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Internal Migration of Immigrants: Evidence from Western Germany

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Abstract

This paper deals with the internal migration patterns of the immigrant population in Germany and addresses the question of whether immigrants are more mobile than native Germans and to what extent the differences in spatial mobility behavior between immigrants and native Germans are influenced by (a) individual level characteristics and (b) the regional economic and social context background. The analysis shows a very low rate of internal migration in Germany. Even after controlling for individual- and regional-level characteristics, the immigrant population is half as mobile as native Germans. The results are more consistent for second-generation immigrants.

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1. Introduction

Internal migration is a selective process that is affected by individual and regional characteristics. A rich selection of studies approaches the matter of internal migration with its patterns, determinants, and consequences from different perspectives. Moreover, the internal migration of ethnic minorities in a host country has been well documented, with contradictory results (Ellis / Goodwin-White, 2006; Finney / Simpson, 2008; Foulkes / Newbold, 2000; Gurak / Kritz, 2000; Kritz / Nogle, 1994; Newbold, 1999; Spilembergo / Úbeda, 2004; Kulu / Billiari, 2004; 2006). Research on this field, however, can mainly be found in the Anglo-American literature. Little is known about the internal migration patterns of immigrants in Germany, where 15.4 million people have a migration background – a population that, according to the population prognoses, will constitute one third of the whole population in 2050 (Statistisches Bundesamt 2009), thus making the internal migration patterns of immigrants

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both socially and politically more relevant. To the best of my knowledge, the only exception in this research field is the discussion paper of Schündeln (2007), which analyzes the mobility patterns of immigrants, defined as a homogenous group. He identifies a higher likelihood of immigrants to move within and across federal states in Germany. In contrast to this research by Schündeln (2007), the present study contributes, first, by limiting the scope of internal migration from interstate to inter-county migration with a distance of more than 50 km, and second, by differentiating between immigrant groups and focusing on immigrants from former guest-worker countries. Against this background, this study poses the question of whether and to what extent immigrants in Germany differ from native Germans regarding internal migration patterns, and whether these differences in internal migration behavior are generated by individual characteristics and the region-level economic and social context. The analysis is based on ten waves from the German Socio-Economic Panel (SOEP) covering the years 2000 until 2009.

This paper is structured as follows: Section 2 outlines the theoretical arguments, supported with empirical findings, mostly from Anglo-American research, on the internal migration of immigrants, with some expectations specified. Section 3 describes the data and variables. Section 4 presents the empirical findings. The last section discusses the major findings, concluding with an outlook for future research.

2. Literature Review and Theoretical Background

Migration can be considered a multilevel process. This section briefly outlines this underlying multilevel perspective, divided into (a) individual characteristics and (b) the economic and social structural context. To avoid confusion, "migration" in this article is defined as a long-distance move within a country that not only includes a change of residence but also potentially implies a change of the location of daily activities, such as workplace, school, shopping, and leisure activities (Jürges, 1998). In this sense, migration is considered synonymous with internal migration and (long-distance spatial) mobility.

At the individual level, migration is affected by individual characteristics and resources, such as age, education level, marital status, employment status, sex, number of children in the household, ethnic background, migration experience, and homeownership. Following the human capital perspective, migration can be considered an investment into human capital. Before making the migration decision, individuals calculate both the short- and long-term material and immaterial costs and benefits of migration and translate these into action only if the expected benefits of migration exceed its costs (Sjaastad, 1962). For example, the economic advantages of migration would be higher for younger people and for those who have invested more in education, as indicated in empirical

research (Newbold, 1999; Kulu/Billiari, 2006; Jürges, 1998; Windzio, 2004). Furthermore, the more a person is attached to a specific region, the higher are the costs of leaving the region. The cumulative inertia theorem of McGinnis (1968) assumes that the time spent in one region (or duration of stay) can be translated into an enlarged social integration into that region, which could increase the costs of migration and, therefore, lead to a lower likelihood to leave the region. Since individual-level characteristics could differ by different immigrant groups (Kritz/Nogle, 1994), it can be hypothesized that the immigrant group composition could partly explain the differences in migration propensity between native Germans and immigrant groups. This means that the lower mobility rates of immigrants could be explained by the in-group composition, which, for example, consists of more married people on average or vice versa. To summarize, the individual-level characteristics have to be tested to find out whether they do account for differences between natives and immigrants.

In addition to the effects of individual characteristics, previous research has highlighted the importance of the economic and social structural context on migration, especially to explain the differences in migration propensity between immigrants and natives (Kritz/Nogle, 1994; Gurak/Kritz, 2000; Spilembergo/Úbeda, 2004). From an economic point of view, migration follows the direction of higher wages and lower unemployment. In this sense, regions where the average per capita income is low and the unemployment rate is high would account as sending regions. Some empirical findings also support this theoretical argument (Hunt, 2006). However, this economic argument, when applied to immigrant groups, reveals a more contradictory picture. On the one hand, Schündeln (2007) indicates for Germany a higher responsiveness of immigrants to unemployment differentials between federal states compared with natives. On the other hand, while exploring the internal migration patterns of different immigrant groups in the United States, Kritz/Nogle (1994) found different levels and directions of the regional unemployment rate depending on nationality group. Thus, in light of the contradictory empirical evidence, the regional unemployment is controlled to find out the extent to which immigrants are economically attached to the region.

However, migration decisions are not only economically motivated but are also framed by the social relations and social capital in regions. Social capital can be described as the resources of persons not only at the individual level (such as proximity to friends and family, community affiliation), but also on an upper level as a resource of a given (nativity) group (Haug, 2000). Keeping in mind that immigrants mostly first settle in regions and communities where their co-nationals already reside in order to benefit from the advantages of the existing immigrant networks (Heckmann, 1992; Friedrichs, 2008), the nativity concentration of the region can also be considered as a proxy of existing social capital in that region, as is mostly done in U.S. research. Proximity to co-nationals potentially implies close ties and a dense network structure that will

increase the costs of leaving this existing social structure. Proximity to co-nationals – measured as state-level ethnic concentration in the United States – in fact has been observed as a migration deterrent factor (Kritz/Nogle, 1994; Gurak/Kritz, 2000; Foulkes/Newbold, 2000; Newbold, 1999; Ellis/Goodwin-White, 2006). Accordingly, nativity concentration serves to control as a social capital determinant. However, reducing social capital to a constant determinant for all members of a given nativity group is based on the assumptions that the networks of co-nationals are homogenous and that the network effects are unidirectional. Therefore, it can only provide a rough estimate and should be interpreted with caution.

3. Data Sources and Variables

The empirical analysis is based on data from the German Socio-Economic Panel (SOEP) (v27). The SOEP is a representative household- and individual-level panel study that includes a broad spectrum of topics, such as demography, labor market, economic situation, health, education, value orientation, integration, and housing (Wagner et al., 2007). The SOEP is a suitable dataset for the research question because of its longitudinal character, as capturing internal migration information from at least two consecutive waves is needed. Moreover, due to the overrepresentation of the population with migration background, the dataset provides a sufficient number of cases of immigrants (Frick, 2006). The data have been linked to the regional information (unemployment rate, urbanization degree) from the German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) and from regional statistic offices (nativity concentration) using the NUTS Geocodes standards at the NUTS-3[1] level based on small-scale official district codes[2]. As the exact distance between two following residences was only available from the wave 2000 upwards, which represents the key information of the study, the analysis covers an observation period of ten waves between 2000 and 2009 (Goebel, 2011). To focus on migration patterns of the working-age population, the dataset consists of heads of private households 18 to 65 years of age, not having entered the retirement period yet. The immigrant population consists of people from former guest-worker countries[3] and their descendants, as these are the biggest immigrant groups in Germany and can partly be treated as a distinct group due to their similar migration history. To treat immigrants from former guest-worker countries as a homogenous group is not the best solution, as they might differ with regard to characteristics like discrimination experience in the hous-

1 NUTS-3 corresponds to Germany counties – *(Land-)Kreise* and *kreisfreie Städte.*

2 The access to *kreise* file underlies strict conditions and requires a special user contract. The analyses are run via e-mail using SOEPremote execution system.

3 Turkey, Italy, Spain, Portugal, Greece, former Yugoslavian Republics.

ing market. However, a further differentiation was not possible because of the restricted number of cases. As these nations were recruited during the recruitment period (1955 – 1973) from Western Germany, Eastern Germany was excluded from the analysis, as were the moves from Western to Eastern Germany (Bade / Oltmer, 2003).

The dichotomous *dependent variable* gives information on whether a person changed his / her residence covering more than 50 km of distance between the two consecutive time points t and $t + 1$. This information is based on the question in the household questionnaire $(t + 1)$, "Did you live in this flat the last time we interviewed you about a year ago?". In the light of previous research on internal migration (Jürges, 2005), the residential moving definition is extended to interregional migration with a minimum 50 km distance based on the information from regional data about the exact moving distance between two residences (*movedist*). Every move in the dataset also implies the change of county.

In terms of *individual level variables*, immigrants are identified by combining parental information with individual data based on waves from 1984 to 2009, which can be summarized as follows: (1) born in a foreign country and / or (2) not in possession of German nationality and / or (3) parents not born in Germany and / or not possessing German nationality. In addition, it was possible to distinguish between different nationality groups. In a second step, immigrants are differentiated into first and second generation[4]. Furthermore, the respondent's age, sex, education level, marital status, and occupational status, and the number of children in the household are controlled. Finally, indicators such as homeownership and duration of residence are integrated into the models as proxies for regional attachment and cumulative inertia.

In terms of *macro-level variables*, the economic condition in the region is captured by the unemployment rate, which was available in the regional dataset from the SOEP (*kreise*). The information on the regional nativity concentration comes from federal statistical offices. In addition, four dummy variables measuring the urbanization degree of the region, based on the data and definition of the BBSR are included (INKAR 2011).

Individual-level variables are based on characteristics from the head of household. For instance, if the head of household is an immigrant, the household is treated as an immigrant household irrespective of the other members of the household or vice-versa. Households that were separated during the observation period (e.g., at $t + 1$) are considered as two distinct households based on personal information of both former and recent heads of households (at t). All

[4] First generation: born in a foreign country and having immigrated to Germany after the age of six; second generation: born in Germany or having immigrated before reaching the age of six.

independent variables derive from wave t (before the move), whereas the dependent variable is based on information from wave $t + 1$ (after the move).

4. Empirical Findings

Table 1 presents the first descriptive information on the internal migration rate of immigrants and native-born Germans in Western Germany. First of all, the analysis underlines a substantial variation in the migration rate between the two groups.

Table 1

Internal migration rate of immigrants and native-born Germans

Nationality background	N	internal migration (> 50 km)	
		%	n
native Germans	36,455	1.21	441
immigrants	5,225	0.59	31
First generation	3,806	0.39	15
Second generation	1,419	1.13	16
Total	41,680	1.13	472

Source: SOEP, v27, 2000 – 2009 pooled dataset, own calculations.

The internal migration rate of immigrants (0.59 %) is half of that of native Germans (1.21 %). Differentiated into generational status, first-generation immigrants show a far lower migration rate (0.39 %) compared with second-generation immigrants (1.13 %). Apart from that, migration with a distance above 50 km is a phenomenon very seldom observed in the dataset, which is also demonstrated in the absolute number of cases[5].

The question, however, is the extent to which the differences in probability of internal migration between immigrants and native-born Germans can be explained by various individual and contextual characteristics. As this paper is the first attempt to describe and explain the internal migration phenomenon of immigrants, simple logistic regression models are used for the dichotomous dependent variable of internal migration. Furthermore, the models are clustered

[5] In contrast to long-distance moves, the residential mobility rate of immigrants (9.12 % for the first generation and 16.28 % for the second generation) is higher than that of native-born Germans (8.90 %). Immigrants are not generally less likely to move, but only concerning long-distance (> 50 km) moves.

by individuals to take into account the panel structure of the data (Giesselmann / Windzio, 2012). Table 2 presents the results. Stepwise modeling techniques are used to disentangle the mediating effects of different determinants. Therefore, in addition to odds ratios (OR), y-standardized beta coefficients (BStdY) are presented, as the latter coefficients allow a comparison across the nested models[6] (Mood, 2010).

The first model includes only the immigration status differentiated by generational status. The coefficients confirm the descriptive results, indicating that the first-generation immigrants from former guest-worker countries are less likely than the second-generation immigrants and native Germans to move within Germany more than 50 km. Age, being married, and the presence of children are – in line with the theory – negatively associated with migration and partly account for the difference between first-generation immigrants and natives in the second model. Interestingly, the non-significant effect from model 1 for the second-generation immigrants becomes significant after introducing social demographic characteristics. Whereas the differences to the first generation disappeared after controlling for educational level and employment status in model 3, the striking differences to the second-generation immigrants remain.

Model 4 includes the determinants of the individual's regional embeddedness. As expected, homeownership is negatively associated with internal migration. With an increased duration of stay in one place the propensity of migration decreases. However, neither homeownership nor duration of stay does make any contribution to explain the mobility behavior of immigrants. On the contrary, the interaction effects between immigrants and duration of stay have shown[7] that the cumulative inertia phenomenon can only be applied to native Germans and does not account for the immigrant sub-population in the SOEP. The longer immigrants live in a place, the more likely they are to make an interregional move.

Model 5 includes the regional unemployment rate and model 6 the nativity concentration of each group as macro-level indicators. The unemployment rate does not have any effect on internal migration, whereas the nativity concentration fosters migration. However, none of them makes a formidable contribution, neither increasing nor decreasing the coefficients for migration background variables, nor fitting the model. Detailed analysis introducing interaction terms[8] with context-level indicators and migration background shows that the significant positive effect of nativity concentration only accounts for Ger-

[6] However, in contrast to the intensive discourse about logistic regression, in this specific case it does not make any difference whether one compares the increasing and decreasing in odds ratios or in standardized beta coefficients across succeeding models.

[7] Models are not shown.

[8] Models are not shown and are available on demand.

mans. On the other hand, the effects of nativity concentration for the first- and second-generation immigrants show the opposite direction, which could be interpreted as a sign that the presence of co-nationals acts as a migration deterrent factor for immigrants. However, the coefficients stayed below the conventional level of significance. Besides, the regional-level unemployment rate does not have any effect on none of the groups.

Table 2

Logistic regression models of internal migration (> 50 km) on individual and contextual level determinants

	Model 1 Immigr. Status		Model 2 Socio-demorg.		Model 3 Socio-econ.		Model 4 regional embedd.		Model 5 Context: unempl.		Model 6 Context: nat. con.	
	OR	BStdY	OR	BStdY	OR	BStdY	OR	BStdY	OR	BStdY	OR	BStdY
Individual factors												
Immigrant status												
First gen. (Ref: German)	0.32 ***	-0.61	0.54 *	-0.33	0.79	-0.11	0.60	-0.24	0.63	-0.21	0.57 +	-0.25
Second gen. (Ref: German)	0.90	-0.06	0.51 *	-0.37	0.58 +	-0.26	0.56 *	-0.27	0.58 +	-0.25	0.53 *	-0.29
Socio-demographics												
age			0.92 ***	-0.04	0.92 ***	-0.04	0.94 ***	-0.03	0.94 ***	-0.03	0.94 ***	-0.03
sex (female=1)			0.99	0.00	0.94	-0.03	0.93	-0.04	0.93	-0.03	0.93	-0.04
married			0.60 ***	-0.28	0.60 ***	-0.25	0.81 +	-0.10	0.80 +	-0.10	0.80 +	-0.10
children in household			0.47 ***	-0.41	0.51 ***	-0.33	0.57 ***	-0.27	0.56 ***	-0.26	0.56 ***	-0.26
Education level (Ref: without adequate degree)												
general/basic vocational					0.75	-0.14	0.77	-0.12	0.78	-0.12	0.79	-0.11
intermadiate					1.46	0.18	1.57	0.21	1.62	0.22	1.64	0.23
maturity certificate					2.05	0.35	2.13	0.36	2.30 +	0.38	2.34	0.39
tertiary education					3.64 **	0.63	3.73 **	0.62	3.99 **	0.64	4.12 **	0.65
Employment status (Ref: employed)												
in education					1.73 **	0.26	1.75 ***	0.26	1.77 ***	0.26	1.75 ***	0.26
unemployed					2.31 ***	0.41	2.04 ***	0.33	2.05 ***	0.33	2.00 ***	0.32
not working					1.93 **	0.32	1.96 **	0.32	1.94 **	0.31	1.94 **	0.30
self employed					0.98	-0.01	1.01	0.00	1.00	0.00	1.00	0.00
Regional embeddedness												
occupancy (log)							0.80 ***	-0.11	0.80 ***	-0.10	0.80 **	-0.10
homeownership							0.31 ***	-0.56	0.30 ***	-0.56	0.29 ***	-0.56
Contextual determinants												
unemployment rate *(grand mean centered)*									0.99	0.00		
nativity concentration *(z-tranformed)*											1.11 +	0.05
N	41680		41680		41680		41680		41680		41680	
Pseudo R^2	0.01		0.11		0.14		0.15		0.15		0.15	
Log likelihood	-2555.58		-2298.58		-2231.81		-2194.12		-2190.02		-2188.66	

Note: All models additionally control for urbanization degree, results not shown on the table. The models are clustered by personal ID number, robust standard errors of the estimates not shown.

Significance level: ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; +$p < 0.1$.

Source: SOEP, v27, 2000–2009, own calculations.

To conclude, the core findings of the analysis can be summarized as follows: In general, internal migration is a remarkable, seldom observed phenomenon in the dataset, and immigrants from former guest-worker countries are almost half as mobile as native Germans. Differentiated into generational status, the difference between second-generation immigrants and native Germans does not change after controlling for individual and regional characteristics. However, the same statement cannot be concluded for the first generation. The general tendency is the same, but the estimates are more alternating for the second gen-

eration, as the level of significance and the effect size oscillate across models. This can also be interpreted as a hint that some independent variables might be interrelated.

5. Discussion and Conclusion

This paper is a first attempt to disentangle the internal migration phenomenon of immigrants in Germany, and it addresses the question of whether there are any differences between native-born Germans and immigrants with guest-worker background regarding internal migration propensities, and to what extent these differences might be influenced by individual-level characteristics, bonds to the region, and regional economic conditions. The core finding is that immigrants in Germany with guest-worker origin, both first and the second generation, are less mobile than native Germans, whereas the results for the second generation remain more consistent across models than for the first generation.

In the end, several questions arise from these results: Why are immigrants from former guest-worker countries, especially from the second generation, significantly less mobile compared with native Germans, even after controlling for individual and regional characteristics? Is this due to cultural differences? Are second generation immigrants more obliged to give family care, which makes them immobile? Are strong family ties for immigrants more important than weak ties in a given region? Is a rather different measure of social capital needed other than nativity concentration? Or is the very low internal migration rate of immigrants in fact caused by drop outs from the survey as they returned to the country of origin? To conclude, there are more questions left than answers. Therefore, these results can only partly be generalized to immigrants from former guest-worker countries and are to be seen as first assigns for further research in this field.

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