milbourne (1988) use an intertemporal model in order to explain the out-migration of foreigners. Migrants are supposed to act as utility maximizing individuals. Only if earnings in the host economy exceed those at home the migrant will stay abroad. Due to a higher preference for consumption in the country of origin, opportunity costs of staying in the host economy are increasing over time. Migrants will return if these costs exceed the benefits. Stark, Helmenstein, and Yegorov (1997) incorporate not only differences in wages between source and destination country but also the purchasing power of savings in their theoretical model. A higher purchasing power in the host country reduces *ceteris paribus* the migration duration since savings gained abroad yield a higher consumption level at home. Hence, return migration does not necessarily imply an equalization or a reversal of wages between home and host economy. Stark and Roed (1998) show that not only the accumulation of real capital but also of human capital is of importance in return migration. Skills acquired abroad might result in an income premium in the country of origin. However, the amount of this income premium is subject to the residual lifetime. Temporary migration will only take place if the expected benefits from skill acquisition abroad exceed the expected lifetime income when residing permanently in the country of origin. But, an increase of the income premium does not necessarily imply a prolongation of the migration duration. The effect is ambiguous since the length of stay abroad also depends on the preference for home country residence.

The theoretical literature on remigration focuses on the wage differential as an important trigger in the migration decision. However, individual earnings of returned migrants are difficult to consider in empirical investigations. Panel data sets usually only comprise information on individuals while staying in one country. If the migrant returns the occupational choice as well as the income situation in the home country cannot be observed.² In an empirical study Dustmann (2003) analyzes remigration from Germany. Using data from the German Socio-Economic Panel he shows that an increase of the wage in the home or host

²Due to unique data sets Dustmann and Kirchkamp (2002) and Mesnard (2004) were able to analyze the activity choice of Turkish and Tunisian return migrants, respectively.

country do not have the same effects on the migration duration. Since wages in the country of origin cannot be observed he approximates it by the years of schooling obtained before initial emigration. In line with previous findings he shows that foreigners have a shorter migration duration if there is a wage increase in the home country. On the other hand, if there is a rise of earnings in the host country the effect on the length of stay is uncertain. The preference for home country residence opposes the beneficial effects of higher earnings abroad. In summary, migrants might return although the wage differential between home and host country increases.

Brecht (1994) analyzes return migration of Southern European guest-workers from Germany. She finds that the family network plays an important role in the remigration decision. When family members live in the country of origin migrants have a higher out-migration rate. In addition, guest-workers that have retired tend to leave. On the other hand, well-integrated foreigners, e.g. a good command of German, display longer migration durations than other migrants.

Bhagwati and Hamada (1974) explicitly considered another important issue in international migration, namely differences in human capital endowment of migrants. They observed a brain drain, i.e. an out-migration of high-skilled, from developing to industrialized economies. In this context, the question whether migrants – according to their skills – are positively or negatively selected in the destination country has become subject to extensive empirical studies [e.g. Chiswick (1986) and Borjas (1987)].

Borjas and Bratsberg (1996) examine the out-migration of the foreign born with regard to their educational level for the United States. Using Census and Administrative data they map an out-migration pattern. If migrants are positively selected when entering the country, i.e. an inflow of predominantly high-skilled migrants, low-skilled foreigners will return to their country of origin. Reciprocally, if low-skilled migrants move to the host country in the first place high-skilled migrants will leave the host economy. In other words, the skill composition of the return migrant flow is subject to the initially generated immigrant flow. However, results of these investigations are somewhat problematic since migration policies are decisive in the selection process of immigrants.

Empirical investigations on return migration focus on socio-economic characteristics of foreigners. However, the analysis of migration durations with regard to the educational background of the temporary migrants has been neglected in the literature so far. In this paper we examine return migration probabilities for foreigners from Germany. Our investigation is unique in the sense that we show that the length of stay of foreigners differs with regard to their skill level. In order to take country-specific effects into consideration we compare out-migration propensities between EU nationals and migrants from third countries. In addition, the employment status of staying and leaving migrants is analyzed.

3 Data

3.1 Data Source

Official statistics in Germany do neither provide data on migration durations nor return ratios for low- and high-skilled foreigners. For our empirical investigation we use the German Socio-Economic Panel (GSOEP). This nationally data set was established in 1984 and contains information for German as well as foreign citizens on an annual basis. The used data comprise 20 waves and cover details on socio-economic characteristics of all individuals including migrants. In each wave individuals drop out while new participants enter the panel. Hence, we do not observe the same migrants over the entire period from 1984 to 2003 but only have information about migrants while included in the panel. Individuals drop out of the panel because of death, leaving to another household within the survey territory or emigration. We only consider movings out of Germany as return migration whereas foreigners who move within German boundaries or die are excluded from our sample.³ However, the destination country of emigrating foreigners is not indicated in the data set. We assume that migrants who are leaving Germany return to the country of origin.⁴ But, a drop-out

³Hunt (2004) focuses on temporary migration within German boundaries, whereas DaVanzo (1983) examines the determinants of primary, repeat and onward movements within the US.

⁴This assumption is verified by other studies, e.g. Haug (2000) shows that Italian guest-workers who have retired and leave Germany choose Italy as their destination country.

does not necessarily represent a final exit from the panel. Some migrants move abroad temporarily, e.g. for family reasons or military service, while others leave permanently. We do not include migrants in our sample who temporarily drop out and reappear in a subsequent wave in the panel.⁵ Since the year of immigration as well as panel attritions are reported we are able to calculate migration durations of foreigners.

The German Socio-Economic Panel does not only report the nationality of foreigners but also covers the country of origin of the migrant. This information is particularly important for the investigation of return migration from Germany. As migrants we only consider foreigners born outside the German territory. We exclude foreigners who were born within German borders since these individuals did not undertake the initial migration, i.e. leaving their country of origin.⁶ We do neither analyze the out-migration of the 2nd or 3rd generations of foreigners nor that of “Aussiedler”, i.e. people with German ancestors who previously lived in Eastern Europe and moved to Germany after the decline of the communist system.

Migrants are included in the panel upon the first wave. However, our sample is left-censored since some migrants have a delayed entry. Since the year of immigration does not correspond to the year the German Socio-Economic Panel was established they are only included in the data set in a subsequent wave. On the other hand, our sample data is right-censored because the last survey was conducted in 2003 and migrants who are included in last wave are considered as residents. In addition, migrants who dropped out of the data set in previous years may reenter the panel in the future and therefore only represent a temporary drop out.

For our empirical analysis we transform the data into person-year observations. Each year an immigrant appears in our sample counts as a single data point. In total, we have 36.329 observations for the period 1984 – 2003. Our sample contains 30.814 observations for residing immigrants and 5.515 for leaving foreigners in the considered timeframe.

⁵For an analysis of repeat and circular movements of migrants leaving and entering Germany see Constant and Zimmermann (2003).

⁶The German alien law code is dominated by the "ius sanguinis" principle. Basically, this regulation states that only persons with German ancestors or foreigners living in Germany for a number of year are eligible for German citizenship. In other countries such as the United States of America the "ius soli" principle applies. Persons born on the American "soil" are naturalized upon their birth regardless to which nationality the parents belong to.

3.2 Sample Characteristics

The basic characteristics of the migrants in our sample are presented in Table 1. We distinguish between foreigners residing in Germany and foreigners that have left the country in the period 1984 - 2003. Our sample contains somewhat more men than women. Among the migrants who have emigrated from Germany over 74 % were married and living together with their spouse. In contrast, 79 % of migrants who stay in Germany are married. On average, the leaving foreigners exceed residing migrants by two years in age. Almost 60 % of return migrants are at least aged 45 while 16 % are younger than 30. The distribution of foreigners resident in Germany in age groups shows that 28 % are aged 29 or younger. Emigrating foreigners display a shorter length of stay (22.2 years) than migrants living in Germany (25.8 years). The distribution of moving and residing foreigners in duration groups shows that most of the out-migrants (43 %) have been living in Germany between 20 and 30 years. Only 13 % of returning migrants have a migration duration between one to ten years whereas 29 % of settled foreigners belong to this group.

In our sample only 8 % of return migrants are classified as high-skilled. The share of the high-skilled foreign population living in Germany amounts to 12 % in our sample. The distinction between foreigners from EU Member States and from third countries allows further insights in the mobility pattern of migrants. Whereas 34 % of foreigners staying in Germany are from the European Union they represent over 60 % of return migrants. With regard to the integration in the national labor market we find differences between staying and leaving migrants. Migrants who are employed according to their formal qualification represent almost 17 % of the resident population. Among the leaving foreigners 12.8 % have a job that corresponds to their acquired formation. A relatively large share of migrants in our sample is unemployed or economically inactive. More than 27 % of migrants living in Germany are not integrated in the labor market. Almost 30 % of the out-migrating foreigners are economically inactive or unemployed. Foreign-born retirees represent 8 % of the return migrants.

Table 1: Characteristics of Migrants

Variable	Stayer	Mover
Male (%)	52.3	53.6
Married (%)	79.2	74.4
Age (in years)	46.9	48.6
Distribution in age groups		
< 30 years	28.0	16.0
30 - 45 years	24.9	25.4
45 - 60 years	23.4	29.7
> 60 years	23.7	28.9
Duration (in years)	25.8	22.2
Distribution in duration groups (%)		
1 - 10 years	29.0	13.0
11 - 20 years	25.2	24.4
21 - 30 years	19.1	42.7
> 30 years	26.7	19.9
High-Skilled (%)	12.3	8.1
EU Nationals (%)	35.8	60.6
Employment according to acquired formation (%)	16.8	12.8
Economically inactive or unemployed (%)	27.5	29.9
Recipient of social assistance (%)	19.6	28.2
Pensioner (%)	6.0	8.3

4 Methodology and Empirical Results

4.1 Binary Choice Model

In order to examine return migration from Germany we apply a binary choice model. In each period (t) covered by our sample (1984 – 2003) a migrant (i) decides whether to stay in the host country or to return to the country of origin. Since return migration probabilities are not directly observed we use a logistic regression model. In this framework the choice probability (P) follows a logistic distribution. The dependent categorical variable Y takes

the value one if the migrant returns and zero otherwise. As independent variables we consider socio-economic characteristics of the migrant such as skill level, age, migration duration, and employment status (vector x).

Assuming that the out-migration probability in a certain period given the individual characteristics of the migrant follows a logistic function we obtain the logistic regression model:

$$P_{it} \equiv P(Y_{it} = 1|X_{it}). \quad (1)$$

The expected value of Y given X is the probability that $Y = 1$ given X is indicated in expression (2).

$$P_{it} \equiv P(Y_{it} = 1|X_{it}) = \frac{e^{\beta' X_{it}}}{1 + e^{\beta' X_{it}}}. \quad (2)$$

Transforming the probability of returning and of staying, respectively, into odds yields expression (3). The odds indicate how often an event occurs relative to how often this event does not happen.

$$\frac{P(Y = 1|X)}{1 - P(Y = 1|X)}. \quad (3)$$

For estimation purposes we take the logs of the odds, which is also known as the logit.

$$\ln\left(\frac{P_{it}}{1 - P_{it}}\right) = \beta'_{it}. \quad (4)$$

The logistic regression model is solved by maximum likelihood estimation. The underlying iterative process of this estimation technique generates coefficients that provide the desirable properties of consistency, normality and efficiency asymptotically. The coefficients indicate how a marginal increase in an independent variable will change the natural log of the odds holding all other variables constant. Since interpretation of the natural log of the

odds to migrate is not intuitive we take the exponential on both sides of term (4) obtaining the odds-ratio:

$$OddsRatio = e^{\beta'it}. \quad (5)$$

Applied to our problem the resulting odds-ratio indicates how a unit change in one independent characteristic affects the chances of return migration. The odds-ratio is a multiplicative coefficient. If the odds-ratio takes a value greater than one it entails a positive effect on out-migration while the effect is negative for values between zero and one. However, when interpreting the odds-ratio it is important to keep in mind that a constant factor change in the odds is not equal to a constant factor change in the probability. Only if the underlying odds are small is the factor change in the odds and in the probability approximately equal.

4.2 Variables and Hypotheses

In the following we describe the set of variables considered as explanatory variables for the return migration decision. These variables are primarily chosen on the basis of earlier reviewed theoretical as well as empirical studies. Former investigations showed that the gender of the migrant as well as the family background is of importance in the migration decision [Brecht (1994)]. Thus, we use the variable *gender* which takes the value one if it is a male migrant and zero if it is a female foreigner. The marital status of the foreigner is captured by the dummy variable *married*. It has the value one if the migrant is married and living together with his/her spouse and zero otherwise. We assume here that foreigners living with their family have a lower out-migration propensity compared to single, divorced or widowed persons.⁷

Since the migration decision is based to a large extent on employment opportunities in the home and host country we consider the employment status of the migrant in Germany. The labor market participation of foreigners is captured by a set of dummy variables. The migrant can either be “employed” or “economically inactive or unemployed”. In our estimation we

⁷See also Stark and Roed (1998) for the role of the family status in the migration decision.

use “economically inactive or unemployed” as a reference category. A priori, we suppose that this group of foreigners has a higher out-migration probability than employed migrants. In the initial migration decision, it is assumed that foreigners move to another country because of better job opportunities and a positive wage differential compared to the situation in the country of origin.⁸ In line with this reasoning, migrants may return if they are unsuccessful in the destination country [Borjas and Bratsberg (1996)]. Hence, we not only distinguish between economically active or inactive migrants but also between foreigners that have retired or are principally available for the labor market. This issue is approximated by the dummy variable “pensioner” that has the value “one” if the migrant is a pensioner and “zero” otherwise. Since citizens from third countries do not have access to the German labor market in general, we differentiate between foreigners with and without EU nationality. The latter group of migrants also faces longer distances between home and host country resulting in higher costs for return migration. Hence, we hypothesize that EU nationals are more mobile than other foreigners.⁹

Former investigations on return migration showed that migrants are often employed below their formal qualification [Stark, Helmenstein, and Yegorov (1997)]. First, employers are not familiar with the foreign education system and cannot distinguish between low- and high-skilled immigrants. Migrants might be under- or overpaid with regard to their qualification. Second, acquired skills in the country of origin are not always transferable to another country, e.g. jurisprudence or tax law. The German Socio-Economic Panel contains a question that indicates whether the migrants’ current economic activity corresponds to their acquired qualification. Thus, we can take this issue into consideration using a proxy variable that takes the value “one” if the current job position is associated with the migrants’ skill background and “zero” otherwise. We expect migrants whose employment corresponds to their education to display a lower out-migration propensity.

With regard to the employment status of the migrant another issue is taken into consideration. Whenever migrants are unemployed or economically inactive the role of the welfare

⁸Whereas the German Socio-Economic Panel provides data on wages for the surveyed individuals we do not observe earnings for migrants who have left Germany on an individual level. Therefore, we do not incorporate the wage differential between host and home country in our set of variables.

⁹Since our sample period covers the years 1984-2003 we only consider citizens from the fourteen "old" EU Member States as EU nationals.

state comes into play. Borjas (1999) identifies a relationship between return migration and the generosity of the welfare state.¹⁰ According to the welfare magnet hypothesis, unemployed migrants are discouraged from moving back to their home country if they benefit from the generosity of the welfare system in the host economy. Foreigners who are not integrated in the labor market of the destination country will not return to their country of origin if benefits from the safety net in the host economy are sufficiently high. Compared to the average wages in third countries benefits from German unemployment insurance or social assistance programs are relatively high. The German Socio-Economic Panel data set reports whether an individual benefits from social assistance programs or not. Hence, we are able to construct a dummy variable that takes the value one if the migrant is a welfare recipient and zero otherwise. Referring to Borjas (1999), we expect the generosity of the welfare state to function as an emigration barrier. However, to take differences in economic wealth between Germany and other countries into consideration, we construct an interaction term between welfare recipient and non-EU citizens. Our hypothesis is that welfare recipients from third countries have a lower return probability than those from EU Member States.

In order to capture differences or similarities in return migration of low- and high-skilled foreigners, the educational background of the migrant is taken into consideration. The German Socio-Economic Panel provides information on skill levels referring to the International Standard Classification of Education (ISCED).¹¹ This allows us to construct two groups of migrants. Foreigners belonging to skill levels 0 to 3 are regarded as low-skilled whereas migrants attaining skill levels 4 to 6 are considered as high-skilled. According to Borjas and Bratsberg (1996) the skill composition of the initial immigration flow determines the out-migration flow. Since Germany experienced an inflow of predominantly low-skilled migrants in the past we expect that the share of qualified migrants leaving the country exceeds those of the skilled foreign resident population.

¹⁰Borjas (1999) welfare magnet hypothesis contains two further aspects with regard to the initial migration decision. First, the welfare state in itself might function as a trigger in the migration decision, i.e. foreigners only move to another country because of the generous welfare state abroad. Second, the welfare system does not represent the main reason for migration but determines eventually the location choice of the migrant.

¹¹The ISCED (International Standard Classification of Education) comprises seven levels: pre-primary (0), primary education (1), lower secondary education (2), upper secondary education (3), post-secondary non-tertiary education (4), first stage of tertiary education (5), and second stage of tertiary education (6).

4.3 Empirical Findings

The results of our logistic regression estimation are presented in Table 2. All coefficients are statistically significant at the 95% percent confidence-level. Comparing female and male return migration we find the latter to show a higher out-migration probability. This result complies with the stylized fact that a male migrant as the head of the household often accepts a job offer abroad in order to support the family at home. These migrants save a high part of their earnings and / or undertake remittances to their relatives. If this type of migrant is not joined by his family members, he tends to return to the home country. In line with this result we find migrants who are married and living together with their spouse to display a lower odds-ratio (0.732) for return migration compared to migrants with a different marital status. An intact familiar environment entails a lower return migration probability.

With regard to the migrants' country of origin we find significant differences in out-migration propensities. Whereas migrants from EU Member States tend to out-migrate foreigners from third countries prefer to stay in Germany (0.361). The principle of free movement of persons within the European Union serves as an explanation for this finding. Migration barriers for foreigners from third countries to Germany and within the European Union are relatively high. Against this background labor market participation of foreigners reveals further insights on the return migration propensity. We find that retired migrants have significantly higher chances of return migration than employed foreigners (1.509). Besides, economically inactive or unemployed migrants display a higher odds-ratio to return compared to employed foreigners (1.425). Consistently, our results show that migrants who are employed according to their formal qualification display a lower out-migration propensity than other foreigners (0.850).

Table 2: Estimation Results for Return Migration from Germany

Variable	Coefficient	Odds-Ratio
	(Std. Err.)	
Constant	-1.211* (0.043)	1.152
Male	0.142* (0.032)	0.732
Married	-0.312* (0.035)	0.361
Non EU-Citizen	-1.020* (0.036)	1.425
Economically inactive or unemployed	0.355* (0.037)	1.509
Pensioner	0.412* (0.058)	0.850
Employment according to qualification	-0.162* (0.047)	1.745
Welfare Recipient	0.557* (0.046)	0.821
Welfare Recipient * Non EUCitizen	-0.197 (0.069)	1.745
High-Skilled	-1.159* (0.128)	0.821
High-Skilled * Duration (1 - 10 years)	1.752* (0.157)	0.314
High-Skilled * Duration (11 - 20 years)	0.895* (0.166)	5.766
High-Skilled * Duration (21 - 30 years)	0.791* (0.158)	2.447
Observations (n)	36,329	2.206
Log-Likelihood	-14,575	

Source: Own calculations from GSOEP (1984-2003).

The role of the German welfare state for the out-migration decision is approximated by the variable “social welfare recipient”. The odds ratio for foreign welfare recipients, which is indicated in the table, exceeds “one”. Obviously, this group of migrants displays a higher return probability compared to other foreigners (1.745). Our finding contradicts the hypothesis of Borjas (1999) who stipulates that migrants who are not integrated in the labor market of the host country tend to stay in the country. In contrast, our estimation results reveal that economically inactive migrants are in general more mobile than employed foreigners. However, an interaction term between welfare recipient and Non-EU-citizen yields further insights on this aspect. Whereas migrants from third countries already show very low chances of return migration those foreigners who were born outside the EU territory and are welfare recipients even display a lower return migration probability ($0.361 \times 0.821 = 0.296$). These migrants tend to stay in Germany. According to the welfare hypotheses of Borjas (1999) this group of migrants might have chosen Germany as a destination country because of the relatively generous welfare system.¹²

With regard to the educational background of return migrants our findings only support the hypothesis of Borjas and Bratsberg (1996) to some extent. Qualified foreigners display an odds-ratio of 0.314, i.e. they show a low chance of out-migration. However, taking the length of stay into consideration we find that high-skilled migrants tend to leave after a short stay (5.766). But return migration probability of high-skilled foreigners decreases as the stay lengthens. We conclude that there are two groups of skilled foreigners. Some high-skilled migrants only stay a short period in the country, e.g. in order to gain professional experience. However, those high-skilled migrants who have been living in Germany for a longer period tend to stay. With regard to low-skilled migrants we conclude that these foreigners are inclined to out-migrate. However, they show longer migration durations than qualified foreigners.

¹²Sinn and Ochel (2003) show that the German welfare state will be threatened by the free movement of people within the European Union due to significant differences in wage earnings in Central and Eastern European Countries and the level of German social assistance. In order to safeguard the basic concept of the welfare state in the EU they suggest a delayed integration of migrants into the social system of the host economy.

5 Conclusions

Studies on the net fiscal impact of immigration usually assume that migrants move permanently from their country of origin to a host economy. However, gross flows of migration from German official statistics reveal that foreigners represent the largest share of emigrants. Using data from the German Socio-Economic Panel we show that the length of stay as well as the probability of return migration differs with regard to the educational background of the migrant. The probability of high-skilled return migration is significantly inferior to that of the low-skilled. However, given the return migration high-skilled foreigners display shorter stays in Germany than less educated foreigners. Comparing the out-migration propensity between EU nationals and migrants from third countries we find the latter to display the lowest return probability.

Currently, some industry branches in Germany face a bottleneck in the supply of high-skilled workers. Due to the skill biased technological change and the demographic change there will be a lack of qualified employees in Germany in the near future. The immigration of high-skilled foreigners may help to overcome this challenge. But the welfare effect of immigration in the destination country is predominantly subject to the labor market participation of migrants. Hence, it is essential to have an appropriate immigration and integration policy.

At the beginning of 2005 the new German immigration law became effective. However, entry barriers for high-skilled foreigners from non-EU Member States are still existent since the general recruitment stop from 1973 remains. In addition, restrictions in the new German immigration law such as temporary residence and working permits for qualified foreigners, have negative effects in the location choice as well as in the migration duration of high-skilled migrants. The immigration of only a small number of high-skilled migrants who show a short length of stay may not be sufficient to overcome the bottleneck on the labor market. Even a total liberalization of the German labor market for high-skilled migrants from third countries would only represent a necessary condition for their immigration. A permanent stay of high-skilled migrants in Germany requires a long-term perspective for these foreigners and a successful integration.

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