

# Do Migrants Improve Governance at Home? Evidence from a Voting Experiment\*

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## Abstract

This paper tests the hypothesis that international migration experiences may promote better institutions at home by raising the demand for political accountability. In order to examine this question, we use a simple postcard voting experiment designed to capture the population's desire for better governance. Using data from a tailored household survey, we examine the determinants of voting behavior in our experiment, and isolate the positive effect of international emigration on the demand for political accountability. We find that this effect can be mainly attributed to the presence of return migrants, particularly to those who emigrated to countries with better governance.

**JEL Codes:** F22, O12, O15, O43, P16.

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# 1. Introduction

Recent research has examined the important role international migration may have for the development of origin countries. The positive effects for economic growth of international remittances, return migrants, diaspora effects promoting foreign investment and international trade, and even of emigration of the most educated have by now been rather well documented.<sup>1</sup> An important area that has not deserved the same share of attention is the role of international migration in the improvement of institutions, which can be crucial to economic development, as surveyed by Acemoglu et al. (2005).

The traditional perspective regards emigration as a “safety valve” or “outside option” that allows individuals unhappy with political institutions to leave their home country.<sup>2</sup> Emigration could therefore be detrimental to the quality of the domestic political system (a form of “brain drain”) by undermining the *demand* for political accountability, and also by hurting the capacity to *supply* better quality home institutions if those who leave are also those most capable of providing these services.

One can however argue that emigration may promote improved political institutions in several ways: current emigrants may create strong diaspora effects whereby they influence political change (via supply, i.e. by influencing local authorities, or via demand, for instance through intensified contact of the domestic population with better institutions abroad); if return emigrants benefited from an enriching experience abroad, these effects can also translate into improvements in the quality of the domestic political institutions (via supply, by direct participation in the political system, or via demand, by bringing increased awareness and demand for political accountability).

Theoretically, therefore, emigration might impact political institutions differently depending on the specific context in which it happens. This empirical question is very much unanswered in the current literature. In this paper we will test the hypothesis that

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<sup>1</sup> Evidence of the positive effects of remittances is provided, among others, by Edwards and Ureta (2003) for El Salvador, and Yang (2008) for the Philippines. Dustmann and Kirchkamp (2003) and Mesnard and Ravallion (2006) examine the role of return migration. Rauch and Trindade (2002), Kugler and Rapoport (2007) and Javorcik et al. (2007) evaluate the relationship between migrant networks, trade and FDI. The possibility of a ‘brain gain’ as opposed to traditional ‘brain drain’ claims is empirically supported by Beine et al. (2008) and Batista et al. (2009).

<sup>2</sup> Hirschman (1970) proposed the “exit” vs. “voice” dichotomy, according to which citizens unhappy with the domestic situation either choose to emigrate (exit) or to protest and contribute to political change (voice). In this setting that emigration may be understood as a “safety valve”, which releases protest intensity in the home political system and therefore reduces demand for political improvements.

international migration experiences promote better institutions at home by raising the *demand* for political accountability.

We propose to examine this research question using a simple postcard voting experiment designed to capture the population's demand for political accountability. Following a survey of perceived corruption in public services, respondents were asked to mail a pre-stamped postcard if they wanted the (anonymous) results of this survey to be made publicly available in the media. This was to happen if at least 50% of the survey respondents would mail the postcard back.

Using tailored data from a purposely designed and conducted household survey in Cape Verde, we are able to examine the determinants of voting behavior in our experiment, and to isolate the positive effect of international emigration on the demand for political accountability.

For this purpose, we consider a simple political economy framework, taking voting behavior as the outcome of an expected cost-benefit analysis. In this setting, we need to control for potentially varying voting costs (such as the distance to the post, or the easiness and frequency of posting mail) and for alternative characteristics affecting varying perceived voting benefits (such as confidence in surveyors, income or family structure). These variables are provided to us by our detailed survey, customized to examine this question.

Overall, we find that international emigration seems to positively impact the demand for improved political accountability. The effect of return migrants seems to be stronger than that of current migrants, and it is especially sizable for the case of migrants to countries with better governance.

Related empirical evidence on the impact of emigration on the quality of political institutions is scarce, but there are a few recent contributions. Docquier et al. (2009) present cross-country evidence showing that over the period 1975-2000 overall emigration seems to have positively impacted institutional quality in origin countries, although the effect of skilled emigration is ambiguous. Li and McHale (2009) provide a detailed description of possible mechanisms through which skilled emigration could affect political and economic institutions at home, and present cross-country evidence consistent with the view that over 1990-2006 there may indeed be such a positive effect on political institutions (particularly on political accountability), but not on economic

institutions. Spilimbergo (2009) offers related evidence on the effect of foreign-educated students in promoting democracy in their home countries. He uses evidence from 1960 to show that foreign education seems to promote democracy in home countries when it is acquired in democratic countries.

These empirical contributions are consistent with our results, but they cannot distinguish between supply and demand forces, nor capture the mechanisms underlying the identified effects because they use aggregate data. This paper uses tailored household survey data for a single country, which allows focusing more specifically on the impact of emigration on the demand for improved political accountability, while aiming at also discriminating between the impact of return and current migrants. This approach is made possible because we propose an original experimental measure of the desire for improved governance, which allows us to rely on within country level variation, instead of the traditional cross-country source of variation. The contributions made by these different lines of work are necessarily distinct, but we believe complementary.

In the remainder of the paper, we begin by presenting an overview of our country of interest, Cape Verde, as our results should be understood in the setting where the postcard experiment was conducted. In section 3, we then turn to presenting our experimental design, while describing the theoretical framework supporting our empirical strategy. Section 4 presents the tailored household survey used in our empirical work, including the main descriptive statistics. These data are then used to perform the empirical analysis with results presented and discussed in section 5. Section 6 presents concluding remarks.

## **2. Cape Verde: a short introduction to the country**

Cape Verde is a nine-island country off the coast of West Africa with 441,000 inhabitants, according to the latest INE (2002) census. Its population is concentrated particularly in the capital island of Santiago, but is overall very homogeneous in religious and ethnic terms, particularly relative to sub-Saharan standards: the index of religious fractionalization as computed by Alesina et al. (2003) is 7.66%<sup>3</sup> (corresponding to 96% of the population being Roman Catholic); whereas the ethnolinguistic fractionalization index takes the value 41.74% (comparable to countries such as Spain or New Zealand, and in contrast

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<sup>3</sup> This index is computed as one minus the Herfindahl index of group shares, and expresses the probability that two randomly selected individuals from a population belong to different groups.

with the top fractionalization observed in 20 sub-Saharan countries where the index takes value of more than 80%).

In terms of institutional history, the country was a Portuguese colony until 1975, when it became independent and a socialist regime was put in place - a common trend in Lusophone Africa at this time. The first free elections only occurred in 1991, but a stable democracy has been in place thereafter. In addition, the country benefits from very good governance, particularly for sub-Saharan African standards: Cape Verde ranks 47th out of 180 countries in Transparency International's Corruption Perceptions Index for 2008, only (slightly) behind Botswana and Mauritius; the country was awarded the Best Control of Corruption in Sub-Saharan Africa in 2005, again after Botswana, by the World Bank.

In terms of economic performance, the country is currently ranked by the World Bank as a "Lower Middle-Income" economy, and had a GDP per capita of 5900 PPP-Adjusted Dollars in 2003, according to Heston et al. (2006). Its economic growth performance clearly exceeded the Sub-Saharan African average for GDP per capita growth over 1980-2004 of 0.6%, again according to Heston et al. (2006). Indeed, Cape Verde was the third fastest country in terms of per capita growth out of the 45 sub-Saharan countries in Heston et al. (2006), after Equatorial Guinea (11% average annual growth rate) and Botswana (5%), both these countries being rich in natural resources and with exports accounting for a large fraction of their GDP (47% and 55%, respectively). Cape Verde stands out growing at an average annual rate of 4.4% (4.1% over 1981-1990, 5.8% over 1991-2000) but with exports accounting for only 20% of its GDP and no natural resource abundance - rather the opposite, as droughts and famines were recurrent characteristics of the country's history.

Indeed, droughts and famines were closely related to the massive emigration phenomenon that characterizes this country. According to estimates from Batista et al. (2009), based on adjusted data for the stock of immigrants in most destination countries, there are around 100,000 Cape Verdean current emigrants, or about 23% of the population. An additional striking feature of Cape Verdean emigration is the magnitude of "brain drain": according to Docquier and Marfouk (2006), 67.5% of the educated labor force of Cape Verde lives abroad. This is arguably the largest such number in the African continent, although these results have been qualified by Batista et al. (2009) as depending particularly on the definition of educational attainment. Finally, the magnitude of international remittances received in Cape Verde is impressive: international remittances account for 16% of GDP

over 1987-2003 (World Bank, 2006), according to official numbers, likely underestimated, as they do not include informal channels (neither legal nor illegal). This magnitude is also especially important given its large relative scale compared to aid and foreign direct investment inflows – international remittances have always surpassed FDI and have been close to the level of foreign aid, particularly since 2000.

### **3. Experimental design and empirical strategy**

#### **Postcard experiment**

This paper examines the hypothesis that international emigration may contribute to promote the demand for better governance at home. To empirically evaluate this hypothesis, an experiment was conducted such that individual respondents to a survey on perceived corruption in public services were offered the opportunity to make the (anonymous) results of this survey publicly available in the national media for political accountability purposes.

In order to have the survey results publicized in the media, survey respondents were invited to participate in a “special referendum” immediately after they finished responding to the corruption questionnaire. They were offered the opportunity to vote for political accountability by taking the incentive-compatible voting action of mailing a pre-paid postcard. The postcard read “*I wish that the conclusions of the survey on the quality of national public services (health, education, justice,...), conducted by the University of Oxford (UK) in the first months of 2006 to 1000 households in the islands of Santiago, São Vicente, Santo Antão, and Fogo, are made public in the Cape Verdean media.*”<sup>4</sup>

The results on perceived corruption in public services were to be made public if 50% or more of the postcards were received back. To add credibility to the experiment, a ‘Media Contract’ was emphasized by a series of news and interviews broadcasted or published in the national television, radio and newspapers while the survey was being conducted in the country.<sup>5</sup>

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<sup>4</sup> See the Appendix for a scan of the original postcard in Portuguese.

<sup>5</sup> In particular, these were the news pieces broadcasted and published:

- National Television Station - RTC - news broadcasted in the main prime-time news at 8pm (24/01/06);
- Radio Nova - interview broadcasted in news (24/01/06);
- National Radio – interview broadcasted in the news (24/01/06);
- Radio Comercial - news based on press note (24/01/06);
- Newspaper Expresso das Ilhas - news based on press note and Radio Nova interview (25/01/06);

## Theoretical framework

In order to test whether international emigration increases the desire for political accountability at home, one needs to begin by setting a framework to understand the determinants of voting in our postcard experiment.

Political economy theories of turnout and voting potentially relevant for our purposes are in large number, as surveyed by Merlo (2006). Following the traditional literature on electoral participation, we model voter turnout as the outcome of an expected cost-benefit analysis.<sup>6</sup>

Since the postcard distributed to the survey respondents was pre-stamped, the cost of voting in our experiment has to do with the opportunity cost of mailing the postcard. This cost potentially depends on how familiar the individual is with posting mail, and how practical it is for the individual to post mail – individuals who are not used to posting mail or for whom it is harder to post mail will likely face higher costs; the same applying to individuals with higher labor income.

The expected benefit of mailing the postcard has to do with a desire for political accountability and this is the main focus of our analysis. However, the literature emphasizes that we should note the *expected* nature of an individual's benefit calculation. Crucially, survey respondents who are more confident about the trustworthiness and independence of the foreign institution sponsoring the survey (as well as about the reliability of the Cape Verdean postal system) will likely attribute a higher probability to the public dissemination of the results on perceived corruption.

The perceived benefit is finally a function of other variables directly affecting the desire for political accountability. We are most interested in the effect of international emigration, but we will need to take into account factors like gender, age, education, wealth, or family ties (see, for instance, Alesina and Giuliano, 2009).

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• Newspaper A Semana, based on an interview (26/01/06).

For additional details and evidence, see <http://www.csae.ox.ac.uk/resprogs/corruption/cv/cv.htm>.

<sup>6</sup> Downs (1957) first provided a 'calculus of voting' framework, which was later formalized by Tullock (1967) and Riker and Ordeshook (1968). Note that because of the simple nature of our voting experiment (i.e. a simple decision of whether to vote or not), we can abstract from strategic voting considerations and safely assume sincere voting behavior.

## Empirical strategy

The voting decision of an individual respondent to our survey can be summarized by the following latent variable model:

$$V_i = 1 (V_i^* \geq 0)$$

$$V_i^* = \alpha_0 + \alpha_1 M_i + \alpha_2' X_i + \varepsilon_i$$

According to this model, the decision to vote (and therefore demand for better political accountability) made by an individual  $i$  is given by  $V_i = 1$ . This voting decision will occur whenever the (unobserved) expected *net* benefit from voting,  $V_i^*$ , is positive.

The expected net benefit from voting first depends on the local emigration history,  $M_i$ , with impact  $\alpha_1$  on voting behaviour, which will turn out to be our main estimate of interest.<sup>7</sup>

Second, a vector of individual, household and locality characteristics  $X_i$  determines costs and benefits of mailing the voting postcard. This vector includes individual demographics (e.g. age as a determinant of the easiness to mail the postcard, but also of the demand for accountability), and individual controls for how familiar someone is with posting mail, and how practical this is for her. In addition, there is an individual indicator of confidence in the foreign institution sponsoring the survey and experiment. At the household level, vector  $X_i$  includes variables such as family structure and asset ownership, which are likely determinants of an individual's subjective valuation of the benefit of improved governance. At the locality level, we control for the average expenditure per capita, which may again influence the perceived benefit of better governance. All regressions also include island fixed effects.

We estimate this empirical model using probit regressions. The source of variation that allows us to identify our main coefficient of interest,  $\alpha_1$ , is variation of voting behaviour across different localities, after controlling for a number of individual, household and local level characteristics.

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<sup>7</sup> Note that the concept of locality is that of a census area in Cape Verde, which would roughly correspond to a small neighborhood where one would expect social interaction to occur.

## **4. Data description: tailored household survey**

### **Household Survey Design and Conduction**

Our empirical work is based upon a household survey on migration and the quality of public services purposely designed to answer our research questions. The survey was conducted in Cape Verde from December 2005 to March 2006 by the authors, who were affiliated to the University of Oxford.

The survey questionnaire was submitted to a representative sample of 1066 resident households (997 complete interviews) in 5% of the 561 census areas of Cape Verde. This sample provided information on both resident non-migrants and return migrants, and also on a large sample of current emigrants. The questionnaire included two modules: one on perceived quality/corruption of public services; and the other on migration characteristics (including full migration histories) of the household. The interviewed household representative (someone aged at least 30 years old) was asked to specify socio-demographic characteristics of all members of the household, including children who already lived elsewhere. Moreover, he was asked to characterize all migration spells within the household, including who emigrated, where and when. Finally, there were some questions regarding the economic situation of the household such as living standards, income or whether any member of the family received remittances in the previous year. The English translation for the full questionnaire is available at

<http://www.csae.ox.ac.uk/resprogs/corruption/cv/questcveng.pdf>.

The tailored data collection consisted of survey (face-to-face) interviews conducted by teams of local interviewers and the authors, who recruited and trained the local teams making sure that each interviewer had at least a total of 18 hours of training in groups of 2-3 individuals. Training included lectures on the content/objectives of the survey; answering the questionnaire; and piloting (at least once per interviewer).

The sampling process was such that sampled census areas were chosen randomly weighting by the number of households, and households within a census area were chosen randomly using standard techniques (nth house, with second visits tried in the same day). The eligibility condition for a household to be interviewed was family residence in the country anytime in 1985-2006. The requirement condition for a respondent within a household to be interviewed was to be aged at least 30 years old.

There are two imperfections to the random sampling of households in the survey. One is differences in attempted interviews in the different census areas, and the other is non-responses. We use weighted data to account for these problems, although differences to unweighted data are negligible. Data collected from non-respondents on their gender, approximate age, approximate schooling, and approximate income are used for this purpose.

Additional details on the fieldwork and survey can be found at

<http://www.csae.ox.ac.uk/resprogs/corruption/cv/cv.htm>.

### **Descriptive Statistics**

In this section we briefly characterize the information from our household survey. The results in Table 1 show that, relative to residents in Cape Verde, current emigrants tend to be slightly disproportionately males and in their prime-working years (21-50 years old). They are also more likely to have post-secondary education. Return migrants are strongly disproportionately males (both in comparison with residents and current migrants) and are mostly aged over 50 years old. They tend to be less educated than current migrants, but still overperform residents in terms of the likelihood of a post-secondary education.

As can be seen from Table 2, the figures for migration flows are relatively close to the percentages that are found in the last INE (2002) census for the period 1995-2000, both for migrant outflows and returns. These numbers are about 4% of residents for the annual outflows of emigrants; and 20% of emigrants for the return flows of emigrants.

Table 3 displays the main destinations for Cape Verdean emigrants. According to both our survey and the INE (2002) census, Portugal and the USA account for respectively about 55% and 20% of the total emigration flows.

Finally, we should note that in the end only 43% of the postcards were returned to us.

## **5. Empirical results**

In this section, we summarize the main empirical results in this paper. In particular, we present, interpret and discuss the robustness of our estimates of a ‘demand for political accountability gain’ arising from the presence of international emigration.

Column (1) in Table 4 presents the baseline estimation of the probability of a given survey respondent mailing the postcard she was given. Without controlling for any other covariates (except for urban locality and island fixed effects), there seems to be a striking statistically significant difference between the postcard voting probability of localities with more and less migrants relative to residents (+1.07pp in the probability of voting for each additional 1pp in the local fraction of emigrants, including both current and return migrants). Controlling for a number of individual and household level relevant covariates, columns (2-4) in Table 4 show how the observed voting differences are basically kept. The signs of all significant coefficients are as expected and do not vary as additional controls are included. Column (5) shows what happens when the average per capita expenditure in a locality is added as a control: it reduces the estimated coefficient to 0.71. This may be understood as evidence that in the absence of this control, international migration was proxying for important local financial characteristics, which raises the question of whether international remittances may matter as determinants of the desire for better governance. The results in column (6) show that this does not seem the case: including the local proportion of households receiving international remittances has an economic and statistically insignificant impact and does not affect the estimated coefficients and significances of the other posting determinants included in the regression.

Our baseline estimates are therefore presented in column (5) of Table 4. An interesting effect is that of a strong negative income/wealth effect on the demand for more accountability. Having annual labor income with a negative estimated coefficient would be difficult to interpret directly as a negative income effect as this could simply be proxying the opportunity cost (time value) of mailing the postcard. However, this effect also shows strongly for asset ownership: wealthier people seem to value less the benefits of political accountability. At the local level, though, the results consistently point to the average expenditure per capita as positively influencing postcard mailing behavior.

Table 5 presents the results of using different proxies for the cost of mailing the postcard and the trustworthiness of doing so. Column (1) presents our baseline. Columns (2) to (5) show that the sign, significance and magnitude of the different estimated coefficients on local international emigration do not seem to be strongly affected by the choice of these controls. In fact, none of these controls ever becomes statistically significant in our estimated specifications. This is consistent with the idea that, although incentive-compatible, the costs of mailing the voting postcard are of small importance.

Table 6 investigates whether the probability of mailing a postcard may depend on actual experience and perception of corruption by survey respondents. Indeed, we find this to be the case: those who perceive more corruption in the health and education sectors (those with whom most respondents had contact with) are significantly more likely to mail the postcard. The impact of perceived corruption slightly affects the magnitude and significance of the impact of international emigration, but it does so in a way that is not systematically upward or downwards. Overall, the sign, order of magnitude and broad statistical significance of the effect of international migration are kept throughout the different specifications.

Given the existing evidence on “brain gain”, namely as found by Batista et al. (2009), we must address the question of whether local education affects the way local international migration generates a desire for political accountability. Table 7 addresses this question. Comparing with the baseline column (1), columns (2)-(3) show that considering local educational attainment (namely intermediate secondary and secondary schooling) basically does not change the sign, magnitude and statistical significance of the impact of local migration on the demand for political accountability. Post-secondary education, however, increases both the size and magnitude of the migration effects, although the positive coefficient on post-secondary education is not significant at conventional levels, as can be seen in column (4).

Column (1) in Table 8 again presents our baseline. This compares to the separate effects of local migrants to Portugal and the US displayed in column (2). The results are striking in that only emigrants to the US seem to have had a sizable and significant impact on the desire for better governance. This result should be understood in light of the latest Transparency International (2009) cross-country governance ranking: the US are placed 19<sup>th</sup> in the world, whereas Portugal is ranked 35<sup>th</sup> and Cape Verde 46<sup>th</sup>. This evidence can be interpreted as the experience of emigrants to the US being more conducive to promoting demand for better governance than that of emigrants to Portugal.

Finally, in column (3) of Table 8, we distinguish between the effects of current and return migrants. The results are striking: the magnitude and significance of effects are much higher for return than for current migrants, regardless of their country of destination. This is an intuitive result, as the actual presence of individuals with migrant experience is more likely to induce effects in their community of residence after their return than while they are still away. Note also that the effects of both return and current migrants to the United States are positive, whereas the effect of migrants returning from Portugal is actually negative. To

interpret this negative result, one should bear in mind that the baseline destinations against which migrants to the US and Portugal are being compared are mostly European, such as France and the Netherlands, which rank closer to the US in terms of governance.

In summary, the evidence we gathered points to international emigration to countries with good governance (and in particular the presence of return migrants) to promote the demand for political accountability in origin countries. We focus on impacts at the locality level, where one would expect social interaction to occur. This effect should be broader and more meaningful than simply considering migration at the household level, which would also introduce a selection problem to the analysis.<sup>8</sup> Our findings are consistent with strong social effects of international migration in promoting demand for political accountability, in addition to simple household level effects. Unfortunately, we miss data on social networks, which could allow us to further investigate this line of thought.

## **6. Concluding remarks**

This paper aims at contributing to the understanding of a largely unmeasured but extremely important potential effect of international emigration: the impact of migration on institutional quality, which likely acts as a determinant of economic growth.

Our findings point to an overall positive impact of international emigration on the demand for improved political accountability in the country of origin we study. In particular, our results emphasize the importance of the destination country of migrants: effects are stronger for migrants to countries with better governance. Our work also indicates a stronger impact of return migrants actually back to the origin country, relative to current emigrants which can only indirectly influence their networks in the home country.

We naturally recognize that international emigration likely affects the supply side of domestic political institutions as well, a part of the lively ongoing “brain drain” vs. “brain gain” debate. Effects could presumably be negative if there is positive selection in current emigration flows or could be positive in presence of skilled return migrants. This is a very interesting empirical question that we leave for future research.

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<sup>8</sup> We nevertheless estimated the instrumented effect of household migration on the demand for better governance and also found positive effects, although not statistically significant. These results are available from the authors upon request.

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## Tables

Table 1: Characteristics of Cape Verdean individuals depending on migrant status.

	Non-Migrants	Current Migrants	Return Migrants
Gender			
Male	47.95%	51.99%	64.46%
Age			
0-10 years	21.39%	0.35%	2.42%
11-20 years	28.63%	11.19%	4.85%
21-30 years	12.91%	33.92%	5.45%
31-40 years	13.05%	25.00%	17.58%
41-50 years	10.14%	20.45%	15.76%
51-60 years	4.44%	8.04%	11.52%
61-70 years	4.24%	0.87%	18.79%
71-80 years	3.80%	0.17%	20.61%
81-90 years	1.19%	0.00%	3.03%
>91 years	0.02%	0.00%	0.00%
Education (males aged 15-64)			
No Education	3.72%	3.6%	5.2%
Pre-school	1.54%	0.7%	0.0%
Alphabetized	11.35%	8.2%	14.3%
Primary	59.69%	62.4%	50.7%
Intermediate Secondary	18.79%	9.9%	19.5%
Secondary	1.12%	0.4%	3.9%
Post-Secondary	3.78%	14.9%	6.5%

Source: Own survey.

Table 2: Migration flows.

	Own Survey	International Censuses
Flow of emigrants as % of residents in Cape Verde		
Between 2000 and 2005	3.96%	
Between 1995 and 2000		2.80%
Flow of return migrants as % of current emigrants		
Between 2000 and 2005	19%	
Between 1995 and 2000		25%

Source: Own survey, INE (2002) and international censuses of destination countries (Portugal, United States, France, Netherlands, Luxembourg, Italy and Spain) from Ruggles et al. (2004).

Table 3: Main destinations of Cape Verdean emigrants. Percentage of total emigration flows.

	Own Survey 2000-2005	Cape Verde Census 1995-2000
Portugal	54	55
US	21	19
France	12	8
Netherlands	2	5
Luxemburg	2	-
Brazil	3	-
Other	6	13

Source: Own survey and INE (2002).

Table 4: Probability of mailing voting postcard. Marginal effects of probit regressions.

	(1)	(2)	(3)	(4)	(5)	(6)
<i>Local proportion of international migrants</i>	1.0679 (0.3118)***	1.0131 (0.3475)***	1.0629 (0.3584)***	1.0724 (0.3510)***	0.7094 (0.3128)**	0.7082 (0.3080)**
<i>Trust in Oxford University</i>		0.0050 (0.0231)	0.0202 (0.0230)	0.0228 (0.0226)	0.0305 (0.0239)	0.0305 (0.0238)
<i>Habit of posting</i>		0.0079 (0.0127)	0.0107 (0.0127)	0.0100 (0.0127)	0.0079 (0.0132)	0.0079 (0.0132)
<i>Male</i>			-0.0851 (0.0480)*	-0.0928 (0.0467)**	-0.0774 (0.0471)	-0.0774 (0.0472)
<i>Age</i>			0.0210 (0.0135)	0.0161 (0.0143)	0.0144 (0.0141)	0.0145 (0.0142)
<i>Age<sup>2</sup></i>			-0.0002 (0.0001)	-0.0002 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
<i>Individual labor income</i>			-0.0002 (0.0001)**	-0.0002 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**
<i>Number of children</i>				0.0205 (0.0120)*	0.0219 (0.0123)*	0.0219 (0.0123)*
<i>Household asset ownership</i>				-0.1401 (0.0626)**	-0.1266 (0.0639)**	-0.1266 (0.0641)**
<i>Local average expenditure per capita</i>					1.4084 (0.5794)**	1.4056 (0.6284)**
<i>Local proportion of households receiving international remittances</i>						0.0180 (1.0638)
<i>Observations</i>	472	458	455	452	452	452

Urban locality dummy and island fixed effects included in all regressions.

Robust standard errors in parentheses, clustered at locality level.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 5: Probability of mailing voting postcard. Marginal effects of probit regressions.

	(1)	(2)	(3)	(4)	(5)
<i>Local proportion of international migrants</i>	0.7094 (0.3128)**	0.6728 (0.3101)**	0.5663 (0.3436)*	0.6137 (0.3214)*	0.6859 (0.3129)**
<i>Trust in Oxford University</i>	0.0305 (0.0239)	0.0433 (0.0285)	0.0339 (0.0242)	0.0271 (0.0243)	0.0320 (0.0249)
<i>Habit of posting</i>	0.0079 (0.0132)	0.0074 (0.0136)	0.0055 (0.0135)	0.0049 (0.0143)	0.0062 (0.0129)
<i>Confidence in postal system</i>		-0.0150 (0.0258)			
<i>Time distance to postbox</i>			-0.0016 (0.0134)		
<i>Comfort in posting mail</i>				0.0123 (0.0146)	
<i>Waits to walk by postbox</i>					-0.0682 (0.1899)
<i>Gives (taxi) driver to post</i>					0.1656 (0.1649)
<i>Gives to family member to post</i>					0.0737 (0.1341)
<i>Gives to mailman</i>					0.3592 (0.2662)
<i>Goes to postbox on purpose</i>					0.0811 (0.1103)
<i>Male</i>	-0.0774 (0.0471)	-0.0794 (0.0473)*	-0.0726 (0.0470)	-0.0802 (0.0474)*	-0.0800 (0.0486)*
<i>Age</i>	0.0144 (0.0141)	0.0155 (0.0146)	0.0154 (0.0140)	0.0162 (0.0141)	0.0155 (0.0141)
<i>Age<sup>2</sup></i>	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0002 (0.0001)	-0.0002 (0.0001)
<i>Individual labor income</i>	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**
<i>Number of children</i>	0.0219 (0.0123)*	0.0233 (0.0130)*	0.0213 (0.0122)*	0.0218 (0.0127)*	0.0219 (0.0124)*
<i>Household asset ownership</i>	-0.1266 (0.0639)**	-0.1678 (0.0626)***	-0.1227 (0.0637)*	-0.1494 (0.0596)**	-0.1237 (0.0638)*
<i>Local average expenditure per capita</i>	1.4084 (0.5794)**	1.4070 (0.5975)**	1.5009 (0.6310)**	1.3869 (0.5879)**	1.4307 (0.5767)**
<i>Observations</i>	452	435	443	445	451

Urban locality dummy and island fixed effects included in all regressions.

Robust standard errors in parentheses, clustered at locality level.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 6: Probability of mailing voting postcard. Marginal effects of probit regressions.

	(1)	(2)	(3)
<i>Local proportion of international migrants</i>	0.7094 (0.3128)**	0.5915 (0.3280)*	0.9314 (0.3355)***
<i>Perceived corruption in health sector</i>		0.0379 (0.0149)**	
<i>Perceived corruption in education sector</i>			0.0393 (0.0147)***
<i>Trust in Oxford University</i>	0.0305 (0.0239)	0.0393 (0.0263)	0.0323 (0.0263)
<i>Habit of posting</i>	0.0079 (0.0132)	0.0021 (0.0136)	0.0054 (0.0138)
<i>Male</i>	-0.0774 (0.0471)	-0.0726 (0.0539)	-0.0855 (0.0534)
<i>Age</i>	0.0144 (0.0141)	0.0147 (0.0152)	0.0069 (0.0158)
<i>Age<sup>2</sup></i>	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
<i>Individual labor income</i>	-0.0003 (0.0001)**	-0.0002 (0.0001)*	-0.0002 (0.0001)**
<i>Number of children</i>	0.0219 (0.0123)*	0.0200 (0.0137)	0.0332 (0.0148)**
<i>Household asset ownership</i>	-0.1266 (0.0639)**	-0.1746 (0.0565)***	-0.0989 (0.0646)
<i>Local average expenditure per capita</i>	1.4084 (0.5794)**	1.3969 (0.5919)**	1.4946 (0.6112)**
<i>Observations</i>	452	426	400

Urban locality dummy and island fixed effects included in all regressions.

Robust standard errors in parentheses, clustered at locality level.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 7: Probability of mailing voting postcard. Marginal effects of probit regressions.

	(1)	(2)	(3)	(4)
<i>Local proportion of international migrants</i>	0.7094 (0.3128)**	0.7158 (0.3119)**	0.6921 (0.3260)**	0.7835 (0.2969)***
<i>Local ratio of population completing relative to population not completing intermediate secondary schooling</i>		0.0594 (0.2055)		
<i>Local ratio of population completing relative to population not completing secondary schooling</i>			-0.1379 (0.2530)	
<i>Local ratio of population completing relative to population not completing university education</i>				1.2626 (0.9505)
<i>Trust in Oxford University</i>	0.0305 (0.0239)	0.0307 (0.0241)	0.0294 (0.0238)	0.0326 (0.0237)
<i>Habit of posting</i>	0.0079 (0.0132)	0.0078 (0.0133)	0.0079 (0.0132)	0.0077 (0.0133)
<i>Male</i>	-0.0774 (0.0471)	-0.0765 (0.0474)	-0.0781 (0.0470)*	-0.0782 (0.0477)
<i>Age</i>	0.0144 (0.0141)	0.0142 (0.0141)	0.0148 (0.0142)	0.0147 (0.0143)
<i>Age<sup>2</sup></i>	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
<i>Individual labor income</i>	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**
<i>Number of children</i>	0.0219 (0.0123)*	0.0221 (0.0124)*	0.0214 (0.0124)*	0.0232 (0.0125)*
<i>Household asset ownership</i>	-0.1266 (0.0639)**	-0.1268 (0.0637)**	-0.1244 (0.0643)*	-0.1346 (0.0652)**
<i>Local average expenditure per capita</i>	1.4084 (0.5794)**	1.2486 (0.7790)	1.6259 (0.7650)**	0.7374 (0.7782)
<i>Observations</i>	452	452	452	452

Urban locality dummy and island fixed effects included in all regressions.

Robust standard errors in parentheses, clustered at locality level.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

Table 8: Probability of mailing voting postcard. Marginal effects of probit regressions.

	(1)	(2)	(3)
<i>Local proportion of international migrants</i>	0.7094 (0.3128)**		
<i>Local proportion of migrants to Portugal</i>		0.2808 (1.1098)	
<i>Local proportion of migrants to US</i>		2.3031 (1.0107)**	
<i>Local proportion of current migrants to Portugal</i>			0.9778 (1.3133)
<i>Local proportion of return migrants to Portugal</i>			-5.2183 (2.6664)*
<i>Local proportion of current migrants to US</i>			0.0671 (2.6015)
<i>Local proportion of return migrants to US</i>			4.8899 (2.0178)**
<i>Trust in Oxford University</i>	0.0305 (0.0239)	0.0327 (0.0232)	0.0288 (0.0228)
<i>Habit of posting</i>	0.0079 (0.0132)	0.0085 (0.0139)	0.0101 (0.0139)
<i>Male</i>	-0.0774 (0.0471)	-0.0699 (0.0475)	-0.0720 (0.0471)
<i>Age</i>	0.0144 (0.0141)	0.0152 (0.0145)	0.0152 (0.0144)
<i>Age<sup>2</sup></i>	-0.0001 (0.0001)	-0.0001 (0.0001)	-0.0001 (0.0001)
<i>Individual labor income</i>	-0.0003 (0.0001)**	-0.0003 (0.0001)**	-0.0003 (0.0001)**
<i>Number of children</i>	0.0219 (0.0123)*	0.0229 (0.0124)*	0.0225 (0.0123)*
<i>Household asset ownership</i>	-0.1266 (0.0639)**	-0.1195 (0.0626)*	-0.1201 (0.0635)*
<i>Local average expenditure per capita</i>	1.4084 (0.5794)**	1.2555 (0.5903)**	1.1474 (0.5994)*
<i>Observations</i>	452	452	452

Urban locality dummy and island fixed effects included in all regressions.

Robust standard errors in parentheses, clustered at locality level.

\* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%

## Appendix: Postcard



Nº 000977

Desejo a divulgação nos Orgãos de Comunicação Social de Cabo Verde dos resultados do inquérito sobre qualidade dos serviços públicos nacionais (de saúde, educação, justiça,...) que a Universidade de Oxford (Reino Unido) realizou nos primeiros meses de 2006 a cerca de 1000 famílias nas ilhas de Santiago, São Vicente, Santo Antão e Fogo.

Para: Universidade de Oxford  
Departamento de Economia/CSAE

Achada Santo António  
C. P. 306-A  
Praia  
Cabo Verde

PORTE PAGO  
PORT PAYÉ

ESTE CARTÃO POSTAL TEM PORTE PAGO  
NÃO PRECISA DE SELO