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Income Composition and Redistribution in Germany — The Role of Ethnic Origin and Assimilation

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Summary

This paper deals with the relative economic performance of immigrants compared to the native born population in Germany. We compare pre- and post-government income, using data from the German Socio-Economic Panel from 1995 to 1997. We categorize six population subgroups by the ethnicity of the adult household members: native-born West Germans, East Germans, "pure" Aussiedler (ethnic German immigrants), "pure" non-ethnic German foreign immigrants, and "mixed" immigrants, either Aussiedler or foreign, living with an adult native-born German.

Our results show that immigrants are quite heterogeneous with respect to their economic performance but, overall, non-ethnic German immigrants are net payers to the social security system. The two subgroups substantially benefiting from the income redistribution are "pure" Aussiedler and East Germans. By this measure, immigrants of non-German nationality are not an economic burden to the native-born population.

1. Introduction

The long-term stability of the — up to now — well-functioning German corporatist social security system, which in large part is pay-as-you-go, is severely endangered by low fertility rates and increasing life expectancy in the native-born population, that is, a smaller number of workers to support a growing number of retirees. Demographers (cf. United Nations Population Division 2000) propose enforced immigration as one solution to this looming societal problem. Yet many people, including influential politicians, still view immigrants as an economic burden rather than a relief. They fear that immigrants do not possess the skills to fully participate in the labor market, and that as a result immigrants have above average take-up rates of public transfers. In addition, some question immigrants' general ability and willingness to be assimilated into society. As a consequence, current public discussion tends to focus on how to avoid immigration instead of how to support it (Rotte 1998).

Although immigration rates to Germany over the last decade were the highest among European countries (after Luxembourg and Switzerland),[1] the government's official policy was not to consider Germany as an immigration country. The former Kohl administration explicitly denied the existence of an active immigration policy and, as a consequence, the need for a comprehensive immigration law.[2] Since the elections in October 1998, which led to the change in federal administration, the German Social Democrats have taken some steps to make naturalization easier and to allow children of immigrants to hold temporary dual citizenship. A person born in Germany does not automatically receive German citizenship, as would be the case in most other countries (*ius soli*), but rather retains the citizenship of the parents. This concept enables people of German ethnic origin (*Aussiedler*)[3] who live outside Germany to claim German citizenship basically when crossing the borderline (*ius sanguinis*).

In most recent years, immigration patterns in Germany have changed substantially. After peaking in 1992 at about 1.5 million persons per year, the total number of immigrants declined almost to about 800,000 in 1998, while the number of persons leaving Germany remained pretty stable, about 750,000 per year. As a consequence, net immigration dropped from 782,000 persons in 1992 to almost zero (47,000) in 1998. This low level of net immigration severely aggravates the demographic problem with regard to the future of the German social security system. However, it may open the door for a dispassionate discussion of the advantages and disadvantages of immigration.

2. Background

From an economic point of view, the question whether immigrants — or specific subgroups among them — are enriching or burdening the native-born population is important: "(The) cost-benefit calculation will surely be a key component of the immigration debate that is likely to dominate domestic public policy in the next decade" (Borjas 1995, p. 279). Most of the research work in this field focuses on differences between the receipt of public benefits of immigrants and the native-born population, and neglects the other side of the cost-benefit calculation: "An

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[1] Source for all numbers and empirical trends in this Section: Lederer, Rau, and Rühl (1999).

[2] Bundesregierung der BRD (1996, 2).

[3] Ethnic Germans ("[Spät-]*Aussiedler*") are German natives and their descendants who lived in Eastern Europe or in the area of former Soviet Union, most of them for generations. According to the German constitution, these people are awarded German citizenship in the case of "re-"immigration to Germany, if they can prove some basic German language knowledge and German cultural identity (for details see e.g., Zimmermann 1999). The immigration of ethnic Germans to Germany dropped from about 400,000 in 1990 to about 40,000 in the first half of 1999 (see Lederer, Rau, and Rühl 1999).

overall judgment on the effects of immigrants on future government expenditures should take into account the tax contributions of immigrants and natives as well as the expenditures for them. However, no recent study provides data on household incomes of natives and immigrants; hence there is no solid basis for estimating the taxes paid by the two groups" (Simon 1996, p. 107). These issues cannot be resolved by analyzing only take-up of public transfers, for example that of welfare benefits (cf. Jensen 1988; Maani 1993; Khoo 1994; Gustman and Steinmeier 1998; Riphahn 1998; Hu 1998).[4] A promising approach is to consider both aspects simultaneously, the receipt of benefits and the contribution to the tax and welfare system. Previously, only a very few studies recognized this (e.g., Börsch-Supan 1994). It is our goal to make a small contribution to this underdeveloped body of research.

The crucial question is: "Do (immigrants) consume more services from the public sector than they pay for in taxes?" (Schultz 1998: 245). More specifically: "Who's financing whom? Do immigrants subsidize the native population or vice versa? Is immigration a cost factor or a net benefit for the public transfer system?" (Weber and Straubhaar 1996, p. 350). LaLonde and Topel (1991) report that immigrants to the United States have lower incomes, but bear this burden for themselves, that is without having a severe negative impact on the native-born population. Simon (1996) confirms this finding for the United States in the 1970s, though the picture for more recent periods is not that clear. Rürup and Sesselmeier (1994) find that immigrants to Germany are net payers with respect to unemployment insurance and medical aid; with respect to old age pensions the results seem to be less obvious because of uncontrollable and unpredictable interdependent effects. For Switzerland, Weber and Straubhaar (1996) find that immigrants are net payers to the tax and social security system.[5] Our empirical work for the case of Germany follows in the tradition of this type of immigration research.

3. Data and Methods

3.1 Data and observation period

Our empirical analyses are based on representative microdata from the German Socio-Economic Panel (GSOEP), which is an ongoing panel survey in which respondents are interviewed annually. This dataset provides data at the household and the individual level (Wagner, Burkhauser, and Behringer 1993) as well as specific information about the ethnic origin of the respondents and their household structure. We match the German portion of the PSID-GSOEP Equivalent File (Burkhauser, Butrica, and Daly 2000) for most detailed information about various components of household income.[6] We make use of data collected from 1995 to 1997 including the new "immigration" subsample which started in 1994/95 (Burkhauser, Kreyenfeld, and Wagner 1997). Because we analyze responses to questions about income for the year preceding the interview, our analysis covers incomes for the years 1994 to 1996. In the descriptive analyses, appropriate weighting factors are applied.[7]

3.2 Level of analysis and definition of ethnic groups

The unit of analysis is the individual within a particular household context. Households are categorized into one of six different groups according to the ethnicity of the adult household members (aged 17 and over). The ethnic origin of the head of household determines the main categorization. Contrary to the more technical definition of the GSOEP administration, we define the household member earning the highest individual income to be the head of household.[8] After the household is categorized, all members of that household (including dependent children) are given the same status concerning ethnicity, regardless of their legal nationality.

In West Germany, we distinguish between: i) Native-born Germans; ii) "Pure" *Aussiedler* (all adult household members are ethnic Germans born outside Germany); iii) "Mixed" *Aussiedler* (the head of household is an ethnic German born outside Germany, and at least one other adult household member is a native-born German); iv) "Pure" foreigners (no adult household members are ei-

[4] Studies focusing on this issue build a major field of research within the immigration context. The general expectation is that take-up intensity among immigrants decreases with increasing duration of stay (Büchel, Frick, and Voges 1997; Voges, Frick, and Büchel 1998). However, a contrary result is presented by Baker and Benjamin (1995). This could be explained by varying institutional settings between countries. Borjas and Hilton (1996) believe that social networks among immigrants lead to higher take-up rates of this group. However, this is challenged by Zavodny (1997). Voges, Frick, and Büchel (1998) and Bird et al. (2000) state that welfare recipiency is higher among immigrants than among native-born people, and Bird et al. even find that take-up shares among immigrants are above average in the case of eligibility. However, both studies conclude that this is due to the less favorable social structure of immigrants, i.e., that different ethnic origin is not a risk factor per se.

[5] Additional studies are reported in Weber and Straubhaar (1996, Table 1, 335).

[6] Since the GSOEP collects only information on gross income, a simulation module is being used in the Equivalent Data File to calculate individual tax and social security contributions. This simulation takes into account progression rules and basic allowances only (c.f. Schwarze 1995).

[7] Our pooled three-year sample contains 52,050 individual observations with valid income information, 45,495 of them living in households with a head of prime age (between 20 and 60), and 12,564 of them living in immigrant households.

[8] In case of different adult household members showing the same individual income, the head of household according to GSOEP definition is the person who knows best about the household's socio-economic conditions.

ther native-born German" or ethnic German); v) "Mixed" foreigners (head of household is neither native-born German nor ethnic German, and at least one other adult household member is native-born German).[9] We use "mixed" immigrants to indicate the effect of assimilation. Due to still persisting strong differences in income structures between West and East Germany, we also distinguish vi) East Germans, virtually all of whom are native-born Germans.[10]

3.3 Income components, relative income positions, and re-distribution

Although we analyze income at the individual level, income information is calculated at the household level. The underlying assumption of this approach is that all members of a specific household pool their resources and share the same utility from a given household income. Consequently, we match the information about the various (equivalent) income components of a specific household to all members of that household, regardless of age or individual income performance.[11]

We analyze the following income components for each of the subgroups described above: i) employment income; ii) capital income (including imputed rent for owner-occupied housing); and iii) private transfers (including old age pensions from former employers or firms). By combining these three components, we obtain pre-government income. We then add iv) old age pensions and v) public transfers, and subtract vi) taxes and social security contributions to obtain post-government income, or income after redistribution.

All income components are standardized by relating individual income to the respective mean of the total German population (total mean = 100). We measure the effect of income redistribution by subtracting for each individual the relative income position based on pre-government income from the one based on post-government income. This yields a positive (negative) measure for those who improve (worsen) their income position due to income redistribution. Thereafter, we use a dummy-variable to indicate winners and losers of redistribution.

3.4 Steps of analysis

We start by comparing the relative income positions within income components by ethnic group. First, we focus on aggregates (market income, non-market income, taxes and social security contributions; see Table 1). Second, we calculate for each ethnic group the various income components as a share of total income ("portfolio structure"; see Table 2). Then, in our multivariate analyses, we apply random-effects models (GLS regressions and probit models; see Table 3), controlling for various socio-economic status (SES) indicators, to analyze relative income positions for pre-government and post-government income as well as changes in relative income position due to income redistribution within the tax and welfare system. With respect to the latter, we analyze the absolute changes in relative income position from pre- to post-government and identify winners and losers. This exercise tells us which population groups benefit from the tax and welfare system and which contribute to it. To control for eventual (pre-)retirement effects, all analyses are executed separately for the total population ("social burden approach") and those living in households with a head of prime working age (20 to 60 years; "labor market integration approach").

4. Empirical Results

4.1 Relative income position in various types of income

We focus on pre-government (or market) income, non-market income, taxes and contributions, and finally, post-government income. The mean of each of these income types, based on the overall German distribution, is standardized to 100. We then present relative positions in all of the income types for the six population groups. This gives a first hint about the economic performance of various ethnic groups.

The upper panel of Table 1 shows results for the total population. In West Germany, the native-born German population has a somewhat higher market income than the German average (+9 percent) and a non-market income about the same as that of the overall population living in Germany. As a consequence, the contribution of the native-born West German population to the tax and social security system is also above average, (+9 percent), as is the available post-government income (+7 percent).

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[9] Some very few "mixed" households with ethnic Germans and foreigners are grouped into the "pure" ethnic German category. Note: the foreigners' group contains a few asylum seekers living in private households (the vast majority of asylum seekers live in institutional arrangements and are not part of the GSOEP sample). See Schmidt and Weick (1998) for more detailed information on the increasing number of partnerships and marriages between Germans and foreign citizens.

[10] Households in East Germany include a small number of foreigners as well.

[11] In order to adjust for differences in household size, we apply an equivalence scale with an elasticity of $\varepsilon = 0.5$ which approximates the so-called OECD scale. All income components are deflated and expressed in 1995 DM. The amounts are adjusted for purchasing power differences between West and East Germany (about 7 percent per annum). We apply a bottom and top trimming by eliminating the lowest and highest 0.5 percent of per capita post-government incomes to reduce the effect of extreme income outliers. Finally, we pool the observations across all three cross-sectional years to obtain the average of the period 1994 to 1996.

East Germans have the lowest market incomes. The market income of immigrants holds a medium position between native-born West Germans and East Germans. Among immigrants, however, there are remarkable differences between ethnic groups. Whereas the "pure" *Aussiedler* have very low market incomes, people living in "mixed" households are better off than the native-born West Germans.

All immigrant groups have substantially lower non-market incomes than the native-born West Germans (e.g., "pure" foreigners: –43 percent), with one outstanding exception. The "pure" *Aussiedler* (+15 percent) are on a similar level as East Germans (+16 percent). The relative position with respect to contributions to the tax and social security system is almost identical to that with respect to the market income for native-born West Germans and all ethnic groups, which indicates a "fair" tax and social contribution system.

Comparing market income and post-government income position, immigrants as a whole seem to be slightly worse off after redistribution. This gives a first hint that immigrants in general do not economically "burden" the native-born population. The economically powerful "mixed" groups of immigrants are the highest net payers. Again, the group of "pure" *Aussiedler* is an exception, the only immigrant group benefiting from redistribution. They improve their relative income position from 66 percent of average pre-government income to 76 percent of average post-government income.

Special attention needs to be given to East Germany. The average market income there is the same as that of "pure" foreigners in West Germany (21 percent below the total population mean). However, in other income types we can observe substantial differences between those two groups. Compared to "pure" foreigner households in West Germany, non-market incomes in East Germany are substantially higher. In combination with the somewhat higher taxes and social security contributions paid by "pure" foreigners, this leads to remarkable differences in post-government income position (-27 percent for "pure" foreigners versus –12 percent for East Germans).

Results based on the entire population are probably heavily influenced by differences in the age structure of the ethnic groups under consideration. Nevertheless, looking at the results based only on persons living in households with a head aged between 20 and 60 years (lower panel in Table 1), the overall pattern remains pretty similar to that for the total population, with one striking difference. Concerning non-market income, the younger immigrants have a substantially higher relative income position than the older ones. This is especially high in the group of "pure" foreigners (from –43 percent to –2 percent). The explanation for this result is described in more detail in the following section: lower eligibility and receipt

Table 1

Relative Income Position in Various Types of Income in Germany, 1995–1997,[a] by Ethnic Group

Type of Income	West Germany						East Germany Total	Germany Total
	Native-Born German	Immigrants						
		Total	"Pure" *Aussiedler*	"Mixed" *Aussiedler*	"Pure" Foreigner	"Mixed" Foreigner		
	Total Population							
Pre-Government (Market) Income	109	90	66	118	79	126	79	100
Non-Market Income (Pensions and Public Transfers)	102	74	115	84	57	60	116	100
Taxes and Social Security Contributions	109	92	67	122	81	125	77	100
Post-Government Income	107	86	76	109	73	112	88	100
	Persons in Private Households with Head of Prime Age (aged 20–60 years)							
Pre-Government (Market) Income	110	84	70	112	70	115	81	100
Non-Market Income (Pensions and Public Transfers)	88	99	115	109	98	77	140	100
Taxes and Social Security Contributions	111	85	71	115	71	112	79	100
Post-Government Income	107	86	74	111	73	112	89	100

[a] Average of 1994–1996 income years.

Source: GSOEP; PSID-GSOEP Equivalent Data File; authors' calculation.

of old age pensions, and high eligibility for other public transfers, e.g., unemployment benefits and social assistance, due to the weaker labor market position. However, we must point out that the relative position in non-market income of "pure" foreigners living in households with heads aged between 20 and 60 is still below the overall German average. This is mainly due to the very high relative position in non-market income recipiency among East Germans (+40 percent versus –12 percent for native-born West Germans).

4.2 Income components as a share of total income

The results of the description of the income portfolio are given in Table 2. For each individual, we relate market income, non-market income, and taxes and contributions to a standardized post-government income (equal to 100).[12]

Again, we first look at results based on the total population (upper panel in Table 2). Concentrating on the totals of the three income aggregates, we find a very clear pattern. Two ethnic groups, "mixed" Aussiedler and "mixed" foreigners, have an economic performance that is clearly above average compared to the overall German population. Two groups, native-born West Germans and "pure" foreigners, have medium performance, and two groups, East Germans and "pure" Aussiedler, have low performance.

The portfolio of the two groups with the best market performance ("mixed" foreigners are somewhat more successful than "mixed" *Aussiedler*) consists of 110 percent to 115 percent market income and 17 percent to 22 percent non-market income; deducting taxes (33 percent in both groups) results in 100 percent of their individual portfolio. Among "mixed" *Aussiedler*, old age pensions play a somewhat greater role than among "mixed" foreigners. This is compensated by a somewhat higher importance of employment income among "mixed" foreigners (102 percent) compared to that of "mixed" *Aussiedler* (98 percent). The income portfolio of the two groups with medium performance ("pure" foreigners are slightly better off than native-born West Germans) consists of 103 percent to 106 percent market income and about 25 percent non-market income, which is reduced by about 30 percent of taxes and contributions. Among native-born West Germans, capital income plays a greater role than within the group of "pure" foreigners (13 percent versus 3 percent). This is compensated for by a much higher importance of employment income among the "pure" foreigners (102 percent versus 88 percent among the native-born West Germans). For non-market income, in the native-born West German group old age pensions contribute 19 percent and public transfers only 7 percent to the income portfolio, while this relation is reversed among "pure" foreigners.

The portfolio of the two groups with the lowest economic performance ("pure" *Aussiedler* are in a somewhat worse position than East Germans) consists of 85 percent to 90 percent market income and 35 percent to 38 percent non-market income. The deduction by taxes and contributions is about 25 percent in both groups.

This clustering of groups according to their economic performance clearly changes when focusing only on people living in households with heads aged between 20 and 60 (lower panel in Table 2). The three clusters are now reduced to only two: the economically better performing group consisting of "mixed" foreigners, "mixed" *Aussiedler*, and native-born West Germans, and the economically worse performing group made up of "pure" foreigners, "pure" *Aussiedler*, and East Germans.

The income portfolio of the better performing cluster among the younger population consists of higher shares of market income (122 percent to 124 percent) and rather low shares of non-market income (12 percent to 14 percent). From it is deducted shares of taxes and contributions between 35 percent and 37 percent. The proportions within the specific income components are remarkable similar. This result clearly confirms the expectation that immigrants tend to behave similar to native-born people, if assimilation has proceeded up to a certain level (in our analysis operationalized by the existence of at least one native-born German adult in the household). On the other hand, the cluster with lower performance among the younger population is much worse off. The income portfolio of these persons consists only of 107 percent to 110 percent market income, but includes 22 percent to 23 percent of non-market income. Deduction of taxes and contributions by 30 percent to 32 percent make it 100 percent of the portfolio. As in the better performing cluster, the structure of components of income is strikingly similar among the three groups. Disregarding the very special situation in East Germany, we can state that the low assimilation status of the two "pure" immigrant groups is key to understanding the lower performance of these households.

4.3 Winners and Losers of the Income Redistribution Process

We define the winners of income redistribution as those individuals who improve their relative income position when moving from pre- to post-government income. In our multivariate analysis, we try to isolate the effect of ethnic origin by controlling for various SES measures. As dependent variables, we use the natural logarithm of the relative

[12] For additional information such as population share receiving specific income components or information about the most important single income component see Büchel and Frick (2000), Tables 2a and 2c.

Table 2

Components and Structure of Equivalent Post-Government Income in Germany, 1995–1997,[a] by Ethnic Group: Income Components as a Share of Total Income (in percent)

Type of Income	West Germany						East Germany Total	Germany Total
	Native-Born German	Immigrants						
		Total	"Pure" *Aussiedler*	"Mixed" *Aussiedler*	"Pure" Foreigner	"Mixed" Foreigner		
	Total Population							
Market Income	*103*	*104*	*85*	*110*	*106*	*115*	*90*	*101*
Employment Income	88	96	78	98	102	102	84	89
Capital Income	13	6	6	11	3	12	5	11
Private Transfers	2	1	1	1	1	1	1	1
Non-Market Income	*26*	*26*	*38*	*22*	*25*	*17*	*35*	*28*
Old-Age Pension	19	12	23	15	7	9	20	18
Public Transfers	7	14	15	7	18	8	15	10
Taxes and Contributions	*–29*	*–30*	*–24*	*–33*	*–30*	*–33*	*–25*	*–28*
Total	100	100	100	100	100	100	100	100
	Persons in Private Households with Head of Prime Age (aged 20–60 years)							
Market Income	*122*	*114*	*107*	*123*	*110*	*124*	*108*	*118*
Employment Income	108	107	100	111	107	111	102	107
Capital Income	13	6	6	12	3	12	5	10
Private Transfers	1	1	1	1	1	1	1	1
Non-Market Income	*13*	*19*	*23*	*14*	*22*	*12*	*22*	*16*
Old-Age Pension	5	4	5	6	4	3	5	5
Public Transfers	8	15	19	8	18	9	17	11
Taxes and Contributions	*–36*	*–33*	*–30*	*–37*	*–32*	*–35*	*–30*	*–34*
Total	100	100	100	100	100	100	100	100

[a] Average of 1994–1996 income years.

Source: GSOEP; PSID-GSOEP Equivalent Data File; authors' calculation.

Table 3

Effects on Relative Income Positions and Redistribution Effects in Germany, 1995–1997,[a] Results from Random-Effects GLS Regression and Probit Models

Variable	Total Population				Prime Age Head (aged 20–60 years)			
	ln (Relative Income Position)		Absolute Change in Income Position Due to Redistribution	Positive Change Due to Redistribution (1 = yes)	ln (Relative Income Position)		Absolute Change in Income Position Due to Redistribution	Positive Change Due to Redistribution (1 = yes)
	Pre-Government Income	Post-Government Income			Pre-Government Income	Post-Government Income		
"Pure" *Aussiedler*	–0.567** (0.031)	0.314** (0.013)	8.082** (0.988)	0.693** (0.083)	–0.434** (0.029)	–0.308** (0.013)	9.647** (0.954)	0.713** (0.087)
"Mixed" *Aussiedler*	–0.063 (0.044)	–0.022 (0.018)	0.290 (1.362)	–0.165 (0.124)	0.006 (0.040)	–0.006 (0.019)	1.927 (1.294)	–0.197 (0.128)
"Pure" Foreigner	–0.263** (0.019)	–0.247** (0.008)	–1.002+ (0.607)	–0.410** (0.051)	–0.225** (0.017)	–0.222** (0.008)	0.591 (0.574)	–0.308** (0.053)
"Mixed" Foreigner	–0.074* (0.031)	–0.035** (0.013)	–3.760** (0.955)	–0.275** (0.087)	–0.016 (0.028)	–0.027* (0.013)	–2.098* (0.894)	–0.260** (0.088)
East German	–0.391** (0.015)	–0.148** (0.006)	7.956** (0.487)	0.611** (0.043)	–0.249** (0.014)	–0.142** (0.006)	9.412** (0.472)	0.634** (0.044)
Single	–0.437** (0.021)	–0.240** (0.008)	–1.180+ (0.622)	0.114 (0.072)	–0.430** (0.022)	–0.259** (0.010)	3.731** (0.689)	0.062 (0.078)
Couple, 1 child	–0.043** (0.016)	–0.061** (0.006)	6.439** (0.466)	0.463** (0.050)	–0.161** (0.015)	–0.092 (0.006)	12.156** (0.462)	0.462** (0.053)
Couple, 2 children	–0.252** (0.017)	–0.172** (0.007)	11.862** (0.517)	0.964** (0.054)	–0.370** (0.016)	–0.212** (0.007)	17.978** (0.516)	0.912** (0.057)
Couple, 3 or more children	–0.522** (0.022)	–0.248** (0.009)	19.740** (0.665)	2.204** (0.067)	–0.641** (0.021)	–0.290** (0.009)	26.561** (0.653)	2.141** (0.070)
Single-Parent	–0.664** (0.022)	–0.333** (0.009)	12.139** (0.658)	1.436** (0.068)	–0.758** (0.020)	–0.356** (0.009)	15.975** (0.629)	1.479** (0.070)
Other Type of Household	0.172** (0.016)	0.061** (0.006)	1.233* (0.486)	0.399** (0.050)	0.039* (0.015)	0.043** (0.007)	7.816** (0.487)	0.551** (0.053)
Age (Head of Household)	0.121** (0.002)	0.025** (0.001)	–3.924** (0.067)	–0.440** (0.010)	0.116** (0.004)	0.042** (0.001)	–3.818** (0.129)	–0.314** (0.013)
(Age**2)/100 (Head of Household)	–0.152** (0.002)	–0.022** (0.001)	5.001** (0.072)	0.538** (0.012)	–0.140** (0.005)	–0.043** (0.002)	4.637** (0.160)	0.375** (0.017)
Education, 9–11 years (Head of Household)	0.282** (0.017)	0.105** (0.006)	–2.478** (0.502)	–0.375** (0.049)	0.236** (0.016)	0.085** (0.007)	–5.045** (0.520)	–0.387** (0.052)
Education, 12–14 years (Head of Household)	0.417** (0.019)	0.177** (0.008)	–5.360** (0.582)	–0.599** (0.057)	0.344** (0.019)	0.156** (0.008)	–7.827** (0.592)	–0.601** (0.060)

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Table 3 (Continued)

Variable	Total Population				Prime Age Head (aged 20–60 years)			
	ln (Relative Income Position)		Absolute Change in Income Position Due to Redistribution	Positive Change Due to Redistribution (1 = yes)	ln (Relative Income Position)		Absolute Change in Income Position Due to Redistribution	Positive Change Due to Redistribution (1 = yes)
	Pre-Government Income	Post-Government Income			Pre-Government Income	Post-Government Income		
Education, 15–17 years (Head of Household)	0.610** (0.028)	0.310** (0.011)	–13.491** (0.835)	–1.034** (0.084)	0.520** (0.026)	0.277** (0.012)	–17.964** (0.824)	–1.117** (0.088)
Education 18+ years (Head of Household)	0.757** (0.026)	0.399** (0.010)	–17.905** (0.797)	–1.297** (0.081)	0.683** (0.025)	0.380** (0.011)	–21.784** (0.793)	–1.332** (0.085)
Poor Health Status (Head of Household)	–0.131** (0.011)	–0.053** (0.004)	0.808* (0.306)	0.213** (0.038)	–0.160** (0.011)	–0.055** (0.004)	2.240** (0.327)	0.239** (0.040)
Unemployment Index 1–30% (low effect)	–0.178** (0.009)	–0.047** (0.003)	9.042** (0.272)	0.846** (0.031)	–0.183** (0.008)	–0.050** (0.003)	8.840** (0.264)	0.869** (0.032)
Unemployment Index > 30% (high effect)	–0.952** (0.012)	–0.165** (0.004)	27.051** (0.347)	2.489** (0.044)	–0.899** (0.011)	–0.176** (0.005)	25.525** (0.351)	2.500** (0.046)
Rural Area (< 20,000 inhabitants)	–0.008 (0.014)	0.011* (0.005)	1.468** (0.434)	0.066+ (0.040)	–0.013 (0.013)	0.015* (0.006)	1.565** (0.421)	0.070+ (0.042)
Big City (> 500,000 inhabitants)	–0.083** (0.016)	–0.018** (0.006)	1.396** (0.492)	0.021 (0.045)	–0.066** (0.015)	–0.024** (0.007)	1.047* (0.477)	0.019 (0.047)
Year of observation, 1995	0.046** (0.006)	–0.015** (0.002)	–1.731** (0.174)	–0.337** (0.024)	0.036** (0.006)	–0.013** (0.002)	–1.626** (0.179)	–0.320** (0.024)
Year of observation, 1996	0.006 (0.006)	–0.011** (0.002)	–0.341* (0.173)	–0.140** (0.023)	0.009 (0.006)	–0.010** (0.002)	–0.255 (0.177)	–0.136** (0.024)
Constant	2.252** (0.053)	3.917** (0.021)	51.001** (1.552)	6.686** (0.213)	2.381** (0.080)	3.640** (0.036)	47.537** (2.473)	4.354** (0.259)
Number of Observations	52,050/19,060				45,495/17,044			
Mean of Dependent Variable (unweighted)	4.102	4.468	–3.549	0.391	4.390	4.475	–12.781	0.316
Overall R^2, McKelvey-Zavoina R^2	0.50	0.32	0.47	0.86	0.36	0.34	0.30	0.63
Wald Chi^2	26,151.7**	11,917.0**	21,899.8**	5,373.1**	13,157.9**	11,143.1**	11,200.4**	4,399.0**

[a] Average of 1994–1996 income years.
** p<0.01; * p<0.05; +p<0.10. Col. 1–3: Random-Effects GLS Regression; Col. 4: Random Effects Probit.
Reference category: native-born German living in West Germany; couple without children; head of household: less than nine years of education; household not affected by unemployment; city size 20,000 to 500,000 inhabitants; year of observation is 1997

Source: GSOEP; PSID-GSOEP Equivalent Data File; authors' calculation.

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pre-government income position, the natural logarithm of the relative post-government income position, and the individual difference between the relative post-government income position and the relative pre-government income position to identify gains and losses due to the re-distribution process. Then we use the sign of the previously described variable to identify winners and losers of redistribution within a head count approach. The first three columns report results from random-effects GLS regressions, and the fourth column reports results based on random-effects probit models. As a first step, we again base our analysis on the total population (left panel of Table 3).

Focusing on pre-government income and controlling for important individual and household characteristics, we can state that people living in "mixed" immigrant households have similar income positions as the reference group of native-born West Germans. While the income of "mixed" *Aussiedler* does not significantly differ from that of the reference group, "mixed" foreigners show a very small, but statistically significant lower position. "Pure" foreigners have a substantially lower position, as do East Germans. The lowest position is observed for "pure" *Aussiedler*, which indicates that this group, all other things equal, is economically weaker than the reference group of native born West Germans, even after controlling for all the other SES information. The effects found for the additional control variables are as expected. We abstain from discussing them in detail.

The estimation results for post-government income are in line with those presented above, though basically all coefficients are somewhat smaller in absolute terms. This is due to the leveling effect of taxation on the one hand and public transfers receipt on the other hand.

However, the magnitude of the redistribution effects shows big differences between the various ethnic groups. Compared to native-born West Germans, "mixed" *Aussiedler* neither benefit nor lose from income redistribution. Foreigners, especially "mixed" ones, are net payers. East Germans and "pure" *Aussiedler* benefit substantially from the redistribution process; they both improve their relative income position from pre- to post-government income on average by 8 percentage points. Turning to a head count approach, this pattern does not change very much.[13]

The message to keep in mind from this analysis is that foreigners contribute above the national average to the support of the weakest groups in Germany, both of which are ethnic German: "pure" *Aussiedler* and East Germans. In other words, foreigners as a whole ("pure" and "mixed" households) do not burden the German tax and social security system. On the contrary, their relative contribution to that system is the highest among all ethnic groups in Germany. In addition, it should be noted that concerning the group of economically rather weak "pure" foreigners, a common principle of progressive tax systems seems to be violated. In contrast to other groups with low pre-government income, like "pure" *Aussiedler* and East Germans, they do not benefit from the redistribution process.

The results for the younger population (right panel of Table 3) are pretty much in line with expectations, i.e., most changes — when compared to the results for the total population — seem to be related to age. Both "mixed" immigrant groups are economically as strong as native-born West Germans; after controlling for education and other factors, we do not find any significant differences in the respective pre-government income positions. However, "mixed" foreigners show a somewhat reduced post-government income position. Based on the "metric approach," younger "pure" foreigners are, all other things equal, no longer net payers to the redistribution process, although the results of the head count approach still suggest that a significant proportion among this group is losing from redistribution. However, assimilated "mixed" foreigners pay significantly higher net amounts to the re-distribution process than do native-born West Germans. As was found for the total population, younger East Germans and "pure" *Aussiedler* benefit substantially from the redistribution process. Concerning the head count results, there is no change from the total population analysis to the prime age (20 to 60) one: "Pure" foreigners run a high risk of losing in the redistribution process. This risk is somewhat lower for "mixed" foreigners, while East Germans and "pure" *Aussiedler* have good chances to benefit from income redistribution.

5. Summary and Conclusions

In this paper, we test the widespread prejudice that immigrants as an entire group are an economic burden to German society. This prejudice is nourished by the uncontested facts that immigrants in general show a weaker labor market position and have higher shares of welfare take-ups.

Based on descriptive results, we find — using market-income as the main indicator for economic performance — that the relative income position of immigrants takes a middle position between the more successful native-born West Germans and the less successful East Germans. However, immigrants show a most heterogeneous behavior: "mixed" immigrants have an even better economic position than native-born West Germans. This result is in line with that of Dustmann (1996) who reports that marriage to

[13] The only remarkable point is that more people among the "pure" foreigners lose during redistribution than among the "mixed" foreigners. In light of the different picture found in the head count, this means that there are a few very successful "mixed" foreigners paying high amounts of taxes and contributions.

a non-German partner slows down the integration process of immigrants. "Pure" foreigners perform similar to East Germans. "Pure" *Aussiedler* are by far the worst off; they show the lowest degree of self-supporting capacity. Another important finding is that immigrants' receipt of non-market income, consisting of old age pensions and public transfers, is — with the exception of the group of "pure" *Aussiedler* — much lower than that of native-born (West) Germans. This also reflects the clear differences in the age structure between the ethnic groups. In addition, we can observe that immigrants on average — again with the exception of "pure" *Aussiedler* — are the losers in the redistribution process from pre- to post-government incomes. Whereas native-born West Germans only lose slightly, immigrants substantially finance the redistribution gains allocated to "pure" *Aussiedler* and East Germans.

We then apply multiple regression models (random-effects GLS and random-effects Probits) to control simultaneously for potential socio-economic differences between various groups. The results clearly show that immigrants of non-German ethnicity lose in the redistribution process, whereas "pure" *Aussiedler* and East Germans strongly benefit from it. This result holds when restricting the sample to persons living in younger households. As a consequence, we conclude that (at least up to now) the "classic" immigrants on average do not burden German society, but, on the contrary, are net contributors to the German tax and social security system. This main finding of our study is in line with that of previous studies by LaLonde and Topel (1991), Rürup and Sesselmeier (1994), Simon (1996), and Weber and Straubhaar (1996). Finally, let us mention that the observed outstandingly favorable position of the "pure" *Aussiedler* in the redistribution process — as well as that of the East German population — seems to be caused by political considerations rather than other effects within a "normal" assimilation process to the West German level. These findings could become most relevant when thinking about the shape of any future German immigration law.

We conclude by admitting some shortcomings of our analysis. Due to data limitations, we could not take into account old age pension receipt of remigrated foreigners who spend the eve of life in their home countries. This might affect our results in such a way that the net contribution of non-ethnic German immigrants would be reduced. In addition, we could not include those public expenditures related to immigration which are not directly related to individual households. Furthermore, our analysis has a static character, while "immigration has a far-reaching and long-lasting impact" (Borjas 1994, p. 1713). It is not our ambition to forecast the economic consequences of future developments, like those influenced by intergenerational transmissions in educational behavior and changes in social structure of immigrant cohorts. With respect to the social security system, e.g., the old age pension system, the interdependent effects of various demographic parameters are complex (Schmähl 1995).[14] Further research should try to internalize those aspects, especially with regard to informing immigration policy. However, methodological problems remain. Beyond these reservations, we believe that our results are strong enough to counter the common prejudice that the existing population of immigrants in Germany is burdening the economic system.

[14] In general, the limitations explicitly listed in Weber and Straubhaar (1996, 351) affect the interpretation of our results as well.

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