

IMPROVE THE PRODUCTIVITY POTENTIAL OF CITIES IN ROMANIA

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Abstract

The present article investigates the fact that as Romania's economy changes, its center of gravity moves from agriculture to industry or industry to higher added-value services, the role of urban areas in facilitating productivity growth and higher gains through exploiting agglomeration potential becoming more and more important. Cities have positive spillover effects only by absorbing economic migrants, increasing productivity and improving the results of human development. This is happening to a large extent in Romania, but much of this migration also comes from the local basin - that is, the deficient parts of the regions lagging. A solution to improve the productivity potential of Romanian cities is to encourage the development of the private sector by developing related infrastructure or by promoting healthy markets and landscapes that create conditions for population migration to cities.

Keywords: productivity, city, migration, private sector, infrastructure

JEL Classification: R11, R13, Q56

Introduction

Transforming national and regional economies from a structural (sectoral) perspective is almost always accompanied by spatial changes, a change in the scale and / or nature of urbanization.

As the economy of Romania turns, its center of gravity moves from agriculture to industry or industry into higher added-value services, the role of urban areas in facilitating productivity growth and higher gains by exploiting the agglomeration potential becoming the more and more important.

Thus, investment in cities is a source of productivity growth, the accumulation of human capital and, ultimately, opportunities for opportunity are key to achieving policy goals for the regions lagging behind.

Description of the Problem

In Europe, primary cities account for less than 16% of the EU population, they generate 23% of its GDP and 228 secondary cities generate another 45% of the EU's GDP.

In Romania, the functional urban areas in Bucharest and the county capitals generate 90% of the total revenues of the enterprises in the country. In low-income regions, most cities have contributed to economic growth, there are still large gaps in the productivity of primary and secondary cities.

Primary cities - such as Bucharest, Sofia, Budapest and Warsaw - have come to a point where they are almost on par with the primary cities of Western Europe. However, differences between primary and secondary cities in low-income countries remain much higher than in other parts of Europe. Together, these factors set parameters for short- and medium-term economic outcomes.

There are five priority areas for eliminating distortions and building up facilities to complement sectoral interventions in regions lagging behind: (1) addressing macro-fiscal shortcomings; (2) improving the regional business environment for businesses; (3) harnessing the productivity potential of cities; (4) skills training; and (5) institution building.

Unstable and weak macroeconomic conditions generate risks and uncertainties that prevent the private sector from making forward-looking and productive investments.

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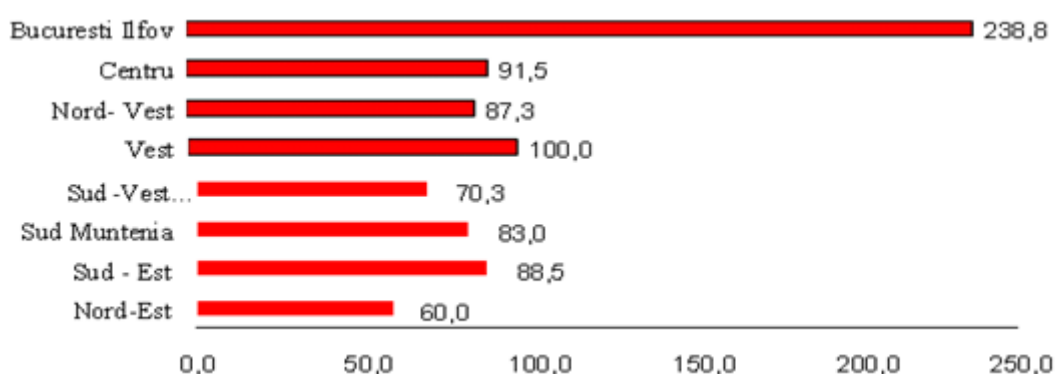
In 2016, the Bucharest-Ilfov region of Bucharest was considered a highly developed region at EU standards, 139% higher than the EU average.

The rest of the country, however, was below the EU standard with a real GDP per capita (PPS) between 27% (North East) and 48% (West). In 2016, income inequality between the eight regions of Romania has become a growing problem. Eurostat data show that the Northeast of the country, the poorest area in Romania and the fifth poorest region of the EU, represents only 36% of the EU average for development in 2016 compared to 139% for the region (South of Transylvania), 51% for Northwest (North of Transylvania), 50% for South East (including Constanta), 46% for South-Muntenia and 42% for Southwest- Oltenia.

Compared to 2007, GDP per capita in PPS increased by 12 percentage points, from 48% to 60% of the EU average, the South East by 14 percentage points, the two Transylvanian regions and Muntenia with 10PP, in Romania - Moldova and Oltenia - it lagged behind an increase of only 9pp.

There are gaps between the regions of Romania, the regional disparity index is an indicator that gives the scale of this phenomenon (Figure 1).

Figure 1. The Regional Disparity Index in Romania in 2015 (=100)



Sursa: date Eurostat 2017

The eight regions have some particularities in their economic structure, which makes certain sectors play a decisive role in their future development. Thus, the economy of the southern regions of the country (South - East, South - Muntenia, South - West Oltenia) is influenced by the evolution of the agricultural sector, which holds important weights of over 15% in these areas, growth of gross domestic product to be negatively affected. They are also regions with significant tourist potential (the Bucovina area in the North - East region, the Danube Delta and the Danube Delta in the South - East region, etc.), their economic evolutions being influenced by the level of utilization of this potential. Another particularity is represented by the areas where the extractive industry played an important role (the Jiu Valley basin in the South - West Oltenia region) and whose economy was affected by the extensive restructuring of the mining sector. The disparities between the 8 territorial regions of Romania increased rapidly in and especially between Bucharest and the rest of the country (Table 1).

Table 1. Disparities between the 8 territorial regions of Romania

Regions in Romania	GDP EUR billions	% of national GDP	GDP Per capita euro	Per capita GDP in PPS	Per capita in PPS GDP per capita in PPS; U.E. 28 = 100
Macroregion 1	38280	22.5	7800	15300	53
Nord-Vest	19519	11.5	7600	14900	51
Centru	18761	11.1	8000	15800	54
Macroregion 2	35241	20.8	6200	12200	42
Nord-Est	17081	10.1	5300	10400	36
Sud-Est	18159	10.7	7400	14500	50
Macroregion 3	67577	39.8	12700	25100	86
Sud-Muntenia	20583	12.1	6800	13400	46
București-Ilfov	46994	27.7	20500	40400	139
Macroregion 4	28532	16.8	7500	14900	51
Sud-Vest Oltenia	12451	7.3	6300	12400	42
Vest	16081	9.5	8900	17600	60
ROMANIA	169771	100.0	8600	17000	58

Sursa: date Eurostat, 2017

In 2016, only three of the eight regions of Romania are still included in the top 20 poorest regions of the EU.

The performance of secondary cities for regions lagging behind is important because their growth will depend to a large extent on the competitiveness of secondary cities.

The evidence from an assessment of the performances of the secondary cities in Romania attests to these tendencies of the secondary cities as engines of growth of their regions, the main growth poles in the country (outside Bucharest) are Brasov, Cluj-Napoca, Constanta, Craiova, Iasi, Ploiesti and Timisoara.

These cities not only attract migrants from the most extensive areas but also hold a share in regional economic output, which usually doubles their share in the regional population.

The findings from Romania's analysis indicate a clear conclusion about the size of the city, the largest ones having a significantly higher productivity. This is important because there are some limits on what type of cities can influence regional development on a sustainable basis, those with large metropolitan areas and significant secondary cities, or urban areas and less efficient cities as growth factors.

In the case of regions lagging behind, a possible explanation of the stage they are in may be the fact that there is no high potential city in their region.

There are significant differences between the economies of the main cities in the regions lagging behind (which tend to be secondary cities) compared to the rest of the region (which tends to be rural).

In the northeastern area of Romania, Iasi is the most dynamic city in the region: GDP per capita is significantly higher than the rest of the region (5900 euro compared to 4600 euro for the region), but it is significantly lower than the Romania as a whole (7600 euros).

With an average net monthly gain close to the national average (404 euro versus 418 euros nationwide) and well above the region level (351 euro), the composition of the city's GDP is different from that of the region as a whole (which is significantly agricultural).

Aid to secondary cities must be an important part of the policy of supporting regions lagging behind. This does not mean that all cities should be supported and that all regions lagging behind should concentrate on the resources of large cities.

It is not only the competitiveness of the city that counts for the regions that have lagged behind, but also the extent to which its improved economic and social outcomes are repercussions on them.

Methodology and Data Sources

An analysis of the results of human development in Romania shows that cities are well ahead of the rest of the country in the results of human development, and those municipalities that improve their Local Human Development Index tend to be those around urban areas.

It is also noted that while site variations decrease slightly over time, the highest convergence occurs within the group of urban locations.

There are also significant differences between cities in terms of their effects on enlargement. In all cities in Romania, the impact seems to decrease on average to 30 km, suggesting relatively limited coverage in the region.

While some cities have not expanded over time (for example, Constanta and Sibiu), the other have expanded on average by 8 kilometers. It's hard to say if the dynamics of Timisoara and Arad, with extensive suburbanization, are better or worse than the dynamics of Cluj and Iasi, which are compact cities with limited expansions in the region.

The reality is that they are shaped largely by the nature of the structural changes that occur in the respective regions - in Cluj and Iasi, to the high value services that crowd in the urban areas in Timisoara and Arad due to the transport corridors in the periurban areas.

In Romania, the functional urban areas in Bucharest and the county residences generate 90% of the total revenues of the enterprises in the country. The magnitude and nature of the city's burst effect is driven by migration and the expansion of city periphery through regional distribution chains and service delivery ties.

Cities have positive spillover effects only by absorbing economic migrants, increasing productivity and improving the results of human development. This is happening to a large extent in Romania, but much of this migration also comes from the local basin - that is, the backward parts of the regions lagging behind.

Between 2002 and 2011, approximately 1.1 million Romanians moved to the functional urban areas of Bucharest and the 40 county residences. For this population, migration meant not only an increase in living standards but also an increase in productivity.

By encouraging the development of the private sector, by developing related infrastructure or by promoting healthy markets and land, conditions are created to migrate the population to cities. Migrants also benefit and strengthen agglomeration savings. Another aspect to be considered is that cities generate dynamics through the multitude of jobs for the population, which has higher productivity and wages but also a higher cost of living.

Cities provide easier access to culture, art, entertainment and diversity, but also have a higher incidence of crime, pollution and congestion.

This problem of congestion effects is linked to the population's tendency to commute and suburbanization.

Results Obtained

The analysis of the development of secondary cities in Romania shows that much of the increase does not come as a result of population migration, many secondary cities and functional urban areas are developing rapidly, primarily due to suburbanization. Opportunities in functional urban areas attract workers despite congestion costs (high housing costs, crime or pollution disadvantages, etc.). This will lead to a continuous increase in productivity that is not sustainable.

For example, in Romania, the functional urban areas of the counties increased especially in the period 2002-2011, in most cases it was determined by a strong increase in suburban areas, while the populations of most of the cities decreased, with the exception of the cities Cluj and Timisoara.

A similar trend of suburbanization has been observed in many European cities (Cadavid et al, 2017) and suggests that suburbanization occurs in several regions lagging behind, especially in Europe's low-income areas, while functional urban areas of the counties are expanding even if

central cities are stagnating or declining due to both demographic changes and policy-induced congestion costs.

Taking into account the potential of cities in the regions lagging behind, to support high productivity growth, to transform regional economies and to generate regional effects, it is important to take into account the links between cities and the accumulation of human capital.

Thus, university cities can have a unique potential to support growth in the regions lagging behind, both because of their potential for positive economic spread and due to the quality of life characteristics that attract and retain skilled workers.

Regional policy can play an important role in unlocking the urbanization potential to generate positive effects in regions lagging behind. Urban areas already absorb much of the structural funds, partly because of their ability to raise funds.

However, EU member countries have been obliged to allocate only 5% of the European Regional Development Fund (ERDF) to sustainable urban development activities.

Given the growing importance of urban areas in terms of the results achieved in regions lagging behind, it is important to take into account the role of the regions and the nature of the urban form that is appropriate to support regional transformation. In order to diminish and eliminate distortions leading to inefficient suburbanization, consideration should be given to strengthening the physical, social and cultural assets of cities and continuing to develop more efficient transport links between central cities, peri-urban areas and rural areas.

It will also need to increase the quality and capacity of social and economic institutions at city and regional level and link to urbanization policy. Both urbanization infrastructure and related infrastructure support the economic potential (increase productivity) and access to opportunities through the same channel - ensuring access to markets (consumers, suppliers and labor markets). Infrastructure connectivity has long been centered on cohesion policy, with tens of billions of euros spent on large-scale infrastructure (eg trans-European networks) for the integration of European markets by supporting market access and mobility in the labor market for work.

While some regions still require large-scale investments in related infrastructure, we may reach the limits of the impact of these large investments. Market access, driven in part by transport infrastructure, has a significant impact on the economic potential of a region. At the same time, the impact of investments in related infrastructure at European level on regions lagging behind would now be quite limited.

The development of rural areas is dependent on ensuring a high degree of accessibility and diversified transport links to major urban centers. Cities in cross-border areas have an increased capacity for cooperation and can lay the foundations of functional urban systems that enable efficient management of people's flows, commodities, access to opportunities for the population is an attractive element in the configuration of quality urban and rural space.

Improved accessibility through connectivity becomes a priority in regions lagging behind, especially in peripheral areas, there is a strong correlation between access to a developed road infrastructure and economic and social outcomes. High peripheral regions tend to have a high level of home access through a developed road infrastructure.

It has been found that not both low-income and low-growth regions have low levels of access to developed road infrastructure, but also have large differences between access within lagging regions and access to other regions of the same country. In Romania, a first step towards mitigating the consistent development gaps between regions is without a doubt their interconnection through high-quality transport infrastructure.

The region with the largest public road network is Bucharest-Ilfov (48.9 km / 100 km²), followed by the South-West region (36 km per 100 km²) and the South-Muntenia region (36.5 km / 100 km²). In contrast, with the worst public road infrastructure is the South East region (30 km per 100 km²).

The regions of North-East Romania are at a great distance (about 2000 km) from the center of Europe and 375 km from Bucharest. The biggest problem in the region is the underdeveloped road infrastructure, there is no motorway between the North-East region and Bucharest, neither between Transylvania and neighboring countries.

The main road connecting Bucharest to the capitals of the North-East County, the E85 (European road) and the national road DN2 are in a very poor condition and are very crowded. This makes transport of people and goods a very great effort, and going from Bucharest to Botosani, the northernmost residence, could take even one day.

However, major additional investments in improving the connectivity of regions should be carefully prioritized and selected to provide good value for money. In the case of the North-East region of Romania, the critical link infrastructure linking the Bucharest region and the European markets is still a priority.

Romania does not have a functional framework for the development, prioritization and execution of public investment projects and the capacity for long-term strategic planning and assuming medium-term commitments on investment projects is insufficient. Also, funding opportunities through structural and cohesion funds are insufficiently exploited.

According to the IMF, improving the quality of public investment over the period 2016-2020 could add 0.5pp to the potential GDP growth rate at the end of the interval. Thus, the existence of a policy mix that supports the development of counties with a relatively low level of development is necessary. The vast majority of these counties occupy a central place in regional politics.

Conclusion

Regarding the regions, namely counties with limited potential for endogenous development, the formation of a critical mass capable of activating it depends decisively on supporting the process of technological dissemination and, on this basis, R & D and innovation.

In conclusion, the regional development implies the development of strategies, smart specialization and innovation at the level of each locality, promoting the research-development-innovation activities depending on the supply of production factors, human capital and the possibilities of cooperation with university and research environments, as well as business, specific to each region or county.

This intelligent specialization must satisfy, first of all, the requirements of the economic and social prosperity and competitiveness of the locality, which does not exclude the spillover effect at national and community level. The smart specialization of regional endogenous growth targets any economic and social domain in which micro and macro-product and product innovations can be applied, in the context of the local, regional and national policy mix that manages to internalize positive externalities, a system payment of subsidies, state aid or other financial means of budgetary assistance. Research on the endogenous development of Romanian regions and counties requires further study of the dialectics of internal and external factors of economic growth, endogenization of external factors, knowledge of the territorial propagation effects of positive and negative externalities, as well as the market mechanisms of their internalisation complementary to public-private partnership at local, county, regional, national, EU and extra EU-28 levels.

Romania's R & D investments are consistently much lower than those achieved at European level. In Romania, approx. 60% of the research expenditure is spent by the state, and approx. 70% of total funding supports activities that do not go beyond the technological development phase, in contrast to approx. 1% for RDI products and up to approx. 2% for product development, ie the essence of innovation and business initiative.

If the phenomenon of more marked regional disparities in the Member States continues, it is certain that the generated effects will also have a negative impact on the country-wide convergence process.

It is also noted that there are differences between the counties in Romania, with Bucharest on the top position, followed by the districts of Ilfov, Timis and Cluj, Iasi, Constanta. There is a pronounced upward trend of the spatial disparities in the Romanian counties in the long run, with some deviations in the subperiods, depending on the evolution of the national economy as a whole. The persistence of severe spatial inequalities in the Romanian economy requires adequate territorial policies capable of supporting the faster development of the lagging counties by capitalizing local resources for economic growth.

In Romania we can see a recovery process. One possible explanation is the progressive reforming process and the stabilization of GDP growth rates.

Bibliography

- Amin, A., and Thrift, N., eds. 1994. *Globalization, Institutions, and Regional Development in Europe*. New York: Oxford University Press.
- Bastos, F. and Nasir, J. 2004. "Productivity and the Investment Climate: What Matters Most?" Policy Research Working Paper 3325. World Bank, Washington, DC.
- Boschma, R. A. 2004. "Competitiveness of Regions from an Evolutionary Perspective." *Regional Studies* 38: 1001–14.
- Butler, S. M. 1981. *Enterprise Zones: Greenlining the Inner Cities*. New York: Universe Books.
- Cadavid, P.R., Cineas, G., Quintero, L.E., and Zhukova, S. 2017. *Cities in Eastern Europe and Central Asia: A Story of Urban Growth and Decline*. Washington, DC: World Bank.
- Commander, S. and Svejnar, J., 2011. "Business environment, exports, ownership, and firm performance." *The Review of Economics and Statistics* 93(1): 309-337.
- Ibáñez, J.N. and Rotoli, F. 2017. "Measuring the Impact of the Trans-European Road Transport Network on the Accessibility of European Urban Agglomerations." *Transportation Research Record: Journal of the Transportation Research Board* 2605: 72-82.
- Klapper, L., Laeven, L. and Rajan, R. 2006. "Entry regulation as a barrier to entrepreneurship." *Journal of Financial Economics* 82 (3): 591– 629. Krugman, P. 1991. "Increasing Returns and Economic Geography." *Journal of Political Economy* 99(3): 483–99.
- Pritchett, L. 1997. "Divergence, Big Time." *Journal of Economic Perspectives* 11(3): 3–17.
- Volintiru, C., Ionescu-Heroiu, M., and Goga, S. 2018. "Benchmarking EU Fund Absorption in Romanian Municipalities." Unpublished draft, World Bank, Washington, DC.
- Juncker, J.C. (14 septembrie 2017). *Starea Uniunii*, https://ec.europa.eu/commission/priorities/state-union-speeches/state-union-2017_ro
- Volintiru, C., Ionescu-Heroiu, M., and Goga, S. (2018). *Benchmarking EU Fund Absorption in Romanian Municipalities*, Unpublished draft, World Bank, Washington, DC.
- 2017a. *Doing Business in the European Union (2017): Bulgaria, Hungary, and Romania*. Washington, DC: World Bank.
- Debacker W. and Manshoven S. (2016) *Synthesis of the state-of-the-art BAMB report: Key barriers and opportunities for Materials Passports and Reversible Building Design in the current system*. VITO.
- World Bank Report (2018) *Rethinking Lagging Regions (2018) Using Cohesion Policy to Deliver on the Potential of Europe's Regions*.