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► To cite this version:

Daniela Borodak, Ariane Tichit. Should we stay or should we go? Irregular Migration and duration of stay: the case of Moldovan Migrants. 2011. halshs-00554296v1

HAL Id: halshs-00554296

<https://shs.hal.science/halshs-00554296v1>

Preprint submitted on 10 Jan 2011 (v1), last revised 8 Jun 2012 (v2)

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**Should we stay or should we go?
Irregular Migration and duration of stay:
the case of Moldovan Migrants**

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June 2009

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Abstract - This paper investigates the motivations behind the trip duration in the destination country for Moldovan migrants. The New Economics of Labour Migration (NELM) asserts that preference for the home country; wage differential and migration costs drive the choice of the timing of return. Within this framework, we focus on the influence of the legal status of migrants (as part of the migration costs) and on the potential push or pull effects of the characteristics of the migrant's region of origin (influencing the choice of the migrant both in terms of wage differential and preference for the origin country). The central proposition is that undocumented migrants face higher migration costs than legal migrants and therefore have an incentive to stay in destination countries longer than migrants with documents in order to increase the amount of savings relative to the costs of entry on a given trip. To test this hypothesis we run a duration model using a national household dataset on migration in the Republic of Moldova collected in 2006 complemented with a regional dataset from Roscovan and Galer (2006). Evidence from parametric survival models supports our proposition and therefore recommends enforcing international laws as regards to the free movement of labor. In addition, the social regional development of the departure zone acts as a pull factor, claiming for more public development aid.

JEL classification: F22; J61; C41

Keywords: Migration; duration; Moldova

1. Introduction

For the last decades, a number of European countries have been implementing significant changes in their migration policy, considering return migration as a critical element (IOM, 2004). These reforms, encouraged by the European Commission (EC, 2005), aim to prevent or deter irregular migration and residence in EU states in one hand, and to promote regular temporary or permanent migration in the other hand. The hypothesis underlying these policies is that return of irregular migrants can help maintain the integrity of asylum systems and regular immigration programmes.

Our main objective in this paper is to analyse the return decisions of Moldovan migrants by investigating to what extent the legal status of a migrant influence their duration of stay in a destination country. This case is indeed of particular interest because in June 2008 the Republic of Moldova was the first country (along with Cape-Verde) to sign up a common declaration for a plan of partnership on labour mobility with the European Union.³ The aim for the European Union and the Republic of Moldova is to continue and intensify discussion and cooperation on the three main sections of the general approach of migration in these nations, namely a better management of legal migrations, fight against irregular migration and strengthening of the relationship between migration and development. The signature of this type of agreements is one among numerous multilateral initiatives that tries to give substance to the notion of "orderly migration" that International Organization for Migration initiated in 2001 (IOM, 2002).

Republic of Moldova has become a country of mass emigration since the mid-1990s. It is estimated that as of mid-2006, approximately one quarter of the economically active population was occupied abroad: one migrant out of four travels illegally to the host country, and one out of three faces illegal residence or employment status (Lucke et al., 2007).⁴ The magnitude of migration phenomenon in Moldova has recently attracted the attention of international institutions and researchers. A large body of empirical research, using several microeconomic survey data collected in Moldova, contributed to the better understanding of determinants of the migration decision, means of migration, and migrants' remittances⁵. However, research on the determinants of return migration and duration of labour migration from Moldova is scarce. A few exceptions are Goerlich and Trebesch (2008) and Pinger (2007).⁶ These

³In December 2007 the European Union Council invited the Commission to start a discussion with the Republic of Moldova in collaboration with the Member States and the Presidency, in order to launch into this plan of partnership for labour mobility. Press release is available at: <http://www.consilium.europa.eu/>. Sainciuc and Cretu (2008) presented the principles of Moldova national migration strategy at the OIM conference « Managing Return Migration » in Geneva in April 2009 (<http://www.iom.int/>).

⁴ The remittances from migrant workers to their families in Moldova amounted to one third of Moldova's gross domestic product (Lucke et al., 2007).

⁵ List of available dataset and surveys on Moldovan migration: Moldovan Labor Force Survey (LFS) since 1999-2008; Moldovan Household Budget Survey (HBS) since 1998-2008; Survey data on remittance recipient households retrieving their money at banks 2007; Survey of members of Savings and Credit Associations 2007; Survey on potential and returning migrants, Moldova 2006; National representative household surveys: "CBS-AXA 2004", "CBS-AXA 2006" and AMM 2003. List of empirical research on Moldovan migration: Avato, 2008; Goerlich and Trebesch, 2008; Mosnneaga 2007; Orozco, 2008; Hagen-Zanker and Siegel, 2007; Lücke et al., 2007; Parsons et al., 2007; Pinger, 2007; Crăciun, 2006; Cuc et al., 2005; AMM-ILO, 2004; Ghencea and Gudumac, 2004; Pyshkina, 2002.

⁶ Goerlich and Trebesch (2008) propose an empirical study of temporary versus permanent migration using "CBS-AXA 2004" dataset. They estimate the migration decision in simple logit model and conclude that the choice of whether to migrate seasonally or for longer periods of time does not appear to be influenced by family characteristics, but only by the seasonal community networks. Pinger's (2007) empirical study concerns the determinants of temporary and permanent migration using "CBS-AXA 2006" dataset, the same that we use in this paper. Pinger uses a standard probit model for the migration decision and shows that return is determined by the economic conditions at home and abroad as well as by the legal status in the host country.

studies suggest that temporary migrants constitute a significant and growing portion of Moldovans migrants. Accordingly to Goerlich and Trebesch (2008) in 2004 more than 40 per cent of Moldova's international migrants were temporary, whereas Pinger (2007) suggests in 2006 that number was close to 70 per cent. However, today very little is known about who returns in Moldova, when, and why. Therefore, a clear understanding of the determinants of trip duration is crucial: to appreciate the link between return migration and development in migrants' origin countries; to design more efficient migration policies, coherent with other development policies both of Moldovan state and of destination countries of Moldovan migration; and to estimate future supply of Moldovan international migrant labour.

Our second contribution regards the methodology and the data that we use. To test our proposition, we combine two datasets: a national household dataset on migration in the Republic of Moldova collected in 2006 covering all 35 districts in the country; and a set of indicators of regional development, constructed with data provided by the National Bureau of Statistics of Moldova. Our empirical analysis of return migration decisions is based on a duration model. As Hill (1987) and Dustmann (2003) notice human capital based theories imply that assimilation in the host country and migration decisions are correlated over time. It is therefore more appropriate to base the analysis of migration on a dynamic model that takes the timing of migration trips into account. Hence, the best way to investigate the duration and the likelihood of an occurring event is to use time-to-event data. Still, the number of empirical analyses of return migration decisions based on a duration model is limited (e.g., Lindstrom, 1996; Detang-Dessendre and Molho, 1999; Longva, 2001; Dustmann and Kirchkamp, 2002; Constant and Zimmermann, 2003; Carrión-Flores, 2006; Bijwaard, 2008) due to the lack of reliable large-scale quantitative data.

We estimate the average duration of migration stay using a Weibull function and correct for unobserved household heterogeneity with a Gamma distribution. The present paper is therefore original on two aspects. Firstly, our work is one of the few that studies the influence of the legal status and economic characteristics of origin areas on trip duration. Secondly, it uses a multivariate continuous time survival model taking into account unobserved heterogeneity.

The paper is organized as follows. Section 2 provides a short overview on the related literature. Section 3 describes the data and portrays differences between censored and return migrants in terms of personal, household and community characteristics. Section 4 employs a duration model (Weibull) to analyze determinants of migration duration and discusses our empirical findings. Section 5 concludes.

2. Optimal Duration of Migration: Review of Related Studies and Hypotheses

Why do migrants return home? There are two main approaches in the economic literature to answer this question. The neo-classical approach argues that the migrant returns if he fails to maximize his expected earnings abroad or if he is forced to come back.⁷ The new economics of labour

⁷ The neoclassical economics of migration views migrants as individuals who maximise not only their earnings but also the duration of their stay abroad to achieve permanent settlement and family reunification. Within this neoclassical framework migrants do not come back, as long as the differential of expected wages between origin and foreign country is positive, or if they are forced to return; return migration (and therefore the duration of stay abroad) is whether constrained or is indicative of the migration plan failure. These standard theoretical models (Sjaastad, 1962; Todaro, 1969; Harris and Todaro, 1970) are considered today as inadequate to explain return migration (Sopemi-OECD, 2008).

migration (NELM) “views return migration as the logical outcome of a “calculated strategy”, defined at the level of the migrant’s household, and resulting from the successful achievement of goals or target” Cassarino (2004)⁸. In this paper we support and intend to test the basic arguments developed in NELM framework that take into account the micro and macro dimensions of return migration (e.g. structuralism, transnationalism, social network theory). In this context (Table 1) the structure of incentives that influence migrant’s decisions on the length of stay consists of a mixture of individual, households and regional characteristics of both origin and destination countries

A first group of papers assume a pure preference for the home country (or preference for consumption at home rather than abroad). Inspired by descriptive literature of 1970s on migrants from Mexico to the USA, Hill (1987) argues that optimally, migrants would prefer to spend as little time as possible abroad in order to accumulate enough savings to reach a particular level of net lifetime income. Hill makes the assumption that migrants have an “exogenous” preference for their origin country: several case studies indicate that Mexican migrants “return home because of the presence of family members in Mexico, a dislike of the U.S. climate, and a preference for Mexican culture and life-style”. In the same vein, Dustmann and Kirchkamp (2001) explain preference for home country by the attachment to the family. Attachments to family and institutions in the home country lower the psychological and monetary cost of the return, but they raise the costs of staying abroad. Djajic and Milbourne (1988) propose a slightly different interpretation of the home preference⁹. In their model migrants with “a stronger preference for consumption in their homeland than they do for consumption abroad” shorten their stay abroad. Hence, our first hypothesis is the following:

Hypothesis 1a: Migrants with stronger family ties have shorter duration spells.

Considering that, in Moldova case, there is considerable regional variation with respect to the both social and infrastructure development, we have to complete hypothesis 1a. As Berg suggests (1961) when describing the temporary migration in Africa, the level of “modernity” of the origin community can affect the duration of migration. To capture this effect, in the analysis of Mexican immigrants’ trip duration in the US, Reys (2001) introduces an aggregated index for community services (having electric, water, public lighting, telephone service, and a paved road from the community to the highway at the time of migration)¹⁰. This variable increases the time hazard of return.

Hypothesis 1b: Migrants reduce their migration duration as a response to higher level of regional social and infrastructure development of the home community’s region.

Target income theory provides a second type of explanation for the return: if the migrants pursue a savings or income target, the faster they reach it, the sooner they come back (Hill, 1987; Lindström, 1996). In this framework two elements explain the duration of migration: wage rates in origin and

⁸ As Cassarino (2004) noted, “Just as there exist several demand-pull and supply-push factors that account for the dynamics of international migration, there also exist various micro and macro factors that motivate return and shape its configuration, under specific circumstances.” For a comprehensive survey on the return migration see Cassarino, 2004; Sopemi-OECD 2008.

⁹ They build a theoretical model based mainly on observations of guest- workers in West Germany in 1960s and 1970s.

¹⁰ In their analysis of internal and US migration of Mexicans, Lindstrom and Lauster (2001) use an index of marginalization constructed (from census data on population size, literacy levels, housing conditions, and access to services such as water and electricity) in order to control for basic development at the community-level.

destination areas, and the costs of migration. Dustmann (2003) analyses temporary migration in a dynamic context and shows that the optimal migration duration may decrease if the wage differential grows larger. Using micro data for Germany, he provides empirical test of this hypothesis. Dustmann and Kirchkamp (2001) propose the same kind of hypothesis. We then conjecture that:

Hypothesis 2a: Migrants reduce their migration duration as a response to higher wages differences in the destination and home countries.

Lindström (1996) shows that migration duration increases with higher origin investment opportunities, as it takes more time for the migrant to reach the target savings¹¹. Lindström suggests that immigrants from communities with better economic opportunities stay longer in the United States than those from communities with poor economic conditions because they are saving more money to invest home. Migrants coming from less developed areas have lower income and savings targets, so that they come back sooner. The economic development of the home region can also be thought as a proxy for the purchasing power of the return migrant. Stark et al. (1997) demonstrate that duration increases as purchasing power differential between the host and home country declines. These two types of arguments lead to a positive relationship between dynamism of the origin region of the migrant and duration of stay abroad.

Hypothesis 2b: Migrants reduce their migration duration as a response to lower level of regional economic development in the home community.

Hill (1987) focuses on the impact of migration costs on the number of trips and on total time spent abroad. The costs of migrating are altered by the distance between countries and by the immigration policy of the destination country. If the number of trips unambiguously declines with higher migration costs, the effect on total time spent abroad is not clear-cut as the duration of each journey increases, but the number of trips reduces. Putting all things together higher costs increases the mean duration of stay. In Djajic and Milbourne (1988) and Lindström (1996) the duration of migration decreases also if the costs of migration decline. The evolution of border control policies in the 2000s, generating higher costs for potential migrants, drives Magris and Russo (2003, 2009) to conclude that the more restrictive the destination countries migration policies, the longer the optimal duration of migration. This negative effect of restrictive policies on return migration is even higher for unskilled workers. This theoretical result can explain the Reichert and Massey (1984) finding on Mexican migrants in United States. They observe indeed a shorter average duration of stay for legal migrants compared to their illegal counterparts. Reyes (2004) insists on the fact that more stringent border enforcement may also affect trip duration: "As the difficulty and cost of crossing increases, the risk of not being able to re-enter the United States also increases. This risk may encourage immigrants to remain in the United States rather than move back and forth, making their migration more permanent (Massey and Lian, 1989). Also, with higher migration cost it takes longer for immigrants to achieve their targeted level of income, increasing the amount of time they have to stay in the United States."

¹¹ The same results for the Mexican case are presented by Reyes (2001): "immigrants from communities with better economic opportunities stay longer in the United States than those from communities with poor economic conditions".

Other empirical studies like Pinger (2007) on Moldova and Lindström (1996) on Mexico conversely conclude to an increase in time spent abroad with having legal documents in the host country. To be more specific about this result Lindström highlights that legal status could be more an indicator of the strength of existing social and economic ties in the destination country than a measure of lower migration costs. Finally, the literature considers the importance of networks on the migrant decisions (Massey, 1990). Bauer and Gang (1998) find that the access to social and informational networks shortens the duration of foreign trips, by allowing migrants to diminish the implicit migration costs¹².

Hypothesis 3: Migrants with higher migration costs have longer duration spells.

To our knowledge, all these hypotheses have never been tested in a duration model using data on Moldovan migrants. Therefore, one of our contributions regarding the analysis of the migrants from Moldova, and more broadly the analysis of length of migration, is the combination of two types of data: micro economic dataset including the legal status of migrants and regional macro economic data.

¹² In the Mexican case, Zahniser (1999) shows that the prior migration experience of close relatives and the presence of family and friends in the United States reduce migration costs and provide vital information about the migration process.

Table 1.

Selection of theoretical and the empirical research proposing a set of variables expected to influence the average trip duration of migration.

Reference	Research Question	Key Concepts/ Keywords	Sample & Method	Key Variables/ Key Predictions / Findings
Neoclassical economics of migration	The neoclassical economics of migration views migrants as individuals who maximise not only their earnings but also the duration of their stay abroad to achieve permanent settlement and family reunification. In this framework of analysis, return cannot but be motivated by a failed migration experience, in terms of expected earnings, employment and duration. (Cassarino, 2004).			
New Economics of Labour Migration	The duration of stay abroad is calculated with reference to the needs of the household, in terms of insurance, purchasing power and savings. Once such needs are fulfilled, return migration occurs. (Cassarino, 2004). The NELM approach to return migration goes "beyond a response to negative wage differential" (Stark 1996)			
Hill, 1987	What explains the temporary and repetitive nature of international labour movements?	Life cycle models; Duration; Number of migratory trips.	Theoretical model developed	The optimal migration duration increase with : - lower wages in host country - higher migration costs
Djajic and Milbourne, 1988	What determines the optimal migration duration?	Life cycle models; two-period model Duration;	Theoretical model developed	The optimal migration duration increase with : - lower utility from home consumption - higher migration costs The increase of wages in home or destination countries has an ambiguous effect on duration.
Lindstrom, 1996	How the economic characteristics of origin area influence duration trips?		Mexican migrants to United States	The optimal migration duration increase with : - lower wages in host country - higher migration costs - higher wage and investment opportunities in origin country
Stark et al., 1997	Is the higher purchasing power of savings (generated from work abroad) at home than abroad a motive for return migration?	Life cycle models; distinction between education and ability; International migration; Qualitative choice models	Theoretical model developed	The optimal migration duration increase with : - smaller purchasing power differential at home and abroad - lower wages in host country
Dustmann and Kirchkamp, 2001	What determines the optimal migration duration? What are the activities migrants choose after a return?	Life cycle models; International migration; Qualitative choice models	Theoretical model developed Survey data set which records activities of returned migrants Turkish migrants in Germany Models are estimated by maximum likelihood	The optimal migration duration depends on : - the age at entry (\uparrow duration), - wages in home country, approximated by the level of education before emigration, which may reflect the relative productivity advantage of the better educated (\downarrow duration) - wages in host country, approximated by immigrant's occupational class upon arrival to the host country (\downarrow duration) - preference parameters approximated by an indicator variable whether the migrant has been married before emigration (\downarrow duration), and by a measure for the number of children born before migration (\uparrow duration).
Magris and Russo, 2009	What are the impacts of selective migration policies on human capital accumulation and optimal migration duration?	Life cycle models; infinite horizon model; Effect of a macroeconomic shock in the origin country	Theoretical model developed Numerical examples	Border closure tends to increase the time spent abroad Macroeconomic risk is important when deciding whether or not to return.

3. Data description

3.1. Data sources

For this analysis we use two datasets that allow us to take into account the micro and macro dimensions of return migration in Moldova: one is a national representative household survey (CBS-AXA 2006) and the second one is a set of indicators of regional development in Moldova provided by Roscovan and Galler (2006). With these data, we can examine return rates for 2006 and incorporate individual, household and community characteristics to the model of migration duration of Moldovan migrants.

The national representative household survey was conducted in Moldova in July and August of 2006 by CBS-AXA commissioned by the International Organization for Migration (IOM), with the support of the Swedish International Development Agency (SIDA). The purpose of the survey was to study the impact of migration and remittances on Moldovan households¹³. The data were collected in all 35 Moldovan regions, so-called "administrative-territorial units". There were 3940 households randomly selected in total, and this generated a total sample of 14068 people, including 4481 (31.85%), who had a migration experiences abroad. We define migrants as those who worked and lived away from home at least one month. Return migrants are defined as those who returned home at the moment of the survey. The sample is restricted to people aged 16-64 who answer to the questions relative to the migration duration and to the legal status. A sample of 948 migrants with valid data points is used in the current analysis to model migration length.

In order to measure the socio-economic conditions in the origin communities we use three synthetic indicators suggested by Roscovan and Galler (2006): economic development index (EDI), social development index (SDI) and infrastructure development index (IDI).¹⁴ As suggests the National Human development Report of 2006 (UNDP, 2006), the economic activity in the Republic of Moldova was extremely polarised since 1997. The geographically unbalanced economic growth had an impact on many dimensions of human development. Roscovan and Galler (2006) classify the 35 administrative-territorial units according to level of development (Table 2) : 1) developed regions with restructuring potential, or regions that are the most economically dynamic and attractive for investments; 2) assisted regions that need development support for the promotion of growth and 3) depressed regions, or less developed regions.

¹³ For more details about the survey cf. Lücke and al (2007).

¹⁴ These indicators are elaborated for the needs of the National Centre for Human Settlements "Habitat Moldova Centre". The Center has been established in December 2005 in the basis of the UNDP "Mesmerizing Moldova" Project and activates as UN-Habitat and Agency for Regional Development partner in the Republic of Moldova (<http://www.habitatmoldova.org/>). For more information on methodology and interpretation of the indexes, see Roscovan and Galer, 2006; Galer, 2004. The economic development index combines normalized measures of: 1) average nominal monthly salary per employee; 2) volume of industrial and agricultural production per inhabitant; 3) volume of services per inhabitant; 4) number of small and medium enterprises per inhabitant; 5) rate of urbanization. The social development index combines normalized measures of: 1) number of physicians per 10000 inhabitant, 2) number of beds in hospitals per 10000 inhabitant; 3) number of deaths of infants (one year of age or younger) per 1000 live births; 4) number of students per teacher. The infrastructure development index combines normalized measures of: 1) number of cars in private ownership of citizens (per 1000 inhabitants); 2) dwelling stock per inhabitant; 3) passenger transportation with public; 4) number of telephones per 100 inhabitant; 5) length of public roads per inhabitant; 6) length of water pipe per inhabitant; 7) sewerage system length per inhabitant.

Table 2.

Distribution of the Moldovan administrative-territorial units by level of development for each synthetic indicators, 2004.

<i>Level of development **</i>	<i>Economic development index*</i>		<i>Social development index*</i>		<i>Infrastructure Index*</i>	
	Freq.	%	Freq.	%	Freq.	%
developed regions	11	31.43	8	22.86	8	22.86
assisted regions	17	48.57	20	57.14	20	57.14
depressed regions	7	20.00	7	20.00	7	20.00
All Regions	35	100.00	35	100.00	35	100.00

Source : Roscovan and Galler (2006). Note: *The zero value of each index corresponds to the average national level of development; a positive (negative) value of each index corresponds to a region with higher (lower) level of development, compared to the mean national level Roscovan and Galler (2006). The highest possible value indicates the maximum development level which corresponds to Chisinau region (the capital of Moldova) and Balti region.

** A region is considered as developed in one of the aspects if the value of corresponding index is higher than 0.5; it is considered as assisted if the index is (-0.5; 0.5); and it is considered as depressed if the index is (<-0.5).

3.2. Dependent variable

The average duration of the migration spells is the dependent variable in this study. Among 948 migrants (Table 3), 72 percent are migrants with unfinished time-span spells (censored migrants) and 28 percent are return migrants.¹⁵

Table 3.

Length of Stay of Moldova migrants (duration in months).

	<i>All</i>		<i>Legal experience</i>		<i>Illegal experience</i>	
	Mean	SD	Mean	SD	Mean	SD
<i>Duration</i>	22.15	40.57	19.89	27.35	22.92	44.15
return migrants	8.95	14.72	5.98	5.99	9.36	11.36
censored migrants	32.05	50.91	29.97	50.77	23.33	30.06
<i>Median duration</i>	6		6		10	
return migrants	4		3		11	
censored migrants	10		6		12	
<i>Number (%) of Observations</i>						
return migrants	267 (28.16)		208 (29.38)		59 (24.58)	
censored migrants	681 (71.84)		500 (70.62)		181 (75.42)	
<i>Duration</i>						
less than 12 months	695 (73.31)		537 (75.85)		158 (65.83)	
13 et 24 months	69 (07.28)		36 (05.08)		33 (13.75)	
more than 24 months	184 (19.41)		135 (19.07)		49 (20.42)	
All Migrants : Number (%) of obs.	948 (100)		708 (74.68)		240 (25.32)	

Source: CBS-AXA 2006 dataset and authors' calculations.

If we divide the sample of movers into categories based on their length of stay abroad (Table 3), we find that 67 percent of those who had ever migrated illegally and 75 percent of the others were abroad for less than one year. For those who were abroad less than two years (and more than one year) the

¹⁵ For migrants who did not report duration spells, we constructed this variable using available information about each individual's time of migration, return and number of spells.

proportion of persons with illegal experience is larger (13%) than the proportion of people with only legal experiences (5%). However these descriptive statistics are insufficient to shed light on the relation between legal status and duration: they include both people who returned in Moldova and migrants who have been abroad at the time of the survey. The estimation of a duration model in the next section will indeed correct for this truncation bias and will allow us to conclude on the effect of the legal status and other covariates on the duration of stay abroad.

3.3. Covariates

Table 4 gives the definitions and basic descriptive statistics of the variables used in the analysis.

A set of household characteristics captures family attachment and allows us to test Hypothesis 1a: proportion of dependents and position of the migrant in the family. On average, dependents represent 20% of the household's members. One out of three migrants is a household' head and one out of five migrants a household head's spouse.

Two indicators relative to social and infrastructure development (SDI and IDI) presented also in table 2 are used to test Hypothesis 1b. We expect shorter duration for migrants from more modern regions.

We need wages in the host and home countries to test Hypothesis 2a. Unfortunately, we do not have these variables in the dataset. We observe however a number of factors that may reflect the relative productivity advantage of a particular migrant. The gender (38% are women), the level of education before emigration and the age (the migrant's medium-age is 35.65) should be positively related to his earnings potential. On the contrary, migrants who do not know the destination country language are supposed to have a lower relative wage abroad. In our sample, even if the majority of migrants (nearly 75%) have low level of education (primary or college), more than 87% know the language of the destination country. We also expect that migrants having a job in a European Union country (8%) have a relative higher wage abroad than a migrant working in a non EU country. Migrants working in the Commonwealth of Independent States (36%) are supposed to have the lowest relative wages. Migrants working in an urban location (44%) in the destination country are as well supposed to have higher earnings abroad. As Lindström suggests (1996), compared with the agricultural sector, urban labour markets provide migrants with a greater variety of jobs.

Regarding potential proxies for the salary at home, we introduce the level of regional economic development (the economic development index, EDI) and a number of community characteristics. We expect migrants from more developed and dynamic regions to stay longer abroad. Their expected wage differential is smaller and their target income is higher. While 30% of migrants come from an urban area, a minority of them (11%) is from a city with more than 50 000 inhabitants. 46% come from the Centre region of Moldova, which is richer than the South. Therefore we anticipate positive effects of these variables on the duration of migration.

Table 4.
Definitions of variables and their descriptive statistics.

<i>Variable</i>	<i>Definition</i>	<i>Mean</i>	<i>SD</i>
Individual Characteristics			
Gender	1 if the migrant is a woman, else 0	0.38	0.49
Age	Age of the migrants in 2006	35.65	9.89
Primary	1 if the migrant has primary education, else 0	0.36	0.48
Tertiary	1 if the migrant has tertiary or college education, else 0	0.39	0.49
University	1 if the migrant has university education, else 0	0.19	0.40
Post-university	1 if the migrant has post-university education, else 0	0.05	0.23
Romanian	1 if the migrant has double Romanian citizenship , else 0	0.03	0.16
Household Characteristics			
Dependents	% of dependents in the household	19.74	0.20
Hh head	1 if the migrant is the household head, else 0	0.36	0.48
Hh hd's spouse	1 if the migrant is the household head's spouse, else 0	0.17	0.38
Hh hd's child	1 if the migrant is the household head's child, else 0	0.16	0.36
HH wealth	1 if the household subjective perception of wealth was deteriorated between 1998 and 2006, else 0	0.35	0.48
Social Capital			
Other migrants	Number of other migrants in the household	1.94	1.60
Network	1 if the migrant received help at the destination, else 0	0.62	0.49
Destination Country Characteristics			
EU	1 if the migrant is working in EU country ¹⁶ , else 0	0.08	0.27
CIS	1 if the migrant is working in CIS ¹⁷ , else 0	0.36	0.48
Other	1 if the migrant is working in other country, else 0	0.36	0.48
Urban destination	1 if the migrant is working in a urban location, else 0	0.44	0.50
Home Country : Community and Regional Characteristics			
Urban origin	1 if the migrant is coming from a urban location, else 0	0.30	0.46
Locality size	1 if the migrant is coming from a locality with more than 50000 inhabitants, else 0	0.11	0.31
North	1 if the migrant is coming from Northern region, else 0	0.29	0.45
Center	1 if the migrant is coming from Central region, else 0	0.46	0.50
South	1 if the migrant is coming from Southern region, else 0	0.26	0.44
SDI	Social development index (min -1.63 and max 5)	0.63	1.83
IDI	Infrastructure development index (min -1.59 and max 1.3)	0.16	0.68
EDI	Economic development index (min -1.06 and max 2)	0.29	0.92
Migration experience			
Illegal exp.	1 if the migrant had illegal migration experience, else 0	0.25	0.44
Illegal entry	1 if the migrant enter illegally in the dest. country, else 0	0.21	0.41
Illegal f. job	1 if the migrant had an illegal first job in the dest. country, else 0	0.26	0.44
Language	1 if the migrant did not know the language of the destination country before migration, else 0	0.13	0.34
Observations	Observations	948.00	
Households	Households	766.00	

¹⁶ EU countries in the CBS-AXA survey include Austria, Belgium, the Czech Republic, France, Germany, Greece, Ireland, Italy, Poland, Portugal, Slovenia, Spain, United Kingdom.

¹⁷ CIS countries in the CBS-AXA survey include Russia, Belarus, Ukraine, Kazakhstan, and Azerbaijan.

At last, we exploit two categories of proxy variables to describe the migration costs: the legal status and the social capital. In the sample a great majority (75%) of immigrants have legal experience. Only 21% of them declare that they had entered illegally the destination country and 26% of them assert having had an illegal first job. Table 3 shows that migrants with illegal experiences have a longer duration. We also introduce a dummy variable that accounts for the Romanian double citizenship. In fact, Moldovan migrants holding a Romanian passport have visa-free travel rights to the EU for three months at a time. They represent 3% of our sample and the majority of them work in non-EU countries. By contrast, the travel to CIS countries is generally visa-free and the frequency of illegal migration to this region is very low. Only 20% of migrants working in CIS countries declare to have had an illegal experience, whereas the proportion of migrants with illegal experience in EU countries reaches 50 percent.

In the CBS-AXA 2006 survey, the migrants are asked how much money was spent in total for migrating. Another question asks if the migrant needed to borrow money in order to pay the trip to the destination country. We then have a direct measure of the migration costs in the dataset. Unfortunately, these questions are not well informed for the subsample of migrants for whom we have the duration of stay and the status (653 migrants answer questions on mean duration of stay, legal status and costs of migration). Hence the econometric estimation strategy proceeds in two steps. In a first step we run regressions on the subsample for which we have durations and legal status (948 individuals) and in a second step we complete the story with estimations on the sub-subsample of migrants for whom we have in addition costs and borrowing (653 individuals). Yet, some descriptive statistics presented in Table 5 give us a broad picture of the link between legal status, costs of migration and the need to borrow.

Table 5.
Summary statistics on costs of migration, legal status and the need to borrow

	<i>Illegal migrants</i>	<i>Legal migrants</i>	<i>All</i>
Borrowers	73	128	201
Mean costs of migration US \$	1669	958	1216
Median costs of migration US \$	1500	150	300
Standard deviation	1480	1395	1463
Non borrowers	110	342	452
Mean costs of migration US \$	871	476	572
Median costs of migration US \$	106	74	74
Standard deviation	1315	1098	1165
All	183	470	653
Mean costs of migration US \$	1190	607	771
Median costs of migration US \$	280	80	100
Standard deviation	1434	1204	1298

Two main results emerge from this table. First, illegal migrants face costs of migration twice as high as legal migrants (nearly 1200 US \$ for illegal migrants and 600 US \$ for legal migrants). Second, a larger proportion of irregular migrants must borrow to pay the trip to the destination country (almost 40% of illegal migrants are borrowers compared to only 27% for legal migrants). The combination of these facts implies that irregular migrants need to repay more for migration than do legal migrants.

A proposition is therefore that irregular migrants might have longer migration spells because they face higher costs of migration. We test this hypothesis in the second part of our econometric analysis presented in the next section.

4. Analysis

We estimate mean duration per stay for all migrants using a survival analysis. We employ duration models as they take account of the presence of censored observations. For that the duration models suppose a baseline hazard function -the hazard when all covariates are zero- and then estimate the effect of covariates on this hazard. That is, the intercept term serves to scale the baseline hazard. Most of parametric survival distributions can be specified in accelerated failure time, corresponding to a linear function between the natural logarithm of the survival time and the covariates, yielding the following linear model:

$$\ln t = \beta x + z, \text{ or } t = \mu \exp(z)$$

Where t is the survival time, x is a vector of regression coefficients, z is the error with density $f()$ and $\mu = \exp(\beta x)$.

The distributional form of the error term determines the regression model. If we let $f()$ be the normal density, the lognormal regression model is obtained. Similarly, by letting $f()$ be the logistic density, the log-logistic regression is obtained. Setting $f()$ equal to the extreme-value density yields the exponential and the Weibull regression models.

The effect of an accelerated failure time model is to change the time scale by a factor of $\mu = \exp(\beta x)$. Depending on whether this factor is greater or less than 1, time is either accelerated or

decelerated. Table 5 presents the estimation of time ratios ($\exp(\beta) = \frac{t_i}{t_j}$) as their interpretation is straightforward¹⁸.

Moreover, we suspect unobserved heterogeneity to be present in our sample. In this case, the population survivor will tend to begin increasing past a certain point, regardless of the shape of the individual survivor. This is due to the frailty effect. As time goes by, the most returning individuals will fail leaving a more homogeneous population comprising only those who have fewer tendencies to

¹⁸ Quoting Jenkins (2005), note that: $\beta_k = \frac{\partial \ln t}{\partial X_k}$ with $t = \mu \exp(z)$. Therefore, if two persons i and j are identical in all

but the k^{th} characteristics, i.e $X_{im}=X_{jm}$ for all $m \in \{1, \dots, K\}$ and they have the same z , $\frac{t_i}{t_j} = \exp[\beta_k (X_{ik} - X_{jk})]$. If in

addition $X_{ik}-X_{jk}=1$, i.e there is a one unit change in X_k ceteris paribus, then $\exp(\beta) = \frac{t_i}{t_j}$.

come back. The way to correct for such heterogeneity is to introduce, at the observation or group of observations levels, an unobservable multiplicative effect, α , on the hazard function, such that:

$$S(t|\alpha) = \{S(t)\}^\alpha$$

Where $S(t)$ is the survivor function. Since α is unobservable it is necessary to suppose that it follows a parametric distribution. Two functions are commonly used: the Gamma and the inverse Gaussian.

In the case of a Gamma distribution for the frailty, the survival is therefore:

$$S_\theta(t) = [1 - \theta \ln\{S(t)\}]^{-1/\theta}$$

With the condition: $\lim_{\theta \rightarrow 0} S(t)$, and thus the frailty model reduces to $S(t)$ when there is no heterogeneity present.

The first choice we have to make is the choice of the duration function. Table 6 presents estimates of the model with all available distributions (Exponential, Weibull, Gompertz, Lognormal and Loglogistic) and a frailty at the individual and household levels, using Gamma and inverse Gaussian functions. To discriminate in favour of the most performing model, we calculate the Akaike and Bayesian criteria. Here are the formulas used:

$$AIC = -2 \ln(\text{likelihood}) + 2k$$

$$BIC = -2 \ln(\text{likelihood}) + \ln(N)k$$

Where k is the model degrees of freedom and N is the number of observations.

The model performs better the less the BIC and AIC values. Both criteria conclude in favour of a Weibull model with a Gamma distribution for household unobserved heterogeneity.

Table 6.

Comparison of models for migration duration: Moldovan migrants, 2006

	<i>Inverse Gauss distribution</i>		<i>Gamma distribution</i>	
	AIC	BIC	AIC	BIC
Models with correction for unobserved household heterogeneity				
Weibull	1291.364	1383.596	1258.509	1350.741
Exponential	1336.446	1423.825	1332.912	1420.29
Loglogistic	1269.703	1361.936	1267.69	1359.923
Lognormal	1304.895	1397.128	1302.649	1394.882
Gompertz	1318.324	1410.557	1318.195	1410.427
Cox	-----a	-----a	3143.015	3220.684
Models with correction for unobserved individual heterogeneity				
Weibull	-----a	-----a	1293.691	1385.924
Exponential	1345.615	1432.994	1343.481	1430.859
Loglogistic	1290.577	1382.81	1288.924	1381.157
Lognormal	1321.687	1413.92	1321.386	1413.618
Gompertz	1318.656	1410.889	1318.656	1410.889
Cox	-----a	-----a	-----a	-----a

^a Model unable to achieve convergence

Table 7.Time ratios estimates for duration regression models using Weibull distribution with Gamma correction for unobserved household heterogeneity.¹⁹

	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>		<i>Model 7</i>	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
Individual Characteristics														
Gender	1.047	0.122												
Age	1.125**	0.042	1.134**	0.040	1.126**	0.039	1.128***	0.040	1.128***	0.044	1.113***	0.043	1.120***	0.044
Age squared	0.999***	0.000	0.999***	0.000	0.999***	0.000	0.999***	0.000	0.999***	0.001	0.999**	0.001	0.999**	0.001
Tertiary	1.040	0.122												
University	0.901	0.146												
Post-university	1.123	0.282												
Romanian	2.491**	1.148	2.371*	1.099	2.428*	1.126	2.310*	1.077	2.153*	0.999	2.116*	0.944	1.999	0.876
Household Characteristics														
Dependents	0.540**	0.143	0.560**	0.145	0.564**	0.142	0.542**	0.136	0.667	0.198	0.769	0.226	0.793	0.232
Hh head	0.039***	0.010	0.034**	0.007	0.034***	0.007	0.041***	0.009	0.051***	0.013	0.069***	0.022	0.072***	0.023
Hh hd's spouse	0.043***	0.010	0.042**	0.009	0.041***	0.009	0.048***	0.011	0.065***	0.016	0.081***	0.025	0.084***	0.026
Hh hd's child	0.067***	0.015	0.066*	0.015	0.066***	0.015	0.076***	0.018	0.113***	0.030	0.136***	0.043	0.149***	0.049
Hh wealth	1.269**	0.148	1.280**	0.146	1.301**	0.145	1.317**	0.146	1.696***	0.221	1.615***	0.209	1.629***	0.211
Social Capital														
Other migrants	1.040	0.056												
Network	1.116	0.118												
Destination Country Characteristics														
EU	1.737**	0.489	1.957***	0.419	2.016***	0.430	1.961***	0.416	2.653***	0.609	1.848**	0.451	1.940***	0.476
CIS	0.810	0.186												
Urban destination	0.908	0.200												
Home Country : Community and Regional Characteristics														
Urban origin	1.308*	0.186	1.309*	0.184	1.309*	0.180	1.318**	0.181	1.140	0.169	1.047	0.156	1.043	0.157
Locality size	1.743*	0.582	1.761*	0.572	1.726*	0.557	1.629	0.539	1.580	0.527	1.572	0.517	1.609	0.530
Centre	1.022	0.137												
South	0.667**	0.112	0.692***	0.090	0.677***	0.087	0.690***	0.087	0.738**	0.101	0.738**	0.099	0.729**	0.098

¹⁹ $\beta = \frac{T_i}{T_j}$

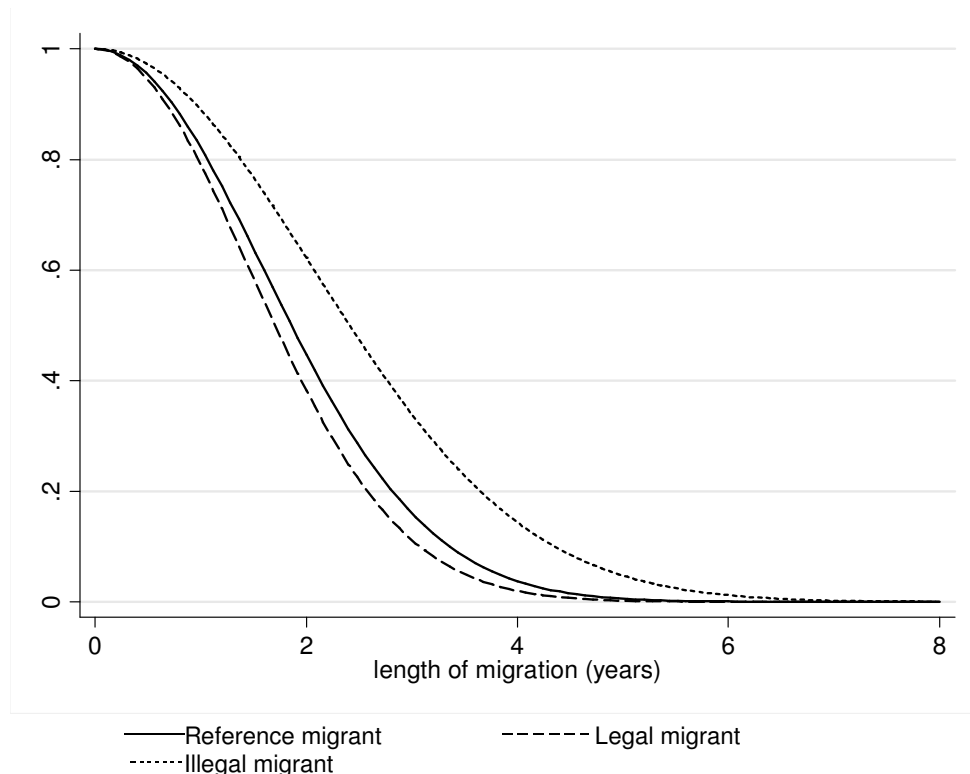
	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>		<i>Model 4</i>		<i>Model 5</i>		<i>Model 6</i>		<i>Model 7</i>	
	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE	β	SE
SDI	0.831***	0.059	0.829***	0.057	0.828***	0.057	0.813***	0.058	0.873**	0.061	0.865**	0.059	0.869**	0.059
EDI	1.252	0.182	1.223*	0.127	1.225**	0.125	1.248**	0.126	1.255**	0.137	1.269**	0.137	1.261**	0.136
IDI	0.964	0.162												
Migration experience														
Illegal exp.	1.432***	0.191	1.415***	0.185					1.308**	0.176	1.210	0.164	1.194	0.161
Illegal entry					1.341**	0.180								
Illegal f. job							1.055	0.123						
Language	1.361*	0.258	1.458**	0.270	1.527**	0.274	1.672***	0.290	1.252	0.233	1.091	0.207	1.096	0.211
Costs of migration											1.000***	0.000	1.000**	0.000
Borrower											0.876	0.101	0.776*	0.102
Costs*borrower													1.000*	0.000
P	2.011	0.501	2.030	0.154	2.051	0.150	2.136	0.164	2.039	0.201	2.123	0.238	2.168	0.260
Theta	2.480	0.501	2.612	0.501	2.616	0.475	2.839	0.538	2.032	0.544	2.114	0.660	2.240	0.727
Negative loglikelihood	607.850		610.254		619.386		616.006		447.48		437.54		435.80	
Number of obs.	948		948		964		945		653		653		653	
Number of households	766		766		775		761		550		550		550	
Number of failures (%)	267 (34.85)		267 (34.85)		273 (35.22)		275 (36.14)		210 (32.2)		210 (32.2)		210 (32.2)	

* p<0.01 ; ** p<0.005 ; *** p<0.001

Model 1 contains all potential influencing covariates. Model 2 that includes only the significant variables is used to generate the following predictions and conclusions on the broad sample.

The estimated p value shows a positive dependency of return probability with duration²⁰. For example a migrant who already spent a year abroad has twice a hazard of return each month than a migrant who have been abroad for only six months²¹. Figure 1 shows that a typical Moldovan migrant has almost no chance to spend more than six years in the host country.

Figure 1.
Weibull survival regression with Gamma household heterogeneity



In Figure 1 the solid line (derived by centring all of the continuous and dummy covariates on their respective means) represents the length of migration experienced by a typical migrant. The survival decreases rapidly in the first three years and then flattens out abruptly around four years to reach roughly zero thereafter. Hence, the predicted model concludes that a very small proportion of Moldovan migrants should stay abroad after four years of migration, even if the maximal observed duration in our sample is twenty-seven years. The general predicted mean of migration duration is about five years and height months. Of course, this is true for the sample as a whole, but some differences appear among groups as illustrated in Figure 1 and Table 7.

²⁰ The Weibull hazard is $h(t) = p \exp(\beta x) t^{p-1}$. Thus the return probability increases with time spent abroad since $p > 1$.

²¹ The properties of the Weibull distribution generate a ratio of hazard of return between y and x months equal to $(y/x)^{p-1}$. Estimation of model 2 concludes for a ratio $(12/6)^{1.03} = 2.03$ between the probability of coming back after one year and six months of migration.

In Figure 1 the dashed line above the survival of the typical migrant is the estimated survival for irregular migrants. The graph makes clear that being illegal in the foreign country increases the duration of the optimal stay. Although legal documents increase the ease of cross-border migration, the acquisition of legal status is also associated with a higher hazard of return to Moldova.

Table 8.

Predicted mean and median duration at covariates sample means for return and censored and legal and illegal migrants

<i>All</i>	<i>All</i>	<i>Return migrants</i>	<i>Censored migrants</i>
Nb. Obs.	948	267	681
Predicted mean duration (months)	68.12	14.62	89.09
Predicted median duration(months)	10.46	6.47	15.97
Legal migrants			
Nb. Obs.	708	208	500
Predicted mean duration (months)	59.87	13.87	79.01
Predicted median duration (months)	8.79	6.10	12.85
Illegal migrants			
Nb. Obs.	240	59	181
Predicted mean duration (months)	92.44	17.26	116.94
Predicted median duration (months)	17.01	7.87	23.89

An interesting outcome of duration models is the prediction of potential length of migration for censored observations (64% of migrants in model 2). According to Table 3, the uncompleted mean migration duration is 32 months (that is a little bit more than 2 years and a half). Model 2 predicts that the real duration for this subpopulation should be seven years and a half. It means that Moldovan non returnees in 2006 should potentially spend six more years abroad. The contrast is also striking between illegal and legal migrants. As the first group has a predicted mean duration of nearly five years, those irregular are about to spend seven years and height months abroad. If legal status is a proxy for more expensive migration costs it can explain this result. We will test this hypothesis in the second part of the econometric analysis (Models 5 to 7 of Table 7). Let's now turn to the interpretation of the results on the whole sample.

Table 7 presents time ratios of the effects of covariates on the duration. The first model rejects the influence of some potential factors. Individual characteristics like gender and education level do not exert an effect over the time spent abroad. Similarly networks do not change the length of migration. Concerning destination country characteristics, migrants to CIS and to urban areas have not different durations than others. To conclude with insignificant variables, migrants coming from the centre of Moldova and from regions where infrastructures are better developed do not seem to be singular as far as their migration behaviour is concerned. On the other hand, most of the expected factors have an influence on the time spent abroad. We begin with variables used to capture the costs of migration (Hypothesis 3). Model 2 of Table 7 contains only significant covariates and includes a dummy variable that takes the value of one if the migrant experienced illegality in the destination country, and zero otherwise. Models 3 and 4 offer robustness tests for the effect of the migrant's

status. Model 3 contains a dummy for illegal entry in the destination country and Model 4 considers the impact of a first illegal job on the migration duration. Each of these possible indicators of illegality increases the time spent abroad.²² The only insignificant indicator of illegality is the dummy for a first irregular work. In Model 2 an illegal migrant has migration duration 1.4 times higher than his legal counterpart. This result is consistent with Magris and Russo's (2009) and Reichert and Massey's (1984) conclusions, and run counter to Pinger's (2007) and Lindström's (1996) findings. From a simple statistical point of view, Görlich and Trebesch (2008) also notice that undocumented migrants are concentrated in the seasonal migrants' sample.²³ Taking into account most of the potential factors of influence on the duration of stay, and running a parametric estimation, our work allow to conclude, contrary to these papers, that being undocumented increase the time spend abroad. Our results therefore support the idea that illegal status is a good proxy for migration costs. To carry on with investigations on the link between undocumented migrants and migration expenditures, Model 6 adds migration costs and the need to borrow to the initial regression. Migration costs are highly significant and, as expected, the effect of legal status vanishes with the introduction of costs in the model. Of course, to be sure that this result is not due to the reduced size of the sample, we re-ran the initial model without the costs on the sub-sample for which we have the migration expenses (Model 5). The time ratio of the indicator of illegal experience (1.308) is close to the one obtained on the whole sample (1.415) and is significant at a five rather than one percent of risk. Therefore, the vanishing of the illegal status effect in Model 6 is not attributable to the reduction of the sample size, but actually to the introduction of migration costs in the regression. The last test we run is to infer if there are differences in the impact of migration expenditures between borrowers and non borrowers. For that Model 7 includes a cross covariate between the costs and being a borrower. The results show a slightly larger impact of migration costs for borrowers, but higher migration costs still generate longer duration of stay for non-borrowers. Hence, illegal migrants come back to Moldova later than legal migrants, essentially because they face higher migration costs.²⁴

Next we examine the influence of indicators for the preference for home country. Conversely to Görlich and Trebesch (2008) we find very important effects of household composition on the migrant's duration of stay. Being the household head, his spouse or his child considerably reduces the time spent abroad. For example, a household head migrant or his spouse would stay only one month in the destination country when a typical migrant with the same characteristics is expected to spend two years at the same place. Similarly the proportion of dependent members in the family decreases the migrant's duration of stay. If a migrant belongs to a household composed of five persons with a given proportion of dependents, he will spend 28% less time abroad than an equivalent migrant with

²² A fourth indicator could have been the absence of a residence permit. We did not consider this latter variable as we suspected some possible endogeneity with the duration of migration: in most of the destination countries people must first have been living in the country for a given period before applying for a residence permit.

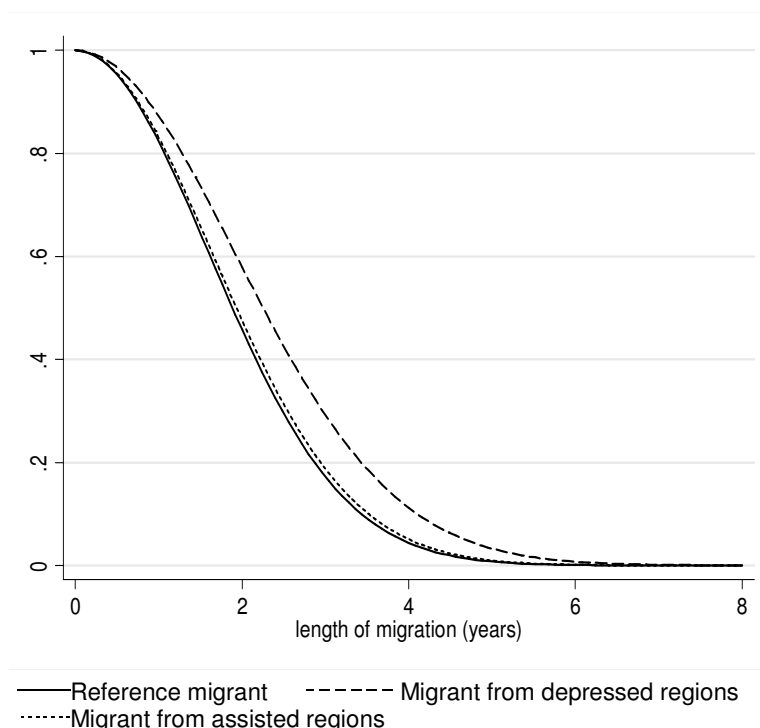
²³ We ran regressions including a dummy variable for seasonal migrants. This factor was significant and exerted a negative influence on duration without changing any of the other results. Suspecting a potential endogeneity of this factor, as in the questionnaire a seasonal migrant is defined as one having spent less than 3 consecutive months abroad, we did not keep it in the model. We also estimated the model on the subsample of non seasonal migrants. The main results were not different from the principal model and only some control variables were no more significant.

²⁴ Illegal status could be also thought as a proxy for lower expected wage abroad. Nevertheless, as documented further on we introduce a lot of other variables that can influence the potential earnings in order to clear the legal status for this likely influence.

one less dependent.²⁵ With regard to the family economic situation influence, Model 2 shows that belonging to a household who experienced a decline in its perceived level of income between 1998 immediately after the crisis and 2006 at the time of the survey, increases the migrant's duration of stay. This can certainly be due to the dependency of this type of family on remittances. Finally we consider the impact of social development of the migrant's region of origin. Figure 2 shows predicted survival function according to the level of social development of the starting area.

Figure 2.

Weibull survival regression with Gamma household heterogeneity, social development index



The reference migrant comes from developed regions. The graph makes clear that migrants from depressed social regions of Moldova spend more time abroad. This claims the importance of development of the starting region in the migrant's decision to stay or come back. A region with better social development acts as a pull factor and makes migrants come back sooner, if they can expect a better way of life in their origin country.

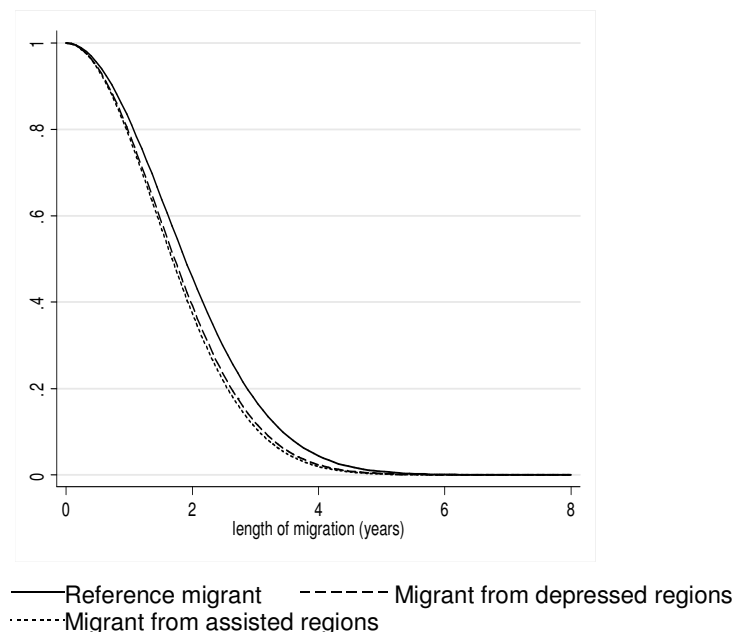
Concerning the effect of factors used as proxies for wages differential, we find that the time spent abroad increases with age at a decreasing rate (as age squared reduces the duration). Migrants who do not know the destination country's language have longer duration. If age and the mastery of the foreign language are respectively positively and negatively linked to the expected wage, these results conclude in favour of the target income theory. Besides this migrants going to EU's countries

²⁵ $\frac{t_i}{t_j} = \exp[\beta_k (X_{ik} - X_{jk})]$ if $X_{ik} - X_{jk} = \frac{1}{5}$, the time ratio between migrant i and j is : $0.56 \cdot 0.025 = 0.72$

spend longer time there. Therefore the target income theory does not apparently apply to the Moldovan migration to the EU. Finally we analyze the push and pull factors of the migrant's region of origin as indicators of potential revenue at home. All of the variables of the starting region of the migrant conclude in favour of the target income theory: migrants coming from less developed areas have lower potential earnings at home and therefore a higher wage gap, so that they come back sooner. In our estimations, migrants from South Moldova experience shorter duration than migrants coming from the Centre and North. As Lücke and al. (2007) document the South region of Moldova is poorer and more agricultural than the other regions and has a higher prevalence of migration in 1999 and 2005. The introduction of more detailed regional data allows a sharper analysis of the influence of the migrant area of origin. Migrants from urban location and cities larger than 50 000 inhabitants return later than their rural and small cities counterparts. This echoes the results on the regional economic development index. Figure 3 shows the estimated survival time for migrants from economically depressed and assisted regions of Moldova.

Figure 3.

Weibull survival regression with Gamma household heterogeneity, economic development index



The solid line in Figure 3 represents the predicted survival function of a typical migrant coming from an economically developed region. Migrants from depressed and assisted districts have shorter duration than the reference migrant. The results can also reach the Lindström's (1996) proposition: migrants coming from poorer regions have higher hazard of return, as their income target and investment opportunities are lower.

5. Conclusion

This paper investigates the factors driving the choice of the migrant's time-span abroad. We test the main hypotheses of the New Economics of Labour Migration: preferences for the home country, income target theory and the influence of migration expenditures. We particularly focus on the

effect of the migrant's legal status (as part of the migration costs) and on the push and pull factors of the region of origin (influencing the choice of the migrant both in terms of wage differential and preference for the origin country). We run a duration model using a Moldovan micro survey carried out in 2006 complemented with regional data from Roscovan and Galler (2006). The estimations show a strong positive relation between the return probability and the time already spent abroad. Migrants with unfinished duration spell at the time of the survey have a mean duration of two years and seven months. According to our results they are likely to come back after five more years abroad.

With regard to the exogenous preference for the home country, family composition exert a very large pull effect on the migrant: a household head has a trip's duration twenty for times lower than a typical migrant. The same size of effect holds for the spouse and the child of the family chief as well as the proportion of dependents in the family. This refutes the findings of other studies on Moldovan migrants like Görlich and Trebesch (2008). The social development of the migrant's region of origin has also a non negligible role in the decision to postpone or to bring forward the return. Migrants are more prone to come back soon in more socially developed regions as the quality of living is better.

Concerning target income theory, we introduce some proxy variables that can influence the wage differential between the home and host country. Only the age increases the time spent abroad while gender and education do not exert any influence on the duration of stay. On the other hand, some regional characteristics play a significant role in the migrant's decision. Emigrants from more economically developed districts, urban areas and bigger cities stay longer in the destination country. On the contrary, Moldovan migrants from the more agricultural and poorer Southern regions have shorter time-span abroad. These results are in accordance with the target income theory, as the expected revenue at home is higher in more developed districts, and therefore the wage differential smaller, making migrants stay abroad longer. We can also refer to Lindström's (1996)'s proposition: migrants coming from poorer regions have higher hazard of return, as their income target and investment opportunities are lower.

Finally we analyze the effect of migration costs introducing two indirect measures (the status of the migrant and the existence of networks). Networks do not influence the duration's choice. On the other hand undocumented expatriated have longer migration periods. More investigations demonstrate that significant higher migration costs explain this quite counter-intuitive effect. Consequently, in terms of policy implications, the main conclusions of this paper argue for an improvement of labor circulation between countries with international aid targeted towards social development in the origin region. These policies are win-win because they allow the destination country to limit the stock of forced permanent migrants and increase the proportion of return migrants in the origin country.

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