

Immigrants' economic performance across Europe – does immigration policy matter?*

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Abstract. Drawing on panel data from the European Community Household Panel (ECHP), the British Household Panel Survey (BHPS) and the German Socio-Economic Panel Study (SOEP), we compare the economic performance of immigrants to Great Britain, West Germany, Denmark, Luxembourg, Ireland, Italy, Spain and Austria to that of the respective indigenous population. The unit of analysis is the individual in the household context. This allows us to define immigrants' state of integration into the host society at the family level taking into account issues such as immigrant/native intermarriage. Economic performance is measured in terms of the country-specific pre-government income position and change in the relative income position due to redistribution processes within the respective tax and social security systems. Our work is based on the premise that countries may be categorized – similarly to existing categorizations based on the type of welfare regime – according to the nature of their immigration policy. From an economic point of view, a successful and integrative immigration policy should result – at least when controlling for background characteristics such as education – in a non-significant differential between the economic performance of immigrants and that of the indigenous population. At first glance, our results indicate that this “ideal” is not attained in all of the countries analysed, particularly not in Germany and Denmark, where the economic performance of immigrants is much lower than that of the indigenous population. However, results from GLS random-effects models show that immigrants to these countries improve their economic situation rapidly with increasing duration of stay in the host country. This implies that these countries also do fairly well in fostering in the economic integration of immigrants. Our empirical results further reveal that the substantial cross-country differences in the immigrant/native-born performance differential persist even when controlling in detail for socioeconomic characteristics of the household and for indicators of the state of the immigrants' integration, such as years since migration and immigrant/native intermarriage. This suggests that not only the conditions of entry to a country impact on immigrants' economic performance, but also country-specific institutional aspects such as restrictions on access to the labour market and parts of the social

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security system that are related to citizenship or immigrant status. There still is a great deal of heterogeneity across EU member states in this respect. This should be taken into account when working towards the harmonization of national EU immigration policies.

Keywords: BHPS, ECHP, Immigration, Income redistribution, SOEP

Starting point: The need to harmonize EU immigration policies

At their Amsterdam meeting on 16th and 17th June 1997, the heads of the European Union (EU) states and governments revised the policies and institutions of the EU by signing a new treaty on “visa, asylum, immigration and other policies connected with the free circulation of people”. According to the terms of the Amsterdam Treaty, the European Union has to adopt measures to control its external borders and to harmonize their immigration policies. For an overview of the Treaty, see: <http://europa.eu.int/scadplus/leg/en/lvb/a24000.htm> (accessed 5 December 2002).

The EU member states had several good reasons to start this harmonization initiative. First of all, the plans to abolish border checks within the Union that had been laid down in the Schengen Treaty of 1990 led to the need to cooperate at the executive level to fight illegal immigration. Apart from this specific practical interest, the establishment of freedom of movement and residence for EU citizens reinforced the need to adjust social policy standards within the EU and, in this context, to think harder about questions of citizenship. Furthermore, almost all EU states are currently undergoing dramatic demographic changes: they are rapidly ageing societies. This is leading to serious problems with respect to the functioning of social systems as well as the skill supply to the labour market. Selective immigration is seen as a tool that may help to address these problems. Finally, the pending eastward extension of the EU’s boundaries requires a joint effort to tackle the immigration problem. Many consider a harmonized immigration policy to be a *conditio sine qua non* for the incorporation of new member states into the EU.

It is evident that this harmonization will be difficult to realize (Zimmermann 1995). Immigration policies vary substantially across states, as do natives’ attitudes towards immigrants (Bauer et al. 2000; Clark & Schultz 1997; Cummings & Lambert 1998; Fertig & Schmidt 2002). Which elements of the immigration policies of single member

states should be adopted at EU level, and which should be dropped? In other words, what characterizes a “successful” immigration policy?

The simplest strategy for enhancing any immigration policy is to steer immigration actively with respect to the social composition of the immigrant population. However, since all countries tend to try to attract the “best” immigrants, the success of this strategy may be limited by competition between countries. Additionally, the native population may fear being crowded out by high-performing immigrants. Ethical considerations also limit the extent to which this strategy can be pursued.

A second long-term strategy is to force, rather than to encourage, immigrants to assimilate to the native society as soon as possible. Limitations to this approach include the traditionally less favourable socioeconomic characteristics of immigrant households. These characteristics may be human capital related at the individual level (e.g., schooling, age, health and unemployment experience) or related to household composition (e.g., number of children or single-parent status). Further restrictions to this strategy include budget constraints, inflexible institutions including the legal system, and a lack of political will on the part of the electorate as well as the government.

A modern immigration policy will try to combine both of these elements, but it remains unclear how much weight should be given to each. Beyond these two major parameters that largely determine the success or failure of any immigration policy, numerous institutional regulations may facilitate or impede immigrants' integration in the host country (e.g., unhindered access to the labour market and to social benefits). There is a great deal of variation in these institutional settings across the EU states. Of course, the effect of a single institutional regulation is hardly empirically measurable. The cumulative effect at the country level can be observed, however. Comparable to clustering into different types of welfare-state regimes, countries can be characterized with respect to the nature of the immigration policy they pursue.

The following welfare regime types are discussed in the literature (e.g., Esping-Andersen 1990; Ferrara 1999; Goodin et al. 1999) with respect to the relevance of the *market*, the *state* and the *family*.

- The “social democratic” regime is distinguished by its generous levels of state support, where benefits are based on individual and universal entitlement. The major emphasis is on support from the state, rather than from the family or the market. Typically, this regime type is found in Scandinavian countries.

- The “liberal” regime type shows rather modest levels of public benefits. The dominant means of support is from the market. Public transfers are heavily means-tested and clearly focused on the most needy persons. Within Europe, the UK and Ireland are the prominent representatives of this regime type.
- With respect to support for individuals, the “conservative” regime type puts a heavy emphasis on the family. The state plays a less relevant role than in the social democratic systems, and insurance-based benefits are very important. This welfare regime type is typically associated with the continental European countries (e.g., Germany and Austria).
- While Esping-Andersen (1990) also classifies the southern European countries of Spain, Portugal and Italy as “conservative” regimes, Ferrara (1999) considers these countries to be a unique group in themselves, the “residual” regime type. Although the locus of solidarity in these countries is within the family, the social security system appears immature and selective, granting only low benefits or even lacking a guaranteed level of minimum support.

In this paper, we try to isolate these welfare state effects (i.e., institutional settings) from the results of the two other main parameters of immigration policy (i.e., the socioeconomic composition of the immigrant population and integration behaviour across countries). Since recent research suggests that the integration or economic adjustment of immigrants is a family affair rather than an individual one (Baker & Benjamin 1997; Beach & Worswick 1993 cf. Duleep & Sanders 1993), we place a special focus on the household characteristics of the individuals under analysis.

In our approach, immigrants households’ economic performance is first compared to that of the native-born population, as measured by pre-government (“market”) household income as well as post-government income. Secondly, we split this income into its various components: wages, benefits and others, paying particular attention to the distribution of the most important source of income. Thirdly, we compare income “portfolios”, consisting of market income, non-market income, and – as a deduction component – taxes and contributions.

Another major issue in the ongoing discussion about immigration to Europe relates to the role of immigrants in the income redistribution process. We analyse that role using a proxy measure gained from a comparison of households’ relative income positions based on pre- and post-government income. We interpret our results in such a way that

ceteris paribus (i.e., after controlling for the social background and the immigrants' state of integration) a non-significant differential between the economic performance of the native-born and the immigrant population as determined by our income measures reflects a moderate and desirable immigration policy. If immigrants emerged to be in a significantly weaker position than natives, even after a long duration of stay, this could be interpreted as a sign of legal discrimination. The opposite result would be unjustified and could fuel the persistent xenophobic attitudes that exist, to a greater or lesser extent, across the EU. The main aim of this paper is to provide accurate information about the difference in the "net" performance of immigrants and the native-born inhabitants of various European countries. Comparing this information across EU countries will not only illustrate the effectiveness of the respective national immigration policies, but also provide an indication of the amount of effort that is needed to harmonize them.

There is no doubt that policy makers and citizens all over Europe are far more concerned about the second form of imbalance (i.e. about immigrants outperforming the native population) than about the first (for the case of Germany, see Rotte 1998). This may explain why the existing literature, in the field of economics at least, focuses primarily on the question of whether or not immigrants represent a burden to the economy of the host country. The following section gives a short overview of this field of research.

Analysing the economic performance of immigrants: Relevant factors

The existing economic literature contains a wide variety of research designs that tackle the question of whether immigrants represent an economic burden to the native-born population in more or less specific form. The most unspecific form of analysis is to use a *dummy variable* to control for foreign nationality or immigration when analysing any social phenomenon. On average, immigrants or foreigners tend to occupy a weaker socioeconomic position than the native-born population. Very often, this is interpreted as indicating that immigrants weaken the welfare position of the indigenous population. In view of the heterogeneous socioeconomic characteristics of the immigrant population, however, this standard interpretation is definitely too rash.

Most empirical research focusing explicitly on immigrants can be grouped into a few subtopics (for an overview see Schultz 1998). A variety of analyses deal with the question of *social integration*. In this

context, a long-term perspective is of particular interest and longitudinal data are of great value (Fielding 1995). In general, changes in the structure of socioeconomic characteristics of the immigrant population also affect integration opportunities (Borjas 1994). Another approach is to focus on intergenerational status mobility, for example, with respect to educational participation (Spiess et al. 2003).

With respect to the economic performance, a highly relevant line of research focuses on the *labour market integration* of immigrants. In general, the earning or unemployment patterns of immigrants are compared to those of the native-born population (Fry & Lowell 1997; Reitz et al. 1999). In recent years, we have observed a trend to more specific research designs, such as the analysis of human capital formation of immigrants (Duleep & Regets 2002). A related topic is the *effect of immigration on the structure of the host country's labour markets*. An extended attempt to answer this question has been made by Friedberg & Hunt (1995). In general, immigration effects are considered to be rather small (Gang & Rivera-Batiz 1994; LaLonde & Topel 1991; Pischke & Velling 1997). However, Enchautegui (1997) found immigration to have rather large positive employment effects.

The *take-up of public transfers* is another major field of research. The receipt of welfare benefits is of particular interest here (Hu 1998; Riphahn 1998). The general expectation is that take-up intensity among immigrants decreases with increasing duration of stay. However, contrary results have been presented by Baker & Benjamin (1995) for Canada as well as by Borjas & Trejo (1991) for the USA. This could be explained by national differences in institutional settings. Borjas & Hilton (1996) believe that immigrants' social networks lead to higher take-up rates among this group. Castranova et al. (2001) found that welfare recipientship is higher among immigrants to Germany than among the native-born population, and that take-up rates among immigrants are above average in the case of eligibility. However, both studies concluded that this is due to the less favourable socioeconomic characteristics of immigrant populations, that is, that ethnic origin is not a risk factor *per se*.

Finally, some previous studies have addressed the question we are especially interested in: whether a host society is *economically burdened by or profits from immigration*. An adequate approach to this question must consider both the receipt of benefits and contributions to the tax and welfare system. LaLonde & Topel (1991) reported that immigrants to the USA have lower incomes, but bear this burden for themselves without seriously affecting the native-born population. For Switzerland,

Weber & Straubhaar (1996) found that immigrants are net payers to the tax and social security system. Gustafsson & Österberg (2001) noted that immigrants tend to burden the public sector budget upon arrival in Sweden, but that after a few years this is no longer the case. However, as Ekberg (1999) pointed out, the question of whether the immigrant population as a whole contributes to or benefits from the public sector is largely dependent on the age structure of this population and on the labor market situation, and is therefore subject to change. Büchel & Frick (forthcoming) compared the situation in Great Britain and Germany and found that, on the whole, the non-indigenous population in Great Britain fares much better, relative to the native-born population, than the immigrant population in Germany. However, the range of economic performance across different ethnic groups is much larger in Great Britain than in Germany. The less protective liberal welfare system in Britain is characterized by much lower redistribution effects than the more protective conservative system in Germany. Consequently, the relatively low-performing immigrant population in Germany profits more from the redistribution system than immigrants with similar socioeconomic attributes in Great Britain. The following cross-country analysis of selected EU countries should be seen in the tradition of this type of immigration research and may help to combat the lack of empirical cross-country research in this field.

Data and methods

Data

Our empirical analyses are based primarily on data from the European Community Household Panel (ECHP-UDB). This panel survey with a yearly re-interview design is organized by EUROSTAT; for the years 1994–2001, it was carried out by the EU countries' National Data Collection Units (NDU), which are generally the national statistical offices (for more detailed information on the ECHP, see Wirtz & Mejer 2002 or <<http://forum.europa.eu.int/irc/dsis/echpanel/info/data/information.html>>). In order to maximize the potential for cross-national comparisons, data collection is “input harmonized”, with a blueprint version of the questionnaire being prepared as a guideline and then adjusted to national particularities. The ECHP starting sample covered some 60,000 households and 130,000 individual interviews, with the achieved sample size ranging from about 1,000 households in Luxem-

bourg to approximately 7,000 in Spain, Italy and France. For the purposes of this study, we draw on data collected in Denmark, Luxembourg, Ireland, Italy, Spain and Austria. Unfortunately, all other countries had to be excluded because of data restrictions, mainly because information on certain immigration-related issues¹ or income components² was missing.

In order to at least partially compensate for the exclusion of some of Europe's most important immigrant countries, we also use representative micro-data from two further ongoing panel studies, the British Household Panel Survey (BHPS)³ conducted by ISER at the University of Essex and the German Socio-Economic Panel Study (SOEP)⁴ carried out by DIW Berlin. In principle, both databases cover the same areas of interest as the ECHP and provide comparable data. In fact, the SOEP and BHPS are now used as the basis for "cloning" ECHP data for Germany and Great Britain, respectively, since data collection for these countries was discontinued after the third wave of the ECHP. Our analysis is based on all years of observation in the 1994–1998 period, depending on the country-specific timing of data collection (e.g., Austria did not join the ECHP until 1995; data for Luxembourg only exists for 1994–1996). For Germany we draw on SOEP data for the period 1995–1999, thus allowing for the inclusion of the additional immigrant sample introduced in 1995 (cf. Burkhauser et al. 1997). We pool all available annual data for each of the eight countries under consideration. The unit of analysis is the individual in the household context.

Since our approach is "performance-minded" with respect to the opportunities on the labour market rather than "social burden-minded" (i.e., looking at the society as a whole), we consider only individuals living in households with a head aged between 20 and 60. This helps to eliminate the impact of different age structures in the native-born and the foreign-born population. Furthermore, the relationship between the economically active and the retired population may vary markedly across countries, since immigration often takes place in waves that create specific age structures in the immigrant population of a country.

Definition of ethnic groups

We take an *immigration-based* rather than a *citizenship-based* approach to defining ethnic groups. We chose this concept because it is more robust to cross-national differences in citizenship legislation and to

avoid confusion between the status of being *foreign-born* and that of being a *foreigner*. In the following, a household is defined as an immigrant household if at least one adult member of the household is foreign-born. In this case, all members of the household are defined as “immigrants”, irrespective of their country of birth. Accordingly, a non-immigrant household is one in which all adults are native-born. We then identify the country of origin and distinguish between EU and non-EU countries. In general, we expect people from EU member states to be better off economically, mainly because the cultural differences between the country of origin and the host country are assumed to be less pronounced, but also because EU citizens have privileged legal status compared to other immigrants to the EU.

Measuring the state of integration

To measure the individual state of integration, we first refer to data on the immigrants' length of residence in the host country. We expect integration and economic performance to improve with duration of residence. Furthermore, we categorize immigrant households into two groups to reflect their state of integration: so-called “mixed” households and “non-mixed” households. Whereas all adult members of non-mixed households are foreign-born, in mixed households at least one adult is native-born and at least one other is foreign-born (these are mainly mixed couples – married or cohabiting – with one immigrant and one native partner). We expect people living in mixed immigrant households to perform better than those in non-mixed households because they are more integrated into the host society. We are aware that this indicator is not a standard measure. However, results presented by Büchel & Frick (forthcoming) suggest that this concept of measuring the individual degree of integration is a valid one. Due to data restrictions, we are unfortunately not able to use individual proficiency in the language of the host country as an indicator of integration.

Table 1 shows that both the proportion of immigrants⁵ and their state of integration as measured by the method described above varies markedly across the countries under consideration. The highest proportion of immigrants is found in the small country of Luxembourg, which lies at the heart of the EU; this may be due to the high concentration of foreigners working in Luxembourg's financial and banking sector, as well as to the rather large group of migrant workers from Portugal. In the Mediterranean states, represented by Italy and Spain,

Table 1. Population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b, by household immigrant status

	Native-born (%)		Immigrant (%)		Total (%)	
	All adult household members are native-born	All adult household member are immigrants (“non-mixed”HH)	All adult household member are immigrants (“non-mixed”HH)	At least one adult household member is native-born (“mixed” HH)	Total	Total
Denmark	89.6	4.6	4.6	5.8	10.4	100.0
Luxembourg ^c	53.8	28.5	28.5	17.7	46.2	100.0
Ireland	88.7	1.8	1.8	9.5	11.3	100.0
Italy	95.4	0.7	0.7	3.9	4.6	100.0
Spain	96.3	0.6	0.6	3.1	3.7	100.0
Austria ^d	86.6	6.9	6.9	6.5	13.4	100.0
Great Britain ^e	88.8	3.8	3.8	7.4	11.2	100.0
West Germany ^f	79.2	12.2	12.2	8.6	20.8	100.0

Source: ECHP-UDB waves 1–5; BHPS waves 4–8; SOEP waves 12–16; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period.

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

^eBased on BHPS data 1994–1998.

^fBased on SOEP data 1995–1999.

there are few (legal) immigrants [for an estimation of the number of illegal immigrants to Mediterranean countries see Reyneri (2001)]. Because of their relatively weak economic performance in the 1960s and 1970s, these countries were long characterized by emigration rather than immigration (e.g., the “guest worker” movement of low-skilled labour to the German automobile industry and mining sector). On the other hand, the few immigrants to these countries are atypically well integrated; most of them live with members of the native population. As a result of this out-migration from Mediterranean countries as well as the massive influx of immigrants with German ancestry (*Aussiedler*) from Eastern European countries since the late 1980s, West Germany has a rather high share of immigrants, most of whom live in non-mixed households. The proportion of immigrants in Great Britain is markedly lower than in Germany, and these immigrants appear to be somewhat better integrated, with two-thirds of them living in the same household as a member of the native population.

Income components, relative income positions, and redistribution measures

Although we analyse income at the individual level, income information is calculated at the household level. This is because, in many countries, receipt of some income components, such as social assistance, is related to the household as a whole and not to specific individuals living in a household. The assumption underlying this approach is that all members of a specific household pool their resources and share the utility of a given household income. Consequently, we apply the information about the various (equivalent) income components of a specific household to all members of that household, regardless of age or individual income performance.

In order to adjust for differences in household size, we apply the so-called modified OECD equivalence scale (head of household = 1; other household members aged 14 years and older = 0.5; children aged below 14 = 0.3). By eliminating the lowest 0.5% of post-government incomes (“bottom trimming”) we reduce the effect of extreme income outliers at the lower end of the distribution. This procedure is conducted for each country separately. All incomes are deflated and adjusted for purchasing power differences.

The ECHP collects information on the most important sources of income in each household: wages and salaries, income from self-employment or farming; private income, public pensions,

unemployment benefits, any other social benefits or grants. This self-assessed information is not available in comparable form in BHPS and SOEP.

In our portfolio analysis, we use slightly different components: pre-government income (also called “market income”) is the sum of labour income and non-labour income, the latter resulting mainly from returns on capital. Public pensions and public transfers represent non-market income. Finally, adding pre-government income to non-market income, and subtracting taxes and social security contributions results in post-government income. Because the ECHP does not include data on these deductions, we subtract post-government income from the sum of pre-government income and non-market incomes, thus yielding a proxy for taxes and social security contributions.

Some income components of particular interest to our analysis are standardized by relating individual income to the respective mean for the total population of a given country (total mean = 100%). The effect of redistribution is measured by subtracting the relative income position based on pre-government income from that based on post-government income for each individual. This yields a metric measure which is positive (negative) for those who improve (worsen) their income position as a result of the redistribution process entailed by taxes and social security contributions on the one hand and the receipt of public transfers (including public pensions) on the other. When interpreting these results, it is important to bear in mind some of the shortcomings of the surveys underlying our analyses. Most population surveys do not attempt to collect data on the exact amount of taxes paid and other deductions made – the information provided in the public micro-data available is often the result of rather crude approximations. In the ECHP, annual income data is converted from gross to net figures using a simple conversion factor that is the same for all household members and for all gross income components. This procedure appears to be somewhat less precise than that used for the SOEP data, where the annual income information is drawn from the Cross-National Equivalent File (CNEF) (see Burkhauser et al. 2001). Here, a simulation module is used to calculate individual tax and social security contributions, taking into account progression rules and basic allowances (cf. Schwarze 1995). However, given that potential tax exemptions, which are more often found at the upper tail of the income distribution, are overlooked by this procedure, it may overestimate real tax payments. For detailed documentation of annual income data based on the BHPS, see Bardasi et al. (1999).

Steps of analysis

As a first exploratory indication of economic self-sufficiency, we examine the most important income component separately for native-born and immigrants (Table 2). We then take a closer look at the portfolio structure (Table 3), as reflected by the percentage share of various income components in the total post-government income. To facilitate the interpretation of Table 3, we additionally present the income position of immigrants relative to that of the native-born population for the income components analysed (Table 4). Appendix A reports the same information in absolute *ppp*-adjusted figures rather than relative shares.

Econometric models controlling for various socioeconomic characteristics are then used to analyse relative income positions based on pre-government income (left panels in Table 6) as well as changes in the relative income position due to the redistribution process within the tax and welfare system (right panels in Table 6). This provides information about which of the population groups profit from the tax and welfare system on average, and which contribute to it. Means and standard deviations of all the socioeconomic variables applied are presented in Table 5, providing a short description of the immigrant and native-born population in each country. In a first specification of the models (Table 6, Panel A), we characterize immigrants in a given country as a homogenous group identified by a dummy only; in a second specification (Table 6, Panel B), we control for heterogeneity among immigrants with respect to their region of origin (EU versus non-EU countries) and integration status (measured in terms of years since migration and our mixed/non-mixed variable). To avoid methodological problems arising from the fact that individuals living in the same household are not statistically independent observations, we switch from the individual to the household level for the regression analyses. To make full use of the panel nature of the data, we apply random-effects GLS models to control for unobserved heterogeneity occurring in the context of repeated observation of households over time.

Empirical results*Main source of income*

Given the restriction of our analysis to individuals living in households with a prime-aged head, it is not surprising that wages and salaries form

Table 2. Main source of income for population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b, by household immigrant status

Main source of income in the previous year														
Native-born (%)		Immigrant (%)												
	Wages and salaries	Income from self-employment or farming	Private pensions	Unemployment benefits or grant	Any other social benefits or grant	Total	Wages and salaries	Income from self-employment or farming	Private pensions	Unemployment benefits or grant	Any other social benefits or grant	Total		
Denmark	81.8	6.0	0.4	0.5	2.9	8.4	100.0	40.3	1.9	0.2	0.6	18.7	38.3	100.0
Luxembourg ^c	74.9	7.5	1.4	7.8	0.1	8.3	100.0	86.1	4.6	1.4	2.4	0.3	5.3	100.0
Ireland	63.0	13.4	0.7	1.7	12.2	8.9	100.0	58.9	12.5	0.6	1.7	18.5	7.8	100.0
Italy	68.2	18.8	2.2	8.5	0.8	1.7	100.0	70.9	19.2	2.6	4.6	0.7	2.0	100.0
Spain	68.4	15.4	1.5	6.0	4.4	4.2	100.0	66.4	15.0	3.6	3.5	8.1	3.4	100.0
Austria ^d	79.3	6.7	1.8	5.7	1.1	5.4	100.0	83.4	4.3	1.8	2.5	2.3	5.7	100.0
Great Britain	n.a.													
West Germany	n.a.													

Source: ECHP-UDB waves 1–5; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period.

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

Table 3. Components and structure of equivalent post-government income for population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b, by household immigrant status

		Income components as a proportion of total post-government income (in %)										
		Native-born			Immigrant							
		Pre-government (=market) income	Non-market income (pensions and public transfers)	Taxes and social security contributions	Total post-government income	Pre-government (=market) income	Non-market income (pensions and public transfers)	Taxes and social security contributions	Total post-government income			
		Total			Total			Total				
		Labour income	Non-labour income	Labour income	Non-labour income	Labour income	Non-labour income	Labour income	Non-labour income			
Denmark		139	3	20	-59	100	69	67	2	60	-29	100
Luxembourg ^c		100	5	23	-23	100	111	106	5	18	-29	100
Ireland		100	2	28	-28	100	96	94	2	32	-28	100
Italy		123	5	14	-37	100	126	121	5	11	-37	100
Spain		113	4	19	-32	100	114	106	8	18	-32	100
Austria ^d		116	6	22	-38	100	120	116	4	21	-41	100

Table 3. (Continued)

		Income components as a proportion of total post-government income (in %)									
		Native-born			Immigrant						
		Pre-government (=market) income	Non-mar- ket income (pensions and public transfers)	Taxes and social security contribu- tions	Total post- gov- ern- ment income	Pre-government (=market) income	Non- market income (pensions and public transfers)	Taxes and social security contribu- tions	Total post- gov- ernment income		
		Total Labour income	Non-labour income			Total Labour income	Non-labour income				
Great Britain ^e	98	5	19	-22	100	104	98	6	19	-23	100
West Germany ^f	126	5	15	-41	100	114	111	3	21	-35	100

Source: ECHP-UDB waves 1–5; BHPS waves 4–8; SOEP waves 12–16; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period (i.e., 1993–1997 income years; equivalent income based on modified OECD scale).

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

^eBased on BHPS data 1994–1998.

^fBased on SOEP data 1995–1999.

Table 4. Income position of immigrants relative to the native-born population for various types of income for population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b

	Relative income position of immigrants (native-born population = 100)					
	Pre-government (=market) income			Non-market income (pensions and public transfers)	Taxes and social security contributions	Total post-government income
	Total	Labour income	Non-labour income			
Denmark	47	47	47	274	46	85
Luxembourg ^c	103	103	102	75	111	97
Ireland	117	117	106	102	131	110
Italy	105	105	93	76	108	100
Spain	107	104	202	87	104	105
Austria ^d	97	98	63	89	96	95
Great Britain ^e	107	106	138	91	110	104
West Germany ^f	71	74	36	121	68	78

Source: ECHP-UDB waves 1–5; BHPS waves 4–8; SOEP waves 12–16; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period (i.e., 1993–1997 income years; equivalent income based on modified OECD scale).

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

^eBased on BHPS data 1994–1998.

^fBased on SOEP data 1995–1999.

the main source of income for the clear majority of inhabitants in all countries considered (Table 2). A remarkable exception here is Denmark, where wages and salaries represent the main source of income for only 40% of the immigrant population. We will interpret this outlying result more carefully in our discussion of the results to be presented in Tables 3 and 4. For immigrants living in Luxembourg, wages and salaries play a more significant role as the main source of income than for the native-born population. This is in line with the findings that income from self-employment or farming and from pensions is somewhat less important for this group.

In Italy, Spain and Ireland, a substantial proportion of inhabitants report income from self-employment or farming to be their main source of income. Here, the differences between the native-born population and immigrants are only marginal. This is a notable result considering that immigrants are generally less likely to have access to capital and farmland. However, the large agricultural sectors in these countries may offer less educated immigrants relatively good employment opportunities.

Private income as the main source of income is very rare in all countries considered. Again, the differences between the native-born population and immigrants are inconsequential. Due to the restricted age range of our sample, pensions play a minor role as well. However, it should be mentioned that in four of the six countries, access to pensions as the main source of income is much more restricted for immigrants than for the native-born population. Exceptions are Denmark and Ireland, where no differences can be observed.

Another picture emerges with respect to public transfers. In almost all countries under consideration, immigrants are more often reliant on unemployment benefits as their main source of income than members of the native-born population. Exceptions are Luxembourg and Italy, where this income component is negligible as a main income source for both immigrants and the native-born population. For other social benefits and grants, the differences between the two groups are rather small for all countries except for Denmark, where social benefits form the major source of income for almost 40% of the immigrant population (i.e., five times as high a share as among the native-born group).

Although, for some countries, these results seem to be roughly in line with the expectation of immigrants being costly to the host country's native population, it is not clear to what extent these findings reflect the self-supporting capacities of immigrants *per se* or rather differences in the underlying socioeconomic characteristics of the immigrant population (education, family composition, unemployment, health

status, etc.), or even institutional effects in the sense of discrimination against immigrants. Thus, we will control for socioeconomic differences in our regression models.

Structure of post-government income ("portfolio")

We start the interpretation of the portfolio analysis by considering the income structure of the native-born population in the countries under analysis (left-hand part of Table 3). When discussing the differences between the native-born and the immigrant population, we will use the condensed information provided in Table 4, which incorporates the immigrant-specific information presented in the right-hand part of Table 3.

The income portfolio of the native-born population varies substantially across countries (Table 3), clearly reflecting the effects of different institutional settings and the underlying welfare regimes. Taxes and social security contributions are especially high in the highly protective social democratic welfare state of Denmark. These deductions amount to around 40% for countries representing conservative welfare regimes (Germany –41% and Austria –38%) and are somewhat lower for the Southern European or residual welfare regimes of Italy (–37%) and Spain (–32%). For Luxembourg, which is considered a conservative welfare state, we find a surprisingly low share of deductions for taxes and social security contributions (–23%). Finally, the proportion of deductions in the liberal welfare regimes of Ireland and Great Britain is, as expected, low (–28% and –22%, respectively, of the portfolio of the native-born populations).

Based on the income information given in Appendix A, Table 4 presents the income position of immigrants relative to the native-born population for each income component. The relative income positions of the immigrant populations vary markedly across the countries (Table 4). The result for immigrants to Denmark is particularly notable. Whereas the market income of this group is not even half that of the native-born Danish population, the non-market income component of their portfolio is almost three times as high. Consequently, the taxes and social security contributions paid by immigrants to Denmark are very low. This outlying pattern may be explained by the atypical structure of socioeconomic characteristics of the Danish immigrant population, which is characterized by a high proportion of low-skilled immigrants from non-EU countries (Brücker et al. 2002, p. 52, 60) (Table 5). This

Table 5. Socioeconomic characteristics of population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b, by household immigrant status

	Mean (standard deviation)															
	Native-born						Immigrants						West Germany ^f			
	DK	Lux ^c	Ireland	Italy	Spain	Austria ^d	GB ^e	West Germany ^f	DK	Lux ^c	Ireland	Italy		Spain	Austria ^d	GB ^e
Individual age (years)	31.06 (17.03)	32.04 (18.82)	27.11 (17.33)	31.95 (17.66)	31.66 (18.58)	32.49 (18.48)	29.60 (17.33)	31.75 (16.95)	25.35 (16.85)	29.46 (17.24)	25.44 (16.80)	30.26 (17.34)	29.54 (17.03)	30.61 (17.90)	27.98 (17.11)	29.76 (17.35)
Head aged, 16–25	0.05 (0.22)	0.02 (0.15)	0.02 (0.14)	0.01 (0.10)	0.02 (0.13)	0.04 (0.20)	0.05 (0.22)	0.03 (0.18)	0.06 (0.23)	0.02 (0.14)	0.02 (0.12)	0.01 (0.10)	0.02 (0.14)	0.06 (0.23)	0.04 (0.20)	0.03 (0.18)
Head aged, 26–35	0.25 (0.43)	0.25 (0.43)	0.19 (0.39)	0.17 (0.38)	0.21 (0.40)	0.29 (0.45)	0.26 (0.44)	0.31 (0.46)	0.30 (0.46)	0.34 (0.47)	0.31 (0.46)	0.22 (0.41)	0.25 (0.43)	0.30 (0.46)	0.22 (0.41)	0.24 (0.42)
Head aged, 36–45	0.31 (0.46)	0.35 (0.48)	0.36 (0.48)	0.33 (0.47)	0.32 (0.47)	0.33 (0.47)	0.33 (0.47)	0.30 (0.46)	0.50 (0.50)	0.32 (0.47)	0.33 (0.47)	0.35 (0.48)	0.33 (0.47)	0.29 (0.45)	0.37 (0.48)	0.32 (0.46)
Head aged, 46–55	0.30 (0.46)	0.26 (0.44)	0.32 (0.47)	0.34 (0.47)	0.33 (0.47)	0.24 (0.43)	0.27 (0.45)	0.24 (0.43)	0.09 (0.28)	0.26 (0.44)	0.25 (0.43)	0.28 (0.45)	0.32 (0.47)	0.27 (0.45)	0.28 (0.45)	0.30 (0.46)
Head aged, 56–60	0.09 (0.28)	0.12 (0.32)	0.10 (0.30)	0.15 (0.36)	0.12 (0.33)	0.10 (0.30)	0.08 (0.28)	0.12 (0.32)	0.06 (0.23)	0.06 (0.23)	0.09 (0.28)	0.14 (0.34)	0.08 (0.27)	0.08 (0.27)	0.09 (0.29)	0.11 (0.31)
Age of household head (years)	41.68 (9.94)	42.45 (9.63)	43.32 (8.95)	44.88 (9.09)	43.83 (9.35)	41.20 (9.86)	41.23 (9.80)	41.40 (10.05)	38.51 (8.35)	40.39 (9.07)	41.05 (9.37)	43.71 (9.19)	42.12 (9.07)	40.71 (10.22)	42.15 (9.31)	42.64 (9.75)
Number of children in household	1.03 (1.15)	1.11 (1.17)	1.91 (1.66)	0.96 (1.04)	1.04 (1.06)	0.96 (1.06)	1.12 (1.18)	0.94 (1.07)	2.18 (1.82)	1.18 (1.14)	2.00 (1.57)	1.05 (1.05)	1.00 (0.90)	1.11 (1.24)	1.45 (1.62)	1.42 (1.50)

Table 5. (Continued)

No children in household	0.45 (0.50)	0.41 (0.49)	0.25 (0.43)	0.42 (0.49)	0.40 (0.49)	0.45 (0.50)	0.43 (0.49)	0.46 (0.50)	0.26 (0.44)	0.37 (0.48)	0.22 (0.42)	0.38 (0.48)	0.34 (0.47)	0.41 (0.49)	0.35 (0.48)	0.34 (0.47)
1 child in household	0.21 (0.41)	0.23 (0.42)	0.20 (0.40)	0.29 (0.46)	0.27 (0.45)	0.23 (0.42)	0.20 (0.40)	0.24 (0.43)	0.18 (0.38)	0.24 (0.42)	0.17 (0.38)	0.31 (0.46)	0.37 (0.48)	0.27 (0.45)	0.23 (0.42)	0.25 (0.43)
2 children in household	0.25 (0.43)	0.24 (0.43)	0.24 (0.43)	0.21 (0.41)	0.25 (0.44)	0.24 (0.43)	0.24 (0.43)	0.21 (0.41)	0.18 (0.38)	0.26 (0.44)	0.24 (0.43)	0.23 (0.42)	0.24 (0.43)	0.20 (0.40)	0.24 (0.43)	0.24 (0.43)
3+ children in household	0.09 (0.29)	0.12 (0.33)	0.32 (0.46)	0.07 (0.25)	0.08 (0.27)	0.07 (0.26)	0.13 (0.34)	0.08 (0.28)	0.39 (0.49)	0.13 (0.34)	0.37 (0.48)	0.08 (0.27)	0.04 (0.21)	0.12 (0.32)	0.17 (0.38)	0.17 (0.38)
Couple household	0.80 (0.40)	0.72 (0.45)	0.77 (0.42)	0.81 (0.40)	0.75 (0.43)	0.66 (0.47)	0.65 (0.48)	0.68 (0.47)	0.84 (0.36)	0.78 (0.41)	0.84 (0.37)	0.76 (0.42)	0.81 (0.39)	0.80 (0.40)	0.69 (0.46)	0.77 (0.42)
Lone parent household	0.05 (0.23)	0.08 (0.27)	0.09 (0.28)	0.07 (0.25)	0.07 (0.25)	0.09 (0.28)	0.09 (0.28)	0.05 (0.21)	0.03 (0.17)	0.03 (0.17)	0.07 (0.25)	0.09 (0.29)	0.07 (0.26)	0.04 (0.19)	0.09 (0.28)	0.03 (0.18)
Male house- hold head	0.66 (0.48)	0.85 (0.36)	0.83 (0.38)	0.87 (0.34)	0.92 (0.33)	0.54 (0.50)	0.64 (0.48)	0.68 (0.47)	0.65 (0.49)	0.88 (0.32)	0.83 (0.38)	0.86 (0.35)	0.88 (0.34)	0.63 (0.48)	0.65 (0.48)	0.80 (0.40)
Bad health conditions	0.40 (0.49)	0.66 (0.47)	0.78 (0.42)	0.68 (0.47)	0.44 (0.50)	0.63 (0.48)	0.08 (0.26)	0.05 (0.21)	0.68 (0.47)	0.71 (0.45)	0.79 (0.41)	0.71 (0.45)	0.42 (0.49)	0.65 (0.48)	0.08 (0.27)	0.03 (0.18)
Education level: High	0.19 (0.39)	0.07 (0.26)	0.06 (0.24)	0.03 (0.16)	0.07 (0.26)	0.03 (0.16)	0.48 (0.50)	0.15 (0.36)	0.21 (0.41)	0.11 (0.31)	0.09 (0.28)	0.07 (0.25)	0.13 (0.34)	0.06 (0.24)	0.62 (0.49)	0.08 (0.27)

Table 5. (Continued)

Years since migration	-	-	-	-	-	-	-	-	-	-	-	-	15.00 (10.85)	15.96 (11.04)	24.17 (10.44)	22.38 (12.98)	19.83 (10.22)	19.39 (15.74)	23.11 (11.05)	17.71 (10.36)	
Years since migration	-	-	-	-	-	-	-	-	-	-	-	-	3.43 (4.55)	3.77 (5.03)	6.93 (5.27)	6.78 (7.69)	4.98 (4.72)	6.23 (8.94)	6.56 (5.33)	4.21 (4.27)	
Year 1994	0.25 (0.43)	0.35 (0.48)	0.26 (0.44)	0.22 (0.41)	0.24 (0.43)	0.00 (0.00)	0.21 (0.40)	0.00 (0.00)	0.00 (0.00)	0.19 (0.39)	0.39 (0.49)	0.26 (0.44)	0.22 (0.42)	0.26 (0.44)	0.00 (0.00)	0.22 (0.42)	0.00 (0.00)	0.22 (0.42)	0.22 (0.42)	0.00 (0.00)	0.00 (0.00)
Year 1995	0.22 (0.42)	0.33 (0.47)	0.22 (0.42)	0.23 (0.42)	0.22 (0.41)	0.27 (0.44)	0.21 (0.40)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.33 (0.47)	0.22 (0.42)	0.24 (0.43)	0.26 (0.44)	0.30 (0.46)	0.21 (0.41)	0.20 (0.40)	0.20 (0.40)	0.21 (0.41)	0.20 (0.40)	0.20 (0.40)
Year 1996	0.19 (0.39)	0.32 (0.47)	0.19 (0.39)	0.21 (0.41)	0.20 (0.40)	0.26 (0.44)	0.21 (0.40)	0.20 (0.40)	0.20 (0.40)	0.23 (0.42)	0.29 (0.45)	0.19 (0.39)	0.21 (0.41)	0.21 (0.41)	0.28 (0.45)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)
Year 1997	0.18 (0.38)	0.00 (0.00)	0.17 (0.38)	0.19 (0.39)	0.18 (0.38)	0.25 (0.43)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)	0.21 (0.41)	0.00 (0.00)	0.17 (0.37)	0.18 (0.38)	0.17 (0.37)	0.22 (0.41)	0.20 (0.40)	0.20 (0.40)	0.22 (0.41)	0.20 (0.40)	0.20 (0.40)	0.20 (0.40)
Year 1998	0.16 (0.37)	0.00 (0.00)	0.15 (0.36)	0.16 (0.36)	0.16 (0.37)	0.22 (0.42)	0.18 (0.38)	0.20 (0.40)	0.20 (0.40)	0.18 (0.38)	0.00 (0.00)	0.16 (0.37)	0.14 (0.35)	0.11 (0.32)	0.20 (0.40)	0.16 (0.37)	0.19 (0.39)	0.20 (0.40)	0.16 (0.37)	0.19 (0.39)	0.19 (0.39)

Table 5. (Continued)

	Mean (standard deviation)															
	Native-born							Immigrants								
	DK	Lux ^c	Ireland	Italy	Spain	Aus- tria ^d	GB ^e	West Germany ^f	DK	Lux ^c	Ireland	Italy	Spain	Aus- tria ^d	GB ^e	West Germany ^f
Year 1999	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.40)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.40)

Source: ECHP-UDB waves 1–5; BHPS waves 4–8; SOEP waves 12–16; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period (i.e., 1993–1997 income years; equivalent income based on modified OECD scale).

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

^eBased on BHPS data 1994–1998.

^fBased on SOEP data 1995–1999.

Table 6. Pre-government income positions and redistribution effects for households with prime-aged heads in selected EU countries, 1994–1998: Results from RE-GLS regression models

	Pre-government income										Redistribution									
	DK	Lux	Ireland	Italy	Spain	Austria	GB	West Germany	DK	Lux	Ireland	Italy	Spain	Austria	GB	West Germany				
Immigrant household	-0.596**	0.155*	0.109+	0.044	-0.035	0.058	0.054	-0.174**	15.372**	-9.030*	-4.626	-4.386	2.580	-2.646	-2.386*	2.050**				
	(7.49)	(2.01)	(1.66)	(0.73)	(0.42)	(0.93)	(1.28)	(5.70)	(4.93)	(2.23)	(0.70)	(1.40)	(0.56)	(0.85)	(2.42)	(2.77)				
Head aged, 16–25	-0.319**	-0.067	-0.329**	-0.252**	-0.391**	-0.239**	-0.481**	-0.281**	8.505**	6.230	10.499	8.497**	12.274**	9.859**	6.945**	5.017**				
	(6.10)	(0.49)	(4.23)	(4.28)	(5.91)	(3.83)	(12.78)	(7.22)	(3.77)	(0.77)	(1.15)	(2.69)	(3.55)	(2.89)	(7.64)	(4.96)				
Head aged, 26–35	-0.086*	-0.016	-0.030	-0.008	-0.046	-0.059	-0.109**	-0.033	4.573**	5.180	2.437	2.693+	7.798**	4.510*	-0.460	0.899				
	(2.29)	(0.23)	(0.73)	(0.30)	(1.25)	(1.55)	(4.44)	(1.39)	(2.80)	(1.25)	(0.48)	(1.94)	(4.06)	(2.13)	(0.76)	(1.46)				
Head aged, 46–55	-0.082*	-0.276**	-0.035	-0.162**	-0.067+	-0.125**	-0.063*	-0.032	3.996*	11.141*	-3.450	2.493+	-2.580	5.716**	6.411**	3.816**				
	(2.14)	(3.54)	(0.88)	(6.52)	(1.83)	(3.15)	(2.36)	(1.19)	(2.38)	(2.47)	(0.72)	(1.88)	(1.35)	(2.60)	(9.76)	(5.54)				
Head aged, 56–65	-0.393**	-1.422**	-0.213**	-0.620**	-0.265**	-0.743**	-0.404**	-0.374**	17.290**	43.889**	9.024	18.392**	6.278**	24.387**	19.773**	17.405**				
	(7.19)	(12.54)	(3.84)	(19.00)	(5.95)	(14.67)	(10.62)	(10.80)	(7.36)	(6.78)	(1.39)	(10.58)	(2.68)	(8.82)	(21.35)	(19.61)				
1 child in household	-0.024	0.073	-0.126**	0.050	0.029	0.038	-0.321**	-0.279**	12.175**	1.702	13.086*	-5.422**	-2.427	-4.229	6.590**	11.268**				
	(0.59)	(0.72)	(2.65)	(1.56)	(0.88)	(0.75)	(11.56)	(11.35)	(6.88)	(0.28)	(2.13)	(3.14)	(1.42)	(1.47)	(9.58)	(17.37)				
2 children in household	-0.147**	-0.259*	-0.336**	-0.116**	-0.130**	-0.173**	-0.558**	-0.461**	19.489**	12.114+	19.463**	-1.116	0.014	6.855*	10.737**	16.647**				
	(2.95)	(2.31)	(6.27)	(3.02)	(3.09)	(2.97)	(17.16)	(15.34)	(9.21)	(1.85)	(2.92)	(0.55)	(0.01)	(2.13)	(13.52)	(21.28)				
3+ children in household	-0.251**	-0.442**	-0.628**	-0.312**	-0.350**	-0.542**	-0.962**	-0.609**	26.164**	21.507**	28.273**	4.763	0.725	17.727**	14.447**	21.502**				
	(3.43)	(3.20)	(10.11)	(5.41)	(4.87)	(6.83)	(22.14)	(13.97)	(8.38)	(2.72)	(3.83)	(1.55)	(0.19)	(4.11)	(13.67)	(19.11)				

Table 6. (Continued)

	Pre-government income										Redistribution									
	DK	Lux	Ireland	Italy	Spain	Austria	GB	West	Germany	DK	Lux	Ireland	Italy	Spain	Austria	GB	West	Germany		
Couple household	0.762**	0.193**	0.493**	0.301**	0.388**	0.450**	0.329**	0.186**	-27.84**	-8.251 +	-28.52**	-19.23**	-18.44**	-13.79**	-3.741**	-3.137**				
	(22.32)	(2.62)	(10.76)	(10.17)	(9.81)	(11.58)	(13.93)	(8.33)	(18.70)	(1.96)	(5.39)	(12.25)	(8.73)	(6.68)	(6.43)	(5.35)				
Lone parent household	0.027	-0.003	-0.226**	-0.068	-0.153*	-0.128*	-0.836**	-0.552**	-8.498**	1.033	1.654	-1.431	4.217	10.306**	11.168**	7.337**				
	(0.49)	(0.02)	(3.14)	(1.42)	(2.48)	(2.14)	(18.44)	(11.64)	(3.46)	(0.14)	(0.20)	(0.56)	(1.28)	(3.18)	(9.97)	(5.84)				
Male household head	0.156**	0.419**	0.306**	0.157**	0.156**	0.125**	0.235**	0.312**	-6.895**	-9.507 +	-6.861	-6.912**	-7.738**	-2.438	-3.925**	-3.406**				
	(4.98)	(4.55)	(5.15)	(5.93)	(4.27)	(4.75)	(7.97)	(9.95)	(5.24)	(1.87)	(1.13)	(4.88)	(4.01)	(1.64)	(5.83)	(4.54)				
Bad health conditions	-0.202**	-0.174*	-0.169**	-0.152**	-0.286**	-0.156**	-0.405**	-0.215**	9.903**	6.088	4.409	6.737**	9.056**	12.047**	9.715**	4.870**				
	(6.47)	(2.13)	(4.15)	(5.57)	(10.76)	(3.89)	(16.02)	(7.51)	(7.14)	(1.22)	(0.81)	(4.59)	(6.56)	(5.18)	(15.30)	(6.31)				
Education level: High	0.171**	0.323*	0.348**	0.401**	0.369**	0.268**	0.357**	0.396**	-10.79**	-30.50**	-32.13**	-38.72**	-24.93**	-23.47**	-6.537**	-7.374**				
	(4.70)	(2.50)	(5.81)	(6.59)	(6.53)	(2.81)	(16.25)	(10.37)	(6.80)	(4.42)	(4.58)	(12.10)	(8.33)	(4.83)	(12.31)	(7.64)				
Education level: Low	-0.153**	-0.494**	-0.391**	-0.334**	-0.584**	-0.265**	-0.867**	-0.179**	10.275**	25.298**	29.099**	18.643**	26.996**	13.615**	8.012**	2.495**				
	(4.74)	(5.70)	(10.85)	(13.24)	(13.71)	(7.26)	(21.05)	(7.67)	(7.36)	(5.46)	(6.78)	(13.95)	(11.95)	(7.13)	(8.00)	(4.22)				
HH with previous unemployment	-0.349**	-0.496**	-0.240**	-0.017	-0.210**	-0.043	-0.405**	-0.495**	22.437**	14.196*	16.844**	3.289*	10.533**	7.840**	7.515**	16.693**				
	(9.19)	(4.25)	(6.20)	(0.67)	(6.02)	(1.04)	(21.38)	(28.84)	(14.68)	(2.28)	(4.05)	(2.45)	(5.55)	(3.72)	(15.64)	(36.04)				
...																				
Observations	10633	2223	11048	22218	13688	9162	16683	19403	10633	2223	11046	22218	13688	9162	16683	19403				
Groups	2896	835	3226	6178	3890	2932	5077	5336	2896	835	3225	6178	3890	2932	5077	5336				
R ² adj.	0.2134	0.2776	0.2280	0.1348	0.1823	0.1480	0.3912	0.2207	0.1791	0.1568	0.0331	0.1050	0.1416	0.0873	0.2541	0.2034				

Table 6. (Continued)

Panel B : full SES model with extended immigrant control

Origin: EU/ mixed HH	-0.243 (1.17)	0.160 (0.94)	0.014 (0.07)	-0.250 (1.47)	-0.276 (1.11)	-0.074 (0.39)	-0.011 (0.09)	-0.064 (0.65)	13.365 (1.54)	-13.882 (1.50)	5.168 (0.25)	12.105 (1.36)	7.030 (0.53)	7.425 (0.76)	-1.028 (0.35)	5.756* (2.36)
Origin: EU/ non-mixed HH	-1.169** (4.12)	0.127 (0.86)	-0.363+ (1.71)	-0.715* (2.39)	-0.191 (0.60)	-0.185 (0.84)	-0.595** (2.81)	-0.254* (2.50)	9.837 (0.84)	-17.404* (2.22)	-22.574 (1.00)	17.537 (1.11)	13.398 (0.77)	22.182* (1.97)	7.545 (1.51)	6.897** (2.72)
Origin: Non-EU/ mixed HH	-0.603** (3.17)	0.273 (1.01)	0.098 (0.39)	0.065 (0.43)	0.281 (1.22)	-0.358* (2.26)	0.064 (0.62)	-0.288** (3.63)	16.959* (2.14)	-13.368 (0.91)	7.834 (0.29)	-3.958 (0.50)	-1.005 (0.08)	18.826* (2.28)	-2.906 (1.16)	9.308** (4.61)
Origin: Non-EU/ non-mixed HH	-1.918** (9.90)	-0.265 (1.26)	-1.499** (3.25)	0.037 (0.18)	-0.327 (1.44)	-0.313* (2.47)	-0.226+ (1.92)	-0.662** (8.86)	36.668** (4.67)	-2.574 (0.23)	42.579 (0.97)	13.630 (1.24)	23.721+ (1.92)	8.423 (1.30)	-1.040 (0.37)	10.588** (5.66)
Years since migration	0.045* (2.48)	0.012 (0.95)	0.011 (0.73)	0.011 (1.16)	0.015 (0.85)	0.030** (2.72)	0.002 (0.17)	0.039** (4.91)	-0.973 (1.30)	0.298 (0.44)	-1.093 (0.64)	-0.869+ (1.71)	-2.274* (2.37)	-2.047** (3.62)	0.151 (0.68)	-0.849** (4.26)
Years since migration (squared)	-0.096* (2.29)	-0.036 (1.41)	-0.014 (0.43)	-0.018 (1.28)	-0.052 (1.50)	-0.038* (2.22)	0.012 (0.57)	-0.105** (5.31)	2.338 (1.39)	0.146 (0.11)	2.838 (0.82)	1.503* (2.07)	7.699** (4.12)	3.628** (3.99)	-0.657 (1.36)	1.934** (3.86)
...																
Observations	10633	2223	11048	22218	13688	9162	16683	19403	10633	2223	11046	22218	13688	9162	16683	19403
Groups	2896	835	3226	6178	3890	2932	5077	5336	2896	835	3225	6178	3890	2932	5077	5336
R ² adj.	0.2175	0.2799	0.2319	0.1349	0.1830	0.1497	0.3910	0.2299	0.1798	0.1602	0.0340	0.1049	0.1427	0.0903	0.2541	0.2055

Regression models also include controls for year of observation and a constant. Absolute value of z-statistics in parentheses. + Significant at 10%; * Significant at 5%; ** Significant at 1%.

Source: ECHP-UDB waves 1-5; BHPS waves 4-8; SOEP waves 12-16; authors' calculation.

situation may partly explain, although not justify, the negative attitudes of the native-born Danish population to foreigners.

However, in the majority of countries included in our analyses, non-market incomes are lower among immigrants than among the native-born population. Ireland and West Germany form exceptions here. While in Ireland, there are no great differences between the two groups, immigrants to West Germany are much more reliant on non-market income than the native population, though the situation is nowhere near as extreme as in Denmark. Furthermore, with the exception of Denmark and West Germany, immigrants are slightly more heavily burdened by taxes and social contributions than the native-born population. These results may indicate discrimination against immigrants, in that they are taxed more heavily (although this may simply be a result of tax progression due to higher market incomes) and have somewhat reduced access to the social systems. However, given the underlying data restrictions with respect to deductions (see Section 3), we abstain from this interpretation. An exceptional situation is found in Ireland, where highly skilled immigrants (Brücker et al. 2002, p. 60), mainly from Great Britain and the USA, show a substantially better market performance than the native-born population, and therefore bear a clearly above-average tax and contributions burden.

Correlates of relative pre-government income position and income redistribution

It is easy to misinterpret the empirical results of bivariate cross-country analyses, since there is a great deal of variation in socioeconomic characteristics of the respective populations (Table 5). Although we will not discuss these differences in detail at this stage, it should be noted that, in all countries considered here, immigrant households tend to be somewhat larger, to have more children, and to be more frequently affected by unemployment. Looking at the structure of the immigrant population only, it appears that the majority of immigrants to Luxembourg and Ireland come from EU countries, while the proportion of immigrants from non-EU countries is considerably larger in all of the other countries under investigation (up to 80% in Great Britain, West Germany and Austria). However, the geographic origin of these non-EU populations is very heterogeneous across these three countries: while most non-EU immigrants to Great Britain come from (former) commonwealth countries, the major non-EU immigrant groups in

Germany are from Turkey, the former Yugoslavia and – since the late 1980s – ethnic Germans from Poland, Romania and Russia. Finally, Austria has many immigrants from the Czech Republic and Hungary.

The dependent variables in the regression models are pre-government income position (left-hand panel in Table 6) and the impact of redistribution (right-hand panel in Table 6), the latter being measured in terms of the difference in the relative income positions based on pre- and post-government income, respectively.

Immigrants to Denmark, in particular, and West Germany have a much lower pre-government income position than the native-born population (Table 6, Panel A). As such, the descriptive results are confirmed when controlling for various socioeconomic measures. When taking these social differences into account, immigrants to Luxembourg have a significantly higher pre-government income position than the native-born population. The same is true for Ireland, but only at the 10% significance level. Both countries appear to be able to attract outperforming migrant workers without major (language) problems. On the other hand, no immigration status-specific differences in pre-government income are found in Italy, Spain, Austria or Great Britain. The redistribution analysis provides an almost perfect counterpart to these findings. The outperforming immigrant populations in Luxembourg and Ireland lose out in the national redistribution process, whereas the opposite is the case for the severely underperforming immigrant populations of Denmark and West Germany. Although immigrants to Great Britain do not show a significant income advantage over the native-born population, they do pay significantly more into the system as a whole. The non-significant difference between the market performance of the Italian, Spanish and Austrian immigrant populations and the respective native-born populations is also reflected in the redistribution process.

Concerning the additional set of control variables, very similar patterns can be observed across countries. In all countries, households with a middle-aged, well-educated head who is in good health and who has not previously been affected by unemployment fare better economically than others. Two-parent households have higher market income, and the presence of (many) children in the household is negatively linked to income. Finally, the European tax and contribution systems seem to be “fair” to the extent that those socioeconomic groups with a weaker pre-government income position tend to profit from the redistribution process.

Differentiating the immigrant groups according to their region of origin and state of integration allows for a better control of the heterogeneity of the immigrant population across Europe (Table 6, Panel B). The effects of the additional control variables (socioeconomic status, time period) remain essentially unchanged when compared to the results of the simple dummy control for immigration status described above (as such, these effects are not documented in Table 6, Panel B).

First of all, it emerges that in all countries analysed, mixed households in which an immigrant from the EU resides with an adult member of the native-born population do not show any significant differences in economic performance compared to households of native-born individuals only (first line of Table 6, Panel B). This holds for both of the performance indicators analysed – pre-government income position and change in the relative income position due to the redistribution process – with the exception of West Germany in the latter case. Bearing in mind that the distribution of socioeconomic characteristics and skills of the citizens of the various EU member states, and especially of those leaving their country of origin for economic reasons, still differs markedly from one country to the next (cf. Barrett 1998 for an evaluation of immigrants to the US), this is a remarkable result. It shows that mixing with the native-born population by marriage (or cohabitation) is associated with successful economic integration of immigrants in all analysed countries, even in the first generation. Incidentally, this can also be taken as an indication of the validity of our mixed/non-mixed categorization. However, it should be noted that we cannot assume a causal relationship here. It may as well be that the economic success associated with mixed households is a result of better integration rather than its cause.

The results shown in the second line of Table 6 (Panel B) reveal that those who immigrate to Denmark, Ireland, Italy, Great Britain and West Germany from other EU countries and who live alone or with a partner from the same ethnic origin (non-mixed immigrants) are worse off economically than the native-born population, even when controlling for duration of stay and numerous other socioeconomic background variables. Since we are not able to measure the skill potential of individuals in our immigrant sample perfectly (e.g., we cannot measure language knowledge), we hesitate to interpret this result as an indicator for discrimination against immigrants from the EU to these countries, and prefer the interpretation of atypically low (unmeasured) skill levels within these groups. Furthermore, when inspecting the findings on redistribution effects, it emerges that non-mixed immigrants lose out

from the redistribution process in Luxembourg, but profit from it in Austria and in West Germany. While the latter result corresponds with our expectation of reduced self-supporting capacities among immigrants in non-mixed households, the Luxembourg result may well be influenced by the high-performing employees in the country's financial and banking sector.

In general, integration in the sense of living with a native-born adult also raises the income of immigrants from non-EU countries to levels similar to those of the native-born population (third line of Table 6, Panel B). Exceptions are Denmark, Austria and West Germany, where non-EU immigrants in mixed households show a significantly lower market performance than the native-born population. Accordingly, in these three countries, these same groups also profit from the redistribution process.

The group assumed to be least well assimilated are immigrants from non-EU countries who live in non-mixed households. These are the "foreigners" central to the immigration debate. In terms of pre-government income, their households are outperformed by the native-born population in almost all countries under consideration; this effect is statistically significant in Denmark, Ireland, Austria, Great Britain and West Germany. However, it is only in Denmark and West Germany that they profit substantially from the redistribution process; a positive correlation is also found here for Spain.

Our hypothesis predicts that duration of stay in the host country (as another indicator of integration) will have a positive effect on the economic performance. However, our data only confirm this improved market performance with time among immigrants to Denmark, Austria and West Germany. Notably, these are essentially the countries for which we identified the highest economic penalties for immigrant status. In these countries, immigrants who arrived more recently are the main economic underperformers. With increasing duration of stay, however, their economic position improves rapidly, signalling successful societal integration. Thus, the assumption that a significant immigrant/native-born differential in economic performance reflects an ineffective integration policy on the part of the host country needs to be qualified.

As expected, this effect is not linear, but diminishes over time (see squared effect). The results for the redistribution analyses are essentially in line with the results on pre-government income, but with two notable exceptions. First, it emerges that immigrants who live in the host country for longer are net payers to the social system in Italy and Spain, although their pre-government income position is not affected by

duration of stay. The finding for Denmark is most important: given the extremely poor economic performance of immigrants to this country, there is no statistically significant indication that their need for support *via* redistribution is reduced over time (i.e., immigrants to Denmark remain dependent on public transfers).

Conclusions

It is well-known that there is considerable variation in the economic performance of immigrant populations in different EU countries. This is mainly caused by the heterogeneous conditions of entry to the EU states, which strongly influence the distribution of socioeconomic characteristics of the immigrant population, as well as by differences in country-specific strategies to promote the integration of the existing immigrant population. A remarkable result of our analyses, however, is that these cross-country differences persist, even when we control in detail for socioeconomic characteristics of the individual in the household context and for indicators designed to tap the individual state of integration such as years since migration and immigrant/native intermarriage. This suggests that institutional aspects such as restrictions on access to the labour market and parts of the social security system that are related to citizenship or immigration status play an important role in limiting the economic performance of immigrants. In this respect, there still is a great deal of heterogeneity across EU member states.

Although we cannot rule out the possibility that country-specific differences in the data collection strategies of the ECHP, BHPS and SOEP may affect data comparability and consequently the interpretation of our results, the heterogeneous pattern of results seems to reflect the fact that policy can heavily influence the way immigrants are (or are not) integrated into the indigenous population. A modern immigration policy will combine the elements of cautiously steering social selection of immigrants, supporting integration, and reducing institutional discrimination against non-citizens. Here, we found contrasting country-specific patterns in our data. Further research could concentrate on clustering countries according to their immigration and integration policy along the lines of welfare state typologies.

Finally, an important open question is whether the mixing of immigrants with the indigenous population as indicated by immigrant/native marriage is rather a consequence or a cause of the economic

well-being observed in this group. The answer to this question is of particular relevance to those responsible for designing a harmonized EU immigration policy.

Notes

1. Data on immigration status is missing for all observations or at least a very high proportion of the ECHP samples in Germany, the Netherlands and Great Britain. Information on immigrants' country of origin is missing for Greece. In some countries, these variables had to be dropped due to national data protection regulations.
2. The ECHP data for France, Finland and Sweden do not allow gross and net income to be differentiated as required in our analysis of income redistribution effects.
3. The BHPS was initiated in 1991 with 5,500 households and 10,300 individuals who are re-interviewed yearly (for further details, cf. Taylor 1998 or <<http://www.iser-essex.ac.uk/bhps/>>).
4. The German SOEP was initiated in 1984 with 6,000 households and more than 12,000 individual interviews. In contrast to the BHPS, the immigrant population was oversampled in the SOEP from the outset, thus facilitating analyses of this specific population (for further details, see SOEP Group 2001, Wagner et al. 1993, or <<http://www.diw.de/english/sop/>>). Because almost no immigrants are resident in Eastern Germany, and because East German income structures still differ markedly from West German ones, we restrict the present analysis to West Germany.
5. Note that the figures in Table 1 may deviate from official statistics for several reasons. This is mainly due to the definition of "foreigners" chosen for the present study (foreign-born rather than non-citizens) and the restriction to prime-age groups in our sample. In addition, the definition of immigrant status at the household level certainly overstates the number of individual immigrants since native-born persons are given immigrant status if they live in the same household as a foreign-born adult. Furthermore, it is not clear at this point to what extent ECHP data gives a representative picture of the total immigrant population in the countries analysed – illegal immigrants, in particular, are most likely not covered.

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Appendix A. Mean income levels of various types of income for population living in private households with prime-aged heads^a in selected EU countries, 1994–1998^b, by household immigrant status

	Income level (mean, ppp-adjusted)											
	Native-born					Immigrant						
	Pre-government (=market) income	Non-mar- ket income (pensions and public transfers)	Taxes and social security contri- bu- tions	Total post- govern- ment income	Total pre-govern- ment income (=market)	Pre-government (=market) income	Non-mar- ket income (pensions and public transfers)	Taxes and social security contri- bu- tions	Total post- govern- ment income			
	Total	Labour income	Non- labour income	Total	Total	Labour income	Non- labour income	Total	Total	Labour income	Non- labour income	
Denmark	21,680	21,052	628	2,442	9,239	14,884	10,161	9,863	298	6,684	4,232	12,613
Luxembourg ^c	25,037	23,638	1,399	3,905	6,121	22,821	25,882	24,455	1,427	2,940	6,782	22,040
Ireland	13,437	13,151	286	1,848	4,029	11,257	15,719	15,416	303	1,882	5,260	12,341
Italy	12,856	12,267	589	1,244	3,820	10,281	13,474	12,924	550	943	4,116	10,301
Spain	11,561	11,202	359	1,195	3,511	9,245	12,329	11,603	726	1,045	3,637	9,738
Austria ^d	18,558	17,654	904	2,615	6,348	14,825	17,927	17,354	572	2,335	6,122	14,140

Appendix A. (Continued)

Income level (mean, ppp-adjusted)		Immigrant										
Native-born		Immigrant			Immigrant							
	Pre-government (=market) income	Non-mar- ket income (pensions and public transfers)	Taxes and social security contri- butions	Total post- govern- ment income	Pre-government (=market) income	Non-mar- ket income (pensions and public transfers)	Taxes and social security contri- butions	Total post- govern- ment income				
Great Britain ^e	16,609	15,851	756	1,731	3,983	14,357	17,724	16,684	1,040	1,576	4,374	14,924
West Germany ^f	22,175	21,116	1,059	1,567	7,593	16,149	15,938	15,560	378	1,883	5,210	12,611

Source: ECHP-UDB waves 1–5; BHPS waves 4–8; SOEP waves 12–16; authors' calculation (weighted).

^aHead of household is 20–60 years of age.

^bAverage over the 1994–1998 observation period (i.e., 1993–1997 income years; equivalent income based on modified OECD scale).

^cObservation years 1994–1996 only.

^dObservation years 1995–1998 only.

^eBased on BHPS data 1994–1998.

^fBased on SOEP data 1995–1999.