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# MIREM Project

**MIGRATION DE RETOUR AU MAGHREB**

**Analytical Report, MIREM-AR 2008/03**

*Who Benefits Most from Migration?  
An Empirical Analysis Using Data on Return  
Migrants in the Maghreb*  
Flore Gubert and Christophe J. Nordman



THE WORLD BANK



**EUROPEAN UNIVERSITY INSTITUTE, FLORENCE  
ROBERT SCHUMAN CENTRE FOR ADVANCED STUDIES**

**WHO BENEFITS MOST FROM MIGRATION?  
AN EMPIRICAL ANALYSIS USING DATA ON RETURN MIGRANTS IN THE MAGHREB**

**Flore Gubert and Christophe J. Nordman  
IRD, DIAL, Paris**

**MIREM  
COLLECTIVE ACTION TO SUPPORT THE REINTEGRATION OF RETURN MIGRANTS IN  
THEIR COUNTRY OF ORIGIN  
ANALYTICAL REPORT, MIREM-AR 2008/03  
BADIA FIESOLANA, SAN DOMENICO DI FIESOLE (FI)**

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This paper is the result of a collaboration initiated in August 2007 between the European University Institute (EUI) and the World Bank to study the impact of return migration on development in North African source countries (Algeria, Morocco, and Tunisia) highlighting various patterns of reintegration back home. The data used by the authors stem from the field survey carried out in the framework of the MIREM project (<http://www.mirem.eu>) or “Collective action to support the reintegration of migrants in their country of origin”. The main objective of the MIREM project is to better understand the challenges linked to return migration as well as its impact on development. The project is based at the Robert Schuman Centre for Advanced Studies of the EUI. It is co-funded by the European Union and the EUI.

This work forms part of a broader effort by the World Bank to widen the knowledge base on migration in and from the Middle East and North Africa, and its effects on sending countries, receiving countries, and migrants. The research project is co-funded by a grant from the European Commission under the AENEAS programme.

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## Introduction

The empirical economic literature on return migration is not only small but also highly selective. Existing studies on the topic either examine the link between return migration and entrepreneurial activity (see, *e.g.*, Nicholson, 2004; McCormick and Wahba, 2001; Wahba, 2003; Ammassari, 2003) or investigate whether returnees are able to apply at home what they learned abroad through a comparison of the wages of return migrants to the wages of those who stayed in the home country (see, *e.g.*, Kiker and Traynham, 1977; Enchautegui, 1993; Co et al, 2000; de Coulon and Piracha, 2005; Rooth and Saarela, 2007). By contrast, there exists almost no empirical study of the consequences of migration on the subjective well-being of the returnees themselves.

From a theoretical standpoint, it is generally assumed that migration results from a utility maximization process, *i.e.* that people migrate to be better off. The purpose of this paper is to explore this assumption by comparing the situation of migrants after they move to their situation before they move and by examining their post-migration subjective well-being using data from a survey on return migrants simultaneously conducted in Algeria, Morocco, and Tunisia in 2006 as part of the MIREM project. Since the database contains no detailed information on earnings and incomes in the pre- and post-migration periods, the analysis is conducted using indirect measures: an indicator of occupational mobility between pre- and post-migration periods; and two subjective measures of relative financial well-being and of “post-move” satisfaction. The question we address is finally whether life abroad was positively experienced by migrants.

In Section I, we present the data and summary statistics contrasting the situation of the returnees at the time of the survey with their situation prior to migration along different dimensions (skills, employment status and subjective well-being). In Section II, we first examine whether overseas work experience has enabled returnees to achieve occupational mobility between pre- and post-migration periods. In Section III, we tackle the determinants of post-move “life satisfaction” between migration and post-migration periods, including subjective measures of financial well-being and the returnees’ perception of experience abroad *per-se*. Finally, in Section IV, we link typology of returnees with post-move satisfaction, thus trying to shed light on who are those “happy migrants”.

## I. Data and Descriptive Statistics

The data used in this study are drawn from the three recent surveys on returned migrants simultaneously conducted in Algeria, Morocco, and Tunisia in 2006 as part of the MIREM project (see Cassarino, 2008, and [www.mirem.eu/mirem?set\\_language=en](http://www.mirem.eu/mirem?set_language=en), for further details on the whole project). About 330 returned migrants were interviewed in each country using a common questionnaire. In each country, the sampling procedure was based on a geographical stratification process. A few specific regions were selected using official statistics on return flows, so that the survey data cannot be viewed as reflecting national trends.

According to the team of the MIREM project, a returnee is defined as “*any person returning to his/her country of origin, in the course of the last ten years, after having been an international migrant (whether short-term or long-term) in another country. Return may be permanent or temporary. It may be independently decided by the migrant or forced by unexpected circumstances.*” This definition



partially draws on the one recommended by the United Nations. It refers specifically to migrants who returned to their country of origin in the course of the last ten years, for this time limit allows the impact of the experience of migration on the interviewee's pattern of reintegration to be assessed. It also allows the respondents to recount their migratory experiences more precisely.

The questionnaire is structured around three modules relating to the different migratory stages: the returnees' conditions before they left for abroad; the returnees' experience of migration lived abroad; and the returnees' post-return conditions in the country of origin.

Because the data focus on returnees only, they are perfectly suited to identify the various factors having motivated and shaped the migratory stages and to analyze whether the interviewees' experience abroad has impacted on their post-return living and working conditions. They also make it possible to identify why and how patterns of reintegration differ between returnees and countries. These questions are generally not addressed in the existing literature and constitute as such the originality of the MIREM project.

The discussion that follows provides summary statistics aimed at contrasting the situation of the returnees at the time of the survey with their situation prior to migration along different dimensions: education and skills, employment status, financial well-being, etc.

## **1. Migration experience and human capital acquisition**

In order to collect information on the conditions under which migration has been undertaken, returnees were asked to list the three main reasons for their migration. The frequency tabulation of their answers relating to their first motivation is given by Table 1. As suggested by the figures, migration from Maghreb countries is mainly motivated by economic or job-related reasons. However, there are sharp differences between men and women, with one female migration out of two being undertaken for a motive of family reunification.

Next to economic or job-related reasons, a significant share of returnees migrated in order to invest in education. The higher the level of education, the more likely the desire of obtaining further education through migration. Looking further into the data, 26% of the returnees actually did study during their migration stay (Table 2). This proportion is much higher within the sample of Moroccan and Algerian returnees than for Tunisian returnees, which may reflect the low quality of the education system in Morocco and Algeria compared to that of Tunisia. The proportion of returnees who studied abroad is also increasing with the returnees' level of education prior to migration. That Moroccan, Algerian and Tunisian migrants expanded their human capital while staying away suggests that their countries of origin did not bear all the cost of their education and that this cost was shared with immigration countries.

**Table 1 – Main motivation for migration (%)**

	Algeria		Morocco		Tunisia		All	
	All	Males Females	All	Males Females	All	Males Females	All	Males Females
Better living conditions	28.0	30.0 15.6	32.4	35.4 11.9	38.5	42.5 7.9	33.0	36.0 12.0
Higher income	9.0	10.1 2.2	10.9	11.8 4.8	4.6	4.8 2.6	8.2	8.9 3.2
Better job	5.7	6.6 0.0	7.0	8.0 0.0	4.2	4.8 0.0	5.7	6.5 0.0
Better working conditions	1.8	2.1 0.0	1.2	1.4 0.0	2.1	2.1 2.6	1.7	1.9 0.8
Job opportunity abroad	3.3	3.5 2.2	4.9	5.6 0.0	15.8	15.4 18.4	8.0	8.2 6.4
Search for job	10.8	12.5 0.0	8.8	10.1 0.0	9.7	11.0 0.0	9.8	11.2 0.0
Studies	19.9	18.5 28.9	20.6	20.1 23.8	10.0	11.0 2.6	16.8	16.5 19.2
Family reunification	9.6	3.8 46.7	7.6	2.8 40.5	10.9	4.4 60.5	9.4	3.7 48.8
To help family	6.3	7.3 0.0	0.3	0.4 0.0	1.5	1.7 0.0	2.7	3.1 0.0
Health/Health insurance	0.9	0.7 2.2	0.0	0.0 0.0	0.0	0.0 0.0	0.3	0.2 0.8
No specific reason	0.6	0.4 2.2	0.3	0.4 0.0	1.2	0.7 5.3	0.7	0.5 2.4
Other	3.9	4.5 0.0	3.3	3.1 4.8	1.5	1.7 0.0	2.9	3.1 1.6
Do not know	0.0	0.0 0.0	2.7	1.0 14.3	0.0	0.0 0.0	0.9	0.4 4.8
<b>Total</b>	<b>100.0</b>		<b>100.0</b>		<b>100.0</b>		<b>100.0</b>	

Source: MIREM © EUI, Authors' calculations.

**Table 2 – Percentage of returnees who studied abroad by pre-migration level of education**

	Algeria		Morocco		Tunisia		All	
	n	% who studied when abroad	n	% who studied when abroad	n	% who studied when abroad	n	% who studied when abroad
<i>Education bef. migration:</i>								
None	77	5.2	38	5.3	31	3.2	146	4.8
Pre-school	13	7.7	19	15.8	10	0.0	42	9.5
Primary	36	5.6	58	12.1	69	4.4	163	7.4
College	35	8.6	44	31.8	19	21.1	98	21.4
Secondary	55	23.6	83	39.8	130	23.1	268	28.4
Tertiary I	74	47.3	66	63.6	64	26.6	204	46.1
Tertiary II	39	56.4	9	77.8	6	16.7	54	55.6
Other	3	66.7	3	100.0	1	100.0	7	85.7
Do not know	0	0.0	10	60.0	0	0.0	10	60.0
<b>Total</b>	<b>332</b>	<b>24.7</b>	<b>330</b>	<b>35.5</b>	<b>330</b>	<b>17.3</b>	<b>992</b>	<b>25.8</b>

Source: MIREM © EUI, Authors' calculations.

In addition to investing in their education, a significant share of returnees took advantage of their migration stay to acquire specific skills through training periods (Table 3). In contrast to investment in education, the propensity of returnees to get training appears much less correlated to their pre-migration level of education: in the case of Algeria, for example, the proportion of returnees who received training is exactly the same among those who were primary educated prior to migration and those who were tertiary educated. As far as job training is concerned, this result is at odds with common findings on developed countries (Barron, Berger and Black, 1997) according to which more educated individuals generally receive more job training. By contrast here, training may appear as an efficient substitutability scheme with regard to formal education for low educated migrants who want to improve their employability abroad. Meanwhile, training is a device to swiftly adapt skills to changing economic environment, as opposed to public or private education that generally require many years before it can be converted into earning gains.

**Table 3 – Percentage of returnees who received training by pre-migration level of education**

	Algeria		Morocco		Tunisia		All	
	n	% who got trained when abroad	n	% who got trained when abroad	n	% who got trained when abroad	n	% who got trained when abroad
Education bef. migration:								
None	77	5.2	38	5.3	31	9.7	146	6.2
Preschool	13	23.1	19	10.5	10	0.0	42	11.9
Primary	36	16.7	58	10.3	69	15.9	163	14.1
College	35	20.0	44	13.6	19	5.3	98	14.3
Secondary	55	20.0	83	21.7	130	25.4	268	23.1
Tertiary I	74	17.6	66	24.2	64	28.1	204	23.0
Tertiary II	39	23.1	9	11.1	6	16.7	54	20.4
Other	3	0.0	3	0.0	1	100.0	7	14.3
Do not know	0	0.0	10	20.0	0	0.0	10	20.0
Total	332	16.0	330	16.1	330	20.6	992	17.5

Source: MIREM © EUI, Authors' calculations.

Overall, there is thus evidence that a significant share of migrants gained both higher education and relevant experience overseas. Such human capital acquisition is likely to help enhancing the developmental effect of return migration.

## 2. Migration experience and changes in employment status

Changes in employment status and mobility are also relevant to understand the economic consequences of migration. Tables 4a to 4c report transitional probabilities of returnees to self-employment, employer, waged-employment, etc. as a function of their former labour market status.<sup>1</sup> Whatever the country considered, figures suggest that the transitions to self-employment or employer arise from various origins. This is especially true in the case of Tunisia: a significant share of the migrants who were either informally employed, in precarious jobs or unemployed prior to migration has shifted to entrepreneurship after return. Because the data focus on returnees only, however, it is hard to disentangle the effect of migration experience from life-cycle effects on these transitions.

<sup>1</sup> For interested readers, Tables A1 and A2 in Appendix report transitional probabilities for labor status before vs. during migration and during vs. after migration.

Returnees are indeed older and more experienced today than they were prior to migration. Should they have chosen not to migrate, their current employment status would also be different from their previous one. The crucial point here would be to examine whether transitions from informal or precarious jobs to high-quality jobs are more likely to occur for migrants than for non-migrants. Given the composition of the samples, however, this question cannot be properly addressed.

**Table 4a – Transitional probabilities of returnees by employment status, Algeria**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Inactive/Retired	Other	Do not know	
Employment status before migration:											
Employer	83.3	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6
Waged	7.3	45.2	10.5	0.8	0.0	0.8	10.5	25.0	0.0	0.0	124
Self-employed	10.0	8.0	40.0	0.0	0.0	0.0	18.0	24.0	0.0	0.0	50
Seasonal worker	12.2	2.4	4.9	2.4	0.0	0.0	7.3	70.7	0.0	0.0	41
Family worker	0.0	14.3	0.0	0.0	0.0	0.0	0.0	85.7	0.0	0.0	7
Student	5.9	35.3	11.8	0.0	0.0	14.7	23.5	8.8	0.0	0.0	34
Unemployed	8.8	14.0	14.0	1.8	0.0	1.8	17.5	42.1	0.0	0.0	57
Inactive/Retired	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	12
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Do not know	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Total	9.3	25.3	14.2	0.9	0.0	2.1	13.0	35.3	0.0	0.0	332

Source: MIREM © EUI, Authors' calculations.

**Table 4b – Transitional probabilities of returnees by employment status, Morocco**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Inactive/Retired	Other	Do not know	
Employment status before migration:											
Employer	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
Waged	12.1	24.1	20.7	1.7	0.0	0.0	20.7	12.1	6.9	1.7	58
Self-employed	4.4	4.4	32.6	6.5	2.2	0.0	15.2	13.0	13.0	8.7	46
Seasonal worker	6.7	13.3	3.3	46.7	0.0	0.0	10.0	10.0	3.3	6.7	30
Family worker	5.9	11.8	35.3	17.7	5.9	0.0	11.8	0.0	5.9	5.9	17
Student	17.1	37.5	10.2	1.1	0.0	3.4	18.2	5.7	5.7	1.1	88
Unemployed	10.0	10.0	13.3	3.3	0.0	3.3	40.0	3.3	13.3	3.3	30
Inactive/Retired	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	4
Other	3.3	6.7	13.3	3.3	0.0	3.3	23.3	3.3	43.3	0.0	30
Do not know	20.0	32.0	8.0	0.0	0.0	8.0	4.0	4.0	20.0	4.0	25
Total	11.5	20.6	16.1	7.3	0.6	2.1	18.2	8.5	11.8	3.3	330

Source: MIREM © EUI, Authors' calculations.

**Table 4c – Transitional probabilities of returnees by employment status, Tunisia**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Inactive/Retired	Other	Do not know	
Employment status before migration:											
Employer	50.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	4
Waged	14.4	50.0	6.8	1.7	0.0	0.9	6.8	13.6	2.5	3.4	118
Self-employed	23.4	2.1	29.8	6.4	2.1	0.0	12.8	23.4	0.0	0.0	47
Seasonal worker	27.5	3.9	13.7	9.8	3.9	2.0	7.8	25.5	5.9	0.0	51
Family worker	27.3	0.0	0.0	0.0	18.2	0.0	9.1	45.5	0.0	0.0	11
Student	39.0	29.3	4.9	2.4	2.4	7.3	9.8	0.0	4.9	0.0	41
Unemployed	31.3	18.8	15.6	3.1	0.0	0.0	25.0	3.1	3.1	0.0	32
Inactive/Retired	7.1	0.0	0.0	0.0	0.0	0.0	7.1	71.4	7.1	7.1	14
Other	0.0	25.0	50.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	4
Do not know	25.0	37.5	12.5	0.0	0.0	0.0	25.0	0.0	0.0	0.0	8
Total	23.0	25.5	11.8	3.6	1.8	1.5	10.3	17.9	3.0	1.5	330

Source: MIREM © EUI, Authors' calculations.

Other interesting features emerge from the table. First, those migrants who left their countries as students generally occupy high-quality jobs after return, with roughly one returnee out of three being a wage-earner. In the case of Algeria, however, the share of unemployed among this sub-group is also very high suggesting that being educated is not a sufficient condition to get a job in this country. The share of migrants who retired after return is also much higher in the case of Algeria than in the case of Morocco and, to a lesser extent, of Tunisia. This last result is likely to be related to the age distribution of the returnees, however, and should not necessarily be interpreted as a failure to reintegrate labour market (Table 5).

**Table 5 – Age distribution of returnees at the time of the survey (%)**

	Algeria	Morocco	Tunisia	All
Less than 20	0.3	0.3	0.0	0.2
20-30	9.0	15.9	5.5	10.1
30-40	25.6	33.3	25.2	28.0
40-50	17.5	26.9	27.0	23.8
50-60	11.8	10.4	22.4	14.9
60-70	21.4	10.4	14.2	15.4
70-80	12.7	2.8	5.8	7.1
80+	1.8	0.0	0.0	0.6
Total	100.0	100.0	100.0	100.0

Source: MIREM © EUI, Authors' calculations.

### 3. Migration experience and “post-move” subjective well-being

Tables 6 to 9 report returnees' overall assessment of the economic impact of overseas experience on their lives. During the interviews, respondents were first asked to indicate whether their past migration experience had been positive for them. The frequency tabulation of their answers is given by Table 6. As suggested by the figures, most returnees positively evaluate their migration experience. The percentage of enthusiastic individuals is the highest among Tunisian returnees and the lowest among

Algerians. Turning it the other way around, the proportion of returnees who negatively evaluate their migration experience is very low, between 1.5 and 2.7%.

**Table 6 – Returnees’ perception of experience abroad (%)**

	Algeria	Morocco	Tunisia
Positive	65.4	84.6	89.1
Negative	1.5	1.5	2.7
Neither positive nor negative	18.1	7.9	5.2
Don't know or no response	15.1	0.0	3.0
Total	100	100	100

Source: MIREM © EUI, Authors’ calculations.

Next, respondents were asked to specifically evaluate their financial situation during migration in comparison to their financial situation prior to migration. As suggested by Table 7, more than 80% of the interviewees indicated that they were financially “better-off”. This proportion is even higher for those migrants who were in a bad or very bad financial situation prior to migration. Respondents were also asked to evaluate their living standards now in comparison to their living standards when abroad (Table 8). Here, their answers are much more balanced: about one returnee out of three considers that his/her standard of living is worse now compared to his/her standard of living during migration.

**Table 7 – Financial situation before vs. during migration (subjective assessment)**

	Algeria		Morocco		Tunisia		All	
	%	“Situation improved during migration” (%)	%	“Situation improved during migration” (%)	%	“Situation improved during migration” (%)	%	“Situation improved during migration” (%)
Situation before migration:								
Very good	3.9	46.2	3.6	50.0	3.0	90.0	3.5	60.0
Good	14.8	63.3	13.3	72.7	12.4	90.2	13.5	74.6
Neither good nor bad	34.3	78.9	50.6	82.0	44.2	89.0	43.0	83.6
Bad	20.5	91.2	19.4	84.4	23.3	88.3	21.1	88.0
Very bad	24.1	95.0	7.3	54.2	14.2	80.9	15.2	84.1
Don't know	2.4	87.5	1.8	33.3	2.4	75.0	2.2	68.2
Missing	0.0	-	3.9	38.5	0.3	100.0	1.4	42.9
Total	332	81.9	330	75.5	330	87.6	992	81.7

Source: MIREM © EUI, Authors’ calculations.

**Table 8 – How do returnees estimate their living standards in home country compared to abroad? (in %)**

	Algeria	Morocco	Tunisia
Better	44.9	41.8	50.3
No change	17.8	11.2	13.6
Slightly worse	23.5	22.4	21.5
Much worse	6.3	12.4	6.4
Don't know or no response	7.5	12.1	8.2
Total	100	100	100

Source: MIREM © EUI, Authors’ calculations.

Last, respondents were asked to say whether they were happy to be back in their home country or not. Overall, most respondents are happy to be back although Moroccan returnees appear less enthusiastic on average than Algerian and Tunisian returnees (Table 9). Post-move satisfaction is

actually altered by the difficulties return migrants encounter after return (Table 10). Whatever the country considered, the low bureaucracy and/or the health care system inefficiencies rank first among the main difficulties encountered by return migrants. In the case of Morocco and Algeria, one returnee out of three finds it hard to readapt his/herself to their home country.

**Table 9 – Are returnees happy to be back in their home country? (%)**

	Algeria	Morocco	Tunisia
Yes	70.2	57.3	72.1
No	12.7	23.9	10.9
Indifferent	17.2	15.8	16.4
No response	-	3.0	0.6
Total	100	100	100

Source: MIREM © EUI, Authors' calculations.

**Table 10 – Have returnees got difficulties in home country since return? (%)**

Yes, in...	Algeria	Morocco	Tunisia
Access to housing (*)	21.7	11.5	4.6
Problems of assimilation	24.7	21.2	12.4
Difficulties to readapt	37.1	30.3	21.2
No job	21.1	25.2	13.0
Wages too low	28.6	24.9	21.8
Inefficient health system	48.2	55.5	11.5
Excessive bureaucracy	46.7	51.5	23.9
Other reason	2.1	6.1	8.2

Source: MIREM © EUI, Authors' calculations.

(\*) Column totals are higher than 100% because respondents could provide several answers.

Overall, descriptive evidence suggest that on most dimensions analyzed there is a positive payoff to migration: a significant share of migrants gained both higher education and relevant experience overseas; and some got higher positions after return. As a result, most returnees qualify their stay abroad as a positive experience. In what follows, the analysis is pushed further in order to disentangle the determinants of successful migration and reintegration. Under which conditions is migration associated with upward occupational mobility? Who are those return migrants who positively assess their post-move living conditions? To what extent do their patterns of reintegration significantly differ from those of dissatisfied returnees?

## II. The Determinants of Occupational Mobility Between Pre- and Post-Migration Periods

The objective of this section is to identify the characteristics of those migrants who moved in status between the pre- and post-migration periods, and the various factors that explain this mobility. Here, mobility is defined as mobility between *occupational* groups. An alternative approach would be to rely on a continuous variable capturing, for instance, the migrants' labor market outcomes or their living standards as measured by earnings or household consumption. Unfortunately, such indicators are not available in the MIREM database. Nonetheless, there is also one objective reason for favoring a measure of mobility based on occupation rather than on a continuous economic variable: occupational

status is indeed generally considered as a good indicator of social status as it encompasses other dimensions including living standards, prestige, and eventually power.<sup>2</sup>

## 1. Methodological issues

In order to measure the extent to which migrants shift jobs within the occupational distribution, we first need to classify all occupations in a hierarchical order. To this end, we rely on the methodology presented in Pasquier-Doumer (2005) which is based on a hierarchical cluster analysis of occupational groups. The objective of this method is twofold: (1) to classify all the occupations that are listed in the MIREM database into a small number of mutually exclusive groups or clusters based on their similarities or dissimilarities; and (2) to establish a hierarchy among the clusters.

The association method retained is agglomerative and relies on a similarity index measuring the distance between the different occupations on the basis of different criteria ( $X$ ). Formally, the retained measure of similarity between two occupations  $i$  and  $j$  is the Euclidean distance  $L2$  (or dissimilarity index) given by:

$$L2 = \sqrt{\sum_{k=1}^p (X_{ki} - X_{kj})^2},$$

where  $k$  is one of the  $p$  variables used to establish the classification.

The whole procedure can be summarized in the following way:

- We use information on occupational status prior to migration as our unit of analysis. All those returnees who were out of the labor market prior to migration (*i.e.* who were either students, retired/inactive or homemakers) were dropped from the analysis, so we are left with 9 occupations. The purpose is then to define broader groups of these 9 occupations so as to regroup similar occupations on the basis of the variables  $X$ . These new groups, mutually exclusive, will hence be made of similar occupations according to these  $X$ s.
- The different criteria  $X$  retained for the cluster analysis are variables measuring the migrant's living standards and level of education. In order to assess the migrant's living standards (during the pre-migration period), we use three objective and one subjective measures of his/her financial situation. Objective measures include 8 dummies for type of housing, one dummy for land ownership and one dummy taking the value 1 if the migrant owns other durable goods. Subjective measures are dummies indicating whether the individual considers him/herself in a good, medium or bad financial situation. The level of education is measured in the pre-migration period and comprises 9 dummies.
- The  $X$ s are then averaged over the 9 initial occupational categories. These indicators are then introduced in the hierarchical cluster analysis of these categories. We use the 'cluster completelinkage' command of STATA. This command performs a hierarchical agglomerative

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<sup>2</sup> According to Max Weber, social status is multidimensional and can be approached by three dimensions: economic welfare, power and prestige.



complete linkage cluster analysis.<sup>3</sup> Due to small sample size, all the data were pooled so that the analysis is conducted on a single sample of returnees (n = 731).<sup>4</sup>

- The results of this analysis allow us to define the following mutually exclusive groups or clusters:
  - Group 1 “Employers or Employees with secured jobs” : Occupations 5 & 1
  - Group 2 “Employees with secured part-time/short term jobs” : Occupations 2 & 3
  - Group 3 “Small self-employed” : Occupation 6
  - Group 4 “Employees with unsecured jobs or unemployed” : Occupations 4, 7 & 9
  - Group 5 “Family workers” : Occupation 8
- In a last stage, we use information on occupational status after return. By comparing the groups (1, 2, 3, 4 or 5) to which he/she belongs to before and after the period of migration, we are able to determine whether the migrant experienced an upward or a downward occupational mobility. Three variables are then constructed: an upward mobility dummy (taking value 1 if the migrant experienced an upward mobility between the pre- and post-migration periods, 0 otherwise); a downward mobility dummy (taking value 1 if the migrant experienced a downward mobility between the pre- and post-migration periods, 0 otherwise); and a variable taking value -1 if the migrant moved downward in occupation, 0 if he/she stayed in the same occupational group and 1 if he/she moved upward.

Table 11 provides summary statistics on the main characteristics of returnees by occupational group. On average, high-status and secured jobs are associated with relatively high education levels and relatively high living standards compared to low-status and more precarious jobs.

**Table 11 – Characteristics of returnees by occupational group (prior to migration) (%)**

	Group 1	Group 2	Group 3	Group 4	Group 5	All
<i>Education prior to migration</i>						
None	9.5	12.2	23.3	25.7	14.3	18.3
Pre-School	1.4	2.2	2.7	7.1	11.4	4.5
Primary	10.8	22.2	21.9	21.2	37.1	19.0
College	7.2	13.3	11.0	11.9	5.7	10.3
Secondary	23.0	21.1	31.5	22.5	11.4	22.8
Tertiary I	32.4	23.3	8.2	9.3	17.1	18.3
Tertiary II	15.3	5.6	1.4	1.3	2.9	6.2
Other diploma	0.5	0.0	0.0	0.6	0.0	0.4
<i>Financial situation prior to migration</i>						
Good	27.0	10.0	19.2	7.1	17.1	15.2
Medium	52.3	45.6	53.4	28.3	45.7	41.0
Bad	20.3	42.2	27.4	63.3	37.1	42.8

<sup>3</sup> The results of our analysis appeared qualitatively insensitive to the choice of this option instead of an *agglomerative average linkage cluster analysis* for instance. In other words, the final occupational groups obtained were the same whatever the type of cluster analysis performed. The dendrogram reporting the results of the hierarchical cluster analysis is presented in Figure A1 in Appendix.

<sup>4</sup> As mentioned earlier, those returnees who were out of the labor market prior to migration were dropped from the analysis. The initial sample of 992 returnees is thus reduced to 731.

<i>Living conditions prior to migration</i>						
Villa	19.8	8.9	11.0	8.7	5.7	12.2
Flat	38.3	27.8	17.8	13.2	5.7	22.7
Traditional house	29.7	41.1	47.9	44.7	31.4	39.4
Rural dwelling	5.9	15.6	20.5	26.4	57.1	19.7
A room	0.9	1.1	1.4	0.3	0.0	0.7
Precarious/slum	2.7	4.4	1.4	4.2	0.0	3.3
Other	2.7	1.1	0.0	2.6	0.0	2.1
<i>Wealth</i>						
Owns land	25.7	26.7	42.5	41.5	80.0	36.8
Owns other goods	62.6	45.6	67.1	47.3	51.4	53.9
Number of observations	222	90	73	311	35	731

Source: MIREM © EUI, Authors' calculations.

Summary statistics on occupational mobility within the sample are displayed in Tables 12 and 13. As suggested by Table 12, a large share (62%) of those returnees who were in the highest group prior to migration is still found in the highest group after migration. By contrast and compared to all other groups, returnees originating from the second group have a very strong propensity to move either upward (33.3%) or downward (35.1%). Interestingly enough, figures suggest that the propensity of returnees originating from groups 3 to 5 to move to group 1 is much higher than their propensity to move to group 2. Last, the share of returnees who are out of the labor market after return is higher for those who were in groups 4 and 5.

**Table 12 – Transitional probabilities of returnees by occupational group (%)**

	Occupational group after migration						Total	n
	Group 1	Group 2	Group 3	Group 4	Group 5	Out of labor market		
Occupational group prior to migration:								
Group 1	<b>62.2</b>	3.6	5.4	7.7	0.0	21.2	100.0	222
Group 2	33.3	<b>10.0</b>	14.4	21.1	0.0	21.1	100.0	90
Group 3	15.1	1.4	<b>42.5</b>	17.8	1.4	21.9	100.0	73
Group 4	24.4	2.9	9.3	<b>29.3</b>	1.3	32.8	100.0	311
Group 5	17.1	2.9	20.0	14.3	<b>5.7</b>	40.0	100.0	35
Total	35.7	3.8	12.6	19.8	1.0	27.1	100.0	731

Source: MIREM © EUI, Authors' calculations.

Note: Figures in bold indicate no change. By construction, returnees originating from group 1 cannot move upward while returnees originating from group 5 cannot move downward.

Table 13 finally report statistics on occupational mobility by country. Occupational mobility appears unevenly distributed across the three samples. In particular, Algerian returnees are less likely than Moroccans or Tunisians to move upward in occupational status (17.2% vs. 30% for Tunisians and 26% for Moroccans) and more likely to be out of the labor market.

**Table 13 – Incidence of occupational mobility among returnees by country (%)**

	Algeria	Morocco	Tunisia	All
Downward mobility	12.3	15.3	9.1	11.9
No change	34.7	37.7	39.2	37.1
Upward mobility	17.2	26.2	29.7	23.9
Out of the labor market	35.8	20.8	22.1	27.1
Total	100.0	100.0	100.0	100.0
Number of observations	285	183	263	731

Source: MIREM © EUI, Authors' calculations.

## 2. Econometric model

With our alternative measures of occupational mobility, our intention now is to disentangle the possible determinants of occupational mobility between pre- and post-migration periods. To this end, we first estimate two probit models of upward and downward occupational mobility respectively. In the first model, the dependent variable is a dichotomous variable taking value 1 if the migrant moved upward in occupation, 0 otherwise; in the second one, the dependent variable is a dichotomous variable taking value 1 if the migrant moved downward in occupation, 0 otherwise. The difficulty, however, is that occupational mobility is not observed for those returnees who are out of the labor market. Restricting our analysis to the sole returnees having (or seeking) a job after return would be fine if occupational data were missing at random. This is doubtful, though, since those returnees who are out of the labor market are likely to constitute a self-selected sample. It is indeed likely that some of the returnees who would have moved downward in occupational status after return chose not to integrate the labor market. We thus need to take this selectivity issue into account in order to get unbiased results. To this end, we use a heckman selection model. We first estimate a dichotomous model predicting whether the individual is active (selection model) and then estimate a dichotomous model of upward (or downward) occupational mobility. We use age at the time of the survey to predict selection.

Estimation results are reported in Tables A3 and A4 in Appendix. Due to space limitations, results of the selection model are not displayed but are available upon request.<sup>5</sup> Column 1 shows estimation results obtained on a pooled sample while Columns 2 to 4 show estimation results obtained on the Algerian, Moroccan and Tunisian samples respectively.

Six blocks of independent variables are introduced in the model.

The first block includes demographic characteristics of the migrant, such as being female, age measured at time of migration, whether the individual was born in an urban area and whether he/she is bi-national.<sup>6</sup>

The second block includes variables controlling for family status prior to migration, i.e. whether the individual was married and the size of his/her household (prior to migration).

The third block comprises controls for the occupational status of the migrant prior to migration. It is likely indeed that occupational mobility, either upward or downward, is partly conditioned by the

<sup>5</sup> The correlation of the residuals in the two equations is always significantly different from zero, suggesting that not correcting for self-selection in our analyses would provide biased results.

<sup>6</sup> Within the sample considered here (n=533), 8.3% of the returnees are bi-national. This share varies between countries, from 3.5% in the case of Morocco to respectively 8.7 and 11.2% in the cases of Algeria and Tunisia.

occupational level from which the migrant starts. Of course, in the probit model of upward mobility, those returnees who were employers or employees with secured jobs prior to migration (i.e. those who were in Group 1) are excluded from the analysis since by construction of the mobility variable, it is impossible for them to experience an upward mobility. Conversely, in the probit model of downward mobility, it is those returnees who were in the lowest group that are excluded since it is impossible for them to experience a downward mobility.

A fourth block of determinants includes characteristics of the migrants' overseas stay. These are important covariates deemed to influence the probability of professional success or failure after return. Among them, we include proxies of human capital accumulated abroad such as whether the migrant worked when he was abroad or whether he/she received vocational training. We also include one variable measuring migration duration as a proxy for professional experience in the labor market of the receiving country and for skill acquisition.<sup>7</sup> A dummy variable indicating whether the diploma held by the migrant (if any) has been recognized in the destination country is introduced in order to account for misuse of human capital abroad (the so-called "brain waste") or, on the contrary, appropriate human capital transfer from origin to destination countries. Last, a set of destination country dummies are considered. These variables may capture environmental, institutional or network effects in the last immigration country that may affect the migrants' success or failure after return.

A fifth block of independent variables that includes three dummies scaling the amount of remittances the migrant used to send when he/she was abroad is included as well (the reference being no remittances). Indeed, migrants may face capital market imperfections in their home country so that overseas savings and remittances are subsequently able to fuel productive investments (Mc Cormick and Wahba, 2001). For this reason, this information may affect migrants' professional trajectories. As there is no direct measure of overseas savings in the MIREM survey, we use these remittances dummies to control for the effect of savings.

A last block of independent variables is included to control for conditions and timing of return. Time elapsed since return controls for labor market experience in the home country<sup>8</sup> while conditions of return are captured by a dummy variable indicating whether the migrant deliberately chose to return or was forced to do so.<sup>9</sup> Besides, three dummies controlling for the potential effect of location after return are used: a dummy for being back to the birth place, and two dummies for the size of the city (capital and secondary city, the reference being a small city).

### *Estimation results*

Let us first describe the effects of demographic variables on the probability of experiencing an occupational mobility. Most variables (in particular gender, age, household size prior to migration) are actually insignificant in both groups of regressions (Tables A3 and A4). There are a few exceptions, however. Being married prior to migration is found to reduce the probability of moving *upward* within the whole sample, this result being driven by Tunisian returnees for whom the effect of the variable is

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<sup>7</sup> In a companion paper, the exogeneity assumption of migration duration is fully discussed and tested. Here, it is assumed that migration duration is exogenous.

<sup>8</sup> Alternatively, it can also be thought of human capital depreciation if the time elapsed is spent unproductively.

<sup>9</sup> In what follows, we consider that a migrant was forced to return if he was expelled or if he returned because he was unsuccessful to legalize his status.

marginally strong. An analogous result is found for Moroccan returnees, for which being married prior to migration is found to increase the probability of moving downward. Being bi-national has an impact on upward mobility but the effect is significant only in the Tunisian case.

Introducing controls for occupational status prior to migration provides evidence that mobility is in large part conditioned by the migrants' initial position in the distribution of occupations. More specifically, those returnees who were family workers prior to migration (*i.e.* those returnees who were in Group 5) and those who were in Group 4 (small self-employed) are much more likely to experience an upward mobility after their overseas stay than those returnees who had secured part-time or short term jobs (Group 2). The effect is particularly strong for Moroccan migrants. With regard to downward mobility, it is those returnees who were previously in Group 1 and Group 2 (employees with secured part-time or short term jobs) that are much more likely to experience a downward mobility. Returnees originating from Group 2 in particular appear much more at risk of experiencing a downward mobility.

Characteristics of overseas stay are not significant at all in the models of upward mobility, except for migration duration. In the case of Algerian and Moroccan returnees, those who stayed abroad for a short period of time are more likely to experience an upward mobility. Turning to the models of downward mobility, our proxy for skill acquisition abroad (measured by a dummy variable taking value 1 if the migrant worked when he was abroad, and 0 otherwise) is significant in most regressions but with an unexpected sign (working abroad being positively associated with experiencing a downward mobility). This suggests that our proxy is not a proper measure of skill acquisition and controls for something else. By contrast, those migrants whose diploma was recognized are less likely to move downward after return.

A high amount of remittances is significantly and positively associated with upward mobility. This result suggests that the higher the remittances, the lesser the budget constraint after return, an important determinant of entrepreneurship behavior.

Conditions of return also seem to play an important role in the migrants' professional trajectories. In particular, those migrants who returned for administrative reasons are less likely to experience an upward mobility. The effect is particularly strong in the case of Tunisian returnees. "Forced" returns are indeed likely to be unprepared returns and to negatively affect the migrants' professional reintegration in their home country. A symmetric result is found in the model of downward mobility.

Surprisingly enough, residing in the capital city after return is negatively associated with upward mobility in both Algeria and Tunisia, and positively in the case of Morocco. The result for Algeria and Tunisia may be a sign of a lack of "good" jobs in Algiers and Tunis labor markets.

Finally, the set of dummies for destination countries display few significant coefficients (the reference being migration to France). This result suggests that the receiving country has little effect on the probability of having an upward/downward mobility after migration once demographics, education, professional status, overseas stay and return characteristics of the migrants are accounted for.

In order to both improve and check the robustness of our results, we ran alternative regressions using other mobility measures and other estimators. In particular, we estimated an ordered probit model in which the dependent variable ranged from 1 (high-quality jobs) to 5 (low-quality jobs).

Regression results are displayed in Table A5. To ease interpretation, note that a positive sign of the coefficient means that the variable increases the likelihood of a *downward* mobility, while a negative sign means that the variable increases the likelihood of an *upward* mobility. Overall, no difference emerges as compared to the previous estimates. Here again, occupational status prior to migration is found to strongly explain occupational mobility. The same holds true for return conditions, past remittance behavior, etc.

### III. The Determinants of Post-Move Life Satisfaction

Migration and life satisfaction can be linked theoretically through the assumption that the benefits of moving outweigh the costs.<sup>10</sup> The purpose of this section is to explore the basic assumption that life satisfaction of movers increases after migration period. Life satisfaction, also termed self-reported happiness or subjective well-being (Ferrer-i-Carbonell and Frijters, 2004), is frequently conceptualized as a single dimension, even as a single-item response. However, the single dimension approach may obscure the possibility of different satisfaction patterns and variation in predictors. To enhance the validity of our knowledge about migration and subjective well-being, we model different dimensions of life satisfaction using direct answers to questions on pre- and post-move satisfaction present in the MIREM questionnaire.

#### 1. Dependent variables and determinants

Three dimensions of post-move satisfaction are distinguished: (i) returnees' self-assessment of their relative financial situation during and after migration, (ii) their perception of experience abroad per-se, *i.e.* whether it is positively valued or not, and (iii) whether they are happy to be back in home country.<sup>11</sup>

The variable (i) to be explained is computed using two questions of the MIREM questionnaire. The first relates to the migrant's financial situation *during* migration: "*How would you describe your financial situation in the last immigration country compared to that prevailing prior to migration?*". The response scale offered was: "*Much improved*", "*Improved*", "*Unchanged*", "*Deteriorated*", "*No opinion*". The second question refers to the financial situation *after* migration in comparison to the situation that prevailed during migration: "*Today, compared to your situation abroad, how would you describe your financial situation?*". The same response scale was offered. We assign an ordinal value to the two responses ranging from -1 ("*Deteriorated*") to 2 ("*Much improved*").<sup>12</sup> We then construct a dummy variable taking the value 1 if the sum of the two ordinal variables is strictly positive, thus indicating that the migrant declares being in a financial situation that is better today than in the last immigration country.<sup>13</sup> Descriptive statistics for this indicator are reported in Table 14 below. The

<sup>10</sup> This assumption was formalized by Ziegler and Britton (1981).

<sup>11</sup> See Section I.3 for descriptive statistics on these post-move satisfaction variables.

<sup>12</sup> In order to be able to compare the responses to these two questions, individuals without opinion are dropped. Also, interpersonal comparability of ordinal scales has to be assumed. This assumption is strong for the case of subjective questions but it has been suggested (see Ferrer-i-Carbonell and Frijters, 2004) that so long as it does not require cardinality (*i.e.* response with value 2 has twice much weight than response with value 1) then interpersonal comparability is preserved.

<sup>13</sup> For 79 return migrants, answers to the two questions are very different (either -1 and 2 or 2 and -1). In such cases, it is hard to know whether the financial situation has improved or not. We thus estimated our model on the full sample (*i.e.*

figures suggest that a similar proportion of returnees across countries declared having an improved financial situation upon return. Moroccan migrants are the most numerous to have a positive perception (76%), followed by Tunisians (74%), and Algerians (65%).

**Table 14 – Percentage of returnees with a positive opinion of their financial well-being after return (%)**

	Algeria	Morocco	Tunisia	All
	65.4	76.6	73.9	72.1
Number of observations	298	304	307	909

Source: MIREM © EUI, Authors' calculations.

The second type of dependent variables (*ii*) stems from the question “*How would you describe your experience abroad?*”, with response scale offered being “*Advantage*”, “*Drawback*”, “*No importance*”, “*Do not know*”. We constructed a dummy variable taking value 1 for the answer “*Advantage*” and 0 otherwise. An ordinal variable is also derived taking values 1 to 3 (from “*Drawback*” to “*Advantage*”). Summary statistics of answers to this question are reported in Table 6 in Section I.

Finally, a third dependent variable (*iii*) is derived from the question “*Are you happy to be back in your home country?*” and takes value 1 for the answer “*Yes*”, and 0 otherwise. Table 9 (Section I) reports summary statistics.

The same set of explanatory variables as the one discussed in the previous section on occupational mobility is included, with a few exceptions though. First, a few demographic variables, occupational status dummies, and characteristics of overseas stay have been dropped from the model for lack of significance and in order to preserve degrees of freedom.<sup>14</sup> However, an additional covariate in the block of variables describing the family status is included, namely a dummy indicating whether the returnees got married with a European.<sup>15</sup> This variable is indeed likely to positively affect the perception of life satisfaction upon return if getting married with a European constituted an important motive to migrate.

Second, we include additional controls, such as a set of dummies for educational attainment and two dummies controlling for the returnees' financial situation prior to migration. These dummies are used in place of occupational status prior to migration. It is indeed likely that life satisfaction after migration is partly conditioned by the financial situation from which the migrant starts.

Note that the models were estimated on a pooled sample of Algerian, Moroccan and Tunisian returnees in order to increase the sample size. Controls for returnees' nationality are therefore included.

## 2. Estimation results

The probit and ordered probit estimates of post-move life satisfaction are reported in Table A6. Before turning to the comments, note that disentangling the determinants of subjective well-being is difficult, since this subjective assessment is likely to be strongly affected by psychological factors, therefore

(Contd.) \_\_\_\_\_

including those individuals and assuming their situation has improved) and on the sample excluding those individuals. Results were left unchanged.

<sup>14</sup> For instance, this is the case for the dummy of being bi-national and the returnees' household size prior to migration.

<sup>15</sup> Note that they represent 9.3, 9.7 and 13% of the Algerian, Moroccan and Tunisian samples, respectively.

unobserved individual characteristics. In the case of our first dependent variable, relative financial well-being, this problem is potentially less acute since we look at *changes* in satisfaction between two periods. This is because any effect of time-invariant unobservables on well-being drops out by differencing the satisfaction measures between these two periods. We can then relate the changes in financial well-being to changes in observables. For the other dependent variables, the initial problem of uncontrolled factors, such as psychological ones, remains. However, the latter are hardly properly measured in general, and were of course beyond the scope of the MIREM survey.

The demographic variables (sex, age, geographic origin) seem to be important determinants of post-move satisfaction. The effect of being female is always negative while that of age is negative in the two versions of the probits of considering migration positively (models (2) and (3)). The effect of age switches sign in the last specification where we explain the probability of being happy to be back in home country. This reverse of sign is not entirely surprising however as we do not necessarily expect the same effects in models (1) to (3) and model (4). Indeed, returnees may be happy to be back to home country and, at the same time, either satisfied or unsatisfied with their experience abroad. Finally, being born in an urban environment is positively associated with considering migration positively (specifications (2) and (3)).

Interestingly enough, marital status prior to and during migration only affects the probability of being happy to be back in home country. The signs of the considered variables also have expected signs: positive for the dummy of being married before migration, and negative for the dummy indicating a marriage with a European abroad. Both effects are reflective of the importance of family ties and networks in the determination of returnees' post-move satisfaction.

A rather unexpected effect is found on the control for financial situation prior to migration. Having known a bad financial situation before migration (the reference being a good financial situation) is negatively associated with the perception of a financial improvement after migration (model (1)). In other words, returnees who were in poor financial condition before migration are not more likely to self-report financial improvement after return.<sup>16</sup> By contrast, the negative effect obtained on this variable in model (4) may conform to former expectation. Indeed, migrants who were in a bad financial situation before leaving may have good reasons to dread their return to home country.

The effect of education is somewhat uncertain but is generally negative in all specifications. Specification (3) provides the most robust evidence that schooling level is negatively associated with a positive perception of experience abroad, especially as returnees reached higher levels.

Few characteristics of overseas stay seem to be correlated with post-move satisfaction. Among them, received training abroad exerts a positive impact on having a positive view on migration (model (2)). However, this effect disappears once we refine the model using an ordered probit of the value attributed to migration experience (model (3)). Migration duration does not seem to influence post-move satisfaction much, except in the first model of relative financial well-being where its effect is positive. The most robust finding is observed on the dummy indicating whether the returnees' diploma has been recognized abroad, whose effect is strongly positive. This highlights the high value that

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<sup>16</sup> Note that we checked the robustness of this result using alternative dependent variables of financial situation after return, notably an ordinal variable ranging from -1 ("*Deteriorated*") to 2 ("*Much improved*") and obtained the same qualitative results.



returnees may attach to human capital transfer and skill acquisition abroad for viewing their migration experience as a success.

As might be expected, high amounts of remittances exhibit a positive effect on the probability of having a positive perception of financial well-being and of being happy to be back in home country. This is probably because being able to send high amount of remittances correlates positively with professional success abroad and savings.

The block of variables describing conditions of return highlights that the nature of the return strongly affects returnees' post-move satisfaction. First, returnees who were forced to return are always much less likely to declare being in a better financial shape, to report having a positive view on migration experience, and to affirm being happy to be back in home country than those who deliberately chose to return. These findings are not surprising, as far as self-assessments of well-being are likely to be strongly influenced by psychological factors. Time elapsed since return exerts a positive effect in two dimensions: financial well-being and positive view about return.

The dummies for the location of return provide interesting effects. First, being back to birthplace is negatively associated with a positive view on migration experience. This may be an expected effect as returning to the birthplace might be considered, for some migrants, as a failed attempt to improve their social position, especially if they originated from a poor rural area. By contrast, migrants who returned to a large city as compared to a small one are less likely to report a positive view on their migration experience. This result contradicts somehow the previous comment but is consistent with preceding findings on the determinants of upward occupational mobility which suggested that returning to the capital city was negatively associated with upward mobility in the Algerian and Tunisian cases.

Some destination countries dummies included in the models report significant effects. This is the case of the dummy for Spain which is negatively associated with a positive view on migration experience. Similarly, returnees coming back from MENA countries also report, all else being equal, a mitigated view on their migration experience.

Finally, it is worth noting that Tunisian returnees (the reference in the specifications) are more likely to report positive post-move satisfaction on their migration experience (models (2) and (3)) as compared to their Algerian and Moroccan counterparts.

#### **IV. Who are Those Happy Migrants? A Typology of Returnees Using a Factor Analysis**

In this section, we further examine returnees' characteristics and overseas stay to draw a typology of those migrants who declared positive views on their migration experience. To this end, we adopt a two-step approach. In a first stage, we summarize all the information we have on the returnees' characteristics and their overseas stay using a factor analysis. We then use the computed factors as regressors in an ordered probit model where the dependent variable measures the returnees' post-move satisfaction on several dimensions.

##### **1. Principal Component Analysis of Returnees' Characteristics and Experience Abroad**

In what follows, we use a principal component analysis (PCA) to summarize the available information about the migrants. In PCA, a set of variables is transformed into orthogonal components, which are

linear combinations of the variables and have maximum variance subject to being uncorrelated with one another. Typically, the first few components – of factors – account for a large proportion of the total variance of the original variables, and hence can be used to summarize the original data. The computed factors are then rotated using an oblique rotation to ease their interpretation.

Table A7 shows the results of the PCA, with the definition of the main seven inertia axes (the factors), which are linear components of the characteristics of the returnees, their overseas stay and their return conditions. Figures in the Table are correlation coefficients of each characteristic with the first seven factors. A star means that the correlation is significant at the 1% level. The first factor is positively and highly correlated to age, low education, and migration duration, thus describing those early uneducated migrants who migrated at the end of the sixties. The second factor is associated with return conditions, *i.e.* whether the individual returned alone or with other member of his/her family. It is negatively correlated with a dummy taking value 1 if the returnee was alone and positively with dummies taking value 1 if the returnee was with his/her spouse or with other members of his/her family. The third factor describes those younger migrants with medium education level who were overwhelmingly out of the labor market prior to migration. The fourth factor corresponds to migrants with a work visa coming back from the MENA region. The fifth factor is positively associated with migration between 1985 and 1995. The sixth factor is related to location after return: it is positively correlated with being back to a secondary city and negatively with being back to capital city. Finally, the seventh factor represents returnees' birthplace and is positively (resp. negatively) associated with being born in urban (resp. rural) area.

## 2. Linking the typology of returnees with post-move satisfaction

We now use the seven factors described above as regressors in an ordered probit model where the dependent variable ranges from 0 to 3. A score of 0 is synonymous of a “failed” migration: the returnee is financially in a worse shape now compared to prior to migration, is unhappy to be back in his/her home country and negatively assesses his/her migration experience. By contrast, a score of 3 is synonymous of a “successful” migration and return: the returnee is financially in a better shape now compared to prior to migration, is happy to be back in his/her home country and positively assesses his/her migration experience. Scores 1 and 2 are intermediate situations. One could argue that happiness relating to being back home is ambiguous with respect to migration experience, since those returnees who were very happy during their migration stay could well be unhappy to be back. Conversely, those returnees who had a bad time when abroad could well be pleased to be back. We thus run one alternative regression where the dependent variable is computed after excluding this criterion.

Results of the regressions are displayed in Table A8. Overall, estimation results bring support to the idea that returnees do not form a homogenous group. Some of them did benefit from their migration experience, while others did not, after controlling for their nationality. Among those who clearly benefited from their experience abroad are the early migrants (*i.e.* those uneducated migrants who left at the end of the seventies and stayed abroad for a long period of time) and the migrants who left during the late eighties, early nineties. By contrast, those who negatively assess their experience abroad are those young medium-educated migrants. Last, the results confirm that Moroccan and Algerian returnees are on average less satisfied than the Tunisians.

The specification using the restricted dependent variable confirms the previous results, with one exception though: the negative effect of being a young medium-educated migrant on post-move satisfaction disappears. Hence, those young migrants who seemed unsatisfied with their migration experience were mostly so because of an unhappy return. Looking back at the correlations displayed in Table A7, it appears that some of those young migrants did not voluntarily choose to return (as suggested by the positive and significant correlation coefficient between the third factor and the dummy indicating a return for administrative reasons).

## Summary and concluding remarks

In this paper, we investigate the link between overseas work experience and patterns of reintegration using a recent survey on returned migrants simultaneously conducted in Algeria, Morocco and Tunisia in 2006 as part of the MIREM project.

The first part of the paper compares the situation of the returnees at the time of the survey with their situation prior to migration along different dimensions (skills, employment status and subjective well-being). Summary statistics first highlight that migration from Maghreb countries is mainly motivated by economic or job-related reasons. However, there are sharp differences between men and women, with one female migration out of two being undertaken for a motive of family reunification. Meanwhile, a significant share of migrants gained both higher education and relevant experience overseas, including job training. Such human capital acquisition is likely to help enhancing the developmental effect of return migration.

Statistics on changes in employment status before and after migration period suggest that:

- The transitions to self-employment or employer arise from various origins: for instance, a significant share of Tunisian returnees who were either informally employed, in precarious jobs or unemployed prior to migration has shifted to entrepreneurship after return;
- Those migrants who left their countries as students generally occupy high-quality jobs after return, with roughly one returnee out of three being a wage-earner. The Algerian case stands apart, however, since it also exhibits a high share of unemployed returnees among this sub-group of student emigrants.

Figures on post-move subjective well-being indicate that most returnees positively evaluate their migration experience, Tunisian returnees being more likely than the others to show enthusiasm. In addition, more than 80% of the interviewees indicate that they are financially better-off after return as compared to their financial situation prior to migration. Last, most returnees are happy to be back in their home country although Moroccan returnees appear less enthusiastic on average than their Algerian and Tunisian counterparts.

We then pushed further the analysis to disentangle the determinants of successful migration and reintegration. We first tackle mobility between *occupational* groups using a hierarchical cluster analysis of occupations after and prior to migration. The econometric results of models determining the probability of moving *upward* or *downward* are the following:

- Being married prior to migration is found to significantly reduce the probability of moving *upward* within the whole sample, this result being partly driven by Tunisian returnees for whom

the effect of being married is particularly strong. The reverse holds true in the case of Moroccan returnees, for whom being married prior to migration is actually found to reduce the probability of moving *downward*.

- We provide evidence that mobility is in large part conditioned by the migrants' initial position in the distribution of occupations. This effect is particularly strong for Moroccan migrants.
- Characteristics of overseas stay are not always significant in the models of upward mobility, except for migration duration. In the case of Algerian and Moroccan returnees, those who stayed abroad for a short period of time are more likely to experience an upward mobility.
- A high amount of remittances is significantly and positively associated with upward mobility thereby suggesting that the higher the remittances, the lesser the budget constraint after return, an important determinant of entrepreneurship behaviour (see Gubert and Nordman, 2008).
- Migrants who returned for administrative reasons are less likely to experience an upward mobility suggesting that "forced" returns, thus unprepared, negatively affect the migrants' professional reintegration in their home country.
- Finally, we show evidence that the migrants' receiving country has little effect on their probability of having an upward/downward mobility after migration once their demographics, education, professional status, overseas stay and return characteristics are accounted for.

In a second attempt to disentangle the determinants of successful migration and reintegration, we model different dimensions of subjective well-being using direct answers to questions on pre- and post-move satisfaction. Before turning to the main results, recall that disentangling the determinants of subjective well-being is difficult since subjective assessments are likely to be strongly affected by psychological factors, therefore unobserved individual characteristics in most surveys.

Four main findings are worth noting. First, demographic characteristics seem to be important determinants of post-move satisfaction:

- The effects of being female and of the migrant age on the probability of considering migration positively are negative. The effect of age switches sign when we explain the probability of being happy to be back in home country suggesting that returnees may be happy to be back to home country and, at the same time, either satisfied or unsatisfied with their experience abroad.
- Being born in an urban environment is positively associated with considering migration positively while marital status prior to and during migration affects the probability of being happy to be back in home country. The effects are reflective of the importance of family ties and networks in the determination of returnees' post-move satisfaction.

Second, returnees who were in poor financial conditions before migration are not more likely to self-report financial improvement after return. Moreover, these returnees also seem to dread their return to home country.

Third, interestingly enough, few characteristics of overseas stay seem to be correlated with post-move satisfaction. The most robust finding lies in the positive effect of returnees' skills recognition abroad, thus highlighting the high value that returnees may attach to human capital transfer and skill acquisition abroad for viewing their migration experience as a success.

Fourth, the nature of the return strongly affects returnees' post-move satisfaction, as might be expected. For instance, being back to birthplace is negatively associated with a positive view on migration experience, as if relocation in a known place would be considered as a failed attempt to improve social position. By contrast, migrants who returned to a large city as compared to a small one are less likely to report a positive view on their migration experience.

Finally, we draw a typology of those migrants who declared positive views on their migration experience using a two-step approach: firstly, we perform a factor analysis of the returnees' characteristics and overseas stay; secondly, we assess the econometric determinants of post-move satisfaction using this new typology of returnees (or computed factors) as regressors.

The new typology of returnees can be broadly described as (1) early migrants, (2) returnees with family, (3) young medium-educated migrants, (4) job-related migration to MENA, (5) late eighties' migrants, (6) returnees to secondary cities and (7) urban migrants.

Overall, estimation results bring support to the idea that returnees do not form a homogenous group. For instance, among those who clearly benefited from their experience abroad are the early migrants, *i.e.* those uneducated migrants who left at the end of the seventies and stayed abroad for a long period of time, and the migrants who left during the late eighties, early nineties. By contrast, those who negatively assess their experience abroad are those young medium-educated migrants.

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# APPENDIX





**Table A1 – Transitional probabilities for labor status before vs. during migration****Algeria**

	Employment status during migration										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status before migration :											
Employer	50.0	33.3	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	6
Waged	0.0	58.9	3.2	4.0	0.0	16.1	8.9	5.6	3.2	0.0	124
Self-employed	0.0	56.0	30.0	8.0	0.0	0.0	4.0	2.0	0.0	0.0	50
Seasonal worker	4.9	68.3	0.0	7.3	0.0	0.0	0.0	19.5	0.0	0.0	41
Family worker	0.0	85.7	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	7
Student	2.9	32.4	2.9	5.9	0.0	38.2	8.8	5.9	2.9	0.0	34
Unemployed	0.0	79.0	0.0	1.8	1.8	3.5	5.3	8.8	0.0	0.0	57
Inactive/retired	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	12
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Do not know	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Total	1.8	59.3	6.3	4.5	0.3	10.5	5.7	9.9	1.5	0.0	332

Source: MIREM © EUI, Authors' calculations.

**Morocco**

	Employment status during migration										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status before migration :											
Employer	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
Waged	0.0	56.9	19.0	5.2	3.5	1.7	3.5	1.7	8.6	0.0	58
Self-employed	0.0	28.3	39.1	15.2	2.2	0.0	0.0	6.5	8.7	0.0	46
Seasonal worker	3.3	30.0	3.3	40.0	0.0	0.0	0.0	0.0	16.7	6.7	30
Family worker	11.8	5.9	41.2	23.5	5.9	0.0	11.8	0.0	0.0	0.0	17
Student	4.6	51.1	10.2	10.2	0.0	11.4	2.3	1.1	8.0	1.1	88
Unemployed	3.3	23.3	10.0	26.7	3.3	6.7	13.3	0.0	13.3	0.0	30
Retired/inactive	0.0	0.0	0.0	25.0	0.0	0.0	0.0	25.0	25.0	25.0	4
Other	0.0	33.3	13.3	10.0	3.3	3.3	10.0	3.3	23.3	0.0	30
Do not know	8.0	40.0	4.0	4.0	0.0	4.0	0.0	0.0	24.0	16.0	25
Total	3.0	39.4	16.4	14.6	1.8	4.6	3.9	2.1	11.8	2.4	330

Source: MIREM © EUI, Authors' calculations.

**Tunisia**

	Employment status during migration										n
	Employer	Waged	Self-employed	Seasonal workers	Family workers	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status before migration :											
Employer	0.0	75.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	4
Waged	5.1	76.3	2.5	2.5	0.0	1.7	4.2	6.8	0.9	0.0	118
Self-employed	2.1	36.2	29.8	6.4	0.0	0.0	4.3	14.9	4.3	2.1	47
Seasonal worker	13.7	49.0	15.7	9.8	0.0	0.0	2.0	7.8	0.0	2.0	51
Family worker	9.1	45.5	27.3	0.0	0.0	0.0	9.1	9.1	0.0	0.0	11
Student	17.1	48.8	2.4	2.4	0.0	24.4	0.0	0.0	4.9	0.0	41
Unemployed	3.1	56.3	18.8	9.4	0.0	0.0	6.3	6.3	0.0	0.0	32
Retired/inactive	0.0	21.4	7.1	0.0	0.0	0.0	7.1	64.3	0.0	0.0	14
Other	0.0	25.0	25.0	25.0	0.0	0.0	0.0	0.0	25.0	0.0	4
Do not know	0.0	62.5	0.0	0.0	0.0	0.0	25.0	12.5	0.0	0.0	8
Total	7.0	56.7	11.2	4.9	0.0	3.6	4.6	9.7	1.8	0.6	330

Source: MIREM © EUI, Authors' calculations.

**Table A2 – Transitional probabilities for labor status during vs. after migration****Algeria**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status during migration :											
Employer	66.7	16.7	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	6
Waged	9.6	20.8	13.7	1.0	0.0	0.5	11.2	43.1	0.0	0.0	197
Self-employed	4.8	19.1	47.6	0.0	0.0	0.0	19.1	9.5	0.0	0.0	21
Seasonal worker	6.7	33.3	33.3	6.7	0.0	0.0	13.3	6.7	0.0	0.0	15
Family worker	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1
Student	8.6	57.1	5.7	0.0	0.0	11.4	17.1	0.0	0.0	0.0	35
Unemployed	0.0	47.4	10.5	0.0	0.0	5.3	31.6	5.3	0.0	0.0	19
Retired/inactive	6.1	6.1	3.0	0.0	0.0	3.0	0.0	81.8	0.0	0.0	33
Other	0.0	40.0	0.0	0.0	0.0	0.0	60.0	0.0	0.0	0.0	5
Do not know	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Total	9.3	25.3	14.2	0.9	0.0	2.1	13.0	35.3	0.0	0.0	332

Source: MIREM © EUI, Authors' calculations.

**Morocco**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status during migration :											
Employer	60.0	0.0	30.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	10
Waged	11.5	35.4	10.0	3.9	0.0	1.5	16.9	9.2	9.2	2.3	130
Self-employed	11.1	1.9	53.7	1.9	1.9	0.0	16.7	3.7	5.6	3.7	54
Seasonal worker	4.2	8.3	10.4	27.1	0.0	0.0	31.3	6.3	12.5	0.0	48
Family worker	0.0	16.7	0.0	0.0	16.7	0.0	16.7	16.7	33.3	0.0	6
Student	6.7	46.7	6.7	0.0	0.0	20.0	6.7	6.7	6.7	0.0	15
Unemployed	0.0	15.4	15.4	0.0	0.0	7.7	46.2	0.0	7.7	7.7	13
Retired/inactive	0.0	28.6	0.0	0.0	0.0	0.0	0.0	57.1	0.0	14.3	7
Other	12.8	7.7	0.0	12.8	0.0	0.0	12.8	7.7	35.9	10.3	39
Do not know	37.5	25.0	0.0	0.0	0.0	12.5	0.0	25.0	0.0	0.0	8
Total	11.5	20.6	16.1	7.3	0.6	2.1	18.2	8.5	11.8	3.3	330

Source: MIREM © EUI, Authors' calculations.

**Tunisia**

	Employment status after return										n
	Employer	Waged	Self-employed	Seasonal worker	Family worker	Student	Unemployed	Retired/inactive	Other	Do not know	
Employment status during migration :											
Employer	95.7	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23
Waged	19.3	38.5	10.7	2.7	1.1	1.6	8.6	12.3	3.7	1.6	187
Self-employed	32.4	0.0	32.4	0.0	8.1	0.0	10.8	13.5	2.7	0.0	37
Seasonal worker	0.0	18.8	6.3	31.3	6.3	0.0	25.0	12.5	0.0	0.0	16
Family worker	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
Student	8.3	41.7	8.3	0.0	0.0	16.7	16.7	0.0	0.0	8.3	12
Unemployed	13.3	13.3	0.0	13.3	0.0	0.0	53.3	6.7	0.0	0.0	15
Retired/inactive	3.1	3.1	3.1	0.0	0.0	0.0	0.0	84.4	3.1	3.1	32
Other	33.3	16.7	16.7	0.0	0.0	0.0	0.0	16.7	16.7	0.0	6
Do not know	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2
Total	23.0	25.5	11.8	3.6	1.8	1.5	10.3	17.9	3.0	1.5	330

Source: MIREM © EUI, Authors' calculations.

**Table A3 – Probit model of upward occupational mobility after migration with selection**

	Pooled sample	Algeria	Morocco	Tunisia
<i>Individual characteristics</i>				
Female	0.139 (0.42)	0.062 (0.14)	-0.153 (0.14)	-0.589 (0.66)
Age (at time of migration)	0.016 (1.23)	-0.003 (0.11)	0.004 (0.15)	0.015 (0.50)
Born in urban area	0.048 (0.29)	-0.069 (0.23)	0.101 (0.25)	0.240 (0.81)
Bi-national	0.144 (0.53)	-0.425 (0.78)	0.157 (0.16)	0.947* (1.93)
<i>Family status before migration</i>				
Married before migration	-0.233 (1.21)	0.099 (0.26)	-0.725 (1.42)	-0.906** (2.43)
Household size before migration	0.005 (0.21)	0.006 (0.15)	0.018 (0.28)	-0.001 (0.03)
<i>Occupational status prior to migration [ref. is Group 2]</i>				
Was in Group 3	-0.440* (1.84)	-0.531 (1.27)	-1.233* (1.69)	-0.352 (0.72)
Was in Group 4	0.529*** (2.79)	0.608* (1.83)	0.328 (0.66)	0.741* (1.92)
Was in Group 5	2.705*** (4.52)	-	3.038*** (4.20)	-
<i>Characteristics of overseas stay</i>				
Worked during last migration	-0.044 (0.26)	-0.211 (0.66)	-0.195 (0.37)	-0.477 (1.48)
Trained during migration	0.158 (0.78)	0.287 (0.66)	0.026 (0.05)	-0.068 (0.20)
Diploma recognized (1: yes)	0.229 (1.09)	0.186 (0.47)	0.210 (0.33)	0.255 (0.66)
Migration duration (in years)	0.016 (1.55)	-0.045*** (3.17)	-0.055** (2.00)	0.017 (1.18)
<i>Past immigration country</i> (dummies included but not shown)				
<i>Past remittance behavior [ref. is sent nothing]</i>				
Sent less than 500 per year	-0.057 (0.25)	-0.377 (0.78)	-0.476 (0.77)	-0.693* (1.70)
Sent between 501 and 1000 per year	0.111 (0.54)	0.532 (1.43)	-0.249 (0.47)	-0.100 (0.22)
Sent more than 1000 per year	0.393** (1.98)	0.726 (1.49)	0.744 (1.47)	0.346 (1.03)
<i>Return conditions</i>				
Time elapsed since return	0.048*** (2.70)	-0.024 (0.51)	-0.005 (0.17)	0.056 (1.37)
Back to birth place	-0.002 (0.01)	0.376 (1.09)	-0.229 (0.58)	-0.263 (0.90)
Returned for administrative reasons	-0.719*** (3.81)	-0.583 (1.55)	-0.774 (1.59)	-1.043*** (2.76)
Location after return is capital city [ref. is small city]	0.113 (0.61)	-0.950* (1.75)	1.558** (2.11)	-0.711* (1.76)
Location after return is secondary city	0.042 (0.23)	-0.339 (0.97)	1.458** (2.24)	-0.514 (1.36)
Algerian returnees	-0.073 (0.35)			
Moroccan returnees	-0.312 (1.43)			
Constant	-0.824 (1.52)	0.161 (0.19)	0.081 (0.06)	0.098 (0.09)
Observations	489	184	139	166

Absolute value of z statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

**Table A4 – Probit model of downward occupational mobility after migration with selection**

	Pooled sample	Algeria	Morocco	Tunisia
<i>Individual characteristics</i>				
Female	-0.299 (0.81)	-0.997 (1.54)	-0.092 (0.19)	-
Age (at time of migration)	-0.005 (0.41)	-0.027 (1.30)	0.013 (0.46)	0.004 (0.11)
Born in urban area	-0.093 (0.50)	-0.562* (1.93)	0.527* (1.72)	-0.438 (1.23)
Bi-national	-0.115 (0.34)	-0.261 (0.50)	-	0.056 (0.11)
<i>Family status prior to migration</i>				
Married before migration	-0.204 (0.95)	-0.039 (0.11)	0.755* (1.82)	-0.777* (1.74)
Household size before migration	0.031 (1.19)	0.058 (1.42)	0.019 (0.42)	0.004 (0.08)
<i>Occupational status prior to migration [ref. is group 5]</i>				
Was in Group 1	2.025*** (6.94)	1.420*** (3.87)	1.483*** (2.74)	1.623*** (3.64)
Was in Group 2	2.298*** (7.54)	1.887*** (4.65)	1.561*** (3.34)	2.004*** (4.01)
Was in Group 3	1.523*** (5.00)	-	-	2.159*** (3.94)
<i>Characteristics of overseas stay</i>				
Worked during last migration	0.776*** (3.37)	1.363*** (3.38)	1.591*** (3.23)	0.442 (1.10)
Trained during migration	-0.240 (1.04)	-0.495 (1.36)	-0.414 (0.81)	-0.351 (0.82)
Diploma recognized (1: yes)	-0.579*** (2.85)	-	-	-0.734** (1.96)
Migration duration (in years)	-0.003 (0.28)	-0.027* (1.79)	0.051*** (2.61)	0.024 (1.30)
<i>Past immigration country</i> <i>Past remittance behavior [ref. is sent nothing]</i> <i>(dummies included but not shown)</i>				
Sent less than 500 per year	0.398 (1.55)	0.359 (0.70)	0.337 (0.65)	0.573 (1.32)
Sent between 501 and 1000 per year	-0.000 (0.00)	0.408 (1.07)	-0.315 (0.86)	-0.082 (0.17)
Sent more than 1000 per year	-0.309 (1.46)	0.083 (0.24)	-0.161 (0.41)	-0.537 (1.29)
<i>Return conditions</i>				
Time elapsed since return	-0.040 (1.59)	-0.014 (0.31)	-0.035 (0.84)	-0.051 (1.02)
Back to birth place	0.047 (0.26)	-0.574 (1.52)	0.189 (0.46)	0.012 (0.04)
Returned for administrative reasons	0.634*** (2.84)	0.293 (0.79)	-0.001 (0.00)	0.933** (1.98)
Location after return is capital city [ref. is small city]	0.302 (1.63)	0.550 (1.60)	-0.650 (1.35)	0.408 (0.97)
Location after return is secondary city	-0.036 (0.16)	0.399 (1.12)	-0.427 (0.89)	-0.143 (0.28)
Algerian returnees	0.151 (0.69)			
Moroccan returnees	0.087 (0.34)			
Constant	-3.092*** (5.09)	-2.190** (2.49)	-3.642*** (3.94)	-2.670* (1.95)
Observations	673	278	152	243

**Table A5 – Ordered probit of occupational mobility after migration (from high to low-quality jobs)**

	Pooled data	Algeria	Morocco	Tunisia
<i>Individual characteristics</i>				
Female	-0.312 (1.28)	-0.398 (1.11)	0.560 (1.00)	-0.698 (1.22)
Age at time of migration	-0.003 (0.35)	-0.016 (0.90)	-0.003 (0.16)	-0.002 (0.11)
Born in urban area	-0.176 (1.35)	-0.174 (0.69)	-0.605** (2.21)	-0.163 (0.69)
Bi-national	-0.331 (1.51)	0.641* (1.70)	-1.169 (1.28)	-0.915** (2.32)
<i>Family status prior to migration</i>				
Married before migration	0.070 (0.49)	-0.059 (0.21)	-0.362 (1.21)	0.270 (0.98)
Household size before migration	0.018 (0.98)	0.042 (1.27)	0.009 (0.23)	0.008 (0.23)
<i>Occupational status prior to migration [ref. is Group 1]</i>				
Was in Group 2	0.696*** (3.71)	0.979*** (2.92)	-0.020 (0.05)	0.903*** (2.60)
Was in Group 3	0.719*** (4.53)	0.866*** (3.13)	0.382 (0.92)	0.914*** (3.34)
Was in Group 4	1.454*** (7.36)	1.511*** (4.27)	1.274*** (2.76)	1.771*** (4.30)
Was in Group 5	0.902*** (2.82)	0.432 (0.36)	0.625 (1.18)	-7.398 (0.00)
<i>Characteristics of overseas stay</i>				
Worked during last migration	0.467*** (3.32)	0.930*** (3.68)	0.729** (2.15)	0.135 (0.54)
Trained during migration	-0.190 (1.23)	-0.373 (1.23)	-0.280 (0.69)	-0.158 (0.60)
Diploma recognized (1: yes)	-0.438*** (2.96)	-0.190 (0.78)	-1.360*** (3.21)	-0.121 (0.47)
Migration duration (in years)	0.006 (0.97)	-0.006 (0.50)	0.035** (2.16)	0.005 (0.45)
<i>Past immigration country</i> (dummies included but not shown)				
<i>Past remittance behavior [ref. is sent nothing]</i>				
Sent less than 500 per year	0.249 (1.42)	0.957*** (2.66)	-0.204 (0.55)	0.464 (1.56)
Sent between 501 and 1000 per year	0.047 (0.28)	0.472 (1.53)	-0.500 (1.56)	-0.104 (0.30)
Sent more than 1000 per year	-0.255* (1.73)	-0.082 (0.26)	-0.588* (1.84)	-0.437* (1.73)
Time elapsed since return	0.011 (0.70)	0.015 (0.42)	0.022 (0.82)	0.018 (0.58)
Returned for administrative reasons	0.410*** (2.86)	0.228 (0.84)	0.081 (0.27)	0.693*** (2.60)
Back to birth place	-0.085 (0.69)	-0.213 (0.79)	0.322 (1.20)	-0.098 (0.45)
Location after return is capital city [ref. is small city]	0.317** (2.24)	0.548** (1.96)	-0.249 (0.69)	0.190 (0.65)
Location after return is secondary city	0.071 (0.46)	-0.067 (0.25)	-0.575 (1.32)	0.006 (0.02)
Algerian returnees	0.347** (2.27)			
Moroccan returnees	0.248 (1.44)			
Observations	506	183	129	194
Pseudo R-squared	0.17	0.21	0.25	0.20

**Table A6 – Probits and ordered probit of post-move life satisfaction  
(marginal effects for probits)**

	<b>Probit of relative financial well-being</b>	<b>Probit of migration positively valued</b>	<b>Ordered probit of migration score value (1 to 3)</b>	<b>Probit of being happy to be back in home country</b>
	<b>(1)</b>	<b>(2)</b>	<b>(3)</b>	<b>(4)</b>
<i>Individual characteristics</i>				
Female	-0.102** (1.96)	-0.111** (2.54)	-0.510*** (2.66)	-0.039 (0.73)
Age (at time of survey)	-0.000 (0.02)	-0.005*** (2.95)	-0.030*** (3.24)	0.007*** (2.75)
Born in urban area	0.046 (1.19)	0.073** (2.57)	0.412*** (2.89)	-0.017 (0.43)
<i>Family status</i>				
Married before migration	0.065 (1.62)	0.037 (1.31)	0.135 (0.91)	0.097** (2.29)
Got married with a European during migration	0.023 (0.45)	0.062 (1.60)	0.275 (1.16)	-0.121** (2.21)
<i>Self-reported financial situation prior to migration</i> [ref. is Good financial situation ]				
Medium financial situation	-0.027 (0.60)	0.052 (1.56)	0.237 (1.37)	-0.065 (1.42)
Bad financial situation	-0.152*** (3.03)	-0.048 (1.34)	-0.116 (0.64)	-0.115** (2.22)
<i>Education</i> [ref. is None ]				
Primary	0.030 (0.55)	-0.037 (0.96)	-0.101 (0.52)	-0.073 (1.21)
Preparatory	-0.146** (2.04)	0.019 (0.37)	0.410 (1.31)	-0.032 (0.45)
Secondary	0.034 (0.62)	-0.078* (1.66)	-0.363* (1.70)	-0.020 (0.33)
University	0.043 (0.72)	-0.060 (1.14)	-0.399* (1.65)	-0.018 (0.29)
Higher diplomas	0.033 (0.51)	-0.026 (0.48)	-0.352 (1.33)	-0.057 (0.82)
<i>Characteristics of overseas stay</i>				
Trained during migration	0.069 (1.58)	0.067** (2.14)	0.204 (1.12)	-0.019 (0.42)
Diploma recognized (1: yes)	-0.050 (1.11)	0.110*** (3.50)	0.504*** (2.73)	0.114*** (2.61)
Migration duration (in years)	0.006** (2.21)	0.002 (1.22)	0.013 (1.43)	0.003 (1.23)
<i>Past remittance behavior</i> [ref. is sent nothing]				
Sent less than 500 per year	-0.023 (0.43)	0.007 (0.19)	0.262 (1.20)	-0.062 (1.07)
Sent between 501 and 1000 per year	0.121*** (2.75)	0.034 (1.03)	0.146 (0.81)	0.093* (1.89)
Sent more than 1000 per year	0.149***	0.047	0.259	0.109***

	(3.77)	(1.64)	(1.60)	(2.58)
<i>Conditions of return</i>				
Time elapsed since return	0.008* (1.70)	0.001 (0.38)	0.001 (0.07)	0.009* (1.68)
Returned for administrative reasons	-0.264*** (5.14)	-0.113*** (2.76)	-0.461** (2.54)	-0.389*** (7.19)
Back to birth place	-0.014 (0.40)	-0.054** (2.00)	-0.300** (2.28)	0.006 (0.17)
Location after return is capital city [ref. is small city]	0.042 (1.06)	-0.241*** (6.77)	-0.802*** (4.98)	-0.027 (0.65)
Location after return is secondary city	-0.025 (0.56)	-0.101*** (2.59)	-0.380** (2.12)	0.071 (1.55)
<i>Destination country [ref. is France]</i>				
Germany	0.067 (0.93)	0.106 (1.64)	0.486 (1.04)	0.069 (0.90)
North America	-0.142 (1.39)	0.109* (1.69)	0.645 (1.26)	0.155 (1.62)
Other Europe	0.018 (0.26)	0.045 (0.87)	0.052 (0.18)	-0.073 (1.01)
Spain	-0.051 (0.55)	-0.230*** (2.70)	-1.167*** (3.89)	0.044 (0.48)
Italy	-0.021 (0.39)	-0.043 (1.01)	-0.370* (1.75)	0.061 (1.12)
MENA	-0.028 (0.42)	-0.177*** (2.96)	-0.554** (2.40)	-0.055 (0.78)
Unknown	0.039 (0.37)	-0.253** (2.57)	-1.056*** (3.14)	0.000 (0.00)
Other	-0.231 (1.19)	-	6.964 (0.00)	0.063 (0.38)
Algerian returnees	0.069 (1.60)	-0.341*** (8.12)	-0.968*** (5.54)	-0.035 (0.76)
Moroccan returnees	-0.031 (0.67)	-0.119*** (2.80)	-0.218 (1.11)	-0.093* (1.90)
Observations	869	929	868	937
Pseudo R-squared	0.16	0.26	0.18	0.23

Absolute value of z statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%



**Table A7 – Correlations of factors with returnees' characteristics and overseas experience**

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
<i>Individual characteristics</i>							
Female	-0.1180*	0.1651*	0.0229	0.0623	0.0018	-0.0555	0.084
Age (at time of migration)	-0.0976*	0.02	<b>-0.6470*</b>	0.1808*	-0.0894*	0.0273	-0.0924*
Age (at time of survey)	<b>0.8569*</b>	0.1137*	-0.2482*	0.0308	-0.0714	0.0047	-0.3073*
Born in rural area	0.3527*	-0.0036	-0.0529	-0.1302*	-0.0612	0.0297	<b>-0.9140*</b>
Born in urban area	-0.3478*	0.0066	0.0467	0.1288*	0.0591	-0.0263	<b>0.9126*</b>
<i>Education level</i>							
No education	<b>0.6327*</b>	-0.0057	-0.0567	-0.1033*	-0.2075*	-0.0202	-0.4088*
Pre-School	0.2725*	-0.0321	-0.0614	-0.1172*	-0.1407*	0.0243	-0.0434
Primary	0.0721	0.0478	-0.0601	-0.0532	0.048	-0.1080*	-0.1089*
Preparatory	-0.0631	-0.0338	-0.0920*	-0.2805*	0.0054	0.0245	0.2259*
Secondary	-0.2574*	-0.0355	<b>0.5025*</b>	0.2094*	0.3018*	0.0077	0.2626*
Tertiary I	-0.3989*	-0.0169	0.0218	0.3128*	0.0287	0.1608*	0.0329
Tertiary II	-0.1411*	0.0369	<b>-0.5044*</b>	-0.2301*	-0.1659*	-0.1022*	0.0525
<i>Occupational status prior to migration</i>							
Was in Group 1	-0.0643	0.0138	<b>-0.6436*</b>	0.2867*	0.0557	0.0098	0.0778
Was in Group 2	-0.0484	-0.0518	0.0219	0.0041	0.0777	-0.0067	0.0209
Was in Group 3	0.0281	-0.0433	0.0274	-0.0644	-0.0012	-0.0107	-0.0595
Was in Group 4	0.2239*	0.0512	0.1569*	-0.2296*	-0.2676*	-0.1222*	-0.1566*
Was in Group 5	0.0602	0.0935*	-0.0529	-0.0642	-0.0029	0.1938*	-0.0198
Was inactive	-0.1869*	-0.0454	0.4433*	0.0316	0.1830*	0.0539	0.1225*
<i>Migration experience</i>							
Entered illegally in PPI	-0.2304*	-0.1312*	0.1389*	-0.1729*	-0.1299*	-0.1430*	0.0096
Entered with a tourist visa	-0.1480*	-0.0728	-0.0605	-0.2913*	0.1625*	0.1769*	-0.0621
Entered with a work visa	0.2846*	0.0971*	-0.1307*	<b>0.5462*</b>	-0.1528*	-0.1533*	0.0392
Entered with a family visa	-0.0227	0.0726	0.036	0.0112	0.0435	0.0076	0.0792
Entered with another visa	0.0768	0.0404	0.0504	-0.0829	0.0518	0.0694	-0.0288
Number of migrations	0.0546	0.0225	-0.0451	-0.0849*	0.0910*	0.0324	-0.0041
Migration duration	<b>0.8943*</b>	0.0804	0.0932*	-0.0477	-0.1249*	0.0331	-0.2497*
Migrated alone	-0.1580*	-0.2954*	0.0601	-0.0443	-0.0776	-0.0244	0.0663
Migrated before 1974	<b>0.8606*</b>	0.0566	0.0461	-0.0766	-0.2579*	-0.0429	-0.2422*
Migrated between 1975 and 1985	0.0683	0.0899*	0.034	0.039	0.0111	0.0332	0.0019
Migrated between 1985 and 1995	-0.1731*	0.0088	0.0582	0.0024	<b>0.8387*</b>	0.0117	0.0434
Migrated after 1995	<b>-0.6672*</b>	-0.1226*	-0.1175*	0.0389	<b>-0.5242*</b>	0.0045	0.1776*
Migrated to Germany	0.079	0.0053	0.1092*	0.0575	0.1468*	0.1731*	-0.0166
Migrated to North America	0.0195	-0.0515	-0.0041	-0.0366	0.1388*	-0.0396	-0.1936*
Migrated to other European country	-0.063	0.0747	-0.0458	0.027	0.0058	-0.0232	0.0985*
Migrated to Spain	-0.1145*	-0.0888*	0.0447	0.0406	-0.0743	0.1348*	-0.1645*
Migrated to France	0.3621*	-0.047	-0.0117	-0.2359*	-0.3741*	0.1115*	-0.0412
Migrated to Italy	-0.2795*	-0.0729	0.0872*	-0.2174*	0.3398*	-0.1827*	0.1540*
Migrated to MENA	-0.2206*	0.0985*	-0.1703*	<b>0.7226*</b>	0.0769	0.0158	0.0285
Migrated to ?	0.0429	0.0875*	0.1472*	-0.0269	-0.0243	-0.0638	-0.038
Migrated elsewhere	-0.0119	0.1950*	-0.2630*	-0.1168*	-0.0702	-0.3191*	-0.006
Diploma recognized	-0.3399*	0.0429	-0.0761	0.3391*	0.0629	0.1062*	0.0909*
Had training when overseas	0.0191	0.0682	0.1474*	0.1300*	0.0534	0.2785*	0.1494*
Worked during migration	0.0978*	-0.0394	0.1512*	0.1334*	0.0836	0.3697*	0.0233
<i>Past remittance behavior</i>							
Sent nothing	-0.1996*	0.063	-0.0445	0.0527	-0.0038	0.0125	0.1360*
Sent less than 200 per year	0.027	0.0209	-0.0041	0.0242	0.0002	0.0623	-0.0202
Sent between 200 and 500 per year	-0.0021	-0.0436	0.1021*	-0.0004	0.0307	0.0219	0.0023

Sent between 501 and 1000 per year	0.0305	0.0313	-0.0196	-0.0726	0.0225	-0.0055	-0.0519
Sent more than 1000 per year	0.1796*	-0.0692	-0.0302	-0.0162	-0.0442	-0.0762	-0.0961*
<i>Return conditions</i>							
Returned for administrative reasons	-0.2839*	-0.2237*	0.1131*	-0.2071*	0.0027	-0.0975*	0.0625
Returned alone	-0.043	<b>-0.8995*</b>	0.0228	-0.1029*	-0.07	-0.0201	-0.0266
Returned with spouse	0.0976*	<b>0.9418*</b>	-0.0523	0.0961*	0.0358	0.0239	0.0206
Returned with family	0.0304	<b>0.8749*</b>	-0.0462	0.1186*	0.0844*	0.0312	0.0142
Back to capital city	0.0864*	-0.0132	-0.0188	0.1593*	-0.0509	<b>-0.6870*</b>	0.1754*
Back to secondary city	0.0995*	0.0144	0.0184	0.0005	-0.0658	<b>0.7194*</b>	0.0342
Time elapsed since return	0.3654*	0.1141*	0.0279	-0.0795	0.3365*	-0.1501*	-0.1218*
Back to birthplace	-0.0859*	-0.0372	0.2764*	0.0041	0.2118*	0.0442	0.1862*
<i>Future expectations</i>							
Remigration is very likely	-0.065	-0.0252	0.0458	-0.0674	-0.0655	-0.0458	0.0262
Remigration is likely	-0.0686	-0.0355	0.0349	0.1208*	-0.0173	0.0371	0.049
Will not remigrate now	0.004	0.0264	-0.0648	-0.2692*	0.0237	-0.1306*	0.0043
Will never remigrate	0.1234*	0.0356	0.013	0.1097*	0.0395	0.1402*	-0.0731

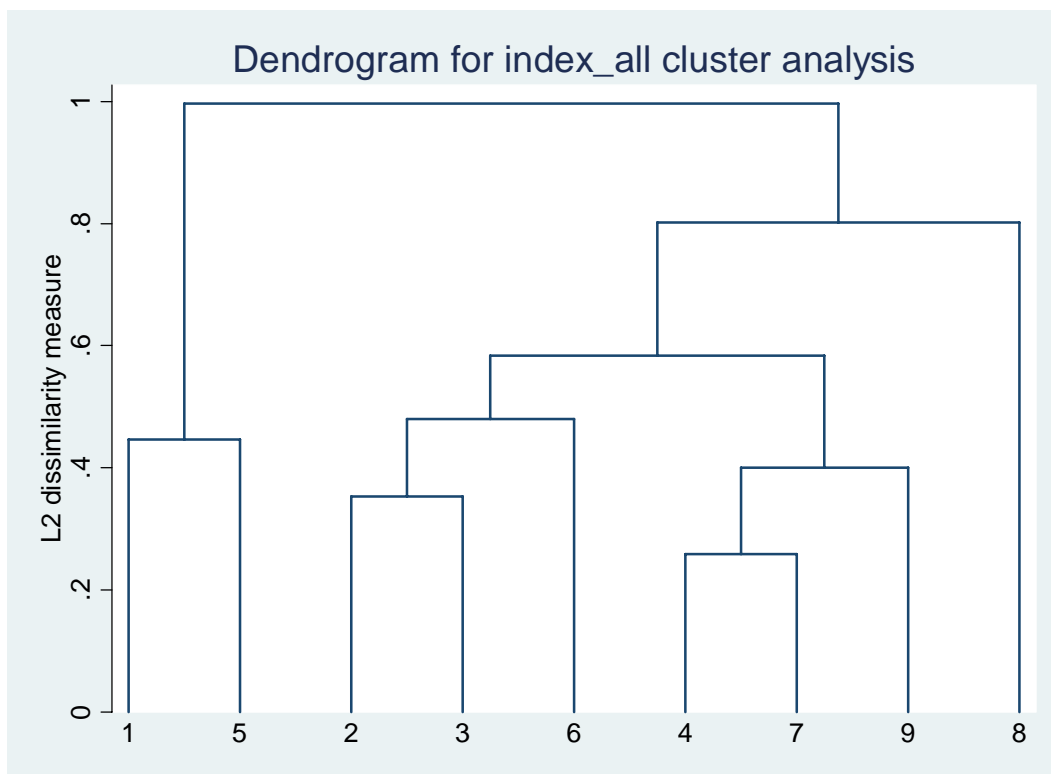
A “\*” means significant at the 1% level.

**Table A8 – Ordered probit of Post-Move Satisfaction**

	Post-Move Satisfaction	Post-Move Satisfaction (restricted)
Early migrants (Factor 1)	0.239*** (6.09)	0.078* (1.91)
Returnees with family (Factor 2)	0.118*** (3.10)	0.142*** (3.47)
Young medium-educated migrants (Factor 3)	-0.107*** (-2.73)	-0.022 (-0.54)
Job-related migration to MENA (Factor 4)	0.012 (0.33)	-0.039 (-1.00)
Late eighties' migrants (Factor 5)	0.114*** (2.98)	0.089** (2.19)
Returnees to secondary cities (Factor 6)	0.141*** (3.70)	0.127*** (3.13)
Urban migrants (Factor 7)	0.012 (0.33)	0.056 (1.42)
Algeria	-0.424*** (-4.40)	-0.468*** (-4.57)
Morocco	-0.279*** (-2.86)	-0.260** (-2.49)
Number of observations	934	934
Pseudo R <sup>2</sup>	0.045	0.034

Absolute value of z statistics in parentheses. \* significant at 10%; \*\* significant at 5%; \*\*\* significant at 1%.

**Figure A1 - Dendrograms of ascending hierarchical classification of occupations**



*Note:* Occupations are on abscissa axis, dissimilarity index is on ordinate axis. 1: Salaried worker in *CDI*; 2: Salaried worker *CDD*; 3: Part-time salaried worker; 4: Seasonal worker; 5: Employer/Firm Manager; 6: Regular Self-employed; 7: Irregular Self-employed; 8: Family worker; 9: Unemployed worker.

