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INTERNATIONAL MIGRATIONS AND AGGLOMERATION ECONOMIES

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OBJECTIVE

The aim of this paper is to analyse the influence of urbanisation in international migration all over the world, with a particular emphasis on ENC countries + Russia. Any work considering international migrations assume that migrants estimate and benefits of moving to alternative locations and migrate to where the expected discounted net returns are greatest over some time horizon. Nevertheless other noneconomic territorial features have been found to be essential elements determining utility differentials, and hence migration incentives of potential movers, across different territories. Actually, a large amount of man-made amenities are efficiently provided in cities and consequently urbanisation does not only provide higher wages but also more opportunities.

In this work we embrace the international migration with the urbanisation literature and we inspect the relationship in a panel data framework in which we consider a gravitational model for panel of 197 countries over the period 1960-2010. Particular attention is devoted to ENC countries + Russia.

MAIN RESULTS AND POLICY IMPLICATIONS

Nowadays large international flows of people are from low income countries to wealthy countries, while in the industrial period in the XIXth century, industrialised countries were the main senders. It is in line with the findings of Milanovic (2011): in the early 19th century just 30% of the total global inequality was due to differences in mean country incomes, while in the early 21st century that figure is over 80%. It was in the post-industrial period that began in the 1960s, when people began to move from lower income countries to wealthy countries.

Migration is mainly explained by the personal opportunities that the worker may face wherever he/she goes. In economic development models migration occurs between

lagged rural areas and developed urban areas, as the latter exhibit higher wages due to agglomeration economies. Individuals may only look for a monetary result of their investment in migration, although many other factors may play a role as well, and urbanization, industrialization and economic development tend to be parallel processes. If urbanisation is expected to promote economic growth, it is likely to be associated with higher opportunities and larger migration flows.

The influence of the urbanisation rate in international migrations has been analysed previously in the literature (Kim and Cohen, 2010). Neumayer (2005) suggests that people living in cities in the origin country are likely to be better informed than rural inhabitants. Martin (2003) argues that migrants go to cities in developing countries to get visas or make arrangements for legal or illegal migration. In the destination country, large and growing urban areas indicate better job opportunities and higher salaries. The world system theory supports the idea of expanding global cities concentrating educated and well paid workforce that demands unskilled workers, usually coming from international migration. This idea can be expanded from global cities (New York, London, etc.) to the gateway cities: in many countries there are a small number of traditional gateway cities, which are usually the largest metropolitan areas.

Nevertheless, size is not all: Frey (2002) has referred to a secondary migration process where immigrants move from the gateway cities to the "domestic migration magnet" cities in the United States. This is in line with recent OECD results, stressing that median and small agglomerations enjoy strong levels of development.

Finally, as stressed by Rodríguez-Pose and Ketterer (2012) "economic and noneconomic territorial features have been found to be essential elements determining utility differentials, and hence migration incentives of potential movers, across different territories" (p. 536). If amenities such as climate have been found important in the literature, a large amount of man-made amenities are efficiently provided in cities and consequently urbanisations does not only provide higher wages but also more opportunities, in line with Sen's concept of capabilities.

There is a long tradition of estimating bilateral migration flows as a function of characteristics in the source and destination countries only. Nevertheless there is a growing body of literature where the econometric analysis is consistent with a theoretical background. In this work we have reviewed the theoretical literature on migration, with a particular emphasis on Douglas and Wall (1993), Douglas (1997), Wall (2001), and Faggian and Royuela (2010), on one side, and Grogger and Hanson, (2011), Ortega and Peri, (2009), Beine, et al. (2011) and Bertoli and Fernández-Huertas Moraga (2011) on the other. Both approaches assume model of migration choice across multiple locations and derive an estimating equation from the model.

The empirical strategy has been twofold. On one side we have followed Ortega and Peri (2009), by using a log linear model, in which we have expanded the fixed effects to dyad-specific fixed effects structure and an origin country-time fixed effects structure. Consequently we are able to estimate the net effect of income (GDP per capita) and urbanisation (urbanisation rates, urbanisation in cities over 1 million, and urbanisation in small and median cities) on international migration.

We find in the full sample of 197 countries that the elasticity of income on international migration is 0.36, a result above the 0.29 of Ortega and Peri (2009) for a subset of OECD countries. This result, compared to the one obtained without fixed effects, implies that the short run effect is small compared with the long run structural effect.

Migration an urbanization at destination are taking place at an inverse rhythm. This is not surprising, as developing countries both expulse people to richer countries and increase their urbanisation rates. What is more striking is the fact that the proportion of people living in large cities (more than 1 million) displays negative elasticity with migration. This result confirms contrasts with the significantly positive parameter for median and small cities. Again, we have to consider the global trends: in developed countries the increase in urbanisation has been particularly strong in small and median cities, while the proportion of people in large cities have been stagnated (Western Europe) or even decreased (Northern Europe). Inversely, large cities have experienced a large increase in countries that are not receiving immigration, such as African countries. Overall, urbanisation and urban concentration are not being synonymous. On the contrary: migrants go to prosperous countries offering not only higher wages but also more and better services and opportunities, but they are offered more spatially balanced over time. At the same time, large cities in developing countries are not playing the right role as services providers, probably due to congestion and disordered urban growth.

We have also considered a model of migration restricted to a sample from ENC countries + Russia to EU27 countries. The results confirm the importance of income as the key pull factor and shows a large differential compared with the elasticity observed in the full sample: 2.77 in the model with the global urbanisation rate, 1.48 when considering the model with urbanisation in large cities, and 2.56 in the model with urbanisation in median and small cities. Cleary the increasing GDP per capita differential together with the proximity between the EU and the ENC countries has driven large migration flows compared with the full international sample.

Contrary to what is observed in the full sample, migration flows from ENC countries + Russia are driven to countries in which the urbanisation rate in large cities has increased more, particularly in Southern Europe. On the contrary, the urbanisation rate in small and median cities display non-significant parameters, what contrasts with the results of the full sample. Consequently, the arguments displayed for the full sample change for the ENC countries. Now people have migrated to countries where has increased more spatial concentration and income, countries where opportunities happen in large cities rather than on small and medium cities.

In order to account for heterogeneity and consequently taking into account the critiques by Santos Silva and Tenreyro (2006) (the pattern of heterokedasticty can affect not just the efficiency of the estimator but also its consistency), we have also estimated non-linear models (Poisson, Negative Binomial , etc.). Nevertheless, this strategy deserves another approach, as it is not feasible to perform the estimates for such a large amount of fixed effects. It has consisted on using the characteristics in origin and destination countries as variables to be controlled for. Finally, the preferred model is the Zero Inflated Negative Binomial model.

Regarding the economic variables we see in all estimates that GDP per capita at the destination country matters. Interestingly, the GDP per capita at the origin country displays a significantly positive parameter in two out of the three estimates where it is included. It means that people in more developed countries display a higher propensity to migration. We have included a list of variables related with the agriculture sector. Overall we see that higher agricultural weight in every country economy diminishes the propensity to migration. Institutional aspects matters as well, and in general more developed countries display higher migration outcomes, and that having social networks at the other country strongly influence higher levels of migration.

The variables related with urbanisation display positive results. As developed countries are the more urbanised ones, this result suggests again that migration levels are higher in more developed countries. The parameter of the destination country is about 7 times larger than the parameter of the origin country. It means that more urbanised countries display higher proportion of immigrants than what they expulse. Interestingly this asymmetry, typical in migration gravitational models, is much larger than the one observed between origin and destination GDP per capita and to any other variable. Urban growth matters, particularly at home (it looks like that people prefer migrate from own rural to own urban rather than migrating away), and large cities have a stronger influence than median cities (gateway cities).

The final set of non-linear regressions considers the restricted sample of international migration from ENC countries + Russia to EU27. The specification includes origin country-time fixed effects plus destination-country fixed effects, and consequently includes distance variables. GDP per capita is not a pull factor in these models, while regarding urbanisation rates the only indicator is the urbanisation rate in large cities (larger than 1 million). Again, it is confirmed the fact that international migration from ENC countries + Russia towards EU27 countries have been directed towards countries where large cities have experienced higher increases.

Given the nature of this work, focused on the analysis of the influence of pull factors with a particular emphasis on income (GDP per capita) and urbanisation (at different urban sizes), the policy conclusions that can be derived from this work are related to the development distance between countries. Migration is intrinsically good, as people locates where will be more productive. In addition, people move to places where they will enjoy better opportunities and quality of life. These places are usually where services are more efficiently provided, this is, cities. We have found that urbanisation, that can be considered a measurement for development, plays a role in explaining international migrations, and that people have moved to places where urbanisation has experienced quick expansion. The role of large versus small and median cities arises for explaining international migration depends on the circumstances: small and median cities explains international migration in the whole World, while for ENC countries + Russia international migrants preferred countries with expanding large cities.