Labour Mobility and Institutional Quality: the Case of Romania[1]

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Abstract

Our paper aims to analyse the determinants of the Romanian labour migration during the transition period. Our approach is comparative taking into account both the possibility of international labour migration and that of internal labour mobility. Furthermore we allow the migration decision to vary according to the migrant's gender. Romanian labour migration is very interesting to study since Romania is the first supplier country in the EU, but also because at the internal level Romania has been confronted to shifting migratory patterns during the period of economic and social transition. Using two unique data sets our goal is to prove that poor institutional quality is one of the main determinants of Romanian temporary labour migration.

1. Intoduction

Migration is nowadays one of the core issues in the European Union. Migration in EU has been largely influenced in the recent years by the increase in flows from Eastern European countries as a consequence of the enlargement of the European Union. Poland and Romania became by far the two main origin countries in 2005. Whereas in the case of Poland

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destinations are more diverse, flows from Romania are highly concentrated with 90% of movements towards three destination countries, namely Spain, Italy and Germany (SOPEMI 2007).

The official discourse on migration is mitigated. On one hand, many European states fear a possible "invasion" from the citizens from the Eastern European countries and argue that labour market liberalization would lead to high levels of unemployment in the economy. This entitles them to adopt protective policies, like transition periods with regard to citizens from the newly integrated countries. On the other hand, as many countries face labour shortages due to their negative demographic balances, workers are needed on the European labour market.

At the same time, in the home countries there is an increasing debate on international migration as these countries have also come to face problems of demographic imbalances and labour market shortages and have become in turn migrant receiving countries (see data in appendix IV). The main question is if important remittance inflows in the case of these countries could upset the loss in human capital.

Our aim is to study the determinants of temporary labour migration and to compare this type of mobility with internal mobility. Very few studies have tried so far to shed light on the determinants of international migration from Romania although it has come to involve more than 10% of the country's population. The only attempts made so far rely mostly on the communitarian migration census developed by the IOM (2002), which does not take into account individual level variables. Besides considering the importance of individual level variables and employment sectors at destination, we also look into the relationship between institutional quality and the probability to move out of the residential region.

We employ two original datasets. We use individual level data from the 2002 Romanian Census, as well as data on local institutional quality provided by UNDP Romania and the Romanian Institute for Public Policies.

Our study proves the existence of international migration costs in the case of Romanian migration, as members of poor households were more likely to be internal migrants whereas international migrants came from households having already reached a certain level of wealth. International temporary migrants are equally distributed in our sample between the rural and the urban regions of Romania, which proves that not only the rural poor involved in temporary labour migration as it was long considered in Romania. This form of mobility was also adopted by urban settlers.

Interestingly, the part of women in migration flows from Romania has been steadily increasing since 1990. In 1992, women accounted for 51.63% of the permanent migration flows. Their part had reached 62.42% by 2005 (NIS 2006). However, temporary labour migration flows seem to be still dominated by men. One of the aims of our study is to find a possible explanation to this matter.

In the first part of our paper we describe the evolution of Romanian international migration. In the second part of our article we draw a picture of institutional quality in Romania at first at the macro level and then at the regional level by discussing the issue of local public goods delivery. In the following section we proceed at a review of the main theories on migration decision. We continue with the description of the data employed. In section five we present our research hypothesis as well as the variables we use in our model. Section six puts forward the econometric specification and summarizes our main results. In the last section we conclude.

2. Romanian migration: types, patterns and evolution

The dismantling of communism entangled a process of economic underdevelopment in the Eastern European countries which led to the downsizing of many firms and economic activities. The transition period was also associated with a transition in migratory behaviour (Kaczmarzinsky and Okolski 2005) as the economic and social transition brought about sweeping changes in the migratory behaviour of the East European populations. As other Eastern European countries, Romania underwent important changes in the migratory forms during the post-communist period. Some new migratory forms developed whereas others were a mere adaptation of migratory patterns already present during communism.

2.1 Romanian migration during communism

During communism, international migration was kept under very strict control and the only forms of migration allowed in Romania were labour migration towards COMECON countries and some very restricted migration, mostly ethnic in the frame of bilateral agreements concluded by the Romanian communist state with Israel, Germany, Hungary and the US (Nedelcu 2005). On the other hand, internal migration was highly encouraged, especially the rural to urban migration, as the communist regime sought a massive industrialization of the country. In 1948, almost four fifths of the country's population lived in the rural area. Agriculture was considered important only to meet internal demand and as an input factor for the industry. Many villages underwent collectivization and were meant to disappear. The rural

exodus targeted mainly big cities until 1967 when a law was passed against migration in the largest cities in Romania. Until the end of the 70s however internal migration flows were dominated by long distance urban to rural migration. The end of the 70s saw the development of intra-country migration still dominated by rural to urban flows. During the 1980s internal migration slowed down. However, flows were still dominated by long-distance East to West migrants. In 1990, rural to urban internal migration reached its highest level of 70% of all internal migration patterns, but later underwent a sharp decrease.

2.2 The Evolution of internal migration during post-communism

The collapse of many state enterprises during the transition period led to massive unemployment and to vicious migratory behaviour as having no other option, the laid-off workers returned to their rural communities of origin inducing flows of urban to rural migration (World Bank 2005). Mono-industrial towns could no longer provide jobs for the rural exodus. Furthermore, the land reform ensured the restitution of lands to those who had been deprived during the communist period encouraging urban to rural returns. The North-East region which is the poorest region in the EU attracted most of the rural to urban migration flows, including flows from other regions of Romania as North-Eastern inhabitants had previously migrated out of the region in large numbers especially heading to the Western regions of the country. These returning migrants in rural of North-East account in most cases for a reverse pattern of long-distance migration. The main sending regions are West, Center and Bucharest, whereas amongst the receiving regions we identify along with the region of North-East, the three NUTS II level regions from Southern Romania. At the NUTS III level returning migrants went mainly to Botosani, Iasi, Vaslui, Bacau all situated in the North-East. In 1997, the urban to rural migration exceeded for the first time the level of other pattens of internal migration. However, during the following years its importance started to decrease and the tendency was towards an equalization of the main internal migration flows.

2.3 Stages of Romanian international migration

If internal migration was a common phenomenon during communism, international migration in Romania is for a large share of the Romanian population a post-1989 event. International labour migration developed more as a survival strategy in the absence of social safety nets that could upset the unemployment shock.

Following in the steps of Diminescu (2003) and Sandu (2006) we identify several periods in the Romanian international migration after 1989. The first years following the fall of

communism have seen very important migration flows, mainly permanent. As much as almost 100.000 persons left Romania in 1990 (see appendix IV). The number of migrants decreased to 44.000 and respectively to 31.000 during the following years. At first, ethnic migrations were the most important type of mobility with many Hungarians, Germans and Jews leaving the country in the early 1990s continuing a trend which had already developed during communism. At the same time, the number of asylum seekers underwent a sharp increase in the early 90s. This impressive exodus led Western European countries fear a possible invasion of "the poor from the East". During these years a new form of migration emerged and grew on to become the most important of all starting of mid 1990s: temporary labour migration. This type of migration took most often the form of incomplete labour migration (Okolski 2001) or circular migration. It was believed that this form of migration concerned mostly people from the rural regions of Romania who involved in a back and forth mobility between their country of origin and the country/countries of destination. During the first five years after the collapse of communism the annual temporary labour migration rates stood at around 5‰ and the destination countries concerned were Israel, Turkey, Italy, Germany and Hungary. During the second period annual temporary labour migration rates reached 6-7‰. Destination countries were also more diverse than during the first period with the main destinations being the Mediterranean countries: Greece, Turkey, Italy, Spain and Israel (Diminescu 2006). However, Germany and Hungary continued to play an important part as destination countries for Romanians from Transylvania.

A third chapter in the Romanian migration during the post-communist period has its roots in early 2000 with the opening of the EU accession negotiations. It is during this period that labour agreements with different states were concluded. Prior to 2000 the Romanian state had concluded labour agreements with only two countries: Germany and Lebanon. During the period streaming since 2000 to 2002 six new labour agreements were concluded with Switzerland, Hungary, Luxemburg, Spain and Portugal. Hungary, Spain and Portugal had already been important labour migration destinations. But it was really from 2002 onwards that a new era in the Romanian migration began. Starting 1st of January 2002 Romanian citizens no longer needed a visa in order to freely circulate in the Schengen space. As a consequence, departures intensified and the periods of absence became longer. However, the period concerned by the exemption of visa requirements in the Schengen area was restricted at three months.

Temporary labour migration abroad became thrice more intense during this period than during the pre-Schengen period (Sandu 2006). The annual temporary labour migration rate

skyrocketed to values between 10‰ and 28‰. However, Romania made little progress in concluding new labour agreements with other European countries. Only three new bilateral labour agreements were concluded before Romania's accession to the EU. The countries concerned were France, Germany and Italy, the last being the main destination of Romanian labour migrants (Serban 2007).

A common feature of these stages is that Romanian international temporary labour migration was characterized by the importance of networks. International household networks are supposed to play a very important part for international labour migration. Migration networks can lead to a decrease in the migration costs and thus can boost international migration.

Networks were very important for temporary labour migration, at the same time in helping migrants to leave the country and to find a job abroad. According to Sandu et al. (2006) the importance of kin and friends networks in the destination country had been increasing constantly since 1990. The importance of networks for leaving the country had doubled for each migration period. This is a possible explanation for the increase in illegal labour migration after the 2002. Turkey, Italy and Spain seemed to be the preferred destinations for illegal migration, whereas Germany, Greece and Israel were the least affected by ilegal migration. Friends' networks played an important part in finding a job, especially for those who leave for Hungary, Turkey and Italy. Many labour migrants to Italy and Spain already had a family network established there, whereas private firms played an important part in finding a job in Israel, Greece and Germany.

As networks evolved and more and more people become part of the network, migrant categories diversified. Information became available to all kind of persons and consequently the cost of migration lowered. As shown by McKenzie and Rapoport (2007), the importance of the network decreases with the amount of migration experience which allows access to information flows even in the absence of the network. However, networks remain crucial in the case of illegal migration. As the importance of networks increased in the Romanian temporary labour migration, the number of migrants involved in illegal labour activities also increased (Sandu et al. 2006).

EU accession was the last turning point in the history of Romanian post-communist migration with migratory movements further intensifying during the first months following the accession and with a larger diversification of migrant groups (ANBCC 2007).

At the time of the EU accession as much as two and a half million Romanians were estimated to be working abroad. However, in the case of circular labour migration abroad, we notice a concentration at the level of some very specific destinations, Italy and Spain standing out as

the preferred destination countries for this migration pattern. This may account for the passage from an exploratory phase of migration during the last decade of the twentieth century to a steady phase of migration during the last years.

3. Institutional quality in Romania

3.1 Institutional evolution during post-communism

Romania is a country that has had many problems with institutional quality and has often been criticised for its poor institutions.

Facing worse initial conditions in comparison to most of the other East European EU accession states, Romania increasingly fell behind in the reform process and in the implementation of market-economics and pluralist democracy.

The large size of the state apparatus as well as the volatility of public institutions in Romania have rendered the reform process very difficult and slow. Government expenditure for the provision of public goods has constantly declined in real terms during transition. Moreover, governmental discretion in resource allocation was one of the key issues contributing to the failure of Romanian reforms. Suspicions about corruption at high levels have often cast a shadow on the functioning of the Romanian administration. Education and healthcare were two of the sectors for which corruption is supposed to have reached very high levels in Romania (World Bank 2002).

The Bertelsman Transformation Index examines the political management of change on the way to a market-based democracy by using two rankings and two trend indicators, which present the results of the comparative analysis and rating of 119 countries. The Status Index shows the state of development that a country had achieved on the way to democracy and to market economy. The Management Index classifies the quality of transformation management. The trend indicators provide information on the direction of development in terms of democracy and a market economy in each of the countries examined. We consider the BTI at the level of 2003 as it is the closest value to the period of our study. Romania ranked last of the EU accession countries both in terms of the Status Index and of the Management Index. The poor performance in terms of the Management Index shows high levels of governmental inefficiency in resource reallocation.

3.2 The decentralization process in Romania

The decentralization process took place late, mainly after 1989 and was highly inefficient. Through the nineties Romania remained one of the most centralized states in Central and

Eastern Europe (Wetzel and Dunn 1998). A 1998 reform tried to tackle this problem by granting more independence on the financial side to the local administration. The percentage of public expenditure by the local administration increased as well as the importance of own revenues (resources collected and allocated without the intervention of the central authority). At the same time, the competencies of local administration were extended in several sectors: education, investments and social protection. The local administration was granted more responsibilities in providing local public goods.

The most important element of fiscal decentralization was the fact that revenues from taxes collected to individuals were now split between local administration, regional council and the government. However, as in very poor regions these revenues were likely to be low, the government proceeded at the granting of "balance" revenues. The central authority transferred the funds to each region and than the regional council granted funds to each locality. This is where political discretion came in, as studies showed that some regions were favoured to others and received higher balance revenues than they should have (Ionita 2007). Funds allocation was supposed to be based on the evaluation of local needs, but this process was rarely transparent and local needs were often over or underestimated. The discretionary allocation of funds affected local development and widened the gap between poor and rich regions.

3.3 Local public goods delivery in Romania

Very few studies have taken into account the quality of local institutions for the migration decision. Our study meets this challenge and tries to account for local institutional quality in the migration decision-making process. The proxy we consider for institutional quality is local public goods delivery at the regional level. At the level of local public goods we focus on the provision of compulsory education and on that of healthcare services.

Romania's education system provides high levels of access to education for compulsory education (primary and general secondary education). However, Romania's education system was often characterized by high levels of inefficiency in the allocation of resources, including education personnel and facilities. As a result of the system of central planning the number and location of schools and teachers was determined through centrally determined norms, rather than actual needs.

The role of local governments in education is essentially limited to financing. Starting of 1998, local councils have been granted fiscal responsibility for education and fund a wide range of expenditures including spending for infrastructure, maintenance, and school

equipment. Education indicators vary across regions, with the number of pupils per teacher for primary education ranging between 15.2 (Harghita county) and 21.4 (Constanta county) and between 9.8 (Mures county) and 16.2 (Calarasi county) in the case of general secondary education at the time of our study. Gross enrolment rates also varied between 91% (Harghita county) and 100.9% (Botosani county), whereas the ratio of children not enrolled at school was the highest in the Centre region of Romania. At the county level this ratio was the highest for Vrancea county in South-East Romania (16%) which is also the main temporary labour migration sending county.

Another issue in the provision of local public goods is represented by access to the healthcare system. The health status of the Romanian population is poor in comparison with neighbouring countries and countries at similar income levels. Health services, including hospitals and local health facilities are widespread across the country. However, Romania's healthcare system was characterized by high levels of inefficiency in the allocation and use of services. Health indicators also vary across Romania with the highest infant mortality rate at the level of 2000 in the Bacau county in North-East Romania (28.3%) and the lowest in Valcea county in South-West Romania (12.2%).

Budget constraints in the delivery of local public goods and local governments' inefficiency in resource allocation have increased costs to households. Although compulsory public education is legally free in Romania, households faced a range of various formal and informal out-of-pocket expenses. Household level data showed that out-of-pocket education expenses were widespread and made up for an important part of total household expenditure. Wealthier households spent more and were more prone to spending on education than poorer households. Out-of pocket spending as a percentage of total household spending increased with the household's level of wealth (World Bank 2001).

Moreover, more than 50% of families incurred health related out-of-pocket expenses. Out-of-pocket expenses have increased over time and have represented an increasing share of monthly expenditures for the poorest households.

Effective funds allocation is essential for local development in Romania. Unfortunately, the local financial autonomy in Romania is still more of a goal to attain than a real fact. The situation is more dramatic in the rural regions. While the urban communities have multiple means to supplement their incomes, rural communities depend in a large measure on transfers and equalization funds. However, in our study we have no means to control for differences between urban and rural communities.

4. Literature review

The interest for migration goes back a long time ago. One of first scientific papers to address this issue was an article by Ravenstein in 1885 which individuals we supposed to migrate in order to better themselves. Later on, migration was addressed in a neoclassical framework. At the micro-level, the individual migration model formulated by Todaro (1969) and Harris and Todaro (1970) described the choice of migrating as a result of an individual decision-making process occurring usually under uncertainty (Smith 1979). Expectations we based on the probability of finding employment in each sector and on the wage differential between the two locations. Migration occurred only when the net expected return was positive (Sjaastad 1962).

Later, these assumptions have been challenged by Mincer (1978) who argued that it was rather the net family gain than the net individual gain, which triggered the migration decision. The Mincer model was based as the Harris Todaro model on a cost-benefit analysis. This approach was further developed under The New Economics of Labour Migration theory (Stark and Bloom 1985). The key hypothesis of this strand of literature was that migration decisions were not made by isolated individual actors but by larger units of interrelated people, usually families. According to this approach, the migration decision occured rather as a consequence of capital, credit or insurance market imperfections or of relative deprivation than of labour market inequalities (Stark 1991, Stark and Levhari 1982, Stark and Taylor 1989). Migration acted as insurance for the households which undertook risky agricultural activities. According to this model, migrants entered into implicit contractual arrangements with other household members in which the latter funded the costs of migration and migrants subsequently provided remittances in return. Migrants honoured their obligations either for altruistic reasons or because they expected subsequent benefits such as inheritance (Lucas and Stark 1985).

Another set of studies emphasized the institutional determinants of migration as governance, networks, labour market legislation and the legal status of migrants. The networks approach is particularly well documented with many studies that have taken into consideration the role of the networks in diminishing migration costs. Migrant networks are sets of interpersonal ties that connect migrants, former migrants and nonmigrants in origin and destination areas through ties of kinship, friendship, and share community origin (Massey, 1988). Network connections constitute a social resource that people draw on to gain access to various kinds of financial capital: employment, high wages, the possibility of saving and sending remittances

to their place of origin (Massey 1999). By providing information regarding the modes of migration and job opportunities as well as direct assistance in the form of food or shelter in the destination regions, networks lower the entry costs and reduce uncertainties associated with migration (Rapoport and McKenzie 2007, Munshi 2003, Davis et al 2002, Winters et al. 2001, Massey and Garcia Espana 1987).

Several studies take into account differences existing between international and internal mobility (Rapoport and McKenzie 2007, Stark and Taylor 1991). Whereas the difference found by Stark and Taylor between the two types of migration relies on different returns to human capital in the two locations, Rapoport and McKenzie (2007) focus more on the importance of the network capital in the destination choice.

Other studies rely on the difference of endowments between the region of origin and that of destination. Beauchemin and Schoumaker (2004) in an article on the determinants of migration in Burkina Faso focused the importance of the level of development of the home region in the migration decision. In computing the local development level index they equally took into account education and health. They found a mitigated result: local development might encourage staying but at the same time could encourage migration as in order to take off migration needs good quality infrastructure. Our approach is close to our own research hypothesis, as we consider that local public goods delivery influences migration.

5. Data and descriptive statistics

We employ a dataset of 2.137.967 individuals and 732016 households which represents a 10% randomly selected subsample of the Romanian 2002 census developed by the Romanian National Institute of Statistics[4]. The census was conducted in March 2002 at a time when the Schengen agreement had just become effective for Romanian citizens. There are several limitations at the level of our database as the census is not conceived to study international migration. Our database contains household and individual level data, however we do not have indications about the migrants' destinations, nor about the initial income level of the households. Our choice was due mainly to the importance of the sample and to the high quality individual level data that it provides us. No other available sample on Romanian migration would have provided us with such an important number of migrants. Our study is significant at the regional and national level. In the paper we focused on temporary labour migration because we are able to filter properly for the location of the work place and for the

[4]Data were provided by the Minnesota Population Center. Integrated Public Use Microdata Series - International: Version 3.0. Minneapolis: University of Minnesota, 2007.

duration of absence from the household. We have over 12,000 international temporary labour migrants in our sample and over 20,000 internal temporary labour migrants. We consider to be internal temporary labour migrants individuals who have their workplace in another county.

In order to check the institutional inefficiency hypothesis we employ data from the UNDP Romania on the delivery of local public goods at the regional level. We also use data from the Romanian Institute of Statistics and the Romanian Institute for Public Policy in order to account for local government expenditure on public goods. We build a health indicator by considering the infant mortality rate, the number of persons per doctor and the number of persons per hospital bed (in logarithm) at the regional level. We then compute a second indicator on education provision at regional level by considering the number of students per teacher (primary and general secondary education) and the ratio of children not enrolled in compulsory education (primary and general secondary).

Data from the 2002 Romanian census show us that the North-East region had the highest temporary labour migration rate. It was closely followed by its neighbouring region, the region of North-West. However at NUTS II level, the county with the highest rate of temporary labour migration was Vrancea in the South-East region (see Apendix III). As shown by the IOM (2002) in a communitarian census conducted during 2001 the main countries of destination were in the case of the Vrancea county Italy (41%), Hungary (7%) and Turkey (6%). Vrancea was followed closely by Suceava (NE) and by its neighbouring region Maramures (NW). The main destinations for the inhabitants of the Suceava county were Italy (26%), Germany (16%) and Israel (15%) whereas in the case of Maramures the main destinations were France (17%), Italy (17%) and Portugal (14%). In the case of Vrancea, migration was concentrated at the level of only one country, whereas in the case of the two other counties alternative destinations emerged.

As for the whole census, in our sample the are the North-East followed by the North-West regions have the highest emigration rates while the lowest were registered in the Bucuresti - Ilfov region, mainly due to a “capital effect”. Migrants in this region turn more to internal rural to urban migration with the labour market in Bucharest absorbing the largest part. The county with the highest rate of temporary labour migration in our sample is Vrancea, followed by Suceava as in the case of the whole country.

Most of the international labour migrants are young people in their twenties or early thirties (the mean being 31.4 years). They are younger on average than both internal migrants and non-migrants. More than half of the international migrants are married (54.01%), however

marriage is more important in the ranks of non-migrants (65%°). Only 36.3% household heads are international migrants compared to 40% in the ranks of migrants and of non-migrants. Households that send international migrants are larger than both households sending internal migrants and non-migrant households which suggests that there might be substitution between family members.

The share of women in the household does not differ significantly across households. However, in the case of the share of dependents/household, households which sent internal migrants have the highest share of dependents. The share of dependents is the lowest in the case of non-migrant households. One of the reasons for which migrants leave seems to be the need to provide for the family.

The Wealth Index computed as a mix of durables and services shows that non-migrant households are better equipped and thus could be considered richer than migrant households. Internal migrant households seem to be the most deprived.

Internal migrants come mostly from rural regions (64%) compared to only 50% of the international migrants. International temporary labour migrants can be considered to be equally distributed between rural and urban regions of Romania whereas most of the non-migrants come from rural regions.

On the international labour market, most of the people temporary working abroad in the sample were employed in the field of "Crafts and related trades workers" (39.19%) according to the ISCO international classification, followed by "Elementary occupations" (29.74%). The Crafts workers are also the most internally mobile group.

At the industry level, most of the international migrants work in construction (41.93%), whereas some are employed in household related activities (14.57%) while others work in agriculture (12.96%). Occupations are very gender specific as 95.7% of those working in construction are men, whereas 97% of the migrants employed in household related activities are women. In the case of agriculture the gender specific dimension is less pronounced with 70% of the migrants being men and 30% women. This is in accordance with the study conducted by Sandu et al. (2006) which shows that men work mostly in construction, whereas women are employed in household related activities. Most of the migrants working in household related activities have lower secondary education or high-school education. Those working in construction also have lower secondary education or have graduated a technical school. This is also the case of migrants working in agriculture.

Internal migrants work mostly in manufacture, wholesaling and public administration and work less in agriculture and construction than international migrants and non-migrants.

Do occupations differ across regions? International migrants from the North-East region work in the fields of "Crafts workers" and "Elementary workers". The rate of migrants in "Crafts workers" is also high for the North-West region. Like in the North-East region it is followed by "Elementary workers". The profile of the North-East, North-West, South and South-West regions is similar, whereas for the South-East and West regions this profile is reversed with "Elementary workers" coming in first followed by "Crafts workers". In the case of the Centre region "Crafts workers" is followed by "Service workers" and in that of the Bucharest-Ilfov region "Crafts workers" is followed by "Professionals". Thereafter, these two regions sent also high-skilled migrants. As to gender composition, "Crafts workers" is dominated by males, whereas in "Elementary workers" women slightly outnumber men.

On the Romanian labour market women work mostly in the health sector, financial services sector, education sector, in trade and telecommunications and in agriculture. The average wage gap between men and women stood at 8.5% in 2002. Tasks at the household level are very different between men and women. Women involve in bringing up children, taking care of the elderly and other household activities like cooking or doing the laundry, whereas the main function of men is to provide for their household and to do small household jobs like plumbing.

The amount of time spent away for international labour migrants is in most of the cases between six and twelve months (44.38%) and a lot less important for internal migrants who do not have to bear the costs of crossing a border. The absence duration does not seem to be influenced by migrants' professions. However in the case of workers in agriculture, migrants leaving for less than six months are slightly more numerous than those who leave for longer periods of time. For other fields, longer time migrants outnumber those departed for shorter periods.

6. Hypothesis and variables

Our paper aims to analyse the determinants of the Romanian labour migration during the transition period. Our approach is comparative taking into account both the possibility of international and internal mobility. Our study relies on comparative approaches already developed by Mora and Taylor (2005) and Stark (1991).

Local government inefficiency implies costs at the level of the household. We consider that the household budget constraint should also take into account the cost of acceding to public goods which should normally be provided for free. Temporary labour migration should provide the means for better access to public goods. Our main hypothesis is that migration is

triggered by poor institutional quality, as institutions that do not function properly cannot ensure an effective management of local public resources and cannot effectively provide social services. In our model the decision to migrate is taken jointly by the individual and other household members.

The dependent indicator variable of the probability of an individual to be a labour migrant is measured as weather or not an individual has its main workplace abroad in the case of international labour migration, or in another county than his county of residence but inside Romania in the case of internal labour migration at the date of the 2002 census. The variable takes the value one if the household member works abroad, two if the household member works in the country but in another locality and three if the household member works in his own county.

Individual level variables

We will first take into account individual level variables. We consider first of all the variables proposed by Mincer (1978): age, age squared, gender, status in the household (household head or not), marital status and education.

Age captures the biological age and at the same time experience. Younger people are more prone to migrate as they would have a longer period to recover the migration cost (Harris and Todaro 1970). Younger people are also less risk-averse and therefore are more inclined to take the risk of migrating. They are less rooted in the society of origin and the psychological cost of migration is smaller. But age might have a quadratic effect, this is why we also control for age squared.

We also take into account the impact of education, as returns to education are generally thought to be higher abroad (Winters et al. 2001, Mora and Taylor 2005). However, human capital is not always transferable abroad either because degrees from the country of origin are not recognised abroad or because migrants in an illegal status involve in lower-skilled activities (Markle and Zimmermann 1992).

The marital status variable should capture differences in migration behaviour according to the marital status. Mincer (1978) considered that family ties deterred migration and married persons are less likely to emigrate. On the other hand, married persons need to provide for their family in the home country and could turn to migration in order to obtain the necessary resources.

We also take into account whether the person has a double citizenship or not, as a double citizenship could ease both border crossing and entry on the foreign labour market, especially at a time when Romania was not yet part of the European Union.

We control for the mother tongue as well. In this case our supposition is that Romanian citizens that have a mother tongue other than Romanian are at least bilingual which could be an advantage for them on the labour market both of the home and of the foreign country. It is the case of the Hungarian and German minorities in Transylvania which represented a large part of Romanian migration at the beginning of the 1990s.

We equally consider the employment sector as the migration decision is likely to be influenced by the sector of employment.

Household level variables

A second group of variables captures household characteristics. At the household level, we analyze the following variables: the household size, the dependency ratio (number of dependent persons/number of economically active adults and the share of women in the household. The share of dependants in the household is expected to have a negative effect on migration as persons having young dependent children are less likely to migrate, whereas the share of women could have a positive effect if women's and men's tasks are substitutes.

We also consider two variables taking into account the existence of other household members who migrate internally or internationally.

As we have no indication on the income of the households, we built a Wealth Index as proposed by Katz (1999) and Mora and Taylor (2006) in which we include: the building material of the dwelling, the existence of sewage, water supply, kitchen, toilet and bathroom, central heating, hot water, air conditioning, gas and electricity. All the goods and services included in the index have been given the same weight. Thus the maximum value taken by the wealth index is eleven.

(1) Building material quality (= 1 if concrete; = 0 otherwise);
(2) Water supply (=1 if public; = 0 otherwise)
(3) Central heating (= 1 if heating is central; = 0 otherwise);
(4) Sewage system (= 1 if house has sewage system; = 0 otherwise);
(5) Electricity (= 1 if house has electricity; = 0 otherwise);
(6) Kitchen (= 1 if house has kitchen; = 0 otherwise);
(7) Toilet (= 1 if house toilet; = 0 otherwise);
(8) Bathroom (= 1 if house has bathroom; = 0 otherwise);
(9) Hot water (= 1 if house has hot water; = 0 otherwise);
(10) Gas (= 1 if house is recorded to the gas pipe; = 0 otherwise);
(11) Air conditioning (= 1 if house has air conditioning; = 0 otherwise).

In order to check for other possible poverty effect we use the number of rooms/person. As this effect might not be linear we also take into account the number of rooms/person squared.

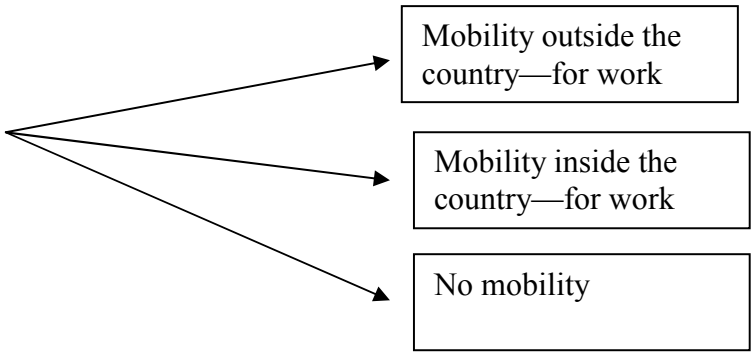
Institutional variables at the regional level

We also take into account regional institutions as migration might differ across regions due to different regional endowments. The variables we consider are the quality of education and that of the healthcare system. We build an interactive variable to account first for the quality of healthcare and second for that of education at the regional level interacted with the household's wealth index, as the exposure to poor institutional quality might differ according to wealth.

7. Empirical specification and results

Our econometric model relies on a three-level multinomial logit taking into account: international migration, internal migration and non-migration (see tables in appendix II).

Using the 2002 census data we compare three options of labour mobility. We assume that either an individual moves abroad in order to work; either the person moves inside the country or finally that his workplace is in his county of residence. In short, we compare the three following geographic mobilities:



The model's econometric specification is the following:

$$\boldsymbol{M}_i = \beta_0 + \beta_0\, age + \beta_2\, age^2 + \beta_3\, sex + \beta_4\, education + \beta_5\, \text{education}^2 + \beta_6\, hhead + \beta_7\, hsize + \beta_8\, rural + \beta_9\, economic\ sector + \beta_{10}\, sharewomen + \beta_{11}\, dependancy + \beta_{12}\, wealth\ index + \beta_{13}\, wealth\ x\ educational\ indicator + \beta_{14}\, wealth\ x\ healthcare\ indicator + \beta_{15}\, educational\ indicator + \beta_{16}\, wealth\ x\ healthcare\ indicator + \varepsilon_i$$

We perform a first regression on a model with institutional variables at the level of the whole sample. We use the cluster option in order to correct for correlation between individual error terms within the household. Then we conduct the Hausman McFadden test for the independence of irrelevant alternatives. The test does not reject our model. We can consider the two migration alternatives to be independent. Furthermore, we allow for gender differences and we run the mlogit regression separately for men and women. We compute the marginal effects and we interpret accordingly.

Individual characteristics

The multinomial logit regression results (see tables in appendix II) shows that the likelihood to migrate is higher in the ranks of men. The mobility of women is still very low as women face more difficulties in entering the labour market.

The impact of **age** is also significant and non-linear for the overall sample as well as for men and women tested separately in the case of international migrants. Age has an inverted-U shaped relationship with migration. In the case of internal migrants, migration decreases with age.

Education has a positive non-linear effect in the case of international migration for both men and women, whereas in the case of internal labour migration its effect is linear. People who are better educated have better chances to migrate internationally. Migration triggers better returns to education and migrants are also selected depending on their level of education. However, after reaching a certain level of education international temporary labour migration becomes less interesting. This is not the case of temporary internal labour migration.

The **marital status** also has a significant negative effect both in the ranks of men and in that of women, confirming the assumption that married people are less likely to migrate. The effect is more important in the case of international migration as long distance might increase the psychological cost of migration when married.

The fact of being **household head** reduces the likelihood of both international and internal labour migration for men and for women. Household heads are less likely to temporary leave their household.

The fact of holding a **double citizenship** has an important effect on international migration, whereas as expected its effect on internal migration is not significant. We also tested separately the importance of having an EU citizenship and this increased even further the likelihood to migrate. As Romania was not yet part of the EU it had still to face restrictions on

the European labour market. Holding a second citizenship seemed to ease a lot international labour migration.

The fact of having **a native language other than Romanian** increases the probability of international migration and decreases that of internal migration. Ethnic minorities from Romania gain easier access to the international labour market, but not to the internal labour market as segregation levels were high and minorities tended to remained clustered.

The **labour market variables** show that comparing to people working in the Hotellery and Restauration, people employed in the construction sector have a higher propensity to migrate both at the internal and at the international level. In the case of women who temporary work abroad the private household services sector stands out as one of their main sectors of employment. However people working in the "Hotellery and Restauration" have a high propensity for mobility due to the nature of their work, therefore it would be useful to reconduct the regression by considering another sector of reference.

Household level variables

The **size of the household** has an important significant effect. Migrants come from large households. The larger the household, the better the chances to become a migrant. The size effect seems to be more important in the case of international migration. This result suggests that there is probably task substitution inside the household, with remaining persons taking over the tasks of those who leave to work abroad.

The **share of women** in the household has a significant positive impact in the case of women's international migration as women who stay behind can substitute in terms of tasks those who leave. In the case of men the effect is slightly negative (significant at the 10% level) indicating that there is no substitution between genders in terms of tasks.

The **dependency ratio** also has a significant positive influence in the case of men's international and internal labour migration. Men leave in order to provide for large households. This may imply that men coming from households with a lot of dependent persons need to find resources and opportunities outside their home region. Its effect is negative in the case of women's migration but less significant. Women have to take care of young and elderly dependants within the household.

The **rural origin** has a positive effect on labour migration both at the international and at the internal level. The effect of the rural origin is less important in the case of women migrating internationally (significant at the 10% level).

The **wealth index** has a positive significant effect in the case of international labour migrants for both men and women, whereas in the case of internal labour migration its effect is negative. This means that international migrants are also selected according to their initial level of wealth as international migration incurs costs which cannot be bore by the very poor. In the case of internal migration, on the contrary it is mostly the poor who involve in this type of mobility.

The probability to migrate increases with the number of migrants in the household who follow the same migration pattern (leave either abroad or inside the country). Several members who migrate together could build a migration network which might reduce the cost of migration. Unfortunately, we do not have data on migrants' localities of origin and we cannot compute the effect of migrant networks. Even at the internal level, we notice that the probability to migrate increases with the number of household members who migrate.

Institutional level variables

The interactive variables used for institutional quality are negative and significant in the case of international migration. The interactive variable between the wealth Index and the Health Index has a positive effect in the case of internal labour mobility, whereas the interactive term between the wealth Index and the Educational Index is not significant in the case of men and has a positive effect in the case of women. The richer the household the lesser the individual migrates internationally if the quality of local social services is poor.

Both the Health Index and the Educational Index have positive significant effects on international labour migration but negative effects on internal labour mobility. The poor quality of social services seems to have an important positive effect on international labour mobility but seems to deter internal mobility.

Conclusions

This paper addresses an original question: "does local institutional quality matter for labour migration?" In order to answer this question we use an original individual dataset from the 2002 census. Furthermore, we merge individual level data with local institution data measuring the provision of public services. We also compare international labour migration strategies, internal mobility and no mobility strategy and take into account gender differences.

We find that Romanian international and internal labour migrants follow distinct patterns. The decision to migrate also differs according to gender. We underline that male rural population has a higher propensity to migrate than female population.

The wealth index is important in the case of international migration which proves the existence of costs associated to this type of migration. Richer households are more likely to involve in international migration, whereas poor households migrate inside the country.

At the level of the household the tasks performed by men and women do not seem to be the same. Men and women are thus not perfect substitutes. A larger share of women has a positive impact on women's migration but not on that of men. The dependency ratio reduces women's migration but encourages the migration of men.

Poor institutional quality boosts international migration both in the ranks of men and in that of women. However, its impact upon internal migration is negative. Wealthier households are less mobile when confronted to poor institutions as they can invest to acquire the public goods they need. The people who are the most affected by poor institutional quality and by inefficiency in public goods provision are the most poor.

The policy implications of our paper are closely related to institutional reforms at the local level in Romania. Migration is for us a sign of institutional malfunctioning. Migrants are leave their country when local administration fails in providing high quality institutions. We do think that more transparent budgets and more participative institutions could provide incentives for migrants to stay in their country of origin. On the other hand migrants may also push for policy reforms if they have access to the debate on the institution quality reforms. A first step is in this case a set of reforms reinforcing the rule of law. A second step is based on local administration reforms: efficient and user oriented institutions are requested. Local public goods provision needs to be addressed as its inefficiency leads to a vicious circle of poverty. Poor households do not have access to public goods like education and health and might therefore remain poor. Poor institutional quality leads to an increase in relative deprivation.

Another issue concerns the access of women on the labour market and their access to mobility. National policies should encourage a better participation of women on the labour market. Women work a lot as housewives even if they integrate the labour market. The role of women in taking care of dependant persons is of the highest importance for the household.

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Appendix I


UCRAINA
UNGARIA
SERBIA
BULGARIA
REPUBLICA MOLDOVA
MARAMUREŞ
SATU-MARE
BOTOŞANI
SUCEAVA
BISTRIŢA-NĂSĂUD
SĂLAJ
IAŞI
BIHOR
NEAMŢ
CLUJ
MUREŞ
HARGHITA
BACĂU
VASLUI
ARAD
ALBA
COVASNA
TIMIŞ
VRANCEA
GALAŢI
HUNEDOARA
SIBIU
BRAŞOV
CARAŞ - SEVERIN
BUZĂU
VÂLCEA
ARGEŞ
PRAHOVA
BRĂILA
TULCEA
GORJ
DÂMBOVIŢA
IALOMIŢA
MEHEDINŢI
ILFOV
OLT
CĂLĂRAŞI
DOLJ
CONSTANŢA
GIURGIU
TELEORMAN
MAREA NEAGRA
ROMÂNIA
HARTA ADMINISTRATIVĂ
http://RO.WIKIPEDIA.ORG
2003 BOGDAN GRUIŞCĂ

Appendix II

Multinomial logistic regression
International migration

variable	dy/dx	Std. Err.	P>|z|
sex	0,028021	0,0002	0,000
age	0,003797	0,0000	0,000
age2	$-8{,}95*10^{-6}$	0,0000	0,000
education	0,009421	0,0001	0,000
Education2	-0,000046	0,0000	0,000
Double citizenship	0,0773571	0,0115	0,000
Civil status	-0,001297	0,0002	0,000
Head	-0,000232	0,0002	0,121
malangue	0,0030345	0,0003	0,000
agriculture	-0,004453	0,0002	0,000
Manufucture	-0,005426	0,0002	0,000
Constuction	0,0209597	0,0010	0,000
Wholesaling	-0,004181	0,0002	0,000
privserv	0,4213793	0,0168	0,000
publicadm	-0,005533	0,0001	0,000
Other	-0,004013	0,0002	0,000
Dependency	0 ,000824	0,0001	0,000
External migrants	0,00056	0,0001	0,000
Internal migrants	0,0325781	0,0001	0,000
Household size	0,0077901	0,0001	0,000
Share women	0,0013105	0,0003	0,000
Wealth index	0,002367	0,0002	0,000
Wealth education	-0,009849	0,0003	0,000
Wealth health	-0,002268	0,0001	0,000
Rural	0 ,001538	0,0002	0,000
Health Index	0 ,013115	0,0011	0,000
Educational Index	0,00934	0,0019	0,000

Number of obs.= 812386
Pseudo R2 = 0.2078

Multinomial logistic regression
Internal migration

variable	dy/dx	Std. Err.	P>|z|
sex	0,09301	0,00025	0,000
age	-0,00035	0,00006	0,000
age2	0,00000	0,00000	0,077
education	-0,00238	0,00016	0,000
education2	0,00014	0,00001	0,000
Double citizenship	0,00893	0,00501	0,175
Civil status	-0,00402	0,00027	0,000
head	-0,00174	0,00025	0,000
malangue	-0,00285	0,00037	0,000
Agriculture	-0,02427	0,00035	0,000
Manufacture	-0,00842	0,00029	0,000
Construction	0,00212	0,00047	0,000
Wholesaling	-0,00634	0,00028	0,000
privserv	-0,00694	0,00121	0,000
publicadmin	0,00073	0,00044	0,093
Other	-0,00463	0,00031	0,000
dependancy	0,00030	0,00016	0,000
nmigrantsE	0.00051	0.00032	0,175
nmigrantsI	0.08721	0.00017	0,000
npersons	0,00026	0,00011	0,000
Share women	0,00220	0,00055	0,000
windex	-0,00294	0,00037	0,000
Wealth education	0,00010	0,00053	0,851
Wealth health	0,00385	0,00028	0,000
Rural	0,01575	0,00044	0,000
Health Index	-0,06457	0,00214	0,000
Educational Index	-0,05642	0,00339	0,000

Number of obs.= 812386
Pseudo R2 = 0.2078

Appendix II
Descriptive statistics all migration

	International migrants		Internal mobility		Sedentary	
	Mean	**standard deviation**	**Mean**	**standard deviation**	**Mean**	**standard deviation**
Age	**31.43**	*8.94*	**33.99**	*10.45*	**38.37**	*12.01*
Married	**0.54**	*0.49*	**0.57**	*0.49*	**0.68**	*0.46*
Sex	**0.70**	*0.46*	**0.68**	*0.47*	**0.54**	*0.50*
Education	**10.13**	*3.29*	**10.7**	*3.5*	**10.18**	*3.74*
Household head	**0.36**	*0.48*	**0.40**	*0.49*	**0.40**	*0.50*
Household size	**4.08**	*1.78*	**4.00**	*1.63*	**4.00**	*1.63*
Rural	**0.50**	*0.50*	**0.64**	*0.47*	**0.65**	*0.48*
Agriculture	**0.14**	*0.34*	**0.08**	*0.27*	**0.28**	*0.45*
Construction	**0.42**	*0.50*	**0.16**	*0.37*	**0.53**	*0.22*
Manufacture	**0.08**	*0.27*	**0.19**	*0.39*	**0.25**	*0.43*
Private household services	**0. 14**	*0.35*	**0.01**	*0.36*	**0.00**	*0.03*
Share of women	**0.48**	*0.20*	**0.47**	*0.19*	**0.50**	*0.20*
Dependency ratio	**0.79**	*0.97*	**0.86**	*1.02*	**0.73**	*0.90*
Wealth index	**5.91**	*3.52*	**5.09**	*3.36*	**6.26**	*3.55*
Wealth*health indicator	**4.32**	*2.75*	**3.53**	*2.72*	**4.79**	*3.15*
Wealth*edu indicator	**4.08**	*2.4*	**3.4**	*2.31*	**4.33**	*2.51*
Health indicator	**0.72**	*0.10*	**0.67**	*0.14*	**0.73**	*0.15*
Educational indicator	**0.69**	*0.54*	**0.66**	*0.06*	**0.69**	*0.12*

Appendix III
Temporary migration rates by regions at the NUTS III level (by counties) at the 2002 Census

County	urban	rural	total
vaslui	12.5	5	8
gorj	4.4	2.9	3.5
mehedinti	5.3	3.8	4.5
giurgiu	8.7	6.7	7.3
bucuresti	7.9	3.3	7.3
arges	8.6	3.1	5.6
prahova	8.9	5.9	7.4
calarasi	7	1.9	3.8
teleorman	10.5	7.3	8.3
buzau	8.6	3.8	5.7
ialomita	8.5	2.4	4.8
olt	5.9	2.7	3.9
hunedoara	12.7	6	11.1
arad	11.8	12.2	12
constanta	13.7	5.3	11.2
braila	10.7	2.4	7.7
dolj	11.3	4.1	7.7
dimbovita	20.7	8.7	12.3
galati	14	14.6	14.2
bihor	14.2	7.5	10.7
valcea	20	9.5	13.6
botosani	18.8	9.3	12.8
iasi	20.5	12.9	16.5
timis	18.1	14.1	16.5
mures	19.9	15.1	17.5
salaj	24.5	13.1	17.6
caras	18.1	13.1	15.9
cluj	23.4	11.8	19.6
covasna	26.7	14.2	20.5
tulcea	18.1	17.8	17.9
sibiu	21.6	10.7	17.9
alba	29.4	14.1	22.9
harghita	30.2	25.7	27.7
suceava	33	36.2	35.1
brasov	30.9	19.4	27.9
bacau	47.8	33.4	40.1
maramures	41.4	29.1	35.6
neamt	46.9	39.2	42
bistrita	42.7	33.4	36.8
satumare	45.9	49.8	48.1
vrancea	73.4	48.9	58.3

Sources: data from Census 2002

Appendix IV

Table: Romanian main economic trends (1991-2005)

	Population (in % of change)	**GDP growth**	**Unemployment (in % of labour force)**	**Permanent Migration (people)**	**Agriculture employment (in % of total employment)**
1991-2000	-3,24	-14.8	7,5	222933	38
2001	-0,12	5,7	6,6	9921	42
2002	-2,74	5,1	8,4	8154	36
2003	-0,28	5,2	7,0	10673	36
2004	-0,28	8,5	6,3	13082	32
2005	0,28	4,1	5,9	10938	32

Sources: WDI, World Bank and EBRD, Romanian National Institute of Statistics