Return Intentions of Irregular Migrants and Skills: the Perverse Effect of the Brain Waste*

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Abstract

In this paper we show that highly skilled illegal migrants may decide to return home more likely than migrants with low or no skills when illegality causes "brain waste", i.e. lower ability of exploiting individual abilities both in the labor and the financial markets. This result is in contrast with common wisdom on return migration, according to which low-skill individuals are more likely to go back to the home country rather than high-skill migrants. The theoretical model is tested with a data set on a sample of 920 illegal migrants crossing Italian borders in 2003. The estimation results confirm that highly skilled illegal migrants are more willing to return home. Moreover, a higher probability of being granted legal status (as it happens for asylum seekers rather than clandestines) lessens the intention to return.

1 Introduction

The debate on illegal migration in the developed world is capturing a great deal of public attention. The mounting dimension of the phenomenon is a direct consequence of the tightening of immigration laws in most OECD countries. In fact, instead of decreasing the size of immigration flows, this policy is having the effect of increasingly shifting the balance from legal to illegal migration.[1] In terms of economic and social impact for both receiving and sending countries this pattern

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[1]According to recent estimates of the INS the total unauthorized immigrant population residing in the United States in January 2000 was about 7.0 million; from 1990 to 1999 from 350.000

is far from being neutral. Given the different set of incentives and constraints faced by legal and illegal migrants we might easily expect significant differences in their migratory behavior. Nevertheless, while there is a number of contributions in the literature on legal migration, the phenomenon of illegal migration has been scarcely analyzed, mainly because of the severe lack of data.

In this paper, we aim to shed some light on return migration, and in particular on return decisions of illegal migrants. Generally, return migration is important for both the country of origin and the host country. Since return migrants mostly carry capital, knowledge and entrepreneurship to developing countries, countries of origin are interested in understanding both the determinants of the return choice and the individual characteristics of those who decide to return. On the other hand, in order to provide a correct design of immigration policies, the analysis of the individual behavior of migrants (i.e. getting information on plans and future expectations) is also essential for destination countries. This is valid for both legal and illegal migrants, although the latter ones must consider both the possibility of being apprehended, but also the probability of being granted legal status (e.g. as asylum seeker or for a general amnesty).

Our analysis focuses on illegal migrants for whom illegality is originally designed in economic terms as a *brain waste* effect, i.e. a tax that impinges the positive outcome of skills on both individual income and savings. In particular, we analyze two main aspects of the choice of return for illegal entrants: the effect of individual skills and the effect of possibly being granted a legal status.

Regarding the relationship between skills and return intentions, most literature has focused on legal migrants. Many studies have emphasized that migrants are not randomly selected but generally represent the upper tail of the skills distribution of the population in the countries of origin (see Borjas et al. 1992; Chiswick 2005). Since migration is a particularly costly investment, only the most capable, entrepreneurial and risk prone individuals usually undertake such an investment. The existing empirical research almost unanimously concludes that return migration is more likely for low-skills individuals and reinforces the positive self-selection of the migrants (Borjas et al. 1996; Dustmann 1993, 2003a, 2003b; Reagan and Olsen, 2000).

However, given the different constraints that legal and illegal entrants face, what is found to apply to the legal migrants is likely to be inappropriate for the illegal ones. As generally acknowledged, although one of the most common motives for migration is the necessity to accumulate assets (which will be subsequently employed in productive activities) an illegal entrant is generally less capable to

to 500.000 illegal migrants where crossing the US borders annually. Estimates of illegal migration flows to Europe (EU-15) in 2001 are up to 650.000 according to a recent study by Jandl (2003), (100.000 of them in Italy).

fully exploit her skills and human capital. Moreover, the illegal status hinders the migrant's access to many markets and institutions in the host country (including financial markets), which are instead fully available to legal migrants. Once that an individual has migrated, being illegal makes individual skills less effective than in the home country, for instance because she has to uniquely resort to the shadow economy. As a consequence, the *brain waste* effect, typically related to the illegal status, might be particularly strong for those who are the most skilled and educated among the illegal entrants. Then, we might expect that the opportunity cost of returning to the country of origin might be substantially lower for the skilled individuals than for the unskilled ones.

With respect to the probability of being granted legal status and its consequences on the return choice, this is strictly applicable to illegal migrants. Indeed, it is important to distinguish two broad classes of illegal aliens, asylum seekers and clandestine immigrants, which differ in two important respects: their desire/ability to live in the open vs. staying hidden; their wish/faculty to return to the home country vs. residing permanently in the country of immigration. On the former, asylum seekers have a motivation to notify their presence to the authorities of the receiving country, whereas clandestine immigrants shy away official contacts and tend to live working quietly. As to return migration, this is an option open to clandestine immigrants but instead generally unavailable to asylum seekers, at least until major events change the situation in the country of origin. While both asylum seekers and clandestine immigrants face the real risk of repatriation, for the latter group this risk is more pronounced.[2] Different probability of being expelled together with different incentives to being "visible" in the country of destination will have a likely effect on labor market performance of illegal migrants, for instance their ability to gain good employment opportunities and length of unemployment spells. The effect on the return choice of different probabilities of being granted legal status is studied in this paper by comparing the distinctive attitudes of (the high-probability) asylum seekers vs. (the low-probability) clandestine immigrants.

The contribution of this paper is twofold. First, we provide a theoretical model that links skills, probability of getting legal residence and magnitude of the brain waste effect to the return decision of illegal migrants. Second, thanks to the availability of an unique data set, we empirically test the main implications of our theoretical specification.

In the theoretical model, the illegal migrant is already in the host country and has to decide whether to stay or to return in the second period. Average wages and rates of return are higher in the host country, but the illegal migrant must bear

[2]On one hand, clandestine immigrants will be generally repatriated upon apprehension, an event that might materialize with some positive probability. On the other hand, the outcome of the generally long and complex procedure deciding on their request might be unfavorable to asylum seekers, in which case they would also be repatriated.

the cost of illegality, i.e. the *brain waste* effect that affects relatively stronger high-skill individuals rather than low-skill ones. Average wages and financial returns are lower in the home country, but no brain waste occurs. This trade off characterizes the return choice of the illegal migrant, together with the probability of being granted legal status in the second period and avoid the brain waste effect.

We mainly find that: (i) the probability of returning in the home country is an increasing function of the individual level of skills; and (ii) an increasing probability of being granted a legal status has a negative effect on the return propensity.

These implications are tested using a data set on a sample of 920 illegal migrants who crossed the Italian borders in 2003. One of the most important features of these data is that they contain information on the migrants' expectations "at the gate" concerning with their intentions to return, together with many other characteristics (e.g. intentions to remit, expectations on future income, employment, legal status, characteristics of the origin village etc.). Indeed, using this data set we are able to quantify the effects of skills and education and other relevant variables on the return choice.

Empirical results confirm the main findings of our theoretical model and, in particular, they highlight the important role of individual skills in increasing the choice of return for illegal migrants. Also, the possibility of being granted a legal status has a significant role on the probability of return.

To the best of our knowledge, this is the first contribution in the direction of knowing more on the relationship between skill characteristics and return attitudes for illegal migrants, who are by far outnumbering legal migrants.

The paper is organized as follows. Section 2 presents the theoretical model of return plans of irregular migrants with heterogeneous level of skills. Section 3 describes the main characteristics of data set employed to test the theoretical model. Section 4 reports and discusses the results of the empirical analysis. Lastly, Section 5 concludes with some general remarks and suggestions for further research.

2 The model

Consider a population of illegal migrants with heterogeneous level of skills from the same source country A who have migrated to the host country B. Migrants skills are continuously distributed over an interval $[\underline{a}, \overline{a}]$ where $\underline{a}$ and $\bar{a}$ represent respectively the individuals with the lowest and highest skill level.

Individuals operate in a two-period world and are endowed with a unit of labor which is inelastically supplied in each of the two periods.[3]

[3]We assume that individual possess no capital at the beginning of the first period. In reality, it is often the case that migrants from less developed countries have a negative amount of wealth since they need to borrow from friends and relatives in order to pay for migration costs.

The migrants intertemporal utility function is defined over first- and second-period consumption and takes the following simple form:

$$U(c_1, c_2) = u(c_1) + \delta u(c_2) = \ln(c_1) + \delta \ln(c_2)$$

where δ is the discount factor.

In the first period individuals live and work in the host country B. Consumption of migrant j is:

$$c_1^j = w_1^j - s^j$$

where w_1^j is the first-period wage when working illegally in country B and s^j are her savings.

Given their status of illegal migrants in the host country B the rewards to human capital cannot be fully exploited: income earned in country B is increasing in the skill level but we assume that the skill premium is compressed because of illegality. More precisely, first period wages are given by the following equation:

$$w_1^j = a^j \tau w^B$$

where w^B is the exogenously given "normal" wage for a unit of labor in the host country.

Individual wages positively depend on individual skills but the status of illegal migrant makes those skills less effective. The parameter $\tau \in (0, 1]$ captures the magnitude of the *brain waste* effect associated with the status of illegal migrant. When $\tau \to 0$ illegal migration tends to be less and less rewarding for all illegal migrants and with a squeezing effect on the level of human capital, i.e. being uneducated and unskilled rather than having a PhD in Engineering does not change the returns from migration.[4] On the contrary, when $\tau = 1$ there is no brain waste and migrants' human capital is fully rewarded according to the skill content a^j.[5] In

[4] Even if $\tau = 0$ is implausible since the brightest and more skilled migrants are more likely to obtain the best opportunities, skills and formal qualification are of little use if you are an illegal migrant. Very often migrants employed illegally in highly unskilled and manual works – such as agricultural workers in developed countries – are highly skilled and educated individuals.

[5] Since all individuals found it profitable to migrate at the beginning of the first period and given that we abstract from differences in preferences for the location of consumption (associated for instance with relatively high preferences for home consumption) for any $a^j \in [\underline{a}, \overline{a}]$ the following inequality is satisfied:

$$\tau a^j w^B \geq a^j w^A \Longrightarrow \tau w^B - w^A \geq 0$$

where $w^A \left(< w^B\right)$ is the exogenously given "normal" wage for a unit of labor in the home country. In other words wage differentials more that compensate for the "brain waste" effect. Moreover, since we assume that illegal migrants have already chosen to live and work in the host country B in period 1, the condition above imposes either a lower bound to the percentage wage gap

other words, when $\tau = 1$ we assume that migration is legalized.

The parameter τ might be interpreted as the effect of the institutional framework within which illegal migration takes place on the individual's ability to use the stock of human capital accumulated at home. The degree to which it is possible for the migrant to exploit her skills might depend, for instance, on the attitude of the immigration authorities in the host country. When some particular skills are required due to an excess demand in the host country labor market, immigration authorities tend to be more tolerant toward illegal migrants possessing those skills (in this case τ may be close to 1).

In the second period migrants face two options. They can return in the home country A, where the exogenously given "normal" wage is w^A ($< w^B$). In this case they fully use their skills and earn $a^j w^A$. Alternatively, they continue to reside in the host country B where they face a positive probability of becoming legal migrants and therefore fully exploit their human capital.

The brain waste affects also the ability of illegal migrants to fully exploit financial markets in the host country and therefore the return on savings, which differs depending on the migrant's choice for the second period.

Often the sole motive for migration is the necessity to accumulate assets that will be subsequently employed in productive activities at home. Here we assume that if the migrant decides to go back to homeland A in period 2, then period-1 savings will be directly used, together with individual skills, in an entrepreneurial project with gross return $a^j R^A$ in the home country A — where R^A is the exogenously given "normal" gross return on savings in the home country. We allow for returns from the entrepreneurial project to differ between migrants. The higher the level of skills of the migrant, the higher the likelihood that she will locate the best investment opportunities and, in turn, the more rewarding will be the allocation of her capital.

Similarly, savings are located in the host country B in case the migrant decides to still reside in B during period 2. The exogenously given "normal" return on savings in B is R^B. Then, in case of period-2 stay in country B, savings receive a return $\tau a^j R^B$, which is higher for individuals with higher skills, but it is affected by the brain waste.

Hence, the return from savings will vary according to the migrant's location choice for the second period:

$$e^j = \begin{cases} e^j_R = a^j R^A s^j & \text{return to country } A \\ e^j_{NR} = \tau a^j R^B s^j & \text{staying in country } B \end{cases}$$

In other words, illegal migrants face constraints which negatively affect not only their ability to fully exploit their labor potential but also the ability to locate

$\widehat{w} \equiv \frac{w^B}{w^A}$ (i.e. $\widehat{w} > \frac{1}{\tau}$) or, given w^A and w^B, a lower bound to τ (i.e. $\tau > \frac{w^A}{w^B}$).

and exploit investment opportunities. For instance, although fully aware of the different financial opportunities offered in the host country, the illegal migrant cannot have access to them since she does not have a legal permit and must recur to alternative, less rewarding and sometimes illegal, forms of financial investment. Instead, when planning to go back to homeland, migrants immediately send home their savings, where they start their entrepreneurial project even before returning.

Therefore, also consumption in the second period differs depending on the migrant's period-2 choice. In case of *return migration,* consumption is given by:

$$c_{2,R}^{j} = w_{2,R}^{j} + e_{R}^{j} = a^{j} w^{A} + a^{j} R^{A} s^{j} = a^{j} \left(w^{A} + R^{A} s^{j} \right)$$

where in the home country return migrants are fully able to exploit their human capital on both their endowment of labor and the capital saved in the host country.

If migrants decide to *stay in the host country* they face a positive probability of getting legal residence. For instance, this might happen in case of an amnesty granted to all illegal migrants who have being residing and working for a certain period in the host country or in case of acceptance of an asylum application. The main consequence of being granted legal status in terms of our model is the ability to fully make use of individual skills, i.e. the brain waste effect disappears in the second period when the migrant obtains the legal status.

Consumption in this case can be expressed as the expected income in period 2 ($w_{2,NR}^{j} \equiv \widetilde{w^{j,B}}$) plus the accumulated savings, invested in the host country B (e_{NR}^{j}):

$$c_{2,NR}^{j} = w_{2,NR}^{j} + e_{NR}^{j} = \widetilde{w^{j,B}} + e_{NR}^{j} \tag{1}$$

Given γ as the probability of getting legal residence in period 2, then the expected wage for migrant j in country B in period 2 ($\widetilde{w^{j,B}}$) will be: (i) $\tau a^{j} w^{B}$, i.e. the illegal immigrant's wage (the same as in period 1) in case of not getting legal status, with probability $(1-\gamma)$; (ii) $a^{j} w^{B}$, i.e. the legal immigrant's wage in case of getting legal residence, with probability γ.

Hence, the expected wage for period 2 in case of no-return is:

$$\widetilde{w^{j,B}} = (1-\gamma)\tau a^{j} w^{B} + \gamma a^{j} w^{B} = a^{j} h w^{B} = a^{j} \widetilde{w^{B}}$$

where $h \equiv [(1-\gamma)\tau + \gamma]$ and $\widetilde{w^{B}}$ is the expected "normal" period-2 wage in the host country B.

When substituting both expected income for period 2 and the return on saving into the expression (1) for consumption, it yields:

$$c_{2,NR}^{j} = a^{j} h w^{B} + \tau a^{j} R^{B} s^{j} = a^{j} \widetilde{w^{B}} + \tau a^{j} R^{B} s^{j}$$

Finally, the lifetime utilities functions of migrants depend on their decision whether or not to return. In case of *return*:

$$U_R^j(c_1, c_2) = \ln\left[\tau a^j w^B - s^j\right] + \delta \ln\left[a^j\left(w^A + R^A s^j\right)\right] \tag{2}$$

Whereas in case of *no return*:

$$U_{NR}^j(c_1, c_2) = \ln\left[\tau a^j w^B - s^j\right] + \delta \ln\left[a^j(\widetilde{w^B} + \tau R^B s^j)\right] \tag{3}$$

In the following sections we compute the optimal level of savings in both cases and focus on the relationship between the illegal migrant's skills level and her rational decision whether or not to return in the home country.

2.1 Optimal Savings, Return Decisions and Skills

The optimal level of savings s^{*j} for an individual with skills j is conditional on her location decision for the second period.

In case of return migration the level of savings which maximizes the individual's intertemporal utility function (2), is given by:

$$s_R^{j,*} = \frac{1}{R^A(1+\delta)}\left[\delta R^A w_1^j - w^A\right] = \frac{1}{R^A(1+\delta)}\left[\delta\tau a^j R^A w^B - w^A\right] \tag{4}$$

If the illegal migrant decides to stay in the host country, then the optimal first-period savings will be determined by the maximization of the utility function (3). Hence, the optimal savings in case of no return is the following:

$$s_{NR}^{j,*} = \frac{1}{\tau R^B(1+\delta)}\left[\delta\tau R^B w_1^j - \widetilde{w^B}\right] = \frac{w^B}{\tau R^B(1+\delta)}\left[\delta\tau^2 a^j R^B - h\right] \tag{5}$$

since $\widetilde{w^B} \equiv h w^B$ and $h \equiv [(1-\gamma)\tau + \gamma]$.

It is easy to show that savings in case of return are higher than saving in case of no-return when the percentage wage gap between the host country B and the origin country A — that is $\widehat{w} \equiv \frac{w^B}{w^A}$ — is higher than the percentage rate-of-return gap — that is $\widehat{R} \equiv \frac{R^B}{R^A}$ — i.e. when $\widehat{w} > \widehat{R}$.[6]

Several authors have emphasized that a positive probability of return induces migrants to save and remit more (see Galor and Stark, 1990; Stark, 1992; Mesnard, 2004). This result is in accordance with the life-cycle theory of consumption since

[6]More precisely, $s_R^{j,*} > s_{NR}^{j,*}$ when:

$$\frac{\widehat{w}}{\widehat{R}} > \frac{\tau}{[(1-\gamma)\tau + \gamma]}$$

Note that the fraction $\frac{\tau}{[(1-\gamma)\tau+\gamma]}$ is always lower than 1 since $\tau \in (0, 1]$.

individuals who plan to re-emigrate in a relatively poor country will save more in order to smooth their consumption path over the life-cycle.[7]

By substituting the optimal level of savings (4) and (5) in the respective utility functions (2) and (3), we obtain the optimal levels of utility in case of return ($U_R^{j,*}$):

$$U_R^{j,*}(\delta, \tau, a^j, w^A, w^B, R^A) = (1+\delta)\ln\left[\frac{1}{1+\delta}\left(R^A\tau a^j w^B + w^A\right)\right] - \\ - \ln(R^A) + \delta\ln(\delta a^j) \tag{6}$$

and in case of no-return ($U_{NR}^{j,*}$):

$$U_{NR}^{j,*}(\delta, \tau, a^j, w^B, R^B) = (1+\delta)\ln\left[\frac{w^B}{1+\delta}\left(R^B\tau^2 a^j + h\right)\right] - \\ - \ln(\tau R^B) + \delta\ln(\delta a^j) \tag{7}$$

Let us define the net utility from returning $U^{j,*}$ for an illegal migrant with j level of skills as the difference between the two optimal levels of utility. Hence:

$$U^{j,*}(\delta, \tau, a^j, w^A, w^B, R^A, R^B) \equiv U_R^{j,*} - U_{NR}^{j,*} \equiv$$

$$\equiv (1+\delta)\ln\left[\frac{R^A\tau a^j w^B + w^A}{\tau R^B \tau a^j w^B + h w^B}\right] - \ln\frac{R^A}{\tau R^B} \tag{8}$$

which can be rewritten as:

$$U^{j,*} \equiv (1+\delta)\ln\left[\frac{R^A w_1^j + w^A}{\tau R^B w_1^j + \widetilde{w^B}}\right] - \ln\frac{R^A}{\tau R^B} \tag{9}$$

The discrete choice whether or not to return depends on the sign of the unobservable net utility $U^{j,*}$.

Propositions 2 and 3 in the Appendix A show the sufficient conditions on wages and rate of returns such that the sign of $U^{j,*}$ is always negative or always positive, i.e. such that migrants respectively decide never to return or always to return.

However, such sufficient conditions are not easy to satisfy. For instance, in the special case of equal "normal" rates of returns — $R^A = R^B$ — the Propositions 2 and 3 never hold when the "normal" wage in the host country is greater than the "normal" wage in the home country, i.e. $w^B > w^A$, which is the most common case also in reality.

[7]Higher incentives to save could also be motivated by a higher marginal utility of consumption in the home country, for instance due to higher purchasing power in the home country or strong preferences for home varieties or by the necessity to overcome higher uncertainty (see Dustmann 1997).

Instead, when migrants are able to circumvent the effect of the brain waste only in the financial markets and rate of returns are equalized net of the brain waste — i.e. $R^A = \tau R^B$ — then the decision where to work depends exclusively on the total flow of income in the two locations. Since the migrant starts in the host country under both cases "return" and "no-return", the decision regards only income from period 2. The migrant decides (not) to return if and only if: $w^A > \widetilde{w^B}$ ($w^A < \widetilde{w^B}$), with no role played by the individual skills.

Notwithstanding these special instances, in the most general case the two propositions show that commonly the sign of $U^{j,*}$ is not uniquely defined. Among all the parameters that denote the sign of the net utility, we pay particular attention to the skill content, represented by a^j.

In particular, the derivative of the net utility $U^{j,*}$ with respect to a^j is the following:

$$\frac{\partial U^{j,*}}{\partial a^j} = \frac{(1+\delta)\tau w^B}{W_R W_{NR}} \left(h R^A w^B - \tau R^B w^A \right)$$

where $W_R \equiv R^A w_1^j + w^A$ and $W_{NR} = \tau R^B w_1^j + \widetilde{w^B}$.

Proposition 1 shows that under general conditions on the relative wages $\widehat{w}$ and relative rates of return $\widehat{R}$, more high-skilled illegal migrants are more likely to return.

Proposition 1 *If the "normal" (percentage) wage gap $\widehat{w} \equiv \frac{w^B}{w^A}$ is strictly higher than the "normal" (percentage) rate-of-return gap $\widehat{R} \equiv \frac{R^B}{R^A}$, i.e.*

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} > 1$$

then, net utility from return migration — therefore the probability of returning in the home country — is an increasing function of the individual level of skills.

Proof.

See Appendix B

■

This result is particularly important since it highlights how the effect of illegality as a brain waste in both the labor market and the accession of financial markets, induces highly-skilled migrants to flee first the host country. Although no welfare consideration can be pushed forward under this very simple framework, illegality seems to cost the host country in terms of inducing the more productive individuals to leave first.

The net utility is also a decreasing function of the probability of legalization, as the first derivative of $U^{j,*}$ with respect to γ proves:

$$\frac{\partial U^{j,*}}{\partial \gamma} = -\frac{(1+\delta)(1-\tau)w^B}{\tau R^B w_1^j + \widetilde{w^B}}$$

As intuitively expected, better prospects for period 2 increase the expected income from staying in the host country and reduce the incentives to return.

These latter two results are the main objective of the empirical analysis, which is preceded by the presentation of the data set in the following sections.

3 Individual Data on Irregular Immigrants: The Survey on Illegal Migration in Italy

We use a unique source of data: the *Survey on Illegal Migration in Italy* (SIMI, henceforth). SIMI was collected from January to September 2003 by a team of researchers at the Department of Economics of the University of Bari with the support of AGIMI-Otranto. The outcome of this joint effort is a survey on the main demographic and socio-economic characteristics of a representative sample of 920 illegal immigrants, as well as their motivations and future expectations.

By means of "illegal immigrant" (i.e. the sampling unit) we define a (at least 18-year old) clandestine or asylum seeker that has been staying in Italy for a period no longer than 6 months. This short period minimizes the measurement error when interviewees were asked to recall previous events. One of the aims of the survey is to obtain an accurate recollection of earnings and expenditures before migration, as well as future expectations before departure. These immigrants were interviewed in three types of centers, i.e. Center of Temporary Permanence, Reception Centers and helping Centers spread in the four main regions mostly affected by the phenomenon of illegal entrance (Apulia, Sicily, Calabria and Friuli Venezia Giulia).

More precisely, the observational unit is identified according to the legal status of the immigrants and in our study we consider the following four categories:

1. *individuals applying for asylum or refugee status*, i.e.:

   - individuals under temporary protection for humanitarian aid;
   - individuals that should be repatriated to a country where they would be persecuted for reasons concerning race, gender, language, religion, opinions, citizenship, personal or social condition or that would be repatriated to a country where they would not be protected from prosecution (ex art.19, 1° comma, D.lgs. no.286/98);

2. *individuals waiting for a rejection decree with accompaniment to the closest border*; the rejection decree is usually issued by the local police authority (*Questore*) to an individual that arrived in Italy avoiding border controls and that was stopped immediately after her/his arrival;

3. *individuals waiting for an expulsion decree*: the decree is issued by the local administrative authority (*Prefetto*) when the migrant avoided border controls and was not rejected yet;

4. *clandestine migrants*, i.e. a foreigner with an expired (or no) visa that has been on the Italian territory for no longer than 6 months and that usually attends a typical migrant meeting point, like a "soup kitchen", orientation provided by voluntaries and NGOs, etc.

Overall, the 920 interviewed individuals belonged to 55 different nationalities, with the six largest fractions coming from Iraq (9.6%), Liberia (9%), Sudan (5.4%), Morocco (5.1%), Senegal (4.8%), Turkey (4.8%). The total number of interviews represented 10.82% of all the 8,502 illegal migrants that were hosted in the selected centers in the period January-September 2003.

On average, the illegal migrant approaching Italy, was young (about 27 years old) and healthy. Most of the interviewees stated to be literate (85.8%), with some of them claiming a discrete considerable level of schooling, although only about 1/3 of them declared having a driving licence (35.2%). Nevertheless, about 70% of the interviewees indicated possessing low-skill qualifications.

Several socio-economic indicators were also measured by considering the "geographical origin" within the country (whether coming from large cities or from the periphery or from the countryside), the availability of different utilities in the original home, the occurrence of recent natural disasters and economic crisis in the area of the migrant's dwelling.

The declared individual monthly income in the country of origin was on average around 145 USD, with a very high variability due to the extreme heterogeneity of the socio-economic conditions of the interviewees. It is noteworthy that more than a half of the interviewees, once settled down in country of final destination, expected to earn a monthly wage between from 500 and 1,000 USD, with an average of 937 USD.

Migration is a major investment for the family: on average it is equivalent to 2 years of family earnings in the country of origin. Finally, it is worth remarking that 1/3 of the respondents judged their monthly income as "very volatile".[8]

About the 60% of the interviewees declared to have intention to return home and our empirical analysis is based on their characteristics in order to determine

[8]For a detailed description of the sampling design, of the adopted questionnaire and of other results see Chiuri, et al. (2004).

which variables affect more the decision to return and whether they are in accordance with the theoretical model presented in Section 2.

4 Empirical Analysis

In order to test the main implications of our theoretical model, we implement a probit model on the intentions to return (i.e. the dependent variable is equal to 1 if the individual expects to return home, zero otherwise). Definitions and basic statistics of the explanatory variables are presented in Appendix C.

Following the theoretical model presented in Section 2, the main objective of this empirical analysis is to test whether the choice of returning home of an individual that has illegally migrated is influenced by her skills (parameter a^j) and by the possibility of having granted a legal status (parameter γ).

Here, we measure individual skills by means of three different variables: *years of schooling*, *individual skills and qualification* and *proficiency of the language* of the intended country of destination. In accordance with the model of Section 2, the brain waste effect associated with the status of illegal migrant increases the opportunity cost of continuing to reside as an illegal in the destination country relatively more for the skilled migrants. Thus, we expect those variables to have a positive effect on the probability of returning in the country of origin.

Moreover, we proxy for the different probability of being granted legal status using a dummy for *clandestine.* Generally speaking, illegal immigrants may be divided into two broad categories: asylum seekers and clandestine immigrants. Asylum seekers have a motivation to notify their presence to the authorities of the receiving country, whereas clandestine immigrants shy away official contacts and tend to live working quietly, waiting for the next amnesty which will make them legal migrants. The probability of being granted legal status, while positive for both categories of migrants, is generally higher for asylum seekers. Since being legal increases the ability of the migrants to fully employ in the country of destination her human and financial capital, we expect the effect of *clandestine* to be negative on the return propensity.

The willingness to return home also depends on expected economic opportunities in the country of origin (i.e. the "normal" wage w^A in model, or negatively the wage gap $\widehat{w}$). Return migration will be generally higher in countries that are at an intermediate level of development and would offer opportunities to migrants who have accumulated human and financial capital. For this reason, we introduce two variable for infrastructures, which are both expected to have a positive effect on return: *infrastructure (macro)* that measures the relative endowment of infrastructure at country level and *infrastructure (micro)* that is a proxy for individual access to basic infrastructures at the level of the village/city of origin.

Expectations on future opportunities in the country of origin are also influenced by previous job experiences in the country of origin. Thus, we include a dummy variable for *unemployed in the home country* before migrating, which is expected to have a negative influence on the probability of returning.

Moreover, illegal migrants might also find better employment opportunities via migrants already established in the country of destination. In fact, those individuals might provide the newcomers with information about labor market opportunities and increase their probability of acceding to better-paid and stable jobs. In order to capture this effect, we include a dummy for *migronetwork*. In terms of our theoretical model, the existence of a network improves the ability of illegals to find a job. Therefore, we expect *migronetwork* to have a negative effect on the probability of return.

In order to have a complete empirical specification, we also introduce few variables that control for the other factors that might affect the choice of returning. In fact, together with business and entrepreneurial motivations, one might decide to return to the country of origin because of family and cultural ties [see Dustmann (2003a)].[9] We therefore include a number of proxies that gives a measure of the intensity of family ties as *number of children*, *children in the destination countries and relatives left at home.* Those are expected to have a positive, negative and positive effect on the return choice, respectively.[10]

As far as cultural ties with the country of origin are concerned, it is widely accepted that the costs of residing in a foreign country increases with the degree of cultural and social diversity between the origin and destination countries. A different religion is one important dimension on which such diversities are expressed. Hence, we include a dummy variable, *Muslim,* that aims to capture the, generally greater, psychological cost of migration faced by individuals of Islamic religion and this is supposed to have a positive effect on the return choice. Along the same line, we include the (log of) geographical *distance* as a proxy for the monetary and psychological cost of migration (when distance is short migrants can afford frequent journeys back home) and *previous migration experience*, given that previous moves generally lower the non-monetary and psychological costs of subsequent migrations. Those variables are expected to have a positive and negative effect on the return choice, respectively.

Aside from our theoretical model, the peculiarity of our dataset also allows us to analyze the effect of *social conflict* and financial or *economic crisis* in the

[9]More broadly those factors might also proxy for psychic cost of migration and may enter our model as a fixed disutility flow for each period the migrant is far away from the family. An extension of the model of Section 2 is straightforward and is available from the authors upon request.

[10]See Dustmann (2003a) who highlights the importance of children in shaping parents' return decision.

village/city of origin on the choice of return.[11] These events might have profound and different implications on the intentions to return. In fact, while social conflicts or civil wars might have a permanent effect on migration, economic or financial crisis might lead to a temporary out-migration which might be subsequently re-absorbed when economic conditions improve again.

On a similar line of thinking, we control for the effects on return intentions of individuals who belong to a minority religious group in the home country. Minority groups in many countries of origin, which are represented in our sample, suffer from discrimination and sometimes violent persecutions. Hence, in our analysis we include an interaction effect between a dummy variable *minority* and an *index of ethnic polarization,* which aims to capture potential conflicts and concentration of power "outside" the minority. This index ranges from 0 to 1 and polarization reaches a maximum when there are two religious groups of equal size.[12] As a matter of construction, this variable is expected to have a negative effect on the probability of return.

Finally, we include a macro area dummy in order to capture the characteristics of the geographical areas of origin that are not observable.[13]

Table 1 and 2 show the estimates and the relative marginal effects, respectively. Although we present the results of different specifications in what follows we only comment on the most completed one (Model 4).[14]

[Table 1 about here.]

[Table 2 about here.]

Results are generally in line with our expectations. Skills and education significantly increase the probability of return to the home country. The probability of return of a relatively skilled person is 9.7% higher than the probability of who has no or low skills. Individuals with the lowest level of education in the sample are 15% less likely to return than individuals with a higher level. Also, the knowledge of the language of the intended destination countries increases the likelihood to return by 11%.

These findings contrast with most of existing analyzes on return migration and return intentions of legal migrants. Dustmann (1996, 2003b) using data from

[11] In terms of our model, they may be related once more to the "normal" wage in the country of origin w^A or negatively to the wage gap $\widehat{w}$, although the two variables will prove to have a different effect among each other.

[12] For recent analysis concerned with the effects of religious and ethnic polarization on economic development see Montalvo and Reynal-Querol (2003, 2004).

[13] The limited number of observations together with the large number of countries in our dataset does not allow us to use country dummy.

[14] Other specifications are also available from the authors upon request.

the German Socio-Economic Panel finds a negative effect of year of schooling on the intention to return in the home country. However, the author finds that for those who intend to return, schooling has a negative impact on the duration of the migration spell. In relation to this last result, Dustmann's explanation is that higher schooling, by guaranteeing higher salary, reduces the time needed to achieve a pre-determined saving target. In a related study on the factors which affect the return migration of a cohort of foreign-born in the US, Reagan and Olsen (2000) find no evidence of skill bias in return migration. On the other hand, our results are in line with Zhao (2002)'s. In his analysis on rural to urban migration in China, the author finds that better educated and skilled rural migrants are more likely to return in their village of origin. The explanation offered by the author fits our interpretation: both the strong labor segmentation in the urban labor market and the tight migration regulatory system in China prevent the full participation of skilled workers from rural area. This imposes heavy costs on skilled migrants in terms of rewards to education and work experience.

As expected, the coefficient on the dummy for *clandestine* is positive and highly significant. The coefficient on *migration network* is significant and positive; this might be due to the fact that the existence of an established networks relatively reduces the risks associated with the migratory experience.

Illegal migrants are also found to be more willing to return in countries that are relatively more developed.[15] Countries that have an above average level of infrastructures (as measured by the dummy *infrastructure (macro)* are 15% more likely to attract migrants back home. As well, migrants who have declared to have access to electricity and/or drinkable water in their home are 9.5% more likely to return [*infrastructure (micro)*].[16] Moreover, we find that individuals who were unemployed back home are significantly less likely to return.

Most control variables have the expected sign. For instance, we find evidence of the importance of family and cultural ties. In our estimations, an individual with two children left in the home country is 16.8 percentage points more likely to return than in the case the children were already in the country of destination. Also the size of the family left in the country of origin significantly affect return intentions. Our evidence is in conformity with Dustmann (2003a) where the presence of children in the host country negatively affects the return intention of parents.

As expected, *past migration experience* reduces the probability of return plans. Also, the coefficients on the proxies for monetary and psychic cost of migration, namely *distance* and *muslim*, are significant and positive, respectively. Finally, we

[15]Let us recall that Proposition 2 in the Appendix underlines that all illegal migrants will go back home when the wage gap is lower than the rate-of-return gap.

[16]This variable might also be interpret as the level of relative deprivation of individuals in the home country.

find that illegal migrants from European and North African countries are more likely to return than those coming from other countries.

Interestingly we also acknowledge that *social conflicts* and *economic crisis* have opposite effects on the return choice. The effect of having experienced an economic or financial crisis in the village of origin seems to be temporary whereas social conflicts have a more permanent effect on migration.[17]

5 Conclusions and Future Work

In this paper we assumed that the status of illegal migrant hinders the full utilization of individual skills. As a consequence, the opportunity cost of returning home is lower for highly skilled migrants rather than individuals with few or no skills.

This result has been proved both theoretically and empirically. A simple two-period model with brain waste effect and probability of being granted legal status has shown that the return choice is more likely for individuals with more abilities. A higher probability of being granted legal status (as it is for asylum seekers rather than clandestine immigrants) decreases the probability of returning home.

Empirical estimates of a probit model on the intentions to return have been obtained on a sample of 920 illegal immigrants hosted in Italian centers. Both skill measures (like years of schooling, host-country language proficiency, skilled type of job at home) and proxies for higher probability of getting a legal status (like being an asylum seeker rather than a clandestine) affect the intentions to return in the predicted direction. Other control variables prove the validity of the empirical model.

Since migration flows are proved to be unavoidable, the main message of this paper pinpoints to a careful design of new immigration policies. In particular, it ought to be considered that a generic ban is not neutral and gives bigger incentives to the more skilled workers to return rather than the low-skill migrants. Welfare considerations on both the host and the home country would of course require a much richer theoretical model, including the effect of new entrants on the host labor markets, a multi-period framework and the possible interactions among natives, legal and illegal immigrants. Another important extension of the model regards the length of the stay in the host country and whether this may also depend on the individual's skills and the degree of illegality. All these extensions may be the task of future work.

[17]This finding confirms the importance of a coordinated, timely and efficient international conflict prevention activity. Also migrants belonging to a religious *minority* in the country of origin are less likely to return: the probability of remaining in the destination country is increasing in the degree of religious polarization (i.e. the higher is potential hostility faced by a religious minority in the country of origin). See Chiuri et al. (2003).

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APPENDIX

A Sufficient Conditions on the Sign of the Net Utility

Proposition 2 (Sufficient conditions for all migrants to stay in the host country B) *No migrant decides to return, i.e. $U^{j,*} < 0$, if:*

(i) *the "normal" (percentage) wage gap $\widehat{w} \equiv \frac{w^B}{w^A}$ is strictly higher than the "normal" (percentage) rate-of-return gap $\widehat{R} \equiv \frac{R^B}{R^A}$:*

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} > 1$$

(ii) *both the "normal" wage and the "normal" rate of return are strictly higher in the host country rather than in the home country, i.e.*

$$\tau w^B > w^A \qquad \tau R^B > R^A$$

Proof. Let us rewrite the net utility in eq. (8) as follows:

$$U^{j,*} \equiv \ln\left[\frac{R^A w_1 + w^A}{\tau R^B w_1 + \widetilde{w^B}} \frac{\tau R^B}{R^A}\right] + \delta \ln\left[\frac{R^A w_1 + w^A}{\tau R^B w_1 + \widetilde{w^B}}\right]$$

or

$$U^{j,*} \equiv \underbrace{\ln\left[\frac{\tau R^B R^A w_1 + \tau R^B w^A}{\tau R^B R^A w_1 + R^A \widetilde{w^B}}\right]}_{[1]} + \underbrace{\delta \ln\left[\frac{R^A w_1 + w^A}{\tau R^B w_1 + \widetilde{w^B}}\right]}_{[2]} \tag{10}$$

The first term [1] is negative if (and only if):

$$\tau R^B R^A w_1 + \tau R^B w^A < \tau R^B R^A w_1 + R^A \widetilde{w^B}$$

or

$$\frac{R^A h w^B}{\tau R^B w^A} > 1$$

which can be written in terms of wage gap and rate-of-return gap:

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} > \frac{\tau}{h}$$

Let us recall that $h \equiv [(1-\gamma)\tau + \gamma]$; hence, the fraction $\frac{\tau}{h}$ is certainly lower than 1 and the term [1] is always negative if

$$\frac{\widehat{w}}{\widehat{R}} > 1 \tag{11}$$

The second term [2] is negative when:

$$R^A w_1 + w^A < \tau R^B w_1 + \widetilde{w^B}$$

or

$$R^A \tau a^j w^B + w^A < \tau R^B \tau a^j w^B + h w^B$$

Let us rewrite the previous condition by employing the wage gap $\widehat{w}$ and the rate-of-return gap $\widehat{R}$:

$$R^A \widehat{w} \tau a^j \underbrace{(\tau \widehat{R} - 1)}_{[\mathcal{A}]} > \underbrace{(1 - h\widehat{w})}_{[\mathcal{B}]} \tag{12}$$

A sufficient condition for (12) is that the term $[\mathcal{A}]$ is positive and the term $[\mathcal{B}]$ is negative.

This occurs when:

$$\tau \widehat{R} > 0 \qquad \Rightarrow \qquad \widehat{R} > \frac{1}{\tau} \qquad \Rightarrow \qquad \tau R^B > R^A$$

for term $[\mathcal{A}]$; and:

$$h\widehat{w} > 1 \qquad \Rightarrow \qquad \widehat{w} > \frac{1}{h}$$

for term $[\mathcal{B}]$.

Since $\frac{1}{h} < \frac{1}{\tau}$, but condition (11) must be satisfied for term [1] to be negative, then a sufficient condition on $\widehat{w}$ would be:

$$\widehat{w} > \frac{1}{\tau} \qquad \Rightarrow \qquad \tau w^B > w^A$$

■

Proposition 3 (Sufficient conditions for all migrants to return the home country A) *All migrants decide to return, i.e. $U^{j,*} > 0$, if:*

(i) *the "normal" (percentage) wage gap $\widehat{w} \equiv \frac{w^B}{w^A}$ is strictly lower than the "normal" (percentage) rate-of-return gap $\widehat{R} \equiv \frac{R^B}{R^A}$:*

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} < \frac{\tau}{h}$$

(ii) *both the "normal" wage and the "normal" rate of return are strictly lower in the host country rather than in the home country, i.e.*

$$hw^B < w^A \qquad \tau R^B < R^A (< hR^B)$$

Proof. Let us recall Eq. (10) from the proof of Proposition 2:

$$U^{j,*} \equiv \underbrace{\ln\left[\frac{\tau R^B R^A w_1 + \tau R^B w^A}{\tau R^B R^A w_1 + R^A \widetilde{w^B}}\right]}_{[1]} + \underbrace{\delta \ln\left[\frac{R^A w_1 + w^A}{\tau R^B w_1 + \widetilde{w^B}}\right]}_{[2]}$$

By following the same steps as for Proposition 2, the term [1] is now positive if (and only if):

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} < \frac{\tau}{h}$$

Hence, a necessary condition for the previous inequality to hold is:

$$\widehat{w} < \widehat{R}$$

since $\tau < h$.

By using inequality (12) and the same steps as in Proposition 2, it is easy to show that the term [2] is certainly negative if (and only if):

$$R^A \widehat{w} \tau a^j \underbrace{(\tau \widehat{R} - 1)}_{[\mathcal{A}]} < \underbrace{(1 - h\widehat{w})}_{[\mathcal{B}]}$$

A sufficient condition such that the previous inequality holds is that term $[\mathcal{A}]$ is negative and term $[\mathcal{B}]$ is positive, which occurs respectively if:

$$\tau \widehat{R} < 1 \qquad \Rightarrow \qquad \widehat{R} < \frac{1}{\tau}$$

and

$$h\widehat{w} < 1 \qquad \Rightarrow \qquad \widehat{w} < \frac{1}{h}$$

Since $\widehat{w}$ must be lower than $\widehat{R}$ for term [1] to be positive, then both conditions are satisfied if:

$$\frac{1}{h} < \widehat{R} < \frac{1}{\tau} \qquad \text{and} \qquad \widehat{w} < \frac{1}{h}$$

■

B Proof of Proposition 1

Proof.

When taking the first derivative of the net utility from return migration, we obtain:

$$\frac{\partial U^{j,*}}{\partial a^j} = \frac{(1+\delta)\tau w^B}{W_R W_{NR}} \left(hR^A w^B - \tau R^B w^A\right)$$

where $W_R \equiv R^A w_1^j + w^A$ and $W_{NR} = \tau R^B w_1^j + \widetilde{w^B}$.

The net utility is then strictly increasing in the skill level a^j if and only if:

$$hR^A w^B > \tau R^B w^A$$

or:

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} > \frac{\tau}{[(1-\gamma)\tau + \gamma]}$$

Notice that, since γ is a probability, then h is a linear combination between τ (which is lower than 1) and 1. Hence, the fraction on the right-hand-side is certainly lower than 1.

As a consequence, the condition:

$$\frac{\widehat{w}}{\widehat{R}} \equiv \frac{\frac{w^B}{w^A}}{\frac{R^B}{R^A}} > 1$$

is sufficient to assure that $U^{j,*}$ is increasing in a^j. ■

C Variables Description

	Description	**Exp. sign**	**Mean**	**St. Dev**	**Type**	**Source**
Years of schooling	number of years the individual attended school (categorical variable: 0 none, 1 from 1 to 5 years, 2 from 6 to 8 years, 3 from 9 to 11 years, 4 more than 12 years)	+	3.37	1.21	categorical	Questionnaire
Host-country language proficiency	equals 1 if the migrant is proficient in the language of the intended destination country (basic or advanced level), 0 otherwise	+	0.46	0.49	dummy	Questionnaire
Highly skilled worker	equals 1 if the individuals possess highly qualified job skills (translator, secretary, financial advisor, doctor or chemist, lawyer, teacher, manager, consultant, entrepreneur) and 0 otherwise	+	0.19	0.39	dummy	Questionnaire
Clandestine	equals to 1 if the individual declares to be a clandestine, 0 otherwise	-	0.3	0.46	dummy	Questionnaire
Migro-network	equals 1 if the individual has relatives and friends in the intended country of destination, 0 otherwise	+/-	0.18	0.39	dummy	Questionnaire

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	Description	**Exp. sign**	**Mean**	**St. Dev**	**Type**	**Source**
Infrastructure (micro)	equals to 1 if the individual has electricity and/or drinkable water in the house of residence in the home country, 0 otherwise	+	0.76	0.43	dummy	Questionnaire
Infrastructure (macro)	equals to 1 if the individual comes form a country where the number of telephone mainlines, daily newspapers, radio and televisions sets for 1.000 people is higher than the average of the 56 countries in our sample, 0 otherwise	+	0.16	0.37	dummy	Country Tables ITC at glance Development Data Group, World Bank
Unemployed in the home country	equals 1 if the migrant is not employed before departure, 0 otherwise	-	0.56	0.5	dummy	Questionnaire
Social conflict	equals 1 if the migrant declares that there was a social conflict in the village or city of origin (residence) in the last 5 years, 0 otherwise	-	0.68	0.46	dummy	Questionnaire
Economic crisis	equals 1 if the migrant declares that there was an economic or financial crisis in the village or city of origin (residence) in the last 5 years, 0 otherwise	+/-	0.86	0.34	dummy	Questionnaire

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	Description	**Exp. sign**	**Mean**	**St. Dev**	**Type**	**Source**
Minority × ethnic polarization index	interaction effect between the dummy variable "minority" (equals 1 in the individuals belongs to a religious minority in the country of origin) and the Index of Ethnic Polarization (see Montalvo J. G. and Reynal-Querol M.,2004) which captures the degree of ethnic polarization within a country (index → 0 means very high polarization; index → 1 means very low polarization)	-	0.23	0.34	dummy	CIA - The World Factbook and Questionnaire
N. of children	number of children	-	0.6	1.1	continuous	Questionnaire
Children in the destination country	equals 1 if one or more children are in the intended destination country (not necessarily traveling with the respondent), 0 otherwise	-	0.06	0.24	dummy	Questionnaire
Relatives in the home country	number of relatives that are left in the country of origin	-	5.17	3.98	continuous	Questionnaire

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	Description	**Exp. sign**	**Mean**	**St. Dev**	**Type**	**Source**
Past migration	equals 1 if the individual has already done a migration experience (internal or international), 0 otherwise	-	0.27	0.44	dummy	Questionnaire
Distance (in log)	(log of) distance in Km (Geographical co-ordinates where used to calculate distance; rounded latitude and longitude figures were used for the purpose of finding the approximate geographic center of the origin and destination countries)	+/-	7.95	0.7	continuous	Gazetteer of Conventional Names, Third Edition, August 1988, US Board on Geographic Names and on other sources.
Muslim	equals 1 if the individual declares to be a Muslim; 0 otherwise	-	0.59	0.49	dummy	Questionnaire
Europe	equals 1 if the individual country of origin is in Europe, 0 otherwise	+	0.25	0.43	dummy	Questionnaire
North Africa	equals 1 if the individual country of origin is in North Africa (Afro-Mediterranean countries), 0 otherwise	+	0.11	0.31	dummy	Questionnaire
Asia	equals 1 if the individual country of origin is in Asia, 0 otherwise	-	0.27	0.44	dummy	Questionnaire

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	Description	**Exp. sign**	**Mean**	**St. Dev**	**Type**	**Source**
Africa (excl North Africa)	equals 1 if the individual country of origin is in Africa (excluded North African countries), 0 otherwise	-	0.37	0.48	dummy	Questionnaire
America	equals 1 if the individual country of origin is in Central and Latin America, 0 otherwise	-	0.005	0.07	dummy	Questionnaire

Table 1: Estimates of the Probit Model: Different Specifications

Regressors	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Years of sch.	0.110**	0.126**	0.119**	0.100**
	(0.036)	(0.042)	(0.045)	(0.046)
Host-c. lang. prof.	0.514**	0.399**	0.312**	0.294**
	(0.089)	(0.104)	(0.112)	(0.112)
Highly skilled worker				0.268*
				(0.141)
Clandestine			0.636**	0.657**
			(0.139)	(0.140)
Migronetwork			0.435**	0.421**
			(0.159)	(0.159)
Infrastr. (micro)		0.216*	0.249*	0.248*
		(0.122)	(0.128)	(0.128)
Infrastr. (micro)		0.287*	0.46**	0.438**
		(0.153)	(0.164)	(0.165)
Unemployed at home		−0.199**	−0.219**	−0.227**
		(0.102)	(0.107)	(0.108)
Social conflict		−0.399**	−0.285**	−0.292**
		(0.127)	(0.140)	(0.140)
Economic crisis		0.566**	0.55**	0.588**
		(0.148)	(0.158)	(0.159)
*Minority*eth. pol.*		−0.376**	−0.323**	−0.298*
		(0.149)	(0.158)	(0.159)
N. of children		0.136**	0.145**	0.143**
		(0.050)	(0.051)	(0.051)
Children in host c.		−0.498**	−0.446*	−0.45*
		(0.223)	(0.242)	(0.243)
Relatives at home		0.043**	0.042**	0.042**
		(0.013)	(0.014)	(0.014)
Past migration		−0.307**	−0.23**	−0.251**
		(0.109)	(0.114)	(0.115)
Distance(in log)		0.427**	0.535**	0.531**
		(0.128)	(0.137)	(0.137)
Muslim		0.304**	0.36**	0.368**
		(0.107)	(0.115)	(0.115)
Asia		−0.830**	−0.794**	−0.807**
		(0.218)	(0.231)	(0.231)

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Table 1: continued

Regressors	**Model 1**	**Model 2**	**Model 3**	**Model 4**
Africa (excl North)		-0.522^{**}	-0.406^{*}	-0.41^{*}
		(0.217)	(0.235)	(0.235)
America		-0.628	-0.737	-0.684
		(0.683)	(0.781)	(0.781)
Constant	-0.340^{**}	-3.852^{**}	-5.138^{**}	-5.101^{**}
	(0.128)	(0.955)	(1.038)	(1.040)
Observations	*866*	*798*	*752*	*752*
Pseudo R^2	0.043	0.144	0.190	0.1932
Log likelihood	-556.83	-457.72	-410.56	-408.73

Standard errors in parentheses / Probability of return (baseline) = 0.633
* significant at 10%; ** significant at 5%

Table 2: Marginal Effects of Model (4)

Regressors	**Marg. Eff.**	**Prob.** *(1)*
Years of schooling	0.038**	0.046
	(0.017)	
Host-country lang. proficiency	0.110**	
	(0.041)	
Highly skilled worker	0.097**	
	(0.049)	
Clandestine	0.231**	
	(0.045)	
Migronetwork	0.149**	
	(0.052)	
Infrastracture (micro)	0.095*	
	(0.05)	
Infrastracture (macro)	0.154**	
	(0.053)	
Unemployed in the home country	−0.085**	
	(0.04)	
Social conflict	−0.107**	
	(0.05)	
Economic crisis	0.230**	
	(0.062)	
*Minority*ethnic polarization index*	−0.112*	-0.037
	(0.06)	
N. of children	0.054**	0.06
	(0.019)	
Children in the destination country	−0.176**	
	(0.096)	
N. of relatives in the home country	0.016**	0.063
	(0.052)	
Past migration	−0.096**	
	(0.045)	
Distance(in log)	0.199**	0.141
	(0.052)	
Muslim	0.14**	
	(0.043)	
Asia	−0.31**	
	(0.086)	
Africa (excl North Africa)	−0.156*	

continued on next page

Table 2: continued

Regressors	**Marg. Eff.**	**Prob.** *(1)*
	(0.089)	
America	−0.268	
	(0.294)	

Probability of return (baseline) = 0.633

(1) change in predicted probability as X changes of one standard deviation centered around the mean value

Standard errors in parentheses

* significant at 10%; ** significant at 5%