

Economic development of EU metro regions: which factors better explain differences in economic performance at different levels of income?

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Extended Abstract

The EU has 271 metro regions which in 2013 held 59% of the population, 62% of employment and 68% of GDP (PPS). This highlights their role as centres of employment, their higher productivity and higher wages.

The present work will illustrate the main findings of a recent report produced by the European Commission, in cooperation with UN-HABITAT, which analysed, among others, the economic development of EU metro regions in the period 2000-2013. It also extends the above mentioned work in three directions:

1. It expands the period of analysis to cover the years 1995 to 2014.
2. It investigates which factors better explain differences in income levels and growth among EU metro regions, by applying a quantile regression approach, to allow for different impacts of the covariates at different levels of economic development.
3. It tries to establish if network effects for cities exist, how strong they are and whether they depend on the city size and its level of economic development.

Cities and especially larger cities tend to have more highly educated population than other areas. In the EU, around 30% of its population aged 25-64 has a completed tertiary education. In metro regions, this is slightly higher at 32% and it is 41% in capital metro regions. These differences in education levels, however, do not fully explain productivity differences.

In all EU countries, the average productivity of metro regions is higher than that of the country. Furthermore, large cities tend to be more productive than smaller cities. In virtually all countries, the capital, usually the largest city, has a (far) higher productivity, but some cities have a productivity level below the national or even the non-metro region; and this includes a number of large ones too.

Europe has a smaller share of its population in very large cities. Given that agglomeration economies increase with city size, this could reduce productivity in Europe compared to parts of the world that have more large cities. However, by international standards, European cities tend to be well-connected and quite close to one and other. If these city networks have similar productivity enhancing effects as agglomeration economies, the relatively small size of European cities would not be a disadvantage after all.

Not all EU cities are close to each other and some cities in central and eastern EU countries are not connected to a good transport network. As a result, cities close to a city of a similar size may gain from this effect. Regional centres without cities nearby are less likely to benefit from this effect, but they may

host more specialised functions because they provide services to a wider region than a city of a similar size next to a large city.

Borrowed strength seems to be especially important between smaller cities, while larger cities benefit less. Analysing the impact of the five closest neighbouring cities reveals positive and significant impact especially for small cities surrounded by other small cities. The clustering of productivity showed no significant cluster emerging around larger cities (such as London, Madrid or Paris), while a number of well-connected smaller cities seem to benefit from agglomeration economies. In central and eastern EU countries, the productivity of the capital city is much higher without any significant spill-overs on nearby cities which have much lower productivity levels.

Although city size has an impact productivity levels, there remains a huge unexplained variation between cities. This variation and how a city can transition between different levels of development will be analysed. There are two key questions: (1) How can high-income cities maintain their advantage? (2) How can lower income cities transition to a higher income level?

The concept of development clubs can be used to describe and analyse changes because the motors of change differ from one club to another. A very-high-income economy, for example, has high wages and high employment rates, whereas a low-income economy will have low wages and/or low employment rates. The high-income economy must resist cost competition from below by continuing to innovate or capture innovative, high-wage sectors. The low-income economy can mobilize low-cost capital and labour to capture activities susceptible to being re-located in search of cost reductions. Each club, therefore, has specific needs and challenges related to its starting point and its medium-term prospects.

Grouping urban economies into clubs or income groups provides a way of generating powerful insights into development and its prospects. It avoids treating all cities in the same way (one-size fits all) or focussing narrowly on a few case studies.

Cities have been classified into four income groups according to their level of GDP per head (in PPS) in 2013:

GDP per head thresholds per development club or income group

Development club or income group	GDP per head (PPS) relative to EU average	Number of cities	Average population size
Very-high-income (VH)	>150% of the EU average;	25	2,400,000
High-income (H)	between 150% and 120%	50	1,134,000
Medium-income (M)	between 120% and 75%	148	933,000
Low-income (L)	less than 75%	48	901,000

The middle-income cities had lower than average GDP growth. A group of cities with low population growth but robust GDP growth can be found in eastern and southern Europe. A low GDP and population group can be found in Germany (mainly in Eastern Germany). In France, cities with a low GDP growth rates can have either a high or low population growth. The high population growth reflects places made attractive by the French provision of amenities and social services across its territories, but which do not create local market-based employment or income, as well as the attractive climate and landscape in the

French sunbelt. The low population growth rate regions there are mostly in deindustrializing regions with fewer climate and lifestyle amenities.

In the low-income group, there is in general low population growth compared to the EU average, but there are three distinct sub-groups. One of them has high GDP growth, almost exclusively in central and eastern EU countries, reflecting catching-up. The second sub-group has higher population growth, but low GDP growth. It is principally in Southern Europe, reflecting sun-seeking migrants, akin to the French sunbelt. And finally, there is a group of cities with both low GDP and population growth.

To summarize, the (very) high-income group continue to attract people. A sub-set of the middle-income cities do as well, but probably because of mostly non-market factors having to do with sun and lifestyle amenities. The low-income group is mostly unattractive to in-migrants and tends to generate out-migrants.

Very-high-income cities must maintain their specialisation in high-wage activities in the face of a changing landscape of comparative advantages. Specifically, they must out-run two forces: one is that the activities that are high-wage at one moment in time tend progressively to become more widespread, more routine, and hence to allow entry of imitators that lower their high wages. A second is as innovative sectors mature, they spread out geographically, so that the leading region no longer has a lock on them. The richest countries and regions, in other words, can only survive through sectoral succession (replacing old activities with innovative new ones) or by continuing to push the edge of innovation in their existing broad areas of activity.

High-income cities face issues not so different from very-high income cities, but they tend to be more vulnerable from having their advantages overlap with the medium-income cities that are developing their skills and productivity. High-income cities are also vulnerable to standardisation of the products they make (product cycles, maturity), which often allows industries to move to locations with lower costs and less-skilled labour. The impact of this trend depends on the capacity of the high-income city's firms to generate innovations within their areas of economic specialisation or to move into related areas of the economy.

At the other end of the spectrum, low-income cities suffer from limited skills and limited endowments in the area of technology and organizations, but they have the advantage – generally speaking – of having low-cost land and labour. This is the mirror image of the situation of the very-high-income cities. As noted earlier, as economic activities become more routinized, they seek lower cost locations, and the low-income cities offers just that. These cities can develop by making land and labour available at low cost; this is the 'advantage of backwardness.'

There are two challenges, however, that low-income cities face. First is whether they actually mobilise their natural advantages, making their labour and land available at low cost and high efficiency. This depends on their market access and the quality of their institutions, and a minimum of skills in the labour force.

Another issue for low-income cities, however, is how to handle success. This is what is known in international development economics as the 'middle-income trap.' A very common observation in comparisons of countries is that successful early developers can enjoy very high growth rates (what are

often known as ‘miracles’) for a certain number of years, but that they always then come to a long-term slowdown. .

Medium-income cities thus have some of the hardest developmental challenges: they are neither as productive nor as innovative as the high and very-high-income cities, but their labour and land prices are not as low as those of the lower-income cities.