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Understanding attitudes to immigration:  
The migration and minority module of  
the first European Social Survey

*David Card, Christian Dustmann and Ian Preston*

# **Understanding attitudes to immigration: the migration and minority module of the first European Social Survey**

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## **Non-Technical Abstract**

**Immigration control is an issue that figures prominently in public policy discussions and election campaigns throughout Europe. Although immigration may have positive effects on economic efficiency and growth in the receiving economy, it is often the negative aspects –or perceived negative aspects – of immigration that attract the most attention. In this paper, we use the immigration module of the European Social Survey (ESS), which we developed in collaboration with the ESS survey team, to investigate public opinions about immigration, and the various dimensions of economic, public and private life that individuals feel are affected by immigration. We show that that there is substantial variation in the strength of anti-immigrant opinion across European countries, and that attitudes toward immigration also vary systematically with characteristics such as age, education, and urban/rural location. We propose possible interpretations of some of these regularities.**

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## **1. Introduction**

Immigration control is an issue that figures prominently in public policy discussions and election campaigns throughout Europe. Although immigration may have positive effects on economic efficiency and growth in the receiving economy, it is often the negative aspects –or perceived negative aspects – of immigration that attract the most attention. In this paper, we use the immigration module of the European Social Survey (ESS), which we developed in collaboration with the ESS survey team, to investigate public opinions about immigration, and the various dimensions of economic, public and private life that individuals feel are affected by immigration. We show that there is substantial variation in the strength of anti-immigrant opinion across European countries, and that attitudes toward immigration also vary systematically with characteristics such as age, education, and urban/rural location. We propose possible interpretations of some of these regularities.

The ESS immigration module was designed to measure aspects of public opinion toward immigration that are not readily available in other surveys. For example the module contains detailed questions on a range of economic consequences that people sometimes attribute to increased immigration. It also includes a series of questions that are usually not asked in attitude surveys, such as the respondent's views on the social effects of immigration, and questions about the ethnicity, cultural affiliation, and skill level that respondents favour among potential immigrant groups.

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A particular strength of the ESS data is that it includes responses to the **same questions** from people in a large number of European and associated countries. This facilitates inter-country comparisons, and makes it possible to relate differences in attitudes across countries to country-specific factors, such as the current level of unemployment or the relative size of the immigrant population in a country. On the downside, designing questions that are understood in the same way across countries with different languages, different immigration experiences, and different legal structures necessarily leads to compromises. Moreover, some of these historical, cultural, and legal factors may exert an independent effect on the way questions are interpreted that is difficult to untangle from differences in underlying attitudes across countries. For example, in countries where citizenship is automatically conveyed to anyone born in the country, “immigrants” may be generally understood to include only people born abroad. In countries where citizenship is linked to ethnic origin, however, “immigrants” may be generally understood to include people of foreign ethnicity, regardless of place of birth.

The issues of immigration and immigration control never fail to elicit strong reactions whenever they are raised by political actors or brought to the centre of attention by current events. Attitudes toward immigration are clearly linked to deeply held views about the economic self-interest and social identity of the native population. We therefore begin the paper by discussing various theoretical frameworks that have been developed to interpret individual reactions to the immigration issue (section 2). We begin with models of economic self-interest, and then discuss broader sociological models focused on aspects of identity and group affiliation. Our exposition is necessarily brief

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and circumscribed, and we refer interested readers to several existing surveys of these topics.

In the third section of the paper we present a brief description of the ESS immigration module, and discuss some of the difficulties and ensuing compromises that arise in designing questions that are reasonably comparable across countries. Sections 4 and 5 are devoted to describing the data in the ESS module in some detail. Our exposition is descriptive, and relies on simple statistical tools. Again, a deeper analysis is beyond the scope of this paper.<sup>\*\*</sup> Nevertheless, the results are of substantial interest given the importance of the immigration issue throughout Europe. In particular, we show that there is considerable heterogeneity in overall attitudes toward immigration across countries, and at the same time wide variation in attitudes within countries along such dimensions as age and education. We show how views toward immigration are related to underlying views about the potential effects of immigrants on economic and social outcomes. We also highlight differences across countries and across subgroups in views about what types of immigrants are most welcome, and which particular characteristics of potential immigrants are most valuable or objectionable.

## **2. Sources of differences in opinion about immigration.**

As we pointed out above, the issue of immigration seems to capture the public imagination forcefully in many countries. But why should people be concerned about

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<sup>\*\*</sup> We have undertaken such an analysis in a separate project (Card, Dustmann, and Preston in preparation).

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immigration? Some of these concerns may have economic origins. Fear of job loss or wage competition and concerns over the costs of social programmes are often cited as reasons to oppose immigration. Other reasons relate to cultural alienation and fear that immigrants will undermine the traditional language, religion, political power, or way of life of the native population. Both economic and social concerns about immigration may be based partly on ignorance, and/or the tendency of people to overemphasise anecdotal rather than systematic evidence. In this section, we will briefly describe some of the models that have been developed by social scientists to understand views about immigration. We begin with economic theories, focusing on the simplest possible models of economic self interest. We then present a very brief review of the sociological theories.

### ***2.1. Immigration and the economy***

There is a large literature in economics that is concerned with the way immigration affects residents of the host country or those who stay behind in the source economy (see for instance Berry and Soligo 1969; Kenen, 1971; Bhagwati and Rodriguez 1976; Bhagwati and Brecher 1980; Altonji and Card 1991; Gaston and Nelson 2000). The effects on the host and sending countries are in certain respects mirror images. We will concentrate our discussion here on the receiving (or host) economy. Our discussion will attempt to capture some important arguments of this literature without providing detail, as detailed exposition is far beyond the scope of this paper.

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Immigration has an economic effect primarily because it alters the size and composition of the labour force of the receiving country. It both expands the total supply of labour relative to other inputs to production and (if the immigrating labour force has a different skill composition than the existing resident labour force) changes the relative supply of different skill groups. The economy needs to respond in some way to employ this new labour or unemployment will grow. Since employers can be induced to hire additional workers if wages are reduced, it is natural to consider the possibility that immigration depresses the wages of competing labour. Thus, a simple hypothesis of economic self interest suggests that lower-skilled workers will be opposed to inflows of low-skilled immigration (Scheve and Slaughter, 2001). On the other hand, high-skilled workers and employers tend to gain if relative wages of less-skilled workers are bid down, suggesting that these groups will be in favour of less-skilled immigrant inflows.

Despite the intuitive appeal of this line of argument, more sophisticated economic models suggest that the impact of immigration on wages will be relatively small, or even zero. The standard model used by economists to analyze inter-country trade flows suggests that adjustments in industry structure can absorb new supplies of labor with little or no change in wages. Moreover, empirical evidence that immigration lowers wages is surprisingly difficult to find (see Card, 2005 for a recent review). Nevertheless, some economists believe that immigrant inflows depress competing wages (e.g., Borjas, 2003) and in any case it seems plausible that lower-skilled workers could oppose immigration based on the **belief** that it will lower their economic opportunities.

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The economic effects of immigration are not confined to labour market competition. Immigrants pay taxes, receive transfer payments, and make use of public services. Whether their net effect on the government budget is positive or negative depends on the demographic and economic characteristics of the immigrants, and on the nature of the tax and benefit system in a particular country. A self-interest argument suggests that native residents could be expected to oppose inflows of immigrant groups who pay less in taxes than they receive in benefits, and support immigration by groups who will pay more in taxes than they will receive in benefits. The latter case may be more important in countries with rapidly aging populations, since immigrants tend to be in their prime working years, and can contribute to a favourable readjustment in the age structure of the population. On the other hand, natives may resent the claims made on health and education services by immigrants who are not seen to have contributed adequately to their funding.

Another cost of immigration that is particularly prominent in the recent policy debate in Europe is the effect of immigrants on crime. While the evidence in the U.S., for example, is that immigrants have much lower rates of criminality than natives (Butcher and Piehl, 1998), some immigrants commit crimes. The presence of immigrants may also contribute indirectly to crime, if immigration leads to increased group conflict, or if social tensions lead to harassment or violence towards immigrants. It is an open question whether concerns over the effect of immigration on crime reflect rational calculations based on the incidence of criminal behaviour among immigrants and the costs of crime,

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or if these concerns are really driven by other channels, such as those emphasized by the sociological theories we discuss next.

So far we have concentrated our discussion on the economic effects of immigration on the receiving country. The departure of migrants from sending countries also changes the size and composition of their labour forces, potentially raising wages but also depriving them of workers with particular skills. Emigration may also affect the public finances of the source countries and alter their demographic structure and cultural character. An important consideration for many immigrant source countries is the flow of remittances from emigrants to family members who remain behind. Indeed, international remittances are a leading source of income for many source countries. The potentially positive impact of remittances underscores an important insight from economic analysis, which is that flows of migrants can potentially benefit **both** the host and the source countries. To the extent that immigrants move where their wages are higher, there is an overall efficiency gain for the world economy. Altruistic residents of the host country may therefore support immigration as a way to improve the lives of residents of poor countries.

Different European countries have very different histories of relations with other parts of the world, including periods of colonial control that may have left enduring links in some nations. One may expect the strength of altruistic feeling towards the source countries to differ widely between potential host countries and to contribute to differences in opinions toward immigration as a whole.

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### **2.2. Social costs of Immigration**

The perceived threat to the economic self-interest of the native population posed by immigrant inflows may be only part of a wider sense of collective threat to social and cultural institutions (Blalock 1967; Blumer 1958; Bobo 1983). In many cases, immigrants are from different racial and ethnic groups than the native population, and have different religious, political, and cultural backgrounds. Inflows of groups with a different religion, language, or culture may be perceived as undermining existing institutions and threatening the way of life and social status of current residents. The unfamiliarity of immigrants may also attract hostility rooted in the displacement of aggressive impulses attributable to stress in the social environment (Le Vine and Campbell 1972).

Sociologists have developed a variety of theoretical models that elucidate some of the channels through which immigrants (or members of other ethnic or cultural groups) may threaten natives (or members of a majority group). Perhaps the leading set of theories used to model immigrant attitudes are based on realistic group conflict theory (Campbell, 1965). This theory posits that the perception of a zero sum competition between groups translates into a belief in a “group threat” which in turn leads to prejudice and negative stereotyping by members of one group against the other, while simultaneously bolstering within-group cohesion (Sidanius and Pratto, 1999).. Realistic conflict theory broadens the notion of self interest among natives to incorporate the possibility that harm to one subgroup of natives could be perceived as harmful to all natives. It also widens the

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dimensions of perceived inter-group competition to include political power and control over accepted social and cultural practices.

Another theoretical model that is sometimes used to discuss attitudes toward immigrants is social identity theory. This theory posits that people strive to achieve positive social identity, which is reinforced by favourable comparisons between one's own group and an outside group (Tajfel, 1982; Tajfel and Turner, 1986). Differentiation from the outside group through discrimination or prejudicial attitudes can therefore increase social identity. Social identity theory offers a useful insight into the evolution of native perceptions of immigrant criminality. In particular, even if immigrants are less likely to commit crime than natives, the belief that immigrants are a leading cause of crime may be identity-reinforcing for members of the native population, since this belief shifts the responsibility for crime to the outside group, and at the same time accentuates the gap between the native population and immigrant groups.

While pursuit of social identity could be a source of negative attitudes toward immigrants, it could also lead to more positive attitudes if the native group's identity is strongly linked to notions of fairness, equality, or social justice. To the extent that some countries have a strong tradition of emphasizing fairness and social justice, whereas others do not, this channel could be helpful in explaining cross-country differences in opinions toward immigration. The difficulty of deriving unambiguous predictions about attitudes toward minority groups from social identity theory is noted by Likata and Klein (2002), who discuss the alternative possibilities in the specific context of European attitudes toward

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immigrants. They argue that that on balance the emergence of a “European” social identity in the post-war period has led to more negative views of immigrants.

Both the economic and sociological theories suggest that the perceived effects of immigration will vary according to the origin and personal characteristics of specific immigrant groups, and also according to the characteristics of the person whose opinion is being considered. We should therefore expect attitudes towards immigration to differ systematically depending upon what sort of immigration is involved and whom we are asking to give their opinion.

### **3. The ESS Immigration Module**

The structure of the biannual ESS allows for two specialized modules on particular issues. Interested researchers are invited to propose modules, and to develop the questions in the module together with the ESS survey team. The first ESS contained two specialized modules, one on migration and minorities, and one on citizenship. The authors of this paper proposed the migration and minority module, and developed the questionnaire with the assistance of the ESS team.

Although one of the primary goals of the ESS is to provide data for quantifying differences across the populations of different European countries, it is very difficult to develop questions about attitudes toward immigrants that will be interpreted in the same way in different countries. European countries have very different histories with respect

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to immigration, and also different laws governing immigration and citizenship. The design of the questions in the ESS has to take account of these contextual differences to minimize inter-country variation in the way respondents interpret the questions. As a result of these concerns, the ESS module on immigration is as finely tuned as it could be if the questions were only asked in a single country. Before turning to an analysis of the responses to the questionnaire, we briefly illustrate some of the difficulties that arise in designing a questionnaire on a topic like migration, and the compromises that emerged out of this process.

The module begins with a preamble intended to establish terms of reference for the respondent and to provide an initial definition of “immigrants”. Ironically, the word “immigrant” has different connotations in different countries, and it was therefore decided to avoid the use of the word, and to refer instead to “people who come to live in [the country] from abroad.” The phrase “to live” was favoured over alternatives such as “to settle” or “to stay” to leave open the issue of whether immigrants are permanent or temporary. A brief list of reasons for “coming to live” was offered to focus respondents on the types of immigrant inflows we wished them to consider as they answered the questions.

A central issue in the ESS immigration module is the respondent’s overall preference for the restrictiveness of immigration policy. Typically, surveys have asked how a respondent would alter policy from its current stance (i.e., whether they would prefer to relax or tighten immigration policy). This wording was felt to be inappropriate given the

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wide variation in current policy stances across the ESS countries. We therefore settled on a more neutral wording asking how many people of different types should ideally be permitted to enter the country on a 4-point scale: “many”, “some”, “few”, or “none”.

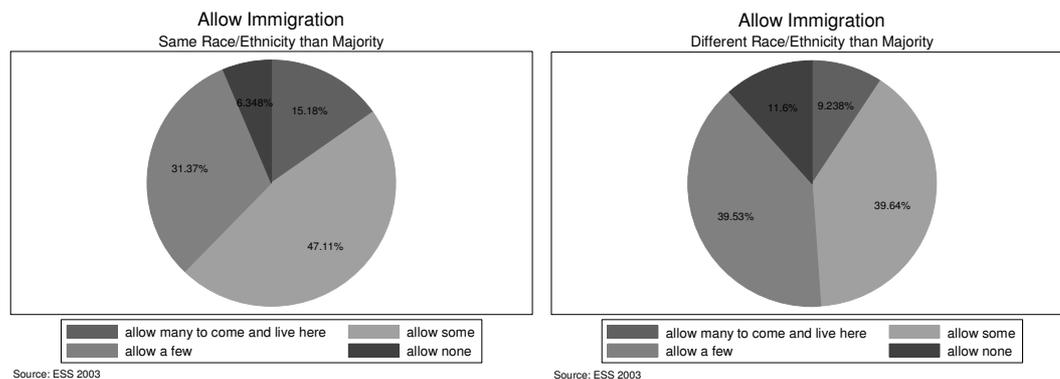
We also wanted to elicit respondents’ views about the relative desirability of different types of potential immigrants. Here, national surveys can name specific origin countries or regions of the world, concentrating on prominent source countries for the country at hand. In a cross national survey such as the ESS this is impossible, since different source countries are salient in different countries, depending on historical links, geography, and other factors. We therefore settled on a wording which distinguished first between people “coming to live” who were of the same or different ethnicity to that of the majority community, and second between people “coming to live” from richer and poorer countries inside and outside Europe.

These examples explain the choice of wording adopted in the ESS immigration module, and illustrate some of the compromises that were adopted to ensure cross-national comparability of responses. Despite these compromises, we believe that the resulting survey provides a rich source of data and information on issue that are at the core of one of the most important social and economic debates in Europe. In the following sections, we will illustrate and analyse some of the key information in the survey.

## 4. Opinion about immigration and types of immigrants

### 4.1. Which types of immigrants are welcome?

We begin by describing responses to questions on overall attitudes to further immigration. As explained, respondents were asked separately about opinions regarding people of the same or different race/ethnicity, people from richer or poorer countries within Europe, and people from richer or poorer countries outside Europe.

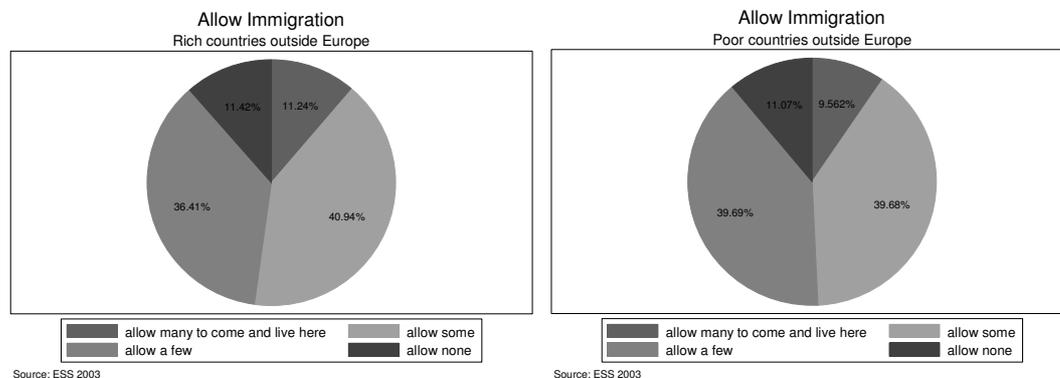


**Figure 4.1.1:** Attitudes to immigration and ethnicity of the immigrant

Figure 4.1.1 displays the distribution of responses to the questions on attitudes toward allowing more or less immigrants of the same or different ethnicity than the majority population in the respondent's country. The first interesting thing to note is that the fraction of respondents who want to completely stop all further immigration is small - between 6 and 11 percent. On the other hand, the fraction who want to allow many new people to come to live is also small. Most responses are in the intermediate range,

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supporting policies that allow for some, or few immigrants. A second notable observation is that there is more overall support for immigration of ethnically similar people than for ethnically different people. Almost a quarter of respondents expressed a preference for a lower level of immigration of ethnically different immigrants than of ethnically similar immigrants (about 10 times more than the number making a distinction the other way). Nonetheless the differences are not dramatic: over three quarters of ESS respondents gave the same answer to both questions.



**Figure 4.1.2:** Attitude to immigration and prosperity of the origin country

Figure 4.1.2 shows the responses to questions about the desirability of more or less immigrants from richer and poorer countries. The question was asked separately for people coming from inside Europe from outside Europe, but in the interest of space we show only the responses for people from outside Europe. Not surprisingly, immigration from richer countries is more welcome than immigration from poorer countries. Indeed, attitudes to immigration from poorer countries outside Europe are very similar to attitudes toward immigrants who have different race/ethnicity than the receiving country. To illustrate this point, tables 4.1.1-3 report cross-tabulations of responses from the two sets of questions. As a starting point, Table 4.1.1 shows the probabilities of different

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responses to the questions concerning immigrants of a different ethnicity, conditional on the responses to the question on immigrants of the same ethnicity. As we noted earlier, people tend to be more negative about immigrants of a different ethnicity. This is revealed by the larger fractions above the main diagonal of the table. For instance, only 59 percent of those who favour many immigrants of the same race or ethnicity also favour many immigrants of a different race or ethnicity, while 25 percent favour some, and 16 percent only a few or none.

**Table 4.1.1:** Attitudes to immigration by ethnicity of the immigrant

<i>Allow many/few immigrants of same race/ethnic group as majority</i>	<i>Allow many/few immigrants of different race/ethnic group from majority</i>				
	Allow many	Allow some	Allow a few	Allow none	Total
Allow many to come	<b>59</b>	25	13	3	5952
Allow some	0.8	<b>73</b>	23	3	17781
Allow a few	0	5	<b>83</b>	11	11587
Allow none	0	2	5	<b>93</b>	2368
Total	3680	15120	14648	4240	37688

Tables 4.1.2 and 4.1.3 display the same probabilities for immigration from poorer/richer countries within Europe, and poorer/richer countries outside Europe. A similar pattern is observable, with a generally less liberal view on immigration from less prosperous countries.

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**Table 4.1.2:** Attitude to immigration and origin country of the immigrant

<b><i>Allow many/few immigrants from poorer countries in Europe</i></b>	<b><i>Allow many/few immigrants from poorer countries outside Europe</i></b>				
	Allow many	Allow some	Allow a few	Allow none	Total
Allow many to come	<b>83</b>	14	3	0	4300
Allow some	1	<b>85</b>	13	1	16201
Allow a few	0	5	<b>89</b>	6	13846
Allow none	0	2	7	<b>91</b>	3411
Total	3802	15159	14716	4081	37758

**Table 4.1.3:** Attitude to immigration and origin country of the immigrant

<b><i>Allow many/few immigrants from richer countries in Europe</i></b>	<b><i>Allow many/few immigrants from richer countries outside Europe</i></b>				
	Allow many	Allow some	Allow a few	Allow none	Total
Allow many to come	<b>75</b>	19	6	1	5325
Allow some	2	<b>82</b>	15	1	16236
Allow a few	0	8	<b>86</b>	6	12192
Allow none	0	3	10	<b>86</b>	3704
Total	4298	15425	13557	4177	37457

For convenience in what follows we condense the information in the responses to these six questions into a single index of the pro-immigrant/anti-immigrant stance of the respondent. Specifically, we classify a respondent as favouring a tight immigration policy if they would prefer to allow few or no immigrants when asked about immigration of *either* the same *or* different ethnicity. Equivalently, we classify someone as favouring a liberal policy if they indicate that they would prefer some or many immigrants of both the same and different ethnicities. Alternative methods of combining the information from the various questions lead to very similar classifications.

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### **4.2. What characteristics should immigrants have?**

Questions were asked in the survey not only about preferences over the relative numbers of different immigrants from different sources, but also about the importance attached to a variety of criteria in determining eligibility for immigrant status. Answers to these questions provide additional insights into the preferences of respondents regarding immigration flows. In Table 4.2.1 we present the mean preferences for each type of qualification, assigning a 1 if the respondent said the particular qualification was extremely important, a 0 if he/she said it was qualification was extremely unimportant, and intermediate values for the intermediate responses. We show the mean preferences for individuals who favour a liberal policy (column1), a tight immigration policy (column 2) and for all individuals (column 3), based on the dichotomous classification introduced in the previous section.

**Table 4.2.1:** Which qualifications for immigration are considered important, by overall preference for immigration. (Means)

Qualification for immigration (0: Extremely unimportant 1: Extremely important)	Preference for Immigration			
	Liberal	Tight	Total	<i>unweighted base</i>
Education	0.56	0.68	0.62	38920
Skills	0.59	0.74	0.67	38996
Wealth	0.22	0.39	0.32	37710
Family	0.50	0.57	0.54	38838
Language	0.61	0.75	0.68	39254
Way of life	0.69	0.81	0.75	39152
Christian	0.26	0.43	0.35	38880
White	0.14	0.31	0.24	39027
<i>unweighted base</i>	18104	21756	39860	

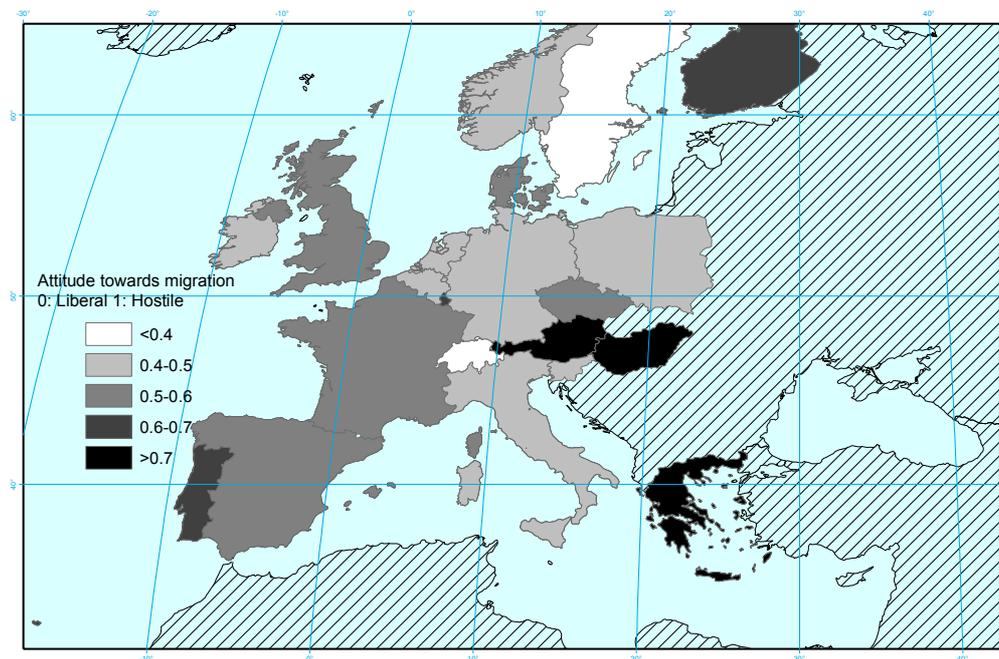
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In general, education, work skills, linguistic ability and, most importantly, commitment to a country's way of life are seen as important, whereas wealth, religion and race are less so. Family connections to the host country fall somewhere between these two extremes. The relative importance attached to different qualifications is generally similar for those with more or less liberal views on immigration numbers. An interesting exception, however, is the relative importance attached to being a Christian, or being of white ethnicity. Respondents who favour a tighter immigration policy tend to put more weight on these two attributes relative to those who favour a more liberal policy.

### ***4.3. How much difference is there across countries?***

Our analysis so far has focused on the overall ESS survey population, without distinguishing between different countries in the sample. Map 1 shows the extent of cross-country differences in attitudes toward immigration, using the mean fraction of respondents in the country who are classified as wanting "tight" immigration as a ranking. The proportion of respondents favouring tight immigration policy ranges from a low of 17.9% in Sweden to a high of 86.1% in Greece and 87.0% in Hungary. This is a remarkably wide range of variation, and presumably reflects many factors, including the current state of the economy, past and present migration policy, and past and present exposure to immigration and differences in the type of resident immigrants. A detailed analysis is far beyond the scope of this paper, but is provided in Card, Dustmann and Preston (in preparation). In the next section we illustrate the relationship with some country characteristics.

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**Figure 4.3.1:** Mean attitudes towards immigration in the ESS countries

### ***4.4. Factors associated with country differences?***

Two obvious explanations for differences in attitudes toward immigration policy are differences in economic conditions, and differences in the number of immigrants already present in the country. In section 2 we discussed economic and sociological theories relevant to overall attitudes towards further immigration. Better economic conditions may lead to reduced concerns about the degree of labour market competition posed by immigrants, and may also help alleviate stresses that are displaced into an anti-immigrant sentiment (Espenshade and Hempstead, 1996; Green, Glaser and Rich 1998). The size of

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the immigrant population may affect the perceived threat posed by further immigration to the social prerogatives of the majority community. It may also influence the degree of contact between the native and immigrant communities. Different theories predict that greater day-to-day contact with immigrants may either increase or decrease the perceived threat posed by immigrants.

We concentrate here on three indicators that capture the overall prosperity of the receiving country, labour market conditions, and previous immigration history. These are: GDP per capita<sup>††</sup>, the unemployment rate<sup>‡‡</sup>, and the relative fraction of the foreign born in the domestic population<sup>§§</sup>. Figures 4.4.1-3 are cross-country scatter-plots that illustrate the association between each of the three indicators and the overall attitude towards immigration in the country (as measured by the fraction of respondents classified as favouring tighter immigration policy). We also superimpose on each figure the best-fitting regression line linking the indicator (graphed on the horizontal axis) to anti-immigrant sentiment (graphed on the vertical axis).<sup>\*\*\*, †††</sup>.

Looking first at the impact of a larger foreign-born population (figure 4.4.1), there is a negative relation between higher immigrant stocks and the fraction of people who want to restrict immigration, but the relationship is not statistically significant. (The regression coefficient and its standard error are given in the footnote of the figure). Likewise, the

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<sup>††</sup> GDP per capita, PPP (current international \$, in thousands). Source: World Bank World Development Indicators

<sup>‡‡</sup> Source: OECD Economic Outlook 74, available at [www.oecd.org](http://www.oecd.org). They refer to year 2002

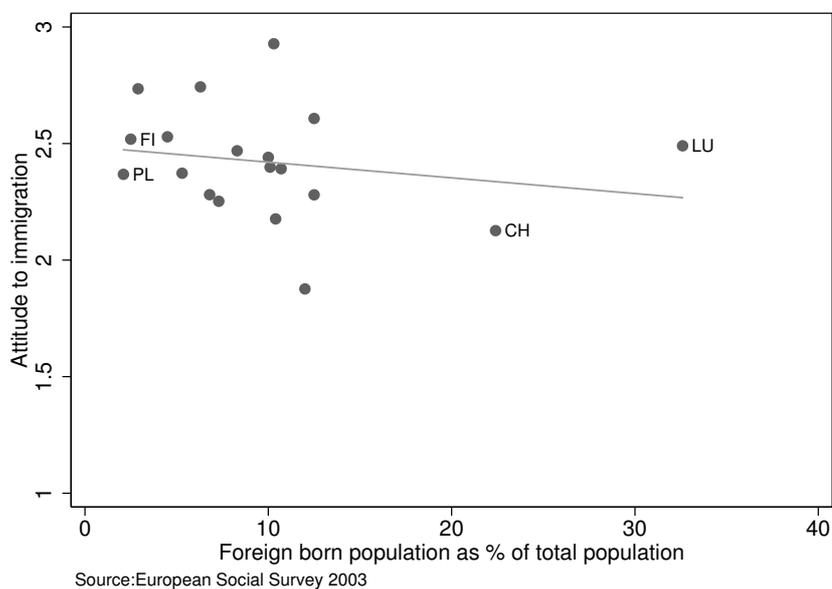
<sup>§§</sup> Source: OECD Database on Immigrants and Expatriates

<sup>\*\*\*</sup> We do not weight for population size.

<sup>†††</sup> We intend these descriptively – the limited cross country variation provides insufficient degrees of freedom to attempt a serious multivariate analysis of the country level processes involved.

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data in figure 4.4.2 suggest a relatively weak association between attitudes and economic prosperity. Finally, the relationship between unemployment and views on restricting immigration (figure 4.4.3) is also quite weak. These results seem to contradict the common belief that adverse economic conditions are an important driver of hostility towards immigration<sup>†††</sup>.



**Figure 4.4.1:** Attitude to immigration and foreign born population , by country

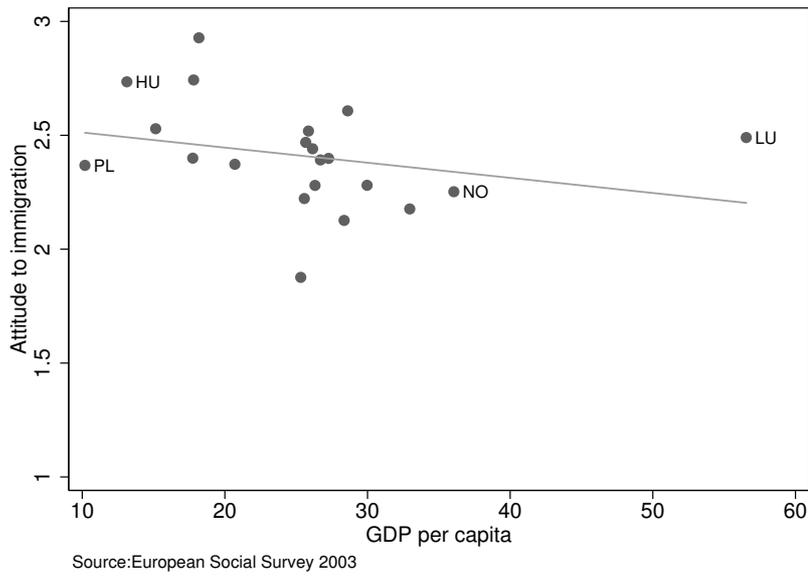
**Note:** Regression (Standard error in parenthesis):  $Attitude = 2.48 - 0.007 * Foreign\ Born\ Population$ ,  
(0.096) (0.008)

$$R^2 = 0.04$$

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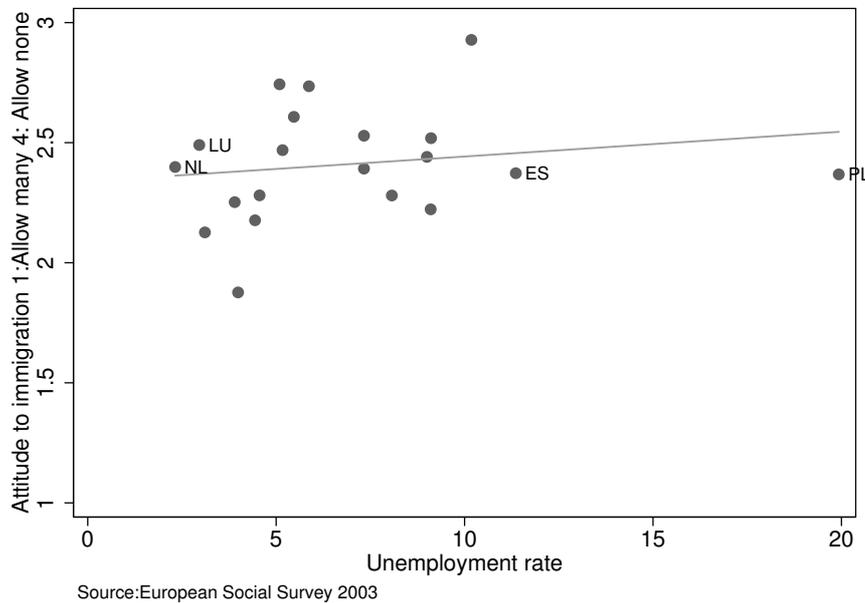
<sup>†††</sup> A similarly weak relationship is found between anti-immigrant attitudes and local unemployment in a recent study of spatial patterns in attitudes in Britain by two of the present authors (Dustmann and Preston 2004).

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**Figure 4.4.2:** Attitude to immigration and GDP per capita, by country

**Note:** Regression (Standard error in parenthesis):  $\text{Attitude} = 2.57 - 0.006 * \text{GDP per capita}$ ,  $R^2 = 0.076$   
(0.143) (0.053)

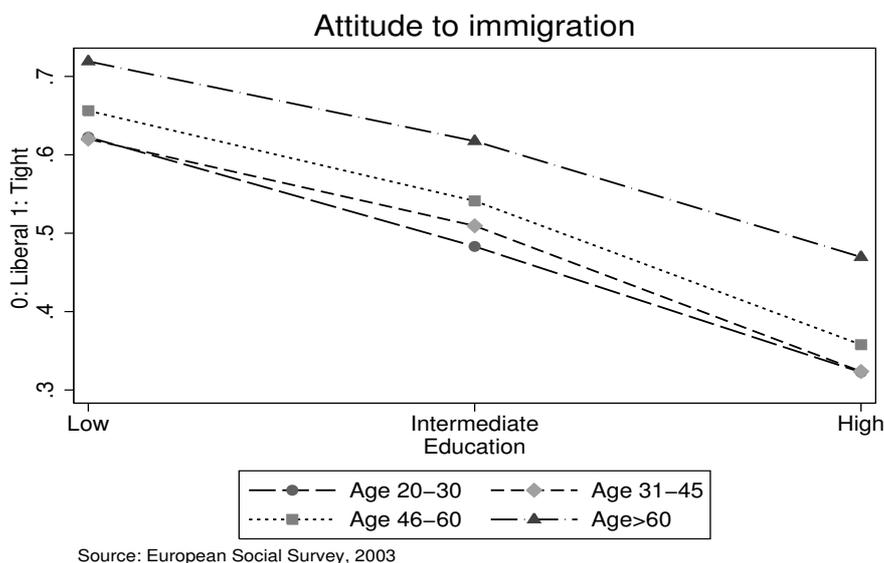


**Figure 4.4.3:** Attitude to immigration and unemployment rate

**Note:** Regression (Standard error in parenthesis):  $\text{Attitude} = 2.34 - 0.01 * \text{Unemployment rate}$ ,  $R^2 = 0.030$   
(0.07) (0.013)

#### **4.5. How do attitudes vary across individuals?**

The previous section has demonstrated that there is wide variation across the ESS countries in attitudes towards immigration that is only weakly related to factors like unemployment, income, and the presence of immigrants. As would be predicted by both economic and sociological theories, however, there is also wide variation in attitudes toward immigration **within** each country. Given the wealth of information on individual characteristics in the ESS this provides an informative basis for assessing the sources of attitudinal differences. For example, theories based on economic self interest suggest that people who compete in the same labour market as immigrants will be opposed to immigration, while those who mainly consume goods or services produced by immigrants will favour further immigration.



**Figure 4.5.1:** Attitude to immigration by age and education

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Two key variables that distinguish individuals are their educational attainment, and their age. To explore the differences across age-and education groups we group individuals by age and education, where we distinguish between low, intermediate and high education, and age groups between 20 and 30, 31-45, 46-60, and above 60. We exclude individuals who are still in full time education.

Figure 4.5.1 shows the differences in the average value of our index of anti-immigrant sentiment by age and education. Each line refers to a specific age group, while the horizontal axis distinguishes between the three education levels. The figure illustrates a clear education divide: for all four age groups the more educated have more liberal attitudes toward further immigration. This is a fact that has been noted in many past studies and interpreted in many ways. Economists have been keen to point out that the more highly educated people occupy more skilled positions which are less threatened by labour market competition from unskilled immigrants (see e.g. Scheve and Slaughter 2001). According to the economic arguments we have discussed above, this line of argument is only valid insofar as immigrants are relatively less educated than natives. While this is true in some countries, it is not in others. For example, in the U.K., Dustmann, Fabbri and Preston 2005 show that immigrants have about the same, or even higher, education than natives. Moreover, education is associated with differences in a wide range of attitudes, including views about racial homogeneity, which may influence the views of better educated people about immigration<sup>§§§</sup>.

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<sup>§§§</sup> See Dustmann and Preston 2004 for additional discussion and analysis.

## Understanding attitudes to immigration

The age pattern of attitudes in figure 4.5.1 is also interesting, and suggests that holding constant education, older people have stronger anti-immigrant views. Given the cross sectional nature of the data we cannot tell whether this is a difference associated with aging or with differences across different birth cohorts. It could be that individuals who are born, say, in the 1940s have led their whole lives with less liberal attitudes towards immigration than individuals born, say, in the 1980s, or it could be that they had similar views when at the same age and that people get less tolerant of immigration as they age. This would be an interesting subject to study if future ESS waves were to repeat questions on immigration.

Other individual characteristics that are likely to be related to immigration attitudes are measures of current labour market status, which may predict the vulnerability of the individual to labour market competition. The economic models we discussed above would suggest such vulnerability as an important driver for resistance to further immigration. Table 4.5.1 relates various measures of the individual's employment status to attitude towards further immigration.

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**Table 4.5.1:** Attitude to immigration and employment status

Main activity the last 7 days	Attitude to immigration		
	Liberal (%)	Tight (%)	<i>unweighted base</i>
in paid work	49	51	14443
in education	65	35	742
Unemployed, looking for a job	44	56	1343
Unemployed, not looking for a job	45	55	769
Permanently sick or disabled	38	62	1169
Retired	34	66	5179
community or military service	45	55	98
housework, looking after children, others	45	54	9608
Other	54	46	1156
<i>unweighted base</i>	15814	18693	34507

The entries in the table in each row refer to the percentage of individual with respective characteristics that support liberal or tight immigration policies. The table demonstrates that those without jobs and looking for work are more resistant to immigration than those in paid work. However those outside the labour force and not looking for work because retired, disabled or looking after children seem even more opposed. Since disabled and retired people are more likely to be older, while those who are unemployed are disproportionately less-educated, the simple patterns in table 4.5.1 could be driven by the education- and age effects as demonstrated in previous figure. A more complex multivariate analysis is required to sort out the competing explanations.

Another influence on attitudes in many dimensions may be religion. Religious differences in attitudes to immigration are shown in Table 4.5.2.

## Understanding attitudes to immigration

**Table 4.5.2:** Attitudes to immigration and religion

<i>Religion</i>	<i>Attitude to immigration</i>		
	Liberal (%)	Tight (%)	Unweighted Base
No religion	52	48	14458
Roman Catholic	43	57	14337
Protestant	46	54	6678
Eastern Orthodox	15	85	2531
Other Christian	47	53	801
Other Religion	54	46	1055
Unweighted base	18204	21756	39860

Christians of all denominations are more opposed to immigration than people of other religions, or people who profess no religion. The strength of association between hostility and eastern orthodoxy stands out in the table but since this is a religion dominant in only one country covered by the survey (Greece) it is difficult to know whether this is really indicative of a religious effect or not\*\*\*\*.

Finally in Table 4.5.3 we compare the attitudes of those who are themselves immigrants with the native born as well as comparing different ethnic groups.

**Table 4.5.3:** Attitudes to immigration and ethnicity and place of birth

<i>Ethnicity and birth</i>	<i>Attitude to immigration</i>		
	Liberal (%)	Tight (%)	Unweighted base
Minority native	43	57	715
Majority native	45	55	35371
Minority immigrant	58	42	626
Majority immigrant	53	46	2542
Unweighted base	17908	21246	39154

\*\*\*\* Looking only within the sample of Greek respondents in the ESS, orthodox adherents in Greece are more hostile toward immigrants than other groups, but the size of the other group is very small, making it difficult to draw strong inferences.

## Understanding attitudes to immigration

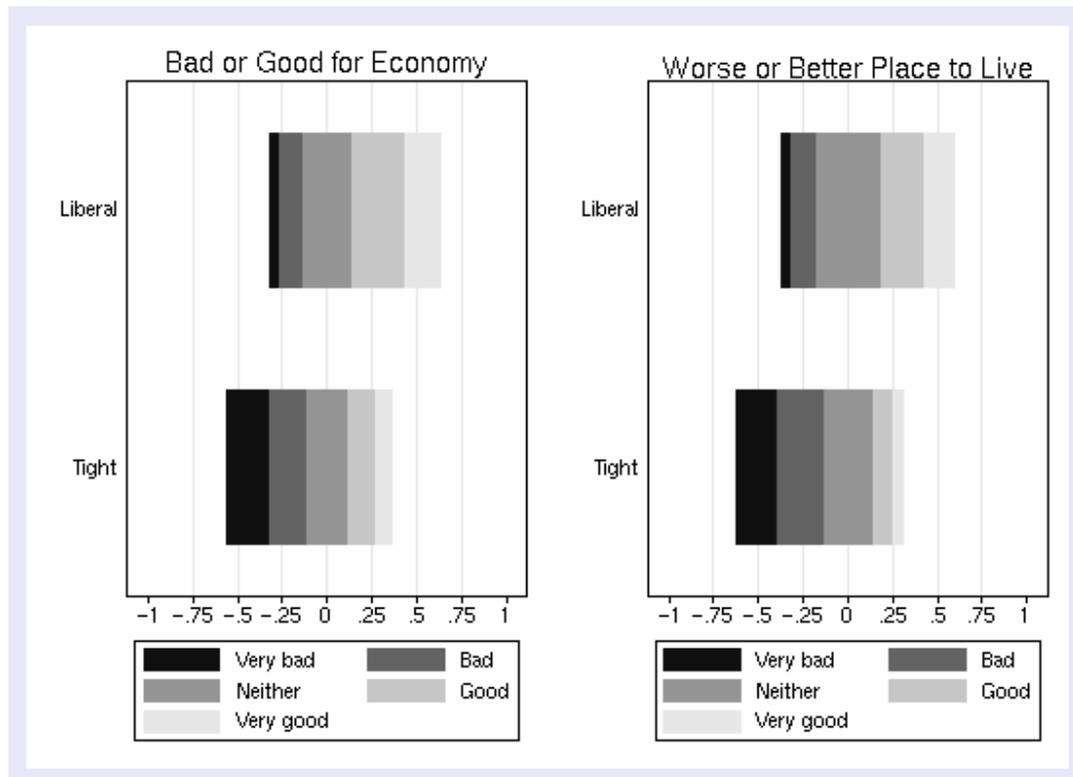
Not surprisingly, those who are themselves immigrants are more liberal than those who are not, though not dramatically so. There is no evidence that native born minorities are more pro-immigrant than native-born members of the majority ethnic group.

These tabulations suggest some systematic differences in attitudes towards immigration across individuals with different characteristics. A large and important role seems to be played by educational attainment and by age or cohort, for example. The association between labour market status and attitudes is contrastingly small, however.

## **5. What do we learn from opinions?**

What is most novel about the ESS module on immigration is the large number of questions regarding opinions on the effects of immigration. Analysis of these questions has the potential to provide a much clearer picture of the sources of differences in attitudes between different people. The questions were asked at different levels of generality. Some questions, for example, asked fairly general questions about whether immigration is good or bad for the economy or the overall quality of life in the country. Others focused on more specific issues such as the effect of immigration on wages or crime rates.

## Understanding attitudes to immigration



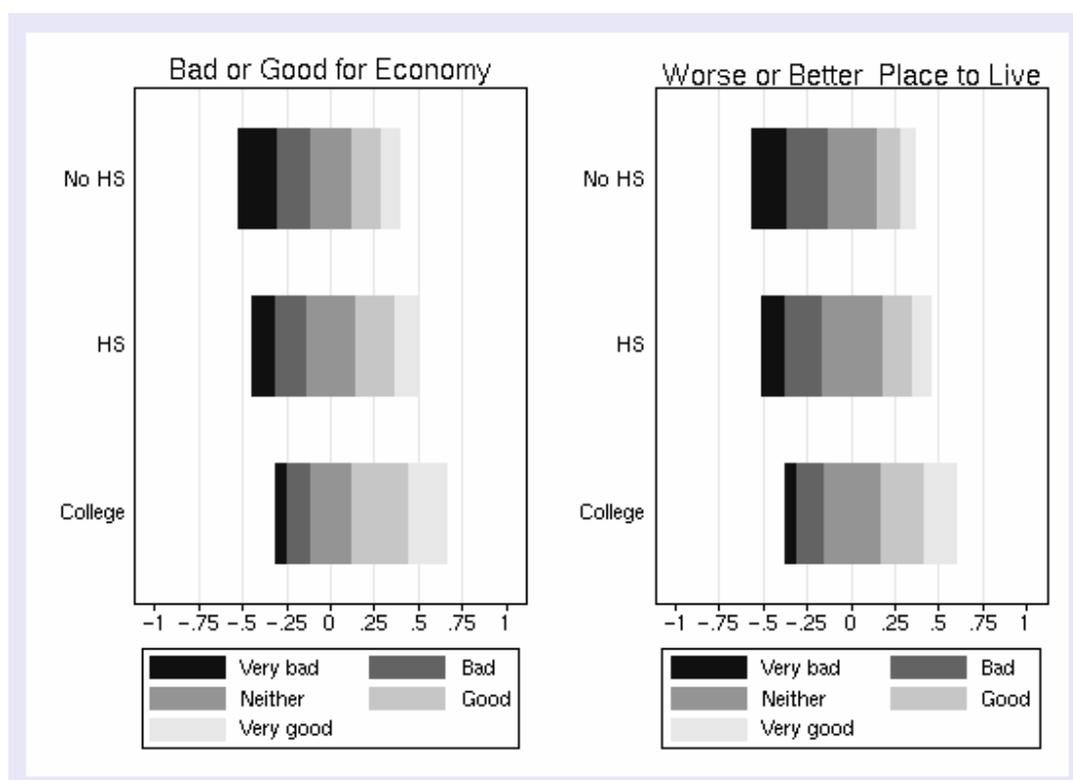
**Figure 5.1:** Attitudes to immigration and effect on the economy and quality of life

We begin in Figure 5.1 by displaying responses to the general questions regarding the overall effect of immigration on the economy and the quality of life. In each panel we show the responses for those who are classified as favouring a more liberal (top) or tighter (bottom) immigration policy. The questions were answered on a 10 point scale: for convenience we have condensed responses to five classes<sup>††††</sup>. It is clear from the figure that those who prefer a tighter policy have more negative views about the impact of immigration on the economy and on the country as a whole.

<sup>††††</sup> For each question we combine 0-2 into a category “very bad”, 2-4 into a category “bad”, 6-7 into a category “good” and 8-10 into a category “very good”. The central response 5, corresponding to an opinion that there is neither a good nor bad effect, draws a relatively large number of responses in each case and we centre bar graphs around this central category.

## Understanding attitudes to immigration

Figure 5.2 presents the distributions of responses categorised by education of the respondent. There is a clear relationship between responses and education, with the more educated being more positive particularly about the contribution immigrants make to the economy, but also being more positive about the effects on the quality of life. Notice that educational differences in opinion are not solely concerned with economic impact.



**Figure 5.2:** The effect of immigration on the economy and on the way of life, by education

We see here that the distribution of answers to these two questions is quite similar but how do the two sets of responses relate to each other? Table 5.1 displays row probabilities where entries in row 1 give the percentage of respondents on the question whether immigrants make the country a better place to live, conditional on having

## Understanding attitudes to immigration

responded that immigration leads to worsening of the country's economy. The range of responses has been coarsened even further here for presentational purposes, with all responses either side of the neutral central category grouped together. The numbers suggest a strong correlation in responses, indicated by the high percentage on the main diagonal. In fact, the correlation coefficient between the two (raw) responses is 0.58. This suggests some commonality in underlying factors driving both beliefs about the economic effects, and beliefs about the overall effects on life quality.

**Table 5.1:** Relationship between effect of immigration on the economy and on the way of life

<i>Immigration good or bad for the country's economy</i>	<i>Immigrants make country worse or better place to live</i>			
	(%) Worsen	(%) Neither	(%) Improve	<i>Unweighted base</i>
Worsen	<b>66</b>	24	8	12515
Neither	28	<b>50</b>	22	10200
Improve	15	32	<b>53</b>	13608
Unweighted base	13163	12475	10685	36323

As we mentioned above, these more general questions are complemented by a large number of more specific ones. In tables 5.2 and 5.3 we display correlation coefficients between some of these more specific questions, our indicator of overall sentiment toward further immigration (column 1) and the respondent's view about the overall effect of immigration on the country's economy (column 2).

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**Table 5.2:** Correlation coefficients between questions (economic issues)

	Attitude to immigration	Immigration good or bad for country's economy	Total number of observations
Average wages are brought down by immigrants	0.331	-0.337	37339
Immigrants take jobs away or create new jobs	0.370	-0.530	38058
Immigrants harm economic prospects of poor more than the rich	0.354	-0.3686	37489
Immigrants help to fill jobs where there are shortages of workers	-0.172	0.259	38344
Immigrants take out more than they put in	0.321	-0.523	37251
All countries benefit if people move where skills are needed	-0.137	0.014	37870
<i>Total number of observations</i>	<i>39860</i>	<i>37405</i>	

Note: Attitudes to immigration are the mean of attitudes to ethnically similar and dissimilar immigrants.

The entries in the first column of table 5.2 show strong correlations between the opinion that immigration policy should be tight and the beliefs that immigrants lower wages, take jobs away, or are a burden to the welfare system. The correlations with the two other specific questions – whether immigrants fill vacant jobs, whether immigration yields benefits to all countries – are weaker but suggest that people who prefer a tight policy are slightly more likely to discount the case that immigrants fill vacancies or that immigration helps all countries. The correlations in the second column of table 5.2 closely follow those in the first column, with even stronger links between the views that immigrants take jobs away from other workers, or put in less than they take out, and the overall assessment of immigration's effect. In general, it seems that people who are in

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favour of tighter immigration, or think that immigration is on balance bad for the economy, have negative views on all aspects of how immigration affects the economy.

Table 5.3 shows a similar exercise focusing on respondents' views about how immigration affects crime, cultural life, and overall social tensions. There is a very strong correlation between responses on how immigrants affect cultural life and whether immigrants make the country a better place to live, suggesting that the cultural channel is highly salient in overall opinions about immigration. The correlations with views about crime and social tension are a little smaller, but as big or bigger than the correlations with the economic factors presented in table 5.2.

**Table 5.3:** Correlation coefficients (social issues)

	Attitude to immigration	Immigrants make country better or worse place to live	Total number of observations
Immigrants make country's crime problems worse or better	0.327	-0.468	38438
Country's cultural life undermined or enriched by immigrants	0.430	-0.611	37670
If a country wants to reduce tension it should stop immigration	0.470	-0.446	37528
<i>Total number of observations</i>	<i>37688</i>	<i>37823</i>	

Note: See note to table 5.2.

Another set of specific questions in the ESS module refer to views about the desirability of social homogeneity. Table 5.4 shows the correlations of responses to these questions with the two overall assessment variables (our overall attitude variable, based on the view that immigration policy should be tight, and opinion on whether immigration makes the country a better place to live). People's overall assessment of immigration tend to be

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relatively strongly related to their opinion on the value of homogeneity in customs and traditions, somewhat less correlated with views about the desirability of a common religion, and only weakly related to views about the value of a common language and a single school system. An obvious issue for further research is whether answers to these questions are different in countries that have a single dominant religion, language, and cultural tradition, versus those where there are two or more prominent religions, languages, or cultural traditions.

**Table 5.4:** Correlation coefficients (social homogeneity)

	Attitude to immigration	Immigrants make country better or worse place to live	Total number of observations
Better for a country if almost everyone shares customs and traditions	0.347	-0.348	39149
Better for a country if there is a variety of different religions	-0.263	0.290	38424
Better for a country if almost everyone speak one common language	0.105	-0.120	39432
Immigrants' communities should be allowed separate schools	-0.065	0.080	38562
<i>Total number of observations</i>	<i>37688</i>	<i>37823</i>	

Note: See note to table 5.2.

A final set of specific questions included in the ESS immigration module refer to opinions about social contact with immigrants from the same or a different ethnic group. (We refer to these as measures of social distance). Specifically, respondents were asked how much they would mind if their boss was an immigrant (from either the same or a different ethnic group) and if someone in their immediate family married an immigrant ((from either the same or a different ethnic group). Table 5.5 presents the correlations of

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responses to these questions with our summary measure of attitudes toward immigration.

The answers are about as strongly correlated with the overall attitude variable as the answers to the main economic questions described in table 5.2.

**Table 5.5:** Correlation coefficients (social distance)

	Attitude to immigration	Total number of observations
Would you mind or not if your boss was immigrant of the same race/ethnic group as the majority	0.3274	38425
Would you mind or not if your boss was immigrant of different race/ethnic group as the majority	0.3664	38241
Would you mind or not if an immigrant of same race/ethnic group as majority married a close relative	0.3199	38679
Would you mind or not if an immigrant of different race/ethnic group than majority married a close relative	0.3425	38440
Total number of observations	38688	

Note: See note to table 5.2.

Our interpretation of the results presented in this section is that overall attitudes toward immigration incorporate many dimensions of concern about the economic and social effects of immigration, and differences in underlying views about social homogeneity and the desirability of social contact with other people. An important but difficult task that we leave for future work is to try to disentangle the various causal channels linking these various attitudes and values to views about immigration.

## **6. Discussion and Conclusion**

## Understanding attitudes to immigration

Immigration is a controversial and increasingly important topic in the public policy debate throughout Europe. This paper provides a brief description and analysis of a set of about 60 survey questions on immigration and minorities, embedded as a special module into the first European Social Survey. We believe this module provides a valuable tool for further analysis of the role of economic interests, social and cultural concerns, and underlying values in the formation of public attitudes toward immigration. Although other surveys contain questions related to immigration, the ESS module is unique in the richness of the questions that were asked to representative samples from a large number of countries.

Public attitudes towards immigration and immigrant-related issues are perhaps more important for shaping migration policies than factual information, and latent fears of immigration are often exploited in electoral campaigns. A key question is how such attitudes are formed. We begin our paper with a brief theoretical discussion, pointing out possible reasons that may lead different people to be in favour of admitting more or fewer immigrants. These considerations provide some explanation for differences in attitudes towards different immigrant groups, as well as the differences in the views of people from different socio-economic backgrounds. We then introduce the immigration module of the ESS. We briefly describe the development of the module, and illustrate some of the difficulties that arise in designing a set of questions that will be interpreted more or less similarly in different countries.

## Understanding attitudes to immigration

We then present a descriptive overview of opinions about immigration in the ESS countries. We analyse responses regarding the type of immigrants and their desired characteristics. We illustrate the wide variation in attitudes regarding immigration policy across the 24 different countries in the ESS, and investigate the correlation between country-wide attitudes and country-specific characteristics, including income, unemployment, and the fraction of immigrants in the national population. Finally, we analyse how responses to immigration-related questions differ according to individual characteristics including age, education, and labor force status. We find a strong correlation between higher education and more favourable views toward immigration. We also show a tendency for older people (or those born in earlier cohorts) to be less favourable toward immigration. Attitudes are also related to individuals' employment status, religion, and whether the individual is of immigrant or ethnic minority descent.

In the final section of the paper, we use the rich detail in the ESS migration module to investigate some of the underlying attitudes and views that lie behind an overall assessment of immigration policy. Individuals were asked their views on whether immigration is beneficial for the economy, and whether immigration improves the quality of life in a county. Responses to these questions are highly correlated, and also highly related with an individual's stance on whether immigration should be made more liberal or tightened. The strong correlation between these responses suggests that there is some common underlying factor structure which drives responses to both questions. We relate the overall attitude questions to responses on a wide variety of specific questions about how immigration is perceived to affect the labour market, cultural life, and crime.

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Finally, we compare overall views on immigration to views on the desirability of cultural, ethnic, and religious homogeneity, and on attitudes toward social interactions with immigrants.

We conclude that attitudes toward immigration are shaped by (and possibly shape) views about a variety of different channels through which immigration affects the economy, national culture, and the social status of natives. Views toward immigrants are also shaped by (or possibly shape) underlying attitudes about social homogeneity and the desirability of social contact with other people. In ongoing work we are attempting to disentangle the various causal channels, and further understand the sources of public opinion on immigration.

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### References

- Altonji, J. G. and Card, D. (1991) “The effects of immigration on the labor market outcomes of less-skilled natives” In *Immigration, Trade and Labor*, (ed. J.M. Abowd and R. B. Freeman) Chicago: University of Chicago Press.
- Berry, R. A. and Soligo, R. (1969) “Some welfare effects of international migration”, *Journal of Political Economy*, 77, 778-794.
- Bhagwati, J., Brecher R. (1980), “National Welfare in the Open Economy in the Presence of Foreign Owned Factors of Production”, *Journal of International Economics*, 103-115
- Bhagwati, J., Rodriguez, C. (1976) “Welfare- Theoretical Analyses of the Brain Drain”, Chapter 5 in J.Bhagwati (ed.), *The Brain Drain and Taxation: Theory and Empirical Analysis*, North Holland Co: Amsterdam, 85-111
- Blalock, H. M. (1967). *Towards a Theory of Minority Group Relations*. New York, Wiley.
- Blumer, H. (1958). "Race Prejudice as a Sense of Group Position." *Pacific Sociological Review*, 1, 3-7.
- Bobo, L. (1983). "Whites' Opposition to Bussing: Symbolic Racism or Realistic Group Conflict." *Journal of Personality and Social Psychology* 45, 1196-1210.
- Borjas, George (2003). “The Labor Demand Curve is Downward Sloping: Re-examining the Impact of Immigration on the Labor Market.” *Quarterly Journal of Economics*, 1335-1374.

## Understanding attitudes to immigration

- Butcher, Kristin, and Anne M. Piehl (1998). "Recent Immigrants: Unexpected Implications for Crime and Incarceration." *Industrial and Labor Relations Review*, 51, 654-679.
- Campbell, D. T. (1965). "Ethnocentric and Other Altruistic Motives." In D. Levine (editor), *Nebraska Symposium on Motivation* 13. Lincoln: University of Nebraska Press, 283-311.
- Card, D. "Is the New Immigration Really So Bad?" IZA Discussion Paper 1119, Forthcoming in *Economic Journal Features*, 2005.
- Card, D., C. Dustmann, and I. Preston (2005). Values, Experiences, and Attitudes: A Cross-National Analysis of Anti-Immigrant Opinion in Europe, in preparation.
- Dustmann, C., F. Fabbri, and I. Preston (2005) The Impact of Immigration on the British Labour Market, *CReAM* discussion paper No.1/05; Forthcoming *Economic Journal Features*.
- Dustmann, C. and I. Preston (2004), Racial and Economic Factors in Attitudes to Immigration, *CReAM* discussion paper No. 1/04
- Dustmann, C. and I. Preston (2004), Is Immigration Good or Bad for the Economy? Analysis of Attitudinal Responses, *CReAM* discussion paper No. 6/04; forthcoming *Research in Labor Economics*.
- Espenshade, Thomas J., and Hempstead, Katherine (1996). "Contemporary American Attitudes Toward U.S. Immigration." *International Migration Review*, 30: 535-570.

## Understanding attitudes to immigration

- Gaston, N. and Nelson, D. (2000) "Immigration and labour-market outcomes in the United States: A political-economy puzzle", *Oxford Review of Economic Policy*, vol. 16, pp. 104-114.
- Green, D. P., J. Glaser and A. Rich (1998), "From Lynching to Gay Bashing: The Elusive Connection Between Economic Conditions and Hate Crime", *Journal of Personality and Social Psychology*, vol. 75, pp. 82-92.
- Kenen, P.B.(1971). "Migration, the Terms of Trade, and Economic Welfare in the Source Country", in *Trade, Balance of Payments and Growth* (J.N. Bhagwati, et al., eds.), North Holland, Amsterdam.
- Levine, R. A., Campbell, D. T. (1972). "Realistic Group Conflict Theory," *Ethnocentrism: Theories of Conflict, Ethnic Attitudes and Group Behavior*. John Wiley&Sons, Inc., New York-London-Sydney-Toronto, 29-43.
- Licata, L. and O. Klein (2002). "Does European Citizenship Breed Xenophobia? European Identification as a Predictor of Intolerance Toward Immigrants." *Journal of Community and Applied Social Psychology* 12, 1-15.
- Scheve, K. F., Slaughter, M. J. (2001). "Labor market competition and individual preferences over immigration policy." *Review of Economics and Statistics*, 83 (1), 133-145.
- Sidanius, J. and F. Pratto (1999). *Social Dominance: An Intergroup Theory of Social Hierarchy*. Cambridge, Cambridge University Press.
- Tajfel, H. (1982). *Social Identity and Intergroup Behavior*. Cambridge, England: Cambridge University Press.

## Understanding attitudes to immigration

- Tajfel, H. & Turner, J. C. (1986). An integrative theory of intergroup conflict. In S. Worchel & W. Austin (Eds.), *Psychology of Intergroup Relations*. Chicago: Nelson-Hall, 2-24.