Self-Selection and the Performance of Return Migrants: The Case of Albania

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December 18, 2002

Abstract

In this paper, using the framework of a Roy theoretical model, we examine the performance of return migrants in Albania. We ask two questions: (i) Had they chosen not to migrate, what would be the performance of return migrants compared to the non-migrants? and (ii) What would be the performance of non-migrants had they decided to migrate and return? Both the selection estimates and the semi-parametric approach allow us to conclude that the flows of return migrants are negatively selected.We find that, had they decided to migrate and come back, the non-migrants would have earned more than twice the wages of return migrants.

JEL Classification: F22, J61

Keywords: migration, self-selection, Albania

Acknowledgements: We would like to thank Alan Carruth, Arnaud Chevalier, Roger Vickerman and the participants at the Applied Econometrics Association conference, Bruxelles and Centre for Economic Performance Labour Market Workshops, London, for helpful comments on an earlier version of the paper. This work is part of the project "Borders, Migration and Labour Market Dynamics in a Changing Europe" financed by the UK Economic and Social Research Council, Grant No L213251042. The usual disclaimer applies.

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1 Introduction

International migration is a selective process. Those who choose to leave a country might be more able and/or more motivated than those who choose to stay in their home country. If this is the case, immigrants are said to be positively selected compared to the home population. Recently Borjas(1987, 1991) has questioned the widely agreed position that migrants are positively selected. He derived the condition under which immigrants coming from a country with highly unequal wage distribution may be negatively selected. In an extension of this work, Borjas and Bratsberg (1996) investigate the return migration of foreign-born individuals in the US and show how this may influence the type of self-selection characterising the immigrant population. Dustmann (1997) studies the optimal length of stay abroad and return behaviour of temporary migrants in the framework of life-cycle analysis while Dustmann and Kirchkamp (2002) look at the activity choice of return migrants. Bauer et al. (2002), studying Portuguese immigrants in Germany, conclude that the German guest worker system succeeded in attracting positively self-selected immigrants in terms of unobservable characteristics and compared to the native German workers. Chiquiar and Hanson (2002) study the performance of Mexican immigrants in the US and compare them to the non-migrant Mexicans. Using the semi-parametric approach of DiNardo et al.(1996), they reject previous results found in a more descriptive literature that Mexican immigrants in the US tend to be negatively selected in terms of observable skills compared to the stayers.

Unlike the literature mentioned, we focus on the wage effect of return migrants and compare them to those who stayed in the home country (those who never migrated). More specifically, we address the question of the self-selection process of out- and then re-migration of the individuals who left Albania and then returned home using the stayers (non-migrants) as the counter-factual. We ask two questions: (i) Had they chosen not to migrate, what would be their performance compared to those who stayed? and (ii) What would be the performance of non-migrants had they decided to migrate and return? To answer these questions, we use a sample of 691 individuals and use two alternative methodologies, a selection model along the lines of Heckman (1979) and Lee (1982) and a semi-parametric approach proposed by DiNardo et al. (1996). The first approach allows us to directly address the questions but offers only mean conditional earnings, while using the second approach we can study the effect of migration on the entire wage distribution.

Evidence suggests that a large number of Albanian migrants fall into the category of temporary (or guest) workers. In Greece, of those who received a temporary white card in the regularisation programme in 1998, only 54% proceeded to the second phase of application one year later to obtain a permanent green card. In a survey realised in Albania by the International Organisation for Migration (IOM) in 1992, 79% of respondents said they were 'likely' or 'very likely' to migrate for a few months, 73% for a few years and only 24% wanted to settle permanently in another country (IOM, 1995). Other evidence based on Eurobarometer shows that 50% of Albanians planned to emigrate for a short

period only[1].

To our knowledge, this is the first systematic analysis of return migrants in their home country. This is also the first study of such an issue in any transition economy (Albania being by far the most affected by migration). In addition, this paper is the first to use a semi-parametric kernel density approach to study the impact of return migration.

We find support for the negative self-selection of return migrants compared to the native non-migrant population (stayers). Our empirical results show that stayers would have performed much better than return migrants had they chosen to migrate both in terms of observed and unobserved characteristics. Individuals' decision not to migrate is based on the valuation of non-wage attributes of their current job, and also by the low added return to human capital (education and labor market experience on the home labor market) of migration. In terms of our model, this result gives support to a story of negative selection of the entire wave of migrants compared to non-migrants.

The rest of the paper is organised as follows. Brief background on Albanian migration is presented in Section 2, while the theoretical model is discussed in Section 3. Section 4 describes the data set and selection of the variables. In section 5, empirical methodology used to examine the issues raised in the theoretical model is presented while the empirical results are given in Section 6. Concluding remarks appear in the last section.

2 Albanian migration: A brief background

Albania has always been a country of emigration. However, between 1945 and 1990 the state pursued a policy of social and economic isolation, totally restricting any movement of its citizens out of its borders. Therefore, following the collapse of communism, a large number of people, uncertain about the economic prospects of Albania, left the country. All this was taking place against the backdrop of rapid and radical political change that had already begun elsewhere in Central and East European countries (CEEC) at the end of the 1980s. Therefore these events provided a further catalyst for change in Albania and helped to put in motion the organisational skills and energy of those who had been waiting for the right time to leave. Precise figures on Albanian immigrants are difficult to gather due to the potentially high number of non-declared (illegal) individuals either settled or working short time periods in the host countries. For example, officially 4300 Albanians were issued a residence permit in 1997 in Greece. But when the country adopted a regularisation programme (between November 1997 and May 1998) for undocumented immigrants, 239,000 Albanian immigrants applied (see SOPEMI, 2000). Hence, behind the official figures, there are a rather large number of undocumented migrants not only in Greece but elsewhere in Europe also, particularly in Italy. The latest report by the UN (2002) estimates that at least 15% of the Albanian population is living abroad. Assuming that the majority of migrations are for work purpose,

[1] See Papapanagos and Sanfey(1998).

this means that 30 per cent of the Albanian work force (1.3 million) is abroad, which is by far the highest proportion amongst the Central and East European economies.

A gradual improvement of the economic situation of Albania took place until the middle of 1996, owing mainly to remittances and macroeconomic policies[2]. These factors lessened, to a certain extent, the major economic and social problems, which emerged as a result of high unemployment rates and big disparities in wealth. However, these "positive factors" proved temporary as the domestically financed deficit increased to almost 11 percent of GDP, and inflation tripled to more than 17 percent by the end of 1996. This was exacerbated by the collapse of the pyramid schemes in early 1997, causing an estimated loss of savings of about $1 billion[3].

The worsening economic situation again forced people to migrate as employment prospects in Albania dwindled for some. Emigration has an important impact in the reduction of unemployment in the country. According to official data, during 1998 unemployment in the country reached 17.7%, with a figure of 19.1% in the north-eastern areas where the level of emigration is lower and 13.4% in the south where mass emigration exists. Given that Albanian emigration is often driven by seasonal and temporary employment, this has had an impact on the Albanian labour market. It is estimated that half the overall number of emigrants are seasonally employed.

According to data from the Albanian Ministry of Labour and Social Affairs, during the last ten years, Albanians have emigrated to about twenty European countries. However by far the biggest number goes to Greece followed by Italy. It may be a result of easier access to information about job availability and level of wages in Greece, as well as the different level of economic development between these countries. The migration flow is amplified by the need for a flexible non-unionised workforce for the informal economy in Greece, which forms an inseparable part of the official economy. However, as mentioned before, most of the migration is temporary and for a specific purpose; to raise funds to setup enterprise in Albania and/or to acquire skills by working in a relatively freer and established market economy.

3 Theoretical framework

In earlier literature, migration has been modeled as a one shot move, where individuals take their decision following an income maximising strategy to either

[2] Remittances have played a key role in the development process of not only Albania but other CEECs also. See Leon-Ledesma and Piracha (2001) for an analysis of the role of remittances in selected CEECs.

[3] Pyramid schemes were companies that, by claiming to be engaged in profitable investments, attracted large and increasing volumes of funds from private depositors with promises of dramatically high returns. In reality, however, depositors' funds were largely not used for solid investments, but served either to pay interest on existing deposits or were transferred by the schemes' owners to bank accounts abroad. For a detailed analysis of the pyramid scheme crisis see Jarvis (2000).

migrate or stay in the home country[4]. More recently, migration has been considered as a dynamic process within the lifetime expectations of workers (Djajic, 1988; Dustmann, 1997). In this context, there is evidence that migration is self-selective, i.e., those who migrated would have done better regardless of whether or not they had gone abroad. Immigrants are often found to be "more able and more highly motivated" than those who stay at home. In this study we question this finding. To do that we analyse the performance of return migrants in the source country, i.e., those who migrated but then decided to return to participate in the labour market of the source country[5].

Using Albanian data, we want to know if migrants who returned home to Albania were selected from the upper or lower part of the ability distribution. To conduct such an analysis we investigate their performance once they return to Albania. The problem can be modelled by assuming income maximising individuals who make a migration decision based on their expected income in the source and the host countries net of any migration (and remigration) costs. More formally, we use a version of the Roy (1951) theoretical model modified by Borjas (1987, 1999) and Borjas and Bratsberg (1996) to analyse this problem. But in contrast with the papers mentioned, we analyse the impact of self-selection on the home country instead of the host country.

Let the log earnings distribution in the source country and the host country be given by the following,

$$w^s = \mu^s + \eta\nu \tag{1}$$

$$w^h = \mu^h + \nu + \epsilon \tag{2}$$

where μ^s is the mean of log income in the source country, μ^h is the mean income that migrants receive in the host country and ν is the random variable that measures deviations from the mean and is independently and normally distributed with mean zero and variance σ_ν^2. The parameter η is interpreted as the rate of return to skills in the source country relative to that in the host country and is assumed to be known to the migrant. Finally ϵ is the random variable that measures deviations from the mean income in the host country and is not known to the migrant, i.e., it captures the luck and/or misinformation about the prospects in host country. ϵ is assumed to be independently and normally distributed with mean zero and variance σ_ϵ^2.

One of the main reasons for migration from Albania to EU countries is the significant wage gap between the two countries. The transition process exacerbated the already beleaguered economy of Albania resulting in sharp increases in the unemployment rate. Therefore, for the unemployed, an alternative has been to migrate temporarily to western Europe (primarily to Greece and Italy), since, in addition to gaining employment, migration also helps overcome any capital constraints that an individual may face in the source country to start

[4] See, for instance, Harris and Todaro (1970).

[5] We ignore the individuals who return to spend their retired life in the source country.

an enterprise.[6] The benefit to the source country is a lower unemployment level and therefore less burden on the welfare system. At the individual level the migrant earns wages by gaining employment and acquires skills which can enhance the migrant's chances of getting employment after returning to the home country. Therefore, migrants will only incur migration costs if they think that after spending a fraction δ of their working life in the host country they can increase their earnings by some percent, κ, when they return to their home country. We assume that the parameters δ and κ are constant.

Workers in Albania, therefore, have the following option: residing in an EU country for a fraction of the working life, followed by a permanent return to the source country. Ignoring discounting and using a first-oder approximation, the log earnings associated with this choice are given by:

$$w^r = \delta w^h + (1-\delta)(w^s + \kappa) \tag{3}$$

Workers maximise their lifetime earnings net of all migration costs. For the migration motive to be relevant, a person will only migrate if the expected earnings, due to skill acquisition abroad, upon return to the source country, are greater than the earnings in the source country if the individual does not migrate, net of both migration and remigration costs. Formally, we can write this as:

$$Ew^r > w^s + C^m + C^r \tag{4}$$

where C^m and C^r are the migration and remigration costs respectively.[7]

Substituting eqs (1),(2) and (3) in (4), we get the condition under which a person will migrate (with the intention of returning to the source country).

$$(1-\eta)\nu > \left(\mu^s - \mu^h + \kappa\right) + \frac{C^m + C^r - \kappa}{\delta} \tag{5}$$

Note that so far we have been assuming that a migrant must return to Albania as he is either required to or has already decided at the time of migration to return home. However, to complete the picture, it could be the case that the migrant could stay, either permanently or for a relatively longer period of time, in the host country.[8] In this circumstance, we need to set out the conditions under which (i) a person will migrate regardless of future intentions and (ii) once migrated, the person will return to the source country after spending a fraction of time in the host country, i.e., has no incentive to stay in the host country permanently. The two conditions are respectively given as,

$$Ew^h > w^s + C^m \tag{6}$$

[6] Mesnard (2000) analyses the choice of activity of return migrants taking into account credit constraints in the home country.

[7] This include both pecuniary and non-pecuniary costs of migration.

[8] As was discussed in Section2, there are some who successfully applied for a permanent stay in Greece.

and

$$Ew^r > w^h + C^r \tag{7}$$

Eq (6) states that if the expected wage net of migration costs is greater than the wage in the source country then it is better for a person to migrate. However, once there, a migrant will return to the source country if the expected wage upon return, net of remigration costs, is greater than the migrant wage in the host country. Substituting for the wages from the above equations, we get the following conditions under which a person will migrate regardless of future intentions and will migrate and then return home after spending a fraction of time in the host country,

$$(1-\eta)\,\nu > \mu^s - \mu^h - C^m \tag{8}$$

$$(1-\eta)\,\nu < \left(\mu^s - \mu^h + \kappa\right) - \frac{C^r + C^m - \epsilon}{1-\delta} \tag{9}$$

It is easier to explain the intuition behind eqs (5), (8) and (9) in a diagrammatic analysis and therefore it will be presented using figures 1 and 2 below.

As discussed earlier, return migration arises because a temporary stay in the host country increases the worker's earning potential in the source country. Therefore migration is a self-selection process which is based on the value of η in this model. The migration flow is composed of negatively selected individuals if $\eta > 1$. In other words, people with lower than average skills in Albania will migrate to EU because in this case only the lower skilled gain the most by moving to the host country. Amongst this cohort of negatively selected individuals, only the more able return to the origin country after a spell in the host country. This case is shown in figure 1.[9] Assuming that skills are not perfectly transferable across borders, there are gains from moving for individuals with lower skills (region left of A), whereas those with relatively higher skills are better off staying in Albania (in terms of eq 8, for instance, this is clear by the fact that to satisfy the inequality condition it must be the case that $\mu^h > \mu^s - C^m$, and therefore it's better for the individual to stay in the host country). Amongst the lower skilled migrants, only those who have relatively higher skills will face incentives to collect the gains from migration and return to Albania (region between A and B).

If $\eta < 1$, however, people with skills higher than the average level will migrate. This is represented by area to the right of A in fig. 2 since the returns are higher now for people with higher skills. And amongst this pool of positively selected migrants only the relatively less able will find it worthwhile to return after a spell in the host country (region between A and B).

[9] Where η is the slope of the earnings function in Albania relative to the slope of the earnings function that migrants face in the host country.

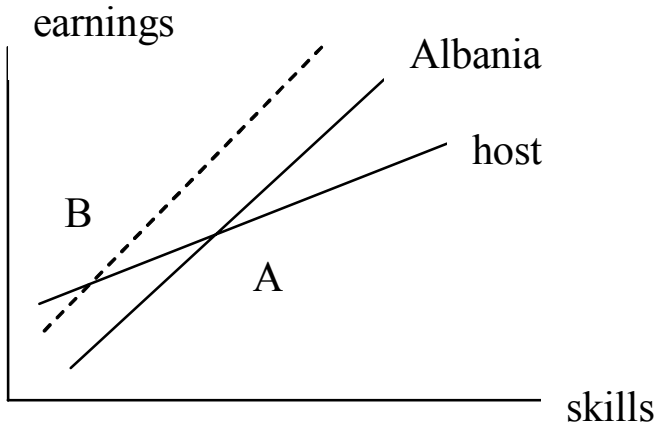

Figure 1: Returns to earnings when $\eta > 1$

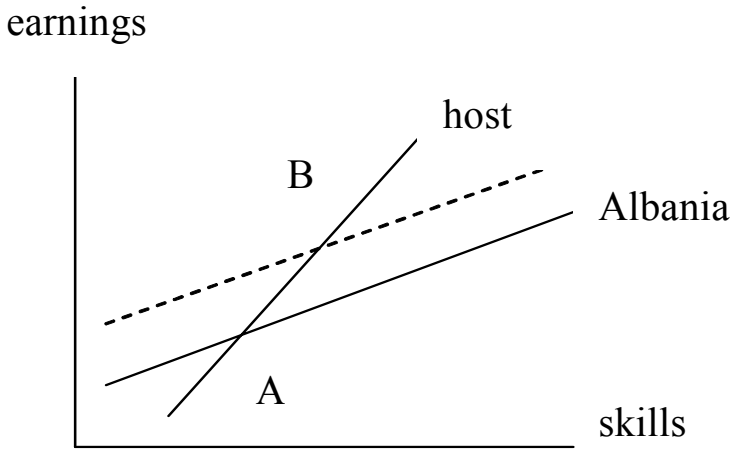

Figure 2: Returns to skills when $\eta < 1$

4 Data and choice of variables

Data used in this paper is based on direct interviews of 1500 individuals in all regions of Albania which were conducted during the period March 1998-January 1999.[10] Names were randomly selected in the district registers. Numbers attributed by districts are proportional to the size of the district, so the sample is regionally representative. No precise question was asked regarding present living location and therefore we could not be certain that some individuals are not actually still working abroad but have been interviewed while taking time off in Albania. In order to circumvent this, we selected only those individuals who have not migrated at all and those who had migrated and came back at least 2 months before the day of interview. Moreover we wanted to avoid the cross-border or seasonal migrants, i.e. those who spend some time of the year abroad and then come back home for the rest of the year. These individuals are defined as persistent migrants (with reference to the literature on low-pay individuals) and most probably have different characteristics and preferences than the population we want to study. Therefore we selected only those individuals who live on earned income, excluding all those who live on remittances (transfers), unemployment benefits, unearned income (i.e. personal savings supposedly earned abroad) or social assistance. We also removed pensioners, housewives and students. After imposing these restrictions we believe we obtained a sample of only 'true' return migrants. Of the 1500 original interviews, selection of valid answers led us to a final sample of 594 wage earners, aged between 16 and 65 (see Appendix for selection and table of means of variables). Of those selected there are 204 migrants and 390 non-migrants. This high percentage of migrants in the population looks excessive but is in line with previous evidence on Albania.[11]

Focusing on migrants, we note that less than 30 per cent migrated for a total period of less than a year, approximately the same percentage migrated for 1 to 2 years, 20 per cent for 2 to 3 years, less than 8 percent for 3 to 4 years, and 7 percent for 4 to 5 years, while only another 7 percent migrated for more than 5 years. Looking at the number of times individuals migrated, we find that 53 percent moved abroad only once, 32 percent did it twice and only 11 percent did it more often. And of those who migrated only once, more that 70 percent did so for more than one year whereas those who migrated twice have an average spell abroad of 13 months each time. For those who migrated three times, their average spell abroad is just over ten months. These findings are consistent with the selection of individuals who are return migrants and not persistent (or seasonal) migrants. Average characteristics are displayed in Table 1.

The hourly wages converted into US dollars[12] are 0.72 US$ for the total sample, $0.81 for return migrants and $0.67 for stayers. The Albanian Institute of Statistics (INSTAT) give the monthly mean income of public sector workers as

[10] This data was collected within the framework of Phare-ACE project.

[11] See Papapangos and Vickerman (2000).

[12] At the average market rate available for the three quarters of the interviews period (II, III, IV, 1998), it was 148.8 Lek/$, (International Financial Statistics, IMF, 2001).

Table 1: Means of the sample

	Tot. sample	Returned Migrants (204)	Stayers (390)
log(wage)	4.446	4.508	4.413
	(0.644)	(0.738)	(0.587)
education	13.973	13.574	14.182
	(2.431)	(2.363)	(2.443)
age	37.470	34,843	38.845
	(10.130)	(9.022)	(10.414)
male	0.663	0.848	0.567
married	0.714	0.676	0.733
Occupations:			
Managers	0.120	0.113	0.123
Lower man.	0.108	0.088	0.118
Skilled worker	0.222	0.211	0.228
Self-employed	0.207	0.289	0.164
Other paid job	0.253	0.206	0.277
Clerical,unskilled,farmer	0.091	0.093	0.090
Paid in for.currency	0.022	0.044	0.010
Live in cities	0.411	0.466	0.382
Live North	0.146	0.123	0.159
Muslim	0.574	0.574	0.574
Numb. of dependents	0.958	1.123	0.872
	(1.138)	(1.157)	(1.120)

10,000 Leks for 1998 (18% of the labor force) while in our sample using average monthly working hours we find an average monthly income of 15,351 Leks. We expect this difference to be due to individuals in the private sector earning more than those in the public sector (unfortunately we do not know whether individuals work in the public or the private sector in our dataset). In our sample, the average migrant is younger, slightly less qualified, less likely to be married and more likely to be male. The differences in average level of education and age are not statistically significantly. Looking at occupation, we note that the largest difference is in self-employed work: return migrants are nearly twice as likely to be self-employed than the stayers. We observe nearly identical proportion of managers in the stayers and return migrants sub-populations (12.3% vs 11.3%). We will discuss these two variables in more detail in the empirical section, as they are central to our analysis. Other noticeable difference is the larger proportion of returnees who live in big cities (46% compared to 39%).

5 Empirical methodology

Two methods are used in order to investigate the issues presented in the theoretical model. We begin by making use of a selection model as proposed by Lee (1978, 1982) and applied to migration by Nakosteen and Zimmer (1980). The model can be summarised by the following three equations:

$$w_i^r = \beta^r x_i + \epsilon_{r_i} \tag{10}$$

$$w_i^s = \beta^{s'} x_i + \epsilon_{s_i} \tag{11}$$

$$m_i^* = \gamma' z_i + u_i \tag{12}$$

The w_i^r is the hourly log wage of individuals who migrated at least once and came back to Albania and w_i^s is the log hourly wage of those who stayed in the country. These hourly wages are explained by a matrix of socio-economic covariates such as education, age and its square, dummy variables for gender, marital status (and its interaction with the gender variable), occupation (managers, lower manager, skilled worker, self-employed, other paid job, and the reference clerical, unskilled and farmers) and a dummy for being paid in a foreign currency.[13] The third equation describes the decision to choose to migrate. The latent variable m_i^* is the difference between benefit and cost from migration (monetary and psychological). It is not observed, but we know when the individual has decided to migrate, so we can define:

$$\text{For migrants} \qquad m_i = 1 \quad \text{iff} \quad m_i^* \geq 0 \tag{13}$$

$$\text{and for non-migrants} \qquad m_i = 0 \quad \text{iff} \quad m_i^* < 0 \tag{14}$$

[13] We have introduced a variable for being paid in foreign currency as we may expect different pay settings for people who work for international organisations or multinational firms than those who work for domestic firms. We observe those who have been abroad at least once are more likely to be hired by such firms (4% of return migrants compared to only 1% of the stayers).

Two sets of variables are used to explain the decision to migrate: those included in the wage equations and those not included in them. The second set is needed to identify the model without relying entirely on distributional assumptions. Education is introduced as a variable for the probit migration decision and the wage equation, as this characteristic may be explaining both the migration decision and the wage equation. Age should be negatively associated with the migration decision as older individuals are expected to be more attached to local amenities than younger ones. Furthermore, men are more likely to move than women, a common feature of all studies on migration. The opposite is true for married individuals. We also add an interaction term between gender and marital status as the effect of these variables might be correlated.

We introduce additional variables in the migration equation that were not included in the wage equation. First, the number of dependents within the household is introduced with the assumption that tighter liquidity constraints on the household might exert, ceteris paribus, a positive impact on migration decision, although it's effect on wages may be negligible. The second one is the size of the city where the individual is currently living. Assuming that the individual returned to the place that he/she left when migrating, we expect people living in big cities to be more likely to migrate as family ties might be more relaxed in an urban environment as compared to a rural one. Moreover, individuals coming from the more mountainous north of the country might be more attached to their home country and less willing to migrate. Another variable expected to influence migration but not wage is religion. There are two main religions in Albania, Islam and Orthodox Christian. Muslims, who comprise 70% of the population, are expected to face higher (non-pecuniary) costs of migration as opposed to the minority Albanian Orthodox and Roman Catholics (20% and 10% of the population respectively). These costs cover the relatively higher level of difficulty muslims might face in practising their faith in a non-muslim country and also the increased difficulty of assimilation in countries with different religions. We therefore introduced a "muslim" dummy to measure these increased costs of migration for muslims.

The following two conditional wages are defined as the outcome for those who have already made the choice,

$$E(w_i^r|m_i = 1) = \beta^{r'} x_i + E(\epsilon_{r_i}|u_i \geq -\gamma' z_i) = \beta^{r'} x_i + \sigma_{e_r}\rho_{ru}\frac{\phi(\gamma' z_i)}{\Phi(\gamma' z_i)}$$

$$E(w_i^s|m_i = 0) = \beta^{s'} x_i + E(\epsilon_{si}|u_i < -\gamma' z_i) = \beta^{s'} x_i + \sigma_{e_s}\rho_{su}[-\frac{\phi(\gamma' z_i)}{1 - \Phi(\gamma' z_i)}]$$

In order to address the questions posed in the introductory remarks, we need the conditional probabilities for migrants, had they chosen not to migrate and similarly the conditional probabilities of stayers, had they chosen to migrate. Following Maddala (1983), these are given as:

$$E(w_i^s|m_i=1)=\beta^{r'}x_i+E(\epsilon_{ri}|u_i\geq-\gamma'z_i)=\beta^{r'}x_i+\sigma_{e_r}\rho_{ru}\frac{\phi(\gamma'z_i)}{\Phi(\gamma'z_i)}$$

$$E(w_i^r|m_i=0)=\beta^{s'}x_i+E(\epsilon_{r_i}|u_i<-\gamma'z_i)=\beta^{s'}x_i+\sigma_{e_s}\rho_{su}[-\frac{\phi(\gamma'z_i)}{1-\Phi(\gamma'z_i)}] \quad (15)$$

Equation (5) is the conditional wage of stayers, had they chosen to migrate

and equation (15) is the conditional wage of migrants, had they chosen to stay. Where $\Phi(.)$ and $\phi(.)$ stand, respectively, for the cumulative and density function of the standard normal, σ_{e_r} and σ_{e_s} are the variances of the error terms of the wage equations for migrants and stayers respectively, and ρ_{su} and ρ_{ru} are the correlations between the stayers and migrants error term, respectively, and that of the migration decision equation. There is no agreement in the literature as whether these conditional wages should be preferred over the marginal distributions. So in the section devoted to the results we give the marginal effects as well. Average wage differentials can be given for different groups of workers and at different ages and levels of education.

So far we have only been able to give average earning differences whereas the distributional impact of migration might also be of interest to answer the questions posed earlier. One way of identifying the effect of return migration would be to answer the following question: Which density function would prevail if the individual characteristics of migrants had been similar to those of stayers and they had been paid according to the wage schedule observed for stayers? This is one counterfactual density. This counterfactual is the wage density that would prevail if everybody were receiving stayers' wages. But another way of studying the effect of migration could be to construct a density that would prevail if everybody received migrants' wages. Here the question is: What density would prevail if the characteristics of stayers were similar to those of migrants and they were paid according to the wage schedule of migrants?
Following DiNardo et al. (1996), we can write down these two counterfactuals by the following steps. First we represent the observed density of wages for stayers as the integral of the density of their wages conditional on a observed characteristics z over the distribution of these characteristics:

$$g(w|m=0)=\int f^s(w|z)h(z|m=0)dz \quad (16)$$

and similarly for migrants, we have:

$$g(w|m=1)=\int f^r(w|z)h(z|m=1)dz \quad (17)$$

We know that the required densities, i.e. the density that would prevail if everybody were receiving stayers wages is:

$$g^s(w) = \int f^s(w|z)h(z)dz$$

and the density that would prevail if everyone were receiving migrants wages is:

$$g^r(w) = \int f^r(w|z)h(z)dz$$

Following Bayes' Law, these last densities can be rewritten as[14]:

$$g^s(w) = \int \theta^1(z)f^s(w|z)h(z|m=0)dz \tag{18}$$

$$g^r(w) = \int \theta^2(z)f^r(w|z)h(z|m=1)dz \tag{19}$$

Note that equations (18) and (19) are similar to equations (16) and (17) except for the weights $\theta^1(z)$ and $\theta^2(z)$ which are respectively:

$$\theta^1(z) = \frac{prob(m=0)}{prob(m=0|z)}$$

and

$$\theta^2(z) = \frac{prob(m=1)}{prob(m=1|z)}$$

These weights can be empirically calculated since $prob(m=0)$ is simply the proportion of stayers in our sample and $prob(m=0|z)$ is the probability of being a migrant given individual characteristics which can be estimated by a probit. Using these weights, we apply weighted kernel densities to the sample of stayers and migrants to estimate the densities of both counterfactual distributions.

6 Results and discussion

6.1 Parametric estimates

Following Ham (2001), we conduct tests on the variables that identify the selection into migrants and stayers. More precisely, we introduce these variables in the wage regressions to check if they are significantly different from zero. If they are significant we exclude them from the entire model, and if they are not significant, we include them in the probit and not the wage estimations. We investigate with four variables: two regional i.e., whether individuals are living in cities and in the North of the country and two personal characteristics:

[14] The property used is: $h(z) = \frac{h(z|m=0)prob(m=0)}{prob(m=0|z)}$ for the stayers and similarly for the migrants $h(z) = \frac{h(z|m=1)prob(m=1)}{prob(m=1|z)}$.

religion (being a muslim) and number of dependents in the household. We expect these variables to affect the migration decision and to be uncorrelated with the error term in the wage equations. We compute Chi-Square tests of their individual and joint significance in the probit and Wald test of the individual and joint significance in the wage equations. The four variables are individually and jointly insignificant in the wage equation for stayers (the individual tests all have a p-value higher than 0.17, while a test to check if they are jointly significant generates a p-value of 0.25). For migrants, coefficients for each variable are insignificant (except for living in cities), and test for their joint significance gives a p-value of 0.075 (without the "living in cities" variable, p-value is 0.45). Instruments are jointly significant (p-value of 0 to the second decimal place) in the probit, and they are all significantly different from 0 individually except the "Muslim" variable (p-value of 0.72). We give in Table 2, the maximum likelihood estimates of the migration model. For comparison, we provide also in the Appendix estimates of wage equations using Lee (1978) endogenous switching model, with wage equations explained only by education and age and then adding progressively more exogenous variables (table 2 and 3). We also give in the Appendix, Lee's estimates with only regional characteristics in the probit (first selection rule, Table 4) and then adding religion and the number of dependents (second selection rule, Table 5).

6.1.1 Comments on estimates

Note that the estimates for the different estimations are rather similar. Generally the coefficients for the stayers' wage equations take the expected sign and are statistically significantly different from zero. One more year of education leads to approximately a 4 per cent increase in the hourly wage; age is introduced to measure labor market experience and shows that each subsequent year gives approximately a 8.5 per cent increase in the dependent variable. The age profile is concave. One coefficient of interest is the male dummy which is negative and not significant. This result has to be interpreted in the context of an ex-communist country where work was compulsory for both men and women and wages were set at the national level. Coefficients for occupations take the expected sign with managers earning 66% more than the omitted category (the group: clerical, unskilled and farmers). The premium for self-employment is 52%.

Interestingly for return migrants, education and age are not significantly different from zero.[15] However, for migrants, returns to being a manager, self-employed and a "lower" manager are significant and higher than for stayers. Skilled return migrant workers earn less that skilled stayers. Managers earn between 90 and 100 per cent (depending on the estimation, see Table 2 and Appendix, Tables 2 to 5) more than the omitted category.[16] The premium for self-employed returners is between 69 and 73 per cent. These results are quite

[15] This result is similar to Ham and al. (2001), who found lower return to education for internal migrants in the United States.

[16] The omitted category is clerical, unskilled, farmer.

Table 2: Maximum likelihood estimates, second selection rule

Variables	Stayers		Migrants		Migration	
Constant	1.776	(.623)	4.92	(1.003)	.617	(.440)
education	.0405	(.013)	.032	(.028)	-.049	(.025)
age	.0850	(.033)	-.028	(.054)	-.036	(.007)
age squ.	-.094	(.040)	.0595	(.071)		
male	-.0613	(.145)	-.533	(.304)	.979	(.133)
married	-.2636	(.141)	-.110	(.333)	.219	(.145)
male*married	-.0110	(.154)	-.011	(.332)		
Occupations:						
Managers	.6562	(.171)	1.003	(.250)		
Lower man.	.2351	(.174)	.608	(.309)		
Skilled worker	.3588	(.151)	.303	(.238)		
Self-employed	.5171	(.152)	.736	(.221)		
Other paid job	.3007	(.149)	.285	(.230)		
For. currency	-.2696	(.272)	.869	(.180)		
Live in cities					.327	(.115)
Live North					-.345	(.148)
Muslim					-.009	(.113)
Dependents					.0690	(.044)
σ_{e_m}	.875	(.074)				
σ_{e_s}			.5773	(.029)		
ρ_{mu}	-.806	(.087)				
ρ_{su}			-.5678	(.142)		

interesting as they suggest that returns to returning take the form of increased earnings in terms of (i) higher positions in the job ladder and (ii) becoming self-employed[17]. Better educated and more experienced migrants are not earning higher hourly wages when they return**.** We observe also a negative and significant sign of the education variable in the migration decision, therefore migration is not associated with higher educated individuals. As the theoretical model shows, individuals choose to migrate if the relative rewards to their skills are higher in the host country and then choose to return if they expect the rewards (promotion and/or higher wages etc) to be higher than before in the home country due to newly acquired skills and/or through saving acquired abroad**.** Therefore returns to skills take the form of access to better jobs in the career ladder but not through return to formal skill (education and labor market experience). Individuals who chose to migrate and then returned face the prospect of access to high paid jobs that do not reward formal training (years of education and labor market experience). In our data set, we found that 10% of the self-employed and the managers used their savings accumulated abroad to

[17] Overall a Chi-Square test of the joint significance of the occupational variables gives a p-value of zero to the fourth decimal place for stayers and migrants.

set up a business. This result can therefore be related to the study of Mesnard (1999) who models return migration as a way of overcoming constraints of the credit market in the home country. In our context, we observe that individuals who lack formal qualifications required for higher paid jobs tend to migrate to overcome their initial disadvantage. This strategy proves particularly successful as the average earnings of return migrants are higher than those of stayers.

Looking at the unobserved characteristics, the signs of the corrections for selectivity allow us to draw interesting conclusions. For instance the correction for sample selection in the migrant's wage equation is not significant when using a two-step approach (Appendix, Table 4 and 5). The maximum likelihood, however, gives a significant and negative estimate for the correlation coefficient. For stayers, the three estimations give a significant and negative sign for the coefficient of the selectivity variable ($[-\frac{\phi(\gamma' z_i)}{1-\Phi(\gamma' z_i)}]$), which means that the truncation effect is positive. Using the framework of a Roy (1951) self-selection model as formalised by Maddala(1983) and others, this indicates that expected earnings of those who choose to migrate may be lower than that of a random individual from the entire sample for given characteristics. And conversely, the expected earnings of those who stayed are higher than the expected earnings of a random individual from the sample. There is positive selection for stayers and support for negative selection of the migrants. We return to this issue in the following section where we directly address the question whether the stayers would have performed as well as migrants, had they decided to migrate.

6.1.2 Expected earnings and self-selection

Mean income is higher for migrants than for stayers by 9 log points, so approximately by 9 percent (see Table 3). Looking at the two counterfactuals, calculated using simple OLS estimations, we note that had they chosen to migrate, stayers' earnings would have been higher than the mean income of migrants. The mean earnings of migrants, had they chosen to stay, would have been 'just' higher than the mean earnings of stayers. However, these estimates are probably biased as they do not take into account the potential self-selection of individuals in either sub-population. Therefore we correct for potential self-selection bias and present the results in columns 2 to 6 of Table 3 which are based on Table 2 and Appendix, Table 4 and 5. We give for each estimation, the mean incomes based on the marginal ($E(w^r) = \beta^{r'} x$ and $E(w^s) = \beta^{s'} x$)[18] and the conditional ($E(w^r|m = 1)$ and $E(w^s|m = 0)$) expected wage rate. Marginal distribution should be used for inference on potential migration and conditional distribution should be used for inference on realised migration (Maddala, 1983, p.287). Bjorklund (1983) proposed to interpret them as, respectively, the outcomes before and after the choice has been made. If we compare rows 1 and 2 in table 3, we observe that migrants made the correct decision in choosing to migrate, as their income is higher than what they would earn by staying. Comparing their

[18] We choose the term "marginal" rather than "unconditional" following Maddala(1983) and Van der Gaag and Vijverberg (1991).

Table 3: Estimated mean hourly wage for return migrants and stayers

	OLS	Endogenous switching, Lee(1978)				Maximum likelihood	
		First sel. rule		Sec. sel. rule		Sec.sel rule	
		marg.	cond.	marg.	cond.	marg.	cond.
Migrants (204 cases)							
Mean income	4.5	4.96	(4.5)	4.73	(4.5)	5.15	4.5
Had they stayed (counterfact.)	4.42	3.91	3.21	4.02	3.47	4.20	3.90
Stayers (390 cases)							
Mean income	4.41	4.04	4.41	4.13	4.41	4.26	4.41
Had they migrated (counterfact.)	4.49	5.10	(5.34)	4.80	(4.91)	5.32	5.66

Notes: Marg. is for: $E(w^r) = \beta^{r'} x$ and $E(w^s) = \beta^{s'} x$
and Cond. is for: $E(w^r|m = 1)$ and $E(w^s|m = 0)$

performance, had they not migrated, with the performance of stayers (rows 2 and 3), we note that the counterfactual mean income of migrants is always lower than the mean income of stayers. This shows that the performance of migrants, if they had stayed, would have been worse than that of the stayers. As for the stayers, comparing rows 3 and 4 it can be seen that their mean income would have been higher had they migrated. So the higher expected earnings are not sufficient to compensate for the costs of migration.[19] It is likely that the stayers know their potential wage will be higher if they returned home after spending some time abroad but they deliberately chose not to leave mainly for non-pecuniary reasons. These results show that return-migrants are negatively selected as depicted in the theoretical analysis in fig 1.

[19] Our data set offer some help in identifying the costs faced by the stayers. They were asked to give the main reason why they did not migrate amongst eight possible answers. The results are as follows: "family" (16%), fear of losing the current job (12%), not having a visa (11%), love for the home country (9%), only at the sixth place comes the financial cost (6%), then being too old (5%) and health reasons (2%). No one chose the risk of losing social assistance.

6.2 Results using semi-parametric estimates

We now investigate the entire density of hourly wages. All graphs presented here give estimates calculated with a Gaussian kernel function. We used the Silverman (1986, eq. 3.31) procedure to select the optimal bandwith, its value lies at around 0.14. Kernel estimates for the entire sample, for the stayers and for the migrants, are displayed in figure 3. In figure 4, densities for the total sample are decomposed into the weighted sum of the densities of migrants and stayers. We simply multiply the sub-group densities of figure 3 by the sub-group population shares.

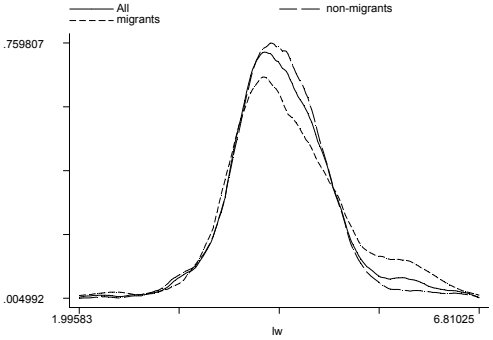

Figure 3: Kernel densities

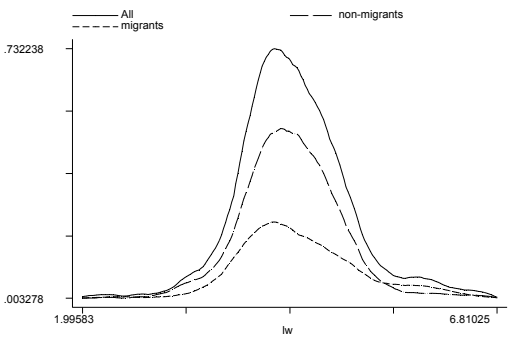

Figure 4: Weighted densities

Figure 3 shows that migrants tend to account for a larger part of the total distribution at higher hourly wages. There is clearly a clustering of the distribution at higher wages for those who have migrated and leads to a small "bump" at the top of the overall distribution. These observations based on the raw distributions are interesting but cannot reveal the real effect of migration as we compare subpopulations with rather different characteristics. We already know from table 1 that migrants tend to be less educated, younger and, more often, male.

The different curves may be due more to these individual characteristics than to migration. So we have to go a step further in comparing populations with similar characteristics. We can do this in two ways, either in displaying the distribution of wages as if everyone were paid the stayers' wage, or in graphing the distribution of wages as if everyone were paid the migrants' wage. More precisely, in the first case we answer the following question: Which density function would prevail if individual characteristics of migrants had been similar to those of stayers and they had been paid according to the wage schedule observed for stayers? We do that in figure 5 which gives this hypothetical counterfactual density together with the density of the entire population. The difference between the two curves can be interpreted as the effect of (return) migration. The curve called the density without migration is calculated using formula 19. We give in the Appendix (fig. 1 to 4), the propensity scores of the probit and also the weights $\theta^1(z)$ and $\theta^2(z)$. Note that the counterfactual density in figure 5 is rather similar to the density of the entire sample. Had the migrants

been paid the same as the stayers and their characteristics would have been similar, we would have observed a slightly different density function. Mainly the small cluster at the top of the distribution disappears and is compensated by a shift of the curve to the right just after the mode of the distribution. So interpreting the effect of migration as the difference between the two curves, we can say that its effect is rather reduced at the bottom of the distribution and can explain the bump at around 6 log hourly Lek.

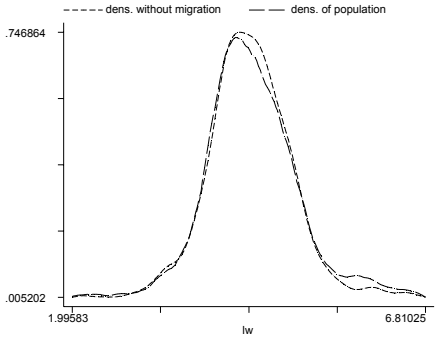

Figure 5: Hypoth. density without migration

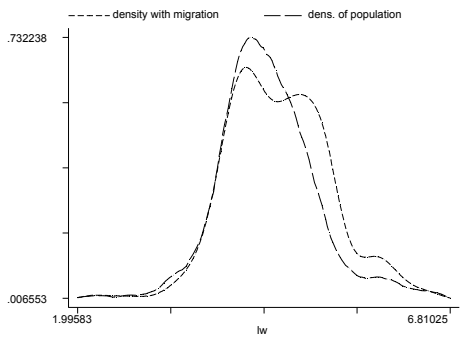

Figure 6: Hypoth. density with migration

Figure 6 gives complementary information as here the reference is the migrants sub-population. The counterfactual curve is now the density that would have prevailed if the stayers had decided to migrate and their characteristics were similar to those of migrants. This would have resulted in the density function lying to the right of the actual one. This counterfactual distribution is nearly bi-modal, with a second (lower) mode at higher wage. These figures give more support to the negative selection of return migrants. In particular, we observe here that the effect of migration would have been much stronger had the stayers decided to migrate and their characteristics were similar to those of migrants.

7 Results with Disaggregated Characteristics

In this section we want to check that the above results, which are based on the mean income of all individuals, still hold if the individuals are disaggregated by qualification levels, age and type of employment (self- or wage employment). Using the maximum likelihood estimates, we therefore calculate the marginal and conditional expected hourly wages for three different characteristics: Those with more and less than 14 years of schooling, those more and less than 30 years of age, and for wage and self-employed workers (see Appendix, Table 6).[20]

The first cell of first column of Table 4 shows that the stayers, had they migrated, would have earned 117% more than the migrants actual earning. And the first cell of column 3 shows that the migrants, had they decided to

[20] Dustmann (2000) showed that return migrants choosing between self-employment or wage sector tend to experience different outcomes when they return.

stay, would have earned 42% less than the actual earnings of stayers. These results strongly suggest that the sub-population of stayers is composed of better performers. For all decomposition of the population, by age, employment and level of education, stayers would have performed better had they migrated. We observe that highly educated (young and old) stayers would have gain more, had they decided to move than low educated and compared to similar migrants. Also highly educated migrants (young and old) would have lost more, had they stayed, compared to stayers with same education level.

Table 4: Absolute advantage for different characteristics

	Stayers		Migrants	
	col.1	col.2	col.3	col.4
	low educ.	high educ.	low educ.	high educ.
wage	117%	126%	-42%	-54%
self	112%	112%	-50%	-54%
young	108%	146%	-29%	-45%
old	104%	134%	-42%	-57%

Notes: Absolute advantage is the difference between mean earnings of stayers (migrants) and the counterfactual mean earnings of migrants (stayers).

Table 5: Comparative advantage for different characteristics

	Stayers		Migrants	
	col.1	col.2	col.3	col.4
	low educ.	high educ.	low educ.	high educ.
wage	-124%	-137%	59%	65%
self	-121%	-109%	69%	51%
young	-132%	-150%	53%	73%
old	-119%	-135%	57%	58%

Notes: Comparative advantage means difference between mean and counterfactual average earnings for each population.

Another area of interest is to look at the individual comparative advantage for each sub-population. Here, comparison is made between what the individuals would have earned (had they decided otherwise) with what they are actually earning. So the first cell of first column of Table 5 shows that low educated stayers are earning 124% less than what they would be earning, had they decided to move. And the first cell of column 3 implies that the less qualified migrants earn 59% than if they had chosen not to migrate. The results confirm that for each type of characteristics migrants made the right decision. However, as

mentioned in the previous section, the stayers must face unobserved costs of migration, which prevent them to migrate despite the fact that they would have been financially much better in doing so. Therefore the results found earlier on the aggregated sub-population (Table 3) are not affected when we take into account the different characteristics.

8 Conclusion

This is the first paper to investigate the relationship between the performance and self selection of return migrants in the home country. We study this in the context of Albania, a country most affected by (temporary) migration after the collapse of communism in 1990.

Our paper finds evidence that return-migrants are negatively selected compared to the stayers in Albania. The benefits for migrants, once they return, translate into access to better positions on the job ladder but not in increased rewards for human capital variable such as age and education. The return migrants on average earn more than the stayers, but had the stayers migrated (and then returned) they would have earned more than twice the wages of return migrants. These results are confirmed by a semi-parametric analysis where we construct the counterfactual density that would have prevailed if the stayers had decided to migrate and their characteristics were similar to those who actually migrated. This counterfactual distribution lies to the right of the actual distribution and is bi-modal, with a second (lower) mode at higher wage. This shows that the stayers, had they migrated, would have had a stronger effect on the distribution of wages in Albania.

Interpreting our results in the framework of our theoretical model implies that the slope of the wage function is higher in Albania than in the host country, or expressed otherwise, that lower skilled Albanians earn relatively more in migrating than higher skilled. The possible policy implications of this result is that (i) there is no brain drain from Albania and (ii) there is possible skill acquisition in the foreign country that translates into improved conditions in Albania when the migrants return. Although more detailed work is needed in this area, our results give support to the idea of allowing more managed migration into the EU from CEEC.

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Appendix

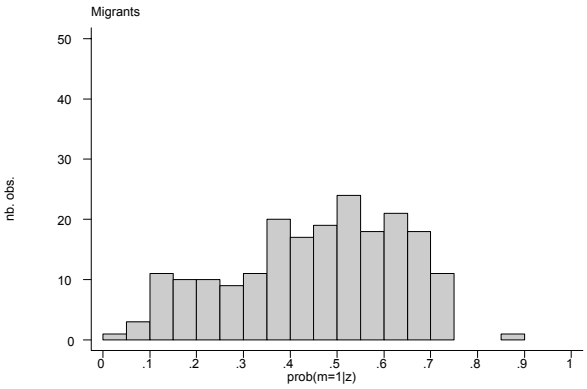

Figure A1: Estimated prop. scores

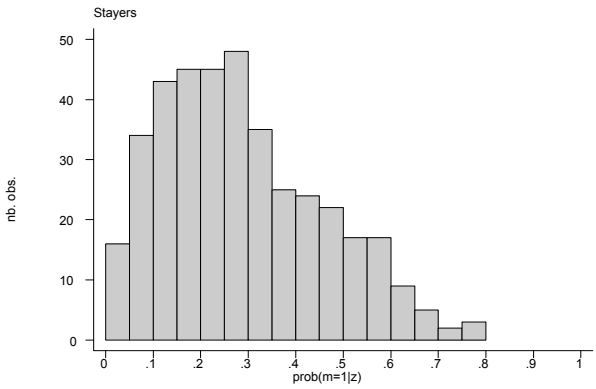

Figure A2: Estimated prop. scores

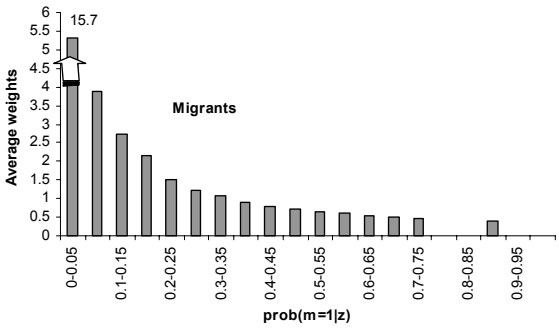

Figure A3: Est. prop.scores and weights ($\theta^2(z)$)

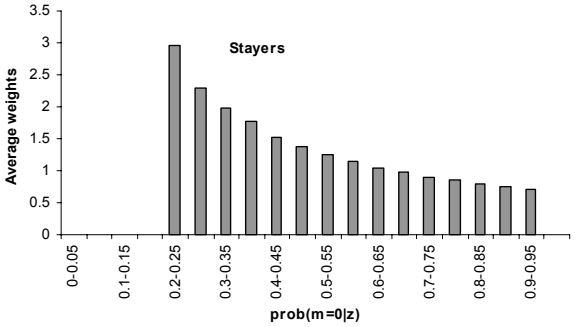

Figure A4: Est. prop. scores and weights ($\theta^1(z)$)

Table 1: Sample Selection Criteria

1500	Total numbers of interviews
-37	Not reporting their age
-25	Individuals less than 15 or more than 65 years old
-460	Retired, not active, student, unemployed, missing occupation
-33	Not reporting years of education
-186	Not reporting earned income
-71	Missing or non valid working hours
- 88	Migrants returned since less than two months
- 6	Hourly wage higher than the 99th percentile
594	**204 return migrants and 390 stayers**

Table 2: Migrants, different specification of the wage function, dep. variable: Lw, second selection rule

Variables	Coeff.	St.-Err.	Coeff.	St.-Err.	Coeff.	St.-Err.	Coeff.	St.-Err.
Constant	4.224	(0.888)	4.455	(0.945)	4.477	(0.969)	4.536	(0.912)
education	0.045	(0.023)	0.049	(0.024)	0.050	(0.024)	0.025	(0.026)
age	-0.018	(0.047)	-0.018	(0.047)	-0.006	(0.050)	-0.030	(0.047)
age squ./100	0.029	(0.068)	0.034	(0.063)	0.023	(0.065)	0.050	(0.061)
male			-0.183	(0.251)	-0.380	(0.372)	-0.234	(0.345)
married					-0.241	(0.312)	-0.038	(0.300)
male*marr.					0.180	(0.319)	-0.014	(0.304)
Managers							0.900	(0.235)
Lower Man							0.571	(0.238)
Skilled work							0.299	(0.198)
Self-emp.							0.691	(0.188)
Other job							0.261	(0.199)
For.curr.							0.686	(0.239)
Lambda	-0.099	(0.182)	-0.286	(0.316)	-0.377	(0.344)	-0.251	(0.319)

Table 3: Stayers, different specification of the wage function, dep. variable: Lw, second selection rule

Variables	Coeff.	St.-err.	Coeff.	St.-err.	Coeff.	St.-err.	Coeff.	St.-err.
Constant	2.106	(0.486)	2.129	(0.512)	1.371	(0.576)	1.487	(0.560)
education	0.055	(0.012)	0.054	(0.013)	0.055	(0.014)	0.045	(0.015)
age	0.067	(0.023)	0.067	(0.023)	0.104	(0.026)	0.089	(0.025)
age squ./100	-0.078	(0.029)	-0.079	(0.030)	-0.112	(0.031)	-0.029	(0.031)
male			0.017	(0.124)	-0.057	(0.169)	-0.170	(0.166)
married					-0.243	(0.122)	-0.293	(0.120)
male*marr.					-0.058	(0.131)	-0.031	(0.126)
Managers							0.676	(0.129)
Lower Man							0.237	(0.127)
Skilled work							0.377	(0.109)
Self-emp.							0.548	(0.116)
Other job							0.322	(0.112)
For.curr.							-0.259	(0.267)
Lambda	-0.329	0.124	-0.298	0.246	-0.543	0.271	-0.599	(0.265)

Table 4: Endogenous switching model, Lee(1978), first selection rule

Variables	Stayers		Migrants		Migration	
Constant	1.281	(0.625)	4.734	(0.936)	0.641	(0.393)
education	0.047	(0.017)	0.033	(0.027)	-0.045	(0.024)
age	0.094	(0.027)	-0.028	(0.047)	-0.037	(0.007)
age squar.	-0.001	(0.000)	0.001	(0.001)		
male	-0.239	(0.193)	-0.437	(0.395)	1.003	(0.132)
married	-0.317	(0.133)	-0.106	(0.302)	0.253	(0.148)
male*married	-0.029	(0.133)	0.027	(0.298)		
Occupations:						
Managers	0.669	(0.136)	0.902	(0.233)		
Lower man.	0.240	(0.134)	0.562	(0.236)		
Skilled worker	0.367	(0.114)	0.301	(0.197)		
Self-employed	0.545	(0.121)	0.693	(0.187)		
Other paid job	0.310	(0.118)	0.254	(0.197)		
For. currency	-0.230	(0.282)	0.681	(0.236)		
Live in cities					0.247	(0.119)
Live North					-0.365	(0.171)
lambda	-0.758	(0.326)	-0.497	(0.397)		

Table 5: Endogenous switching model, Lee(1978), second selection rule

Variables	Stayers		Migrants		Migration	
Constant	1.487	(0.561)	4.536	(0.912)	0.717	(0.413)
education	0.045	(0.015)	0.025	(0.026)	-0.049	(0.024)
age	0.089	(0.025)	-0.030	(0.047)	-0.037	(0.007)
age squ.	-0.001	(0.000)	0.000	(0.001)		
male	-0.170	(0.167)	-0.234	(0.345)	0.975	(0.133)
married	-0.293	(0.120)	-0.038	(0.300)	0.219	(0.150)
male*married	-0.031	(0.127)	-0.014	(0.304		
Occupations:						
Managers	0.676	(0.130)	0.900	(0.235)		
Lower man.	0.237	(0.128)	0.571	(0.238)		
Skilled worker	0.377	(0.109)	0.299	(0.198)		
Self-employed	0.548	(0.117)	0.691	(0.188)		
Other paid job	0.322	(0.113)	0.261	(0.199)		
For. currency	-0.259	(0.267)	0.686	(0.239)		
Live in cities					0.267	(0.121)
Live North					-0.421	(0.176
Muslim					-0.126	(0.117)
Dependents					0.095	(0.051)
lambda	-0.599	(0.265)	-0.251	(0.319)		

Table 6: Mean and Counterfactual mean incomes for different characteristics

	Migrants (204 cases)			Mean		Counterfactual	
	Educ	Age	Wage	Marg	Cond.	Marg	Cond.
				col.1	col.2	col.3	col.4
row 1	<14	all	1	5.02	4.45	4.13	3.86
2	>14	all	1	5.42	4.66	4.36	4.01
3	<14	all	0	4.93	4.36	4.03	3.77
4	>14	all	0	5.14	4.40	4.23	3.89
5	<14	<30	1	4.86	4.40	3.98	3.77
6	>14	<30	1	5.38	4.74	4.30	4.01
7	<14	>30	1	5.15	4.50	4.24	3.93
8	>14	>30	1	5.45	4.60	4.41	4.02
	Stayers (390 cases)			Mean		Counterfactual	
	Educ	Age	Wage	Marg	Cond.	Marg	Cond.
row 9	<14	all	1	4.10	4.28	5.12	5.52
10	>14	all	1	4.40	4.55	5.60	5.92
11	<14	all	0	4.11	4.27	5.12	5.48
12	>14	all	0	4.31	4.43	5.25	5.52
13	<14	<30	1	3.93	4.16	4.99	5.48
14	>14	<30	1	4.28	4.46	5.49	5.86
15	<14	>30	1	4.18	4.35	5.18	5.54
16	>14	>30	1	4.45	4.59	5.64	5.94

Table 7: Absolute advantage for different characteristics, marginal

	Stayers		Migrants	
	col.1	col.2	col.3	col.4
	low educ.	high educ.	low educ.	high educ.
wage	10%	18%	3%	-4%
self	19%	11%	-8%	-8%
young	13%	11%	5%	2%
old	3%	19%	-6%	-4%

Notes: Absolute advantage is the difference between mean earnings of stayers (migrants) and the counterfactual mean earnings of migrants (stayers).

Table 8: Comparative advantage for different characteristics, marginal

	Stayers		Migrants	
	col.1	col.2	col.3	col.4
	low educ.	high educ.	low educ.	high educ.
wage	-102%	-120%	89%	116%
self	-101%	-94%	90%	91%
young	-106%	-121%	88%	108%
old	-100%	-119%	91%	104%

Notes: Comparative advantage means difference between mean and counterfactual average earnings for each population.