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What Drives Individual Attitudes towards Immigration in South Africa?

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Abstract

This paper empirically investigates the determinants of individual attitudes towards immigration in South Africa using the 1996, 2001 and 2007 rounds of the World Values Survey, looking at the role played by both economic and non-economic drivers. Our findings suggest that economic characteristics that work through the labor marketare not likely to explain the observed variation in individual preferences. We find instead some evidence for the role played by non-economic drivers, in particular by the ethnic background of the respondent and his/her religious affiliation. Our analysis thus highlights the importance of cultural factors for the design of migration policy in South Africa.

> *One of the fundamental problems facing Home Affairs and any drafters of a new regionalist and development-oriented immigration policy is a public that remains extremely hostile to immigration as a principle and to migrants in general*. (Crush, 2008).

1. Introduction

Who is against immigration in South Africa? In this paper, we investigate the drivers of individual attitudes towards immigrants in the post-Apartheid period, looking at the role of both economic and non-economic determinants. We use data from three rounds of the World Values Survey, carried out in 1996, 2001, and 2007. The main question we want to answer is whether South African public opinion on migration is affected by the potential labor market competition of migrants with natives or otherwise by non-economic factors. We investigate this by estimating the impact of survey respondents' individual skill on their pro-migration attitudes. Our findings show that the latter is positive and significant in both 1996 and 2001, whereas it becomes not significant in 2007. However, in all the years in our sample immigrants to South Africa are on average more skilled than natives (Facchini et al., 2011). As a result, if the impact of individual skill on preferences was driven by the labor market channel, we would expect it to be negative, since it is the more educated natives who should feel the labor market competition of immigrants the most. Our

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analysis thus suggests that in South Africa over the 1996–2007 period, the labor market channel is not likely to play a role in preference formation over immigration. What might explain the positive impact of individual skill are non-economic determinants. For example, more educated individuals may be more favorable to migration because they are better-informed about its benefits, because they are more cosmopolitan and, possibly, more politically correct (see, for instance, Hainmueller and Hiscox, 2007; Hainmueller and Hiscox, 2010). Furthermore, our evidence shows that cultural drivers that work through ethnic cleavages and religion play a key role in shaping preference formation. In particular, we find that greater religious dissimilarity between migrants and natives in a given geographic area tends to have a negative impact on preferences towards immigration.

Understanding the drivers of public opinion towards immigration in South Africa is important, because migration is likely to have positive development effects both on the receiving country and other African origin countries. From the perspective of South Africa, while income distribution effects will take place (see for example, Facchini et al., 2011), these very same effects are likely to create a "migration surplus" (Borjas, 1995). From the point of view of many origin countries in both Eastern and Southern Africa—for example, Mozambique, Zimbabwe, Lesotho, and Malawi—the flow of migrants to South Africa is likely to have a positive impact especially through the large observed remittance flows.[1]

International migration, especially from neighboring countries, represents a long-standing feature of South African history. Starting from the 1850s, foreign workers were brought into the country from the surrounding regions to be employed in the newly discovered goldmines (Crush, 2000) and in the agricultural, construction, and service sectors. This type of migration continued and rose up to the 1970s. In the last 20 years of the Apartheid regime, the phenomenon came to a halt, as black migration started to be perceived by the government as a source of political threat. With the end of Apartheid, South Africa was able to turn itself again into an attractive destination for foreign workers—especially skilled ones (Facchini et al., 2011)—even if the transition to democracy did not immediately lead to a change in the government's restrictive policies. The 1991 "Aliens Control Act"—"Apartheid's last act" as has been named by many observers—continued to shape migration policy with its "control and expulsion" mentality for a decade. It was only with the passage of the Immigration Act in 2002, and its Amendment in 2004, that the stance changed. In the government's official discourse migration is now perceived as a development tool, both for South Africa and the neighboring countries (Crush, 2008).[2]

Importantly, while the official rhetoric has turned pro-migration, South African voters have become increasingly hostile to foreigners. According to the World Values Survey, only approximately a third of the population favored migration in 1996 and 2001, respectively, and this share declined in 2007 by 10 percentage points, to only 23% of the population. As a result, a growing gap has emerged between voters' attitudes and the announced government preferences. The goal of our analysis is to clarify which factors drive public opinion, and by doing so to shed light on how immigration to South Africa can be made politically feasible, and ultimately benefit both South Africa and other countries in the region.

The remainder of the paper is organized as follows. Section 2 reviews the existing literature,whereas section 3 presents a theoretical framework that clarifies the link between individual attitudes and immigration policy. Section 4 describes our data and section 5 presents our individual-level empirical analysis. Section 6 provides

suggestive evidence on the role of non-economic factors at the province level, and section 7 concludes.

2. Related Literature

Starting from the mid-1990s, several studies have examined the drivers of public opinion towards immigration in advanced destination countries. Early contributions based on US data, like Espenshade and Hempstead (1996) and Citrin et al. (1997), find mainly evidence in favor of non-economic explanations behind preference patterns (but see Bilal et al., 2003). At the same time, the results in Scheve and Slaughter (2001), and Hanson et al. (2007) have drawn attention to the importance of economic determinants: the former provides evidence in line with the labor market channel, while the latter finds support also for the role played by the welfare-state channel. The importance of these two drivers has also been emphasized in many cross-country studies (e.g. Facchini and Mayda, 2009), even if most of these contributions do also find evidence supporting the role played by non-economic determinants of public opinion.

Attitudes towards immigration in South Africa are the result of the complex interaction of an array of different socio-economic and political factors. Particularly important is the role played by the heritage of the Apartheid regime, during which discrimination and racial segregation were actively promoted by the government. The laws in force during this period were designed to create divisions among groups and to manipulate the concept of identity by stigmatizing foreigners. As a result, even after the fall of the regime, some of the sense of territory it had created, combined with the perception of outsiders as a threat, have continued to be widespread among South Africans (Nieftagodien, 2008). The eruption of xenophobic violence in May 2008 has made the immigration issue the focus of much debate among local social scientists, and policy makers have suggested a wide range of speculative explanations and recommendations, which have been followed by a multitude of responses by the South African civil society (Misago et al., 2009). Still, there is little systematic analysis of the drivers of attitudes towards immigrants in the country. An interesting exception is represented by the descriptive study by Crush et al. (2008), who attempt to shed light on the factors behind xenophobic sentiments, discriminatory practices and violence against migrants and their families. Using two representative surveys collected by the South African Migration Project (SAMP) in the post-apartheid period (respectively in 1999 and 2006), Crush et al. (2008) identify two interesting stylized facts. First, the incidence of negative attitudes towards immigrants has increased between 1999 and 2006, which is consistent with what we find based on the WVS dataset. Second, the very strong opinions against foreigners are often the result of prejudice: in fact, most of the respondents have only had a very limited exposure to foreign nationals (Crush et al., 2008). Several theories have been proposed to explain these attitudes, but no consensus has yet emerged. Pillay (2008) has emphasized the importance of inequality, arguing that immigration is likely to exacerbate the already critical situation of South Africa. Confirming the theory of relative deprivation, Misago et al. (2009) also identify high unemployment and poor services delivery as the main drivers of conflict between socio-economic groups. Still, the widespread hostility towards foreigners expressed also by wealthy people in the 2006 SAMP survey contrasts with the argument based on unequal opportunities. Our goal in this paper is to provide a more systematic analysis of the forces at play.

3. Theoretical Framework

To describe the process of migration policy formation we can take advantage of a conceptual scheme which is based on Rodrik (1995). The basic idea is that the formulation of migration policies is the result of the interaction between "policy demand" and "policy supply." On the demand side, the starting block is represented by voters' individual preferences, and by how these preferences are shaped by the inflows of foreign workers. Both economic and non-economic factors are likely to play a role. Grass roots movements, political parties and/or organized pressure groups aggregate these preferences into a migration policy demand. On the supply side, policy makers' behavior is influenced by their own views towards immigration and, of course, by the institutional setting in which the policy making process takes place. This theoretical framework thus highlights the key role played by individual preferences in shaping immigration policy. In this paper we will analyze their determinants, and how they are affected by both economic and non-economic factors.

To understand economic drivers, the literature has assumed that respondents form their opinion, by considering the impact of migration on their utility. Since the latter is uneven across the population, the main economic drivers of attitudes are associated with income distribution effects, and much emphasis has been put on the role played by the labor market. To illustrate the working of this channel, assume that skilled and unskilled labor are combined to produce a single good according to a constant returns to scale production function. The income-distribution effects of migration depend then on the skill composition of migrants relative to natives in the destination country. If immigrants are on average less skilled than natives, they will hurt unskilled natives and benefit skilled ones, as their arrival will induce a decrease in the unskilled wage and an increase in the skilled wage. The opposite is true if migrants are instead skilled.[3]

A second channel that has been highlighted in the literature focuses on the size of the "welfare state" (see Facchini and Mayda, 2009). In many immigrant destination countries, the public sector redistributes a substantial fraction of national income across individuals. In these contexts, immigration has a non-negligible impact on public finances, since foreign workers both contribute to and benefit from the welfare state. This channel is less likely to play an important role though in South Africa, as even if the welfare state is well developed by middle-income country standards, it is still relatively small compared with the rich destinations studied by the literature, and immigrants enjoy only limited access to it (OECD, 2008).

From a non-economic point of view, cultural, racial, and ideological considerations have also been found to play a role. It has been argued that more educated individuals are more in favor of immigration (independently of the immigrants' skill level) simply because they better appreciate the value of diversity (Hainmueller and Hiscox, 2007). Moreover, ideological factors have been shown to affect preferences and in particular the affiliation/alignment with right-wing political parties has been usually found to have a negative impact on pro-immigration attitudes (Mayda, 2006). Similarly, natives tend to be more in favor of immigration if foreigners share a common ethnic background, independently of economic factors (Epstein and Gang, 2010). Furthermore, it has been argued that the interaction among natives and migrants is likely to involve potentially large adjustment costs, due for instance to the lack of local language skills (Chiswick and Miller, 1996; Dustmann and van Soest, 2001; Bauer et al., 2005). This type of cost, and the perception that immigrants might be disproportionately involved in criminal activities, have been found to contribute to a reduction in support for

immigration. Finally, there is also evidence that the level of exposure to media outlets with different ideological positions might play an important role in shaping public opinion (Facchini et al., 2009).

4. Data

To study what drives individual attitudes towards immigration in South Africa, we use individual-level data from three waves of the World Values Survey (WVS) (1996, 2001, 2007). The immigration question in the WVS asks the following: "How about people from other countries coming here to work. Which one of the following do you think the government should do? (a) Let anyone come who wants to? (b) Let people come as long as there are jobs available? (c) Place strict limits on the number of foreigners who can come here? (d) Prohibit people coming here from other countries? (e) Don't know." We transform answers to the WVS immigration question into two dependent variables: an ordered variable, *Immig Opinion*, and a dichotomous variable, *Pro Immig Dummy*, both constructed after excluding "Don't know" responses from the sample. We also exclude from the analysis individuals who were not born in South Africa. The variable *Immig Opinion* ranges from 1 = "prohibit people coming here from other countries" to 4 = "Let anyone come who wants to." *Pro Immig Dummy* is instead defined as follows: *Pro Immig Dummy* = 1, if *Immig Opinion* = 3 or 4; 0, if *Immig Opinion* = 1 or 2.

The WVS also contains information on the socio-economic background of each respondent and on his/her labor market characteristics. We use information from questions on age, gender, social class, broad political affiliation with the right/left, political party affiliation, and religion. We control for the ethnic background of the individual using two different measures: the first one is a broad measure based on four big categories (white, black, indian, colored); the second is based on information from the survey on the language spoken at home. We construct two measures of individual skill from, respectively, data on education (the highest education level attained by the individual) and data on occupation. We use these skill measures to test the implications of the labor market model, together with an indicator of employment status. We use instead each respondent's individual real income as a basic indicator of individual economic status.

Furthermore, we have access to aggregate data at the province level, and use this to match the individual-level survey data with province-specific information, such as on the relative skill composition of natives to immigrants. These data are obtained from the 1996 and 2001 rounds of the South African Census and the 2007 South African Community Survey. To conclude, the dataset we construct makes it possible to identify both stated immigration policy preferences and individual and provincial characteristics that explain immigration opinions in standard economic and non-economic models.

Summary statistics are available in the Supporting Information (for details, see the end of this paper). The data clearly highlight that very few South Africans support immigration. In fact, in 1996, only 34% of the respondents support immigration, and this share decreases to 32% for men in the labor force. These figures make South Africa one of the countries most opposed to migration in 1996 according to the WVS. In 2001 the picture is quite similar. Approximately 37% of the respondents support migration (36% of the men in the labor force), and South Africa continues to be more hostile to the phenomenon than the majority of countries included in the WVS. Interestingly, in 2007 support for migration drops substantially, and only 23% of the popu-

lation (24% of the men in the labor force) is in favor of it. This evidence is consistent with the xenophobic feelings that have recently characterized the debate in South Africa, and mirrors the findings of the 2006 SAMP survey (Crush et al., 2008).

5. Empirical Results

We turn now to study the drivers of individual opinions towards immigration using a balanced data set of South African men in the labor force.[4] As discussed before, we have constructed two different measures of pro-migration attitudes, a dichotomous one (*Pro Immig Dummy*) and an ordered one (*Immig Opinion*). We use non-linear models. Since ordered probit results are harder to summarize, we use the dichotomous measure and estimate probit specifications. Our econometric specification takes the following form:

$$\Pr ob(Pro\ Immig\ Dummy_i = 1 | x_i) = \Phi(x_i \beta) \tag{1}$$

where $\Phi(.)$ is the cumulative distribution function of the Normal distribution and x_i is a vector of individual level economic and non-economic characteristics that, depending on the specification, might be interacted with provincial level variables. We include in all specification province dummies to account for unobserved, additive province-specific effects,[5] and cluster standard errors by province. In order to simplify the interpretation of our results, Tables 1–3 report marginal effects. Thus, our estimates capture the change in the probability of favoring immigration due to an infinitesimal change in each independent, continuous variable, and a discrete change in the probability for dichotomous variables. The main goal of the analysis is to assess the role of economic and non-economic factors in shaping individual preferences. To capture the former, we focus on the labor market channel. As for the latter, we look at ethnic and ideological drivers. Column (1) in Tables 1, 2, and 3 represents our benchmark specification.

In 1996 and 2001 individual skill, measured both with educational attainment (column 1) and an occupation-based measure (column 2), appears to have a positive and mostly significant impact on South Africans' individual preferences towards immigration.[6] For example, moving to a higher education level increases the probability of being pro-migration by 3.8 (5.1) percentage points in 1996 (2001)—see column (1) of Tables 1 (2). This result continues to hold also when we control for employment status (column 3), and when we carry out a series of robustness checks on the role of non-economic drivers (columns 4, 5, and 6). The interpretation of this finding is not straightforward. In fact, Census data suggest that both in 1996 and in 2001 immigrants tend to be quite skilled in South Africa compared with natives. On average, immigrants increased the supply of men in the labor force by 4.6% in 1996 and by 4.9% in 2001; however, they have increased the supply of men with a completed university education by 12.2% in 1996 and 16.3% in 2001 (Facchini et al., 2011). If—as it is standard in the literature—immigrants' and natives' skills are assumed to be broadly substitutable[7] and the impact of individual skill on attitudes was driven by the labor market channel, we would expect the effect of education on pro-immigration attitudes to be negative in both years, since it is the more educated natives who should feel the labor market competition of immigrants the most. Our results suggest the opposite, and thus we conclude that the labor market channel is not likely to play a role in shaping attitudes. What might explain the positive impact of individual skill on

Table 1. Determinants of Individual Attitudes towards Migrants in South Africa (WVS 1996)

Probit with province fixed effects	*1*	*2*	*3*	*4*	*5*	*6*
Dependence variable	*Pro Immig Dummy (WVS)*					
Age	0.001	–0.0001	0.0011	0.0013	0.001	0.0011
	0.0012	0.0012	0.0013	0.0016	0.0013	0.001
Education (education attainment)	0.0375		0.0379	0.0415	0.0351	0.0339
	0.0189*		0.0180*	0.0185*	0.0185†	0.0185†
Income	–0.0039	–0.011	–0.0043	0.0034	–0.005	–0.0025
	0.0103	0.0109	0.0099	0.0087	0.0103	0.0109
Upper social class	–0.0158	–0.0209	–0.0172	–0.0134	–0.0192	–0.021
	0.0202	0.0215	0.02	0.0204	0.0219	0.0187
Political affiliation with the right	–0.0198	–0.0176	–0.0197	–0.0176		–0.0191
	0.0100*	0.0109	0.0100*	0.0101†		0.0103†
Black (ethnic group)	–0.1536	–0.1593	–0.1514		–0.2606	–0.1521
	0.0718*	0.0746*	0.0688*		0.1732	0.0783†
Indian (ethnic group)	–0.2073	–0.2044	–0.2071		–0.227	–0.2351
	0.0140**	0.0151**	0.0139**		0.0233**	0.0198**
Colored (ethnicgroup)	–0.1213	–0.1156	–0.1217		–0.1747	–0.1352
	0.0689†	0.0764	0.0688†		0.0883*	0.0527*
(Occupation-based) individual skill		0.0367				
		0.0080**				
Employed			0.0244			
			0.0608			
English (language spoken at home)				0.0714		
				0.0788		
Zulu (language spoken at home)				0.0557		
				0.1281		
Xhosa (language spoken at home)				0.0123		
				0.0696		
Shoto (language spoken at home)				–0.1198		
				0.115		
Other (language spoken at home)				–0.0248		
				0.0613		
Freedom Front Party (party)					–0.2164	
					0.0520**	
Inkatha Freedom Front Party (party)					0.0375	
					0.0554	
Pan Africanist Communist Party (party)					–0.0174	
					0.1823	
Conservative Party (party)					–0.2103	
					0.0509**	
Democratic Party (party)					–0.0115	
					0.1145	
National Party (party)					–0.0343	
					0.136	
Roman Catholic (religion)						0.0553
						0.0679
Orthodox (religion)						–0.1678
						0.0151**
Muslim (religion)						0.0432
						0.2314
Hindu (religion)						0.1453
						0.0831†
Zionist (religion)						–0.1394
						0.0793†
Tac (religion)						0.0598
						0.1224
Observations (religion)	603	603	603	603	603	603
Psuedo R^2	0.1	0.12	0.1	0.1	0.11	0.11

The table presents marginal effects with robust standard errors clustered by province. Constant not shown. Province fixed effects not shown. ** significant at 1%; * significant at 5%; † significant at 10%. The sample excludes all individuals who were not born in South Africa. The analysis is restricted to men, in the labor force, who are between 15 and 64 years old. *education* (the highest education level attained by the individual) is coded as follows: 1 = none; 2 = less than primary; 3 = primary; 4 = less than secondary university preparatory; 5 = secondary university preparatory; 6 = some university education; 7 = university. *upper social class* is coded as follows: 1 = lower class; 2 = working class; 3 = lower middle class; 4 = upper middle class; 5 = upperclass. *political affiliation with the right* is coded as follows: in order, from 1 (left-wing) to 10 (right-wing). *individual skill* is coded as follows: 1 = agricultural worker; 2 = farmer; 3 = unskilled manual; 4 = semi-skilled manual; 5 = skilled manual; 6 = foreman, supervisor; 7 = nonmanual-office; 8 = supervisor nonmanual; 9 = high qualified professional; 10 = manager of establishment with less than 10 employees; 11 = manager of establishment with 10 or more employees. *income* is coded as follows: from 1 = lowest decile to 10 = highest decile (the income measure includes "wages, salaries, pensions and other incomes").

Table 2. Determinants of Individual Attitudes towards Migrants in South Africa (WVS 2001)

Probit with province fixed effects	*1*	*2*	*3*	*4*	*5*	*6*
Dependence variable			*Pro Immig Dummy (WVS)*			
age	–0.0001	–0.0006	–0.0002	0	0.0009	–0.0005
	0.0045	0.0052	0.0047	0.0046	0.0041	0.0041
education (education attainment)	0.0507		0.0504	0.0534	0.0366	0.0437
	0.0303†		0.0296†	0.0267*	0.0316	0.0312
income	0.0082	–0.0043	0.0092	0.0071	0.0134	0.0082
	0.0188	0.0226	0.0211	0.0202	0.0212	0.0177
upper social class	–0.0075	–0.0048	–0.0073	–0.013	–0.0049	–0.0145
	0.0542	0.0518	0.0535	0.0556	0.0582	0.0536
Political affiliation with the right	0.0002	0.0034	0.0001	0.0062		0.0032
	0.019	0.0168	0.0197	0.0177		0.017
black (ethnic group)	–0.213	–0.1927	–0.2103		–0.1003	–0.2146
	0.1070*	0.1002†	0.1074†		0.1237	0.1409
Indian (ethnic group)	–0.1698	–0.1774	–0.1702		–0.0994	–0.2533
	0.0906†	0.0957†	0.0886†		0.14	0.1138*
colored (ethnicgroup)	–0.0272	0.0049	–0.0269		0.0248	–0.0847
	0.1101	0.1125	0.1094		0.1003	0.1077
(occupation-based) individual skill		0.0337				
		0.0247				
employed			–0.0117			
			0.0803			
English (language spoken at home)				0.0724		
				0.0623		
Zulu (language spoken at home)				–0.0723		
				0.0655		
Xhosa (language spoken at home)				–0.1214		
				0.1159		
Shoto (language spoken at home)				–0.1571		
				0.1431		
Other (language spoken at home)				–0.2761		
				0.0602**		
African Muslim Party					–0.0075	
					0.0867	
African Christian Democratic (party)					0.3927	
					0.1123**	
Afrikaner eenheidsbeweging (party)					–0.1314	
					0.1658	
Azanian People's Organisation (party)					0.3831	
					0.3945	
Democratic Alliance (party)					0.1407	
					0.0804†	
Freedom Front (party)					0.0389	
					0.1231	
Inkatha Freedom Party (party)					0.2417	
					0.2265	
Minority Front (party)					–0.1654	
					0.0342**	
Pan Africanist Communist Party (party)					0.082	
					0.2798	
United Christian Democratic (party)					0.4447	
					0.2511†	
United Democratic Movement (party)					0.5331	
					0.1399**	
Roman Catholic (religion)						0.5331
						0.1399**
Orthodox (religion)						0.0683
						0.0945
Muslim (religion)						0.1879
						0.0944*
Hindu (religion)						0.199
						0.1596
Evangelical (religion)						–0.0487
						0.1805
Independent African Church (religion)						–0.0822
						0.0961
Observations	738	738	738	738	738	738
Psuedo R^2	0.07	0.08	0.07	0.08	0.1	0.09

The table presents marginal effects with robust standard errors clustered by province. Constant not shown. Province fixed effects not shown. ** significant at 1%; * significant at 5%; † significant at 10%. The sample excludes all individuals who were not born in South Africa. The analysis is restricted to men, in the labor force, who are between 15 and 64 years old. The definitions of the variables are given in Table 1 (footnote). The omitted categories are White (ethnic group), Afrikaans (language spoken at home), African National Congress (party), Protestant (religion).

Table 3. Determinants of Individual Attitudes towards Migrants in South Africa (WVS 2001)

Probit with province fixed effects	*1*	*2*	*3*	*4*	*5*	*6*
Dependence variable	*Pro Immig Dummy (WVS)*					
age	–0.0024	–0.0027	–0.0024	–0.003	–0.0023	–0.0028
	0.0026	0.0024	0.0026	0.0028	0.0022	0.0028
education (education attainment)	–0.0017		–0.0017	–0.0105	–0.0017	0.0023
	0.0338		0.0337	0.0312	0.0336	0.0306
income	0.0113	0.0058	0.0114	0.0099	0.0158	0.0117
	0.0124	0.0146	0.0115	0.0126	0.015	0.0121
upper social class	–0.0079	–0.0147	–0.0079	–0.0113	–0.0054	–0.0014
	0.0193	0.0187	0.0204	0.0215	0.0217	0.0188
Political affiliation with the right	0.0255	0.0261	0.0255	0.0261	0.0262	0.0255
	0.0144†	0.0141†	0.0142†	0.0149†	0.0149†	0.0144†
Black (ethnic group)	0.0843	0.1162	0.0842		0.0218	0.064
	0.0441†	0.0279**	0.0438†		0.069	0.0524
Indian (ethnic group)	0.1102	0.12	0.1101		0.0403	0.2181
	0.2365	0.2184	0.2362		0.1404	0.2911
colored (ethnicgroup)	0.3044	0.3365	0.3043		0.2727	0.3178
	0.1407*	0.1282**	0.1428*		0.1561†	0.1475*
(occupation-based) individual skill		0.0178				
		0.0107†				
employed			–0.001			
			0.0603			
English (language spoken at home)				0.1497		
				0.1244		
Zulu (language spoken at home)				0.0866		
				0.0728		
Xhosa (language spoken at home)				–0.0599		
				0.1116		
Shoto (language spoken at home)				0.0915		
				0.0863		
Other (language spoken at home)				0.1481		
				0.0887†		
African Christian Democratic (party)					–0.0346	
					0.1137	
Democratic Alliance (party)					–0.0749	
					0.0694	
Freedom Front (party)					–0.227	
					0.0253**	
Inkatha Freedom Party (party)					0.3564	
					0.2202	
Minority Front (party)					0.1339	
					0.2678	
Independent Democrats (party)					–0.2244	
					0.0530**	
New National Party (party)					–0.1937	
					0.0474**	
Roman Catholic (religion)						0.1159
						0.0731
Jew (religion)						0.6396
						0.1898**
Muslim (religion)						0.1403
						0.3204
Hindu (religion)						–0.1565
						0.1257
Evangelical (religion)						0.077
						0.1017
Jehovah Witnesses (religion)						0.1992
						0.199
African Church (religion)						0.208
						0.0943*
Pentecostal (religion)						0.1354
						0.1685
Observations	548	548	548	548	548	548
Psuedo R^2	0.05	0.06	0.05	0.05	0.06	0.08

The table presents marginal effects with robust standard errors clustered by province. Constant not shown. Province fixed effects not shown. ** significant at 1%; * significant at 5%; † significant at 10%. The sample excludes all individuals who were not born in South Africa. The analysis is restricted to men, in the labor force, who are between 15 and 64 years old. The definitions of the variables are given in Table 1 (footnote). The omitted categories are White (ethnic group), Afrikaans (language spoken at home), African National Congress (party), Protestant (religion).

pro-migration public opinion are instead non-economic determinants. For example, more educated individuals might be more in favor of migration because they are better-informed about its benefits, because they are more cosmopolitan and, possibly, because they are more politically correct (see for instance, Hainmueller and Hiscox, 2007; Hainmueller and Hiscox, 2010). Alternatively, given that migrants arriving in South Africa tend to be well-educated, they might be more "similar" to highly skilled natives than their less educated counterparts along a variety of non-economic dimensions (ethnicity, language, culture), and because of this reason be more welcome.[8] Interestingly, the role of skill is no longer significant in 2007 (see Table 3).

As for the impact of non-economic drivers, in the benchmark specification (column 1 of Tables 1, 2, and 3) we control for the ethnic background of the respondent and for his political orientation. As for the former, in 1996 and 2001 non-whites are less likely than their white counterpart (the omitted category) to support immigration. Interestingly, this effect is reversed in 2007, suggesting that non-whites are becoming comparatively more open towards migration over time. The role of political orientation is less clear. While in 1996 more right leaning individuals appear to be more opposed to migration, the effect becomes insignificant in 2001 and surprisingly turns positive and marginally significant in 2007. These findings must be interpreted with caution, because first of all, reverse causality might be biasing our results since political orientation might respond to underlying migration patterns. Furthermore, the somewhat puzzling 2007 result might be driven for instance by the tougher government's rhetoric on the enforcement of existing migration policies, that might please individuals affiliated with right wing parties and reduce their opposition to migration.

In column (4) we replace our ethnic background variable with a language based measure(where the omitted category is Afrikaan). We do not find any significant effect. In column (5) we look instead more specifically at the role of affiliation with a particular political party. The patterns we find are comparable with those that emerge from our benchmark specification. In 1996, supporters of the Conservative Party appear to be more opposed to migration than members of the African National Congress (ANC), the omitted category in our regressions, and the same is true for the supporters of the Freedom Front. In 2001, with a more fragmented party structure, supporters of the African Christian Democratic Party and those of the United Democratic Movement appear to be more in favor of migration than ANC supporters, whereas the opposite is true for supporters of the Minority Front. Finally, in 2007 more anti-immigrant sentiments characterize supporters of the New National Party, of the Freedom Front and of the Independent Democrats compared with supporters of the ANC.

In several studies on individual attitudes religious affiliation has been found to play a role in shaping attitudes towards immigrants (see for instance Facchini and Mayda, 2008). For this reason, in column (6) of Tables 1, 2, and 3 we have included also a control for the religious faith of the respondent. Very limited evidence can be found of a systematic effect of a specific religious confession. For example, in 2007 Jewish respondents appear to be more pro-migration than protestants (the omitted category), but the opposite is true in 1996.

6. Robustness Checks

In this section we carry out two sets of robustness checks concerning the role of economic (Table 4) and non-economic determinants (Table 5).

Table 4. Labor-market determinants of individual attitudes towards migrants in South Africa (WVS 1996, 2001, 2007)

	1	2	3	4	5	6	7	8	9
Probit with province fixed effects		*1996*			*2001*			*2007*	
Dependent variable					*Pro Immig Dummy (WVS)*				
age	0.003	0.0027	–0.0003	–0.0003	–0.0004	–0.0036	–0.0077	–0.007	–0.0083
	0.0038	0.0041	0.0036	0.0119	0.0117	0.0136	0.0083	0.0091	0.008
income	–0.0119	–0.0161	–0.038	0.0216	0.0216	0.0093	0.0358	0.0392	0.0196
	0.0318	0.0318	0.0349	0.0495	0.0511	0.0643	0.0392	0.0365	0.0465
Upper social class	–0.0486	–0.0401	–0.0636	–0.0196	–0.021	–0.0089	–0.025	–0.0289	–0.053
	0.0622	0.0638	0.0659	0.1427	0.1403	0.1295	0.0611	0.0577	0.0624
Political affiliation with the right	–0.0608	–0.0627	–0.054	0.0006	0.0022	0.0051	0.0806	0.0894	0.0904
	0.0310*	0.0301*	0.0344	0.0499	0.0517	0.0452	0.0459†	0.0492†	0.0469†
Black (ethnic group)	–0.4516	–0.5075	–0.49	–0.553	–0.5606	–0.4574	0.281	0.3425	0.4519
	0.2048*	0.1909**	0.2093*	0.2793*	0.2784*	0.2534†	0.1577†	0.1112**	0.0889**
Indian (ethnic group)	–0.9079	–1.019	–0.9325	–0.495	–0.5198	–0.5154	0.3182	0.2634	0.3771
	0.1076**	0.0988**	0.1088**	0.3052	0.3181	0.3761	0.6364	0.6257	0.573
Colored (ethnic group)	–0.4256	–0.4658	–0.4135	–0.0722	–0.0427	0.0467	0.8274	0.9106	1.0139
	0.2843	0.2408†	0.3105	0.2953	0.334	0.2978	0.3634*	0.3029**	0.3209**
Education (educational attainment)	0.1154	0.2166		0.1333	0.2332		–0.0052	0.2834	
	0.0582*	0.0681**		0.0799†	0.1007*		0.1068	0.0604**	
education×relative skill ratio		–0.1626			–0.1449			–0.3728	
		0.1027			0.2277			0.1597*	
(Occupation based) individual skill			0.1452			0.1032			0.1555
			0.0285**			0.0811			0.0515**
individual skill×relative skill ratio			–0.0414			–0.0036			–0.1206
			0.0246†			0.1146			0.0625†
Constant	–0.4494	–0.0862	–0.2991	–0.4051	–0.2562	–0.3532	–1.218	–0.7797	–1.3788
	0.5049	0.5211	0.3333	0.8645	0.6846	0.698	0.6343†	0.6852	0.3413**
Observations	603	603	603	738	738	738	548	548	548
Pseudo R^2	0.1	0.11	0.12	0.07	0.08	0.08	0.05	0.07	0.07

Note: The table presents coefficients with robust standard errors clustered by province. ** significant at 1%; * significant at 5%; † significant at 10%. Province fixed effects not shown. The sample excludes all individuals who were not born in South Africa. The analysis is restricted to men, in the labor force, who are between 15 and 64 years old. The *relative skill ratio* is the log of one plus the relative skill composition (RSC). The RSC is the ratio of skilled to unskilled labor in the native relative to the immigrant populations. For both natives and immigrants, the ratio of skilled to unskilled labor is measured as the ratio of the number of individuals with secondary completed and university education to the number of individuals with less than primary and primary completed. In order to get the semi–elasticity with respect to the RSC, one needs to multiply coefficients' estimates of the relative skill ratio by RSC / (1 + RSC). The RSC uses data on the stock of immigrants and natives in South Africa in 1996, 2001, and 2007, respectively. See also footnotes to Tables 1, 2 and 3. The omitted category for ethnic group is White.

Table 5. Impact of province-level variables on individual attitudes towards migrants migrants in South Africa (WVS 1996, 2001, 2007)

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Probit with province fixed effects	*1996*				*2001*				*2007*			
Dependent variable	*Pro Immig Dummy*											
age	0.0012	0.0005	0.0009	0.0008	0.0004	0.0006	0.0004	0.0008	–0.003	–0.0028	–0.0037	–0.0039
	0.0008	0.0013	0.0011	0.0012	0.0043	0.0045	0.0044	0.0045	0.0026	0.0026	0.0028	0.0028
education	0.035	0.0353	0.0375	0.0393	0.05	0.0519	0.0506	0.0516	–0.0063	–0.0056	–0.0176	–0.0175
	0.0212†	0.0192†	0.0204†	0.0211†	0.0309	0.0295†	0.0291†	0.0308†	0.0319	0.0318	0.0361	0.0358
income	–0.0005	–0.001	–0.0003	–0.0042	0.0057	0.0064	0.0056	0.0099	0.014	0.0147	0.0163	0.0169
	0.0116	0.0103	0.0115	0.0114	0.0202	0.022	0.0212	0.0192	0.0123	0.012	0.0129	0.0129
Upper social class	–0.0152	–0.0122	–0.0139	–0.0134	–0.003	–0.0027	–0.0033	–0.0023	–0.0014	0.0003	–0.0028	–0.0022
	0.0175	0.0192	0.0171	0.0204	0.0553	0.0556	0.0555	0.0548	0.0174	0.018	0.0189	0.0193
Political affiliation right	–0.0195	–0.0199	–0.0211	–0.0228	–0.0049	–0.0046	–0.0051	–0.0012	0.0258	0.0255	0.0317	0.0319
	0.0102†	0.0095*	0.0103*	0.0113*	0.0174	0.0179	0.0177	0.0183	0.0147†	0.0143†	0.0158*	0.0159*
Black (ethnic group)	–0.1355	–0.1468	–0.1529	–0.1825	–0.1979	–0.1939	–0.1989	–0.1964	0.0895	0.0821	0.093	0.1022
	0.0788†	0.0659*	0.0785†	0.0826*	0.1118†	0.1179	0.1142†	0.1130†	0.0477†	0.0531	0.0504†	0.0474*
Indian (ethnic group)	–0.0277	–0.1572	–0.0866	–0.2061	–0.1496	–0.1735	–0.15	–0.2218	0.1917	0.1741	0.1754	0.1882
	0.0607	0.0293**	0.0493†	0.0306**	0.0952	0.0687*	0.0872†	0.0536**	0.217	0.2297	0.2208	0.2144
Colored (ethnic group)	–0.0492	–0.1465	–0.0749	–0.0507	–0.109	–0.1268	–0.1034	–0.057	0.2489	0.2554	0.2184	0.1846
	0.0833	0.0622*	0.0744	0.0582	0.1025	0.0912	0.1089	0.1186	0.0809**	0.1008*	0.0548**	0.0573**
Total crime rate	0.7676				0.3297				1.2762			
	2.8139				2.1277				1.1591			
Racial dissimilarity		0.4227				0.0984				0.0283		
		0.9786**				0.1497				0.1792		
Language dissimilarity			0.4891				–0.0345					
			0.2567†				0.2183					
Religious dissimilarity				–2.5949				–1.8318				
				0.4009**				0.7006**				
Migration hits (media exposure)											0.0001	
											0.0001	
Xenophobia hits (media exposure)												0.0001
												0.0005*
Observation	603	603	603	603	738	738	738	738	548	548	482	482
Pseudo R^2	0.05	0.09	0.06	0.08	0.05	0.05	0.05	0.06	0.03	0.03	0.04	0.04

Note: The table presents marginal effects with robust standard errors clustered by province. ** significant at 1%; * significant at 5%; † significant at 10%. The sample excludes all individuals who were not born in South Africa. The analysis is restricted to men, in the labor force, who are between 15 and 64 years–old. See also footnotes to previous tables. The omitted category for ethnic group is White.

Our findings suggest that labor market considerations are not likely to explain immigration attitudes in South Africa. However, there are two possible caveats for this conclusion. First, while we have evidence that the Census captures a portion of illegal migrants (see Facchini et al., 2011), it is unlikely to account for all of them. Since illegal migrants tend to be unskilled, our country-wide measure of the skill composition of migrants relative to natives might be upward-biased. Second, labor markets might be segmented within the country, in which case we would need to consider the relative skill composition of migrants in the geographical unit which defines the labor market. This is what we investigate next in Table 4. Columns (1)–(3) report coefficient estimates for 1996, columns (4)–(6) for 2001 and columns (7)–(9) for 2007. Columns (1), (4), and (7) reproduce our benchmark estimates, whereas in the subsequent specifications we introduce in the regression both the direct effect of skill—measured using education (columns (2), (5), and (8)) and the occupation-based measure of individual skill (columns (3), (6), and (9)—and the interaction of skill with the relative skill composition of natives to migrants in the province where the respondent lives. If the labor market channel is at work, we should find a negative impact of the direct effect of skill and a positive impact of the interacted effect of skill. In other words, more skilled natives should be less pro-migration if migrants are skilled, while they should be more pro-migration if migrants are unskilled. This is not what our results suggest. In particular, the province-specific impact of skill is generally not affected by the relative skill composition of natives to migrants in each province, i.e. both the interaction coefficient and the marginal effect of the interaction are mostly not significant. Furthermore, whenever the interaction coefficients and marginal effects are significant, they are negative, i.e. they have the opposite sign compared with what we would expect. Thus, in most regressions, no matter how skilled migrants are, the impact of individual skill is positive. These results continue to hold also when we lag our measure of the province-level relative skill composition to account for the possibility that it takes time for the respondent to become acquainted with the skill composition of the migrants in his area.[9] We confirm the robustness of the results on the labor market by estimating also a regression which includes the number of immigrants relative to natives in the education category of the respondent (results not shown). In one specification we consider the number of immigrants relative to natives in the province in which the respondents live. In another, we consider the number of immigrants relative to natives at the national level. In both specifications, the impact of the ratio is not significant. These results thus confirm the interpretation based on non-economic determinants.

In order to shed additional light on the effects of non-economic determinants of individual preferences towards immigration, we have explored in Table 5 the role played by a series of additional socio-cultural drivers at the province level.[10] In particular, we have controlled for (i) the provincial-level crime rate, (ii) the extent of racial dissimilarity, (iii) the extent of language dissimilarity, (iv) the extent of religious dissimilarity and, additionally for the year 2007, for the effect of media exposure.

Several observers have suggested that one of the main reasons people are against immigration is because they perceive a direct link between immigration and crime. To assess this possibility we have used a measure of total crime rates per capita at the province level obtained from Statistics South Africa. The results reported in columns (1), (5), and (9) of Table 5 suggest that crime does not have a significant impact on preferences towards immigration. To capture the role of the racial heterogeneity between natives and immigrants at the province level we have used information available in the 1996 and 2001 rounds of the census on racial affiliation (i.e. White, Black-

African, Asian-Colored) to construct a race dissimilarity index.[11] The impact of this measure varies over time, but appears to be mostly not significant, with the exception of 1996, where the effect is positive (see columns (2), (6), (10)). This latter finding may reflect a positive effect of (ethnic) cultural diversity on immigration attitudes, or may simply mirror a spurious correlation, due in particular to reverse causality. This is because immigrants, especially those who are racially different from the local population, are likely to locate themselves in provinces where people are more favorable to immigration. Similarly, more "cosmopolitan" natives may decide to live where there is a higher degree of diversity, driven by immigration. Thus, the positive impact of provincial dissimilarity in terms of race on pro-immigration attitudes may suffer from an upward (positive) bias. We have also constructed an analogous measure for dissimilarity based on language spoken at Home,[12] and also in this case there is no clear effect on attitudes towards immigrants (see columns (3) and (6)).

To capture the role of other faith-based cultural factors we have developed a measureof religious dissimilarity using information from the Census (the possible categories are no religion, Buddhist, Hindu, Jewish, Muslim, Christian, Other). Interestingly, the latter does appear to have a systematic effect on preferences towards immigration. In particular, both in 1996 and 2001, the years for which data are available (see columns (4) and (8)), greater religious dissimilarity between natives and migrants tends to have a negative impact on preferences towards migration. This effect is consistent with earlier cross-country evidence provided byMayda (2006).

To delve further into the role played by cultural traits and values, we provide additional suggestive evidence on the role of mass media. As we have already mentioned, many observers have pointed out that the mass media are likely to be very influential in the formation of individual preferences (Facchini et al., 2009). To assess their impact, we have constructed a measure of exposure based on the number of times the word "migration" or "xenophobia" was mentioned in articles published by South African newspapers in 2007[13] available in the Factiva database.[14] In columns (11) and (12) we report our findings. On average, we find that media exposure is positively related to public opinion in favor of immigration. This finding must be interpreted with caution. In particular, while it could suggest the presence of an "educative" role of the media, we cannot control for the specific outlet's (positive or negative) narrative about immigration, or for the self-selection of individuals[14] into reading newspapers, which might also explain the positive correlation we observe.

7. Conclusions

In this paper we have empirically investigated the determinants of individual attitudes towards immigration in South Africa. We have used three rounds of the World Values Survey to show first of all that immigration is very widely opposed, and that opposition against foreigners has increased in the post-Apartheid period, notwithstanding the major shift in the policy stance brought about by the Immigration Act of 2002 and its amendment of 2004. Secondly, we have analyzed the role played by both economic and non-economic drivers in shaping individual preferences.

We have found that economic characteristics that work through the labor market are not likely to explain the observed variation in preferences. Non-economic factors, in contrast, are important determinants of individual level preferences. In particular, our results suggest that faith-based individual level drivers, and even more importantly, the religious dissimilarity between natives and foreigners do play an important role in shaping attitudes towards foreigners. Thus, our analysis suggests that

adequately taking into account cultural factors is key to the design of effective immigration policies for South Africa.

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Notes

1. "The World Bank . . . does report that remittance flows out of South Africa exceeded US$1 billion in both 2005 and 2006" (Crush 2008).
2. "The South African Minister of Home Affairs, Nosiviwe Mapisa-Nqakula, has also championed a development-oriented approach to migration policy and management. She spoke on behalf of the G77 plus China at the UN High Level Dialogue in September 2006, touching in a measured and constructiveway . . . on many of the themes central to the migration–development debate. Within South Africa itself, Mapisa-Nqakula has also advanced the concept of migration for development" (Crush 2008).
3. Similar predictions are obtained in a Heckscher–Ohlin framework, if the immigration shock is sufficiently large to put the economy outside of the cone of diversification.
4. We focus on men as the female's involvement in the labor supply in South Africa is limited. Using a balanced data set allows us to better compare the coefficients reported in the various specifications.
5. The only exception are the results presented in Table 5, where we directly exploit the variation at the province level.
6. A positive gradient is evident also if we use separate education dummies for each education level. This result is available from the authors upon request.
7. Even though between 77% and 80% of migrants to South Africa were born in other African countries respectively in 1996 and 2001, skilled migrants originated predominantly in Europe, Asia and North America (62% and 59% respectively in 1996 and 2001). This suggests that their skills should be indeed broadly comparable with those acquired by native South Africans.
8. We would like to thank one of the referees for suggesting this interpretation.
9. The results are available from the authors upon request.
10. Of course, in these specifications we cannot include province fixed effects.
11. The variable Race Dissimilarity is an average across provinces of the Census dissimilarity index calculated as $\frac{1}{2}\sum_x |P_x(N) - P_x(M)|$ where N and M stand for native and immigrant population and P_x represents the share of population of ethnicity x.
12. First languages spoken at home as reported in the Census are: Afrikaans, English, IsiNdebele, IsiXhosa, IsiZulu, Sepedi, Sesotho, Setswana, Siswati, Tshivenda, Xitsonga, Dutch, German, Greek, Italian, Portuguese, French, Tamil, Hindi, Telugu, Gujarati, Urdu, Chinese, Swahili, Shona, Arabic, Other.
13. Of course, a more complete analysis would involve also looking at the transcript of TV and Radio newscasts, at the ownership structure of the various media outlets, etc. Unfortunately the detailed data that would allow us to carry out this type of analysis are not readily available.
14. We have used information from the following English language newspapers: *Cape Argus, Cape Times, Daily News, Independent on Saturday, Mercury, The Post, Pretoria News, SAPA (South Africa Press Association), The Star*. We have also used information from the following Afrikaan language newspapers: *Die Burger, Beeld, Volksblad*.

Supporting Information

Additional supporting information may be found in the online version of this article at the publisher's web site:

S1. Appendix Tables