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The Case of Ethnic German Migrants in
the German Labor Market**

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The Transferability of Foreign Educational Credentials - The Case of Ethnic German Migrants in the German Labor Market

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Abstract

Since the breakdown of communism, Germany has experienced a major influx of Ethnic German migrants from Eastern Europe. In this paper, we use data from the German Socio-Economic Panel of the year 1998 to analyze the integration of Ethnic German migrants into the German labor market. We particularly focus on the transferability of educational credentials for the labor market integration of migrants. Although there are official procedures for Ethnic Germans to have their educational and vocational certificates recognized, only half of them are working in the occupation they were actually trained for. However, for migrants working in their trained occupation is a prerequisite for performing well in the German labor market. The problems Ethnic German migrants are faced with transferring their vocational skills lead us to some general conclusions on the dominant allocation mechanisms and also predictions on the fate of future migrant populations in the German labor market.

Key Words: Education, Ethnic Germans, Immigration, Labor Market, Vocational Training

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The Transferability of Foreign Educational Credentials-

The Case of Ethnic German Migrants in the German Labor Market

Since the breakdown of communism, Germany has experienced a major influx of Ethnic German migrants (“Aussiedler”) from Eastern Europe. In this paper, we compare the labor market performance of Ethnic Germans to Germans and foreigners in the (West) German labor market. The job prospects of Ethnic Germans are of particular interest out of several reasons. *First*, their economic and social integration into the German society is a matter of major socio-political relevance since they compose about 25 percent of all migrants to Germany in the years between 1989 and 1995 (Lederer 1997). *Second*, from the patterns of integration and exclusion of Ethnic Germans we may learn some general lessons about the allocation mechanisms in the German labor market – in particular the way formal certificates which were acquired in other countries pay off. *Third*, Ethnic Germans were in general broad up in Eastern European countries, where they acquired most of their human capital. Their labor market experience may give an idea on the employment prospects of future migrants from the former state socialist countries, whose influx to Germany will most likely increase with the eastern enlargement of the European Union (Boeri/Brücker 2001, Kraus/ Schwager 2000).

1. Migration of Ethnic Germans to Western Germany

As “Ethnic Germans” we characterize individuals of German decent (and their close family members) who are originated in Eastern Europe, in particular the former Soviet Union, Poland,

and Romania.¹ Officially, German Ethnicity refers to descent, culture and language. This means a person has to give proof of the German Ethnicity of his or her parents or grandparents which is indicated by descent, culture and language. For example, in Romania, German origin can be ‘proved’ by German grandparents, who participated in the German armed forces of World War II. In Poland, individuals can prove their German Ethnicity by referring to the so-called “Volksliste”, which is a register of names made by the Nazi Regime during World War II in order to identify all Germans and ‘potential’ Germans in Poland (Schwab 1990: 124ff.).

With the breakdown of the communist regimes, leaving the Eastern European countries was facilitated and the influx of Ethnic Germans to Germany increased rapidly (Bade/ Oltmer 1999). Therefore, migration of this group has in particular taken place in the last decade. As can be seen from Figure 1, between 1988 and 1998 more than two million Ethnic Germans migrated from Eastern Europe to Germany. While immigration from Poland and Romania mainly took place in the years between 1988 and 1991, since 1989, the migration process has been dominated by Ethnic Germans originated in the former Soviet Union (Figure 1, Panel 2).

[Figure 1 about here]

¹ Literally, the term “Aussiedler” only refers to Ethnic Germans who migrated between 1953 and 1993. Ethnic Germans who migrated, were expelled or fled from Eastern Europe between the end of World War II and 1953 are “Vertriebene” (expelled). With the amendment of the “Bundesvertriebenengesetz” in 1993, the term “Spätaussiedler” was introduced. It refers to Ethnic Germans who have migrated to Germany since 1993 (Greif/ Gediga/ Janikowski 1999).

2. Labor Market Performance of Ethnic Germans – Theoretical Considerations

Why should we focus on the labor market performance of Ethnic Germans? Why should we make a distinction between Ethnic Germans and other migration groups?

First, Ethnic Germans are more likely than other migrants from Eastern Europe to speak the German language. According to data from the German Socio-Economic Panel of the year 1995, 58 percent of the Ethnic Germans self-rate their German speaking abilities as very good or good (own calculations). *Second*, a law (“Bundesvertriebenengesetz § 92”, literally: Law for the Expelled) was created, which specifies the special treatments Ethnic Germans are eligible for. Ethnic Germans gain full German citizenship upon arrival in Germany, they are eligible for German language courses and financial aid and they are fully integrated into the welfare system (Koller 1993, 1995, Münz/Seifert 1997: 116f.). *Third*, Ethnic Germans are entitled to apply for a procedure by which they can get their formal qualifications recognized. This formal recognition procedure is supposed to enhance the labor market value of the schooling and vocational certificates which were acquired in Eastern Europe. *Fourth*, since former communist countries fostered education and vocational training, Ethnic Germans have on average received a higher amount of formal education and vocational training than other migrant groups in the German labor market. Against this background, one could expect that Ethnic Germans enjoy comparatively good employment and career prospects (Reitz et al. 1999). But they should also face better employment chances than other (future) Eastern European migrants in the German labor market because of the special treatments they are entitled to.

In the following sections, we discuss some basic aspects of job allocation mechanisms in the German labor market, paying special attention to educational certificates, occupational allocation mechanisms, and gender-specific patterns of labor market performance.

a) Human capital endowment

According to standard human capital theory, the performance of an individual in the labor market is largely dependent on his or her endowment with human capital (Becker 1975, Mincer 1974). Differences in wages occur because workers enter the labor market with different types and amounts of human capital. Assuming further that workers are paid according to their marginal product, differences in human capital characteristics are supposed to explain most of the variation in wages across people. For our analysis, this would imply that wage differences of foreigners, Ethnic Germans, and West Germans should be largely attributed to differences in their *human capital endowment*. Taking into account that Ethnic Germans have on average received a higher level of education and vocational training than foreigners, one could expect that Ethnic Germans are placed above foreigners in the labor market. However, as Arrow (1972, 1973) pointed out, wage differences –particularly between migrants and natives– can also be attributed to differences in the *remuneration of human capital*. Migrants might receive lower wages even though they are endowed with the same human capital as natives, because employers are prejudiced against them. Furthermore, migrants might earn less, because employers are unable to evaluate their human capital. Although employers would like to hire and assign workers to jobs according to a worker’s productivity, labor market uncertainties hinder them from doing so. Arrow (1972) and Spence (1973) argue that the productivity of a worker cannot

be observed directly, in particular not prior to hiring. The employer has to rely on observable characteristics that the employer believes indicate the productivity of a worker. These indicators are in particular educational and vocational certificates. Employers pay foreign employees less or might not even employ them, because they cannot value the expected productivity of a migrant as precisely, since the employer is not familiar with the schooling and vocational training certificates obtained in a foreign country. We already pointed out that the German government implemented procedures by which Ethnic Germans can get their formal qualifications recognized. However, the recognition of qualifications does surely not guarantee that *employers* value foreign certificates in the same manner as certificates gained in Germany. Possibly, employers are uncertain about the actual skills of an Ethnic German and therefore foreign certificates might be valued less than German certificates.

b) Vocational certificates and occupationalized allocation mechanisms

The arguments discussed so far provide some general ideas on the determinants of Ethnic Germans' labor market chances. However, we have to have a closer look at some specific institutional features of the German labor market. The German labor market is often characterized as a labor market that is governed by rigid job allocation mechanisms which are closely tied to the educational and training system (König/Müller 1986; Müller/Shavit 1998).² In the "German labor market regime", vocational certificates largely define who is eligible for entering job positions and who is not. Perhaps the most relevant aspect with regard to the

² Vocational certificates are mainly gathered by undergoing a training scheme in the "dual system" of vocational training. This system of training is merely unique in Europe in its shape and coverage – although Switzerland, Austria and Denmark are sharing some characteristics of this training arrangement. In the "dual system", firm based training in about 300 different occupations is combined with public vocational schools (Greinert 1995). Up to 3 ½ years of training are certified by general accepted vocational certificates.

employment prospects of migrants is that job allocation is determined by occupation specific credentials (Blossfeld/Mayer 1988; Müller/Shavit 1998; Marsden 1999). In *occupational labor markets*, working in one's trained occupation is crucial for job stability, occupational status and earnings. It follows from this, that the jobs a worker is entitled to enter is not so much determined by years of schooling, but the *very occupation* certified (Konietzka 1999b; Solga/Konietzka 1999). Given this, mobility patterns in the German labor market are strongly horizontally segregated along occupational entitlements.

Against this background, we can draw some specific hypotheses on the labor market mobility prospects of Ethnic Germans: First, as (male) migrants tend to be trained in craft and industry (blue-collar) jobs (see Table 1), they will be largely restricted to the corresponding specific 'craft segments' in the labor market, which, in many cases, offer limited mobility prospects. Second, the occupational structures that prevailed in their countries of origin might differ significantly from those in the German labor market. As a result, Ethnic Germans are more likely to suffer from structural mismatches between achieved training and the actual "qualificational demand" in the German labor market than workers who acquired their education and vocational training in Germany.³ Consequently, Ethnic Germans should yield smaller returns to their vocational training degrees. Since, in occupational labor markets, qualifications are not easily transferable to other occupations, individual adjustment prospects and the chances to find alternative 'adequate' job placements are expected to be limited.

Beyond this, it might be appropriate to distinguish between *vocational* certificates and *college* degrees. Allocation principles in craft and trade occupations are expected to be strongly

³ One basic argument is that in the 1990s, the West German labor market has experienced a shift towards a service dominated economy, while most state socialist countries focused on industry production (Brücker 1995).

segregated along occupation lines, however, the labor market for “tertiary credentials” might operate less rigidly. If this assumption holds true, foreign college degrees can be used more flexibly and should therefore pay off.

c) Gender specific patterns

Although labor market allocation mechanisms apply to both sexes, we expect severe gender-specific differences in the labor market performance of Ethnic Germans. Here, two arguments have to be distinguished. First, occupational labor markets are mostly highly gendered. Above all, craft and trade occupations are mostly considered as men’s *or* women’s jobs (Konietzka 1999a; Solga/Konietzka 2000). The second argument is migrant specific: Assuming traditional gender roles, one would expect that male migration is driven to a large extent by the motive to succeed in the immigration country’s labor market, and women are more likely to migrate as “tied movers” and thus to be less concerned about the transferability of their human capital (Chiswick 1986). If this assumption is true, Ethnic German women should be more likely to work in jobs that do not require vocational training or college education.

3. Data Source

This study uses data from the German Socio-Economic Panel (SOEP) of the year 1998. The SOEP is a longitudinal household survey, providing socioeconomic information on individuals living in private households in Germany (Deutsches Institut für Wirtschaftsforschung 2000). One of the “special features” of the SOEP is that it contains an “immigrant sample”. The immigrant sample is a sample of individuals who have migrated to Western Germany since 1984.

Apart from standard demographic information, respondents are asked about their migration status (Burkhauser/ Kreyenfeld/ Wagner 1996). This aspect is of particular importance for the analysis of Ethnic Germans. Ethnic Germans gain German citizenship upon arrival in Germany. This means that they cannot be distinguished from other Germans based on just their nationality. In most other micro-level data sets and also in the German micro-census, Ethnic Germans cannot be identified.

In our analysis, we denote an Ethnic German to be an individual of German descent, who is originated in Eastern Europe and has settled in the western states of Germany since 1984. We only deal with the Western German labor market, as only a small fraction of all Ethnic Germans reside in Eastern Germany (Bundesministerium des Inneren 1999). In most studies, migrants are compared to established natives, therefore we use “West Germans” as the reference group of established natives. We define a West German as a German national who has already lived in the Western states of Germany in 1984. Since the labor market performance of Ethnic Germans is also of interest relative to other migration groups, we also compare Ethnic Germans to foreign migrants in Germany. The term “foreigner” refers to an individual of Turkish, Yugoslavian, Italian, Greek, or Spanish origin, now living in the western states of Germany. We omit all migrants, who were younger than age 19 when they migrated, because they might have acquired most of their human capital in Germany. Migrants who migrated *after* age 18 could have undergone retraining or have started college education in Germany. One could speculate that this is particularly the case for Ethnic Germans since they are eligible for special retraining measures initiated by the employment agencies (Koller 1992, Kühn 1995). However, in our sample there are only 15 Ethnic Germans who received German vocational certificates and there is only one Ethnic German who received a college degree after having migrated to Germany. We omit all

(foreign or Ethnic) German migrants who have acquired a German vocational or educational certificate. We furthermore restrict the analysis to prime aged individuals (age 16-59) who are not retired, are not in the military service and do not receive education or vocational training at the date of interview. Altogether there are 3,501 West Germans, 520 foreigners and 238 Ethnic Germans in the remaining sample.

4. Empirical Results

4.1 Descriptive Findings

a) Educational Attainment

Compared to the average male German, male Ethnic Germans have received almost the same amount of vocational training. As can be seen from Table 1, 70 percent of all male West Germans and 65 percent of all male Ethnic Germans hold a vocational degree. However, Ethnic Germans are less likely to be holding a college degree (Ethnic Germans: 15 percent, West Germans: 20 percent). The relatively low ratio of Ethnic Germans with a college degree reflects the mechanisms, which allocated people into higher education in the state socialist countries. In the Soviet Union e.g., access to college education was highly rationed through quotas set by the central government (Gerber/ Hout 1995). Foreign migrants finally display by far the highest shares without formal vocational training: only three percent have received a college degree and only 34 percent a vocational training certificate in their countries of origin.

Comparing the educational characteristics of women, it is worth pointing out that Ethnic German women are more likely than West German women to be holding a college degree, but less likely of having a vocational certificate.

[Table 1 about here]

b) The Labor Market Performance of West Germans, Ethnic Germans and Foreign Migrants

We measure the labor market performance of male and female Ethnic Germans, West Germans and foreigners by:

- *Employment Rates:* For males, we distinguish full-time employed and others. We do not report any part-time employed males separately since there are only very few males working part-time (less than two percent). For females, we distinguish between part-time, full-time and not employed.
- *Labor Market Wages:* We only report a monthly gross wage. Although, we also report the working hours in Table 1, we do not use this information to calculate an hourly wage. The major reason for this is that we cannot use respondents who either do not report their working hours or who do not have the working hours specified in their employment contract. Furthermore, we believe that we add substantial error combining the monthly wage and the hours worked into one single variable.
- *Labor Market Positions:* We distinguish “low” and “medium / upper” labor market status. Low labor market status encompasses employees with simple duties and unskilled workers. Medium and upper labor market status encompass master craftsman, foreman, employees with qualified duties, directors and civil servants.

If indeed human capital characteristics determine the labor market performance of workers, male Ethnic Germans should do better in the labor market than foreign migrants. However, this is not the case. Despite their better endowment with human capital, Ethnic Germans resemble foreigners in their labor market performance. Comparing monthly gross wages, male full-time employed West Germans earn almost 5,600 DM on average, while Ethnic Germans and foreign migrants earn less than 4,200 DM or 75 percent of the salary of an average West German. The picture transfers to the labor market status: while 84 percent of the West Germans work in medium or upper labor market positions, only 56 percent of the Ethnic Germans and 32 percent of the foreigners do.

Differences in the labor market performance between male Ethnic Germans and West Germans basically transfer to their female counterparts. On average, employed West German women earn 3,200 DM a month. Ethnic German women earn 80 percent of this amount and foreign women only slightly more. However, women often work reduced working hours, which renders the comparability of monthly wages less sensible. Therefore, we will, in the following, concentrate on their labor market status: While 63 percent of the West German women work in a medium or upper labor market position, only 27 of the Ethnic German women and 12 percent of the foreign women do.

Table 1 also displays employment rates. About 11 percent of male Ethnic Germans are not employed. Rather surprisingly, the ratio of unemployed West Germans is exactly the same. Judged from this evidence, Ethnic German males have the same chances of entering the labor market as West Germans, so that, in the following, we do not pay special attention to the

employment probabilities of Ethnic Germans. Ethnic German women are however less likely to be employed than their West German counterparts. This is rather surprising, since they migrated from countries, where female employment had been strongly fostered (Pascall/ Manning 2000). However, these results are consistent with findings from other studies which also show that female Ethnic Germans face great problems of finding employment in the German labor market (Greif/ Gediga/ Janikowski 1999, Münz/ Seifert 1997: 121)).

c) Working in the Occupation Trained for

Ethnic Germans can get their foreign qualifications recognized officially (see section 2). Despite such formal procedures, those certificates may simply pay off less than German certificates since in many cases they do not correspond to the actual skill demand in the German labor market. Table 1 gives support for this assumption since only 41 percent of the male Ethnic Germans with a vocational certificate work in the occupations which they were actually trained for, compared to 65 percent of the male West Germans. Looking at the skill requirement of the performed job, a very similar picture emerges. We showed above that 78 percent of all male Ethnic Germans have received a post-secondary degree – but only 47 percent of them work in jobs that require a vocational or college diploma, compared to 77 percent of the male West Germans. Foreign migrants are the least likely to have received a post-secondary degree and they are also the least likely to be working in jobs that require vocational training or college education (29 percent). These findings basically transfer to women as well. Only 39 percent of all Ethnic German women are working in jobs that require college education or vocational training, compared to 70 percent among the West German women.

4.2 Multivariate Findings

In the multivariate analysis, we proceed in three steps. First, we estimate a simple employment equation. In a second step, we estimate a wage equation with the log of the monthly wage as dependent variable. In a third step, we estimate a logistic regression model, where we estimate the probability to occupy a medium or upper labor market status. We estimate separate regressions for male Ethnic Germans, foreign migrants and West Germans. For females, we proceed in a similar manner but we do not estimate a wage equation, since there are simply too few Ethnic German women working full-time that would allow us to perform a sensible analysis of monthly gross wages.

Covariates

We insert dummy variables that indicate if an individual holds a vocational or college degree. As reference category, we use individuals who have not earned any secondary degree. We control for firm experience, age and age squared. As bigger firms might pay higher wages, we also insert a binary variable that equals one for all individuals who work in firms with more than 200 employees. For females, we also insert a variable indicating whether there is a child age 10 years or younger in the same household. The most important aspect in the “wage equation” and the “labor market status equation“ is an interaction of *working in the trained occupation* and vocational degree. Here, we investigate whether migrants, who are working in the occupation they were trained for are better able to transfer their vocational credentials to the German labor market.

Results

Table 2 reports the results from the employment regression. For West German males, having a college or a vocational training certificate has a strong positive impact on employment probabilities. For Ethnic Germans and foreigners, educational and vocational certificates basically play no role in explaining the chances of participating in the labor market. For females, the situation is similar. But in contrast to their male counterparts, Ethnic German women with a college degree have higher chances to be employed than others. (For foreign women, we exclude college graduates, because there are too few with such a degree.)

[Table 2 about here]

In the following, we present two earning equations: the first one simply includes the educational attainment variable (Model a), while in the second one, we distinguish vocational degree holders by those who are working in the occupation they were trained for and those who are not (Model b).

The first earning equation shows that West Germans receive high returns to their educational and vocational degrees (Table 3). A college degree increases hourly wages by roughly 50 percent, a vocational degree by 10 percent on average (compared to no degree). In the second specification, the major result is that vocational training has a significant positive effect on wages, but *only if* West Germans are working in their trained occupations. For Ethnic Germans and foreign migrant, we find similar results. Migrants who are working in the occupation they were actually trained for receive considerable returns to their vocational training degrees. For Ethnic Germans,

the hourly wage increases by 14 percent compared to the reference group of Ethnic Germans without a post-secondary degree. A college education increases hourly wages of Ethnic Germans by 25 percent. Although this is well below the increase for West Germans, college education acquired in Eastern Europe still yields significant and high returns in the German labor market.

[Table 3 about here]

Table 4 reports the results from the logistic regression on the employment status. The observed patterns are very similar to the ones we found in the earning equations. Again working in the trained occupation enhances the performance in the German labor market. For all groups, working in the occupation trained for is a prerequisite for good chances of entering a medium or upper labor market status. The regression results also show that college education does pay off for Ethnic Germans as well as for foreign migrants, although Germans with a college degree have by far the highest relative chances of entering a medium or upper position.

[Table 4 about here]

Table 5 finally displays the findings from the logistic regression for female workers. Due to the small number of employed females, we pool Ethnic Germans and foreigners into one sample and insert a binary variable for Ethnic German. Furthermore, we are unable to perform an interaction of vocational degree and working in the occupation trained for, since all 41 female migrants, who

have a vocational degree and are not working in their trained occupation, are occupying a low labor market status. Therefore, we aggregate “no degree” and “vocational degree and not working in the trained occupation” into one category. The results basically support the findings from their male counterparts: Working in the trained occupation strongly increases the probability to enter a medium or upper labor market status. Again, college education has the highest impact on gaining a medium/upper labor market status.

[Table 5 about here]

5. Conclusions: Inclusion or Exclusion?

Which final conclusions can we draw on the transferability of educational, specifically vocational certificates of Ethnic Germans in the German labor market?

Although Ethnic Germans hardly differ in their educational attainment from their West German counterparts they perform substantially worse in the labor market. They earn 25 percent less than West Germans, they almost exclusively work in (blue-collar) positions and they are more likely to occupy a low labor market status. In addition, almost sixty percent of all Ethnic Germans with a vocational or academic certificate are not employed in their trained occupation. Closely related to this finding, more than half of all male Ethnic Germans work in jobs that do not require a vocational or college education.

Unfortunately, due to restrictions in our data set – in particular a small sample size – we did not go beyond cross-sectional analyses of the labor market performance of Ethnic Germans. Paying attention to *cohort* specific patterns and especially *transitions* into the labor market would surely deepen our insight in the employment chances of Ethnic Germans. Nevertheless, despite restrictions of this kind, the multivariate analyses revealed some essential allocation patterns. First of all, the empirical results confirm the hypothesis that *vocational degrees matter* a lot in the German labor market. But, degrees only pay off when employed in the *trained occupation*. If not, workers – Germans or Ethnic Germans – are basically treated as if they had no vocational training at all and they are confined to the labor market opportunities of unskilled workers. This finding strongly supports the assumption of occupational labor markets and ‘occupationalized’ closure mechanisms ruling the German labor market. A major consequence with respect to Ethnic Germans is that their (foreign) vocational credentials are transferable only in narrowly defined occupation specific labor market segments. Against this background, we have to stress that *not* taking into account the dimension of ‘skill match’ leads to misleading conclusions on the value of foreign credentials. It is important to note that these credentials *do* pay off – but only given one precondition: namely that access into the certified job is possible. While returns to foreign vocational degrees are highly conditional on ‘skill match’, Ethnic Germans yield returns to foreign college degrees. Similar is true for foreign migrants, who also yield significant returns to foreign college degrees.

Based on our analyses, one could draw the optimistic conclusion that, also in the future, college graduates and migrants, who are able to enter their trained occupations, have good chances to perform well in the German labor market. However, migrants had altogether much lower chances of working in their trained occupations than the West German comparison group. As

shown in Table 1, 65 percent of the West Germans, but only 41 percent of the Ethnic Germans males (with a vocational training degree) work in their trained occupation. From this we conclude, that *entering the trained occupation* is the most significant “threshold” for migrants in the German labor market. One important further question therefore is if the small chances of Ethnic Germans to enter their trained jobs simply is the outcome of technical skill deficits (like being trained in ‘wrong’ and outdated occupations, a too high concentration on blue-collar qualifications) or a systematic disregard of foreign credentials. In this respect, further research will be necessary.

Finally, what conclusions can we draw with respect to future migration to Germany on the basis of the experiences of Ethnic Germans? The eastern enlargement of the European Union is very likely to induce an increase in East to West migration, with Germany being one of the major recipient countries (Werner 1996). Against this background, the labor market performance of Ethnic Germans may in several respects anticipate the fate of future Eastern European migrants. Ethnic German migrants had access to special treatments (such as language course, retraining measures etc.). They had a comparatively high level of educational and vocational education and could take advantage of special procedures to have their degrees recognized. Nevertheless, less than half of them could finally enter their trained occupation. Taking into account that future East to West migrants will not receive special treatments (such as publicly funded retraining courses, and a standard procedure of recognition of educational and vocational degrees), we can expect that those migrants will profit even less from their vocational certificates in the West German labor market. Instead, their labor market chances will more likely resemble those of other foreign migrants. In other words, they will most likely be placed at the bottom end of the labor market.

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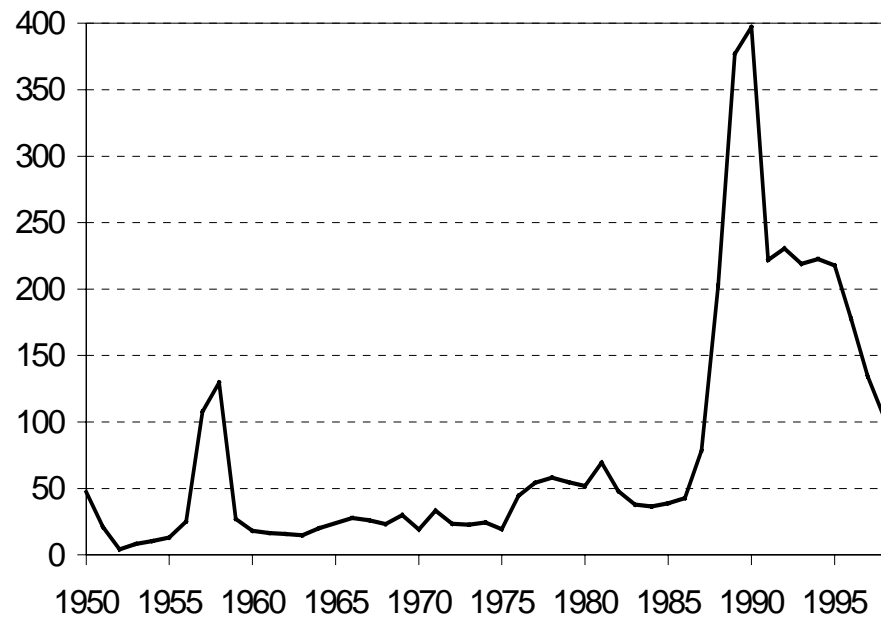
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Appendix

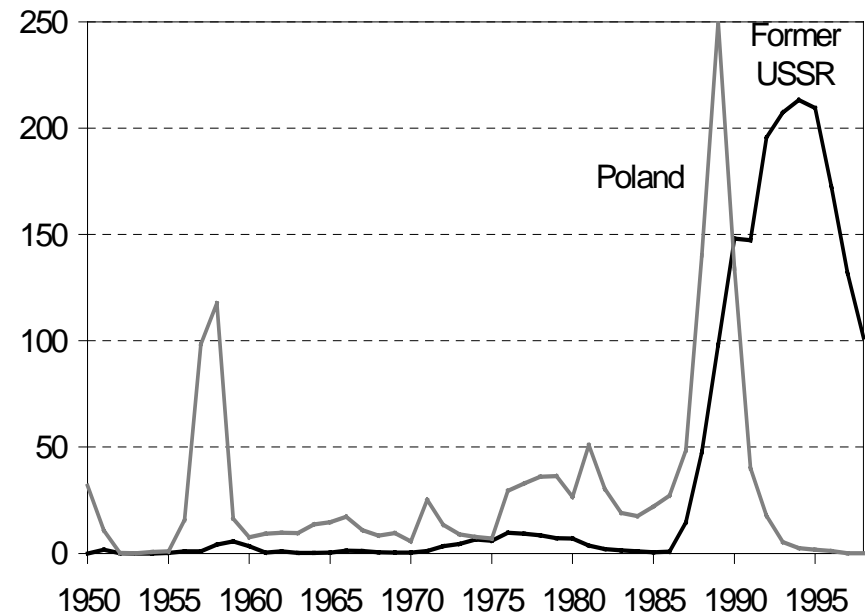
Figures

Figure 1: Yearly Influx of Ethnic Germans to Germany 1950-1995 (In 1,000)

Panel 1: Total Migration of Ethnic Germans



Panel 2: Ethnic Germans from Poland and the former USSR



Source: Bundesministerium des Inneren (1999)

Table 1: Descriptive Statistics

	Males			Females		
	West Germans	Ethnic Germans	Foreigners	West Germans	Ethnic Germans	Foreigners
Educational Attainment						
No degree	0.10	0.21	0.63	0.19	0.36	0.76
Vocational degree	0.70	0.65	0.34	0.70	0.49	0.23
College degree	0.20	0.15	0.03	0.11	0.15	0.01
Employment Rate						
Full-time employed	0.89	0.89	0.72	0.36	0.29	0.30
Part-time employed	0.00	0.00	0.00	0.30	0.29	0.14
Not employed	0.11	0.11	0.28	0.34	0.42	0.56
Wages & Working Hours **)						
Average monthly gross income (in DM)	5552	4185	4111	3153	2460	2578
Working hours (according to work contract)	38.35	38.18	37.99	30.23	29.17	31.45
Position in the Labor Market **)						
Low position (worker)	0.12	0.43	0.68	0.14	0.41	0.75
Low position (employee)	0.04	0.02	0.01	0.23	0.31	0.13
Medium or upper position (worker)	0.26	0.44	0.28	0.04	0.06	0.03
Medium or upper position (employee)	0.58	0.12	0.04	0.59	0.21	0.09
Skill Match/ Job Requirements						
Working in occupation trained for***)	0.65	0.41	0.51	0.67	0.50	0.35
Vocational training or college required	0.77	0.47	0.29	0.70	0.39	0.17
<i>Sample Size</i>	1,862	117	261	1,946	127	247

Note: (1) *) only employed **) only employed, self employed excluded ***) only workers with vocational degree (2) For males, we do not distinguish between full and part-time employed since there are too few males working part-time. Part-time employed males were classified as “not employed”.

Table 2: Determinants of Employment (Logistic regression, dependent variable: probability of being employed)

	Males						Females					
	West Germans		Ethnic Germans		Foreigners		West Germans		Ethnic Germans		Foreigners	
	b	t	b	t	b	t	b	t	b	t	b	t
Intercept	-5.57	-5.09 ***	-16.95	-2.27 **	-11.94	-4.17 ***	-1.66	-1.93 *	-5.76	-1.04	-6.17	-2.58 ***
Educational Attainment												
No degree	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Vocational degree	1.09	5.37 ***	-0.10	-0.11	0.28	0.87	0.58	4.42 ***	-0.36	-0.80	1.09	3.25 ***
College degree	1.29	4.81 ***	0.12	0.09	-0.75	-0.93	0.95	4.51 ***	1.32	1.81 *	--	
Demographic Characteristics												
Age	0.39	6.83 ***	1.05	2.75 ***	0.70	4.78 ***	0.20	4.39 ***	0.41	1.59	0.30	2.53 ***
Age squared (multiplied by 100)	-0.51	-7.43 ***	-1.34	-2.96 ***	-0.85	-4.96 ***	-0.31	-5.62 ***	-0.57	-1.96 *	-0.35	-2.48 ***
Child younger than 11 in household	--		--		--		-2.17	-16.70 ***	-1.48	-2.72 ***	-1.75	-4.07 ***
No Child younger than 11	--		--		--		Ref.		Ref.		Ref.	
<i>Sample Size</i>	1,862		117		261		1,946		127		247	

Note: (1) Significance: ***p<0.01; **p<0.05; *p<0.10 (2) Ref.: Reference category (3) For males: part-time employed are classified as not employed (4) Due to sample size problems, female foreigners with a college degree were omitted.

Table 3: Determinants of Male Wages (OLS, dependent variable: log of monthly gross wage)

	West Germans				Ethnic Germans				Foreigners			
	Model (1a)		Model (1b)		Model (2a)		Model (2b)		Model (3a)		Model (3b)	
	b	t	b	t	b	t	b	t	b	t	b	t
Intercept	7.00	47.43 ***	6.97	47.28 ***	8.02	11.65 ***	7.78	11.44 ***	7.48	22.97 ***	7.51	23.59 ***
Educational Attainment												
No degree	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Vocational degree	0.11	3.52 ***	--		0.06	0.96	--		0.04	1.20	--	
Vocational degree (no match)	--		0.06	1.95 *	--		0.00	0.06	--		-0.03	-0.79
Vocational degree (match)	--		0.13	4.15 ***	--		0.14	1.97 **	--		0.11	2.78 ***
College degree	0.49	14.30 ***	0.48	14.22 ***	0.25	2.92 **	0.24	2.90 ***	0.14	1.61	0.14	1.66 *
Demographic Characteristics												
Age	0.06	7.87 ***	0.06	8.03 ***	0.01	0.16	0.02	0.55	0.03	1.91 *	0.03	1.85 *
Age squared (multiplied by 100)	-0.06	-6.58 ***	-0.06	-6.65 ***	0.00	-0.11	-0.02	-0.48	-0.03	-1.59	-0.03	-1.48
Employment Characteristics												
Firm Experience (multiplied by 10)	0.03	2.48 **	0.02	1.87 *	0.04	0.48	0.01	0.06	0.02	0.83	0.01	0.50
Firm Size \geq 200 employees	0.07	3.71 ***	0.07	4.02 ***	0.15	2.28 **	0.16	2.40 **	0.11	2.72 ***	0.11	2.69 ***
Firm Size < 200 employees	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
r^2	0.33		0.35		0.20		0.25		0.20		0.24	
Sample Size	1,379				97				160			

Note: (1) Significance: ***p<0.01; **p<0.05; *p<0.10 (2) Ref.: Reference category (3) Self-employed, unemployed and part-time employed are excluded.

Table 4: Determinants of Labor Market Position of Males (Logistic-regression, dependent variable: probability of medium or upper labor market position)

	West Germans				Ethnic Germans				Foreigners			
	Model (4a)		Model (4b)		Model (4a)		Model (4b)		Model (4a)		Model (4b)	
	b	t	b	t	b	t	b	t	b	t	b	t
Intercept	1.11	0.84	-0.11	-0.08	6.26	1.09	3.06	0.45	-2.51	-0.69	-2.80	-0.53
Educational Attainment												
No degree	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
Vocational degree	1.23	6.00 ***	--		0.75	1.36	--		1.35	3.70 ***	--	
Vocational degree (no match)	--		0.02	0.09	--		-0.43	-0.70	--		-1.90	-1.81
Vocational degree (match)	--		2.61	9.90 ***	--		3.15	3.52 ***	--		3.86	5.46 ***
College degree	5.44	5.33 ***	5.31	5.21 ***	2.93	3.08 ***	2.85	2.90 ***	2.86	2.49 **	2.93	2.51 **
Demographic Characteristics												
Age	-0.03	-0.47	0.02	0.24	-0.37	-1.29	-0.20	-0.57	0.07	0.38	0.07	0.28
Age squared (multiplied by 100)	-0.02	-0.20	-0.05	-0.59	0.45	1.24	0.24	0.55	-0.11	-0.53	-0.10	-0.32
Employment Characteristics												
Firm Experience (multiplied by 10)	0.62	5.74 ***	0.48	3.97 ***	1.38	1.69 *	0.80	0.80	0.35	1.45	0.20	0.72
Firm Size \geq 200 employees	0.37	1.95 **	0.74	3.63 ***	-0.52	-0.84	-0.64	-0.82	-0.62	-1.29	-1.15	-1.63
Firm Size < 200 employees	Ref.		Ref.		Ref.		Ref.		Ref.		Ref.	
<i>Sample Size</i>	<i>1,450</i>				<i>103</i>				<i>173</i>			

Note: (1) Significance: ***p<0.01; **p<0.05; *p<0.10 (2) Ref.: Reference category (3) Self-employed, unemployed and part-time employed are excluded.

Table 5: Determinants of Labor Market Position of Females (Logistic-regression, dependent variable: probability of medium or upper labor market position)

	West Germans				Ethnic Germans & Foreigners			
	Model (5a)		Model (5b)		Model (6a)		Model (6b)	
	b	t	b	t	b	t	b	t
Intercept	-5.25	-3.82 ***	-5.78	-4.08 ***	-7.75	-1.33	-11.17	-1.63
Educational Attainment								
No degree	Ref.		Ref.		Ref.		Ref.	
Vocational degree	1.53	5.89 ***	--		1.39	1.95	--	
Vocational degree (match)	--		1.34	6.42 ***	--		3.20	3.56 ***
College degree	5.01	4.84 ***	4.49	4.41 ***	3.83	3.68 ***	4.41	4.19 ***
Demographic Characteristics								
Age	0.25	3.33 ***	0.30	3.91 ***	0.32	1.01	0.42	1.13
Age squared (multiplied by 100)	-0.35	-3.60 ***	-0.40	-4.07 ***	-0.44	-1.08	-0.52	-1.08
Child younger than 11 in household	0.03	0.09	0.04	0.10	1.22	1.18	1.32	1.15
No Child younger than 11	Ref.		Ref.		Ref.		Ref.	
Employment Characteristics								
Firm Experience (multiplied by 10)	0.59	3.56 ***	0.49	3.01 ***	-0.20	-0.38	0.06	0.10
Firm Size \geq 200 employees	0.93	3.55 ***	1.02	3.87 ***	0.89	1.10	0.62	0.67
Firm Size < 200 employees	Ref.		Ref.		Ref.		Ref.	
Ethnic German					-0.04	-0.06	-0.45	-0.48
<i>Sample Size</i>	<i>1,178</i>				<i>189</i>			
Note:	(1) Significance: ***p<0.01; **p<.005; *p<.010 (2) Ref.: Reference category (3) Self-employed and unemployed are excluded.							