The Economic Integration of Forced Migrants:
Evidence for Post-War Germany[*]

Thomas K. Bauer
Ruhr-University Bochum, RWI, IZA

Sebastian Braun[†]
Kiel Institute for the World Economy

Michael Kvasnicka
RWI, Kiel Institute for the World Economy, IZA

April 30, 2012

Abstract. The flight and expulsion of Germans from Eastern Europe after World War II constitutes one of the largest forced population movements in history. We analyse the economic integration of these migrants and their offspring in West Germany. A quarter century after displacement, first generation migrants still tend to fare worse economically. Displaced agricultural workers, however, exhibit higher incomes than comparable natives, as displacement caused large-scale transitions out of low-paid agriculture. Differences in economic outcomes of second generation migrants resemble those of the first generation.

Keywords: Forced Migration, Economic Integration, World War II, West Germany.
JEL Classification: J61, O15, R23.

1 Introduction

The mass exodus of Germans from Eastern Europe to West Germany during and after World War II marks one of the largest forced population movements in history. It involved millions of Germans who fled or were expelled, most of them from the former eastern territories of the German Reich. In 1950, displaced Germans (*Heimatvertriebene*) accounted for nearly 17 percent of the total West German population. Their integration posed a paramount challenge for the war-ridden country. West Germany's cities, infrastructure and housing stock laid in ruins, and the displaced arrived with hardly any possessions. Although prospects looked grim initially, integration has been viewed as swift and successful by the contemporary German public. This paper provides a comprehensive empirical analysis of the medium- and long-run economic integration of the displaced and their offspring, and explores to what extent such a positive view is indeed justified.[1] Our results suggest that it is largely not.

The question of how immigrants integrate into the economy of the destination country is a major theme in migration research (Bauer et al., 2005; Kerr and Kerr, 2011). Following the seminal study by Chiswick (1978), empirical studies on the economic integration of immigrants have mostly focused on the US and on the relative earnings of first generation migrants who migrated voluntarily (see Borjas, 1999, for a survey). Far less attention has been devoted to other economic outcomes, such as unemployment, occupational status, or wealth, as well as to the economic integration of second generation migrants (Kerr and Kerr, 2011).[2] Furthermore, only a few studies have investigated the integration of migrants who have been forced to migrate because of natural disasters, wars, or ethnic conflicts.[3] This is despite the fact that forced migration is a problem of global scale. At the end of 2010, some 43.7 million people were forcefully uprooted because of conflict and persecution alone (UNHCR, 2011).

Our study of forced migrants in post-war Germany provides a detailed analysis of a major migration episode in world history and broadens the scope of the existing integration literature in several respects. We consider forced rather than voluntary migrants and study both first and second generation migrants. Moreover, and unlike most of the few studies on forced migrants, we are able to investigate medium- and long-run outcomes.[4] Last but not least, we consider a broader set of outcomes than most studies. Apart from income, we explore also unemployment, the occupational status and sectoral affiliation of individuals, home ownership, the sectoral and regional post-displacement mobility of migrants, and their educational attainment.

---

[1] A number of recent studies have used the inflow of German forced migrants after World War II (Braun and Mahmoud, 2011), of ethnic Germans from the Warsaw Pact countries since the late 1980s (Glitz, 2012), and of East Germans after reunification (Arntz and Bonin, 2011; D'Amuri et al., 2010; Prantl and Spitz-Oener, 2011) as quasi-experiments to study the labour market effects of immigration for native West Germans. These papers do not, however, study the integration of migrants.

[2] Among the notable exceptions are Algan et al. (2010) who provide a comprehensive comparative analysis of the performance of first and second generation immigrants in France, Germany, and the UK. The authors do not only concentrate on wages, but also study differences in employment and educational attainment.

[3] Notable exceptions are Ibáñez and Vélez (2008) who study the welfare consequences of displacement in Colombia; Kondylis (2007, 2008) who investigates displaced persons from Bosnia and Herzegovina and Rwanda; Vigdor (2007), Groen and Polivka (2008), and Sacerdote (2009) who study persons displaced by hurricane Katrina in the US; and Sarvimäki et al. (2009) who study Fins forced to re-settle from areas ceded to the Soviet Union after World War II.

[4] Except for the study by Sarvimäki et al. (2009), all of the work on forced migration cited above focuses exclusively on short-run outcomes measured mostly only one to three years after displacement.

From an analytical perspective, our specific historical setting provides a natural experiment that allows us to abstract from many confounding factors that usually aggravate the analysis of the integration of migrants. First, displacement was not confined to a selective sub-group of Germans in Eastern Europe, e.g., to those that could expect to gain from migrating. Empirical problems associated with selective migration (Borjas, 1991), therefore, do not arise. Second, selective re-migration (Lubotsky, 2007) is no problem either, as forced migrants could not return to their homelands that lay beyond the Iron Curtain. Third, displaced Germans from Eastern Europe and native West Germans spoke the same language, though usually with a different dialect, and had both been educated in German schools. Language acquisition (Chiswick and Miller, 1995; Dustmann and Fabbri, 2003) and the transferability of skills (Bauer and Basilio, 2010), both notoriously difficult to measure, thus do not play a role for the integration process. Fourth, the vast majority of forced migrants arrived in West Germany within a relatively brief period of time (1944-1946). As a consequence, differential cohort and time effects that arise if cohorts of migrants of different average productivity enter the destination economy in different phases of the economic cycle (Borjas, 1999) are not encountered in our analysis. Finally, our data set provides detailed information on the socio-demographic and labour market characteristics of migrants prior to displacement. We are thus able to control for potential pre-war differences between the displaced and native West Germans.

Our findings show that even a quarter of a century after displacement, forced migrants and native West Germans that were comparable before the war perform strikingly different in post-war Germany.[5] In 1971, first generation displaced men have 5.1% lower incomes than native men and displaced women 3.8% lower incomes than native women. Both, displaced men and women, also face a higher unemployment risk than their native peers. Displacement, however, was far from uniform in its effects across migrants of different background. Most notably, we find a large positive income differential of more than 10% for male and female agricultural workers who have been displaced in the wake of World War II.[6] We show that this differential, and also income differences more generally, can be explained by the massive changes in the occupational and sectoral employment structure of forced migrants that were induced by the displacement. Displacement dramatically accelerated transitions out of low-paid agriculture: In 1971, displaced males and females have a 68% and 78%, respectively, lower probability of working in agriculture than native men and women. Displacement also increased blue-collar employment, and reduced self-employment among

[5]Earlier results by Lüttinger (1986) already cast doubt on the view that the integration of the displaced had been swift and largely a success. Lüttinger (1986) uses the same data as we do but does not account in his analysis for pre-war differences between the displaced and native West Germans. He also does not analyse the relative incomes of forced migrants. Schmidt (1997) also includes ethnic Germans that migrated to West Germany after 1942 in his analysis of wage assimilation of migrants in Germany. Using cross-sectional data from 1982 and 1990, he does not find large differences between ethnic German immigrants and natives. However, also Schmidt (1997) is not able to account for pre-war differences between the two groups. In recent work, Falck et al. (2011) analyse the success of a specific integration policy, the 'Law of Equalization of Burden' (*Lastenausgleichsgesetz*, see Section 2), in restoring the pre-war occupational status of forced migrants by 1960. The authors find that the policy did neither foster the re-integration of migrants into agriculture, nor promote self-employment, but that it reduced the likelihood of migrants to work in an unskilled occupation. In contrast to Falck et al. (2011), we analyse the overall economic integration of first generation migrants in the long run (i.e., in 1971), and also the integration of their offspring. In addition, we consider a broader set of outcomes (such as income or home ownership).

[6]This result is broadly consistent with evidence provided by Sarvimäki et al. (2009) who study the displacement of Fins from areas ceded to the Soviet Union in the aftermath of World War II. Sarvimäki et al. (2009) find a positive effect of displacement on the long-term income of male Fins who lived in rural areas before displacement. They do not, however, provide separate regressions for those who had been employed in agriculture before the war.

migrants.

Differences in the labour market performance of second generation migrants resemble, albeit attenuated, those of the first generation. Second generation men have 5.6% lower incomes than their native West German peers, and displacement-induced changes in the sectoral and occupational structure of first generation migrants largely carry over to their offspring. There is also evidence that migrant children tend to acquire more education than their native peers. This finding may be explained by the fact that the loss of family wealth, businesses and farms forced the children of migrants to compete on the wider labour market, and in particular to look for work outside agriculture. Formal education, as a consequence, became more important for individual economic success.

The remainder of the paper is structured as follows. We first provide a brief historical overview of the mass exodus of Germans from Eastern Europe and discuss measures that were taken by policy makers to integrate these migrants in West Germany. Section 3 presents the data we use and provides summary statistics on the pre-war socio-economic structure of the migrant and native West German populations. Section 4 outlines our empirical strategy for identifying the effects that displacement has on the relative economic performance of migrants in West Germany. Section 5 presents our results for the first generation of forced migrants, and Section 6 our results for their offspring. Finally, Section 7 summarises our key findings and concludes.

2 Historical Background

During the mass exodus of German civilians from Eastern Europe, millions of Germans were uprooted and re-settled in the territory of the later West German state (Federal Republic of Germany).[7] In September 1950, forced migrants totalled 7.9 million and accounted for 16.5 percent of the West German population (Federal Statistical Office, 1955). As a result, and despite heavy war losses, the West German population increased dramatically from 39.4 million in 1939 to 47.7 million in 1950. By far the largest number of forced migrants came from the Eastern territories of the German Reich that Germany lost after World War II (see Figure 1 for an overview of Germany's territorial losses between 1919 and 1945). In September 1950, these so-called *Reichsdeutsche* numbered about 4.4 million and accounted for more than 55% of all forced migrants in West Germany. Another 1.9 million displaced individuals came from Czechoslovakia, predominantly from the *Sudetenland*.[8] A large number of the displaced had also resided in those territories that Germany had ceded after World War I, such as Danzig and West Prussia. Forced migrants were not a selected group of the German populations living in Eastern Europe, but represented a complete cross-section of Germans in these regions. Their re-settlement was beyond individual choice and almost universal.

The displacement of Germans from Eastern Europe started in the autumn of 1944. A closing-in front line and fear of atrocities by advancing Soviet troops caused hundreds of thousands of Germans to flee westwards. As final defeat became imminent, they were joined by a growing number of Germans who fled

---

[7]See Connor (2007) for a detailed account of the exodus.

[8]Though mainly inhabited by ethnic Germans, the Sudetenland had become part of the independent Czechoslovak state after World War I when Austria-Hungary broke apart. Like other minorities, Germans living in Czechoslovakia had their own parties and ran their own German schools. The Sudetenland was annexed by Nazi Germany in September 1938.

for fear that liberated non-German populations would take revenge for the suffering and harm the Nazis had inflicted upon them. After the unconditional surrender of Nazi Germany in May 1945, large-scale disorganised (so called 'wild') expulsions of Germans followed, mainly from Poland and Czechoslovakia, which Germany had occupied during the war. In the eyes of many, German atrocities during the occupation had rendered future peaceful cohabitation impossible.

The Potsdam Treaty of August 1945 between the United States, the United Kingdom, and the Soviet Union shifted Germany's eastern border westwards. Germany lost East Prussia, Silesia, and two thirds of Pomerania, which together accounted for approximately 24% of Germany's land size in 1937. With the exception of parts of East Prussia that fell to Russia, these territories were placed under Polish administrative control. The German territory west of the Oder-Neisse line was divided into a British, a French, an American, and a Soviet zone of occupation. The first three of these were later joined to form the Federal Republic of Germany (founded in May 1949); the latter became the German Democratic Republic (October 1949). The Potsdam Treaty also stipulated that German populations in the ceded territories and in post-war Poland at large, as well as Germans in Czechoslovakia and Hungary, were to be expelled.[9] Most of these 'organised' expulsions were carried out in the course of 1946. They continued, albeit on a much smaller scale, into the late 1940s. By 1950, the mass expulsions of Germans from their homelands in Eastern and Central Europe had finally come to a close.

The integration of millions of forced migrants posed a paramount challenge for post-war West Germany. The displaced, having lost both their homes and savings, arrived with hardly any possessions. West Germany's infrastructure and industry were devastated, and significant parts of Germany's main food-growing areas in the east had been lost. In the first post-war years, housing was the major problem. The two major parties in West Germany, the social-democratic SPD and the conservative CDU, actively sought to achieve legal, political, and economic equality between the displaced and the native West German population (Connor, 2007). To this end, several measures were taken. One of the most important was the 'Law of Equalization of Burden' (*Lastenausgleichsgesetz*) of 1952. It provided compensation to forced migrants (and indigenous West Germans) for their loss of property, and sought to spread the burden of war more equally in society.[10] Those whose property had remained unaffected by the war were to compensate the war-damaged. Amongst other sources, funds for compensation were derived from a levy on capital that had remained wholly or partly intact. Unlike other European countries, therefore, West Germany actively sought, by law, to redistribute wealth in order to (at least partially) restore the pre-war distribution of property. Under the same law, the displaced could also apply for grants to set up businesses and for public assistance in finding housing. Between its adoption in 1952 and 1971, the year for which we assess the economic integration of migrants, the benefits paid under the 'Law of Equalization of Burden' amounted to a total of DM 82.4 billion (Wiegand, 1991), or 1.1% of cumulated GDP in this period. A second major legislative initiative was the 'Expellee Land Resettlement Law' (*Flüchtlingssiedlungsgesetz*) of 1949. The

---

[9]Not every German was expelled though. A small minority of ethnic Germans of Slavic descent were verified as indigenous Poles by the authorities and could remain in post-war Poland. And in the USSR, ethnic Germans had to remain in special settlements and labour camps in Central Asia and Siberia to which they were deported during the war. Many of those Germans who remained in the USSR or Poland migrated to Germany after the fall of the Berlin wall.

[10]See Hughes (1999) for a detailed account of how the war-damaged were compensated for their losses, and Falck et al. (2011) for an economic analysis of the law and its success in restoring the pre-war occupational status of migrants.
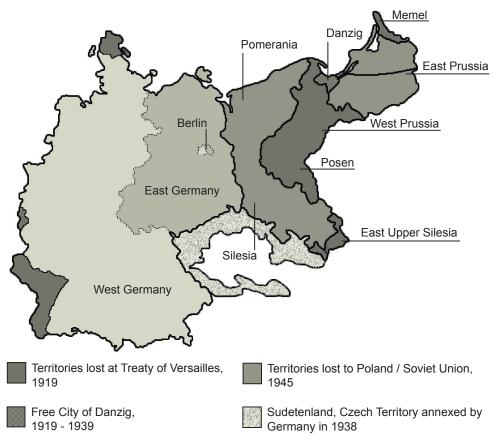
FIG. 1: German Territorial Losses in World War I and II and Sudentenland

law aimed at fostering the integration of forced migrants in agriculture and provided tax incentives for the lease or purchase of farms. Germany thus invested considerable resources in the integration of migrants. Expenditures, in fact, far exceeded those encountered nowawdays in developing countries, which host most of today's forced migrants (UNHCR, 2011).

Macroeconomic conditions also favoured the economic integration of German migrants. Despite the dismal prospects in 1945, economic recovery was surprisingly swift. Following the currency reform in June 1948, industrial production picked up rapidly and almost doubled by 1950. Despite occasional slowdowns, growth remained strong for most of the 1950s and 1960s. Unemployment, too, fell steadily from 11% in 1950 (its post-war peak) to 1.3% in 1960, and remained at low levels until the beginning of the 1970s. In fact, already from the mid-1950s onward, labour was in increasingly high demand. Forced migrants provided an important labour reservoir for the booming post-war industry and prevented labour shortages despite booming demand (Ambrosius, 1996). It is for this reason that migrants are considered an important element of Germany's rapid recovery after the war, a recovery that led contemporaries in the 1960s and 1970s to view the integration of displaced Germans as a success story (Lüttinger, 1986). Overall, the political and macroeconomic conditions were therefore indeed very favourable for a success story, not least when compared to other forced migrations across the world.

3   Data and Pre-War Differences

For our analysis of the relative economic performance of forced migrants and their offspring in West Germany we use individual-level data from the German 1971 supplementary microcensus (Mikrozensus-Zusatzerhebung, 1971). This official, nation-wide, and compulsory survey was explicitly conducted in the early 1970s to provide information on the medium- and long-run economic and social integration of individuals that had been displaced in the wake of World War II. The survey provides detailed information on the social and occupational structure of the German population between 1939 and 1971. It covers 1% of the 1971 West German population that was born before 1957 and contains a total of 486,642 observations. Foreigners were excluded from the survey.

In the survey, respondents provided information on their occupations and sectors of employment in 1971 and also, albeit retrospectively, in 1939, 1950, and 1960. The dataset also contains information on house ownership in 1939 and 1971, the year of birth of the respondents, their current marital status and educational attainment, their year of migration to West Germany (if applicable), and their total monthly net income as of March 1971. Income is recorded in seven ranked categories, and is missing for farmers (the self-employed in agriculture who own arable land) but not for agricultural workers in dependent employment. It consists of income from all sources and thus includes not only labour earnings but also, e.g., capital income or old-age pensions. Income is net of taxes and social security contributions. For individuals born in or after 1920, the dataset also provides information on parental background (the occupational status, sector of employment, and educational attainment of parents) when respondents were 15 years old.

The survey distinguishes between displaced individuals, migrants from the Soviet zone of occupation, and the indigenous West German population (henceforth referred to as 'natives'). Germans that migrated from the Soviet occupation zone (or accordingly the GDR) to West Germany are excluded from the analysis. Natives are defined as non-displaced individuals that had lived on the territory of the later West German state already on January 1st, 1939. Displaced individuals are those with an official displacement identification card (*Vertriebenenausweis A/B*).[11] This card was granted to Germans who had lived in the former eastern territories of the German Reich (or abroad) before the war and were displaced during or after the war. Importantly, children of forced migrants that were born after displacement inherited the official displacement status from the parent with child custody. This feature allows us to study also the relative post-war economic performance of migrant children.

We analyse the economic integration of forced migrants and their offspring (henceforth referred to as first and second generation migrants) in West Germany. First generation migrants are defined as displaced individuals who were born between 1906 and 1925 and arrived in West Germany until 1950. We compare first generation migrants to natives in the same age cohort. Individuals in this cohort were aged 14-33 in 1939 and 46-65 in 1971 and thus of working age throughout the observation period of our analysis (1939-

---

[11]Natives, of course, were themselves often uprooted by World War II. In particular, many fled from the Allied bombings of their cities. However, these natives generally returned home long before 1971. Despite the post-war confusion, the geographic mobility of natives appears to have been relatively low between 1939 and 1950. According to the German population census of September 1950, the vast majority (95.9%) of those who had lived in West Germany already before the war did not reallocate from one federal state to another between 1939 and 1950. This low regional mobility was partly the result of moving restriction imposed by the military administrations of the occupying powers in the first post-war years.

1971). Individuals for which information on 1939 socio-economic characteristics are missing are excluded from the analysis. This applies to 7.0% and 6.4% of all natives and migrants, respectively. The estimation sample for our analysis of the relative economic performance of first generation migrants contains 123,471 individuals, of whom 18.7% or 23,140 individuals are migrants (56.1% of which are female) and 100,331 are natives (57.9% of which are female).[12]

Second generation migrants are defined as children of displaced parents who were born in West Germany between 1944, when the first expellees arrived in West Germany, and 1949.[13] We compare second generation migrants to native peers of the same age. We again exclude individuals with missing information.[14] The estimation sample for our analysis of the relative post-war economic performance of second generation migrants contains 33,809 individuals (49.0% of which are female), of whom 3,333 had been displaced (42.3% of which are female).[15]

Columns (1) to (4) of Table 1 report, by gender, means of available pre-war covariates for first generation displaced and native individuals, and columns (5) and (6) the differences in the means between the two groups. All pre-war data refer to 1939. Apart from age, we have information on house ownership, the socioeconomic status of individuals, and their sector of employment. The table also shows average years of education of displaced and natives, which have been derived from the educational qualifications that individuals held in 1971.[16] These qualifications may be different from those that individuals held in 1939. The vast majority of individuals in our estimation sample (birth cohorts 1906-1925), however, should have completed their education prior to displacement.[17]

Table 1 shows that displaced and native individuals are very similar in their pre-war characteristics. Larger differences exist only in the shares of men and women that are employed in agriculture and industry, a result of the more agrarian structure of the eastern territories of the German Reich. In our regression analysis, we control for these potentially confounding differences in the composition of natives and displaced individuals. Differences in observables can be (robustly) controlled for in standard linear regressions if normalised differences in covariates do not exceed 0.25 in absolute value (Imbens and Wooldridge, 2009).[18] This condition is met in our estimation sample. In fact, most normalised differences in pre-war covariates

---

[12]Imbalanced sex ratios in both groups are the result of World War II male casualties. Men born between 1906 and 1925 were aged 20 to 39 in 1945. War-induced shortfalls among men were largest among this age cohort (see Bethmann and Kvasnicka, 2012).

[13]We do not have information on the actual place of birth of migrants, but know when their displaced parents arrived in West Germany. Second generation migrants are children who were born between 1944 and 1949 to displaced parents that had arrived in West Germany before or in their year of birth.

[14]By doing so, we also restrict our analysis to those individuals that were living with both parents at the age of 15 (as otherwise parental covariates are missing). These restrictions eliminate 16.6% of the observations for natives and 15.4% of the observations for migrants. Regressions on the unrestricted sample yield results that are qualitatively similar to those reported.

[15]Many migrants chose not to have children (or postponed their fertility wishes) during their flight and immediately thereafter. Migrants are thus relatively under-represented in the cohort born between 1944 and 1949.

[16]The dataset only records the highest degree obtained. Years of education are inferred from the minimum years of education that are required to obtain a particular degree. Information on the latter is taken from Müller (1979). The education variable also accounts for times in apprenticeships.

[17]Displacement started in late 1944. In that year, the youngest first generation migrants in our data were aged nineteen (only 1.67% of all individuals). Only 5% of the individuals in our sample have more than 13 years of education.

[18]The normalised differences are calculated as $\Delta x = (\bar{X}_1 - \bar{X}_0)/(\sqrt{S_1^2 + S_0^2})$, where $\bar{X}_1$ and $\bar{X}_0$ (S_1^2 and S_0^2) are the sample means (variances) among displaced and non-displaced individuals.

TABLE 1: PRE-WAR CHARACTERISTICS OF DISPLACED AND NON-DISPLACED GERMANS

	Men		Women		Difference	
	Displaced	Natives	Displaced	Natives	Men	Women
	(1)	(2)	(3)	(4)	(1)-(2)	(3)-(4)
Age (yrs.)	23.2	23.8	23.2	23.8	−0.56***	−0.56***
House ownership	50.7	49.4	48.5	48.0	1.34**	0.52
Years of education[1]	10.5	10.4	9.3	9.2	0.04	0.12***
Employment and occupational status (%):						
Employed	88.4	89.4	55.0	53.3	−1.02***	1.79***
Self-employed[2]	4.5	4.9	1.4	1.5	−0.38*	−0.06
Farmer[3]	4.1	3.7	1.5	1.0	0.41*	0.46***
Civil servant	8.5	6.5	0.6	0.4	1.96***	0.20***
White collar worker	12.3	13.5	14.9	14.3	−1.21***	0.64*
Blue collar worker	43.0	46.1	22.8	22.4	−3.10***	0.34
Helping family member	5.0	4.3	10.0	10.0	0.73***	−0.01
Apprentice	11.1	10.5	3.8	3.6	0.56	0.21
Unemployed	0.4	0.4	0.2	0.1	0.02	0.07*
Out of Labour force	11.1	10.1	44.7	46.6	1.00***	−1.86***
Sector of employment (%):						
Agriculture	18.9	12.5	14.6	11.6	6.39***	3.02***
Industry	32.7	41.3	13.1	15.7	−8.68***	−2.69***
Construction	8.8	9.2	0.4	0.4	−0.47	0.01
Trade/Transport	12.6	12.9	10.4	10.8	−0.29	−0.34
Finance	2.4	2.8	2.0	2.3	−0.37**	−0.38***
Public and private services	12.7	10.3	14.4	12.2	2.47***	2.13***
Unknown[4]	11.9	11.0	45.2	46.9	0.96***	−1.74***
Observations	10,155	42,206	12,985	58,125		

NOTE: Sample means and differences in sample means of pre-war covariates. All data refer to 1939, except education which is measured in 1971. ***, **, * denote statistical significance at the 1%, 5%, and 10% level of the difference in means of a pre-war covariate between first generation forced migrants and natives. [1] Not all individuals may have completed their education prior to World War II. [2] Self-employed outside agriculture. [3] Farmer with own land. [4] Includes all individuals who are not employed.

between the two groups are smaller than 0.10.[19]

The 1971 supplementary microcensus provides data on total income but not on labour earnings. Total income is arguably the right indicator to assess overall economic well-being. Yet, the relative labour market performance of migrants is better reflected in their relative labour earnings. After all, differences in total income could in part reflect differences in capital income (which may not be surprising, as the displaced had lost all their wealth). We therefore also use a second micro dataset, the West German population and occupation census of May 1970 (*Volks- und Berufszählung 1970*), which covers a random 10% sample of the

---

[19]A full tabulation of the normalized differences between native and displaced individuals in each pre-war covariate can be obtained from the authors upon request.

West German population. The census contains information on net monthly labour earnings of individuals in their main job, in addition to data on the socio-economic and demographic characteristics of the West German population. Analogous to the income variable of the microcensus, labour earnings are recorded in seven ranked categories (the categories in the two datasets do not match exactly), and are missing for farmers and helping family members. Displaced individuals and native West Germans can also be identified in the census. However, the census provides no longitudinal information, e.g. on the 1939 occupation and sectoral affiliation of individuals. It also does not contain data on the place of birth or the year of migration to West Germany, so that we cannot identify second generation migrants born in West Germany. After excluding foreigners and Germans from the Soviet occupation zone, the census data contains information on the 1970 labour earnings of 635,443 employed individuals that were born between 1906 and 1925. Of these, 152,127 individuals are migrants (66.9% of which are males) and 483,316 are natives (67.5% of which are males).

4   Empirical Strategy

We are interested in the relative economic performance of first and second generation migrants in post-war West Germany. To investigate whether first generation migrants and native West Germans that were comparable before the displacement fared differently in their medium- and long-run economic outcomes, we run regression models of the following type:

$$Y_{it} = \alpha + X_{i,39}\beta + \delta D_i + \varepsilon_{it}, \tag{1}$$

where Y_{it} is a particular post-war outcome of person i at time t (such as the log of income, house ownership, labour force status, or sectoral affiliation), D_i is a dummy variable that indicates whether a person has been displaced, $X_{i,39}$ is a (row) vector of pre-war control variables, β is a corresponding (column) vector of regression coefficients, and ε_{it} is an error term. Our prime parameter of interest, δ, measures the displacement effect, i.e., the average difference in a particular economic outcome between the displaced and otherwise (as of 1939) comparable native West Germans. Economic outcomes are mainly measured at $t = 1971$. Where available, we also consider economic outcomes in 1950 and 1960. For a subset of outcomes (the geographic and sectoral mobility of individuals), t also refers to decades (1939-1950, 1950-1960, or 1960-1971). We estimate equation (1) separately for men and women. Estimation is generally by OLS. Throughout, we report robust standard errors.

Our analysis of income differences is complicated by the fact that our data records an individual's income in seven ranked categories. In other words, our income data defines only an upper and a lower bound for each individual (and only a lower bound for top income earners). One common approach to deal with such interval censored data is to take midpoints of the income intervals and estimate by OLS. However, this approach can yield inconsistent estimates (Stewart, 1983). We therefore use interval regressions, which are a generalization of the tobit model to interval censored data and are estimated by Maximum Likelihood assuming normal distributed errors.[20] However, we also perform two robustness checks. First, we estimate

---

[20]We implement interval regressions using *Stata*'s *intreg* command. For the bottom income band (below DM 300), we set the lower bound to (the log of) DM 1 (a trivially small number). The top income band is treated as right-censored.

heteroscedastic interval regressions that allow the conditional variance to depend on all covariates. Second, we estimate OLS regressions that use mid-points of the income bands.[21]

Equation (1) controls for observable pre-treatment differences between displaced and native individuals. It does not control for contemporaneous differences in the year the outcomes are measured, as such differences may not be exogenous to displacement status. For δ to have a causal interpretation, displacement status D_i must be uncorrelated, conditional on observed pre-war characteristics $X_{i,39}$, with any unobserved pre-war differences between the two groups that prove sufficiently persistent to affect individual economic outcomes in the medium- or long-run (i.e., in 1950, 1960, or 1971). All pre-war differences between the displaced and natives that do not exert such a lasting impact are irrelevant for the identification of the causal effect of displacement on medium- and long-run economic outcomes.

Note that δ does not measure the causal effect of displacement on the displaced, i.e., an average treatment effect on the treated (ATT). The influx of forced migrants into post-war West Germany is likely to have had general equilibrium effects that affected the West German economy at large and hence also our comparison group – the indigenous West German population.[22] Therefore, estimates of δ do not measure mean differences between forced migrants' actual post-war outcomes and their potential post-war outcomes that would have materialised in a 'no displacement' counterfactual situation. Rather, δ captures differences in the medium- and long-run economic performance between displaced individuals and natives *in post-war Germany*. This is no drawback. From a policy perspective of the host country, it is the relative economic fortunes of the displaced that are of prime interest, not the situation that would have prevailed had war and displacement not occurred. From a technical perspective, estimates of δ have a clear interpretation, as they measure differences between two well-defined groups in the same economy, at the same point in time, and under the same post-war macroeconomic trends.

Identification requires that conditional on $X_{i,39}$, displacement status D_i is uncorrelated with unobserved pre-war differences that still affect economic outcomes in post-war West Germany. For a number of reasons, we believe that this identifying assumption is likely to hold in the context of our analysis. First, and most importantly, displacement was not a choice and hence not confined to a selective sub-group of Germans in Eastern Europe. Almost all Germans east of the Oder-Neisse line, and not only, e.g., those that could expect to gain from re-settling to West Germany, were forced to migrate. Potential self-selection problems that are commonly a case of concern in the analysis of voluntary migration (Borjas, 1991) should thus not play a role in our context. Furthermore, both the displaced and the natives spoke German as their mother tongue, so that differences in language skills, which are notoriously difficult to measure, play no role for the integration process. Third, and more generally, the ceded regions in the East had been an integral part of Germany since the Reich came into existence in 1871. They had all been part of the Free State of Prussia in the Weimar Republic and of the Kingdom of Prussia before 1871, a feature shared by seven of the 11 administrative regions (*Bundesländer*) of West Germany. The new borders of West Germany thus cut through Prussian territories that had been integrated for centuries. Last but not least, we are able to control for a wide range of productivity-related pre-displacement characteristics of migrants and natives, such as

---

[21]We assign an income of 1.4 times the lower bound to top income earners, for which we do not observe an upper bound on income. Our findings are virtually unchanged if we instead assign an income of 1.2 or 1.6 times the lower bound.

[22]In fact, Braun and Mahmoud (2011) find that the inflow of forced migrants reduced native employment in the short run.

their sector of employment or occupational status.

For the second generation of forced migrants, we also consider various economic outcomes and compare them to those of native West Germans. As for the first generation, we explore 1971 income levels and house ownership rates as well as other labour market outcomes (employment status, sector of employment, and occupational status). In addition, we investigate the relative educational attainment of second generation migrants (as of 1971). For all of these outcomes, and akin to our analysis of the first generation, we run regression models of the following type:

$$Y_i^{2nd} = \vartheta + X_i^{2nd}\eta + \theta D_i^{2nd} + \omega_i, \tag{2}$$

where Y_i^{2nd} is a particular 1971 outcome of person i, D_i^{2nd} is a dummy that indicates whether person i has official displacement status, and ω_i is an error term (we dropped the t subscript because all outcome variables now refer to 1971). Control variables in X_i include age and age squared of person i in 1971. Again, we run separate regressions for males and females. Estimates of θ provide information on the economic performance of second generation migrants relative to that of their native West German peers. We will also consider a specification that adds pre-war *parental* covariates to the set of controls in X_i. Estimates of θ then measure the average difference in economic performance between second generation migrants and indigenous peers who were born to parents that were comparable before the war. Unfortunately, the dataset only provides information on pre-war parental house ownership. All other parental characteristics take reference to the time a child was aged 15, i.e., to a date well after the war, and are thus likely to have been affected by the displacement. As the parent generation had mostly finished formal education by 1939, however, we consider parental education as largely exogenous to displacement and use it as an additional parental pre-war covariate.

5 First Generation Migrants

This section reports our findings on the relative economic performance of first generation forced migrants in post-war West Germany. We first consider long-term (1971) income and house ownership, with the latter acting as a proxy for wealth. Section 5.2 documents other labour market outcomes, such as individuals' labour force status, sector of employment, and occupational status, and explores to what extent these outcomes can explain income gaps between the displaced and natives. Finally, Section 5.3 investigates the post-displacement medium-run (1950-1960) and long-run (1960-1971) sectoral and geographic mobility of forced migrants and natives.

5.1 Income and House Ownership

Panels A to D of Table 2 report our estimation results on the 1971 relative incomes of displaced and native workers, i.e., estimates of δ from equation (1). All income regressions consider only individuals who are employed in 1971.

The first-row estimates in Panel A, to which we refer in the following as unconditional estimates, stem

from basic interval regressions of log income in 1971 on 1939 age and age squared only (apart from displacement status). They show that even a quarter of a century after displacement, both male and female migrants exhibit significantly lower average incomes than their native counterparts: in 1971, displaced men earn 5.1% less than native men and displaced women 3.8% less than native women.[23] To gauge the sensitivity of this finding to the use of alternative estimation techniques, Panel A provides two more sets of estimates of δ: the first stem from heteroscedastic interval regressions (2nd row); and the second from OLS midpoint regressions (3rd row). As is evident, estimates are very close, if not identical, to those obtained from the basic interval regressions. Given this robustness, we report in the remainder of Table 2 only estimates from (standard) interval regressions.

Estimates in Panel B add, one by one, three (sets of) control variables to the baseline specification. First, we add house ownership status in 1939 as a control for pre-war differences in non-farm property and wealth more generally. Pre-war wealth may directly affect an individual's post-war capital income. It may also reflect or correlate with an individual's education and his/her economic ties and social networks, which are important for an individual's earnings potential. As it turns out, however, the income penalty for displaced men does not change, and the penalty for women declines only slightly, when we control for 1939 house ownership status. Next, we add pre-war controls for an individual's occupation; and finally, controls for his/her sector of employment. These two sets of control variables account for pre-war differences in labour market experience that might still affect an individual's long-run performance on the West German labour market. Workers who were trained in agriculture, for instance, might have had worse job prospects on the West German labour market than workers who were trained in industry. Differences in pre-war job market experience may hence partly explain the negative displacement effect on income, in particular because the displaced were over-represented in agriculture before the war. Consistent with this hypothesis, the income gap between displaced and non-displaced men (women) declines to about -3.3% (-1.8%) when we add controls for pre-war labour market experience. However, the use of such control variables can also introduce a spurious (upward) bias in the displacement effect. Suppose, for instance, that workers were sorted into sectors on the basis of their ability, with the least productive workers joining agriculture. Since the displaced were more likely to work in agriculture before the war (for macroeconomic reasons), the average ability of displaced agricultural workers would be greater, as a consequence, than the average ability of native agricultural workers. The same would apply also to workers in other sectors. Comparing the incomes of displaced and natives who worked in the same industry before the war can therefore bias upward our estimates, in which case they would constitute a lower bound of the true income penalty associated with displacement. In any case, we still find a sizeable income penalty for the displaced when we condition on pre-war characteristics.

To assess the robustness of this result, Panel C of Table 2 provides estimates from two alternative specifications. The first seeks to assess the importance of potential sample selection bias that may arise from

---

[23]These differences in net income are unlikely to stem from family structure related differences in tax rates between natives and the displaced. As we show in Table A-1 of the Appendix, differences between the two groups in marriage rates and in the number of children are, at best, minor and often insignificant. Differences in net income are also unlikely to stem from differences in health. First, differences in 1971 labour force participation rates between migrants and natives are small and of opposing signs for women and men (see Table 3). Second, mortality rates in 1950/51 are not larger for migrants than for natives (Reichling, 1958). Taken together, these figures suggest that migrants did not suffer more from poorer health than natives.

the fact that income information for 1971 in our data is not available for farmers. Farmer status in 1971 correlates with farmer status in 1939. This correlation, however, is weaker for the displaced than for natives because all displaced farmers lost their farmlands. As a robustness check, therefore, we exclude all individuals who were farmers in 1939 from our estimation sample. The first row of Panel C shows that this exclusion does not affect our results. The second alternative specification adds dummies for the years of education of an individual, a prime determinant of labour income, to the set of explanatory variables. Years of education, as noted, are potentially endogenous. Hence, these estimates do not necessarily have a causal interpretation. The inclusion of years of education dummies also does not notably change our findings (see the second row of Panel C). In fact, the estimate for displaced men is virtually the same as in our most elaborated specification (3). The estimate for displaced women even increases somewhat in absolute terms. Overall, the findings from our two alternative specifications therefore strongly corroborate the results of our baseline regressions: the existence of a sizeable long-term income penalty for displaced individuals that tends to be more pronounced for men than for women.

Displacement had heterogeneous effects on income not only by gender. Panel D of Table 2 shows that average 1971 income gaps differ considerably between individuals who had worked in agriculture, industry, and services before the war. For both genders, negative income gaps are largest for individuals who had worked in services in 1939. They are considerably smaller for industrial workers and even positive for agricultural workers. The positive income differentials for the latter group are sizeable. For both male and female agricultural workers, they exceed 10%.[24] Displacement, therefore, affected individuals quite differently, depending on their pre-war sector of employment. At first glance, the finding of a positive income differential for displaced agricultural workers appears surprising. After all, displaced individuals did not re-locate because labour market prospects in the destination region seemed more promising. While the conditional displacement effects might be upward biased in the light of our previous discussion, we will show in the next subsection that the positive income differential for agricultural workers can also be explained by the fact that displacement promoted large-scale transitions out of agriculture into industry, where jobs were better paid on average. Evidence on the long-term incomes of Fins displaced after World War II is consistent with this explanation (see Sarvimäki et al., 2009).[25]

Our previous analysis, and the analysis to follow in the next section, suggests that differences in pre-war labour market experience and post-war labour market outcomes play a major role in explaining observed income differences between displaced and natives. If true, we would expect income differences to largely reflect differences in labour earnings. Unfortunately, the microcensus does not provide data on labour earnings. We thus use micro data from the population and occupation census of 1970 to estimate differences in labour earnings between natives and the displaced. The results are reported in Panel E of Table 2. We find that displaced men and women have respectively 8.1% and 4.8% lower labour earnings than their native

---

[24]We again obtain similar results if we exclude individuals who had been farmers in 1939, i.e., restrict the analysis to agricultural workers who had been in dependent employment before the war. These results also hold when we consider only (different) sub-sets of pre-war covariates.

[25]Sarvimäki et al. (2009) find a positive effect of displacement on the long-term incomes of male (but not female) Fins who lived in rural areas before displacement. The authors attribute this effect to accelerated transitions from agricultural to modern occupations among the displaced. The study, however, provides no direct evidence on either rates of transition out of agriculture or the long-term incomes of individuals that had been employed in agriculture prior to displacement.

TABLE 2: 1st GENERATION MIGRANTS: LOG INCOME AND HOUSE OWNERSHIP

	Men		Women	
	Displaced	s.e.	Displaced	s.e.
A. 1971 income – Unconditional estimates:				
Interval regression	−0.051***	(0.005)	−0.038***	(0.011)
Heteroscedastic interval regression	−0.054***	(0.005)	−0.038***	(0.011)
OLS midpoint regression	−0.052***	(0.005)	−0.036***	(0.011)
B. 1971 total income – Conditional estimates:				
(1) 1939 age (squared) + house ownership status	−0.051***	(0.005)	−0.032***	(0.011)
(2) = (1) + 1939 occupational status	−0.041***	(0.004)	−0.027***	(0.010)
(3) = (2) + 1939 sector of employment	−0.033***	(0.004)	−0.018*	(0.010)
C. 1971 income – Robustness checks (based on specification (3)):				
Excluding 1939 farmers	−0.038***	(0.005)	−0.017***	(0.010)
Conditioning also on 1971 education	−0.034***	(0.004)	−0.027***	(0.010)
D. 1971 income – By 1939 sector (based on specification (3)):				
Agriculture	0.104***	(0.011)	0.129***	(0.028)
Industry[1]	−0.043***	(0.006)	−0.001	(0.022)
Services[2]	−0.066***	(0.009)	−0.067***	(0.017)
E. 1970 labour earnings – Unconditional estimates:	−0.081***	(0.002)	−0.048***	(0.003)
F. 1971 house ownership status[3] – Unconditional estimates				
Overall sample	−0.089***	(0.005)	−0.117***	(0.005)
Owned no house in 1939	−0.007	(0.007)	−0.030***	(0.006)
Owned a house in 1939	−0.179***	(0.008)	−0.213***	(0.007)

NOTE: Estimates for displacement status. Each estimate stems from a separate regression. Income equations are estimated by interval regressions if not mentioned otherwise. House ownership equations are estimated by OLS. Income regressions condition on employment in 1971. Unconditional estimates stem from regressions that control only for age and age squared in 1939. Conditional estimates stem from regressions that control for additional covariates. Pre-war covariates include: age and age squared in 1939, an indicator for house ownership in 1939, seven categories for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown), and nine categories for the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, apprentice, out of labour force, unemployed). The only post-war covariate considered is the 1971 education of individuals (measured in years and controlled for by a set of dummies). [1] Includes construction. [2] Includes trade/transport, finance, as well as public and private services. [3] The share of house owners among natives in 1971 was 52.2% for males and 44.7% for females. Among native men, who did (not) own a house in 1939, the respective share in 1971 was 73.6% (31.3%); and among native women, it was 64.5% (26.4%). ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

peers in 1970. These numbers for 1970 are, of course, not directly comparable to the income differentials estimated with the microcensus of 1971. This is not only because the two data sets were sampled at different dates but also because the population and occupation census only records labour earnings from the main job (while the microcensus records income from all sources). Yet the fact that we find even larger differences in

1970 labour incomes than in 1971 total incomes suggests that the latter are indeed predominantly driven by differences in 1971 labour incomes.

Finally, Panel F of Table 2 reports (unconditional) estimates of the relationship between displacement status and 1971 house ownership as a proxy for wealth, both for all individuals and for individuals that did or did not own a house in 1939. Among all individuals, the share of house owners in 1971 is significantly lower among displaced men and women. Among men, displacement reduces the chances of owning a house in 1971 by almost 20%, among women by more than 25%. The second and third row in Panel F show that these differentials are largely (women) or even exclusively (men) driven by the subgroup of forced migrants that did own a house in 1939. Quite evidently, therefore, forced migrants have not been able to make up for the loss of property they had suffered as a result of their displacement. Interestingly, however, migrants who did not own a house before the war had, if at all, only a small disadvantage in their quest for house ownership (relative to natives).

5.2   Labour Force Status, Sector of Employment and Occupational Status

Albeit of central importance, income and wealth are but two indicators for the post-war labour market performance and economic integration of displaced individuals. Other indicators are labour force status, sector of employment, and occupational status. In this section, we document the effects that displacement had on these outcomes. We also explore to what extent induced occupational and sectoral changes can explain the long-term income differentials between displaced and natives documented in the previous section.

Panels A to C of Table 3 report estimates of the effects that displacement had on our three additional sets of labour market outcomes. For each set of outcomes, two estimates are reported. The first stem from unconditional regressions that control only for age and age squared of individuals in 1939 (entries in columns denoted by (1)); the second from regressions that control in addition for individuals' 1939 house ownership status, their 1939 occupational status, and their 1939 sector of employment (entries in columns denoted by (2)).

Panel A of Table 3 indicates that displaced men have a 1.4 percentage points lower unconditional probability of being out of the labour force in 1971 than their non-displaced counterparts.[26] Among females, in contrast, this probability is about 3.5 percentage points higher for the displaced than for the natives.[27] The lower labour force participation rate of displaced women may also explain their lower wage penalty (relative to displaced men). As those in the labour force are arguably positively selected, the average income of the employed may indeed increase with a lower labour force participation rate (i.e., a stronger selection). We also find displaced men and women to both suffer from higher unemployment risk in 1971. As unemployment was generally very low in West Germany in 1971, the overall unemployment risk for displaced individuals is still comparatively modest.[28] These estimated effects for both outcomes are little, if at all,

---

[26]This may have to do with the fact that the displaced, having lost their pre-war property and suffering from higher rates of unemployment upon arrival in West Germany, were forced to work until later in live to make their living. Lüttinger (1986) provides evidence for 1971 that pensions were markedly lower among displaced than among non-displaced retirees.

[27]However, this effect is essentially limited to women who were working as helping family members in agriculture before the war. These women could often not resume employment after their families had lost their businesses and farmlands in the East.

[28]The official West German unemployment rate in April 1971 was 0.7%. The unemployment risk in our sample is even lower, since we count the self-employed and working family members as part of the work force, while the official unemployment statistic

TABLE 3: 1st GENERATION MIGRANTS: OTHER LABOUR MARKET OUTCOMES

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. 1971 employment status:						
Out of labour force	0.147	−0.014*** (0.003)	−0.013*** (0.003)	0.644	0.035*** (0.004)	0.039*** (0.004)
Unemployed	0.003	0.001* (0.001)	0.002** (0.001)	0.002	0.005*** (0.001)	0.005*** (0.001)
B. 1971 sector of employment:						
Agriculture	0.094	−0.063*** (0.002)	−0.079*** (0.003)	0.199	−0.155*** (0.004)	−0.122*** (0.004)
Industry[1]	0.506	0.050*** (0.006)	0.080*** (0.006)	0.274	0.090*** (0.008)	0.086*** (0.008)
Services[2]	0.398	0.014** (0.006)	0.000 (0.005)	0.526	0.063*** (0.008)	0.034*** (0.008)
C. 1971 occupational status:						
Self-employed[3]	0.148	−0.057*** (0.004)	−0.050*** (0.003)	0.081	−0.028*** (0.004)	−0.025*** (0.004)
Farmer[4]	0.073	−0.059*** (0.002)	−0.068*** (0.002)	0.028	−0.023*** (0.001)	−0.018*** (0.001)
Blue collar worker	0.419	0.124*** (0.006)	0.130*** (0.005)	0.342	0.150*** (0.008)	0.137*** (0.008)
White collar worker	0.253	−0.012** (0.005)	−0.001 (0.005)	0.295	0.060*** (0.008)	0.038*** (0.007)
Civil servant	0.098	0.008** (0.004)	−0.004 (0.003)	0.021	0.007** (0.003)	0.003 (0.003)
Helping family member	0.008	−0.005*** (0.001)	−0.006*** (0.001)	0.234	−0.167*** (0.005)	−0.134*** (0.005)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions on the sector of employment and on occupational status condition on employment in 1971. The regressions on unemployment condition on being in the labour force in 1971. Regressions include the following pre-war covariates: (1) age and age squared in 1939, (2) = (1) plus an indicator for house ownership in 1939, seven categories for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown), and nine categories for the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, apprentice, out of labour force, unemployed). [1] Includes construction. [2] Includes trade/transport, finance, as well as public and private services. [3] Self-employed outside agriculture. [4] Farmer with own land. ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

affected by adding pre-war controls.

Panel B of Table 3 contrasts the 1971 sectoral employment structure of displaced individuals to that of natives. Displaced men and women are markedly underrepresented in agriculture and overrepresented in industry. Displaced women are also overrepresented in services, while for men this only holds true in the unconditional regression. Additional unreported analyses show that these differentials are driven predominantly by workers who were employed in agriculture before the war. In this group, displacement

does not. Note also that our analysis excludes foreigners who generally have a higher risk of becoming unemployed than German nationals.

reduces the probability for men (women) of working in agriculture by 39.8 (48.2) percentage points and increases the probability of working in industry by 31.3 (27.2) percentage points. Displacement, therefore, greatly promoted transitions out of agriculture into the industrial sector.

Panel C of Table 3 provides further evidence for this finding. It shows that the occupational structure of women and men in 1971 differs significantly between the displaced and natives. Displaced women and men are far less often self-employed, both outside and inside agriculture. This finding casts strong doubts on the effectiveness of the *Flüchtlingssiedlungsgesetz* that encouraged and supported financially the lease and purchase of farms by forced migrants.[29] Instead, first generation male (female) migrants have a 12.4 (15.0) percentage points higher probability of working as a blue-collar worker (unconditional estimates). Displaced men and women also exhibit a drastically lower likelihood of working as a helping family member. Apart from the immediate loss of family-run businesses, this finding may be explained also by the relatively low rates of self-employment among the displaced.

Can these differences in the sectoral and occupational structure of migrants and natives explain the income differentials documented in Section 5.1? Agriculture was a low-pay sector compared to industry or services (almost two-thirds of male and more than 96% of female agricultural workers in our data set fall in the lowest income category). By promoting transitions out of agriculture and into industry, displacement therefore also tended to foster transitions into better remunerated jobs. This observation can explain why displacement has a positive effect on the 1971 income levels of those who had worked in agriculture in 1939, but not of those who had worked in other sectors before the war. Furthermore, blue-collar worker were generally less well paid than white-collar workers, the self-employed, or civil servants. As displaced workers are relatively more likely to be employed as blue-collar workers (see Panel C of Table 3), the induced changes in the occupational structure of displaced workers can also, at least partly, explain why displacement has a negative overall income effect.

5.3 Sectoral and Geographic Mobility after Displacement

The previous section has documented that displacement-induced sectoral changes can partly explain long-term income differentials between natives and displaced. This section analyses whether the displacement had *persistent* effects on the mobility of forced migrants. Table 4 reports estimates of the effects of displacement on the post-displacement sectoral and geographical mobility of individuals. To quantify the former, we employ two outcome measures: the likelihood to change sectors between 1950 and 1960 (medium run), and the likelihood to change sectors between 1960 and 1971 (long run). Concerning geographic mobility, we consider an individual's probability of changing the municipality of residence between 1960 and 1971.[30] For each of these outcomes, we again provide two estimates, one from an unconditional regression that controls only for age and age squared of individuals in 1939, and one from a conditional regression that controls also for pre-war covariates. Differences between the two types of estimates are throughout marginal. We therefore confine our discussion of the results in Table 4 mainly to the unconditional estimates (entries in

---

[29]Presumably, the measure had limited impact because there was simply not enough farmland that could be given to the newcomers (Connor, 2007).

[30]Change of residence information in our data is only available for the decade immediately preceding the survey year 1971.

TABLE 4: 1st GENERATION MIGRANTS: POST-DISPLACEMENT SECTORAL AND REGIONAL MOBILITY

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. Change 1939 to 1950:						
Sector of employment	0.236	0.161*** (0.006)	0.144*** (0.006)	0.212	0.212*** (0.009)	0.192*** (0.009)
B. Change 1950 to 1960:						
Sector of employment	0.144	0.079*** (0.005)	0.072*** (0.005)	0.136	0.090*** (0.008)	0.082*** (0.008)
C. Change 1960 to 1971:						
Sector of employment	0.184	0.009* (0.005)	0.005 (0.005)	0.187	0.052*** (0.008)	0.043*** (0.008)
Residence	0.093	0.045*** (0.004)	0.043*** (0.004)	0.087	0.065*** (0.003)	0.065*** (0.003)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions on sectoral change condition on being employed in the first and in the last year of the respective period considered. Regressions include the following pre-war covariates: (1) age and age squared in 1939, (2) = (1) plus an indicator for house ownership in 1939, seven categories for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown), and nine categories for the occupational or employment status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, apprentice, out of labour force, unemployed). ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

columns denoted by (1)).

Panel B of Table 4 reveals that displaced men and women are far more likely to have changed sectors between 1950 and 1960 than comparable (as of 1939) non-displaced men and women. For displaced men, chances of a sectoral change are 55% higher (a 7.9 percentage points difference to the baseline). For displaced women, the differential is even larger (a 66% or 9.0 percentage points difference). It is also evident that overall sectoral mobility was lower in the 1950s than in the previous decade, both among the displaced and among natives (see Panel A of Table 4). As the years 1939 to 1950 saw both World War II and the actual mass displacement of Germans, higher rates of sectoral mobility in the 1940s are not surprising. What is surprising, however, is that the *relative* differences in sectoral mobility between displaced and non-displaced men remain almost unchanged in the 1950s. Similarly, the sectoral mobility of displaced females exceeds that of native females not only in the 1940s but also in the 1950s. In the last decade considered (1960s), however, sectoral mobility rates converge between the displaced and natives. For men, in fact, differences disappear completely in the conditional regressions (see first row of Panel C). Large and persistent effects of displacement are also observable for the geographic mobility of individuals (second row of Panel C). Displaced men are almost 50% more likely to have changed residence between 1960 and 1971 than non-displaced men. For women, the relative difference is again even larger.

Overall, the evidence presented in Table 4 suggests that displacement had large and persistent effects on the sectoral and geographical mobility of forced migrants. If the displaced had been voluntary migrants,

these findings could, at least potentially, be explained by a higher innate mobility of these individuals, as revealed by their original migration decision. The fact that Germans in Eastern Europe were forced to re-settle after World War II, however, precludes such a selection-based explanation for our results.

6 Second Generation Migrants

In this section, we analyse whether differences in economic outcomes are still observable for second generation migrants and whether any differences that do exist resemble those for the first generation. As defined in Section 3, second generation migrants are children of displaced parents who were born in West Germany between 1944 and 1949. As in the analysis of first generation migrant outcomes, we analyse differences in 1971 incomes and house ownership rates and investigate to what extent observed income differentials can be explained by differences in the labour force status, sectoral affiliation, and occupational status of second generation migrants and their native peers. In addition, we explore the relationship between displacement and educational attainment.

6.1 Income and House Ownership

We start by estimating interval regressions of the effect of displacement on log income. We again use two specifications. The first specification controls only for age and age squared; the second controls also for pre-war parental characteristics (house ownership and educational attainment of both parents). Results for both specifications are reported in Panel A of Table 5. They show that second generation displaced men have significantly lower incomes in 1971 than their non-displaced peers. What is more, the magnitude of the income differential is comparable to the unconditional income differential for first generation men. Estimated unconditional and conditional (on parental covariates) income gaps also differ but little (-5.6 vs. -6.0%).[31]

In contrast, and unlike their mother generation, second generation displaced women do not exhibit an income penalty relative to native women. The wage differential between displaced and non-displaced women is even positive but not statistically significant. This finding may, in part, be explained by the markedly lower birth and marriage rates among female second generation migrants. Marriage and motherhood can lead to early career breaks and reduce both hours of work and wages. Second generation displaced females have a 12.9 percentage points lower probability of being married than their native peers, and a 7.0 percentage points lower probability of having a child (see Table A-2 in the Appendix for the details).[32] Although we find similar differences in marriage and birth rates for men, higher marriage and birth rates are arguably of less importance for the labour force participation and careers of men than of women.

Panel B of Table 5 reports estimates of the effects of displacement on 1971 house ownership. Controlling for parental covariates, second generation displaced men and women have a significantly lower likelihood to own residential property. Compared to their indigenous peers, the chances of migrant men (women) to own

---

[31]We find slightly larger (smaller) income penalties if we estimate OLS midpoint (heteroscedastic interval) regressions.

[32]This is true for all six age groups considered (females born between 1944 and 1949). However, differences between natives and migrants in marriage and birth rates decline steadily with age. Migrants thus seem to have postponed marriage and fertility.

a house are 24% (20%) lower. Additional regressions show that the negative effect of displacement status on 1971 house ownership becomes statistically insignificant for both sexes if we consider only offspring of parents who did not own a house before the war. The lower likelihood of second generation displaced individuals to own residential property can thus, to a large degree, be explained by the loss of property of the parent generation, i.e., by a persistent adverse inter-generational wealth effect.

TABLE 5: 2nd GENERATION MIGRANTS: LOG INCOME AND HOUSE OWNERSHIP

	Men		Women	
	Displaced	s.e.	Displaced	s.e.
A. 1971 income – Unconditional and conditional estimates				
Without parental covariates	−0.056***	(0.012)	0.019	(0.015)
With parental covariates	−0.060***	(0.012)	0.016	(0.014)
B. 1971 house ownership status[1] – Conditional estimates				
All	−0.017***	(0.005)	−0.026***	(0.008)
Parents owned a house in 1939	−0.067***	(0.013)	−0.056***	(0.019)
Parents owned no house in 1939	−0.004	(0.005)	−0.014	(0.008)

NOTE: Estimates for displacement status. Each estimate stems from a separate regression. Income equations are estimated by standard interval regressions. House ownership equations are estimated by OLS. Income regressions condition on employment in 1971. Unconditional estimates stem from regressions that control only for age and age squared of second generation migrants in 1971. Conditional estimates stem from regressions that control for additional parental covariates. Parental covariates include a dummy for house ownership in 1939 and a full set of dummies for years of education of both parents. [1] The share of house owners among natives in 1971 was 7.1% for males and 12.9% for females. Among men, whose parents did (not) own a house in 1939, the respective share in 1971 was 14.0% (4.5%); and among women, it was 21.9% (9.4%). ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

6.2 Labour Force Status, Sector of Employment and Occupational Status

Following our analysis for first generation migrants, this subsection explores to what extent second generation migrants differ from their non-displaced peers in 1971 labour force status, occupational structure and sectoral affiliation, and whether any such differences resemble those observed for the first generation. We also explore again to what extent differences in the sectoral affiliation and occupational structure between displaced and natives can explain the income penalty for displaced men.

The results of these analyses are summarised in Table 6. For each set of outcomes, we again report two estimates. The first stem from unconditional regressions that control only for age and age squared of individuals (entries in columns denoted by (1)); the second from regressions that control in addition for parental pre-war covariates (entries in columns denoted by (2)). As evident, differences between the two estimates are again small. We will therefore mainly discuss the estimates that condition on parental covariates. Panel A of Table 6 shows that the unemployment risk of second generation migrants does not differ from that of native peers. Displaced and non-displaced females, however, do differ in their attachment

to the labour market. Displaced females are 4.2 percentage points (or 10%) less likely to be out of the labour force than native females. The higher labour force participation among female second generation migrants is again likely to be the result of the markedly lower marriage and birth rates of this group compared to their indigenous peers. Less wealth, which materialises in lower home ownership rates, may also contribute to the relatively higher participation rates of displaced females. Empirical evidence suggests that females, in particular, tend to have higher labour force participation rates if they plan to purchase a home (see Havet and Penot, 2010, for a survey of the relevant literature).

The differences in the sectoral employment structure between displaced and non-displaced young adults resemble those of the first generation: displaced men and women work far less often in agriculture, and more frequently in services (see Panel B of Table 6). Displaced women are also significantly more likely to work in industry, while men are less likely to work in industry (a fact that sets them apart from their parent generation). These differences are large in magnitude, in particular for agricultural employment. Young displaced males are 2.0 percentage points (or 47%) and females 3.6 percentage points (or 67%) less likely to work in agriculture than their native peers.

Panel C of Table 6 reports estimates of the effects of displacement on the 1971 occupational structure of young adults. Again, the results largely resemble those found for the parent generation, although some differences between migrants and natives are now more attenuated. In 1971, second generation migrant men and women are less likely to be farmers than their native peers, and migrant men are less likely to be self-employed outside agriculture. Displaced men and women furthermore have a significantly lower probability of working as a helping family member. This is presumably a direct consequence of the much lower self-employment rates among the displaced. In line with our findings for the first generation, we also find second generation male and female migrants to be over-represented among civil servants, and male migrants to be under-represented among white-collar workers. In contrast to the first generation, second generation migrants are no longer over-represented among blue-collar workers. Differences in the occupational structure are particularly large in public employment: Young displaced males are 42% and females 29% more likely to work as civil servants than their native peers. Male migrants are also twice as likely to work as an apprentice.

Differences in the occupational structure between second generation male migrants and their native peers can, at least partly, help to explain the sizeable wage penalty observable for this group. Displaced young male adults are significantly under-represented among the high-earning self-employed outside agriculture and among white-collar workers. Moreover, they are much more likely to work as low-paid apprentices than their native peers.

6.3 Educational Attainment

The educational achievement of migrant children is an important yardstick of the integration of immigrants and of great influence for their economic success later in life. This section studies the educational attainment of second generation migrants and contrasts it to that of indigenous peers.

Table 7 reports estimates of the effects of displacement on the educational attainment of young adults, considering three measures of educational attainment: years of education, and two indicator variables for

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. 1971 employment status:						
Out of labour force	0.171	0.003 (0.010)	−0.010 (0.009)	0.413	−0.042*** (0.013)	−0.042*** (0.013)
Unemployed	0.002	0.001 (0.002)	0.001 (0.002)	0.002	0.002 (0.002)	0.002 (0.002)
B. 1971 sector of employment:						
Agriculture	0.043	−0.027*** (0.004)	−0.020*** (0.004)	0.054	−0.044*** (0.004)	−0.036*** (0.004)
Industry[1]	0.534	−0.034** (0.014)	−0.024* (0.013)	0.318	0.009 (0.016)	0.011 (0.016)
Services[2]	0.419	0.057*** (0.014)	0.039*** (0.013)	0.624	0.031* (0.017)	0.022 (0.017)
C. 1971 occupational status:						
Self-employed[3]	0.024	−0.011*** (0.002)	−0.011*** (0.003)	0.015	−0.003 (0.004)	−0.003 (0.004)
Farmer[4]	0.009	−0.007*** (0.001)	−0.005*** (0.001)	0.002	−0.002*** (0.000)	−0.001*** (0.000)
Blue collar worker	0.531	−0.025* (0.014)	−0.008 (0.013)	0.221	−0.005 (0.014)	−0.002 (0.014)
White collar worker	0.265	−0.006 (0.012)	−0.023** (0.012)	0.638	0.033** (0.016)	0.024 (0.016)
Civil servant	0.097	0.045*** (0.009)	0.041*** (0.009)	0.048	0.016* (0.008)	0.014* (0.008)
Helping family member	0.022	−0.020*** (0.002)	−0.015*** (0.002)	0.065	−0.046*** (0.005)	−0.038*** (0.005)
Apprentice	0.015	0.017*** (0.005)	0.015*** (0.005)	0.011	0.007 (0.005)	0.006 (0.005)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions on the sector of employment and on occupational status condition on employment in 1971. Regressions on unemployment condition on being in the labour force in 1971. Regressions include the following covariates: (1) age and age squared of second generation migrants in 1971, (2) = (1) plus an indicator for parental house ownership in 1939 and a full set of dummies for years of education of both parents. [1] Includes construction. [2] Includes trade/transport, finance, as well as public and private services. [3] Self-employed outside agriculture. [4] Farmer with own land. ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

low and high education. Low education is defined as having at most primary or lower secondary education (*Volksschule*), i.e., only compulsory schooling (eight years) and no vocational degree.[33] High education, in turn, is defined as having completed a degree that requires at least 13 years of education. This group includes individuals with tertiary or upper secondary education (*Abitur*) and individuals with intermediate secondary education (*Mittlere Reife*) that have also completed a commercial apprenticeship (*kaufmännische Lehre*). For each outcome variable, we again run two regressions: one with and one without parental covariates.

---

[33]Compulsory years of education were increased to nine years in 1964. Individuals born in 1940-1949 were aged at least 15 in 1964 and hence not affected by this schooling reform.

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. 1971 years of education	10.67	0.128*** (0.045)	0.035 (0.042)	10.53	0.206*** (0.045)	0.138*** (0.052)
B. 1971 low educated (0/1)	0.117	−0.031*** (0.008)	−0.020*** (0.008)	0.239	−0.053*** (0.011)	−0.040*** (0.011)
C. 1971 high educated (0/1)	0.189	0.020* (0.011)	0.004 (0.010)	0.159	0.023** (0.011)	0.014 (0.011)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions include the following covariates: (1) age and age squared of second generation migrants in 1971, (2) = (1) plus an indicator for parental house ownership in 1939 and a full set of dummies for years of education of both parents. ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

If we do not condition on parental pre-war characteristics, displacement status is associated with an average of 0.13 more years of education for men, and 0.21 more years for women (Panel A of Table 7). As educational achievement tends to be positively correlated across generations (see, for example, Dustmann and Glitz, 2011), and first generation migrants had slightly higher levels of education, migrants might simply have inherited their educational advantage from their parents. Once we add parental covariates to the regression, the positive correlation between displacement status and years of education indeed disappears for men. For women, however, the respective coefficient only shrinks in size (by around a third), but remains statistically significant.[34] Panel B of Table 7 shows that displacement is associated with a lower likelihood of being low educated, a finding that proves robust to the use of parental pre-war characteristics as additional controls. No significant differences between migrant and native children are observable in the probability of being highly educated (see Panel C), once we use parental covariates as additional controls.

The lower likelihood of second generation migrants to be low-skilled may again be explained by the sectoral and occupational changes of the parent generation. In 1971, more than 50% of all young adult farmers and helping family workers are low-skilled. Second generation migrants, however, have a much lower probability to work either as a farmer or a helping family member. This can be explained by the fact that the majority of first generation migrants who had been employed in agriculture before the war left that sector after displacement. Displaced farmers lost their estates, i.e., property that would have predestined their offspring also for a career in (low-skilled) agriculture. Migrant children were forced to look – and compete – for work outside agriculture, i.e., for work that requires larger investments in human capital.[35]

---

[34] 10.7% of the young adults were still at university in 1971 and had thus not yet completed their education by the time the survey was conducted. The share of those still in education does not differ significantly between male migrants and non-migrants, but is higher for female migrants than for non-migrants. The skill-upgrading that we report for female migrants is thus likely to be a lower bound on the effect on completed education.

[35] This explanation is consistent with results reported in Lüttinger (1986). The author analyses the link between the occupation of fathers and the occupational choice of sons born between 1920 and 1929. He finds that among sons whose fathers worked as farmers displacement status greatly reduces the probability to obtain only low education. Lüttinger (1986) attributes his finding to

7   Conclusion

Each year millions of people are forced to leave their homelands because of wars and natural disasters. Although a sizeable phenomenon, both within and between countries, little is yet known on how forced migrants ultimately integrate into the economies of their destination regions or countries. Studies on forced migration are still scant, and in their focus they are almost exclusively confined to the short run. This paper studies one of the largest forced population movements in history, the displacement of millions of Germans from Eastern Europe, and provides a detailed analysis of the medium- and long-run economic performance of these migrants and their offspring in West Germany. As our study considers the integration of forced migrants, it does not suffer from many of the econometric problems that are commonly faced in analyses of the integration of voluntary migrants.

Our findings show that even a quarter of a century after displacement, displaced Germans are, on average, still economically disadvantaged relative to their native peers. In 1971, first generation migrants have significantly lower income levels and significantly higher risks of unemployment than comparable (as of 1939) natives. Similar to their parents, second generation male migrants have also lower income levels. Displacement had, however, strongly heterogeneous effects. In particular, first generation forced migrants who had been employed in agriculture before World War II have substantially higher long-run incomes than comparable natives. We show that this income gain can be explained by faster transitions of forced migrants from agriculture into other sectors and occupations.

Overall, our results suggest that displacement had significant and mostly negative long-run economic consequences for the displaced. Language deficiencies or a potentially negative self-selection of low-productivity migrants cannot explain our findings and neither can unfavourable macroeconomic conditions in the destination region. In fact, for most of the 1950s and 1960s, aggregate economic conditions in West Germany were most favourable. Although a faster transition of the displaced from traditional into modern sectors tended to foster a successful integration, this greater mobility evidently did not suffice to achieve long-run economic parity between migrants and natives. In fact, the economic consequences of displacement and the ensuing adjustment processes appear so long lasting that they are still felt by the offspring of the displaced a full quarter of a century after World War II had ended. Our analysis therefore suggests that the substantial policies measures that were undertaken to foster the successful integration of the displaced did not, as is widely believed, achieve their objective in full.

References

Algan, Y., Dustmann, C., Glitz, A., and Manning, A. (2010). The economic situation of first and second-generation immigrants in France, Germany and the United Kingdom. *Economic Journal*, 120(542):F4–F30.

Ambrosius, G. (1996). Der Beitrag der Vertriebenen und Flüchtlinge zum Wachstum der westdeutschen Wirtschaft nach dem Zweiten Weltkrieg. *Jahrbuch für Wirtschaftsgeschichte*, 2:39–71.

---

the loss of farmland that bereaved sons of the possibility to become farmers themselves. The birth cohort considered by Lüttinger (1986), however, is not ideal, as many individuals (sons) in his analysis are likely to have already completed their education by the time of displacement.

Arntz, M. and Bonin, H. (2011). Can role models enhance gender equality on the labor market? Evidence from the post-unification migration experiment. Mimeo.

Bauer, T. K. and Basilio, L. (2010). Transferability of human capital and immigrant assimilation. Ruhr Economic Papers 164.

Bauer, T. K., Haisken-DeNew, J. P., and Schmidt, C. M. (2005). International labour migration, economic growth and labour markets: The current state of affairs. In Macura, M., MacDonald, A., and Haug, W., editors, *The New Demographic Regime Population Challenges and Policy Responses*. New York and Geneva: United Nations.

Bethmann, D. and Kvasnicka, M. (2012). World War II, missing men, and out-of-wedlock childbearing. *Economic Journal*, forthcoming.

Borjas, G. J. (1991). Self-selection and the earnings of immigrants. *American Economic Review*, 77:531–553.

Borjas, G. J. (1999). The economic analysis of immigration. In Ashenfelter, O. and Card, D., editors, *Handbook of Labor Economics, Vol. 3*. Amsterdam: Elsevier.

Braun, S. and Mahmoud, T. O. (2011). The employment effects of immigration: Evidence from the mass arrival of German expellees in post-war Germany. Kiel Working Papers 1725.

Chiswick, B. (1978). The effect of Americanization on the earnings of foreign-born men. *Journal of Political Economy*, 86:897–921.

Chiswick, B. and Miller, P. W. (1995). The endogeneity between language and earnings: International analyses. *Journal of Labor Economics*, 13:245–287.

Connor, I. (2007). *Refugees and expellees in post-war Germany*. Manchester and New York: Manchester University Press.

D'Amuri, F., Ottaviano, G. I., and Peri, G. (2010). The labor market impact of immigration in Western Germany in the 1990s. *European Economic Review*, 54(4):550–570.

Dustmann, C. and Fabbri, F. (2003). Language proficiency and labour market performance of immigrants in the UK. *Economic Journal*, 113:695–717.

Dustmann, C. and Glitz, A. (2011). Migration and education. CReAM Discussion Paper Series 1105.

Falck, O., Heblich, S., and Link, S. (2011). The evils of forced migration: Do integration policies alleviate migrants' economic situations? IZA Discussion Papers 5829.

Federal Statistical Office (1955). *Die Vertriebenen und Flüchtlinge in der Bundesrepublik Deutschland in den Jahren 1946 bis 1953*. Stuttgart and Köln: W. Kohlhammer.

Glitz, A. (2012). The labor market impact of immigration: A quasi-experiment exploiting immigrant location rules in Germany. *Journal of Labor Economics*, 30(1):175 – 213.

Groen, J. and Polivka, A. (2008). The effect of hurricane Katrina on the labour market outcomes of evacuees. *American Economic Review*, 98:43–48.

Havet, N. and Penot, A. (2010). Does homeownership harm labour market performance? A survey. Groupe D'Analyse et de Theorie Economique Lyon - St. Etienne Working Paper 1012.

Hughes, M. L. (1999). *Shouldering the burdens of defeat: West Germany and the reconstruction of social justice*. Chapel Hill and London: The University of North Carolina Press.

Ibáñez, A. M. and Vélez, C. E. (2008). Civil conflict and forced migration: The micro determinants and welfare losses of displacement in Colombia. *World Development*, 36:659–676.

Imbens, G. W. and Wooldridge, J. M. (2009). Recent developments in the econometrics of program evaluation. *Journal of Economic Literature*, 47(1):5–86.

Kerr, S. P. and Kerr, W. R. (2011). Economic impacts of immigration: A survey. NBER Working Papers 16736, NBER.

Kondylis, F. (2007). Conflict displacement and labour market outcomes: Evidence from post-war Bosnia and Herzegovina. CEP Discussion Paper 778.

Kondylis, F. (2008). Agricultural households and conflict displacement: Evidence from policy intervention in Rwanda. *Economic Development and Cultural Change*, 57:31–66.

Lubotsky, D. (2007). Chutes or ladders? A longitudinal analysis of immigrant earnings. *Journal of Political Economy*, 115(5):820–867.

Lüttinger, P. (1986). Der Mythos der schnellen Immigration. Eine empirische Untersuchung zur Integration der Vertriebenen und Flüchtlinge in der Bundesrepublik Deutschland bis 1971. *Zeitschrift für Soziologie*, 15(1):20–36.

Mikrozensus-Zusatzerhebung (1971). *Berufliche und soziale Umschichtung der Bevölkerung*. GESIS-Datenfile.

Müller, W. (1979). Schulbildung und Weiterbildung als soziologische Hintergrundsvariablen. In Pappi, F. U., editor, *Sozialstrukturanalysen mit Umfragedaten*. Königstein: Athenäum Verlag.

Prantl, S. and Spitz-Oener, A. (2011). The impact of immigration on natives' wages: Heterogeneity resulting from product and labor market regulation. Mimeo.

Reichling, G. (1958). *Die Heimatvertriebenen im Spiegel der Statistik*. Berlin: Duncker & Humboldt.

Sacerdote, B. (2009). When the saints come marching in: Effects of hurricanes Katrina and Rita on student evacuess. NBER Working Paper 14385, NBER.

Sarvimäki, M., Uusitalo, R., and Jäntti, M. (2009). Long-term effects of forced migration. IZA Discussion Papers 4003, Institute for the Study of Labor (IZA).

Schmidt, C. M. (1997). Immigrant performance in Germany: Labor earnings of ethnic German migrants and foreign guest-workers. *Quarterly Review of Economics and Finance*, 37(Supplement 1):379–397.

Stewart, M. B. (1983). On least squares estimation when the dependent variable is grouped. *Review of Economic Studies*, 50(4):737–53.

UNHCR (2011). *Global Trends 2010*. UNHCR.

Vigdor, J. (2007). The Katrina effect: Was there a bright side to the evacuation of greater New Orleans? *The BE Journal of Economic Analysis and Policy (Advances)*, 7:64.

Wiegand, L. (1991). *Der Lastenausgleich in der Bundesrepublik Deutschland 1949 bis 1985*. Frankfurt/Main: Lang.

A Appendix

TABLE A-1: 1st GENERATION MIGRANTS: MARITAL STATUS AND CHILDREN

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. 1971 married (0/1)	0.922	−0.006* (0.003)	−0.004 (0.0003)	0.662	−0.029*** (0.005)	−0.027*** (0.005)
B. 1971 children (0/1)	0.842	−0.004 (0.004)	−0.004 (0.004)	0.794	0.001 (0.004)	0.002 (0.004)
C. 1971 number of children	1.972	−0.004 (0.017)	−0.035** (0.017)	1.839	0.033** (0.016)	0.025 (0.015)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions include the following pre-war covariates: (1) age and age squared in 1939, (2) = (1) plus an indicator for house ownership in 1939, seven categories for the sector of employment in 1939 (agriculture, industry, construction, trade/transport, finance, public and private services, unknown), and nine categories for the occupational, respectively employment, status in 1939 (self-employed, farmer, civil servant, white-collar worker, blue-collar worker, helping family member, apprentice, out of labour force, unemployed). ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.

TABLE A-2: 2nd GENERATION MIGRANTS: MARITAL STATUS AND CHILDREN

	Men			Women		
	Natives	Displaced		Natives	Displaced	
	Mean	(1)	(2)	Mean	(1)	(2)
A. 1971 married (0/1)	0.411	−0.105*** (0.010)	−0.101*** (0.010)	0.696	−0.141*** (0.013)	−0.129*** (0.013)
B. 1971 children (0/1)	0.271	−0.068*** (0.009)	−0.062*** (0.009)	0.522	−0.084*** (0.013)	−0.070*** (0.013)
C. 1971 number of children	0.366	−0.088*** (0.013)	−0.077*** (0.013)	0.781	−0.119*** (0.023)	−0.096*** (0.022)

NOTE: Means of the control group and OLS estimates for displacement status. Each estimate stems from a separate regression. Regressions include the following covariates: (1) age and age squared of second generation migrants in 1971, (2) = (1) plus an indicator for parental house ownership in 1939 and a full set of dummies for years of education of both parents. ***, **, * denote statistical significance at the 1%, 5%, and 10% level. Robust standard errors are reported in parentheses.