MAGNET CITIES
Migration and Commuting in Romania

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Executive Summary

Romania is the fastest growing economy in the EU, and Bucharest and Romania’s secondary cities have been its main growth engines. However, while Bucharest has reached productivity levels comparable to those of other EU capitals, secondary cities in Romania still have some ways to go before competing on equal footing with secondary cities in the EU. Without strengthening these secondary cities, the Romanian economy cannot sustain growth in the coming years.

The most competitive secondary cities are those that are most astute at attracting people, investments, and tourists. This report looks at the cities that have been most successful at attracting migrants and commuters, and proposes a number of recommendations aimed at making secondary cities more attractive and competitive. In what follows we will discuss the key findings and proposals of the report.

Key Findings

While not all Romanian cities are dynamic economic hubs, most have witnessed a development dynamic in the past years that goes beyond their administrative boundaries - they are basically part of functional urban areas. It is these functional urban areas where most of the population growth has happened in Romania in the past years. The functional urban zones (FUAs) of Bucharest and the 40 county capitals in Romania generate 90% of national firm revenues, amass 80% of the people with higher education, have attracted 67% of commuters in 2011, and 66% of migrants between 2001 and 2011, amass 61% of overall employment and 58% of the total population of the country.

The most dynamic cities attracted labor force from quite a distance, and the localities with a more mobile population tended to be more developed than the localities with a less mobile population. In essence, development spills over from the most dynamic cities to the surrounding areas, and this is a key dynamic of the development process. Without strong cities, one cannot have strong regions and a strong national economy. The FUAs of the county capitals, generate between 69% and 89% of firm output in their respective regions, and they register an average Local Human Development Index score that is between 10% and 24% higher than the regional average.

In 2011, only 31% of the stable population in Romania (around 6.2 million people) changed their residence inside the country at least once during their lifetime. However, Romania
has one of the highest emigration rates in the EU. Key features of in-country migrants to the FUAs of Bucharest and the 40 county capitals include: 1) 57% are female; 2) 51% came from a different county, although not from a very distant one; 3) 67.5% moved to an urban area; 4) 50% moved from rural to urban areas, but there is a growing share of urban to urban migration; 5) 60% of migrants are over 45 years of age; 6) 58% moved for personal reasons (e.g. marriage), 21% moved for work, and 13% moved for studies; 7) 23% have tertiary studies and 34% have upper secondary studies; 8) 47% are employed, while 33% are retired; 9) 55% are qualified workers, generally requiring secondary education, while 28% are managers and professionals with higher education; 10) 58% work in the services sector, 23% in industry, 12% in agriculture.

**Overall, 1.8 million Romanians were commuting for work to another locality in 2011, countrywide. Of those, 1.2 million commuted to the FUAs of Bucharest and the 40 county capitals.** Key features of commuters to the FUAs of Bucharest and the 40 county capitals include: 1) 61% are male; 2) young people (less than 35 years) are more mobile and are willing to travel longer distances; 3) 62% come from rural areas; 4) 26% have tertiary education, although only 18% of jobs commuters occupy require tertiary education; 5) 58% have completed a form of secondary education; 6) 56% are working in services sectors; 7) the share of blue-collar commuters had decreased from 45% in 2002 to 15% in 2011; 8) the automotive industry is most dependent on commuters (46% of the total labor force).

**Large industrial centers, such as Ploiești and Pitești receive more commuters, while service driven economies, such as Cluj-Napoca and Iași, receive more migrants.** This is a dynamic that makes intuitive sense, and a dynamic that has important implications for local administrations. Basically, manufacturing centers will sooner or later face limits to growth, as salary growth in these sectors cannot outpace the growth in the cost of living in these cities. On the other hand, high value-added services sectors can sustain salary growth more easily and they encourage salary growth in all other sectors too¹. That is why cities with a strong high value-added services base (usually the larger university centers) are more attractive to migrants. Nonetheless, it seems there is a strong link between the growth in the number of jobs and a growth in commuting, indicating that urban economic growth is inherently metropolitan economic growth, requiring the proper interventions and assistance from the local, county, national, and EU level.

**Overall, one can say that migration and commuting are probably the most accurate indicators of territorial competitiveness.** The reasons that people chose to move to a city are varied and multifaceted, varying from job and education opportunities, to personal reasons (e.g. for marriage), and to reasons that have to do with quality of life, shopping options, cultural and arts scene, the presence of like-minded people, or the proper climate. The cities, or rather the functional urban areas that manage to attract the most people, are usually those that have managed to offer the widest menu of things people are looking for. Thus, the number of people that willingly migrate and commute to a certain area, represent one of the most important measures of success for that particular area.

**Migration to major cities in Romania has been a few orders of magnitude higher between 2001 and 2011 (a decade of fast economic growth) than in all the previous decades.** In dynamic functional urban zones such as Cluj-Napoca, Timișoara, or Iași, over 35% of all migrants made the move between 2001 and 2011. This hints to a reshuffling of urban dynamics, after years of central planning, and empirical data does indeed show that these three cities are widening their area of influence (see map below), and are the most likely candidates for strongest secondary cities in Romania.


XII - MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Although central planners attempted to have a balanced territorial development, they seem to have achieved the opposite effect. Migration data shows that Bucharest clearly dominated migration flows before 1989. In the years of rapid economic growth (2001-2011), regional centers such as Cluj-Napoca and Iași have become more prominent, and regional influence areas seem to be more balanced. As urban centers such as Constanța, Brașov, or Craiova will become stronger, the territorial influence areas are likely to be even more balanced. Ploiești will likely be part of the largest urban agglomeration in Romania – that of Bucharest.

Migration and commuting are not only spurred by economic growth, but they are also critical to the development process. As an economy enters an expansion phase, it is critical that resources, including human resources, are allocated efficiently where they are most needed. The more mobile people are, the better off the economy is. To encourage migration and commuting, cities have to offer something that people need, want, or desire, and public authorities have to provide the policies and infrastructure that makes the movement of people as seamless as possible.

The factors that make a particular FUA attractive to people are not always under the control of local authorities, and often times they are a matter of path dependency. Nonetheless, local authorities have a number of tools to their disposal to help make their cities more attractive. Some of the factors that have helped some Romanian cities become more competitive include:

1. **Size**. The bigger you are the bigger gravitational pool you tend to have. Larger cities in Romania have by-and-large managed to attract more people. Bucharest, as the primate city in Romania, has been, and will likely remain the main attraction hub in Romania. When it comes to commuting, the strength of the private sector has also played a role. Thus, relatively smaller FUAs like Pitești and Ploiești, have attracted the highest number of commuters after Bucharest, largely because of the strong automotive industry in the first case, and the large oil refineries in the second case.
2. **Proximity to density.** Cities that are close to larger cities tend to initially lose out in the economic growth game (although suburbs and peri-urban localities thrive), as qualified people migrate to the larger city in search of better opportunities. As the “economic cup” of the larger city fills up (i.e. as costs go up in the larger city), benefits start to spill over back to the smaller cities. This is what happened in Romania too, with growth poles like Ploiești, Brașov, Constanța, or Craiova being in the sphere of influence of Bucharest, and initially losing out to the capital. Now, as costs and salaries in Bucharest have grown a lot, more and more investments go to the cities around Bucharest.

3. **Proximity to the West.** The closer cities are to the Western border of Romania (where 70% of exports go through), the better off they tend to be. Proximity to markets matters. Thus, smaller, but strategically located FUAs, such as Oradea, Arad, or Sibiu, have been among the top performers in recent years, both in terms of economic growth and in the numbers of people they have managed to attract.

4. **Universities.** By-and-large, the FUAs with the strongest universities have also been the most successful at attracting people. Universities offer a unique advantage to the FUAs that house them. They bring in a continuous and constant supply of young and well educated people, which, when matched with the proper job opportunities, make for a successful recipe. Many of the students that graduate from these universities decide to stay in the FUA if the appropriate job opportunities are available, and having such an in-flow of young and qualified people is critical for Romanian cities – particularly in an environment of overall demographic decline.

5. **Economic make-up.** Cities with a higher share of high value-added sectors fared better than cities with a low share of such sectors. As cities grow, so does the cost of living, and without economic sectors that can afford to grow salaries continuously, the city eventually hits a growth block. That is why there are, arguably, not a lot of manufacturing metropolises in the World. Overall, the cities with a higher share of high value-added services sectors, did better than the ones with a stronger manufacturing base. Cluj-Napoca, Timișoara, and Iași have therefore the strongest prospects for sustained future growth. Obviously, strong universities are critical to attracting high value-added service industries, as they supply these industries with the needed qualified labor forces.

6. **Quality of Life.** While quality of life is a luxury many local administrations cannot afford to pay attention to, many people care about it – particularly the most qualified people, which have the highest mobility and can chose between many different cities. Cities with an active civil society, a good night life, and plenty of opportunities to spend free time, will generally do better than cities without such amenities. To most people, quality of life means other like-minded people. Thus, qualified people usually move to places with a lot of other qualified people. This is the best way they can get better at what they do.

A few caveats are also worth noting here:

- **Regional catchment areas.** With the exception of Bucharest, which has a national reach, and maybe with the exception of Cluj-Napoca, Timișoara, and Iași, which manage to attract people from other urban centers, most FUAs in Romania have a limited reach. This means that they primarily attract migrants and commuters from a close-by area, so the qualifications of their migrants and commuters are usually not better than the general qualifications of the people in the region.

- **Success does not come without cost.** The FUAs that are most successful in attracting people, also witness a general increase in living costs, with negative side-effects for people that don’t benefit from high value-added sectors.
c) Commuter figures imply both a push and a pull factor. While many commuters are attracted to a city because of the opportunities it offers, a significant share of commuters also represent people that moved outside the core city while continuing to work in the city. The reasons people move and subsequently commute are manifold – e.g. high cost of living in the core city; poor quality of services in the core city; the need for more spacious housing units; poor spatial planning. This is a dynamic that needs to be well understood and properly unpacked when devising local/metropolitan policies and interventions. For example, the development of very good metropolitan road infrastructure, may encourage a suburbanization process, pushing people outside core cities into the suburbs and peri-urban areas.

KEY PROPOSALS

While geography, path dependency, and sheer luck play a role in a city’s competitiveness, public authorities, and the actions that they take, also play an important role. If infrastructure interventions and public policies are properly dispatched they can have a significant impact. Good connective infrastructure can enable easier access to markets, better mobility, and a better allocation of resources. Investments in quality of life can make cities more attractive, while integrated metropolitan planning can remove barriers for new housing and business developments. In what follows we will discuss some of the key interventions that could be undertaken by the EU, the National Government, and local/regional administrations. These are interventions that can help strengthen FUAs in Romania, and make them more competitive – both internally and externally. We will focus only on the measures considered to have the most significant impact. A more detailed list of recommendations is available later in the report.

Possible EU Interventions

The EU’s focus on Sustainable Urban Development for the 2014-2020 Programming Period, and the introduction of the Integrated Territorial Investment (ITI) tool, represent important steps in the right direction – what is lacking is the proper dosage. More specifically, for the 2014-2020 Programming Period, the EU required Member States to allocate 5% of ERDF funds for Sustainable Urban Development activities. The required share allocation is much too small given the critical importance of cities in the growth and development of countries. Ideally, a larger ERDF allocation should go to urban and metropolitan development activities. Similarly, the use of the ITI tool was used differently by different Member States. Poland, for example, chose to use ITI for 18 of its metropolitan areas, whereas Romania chose to only use it for the Danube Delta Region. Romania has instead decided to have a dedicate axis under the Regional Operational Programme 2014-2020, with dedicated funding for the 40 county capitals, which will be discussed in more detail in this report.

Key interventions that could be taken into consideration for the 2021-2027 Cohesion Policy include:

1. Large infrastructure interventions for metropolitan areas (e.g. connective infrastructure, environmental interventions, business infrastructure). While urban development dynamics are metropolitan in nature, local administrations often lack the means and/or willingness to finalize interventions at the metropolitan level. As such, it is important to provide both the incentives and resources required to strengthen metropolitan areas.
2. **Local infrastructure interventions** along the lines of what has already been financed in the 2007-2013 Programming Period, and what will be financed in 2014-2020 Programming Period – e.g. rehabilitation/modernization/creation of public spaces; rehabilitation of historic buildings; rehabilitation/modernization of apartment block neighborhoods and the public spaces in and around the apartment blocks; creation/modernization/rehabilitation of green spaces; extension/modernization/rehabilitation of pedestrian and bike infrastructure; extension/modernization/rehabilitation of metropolitan public transport infrastructure; targeted interventions for urban marginalized communities.

3. **Human capital interventions** that can help cities be better prepared for the economy of tomorrow. Such interventions could include: on-the-job training programs; international scholarships for university students; internship programs; twinning programs for professors, private companies, and NGOs; translation of the latest scientific advancements in the West; open knowledge repositories for public administrations.

4. **Competitiveness interventions** targeting Romanian FUAs, such as: access to internet infrastructure for everybody; revolving fund for start-ups and SMEs; incubators for start-ups.

### Possible National Interventions

**Romania does not have a clear Urban Development Policy, nor does it have a dedicate state-budget funded investment program targeting urban areas.** The National Territorial Development Strategy provides a welcome step in the right direction, acknowledging the role cities play in national economic growth and development, but there is no clear national policy targeting cities, metropolitan areas, or functional urban areas. Some major lines of action the National Government could consider include:

1. **The elaboration of a National Urban Development Policy**, which can identify the major challenges Romanian cities face, and ways in which the Central Government can help them overcome these challenges.

2. **The introduction of a metropolitan investment program**, financed from the state-budget, which can complement EU-funded programs and help urban areas in Romania respond to distinct challenges they face (e.g. the development of metropolitan transport infrastructure; the introduction of metropolitan public transport systems; investments in metropolitan business infrastructure; or the creation of metropolitan green and/or recreational spaces).

3. **Legislative framework for metropolitan areas**, which can enable and encourage metropolitan governance, management, and development.

4. **The elaboration of national standards and tools** that can help local authorities raise their capacity and effectiveness in implementing integrated urban development programs (e.g guides for the urban regeneration of apartment block neighborhoods).

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2 See for example the work of Dumitru Sandu.
Possible Local Interventions

While the EU and the National Government play a significant role in helping make Romanian cities more competitive, it is local administrations that have the biggest levers to make their cities more attractive and competitive. The range of interventions and policies they can undertake is quite large. We include here some of the interventions that we consider most important:

1) **Strengthening the local private sector**, by attracting investments (both foreign and national), by encouraging local entrepreneurship, and by enabling access to national and foreign markets. Without a strong private sector, no amount of public infrastructure will make a city more attractive to people.

2) **Improving the quality of life**, to make the city more attractive to a wide spectrum of people, by investing in public spaces and sustainable transport modes, by improving the quality, efficiency, and reach of public transport networks, by undertaking ambitious urban regeneration programs in apartment block neighborhoods, by creating and extending green areas and parks, by encouraging cultural and artistic events, and by strategically responding to parking challenges.

3) **Fostering partnership** with a wide range of private and public stakeholders, to better respond to challenges that a local administration cannot as efficiently tackle on its own.

4) **Investing in education**, to ensure that the locality’s most prized asset, its people, are adequately prepared to meet new and complex development challenges. Well qualified people are a critical asset for local administrations that hope to attract investments.

This work builds on an excellent body of work on internal and external migration in Romania. Romanian and foreign researchers have periodically analyzed migration flows and their dynamics, and have also looked in-depth at external migration dynamics, which for Romania are very important. We have, therefore, also included a chapter on external migration, as it provides an important backdrop to the analysis of in-country migration. Between 1990 and 2011, over 1.8 million people have migrated to one of the 41 FUAs analyzed in this report. However, 3 million people have chosen to migrate abroad. Policies that are geared towards strengthening Romanian FUAs could potentially help re-direct some of these outward flows inwardly.

This work is the first of its kind focusing squarely on migration and commuting patterns to the largest urban centers in Romania. The work was made possible by the rich and enlarged data sets that are now collected by the Romanian National Institute of Statistics. We are thankful we were able to use this large database. We hope this work will be useful both for policy makers and private sector representatives.
ANALYTICAL FRAMEWORK
This report is primarily addressed to policy makers and to a lay audience interested in urban development issues. As such, the report aims to achieve several key desiderates: 1) to bring evidence that cities are critical for economic growth and development; 2) to argue that the number of people a city manages to attract (through in-migration and commuting) is one the most important indicators of the city’s competitiveness; 3) to analyze migration and commuter patterns in Romania, and identify the cities most successful in attracting migrants and commuters; 4) to try to determine why some cities are more successful than others in attracting migrants and commuters; and, finally, 5) to propose measures that could help make these urban areas more attractive and competitive.

The report is part of a larger “Lagging Regions” initiative, undertaken by the World Bank, to better understand how lagging regions in the EU could respond to development challenges they face. DG Regio has identified two types of lagging regions in the EU: 1) low-income regions (i.e. those with a GDP per Capita (PPS) below 50% of the EU average); and, 2) low-growth regions (i.e. regions that have not managed to converge to the EU average in the past 10 years). The Bank’s “Lagging Regions” initiative pursues several strands of analysis, such as: a re-framing of “lagging regions” around a different set of indicators; an analysis of financial instruments that could be used to complement EU grants; an analysis of how regions could improve the business environment to becomes more attractive to private investors, while spurring local entrepreneurship; an analysis of key ingredients that encourage better EU funds absorption. This analysis focuses primarily on the role cities, or rather the role of functional urban areas in driving regional growth and development, and ways in which these functional areas could be strengthened.

The report tries to answer three key questions: 1) What role can secondary cities (as growth poles) play in supporting the growth of lagging regions (or mitigating their decline); 2) Which secondary cities stand the best chance to pull their region’s economy upward, and what can be done to help them; 3) What can be done to strengthen these secondary cities. Data on economic performance, migration, and commuting will be used to help answer those questions.

Evidence in the report will show that cities matter for economic growth – they matter a lot. It is usually a relatively small number of cities that generate an overwhelming share of economic output and growth. In the EU, 28 primate cities generate around 23% of the EU GDP (and only amass 7.8% of EU’s population), while 228 secondary cities are responsible for 40% of GDP (and 15% of the total EU population). These are the main economic engines of the EU, and the better they function, the better does the economy of the EU as a whole.

This pattern holds even when looking at individual countries, regardless their level of development. Thus, in all EU countries, from the most developed (e.g. Germany, France, the UK) to the least developed (e.g. Romania, Bulgaria), primate and secondary cities amass somewhere between 10%-30% of the total population, and generate around 50%-70% of GDP. When the larger functional urban zones of these cities are taken into consideration, the picture is even starker. For example, in Romania, the functional urban zones of Bucharest and the 40 county capitals generate 90% of firm revenues in the country.

Cities, and their functional urban areas, are also critical for regional performance, and particularly for the performance of lagging regions. The most performing regions rely on one or more urban area(s) to sustain economic growth. And given that primate cities are, or are surrounded by leading regions, in every EU country, it is secondary cities that play a particularly important role in the performance of EU’s lagging regions.

Primate cities are the first beneficiaries of development. In virtually every country around the globe, it is the primate city (the largest urban center) that reaps the first benefits of development. Economic output in primate cities tends to grow faster than in all other regions. Historical data also shows that primate cities are relatively rigid in their leading position. New York was the largest city in the US in 1790, with a population of only 33,000, and it remains the main population and economic center in the US today.
Secondary cities are however a country’s source of dynamism and they are critical for an improved performance of the national economy, and an improved performance of regional economies. GDP per Capita (PPS) data for EU countries shows that while primate cities in New EU Member States have productivity levels that rival those of primate cities in Old EU Member States, secondary cities in New EU Member Countries have a significant productivity lag when compared with secondary cities in Old EU member Countries. It is these secondary cities that hold the key to development for developing countries.

Knowing which secondary cities stand the best chance to become national and regional economic growth engines, can help improve development policies and public investments. For example, while urban development patterns are metropolitan in nature (in Romania, 47% of migrants to the main functional urban zones, settled in suburban areas not the core city), few local authorities have the resources and/or leverage to undertake metropolitan projects (i.e. projects that cross several administrative boundaries).

Migration and commuter data are good proxies for identifying the most successful secondary cities and for identifying the policies that can catalyze growth and development in these cities. The decision to move to a particular place is multi-faceted. People don’t only move for jobs or higher salaries, but also for better education, better healthcare, better quality of life, or for other people. Migration data nicely captures this cumulus of factors and provides important insights on which cities can function as regional growth engines. The cities that are most successful at attracting people are usually also the top regional economic performers. In turn, commuter data provides insights about metropolitan dynamics, and can help with the adoption of the right policies and public investments.

The report is structured along four main sections:

1. An analysis of development dynamics, with a particular focus on the importance of cities in driving growth and development.
2. An analysis of migration and commuter patterns in Romania.
3. An analysis of the cities and areas that have been most successful at attracting people, and an analysis of the urban areas that will likely attract most people in the future.
4. Recommendations on how EU, national, and local policies and investments can help make secondary cities more competitive.

The focus of the analysis will be on Bucharest and the 40 county capitals in the country. The county capitals have been chosen by the Romanian Government as main recipients of Sustainable Urban Development funds, from the European Regional Development Fund for the 2014-2020 Programming Period. The recommendations in this report can thus help improve the way these funds will be spent. Moreover, the recommendations could help refine regional and urban development policies at the EU and at the national level, particularly with a view to the 2021-2027 Programming Period.

Given that urban dynamics are rarely limited to the administrative boundaries of a locality, data was collected both for the county capitals themselves, and for their functional urban zones. The functional urban zones have been defined using an EC-OECD methodology. This is the same methodology used by the Romanian Ministry of Regional Development and Public Administration to define the functional urban zones that are eligible for EU funding for the 2014-2020 Programming Period.

KEY DEVELOPMENT DYNAMICS in ROMANIA
Romania’s economic performance after 2000 has been Impressive

Between 2000 and 2013, Romania has been the fastest growing economy in the EU. Benefiting from the EU accession, both before the actual accession in 2007, and after, Romania’s economy has grown at a very fast rate. An influx of foreign direct investments, large remittances sent from Romanians working abroad (Romania is one of the largest recipients of remittances in the World), a strong export performance (going primarily to other EU countries), and growing internal consumption have fueled the strong performance of the Romanian economy in the past years.

Between 1992 and 2015, Romania’s economy grew at a compound annual growth rate of 8.4%, and was one of the fastest growing economies in the World. Romania had a growth rate in this time-period that was 1% higher than the average for Upper Middle-Income Countries and more than three times the rate for the EU and High Income Countries. Most impressively, Romania managed to catch up with the economies of Brazil and Mexico, which in 1992 had a GNI per Capita that was 3 respectively 4 times as high as that of Romania.

The Romanian economy not only grew but also dramatically changed in the last 15 years, in line with the single market integration process that took place in most CEE countries. This involved the shift from subsidized low competitive sectors developed in the communist period such as metallurgy, heavy machines building, or apparel production, to transportation, electronic and electrical equipment. As Romania’s economy has become integrated into the EU trading block, it has also started to morph and look more like the economy of the EU. Around 72% of the EU exports fall in three large categories: transportation (e.g. cars, car parts, trucks, trains, airplanes); machines (TVs, computers, mixers, microwaves, mobiles), and chemical products (soaps, shampoos, detergents, fertilizers, medicaments). Romania’s export share in these three sectors went from 24% in 2000 to 46% in 2014. Moreover, in 2014, Romania was exporting 8 times more than it did in 1989, when the Communist system fell apart.

From a territorial perspective, all of Romania’s regions reported a significant GDP growth between 2000 and 2014. However, as is indicated in the World Development Report 2009: Reshaping Economic Geography (WDR’09), the development gap between the most dynamic regions in Romania (the leading regions) and the less developed regions (the lagging regions) has widened, despite the allocation of EU funding of around 7 bln. Euro for the regional cohesion only in 2007-2013 programming period. The GDP/capita (PPS) for the Bucharest-Ilfov Region (the most dynamic in the country) currently exceeds the EU-28 average by 29%, whereas the poorest region in Romania (and the 4th poorest in the EU) – North East - reaches only 35% of the EU-28 average.
This growing gap between the leading and lagging regions in Romania is not a failure of the EU Cohesion Policy, nor a failure of the territorial development policy in Romania, but simply the way development takes place in growing economies. When looking at the data, one immediately sees that regional growth rates have been relatively similar – between 2000 and 2014, all NUTS 2 regions in Romania have grown at compound annual growth rates of 7.6% to 8.8% (see figure below). In fact, the lagging regions in Romania has been among the fastest growing regions in the EU. The experience of most developed countries shows that unequal regional growth is a normal dynamic in growing economies – it is in fact a sign that the economy is actually developing. Over time, differences in living standards between regions disappear (i.e. people can have a similar quality of life almost everywhere across the territory of the country), but the economy will continue to be driven by a handful of leading regions – primarily the largest metropolitan area in the country.

**Figure 2. The GDP per capita (Euro PPS) at NUTS 2 level in Romania, between 2000 and 2014**

Data source: EuroStat

**Figure 3. Compound Annual Growth Rate for 2000-2014, for NUTS 2 Regions in Romania**

Note: Red signifies lagging regions (i.e. regions with a GDP per Capita (PPS) below 50% of the EU average)
Cities have driven economic growth

The 8 largest cities in Romania amass around 22% of the population and generate around 53% of the country’s GDP. When looking at the larger area of influence of the 8 Growth Poles (in this case, the one-hour driving areas around the Growth Poles), the strength of these urban centers becomes even more evident. Thus, the areas in the map below, amass around 50% of Romania’s population and generate around 75% of firm revenues in Romania. These are some of Romania’s main economic growth engines, and Romania is in this respect no different from all the other EU countries.

Within the EU, primate and secondary cities amass around 10%-30% of the country’s population and generated around 50%-70% of the GDP (see figure below). These cities are the economic growth engines of the EU. If they don’t function well, neither does the national economy as a whole. It is therefore critical to have proper urban development policies at the national level, and to intervene there where it is difficult or impossible for local authorities to intervene (e.g. the development of metropolitan transport infrastructure).

Knowing that cities are a country’s growth engines is only half the story though. It is important to also determine what exactly makes them successful. More specifically, it is important to determine what exactly makes cities more attractive to investors, people, and tourists. Some clues we already have. We know for example that primate cities (the New Yorks, Paris’, Londons,
Tokyos, and Warsaws of this world) very rarely change their position in the national hierarchy. New York was the largest city in the US in 1790, with a population of 33,000, and it remained the largest city in 2010, with a population of around 8 million. Even when you bomb them out of oblivion, partition them in 4, and then divide them in 2 for 40 years, the way Berlin was, they remain quite resilient. Primate cities follow a dynamic of their own, and are the most attractive urban centers for both investors and people. Usually, when primate cities do well, so does the economy as a whole. When they do poorly, so does the economy.

**Figure 5. Share of primate and secondary cities in the national population (left), and in the national GDP (right)**

![Figure 5](image_url)

**While primate cities give the tone to the rest of the economy, it is often secondary cities that are an economy’s source of dynamism.** It is secondary cities where breakthrough innovations are generated and where new economic sectors are born. The textile mill was invented in Lancashire and Birmingham; the first steel mill was developed in Pittsburgh; the car was perfected for a mass market in Detroit; movies made it to the big screen in Los Angeles; the computer and the internet matured in Silicon Valley. These secondary cities have risen, and some have fallen, together with the sectors they have given birth to. The most dynamic of them usually outpace the growth rate of the primate cities. For example, Cluj-Napoca, Timișoara, Iași, Constanța, Brașov, or Craiova have grown faster than Bucharest between 2011 and 2015.5

5 Listă Firma
Interestingly, the performance of national economies in EU countries seems to closely follow the performance of secondary cities in those respective countries. As the figure below highlights, the performance of primate cities seems to be an outlier in almost every EU country – only in Italy, Germany, and Ireland do primate cities have an economic performance similar to that of the national economy and the secondary cities. On the other hand, national economies seem to, almost uniformly, follow the performance of secondary cities. Thus, one could argue that the strengthening secondary cities can ultimately help strengthen national economies.

Figure 6. Secondary cities are among the biggest contributors to a country’s economic growth, particularly in larger developed countries (e.g. Germany, France, the UK)

Note: The graph on the left indicates the national economic growth rate between 2000 and 2013. The graph on the right shows who contributed to this growth (i.e. primate cities, secondary cities, and the rest of the country).

Data Source: EuroStat

In most larger EU countries (e.g. Germany, France, the UK), secondary cities have been the main economic growth engines. In smaller EU countries, such as Ireland, Sweden, Denmark, Belgium, or Austria, secondary cities have been less prominent – largely because they are fewer in number, smaller in size, and because the primate cities are very strong. Still, even in these countries, primate and secondary cities were responsible for over 50% of economic growth. Spain and Italy show up as outliers. In essence, the poor performance of their primate and secondary cities, is reflected in the overall poor performance of the economy. In Spain, Madrid has had an overall poor performance between 2000 and 2013 (it underperformed the national economy), while the secondary cities have witnessed economic regress, stagnation, or modest growth. In Italy, virtually every major city has had a modest economic performance between 2000 and 2013, including Rome.
Of course, Romania needs both Bucharest and its secondary cities to be dynamic and agile. It is these cities and their functional urban zones that will push the development of the Romanian economy in a new era. However, Romania still has a long way to go. Romania has the second lowest GDP per capita in the EU after Bulgaria – with 15,200 Euro/inhabitant in 2014 representing only 55% of the EU average (up from 41% in 2007). Currently, Romania has a 7-10 year development lag over other Central and Eastern European countries like Poland, Slovakia, Hungary, or the Czech Republic (i.e. it needs 7-10 years to reach their current development level) and a 35 year development lag over OECD counties (i.e. it took OECD countries 35 years to develop from Romania’s current development level to their current development level)\(^6\). Without strong and competitive cities, Romania will not be able to bridge this development gap.

\(^6\) World Bank
Of course, a city’s competitiveness is not something that can be engendered by fiat. We don’t quite know why some cities perform better than others. We know there are a number of enabling conditions that make a city’s economy take off (e.g., proximity to markets, a large human capital pool, an existent large population and labor pool), but we are less astute at explaining differences between cities with similar endowments.

Before we discuss however why some Romanian cities have performed better than others, it is important to first see their overall performance. Luckily, EuroStat collects data at the city level, and it is easy to see how Romanian cities perform both internally and externally. A look at their performance over the past years will then enable us to also posit what may have enabled such a performance.

Bucharest is expectedly the top performing city in Romania, and its economy is larger than that of 7 EU countries, including Croatia, Slovenia, and Luxembourg. When taken together with countries and other cities in the EU, Bucharest is basically the 41st largest economy of the EU. As such, proper management of the economy of Bucharest is critical. When compared to other capitals in the EU, Bucharest also does well, being among the more performant capitals (see figure below). In essence, Romania’s primate city is now competing head to head, in terms of productivity, with the other primate cities in the EU.
However, if the Romanian economy is to compete with Western economies, its secondary cities have to become stronger. Currently, none of Romania’s secondary cities are among the 100 largest economies in the EU, and they significantly underperform secondary cities in Western Europe. Bucharest may have a GDP per Capita (PPS) larger than that of Rome, Madrid, or Berlin, but Germany and France, the two largest economies of the EU, each have ten cities among the top 100 largest economies of the EU. The UK, the third largest economy in the EU, has nine of its cities among the top 100 largest EU economies. Paris and London have economies that are seven times as large as that of Bucharest.

Strong and competitive secondary cities are also critical for a region’s performance, because diffuse growth and development to surrounding localities. The maps below show that between 2002 and 2011, the regions that have developed the fastest are the dynamic cities and the areas around them. This is in fact the essence of development – concentration in a few growth centers and the diffusion of growth to surrounding areas, until every corner of the country is reached.
Development in Romania, following 1989, can be understood as the progressive filling of a pyramid of glasses. The first step in the development process is the identification of a large enough bottle (i.e. markets) to fill those glasses. For Romania, the EU common market represents a very large bottle, which will pay dividends well into the future. The second step is the actual filling of this pyramid of glasses. And, usually, the pyramid is filled from the top, on down. In Romania, the primate city (i.e. Bucharest) was the first benefactor of EU integration, with many of the new investments and jobs going there first. Secondary cities started on an accelerated growth path, with a relative time lag. In essence, until Bucharest reached a certain level of economic maturity, the other cities in Romania did not manage to grow as fast as Bucharest. Only in recent years did secondary cities in Romania manage to reach higher levels of economic growth than Bucharest, and are in the process of catching up with the capital.

However, while the flow of wealth and capital to the primate city is clear and direct, the flow to secondary cities is less direct. It is not always immediately obvious which secondary city will perform better. For example, between 2000 and 2013, Timișoara, Cluj-Napoca, Craiova, and Brașov, outperformed (in terms of GDP per Capita (PPS) growth) their regions and the national economy. Iași managed to outperform the North-East Region, but not the national economy. Constanța did not outperform either the regional or the national growth rate. The performance of these cities is likely both the result of a set of givens (e.g. size, proximity to the West, distance from Bucharest), but also the result of conscious interventions (e.g. strong local leadership, the development of metropolitan infrastructure, investments in business parks, or the increase in the quality of life).

While Bucharest outperformed secondary cities in the early transition years, most secondary cities in Romania have had a stronger performance than Bucharest in recent years. This dynamic can be further encouraged through targeted interventions and a clear urban development policy. Between 2011 and 2015, most county capitals in Romania managed to outperform Bucharest in terms of firm revenue growth. Bucharest has a disproportional share of firm revenues (largely because most multi-nationals in the country register their headquarter there), but the output of firms registered in Bucharest has grown slower than the output of firms registered in most of the county capitals. This may suggest that Bucharest has reached a certain level of economic maturity, and other cities are starting to come from behind.
Thus, the advice for policy makers is clear: a strong Romanian economy is impossible without strong Romanian cities, and a focus on secondary cities is critical in the coming years! The following analysis will shed more light on how secondary cities in Romania have performed in the past years.

### Table 1. Firm revenues in Bucharest and the county capitals

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Târgu Jiu</td>
<td>€ 525,015,488</td>
<td>€ 1,199,270,494</td>
<td>22.94%</td>
</tr>
<tr>
<td>Craiova</td>
<td>€ 2,216,442,353</td>
<td>€ 3,473,076,283</td>
<td>11.88%</td>
</tr>
<tr>
<td>Suceava</td>
<td>€ 561,613,684</td>
<td>€ 863,541,352</td>
<td>11.36%</td>
</tr>
<tr>
<td>Iași</td>
<td>€ 1,963,443,453</td>
<td>€ 2,928,990,623</td>
<td>10.52%</td>
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<tr>
<td>Pitești</td>
<td>€ 1,951,752,262</td>
<td>€ 2,816,041,305</td>
<td>9.60%</td>
</tr>
<tr>
<td>Botoșani</td>
<td>€ 630,018,495</td>
<td>€ 901,948,278</td>
<td>9.38%</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>€ 5,052,009,718</td>
<td>€ 7,226,366,735</td>
<td>9.36%</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>€ 1,130,453,911</td>
<td>€ 1,612,595,406</td>
<td>9.29%</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>€ 529,046,618</td>
<td>€ 747,778,404</td>
<td>9.04%</td>
</tr>
<tr>
<td>Brăila</td>
<td>€ 880,645,993</td>
<td>€ 1,241,659,454</td>
<td>8.96%</td>
</tr>
<tr>
<td>Bistrița</td>
<td>€ 940,279,706</td>
<td>€ 1,321,482,847</td>
<td>8.88%</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>€ 1,088,628,991</td>
<td>€ 1,500,874,788</td>
<td>8.36%</td>
</tr>
<tr>
<td>Arad</td>
<td>€ 2,697,239,293</td>
<td>€ 3,695,279,590</td>
<td>8.19%</td>
</tr>
<tr>
<td>Constanța</td>
<td>€ 3,775,910,070</td>
<td>€ 5,135,128,916</td>
<td>7.99%</td>
</tr>
<tr>
<td>Oradea</td>
<td>€ 2,315,338,017</td>
<td>€ 3,090,986,809</td>
<td>7.49%</td>
</tr>
<tr>
<td>Băcău</td>
<td>€ 1,909,987,534</td>
<td>€ 2,535,930,553</td>
<td>7.34%</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>€ 2,847,637,941</td>
<td>€ 3,762,246,910</td>
<td>7.21%</td>
</tr>
<tr>
<td>Timișoara</td>
<td>€ 4,977,210,992</td>
<td>€ 6,533,602,508</td>
<td>7.04%</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>€ 270,789,743</td>
<td>€ 352,027,698</td>
<td>6.78%</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>€ 507,554,119</td>
<td>€ 659,708,617</td>
<td>6.77%</td>
</tr>
<tr>
<td>Focșani</td>
<td>€ 632,485,386</td>
<td>€ 821,677,506</td>
<td>6.76%</td>
</tr>
<tr>
<td>Zalău</td>
<td>€ 657,119,097</td>
<td>€ 837,198,675</td>
<td>6.24%</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>€ 463,487,574</td>
<td>€ 590,474,512</td>
<td>6.24%</td>
</tr>
<tr>
<td>Brașov</td>
<td>€ 4,234,621,497</td>
<td>€ 5,325,889,563</td>
<td>5.90%</td>
</tr>
<tr>
<td>Bușău</td>
<td>€ 1,791,857,270</td>
<td>€ 2,236,464,652</td>
<td>5.70%</td>
</tr>
<tr>
<td>Sâlaj</td>
<td>€ 607,491,432</td>
<td>€ 739,101,953</td>
<td>5.02%</td>
</tr>
<tr>
<td>Tulcea</td>
<td>€ 802,354,687</td>
<td>€ 972,808,566</td>
<td>4.93%</td>
</tr>
<tr>
<td>Vaslui</td>
<td>€ 388,622,827</td>
<td>€ 470,741,288</td>
<td>4.91%</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>€ 1,042,806,670</td>
<td>€ 1,238,764,774</td>
<td>4.40%</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>€ 342,551,214</td>
<td>€ 404,755,144</td>
<td>4.26%</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>€ 678,066,422</td>
<td>€ 793,448,398</td>
<td>4.01%</td>
</tr>
<tr>
<td><strong>Bucharest</strong></td>
<td><strong>€ 78,124,551,508</strong></td>
<td><strong>€ 90,318,021,918</strong></td>
<td><strong>3.69%</strong></td>
</tr>
<tr>
<td>Galați</td>
<td>€ 3,347,867,653</td>
<td>€ 3,781,645,941</td>
<td>3.09%</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>€ 314,760,271</td>
<td>€ 349,745,433</td>
<td>2.67%</td>
</tr>
<tr>
<td>Alexandria</td>
<td>€ 490,108,430</td>
<td>€ 542,335,405</td>
<td>2.56%</td>
</tr>
<tr>
<td>Slatina</td>
<td>€ 1,768,669,573</td>
<td>€ 1,937,580,387</td>
<td>2.31%</td>
</tr>
<tr>
<td>Sibiu</td>
<td>€ 2,607,330,864</td>
<td>€ 2,607,751,180</td>
<td>0.00%</td>
</tr>
<tr>
<td>Călărași</td>
<td>€ 744,000,803</td>
<td>€ 741,859,298</td>
<td>-0.07%</td>
</tr>
<tr>
<td>Reșița</td>
<td>€ 465,388,451</td>
<td>€ 433,299,075</td>
<td>-1.77%</td>
</tr>
<tr>
<td>Ploiești</td>
<td>€ 4,379,689,038</td>
<td>€ 4,070,314,763</td>
<td>-1.81%</td>
</tr>
<tr>
<td>Deva</td>
<td>€ 712,089,835</td>
<td>€ 622,028,511</td>
<td>-3.32%</td>
</tr>
</tbody>
</table>

Source: Listă Firma
MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
ROMANIAN MAGNET CITIES
The most dynamic and successful cities, are also the ones where people want to move. In what follows, we will take a more in-depth look at the Romanian cities that have been most successful in attracting people, and we will try to identify their recipe to success. Economic development inevitably requires a concentration of people and resources in certain places, and it is this concentration that makes both private companies and individuals more productive. Firms have a larger and more diverse labor pool they can choose from in cities, while people have more opportunities they can pursue and more people they can learn from. In what follows, we will look at commuting and migration in Romania, to identify Romania’s magnet cities, and to try to determine their success recipe.

An analysis of commuter and migration patterns, should not be limited however to the administrative boundaries of cities. Cities rarely exist in a vacuum – investors often move to peripheral areas, and people often commute in from outside the center city. To determine the functional urban zones of cities, an OECD-EC methodology was used. The methodology is simple and has universal application. To determine the functional urban area of a city, once has to identify the localities where at least 15% of the workforce commutes to that particular city. Once these localities are identified, the exclaves (i.e. localities that are not part of a contiguous area around the center city) are eliminated, and the enclaves (i.e. the localities that are part of a contiguous area around the center city, but don’t have 15% of their workforce commuting to the city) are included. The proposed functional urban zones (FUAs) for the county capitals in Romania, are included in the figure below.

It is important to note that even the smallest and least dynamic cities have a development dynamic that goes well beyond their immediate administrative boundary. Moreover, at the FUA level, hierarchies change a bit. For example, Cluj-Napoca is the second largest city in Romania, but at the FUA level it is only fifth largest. The Ploiești FUA attracts the second largest number of commuters after Bucharest, and over a third of those commute to the outer FUA areas (i.e. not the core city). Similarly, the Timișoara FUA has attracted the second highest number of in-migrants between 2001 and 2011, and over a third of those moved to the outer areas of the FUA. Timișoara also has the second highest number of employed people at the FUA level, and 35% of those work in the outer FUA areas.

Figure 12. The proposed functional urban zones (FUAs) for the county capitals in Romania
The table below provides a number of key figures on commuting and migration to the county capitals in Romania. This will provide a quick overview of what cities and FUAs have been most successful at attracting migrants and commuters, and it will provide a backdrop for understanding the key dynamics discussed further down. The FUAs of Bucharest, Timișoara, Cluj-Napoca, Iași, and Constanța have been most adept at attracting people, while the FUAs of Bucharest, Ploiești, Pitești, Constanța, and Timișoara attract the highest number of daily commuters. What makes these FUAs particularly attractive will be the subject of the following sections.

### Table 2. Key indicators on commuting and migration to the Romanian county capitals

<table>
<thead>
<tr>
<th>Municipality</th>
<th>FUA</th>
<th>Population in 2011</th>
<th>Employed People in 2011</th>
<th>Number of Commuters in 2011</th>
<th>In-migration between 2001 and 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUCHAREST</td>
<td>1,883,425</td>
<td>2,703,015</td>
<td>1,001,430</td>
<td>1,354,658</td>
<td>252,462</td>
</tr>
<tr>
<td>Constanța</td>
<td>283,872</td>
<td>546,900</td>
<td>143,018</td>
<td>219,753</td>
<td>37,799</td>
</tr>
<tr>
<td>Timișoara</td>
<td>319,279</td>
<td>508,037</td>
<td>174,862</td>
<td>236,703</td>
<td>42,469</td>
</tr>
<tr>
<td>Ploiești</td>
<td>209,945</td>
<td>506,213</td>
<td>115,986</td>
<td>213,284</td>
<td>45,159</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>324,376</td>
<td>470,939</td>
<td>173,354</td>
<td>215,275</td>
<td>40,462</td>
</tr>
<tr>
<td>Brașov</td>
<td>253,200</td>
<td>455,830</td>
<td>133,870</td>
<td>202,138</td>
<td>33,233</td>
</tr>
<tr>
<td>Iași</td>
<td>290,622</td>
<td>414,869</td>
<td>142,439</td>
<td>193,830</td>
<td>32,048</td>
</tr>
<tr>
<td>Craiova</td>
<td>269,506</td>
<td>380,641</td>
<td>128,387</td>
<td>171,052</td>
<td>20,454</td>
</tr>
<tr>
<td>Pitești</td>
<td>155,383</td>
<td>348,981</td>
<td>90,481</td>
<td>183,206</td>
<td>32,093</td>
</tr>
<tr>
<td>Galați</td>
<td>249,432</td>
<td>339,408</td>
<td>111,072</td>
<td>151,776</td>
<td>15,437</td>
</tr>
<tr>
<td>Oradea</td>
<td>196,367</td>
<td>336,538</td>
<td>106,896</td>
<td>154,595</td>
<td>25,276</td>
</tr>
<tr>
<td>Arad</td>
<td>159,074</td>
<td>296,981</td>
<td>91,166</td>
<td>131,041</td>
<td>25,721</td>
</tr>
<tr>
<td>Sibiu</td>
<td>167,245</td>
<td>276,064</td>
<td>85,825</td>
<td>124,109</td>
<td>23,156</td>
</tr>
<tr>
<td>Bușău</td>
<td>115,494</td>
<td>258,137</td>
<td>66,137</td>
<td>111,139</td>
<td>20,546</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>134,290</td>
<td>251,523</td>
<td>75,442</td>
<td>110,199</td>
<td>22,489</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>98,776</td>
<td>233,497</td>
<td>55,641</td>
<td>106,795</td>
<td>17,393</td>
</tr>
<tr>
<td>Băcău</td>
<td>164,307</td>
<td>228,656</td>
<td>76,835</td>
<td>108,638</td>
<td>18,367</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>123,738</td>
<td>215,129</td>
<td>64,456</td>
<td>91,812</td>
<td>16,322</td>
</tr>
</tbody>
</table>
Migration patterns in Romania

Who is migrating and when did they migrate?

The final results of the 2011 census indicate that 6.18 million Romanian citizens (30.7% of the total stable population) changed their residence inside the country at least once during their lifetime. The number is slightly smaller than the one reported at the 2002 census (6.73 million, 31%). In addition, around 3 million Romanians migrated outside Romania after 1990. In contrast with the commuting process, most migration flows in Romania are long-distance ones. Almost 51% of the migrants moved to a different county than the one they were born or used to live in and only 49% moved to a different settlement inside the same county. This indicates that long-term migration is more intense where commuting is limited by distance, explaining also the demographic collapse of many remote rural areas in Romania.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Population in 2011</th>
<th>Employed People in 2011</th>
<th>Number of Commuters in 2011</th>
<th>In-migration between 2001 and 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Municipality</td>
<td>FUA</td>
<td>Municipality</td>
<td>FUA</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>79,610</td>
<td>210,410</td>
<td>47,737</td>
<td>99,872</td>
</tr>
<tr>
<td>Brăila</td>
<td>180,302</td>
<td>196,818</td>
<td>70,490</td>
<td>76,422</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>102,411</td>
<td>195,584</td>
<td>55,703</td>
<td>77,998</td>
</tr>
<tr>
<td>Suceava</td>
<td>92,121</td>
<td>182,955</td>
<td>49,271</td>
<td>85,310</td>
</tr>
<tr>
<td>Focșani</td>
<td>79,315</td>
<td>172,530</td>
<td>42,463</td>
<td>77,227</td>
</tr>
<tr>
<td>Deva</td>
<td>61,123</td>
<td>158,650</td>
<td>36,234</td>
<td>76,433</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>85,055</td>
<td>148,011</td>
<td>39,964</td>
<td>66,598</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>82,504</td>
<td>144,618</td>
<td>42,807</td>
<td>67,396</td>
</tr>
<tr>
<td>Slatina</td>
<td>70,293</td>
<td>132,789</td>
<td>40,384</td>
<td>63,374</td>
</tr>
<tr>
<td>Botoșani</td>
<td>106,847</td>
<td>129,276</td>
<td>45,675</td>
<td>56,509</td>
</tr>
<tr>
<td>Bistrița</td>
<td>75,076</td>
<td>126,860</td>
<td>44,383</td>
<td>64,419</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>92,617</td>
<td>120,762</td>
<td>42,400</td>
<td>56,541</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>63,536</td>
<td>113,461</td>
<td>37,216</td>
<td>54,331</td>
</tr>
<tr>
<td>Călărași</td>
<td>65,181</td>
<td>104,323</td>
<td>30,544</td>
<td>43,774</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>38,966</td>
<td>97,627</td>
<td>24,389</td>
<td>42,672</td>
</tr>
<tr>
<td>Tulcea</td>
<td>73,707</td>
<td>94,092</td>
<td>37,304</td>
<td>70,114</td>
</tr>
<tr>
<td>Zalău</td>
<td>56,202</td>
<td>90,073</td>
<td>29,780</td>
<td>41,931</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>56,006</td>
<td>84,341</td>
<td>26,399</td>
<td>36,307</td>
</tr>
<tr>
<td>Reșița</td>
<td>73,282</td>
<td>81,091</td>
<td>29,328</td>
<td>33,375</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>61,353</td>
<td>80,932</td>
<td>25,317</td>
<td>33,276</td>
</tr>
<tr>
<td>Vaslui</td>
<td>55,407</td>
<td>80,861</td>
<td>26,687</td>
<td>39,929</td>
</tr>
<tr>
<td>Slobozia</td>
<td>45,891</td>
<td>80,570</td>
<td>23,300</td>
<td>33,639</td>
</tr>
<tr>
<td>Alexandria</td>
<td>45,434</td>
<td>70,409</td>
<td>23,215</td>
<td>31,766</td>
</tr>
<tr>
<td>TOTAL</td>
<td>7,100,570</td>
<td>11,662,401</td>
<td>3,706,287</td>
<td>5,276,216</td>
</tr>
</tbody>
</table>

Data Source: Romanian National Institute of Statistics
The urban-urban migration is in general a long-distance one, with 74.9% of the migrants moving across the border of the county they used to live before, whereas the rural-rural one involves shorter distances. In over 63% of the cases, rural-urban migration took place between communities within the same county. Most of the migrants live in urban areas - 4.17 million, representing 67.5% of the total number of citizens that changed their residence, respectively 38.4% of the urban stable population, compared to only 2.01 million in rural areas. This is mostly the effect of the planned or even forced industrialization and urbanization process that took place in the communist period, especially in the 70s and 80s, but also to the shift to urban-urban migration flows in the recent years.

Compared to the 2002 Census, the share of migrants living in urban areas dropped by 4% as a result of the strong suburbanization process that took place around the most important cities. This resulted in a significant number of citizens that left the cities in order to settle in the rural surrounding, where the living cost and conditions were generally more attractive. The map below shows that the localities that have witnessed population growth between 2002 and 2011 are largely localities surrounding a larger urban area, or an urban agglomeration. This in fact reflects a strong, and on-going suburbanization process, with the dynamic being particularly obvious in the case of Bucharest, Constanța, Brașov, Cluj-Napoca, Iași, Oradea, Sibiu, or Pitești.
Between 2001 and 2011, the period of rapid economic growth in Romania, 65.5% of migrants came from urban areas – primarily from smaller cities and towns to large cities, and from large cities to suburbs. The FUAs of Cluj-Napoca, Brașov, Timișoara, and Iași, each received more than 75% from urban areas. While there was significant migration within the FUA (e.g. people moving from the center city to suburbs), the majority of migrants came from urban areas outside the FUA – 73% in the case of Cluj-Napoca; 63% in Brașov; 71% in Timișoara; and 70% in Iași.

With the exception of Giurgiu, all the other 39 FUAs received more than 50% of migrants from urban areas, and most received a majority of migrants from outside the FUA. Only Satu Mare, Târgoviște, Pitești, Baia-Mare, and Miercurea Ciuc received more migrants from within the FUA than from without. However, with the exception of a few FUAs (e.g. Timișoara, Cluj-Napoca, Brașov, Iași, Sibiu), most of migrants to FUAs came from within the same county. This indicates that most FUAs in Romania have territorially limited migration catchment areas. Annex 1 includes maps with the migration catchment areas of all FUAs discussed here. It should also be noted here that out-migration, particularly to EU countries (e.g. Italy, Spain, Germany, Hungary, France), has been stronger than internal migration. Outmigration dynamics will be discussed in more detail later on.

Table 3. Where FUAs have attracted migrants from between 2001 and 2011

<table>
<thead>
<tr>
<th>FUA</th>
<th>Migration within the FUA</th>
<th>Migration from outside the FUA</th>
<th>% of migrants from outside the FUA</th>
<th>% of migrants coming from a different county</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
<td>22,287</td>
<td>59,532</td>
<td>72.8%</td>
<td>61.3%</td>
</tr>
<tr>
<td>Timișoara</td>
<td>24,470</td>
<td>59,392</td>
<td>70.8%</td>
<td>63.0%</td>
</tr>
<tr>
<td>Iași</td>
<td>18,589</td>
<td>42,592</td>
<td>69.6%</td>
<td>56.5%</td>
</tr>
<tr>
<td>Brașov</td>
<td>15,147</td>
<td>25,274</td>
<td>62.5%</td>
<td>58.8%</td>
</tr>
<tr>
<td>Constanța</td>
<td>19,771</td>
<td>21,549</td>
<td>52.2%</td>
<td>42.1%</td>
</tr>
<tr>
<td>Arad</td>
<td>10,440</td>
<td>18,626</td>
<td>64.1%</td>
<td>49.9%</td>
</tr>
<tr>
<td>Ploiești</td>
<td>18,308</td>
<td>18,620</td>
<td>50.4%</td>
<td>34.6%</td>
</tr>
<tr>
<td>Craiova</td>
<td>7,705</td>
<td>18,089</td>
<td>70.1%</td>
<td>42.9%</td>
</tr>
<tr>
<td>Oradea</td>
<td>15,710</td>
<td>17,811</td>
<td>53.1%</td>
<td>29.3%</td>
</tr>
</tbody>
</table>
### Romanian Magnet Cities

<table>
<thead>
<tr>
<th>FUA</th>
<th>Migration within the FUA</th>
<th>Migration from outside the FUA</th>
<th>% of migrants from outside the FUA</th>
<th>% of migrants coming from a different county</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibiu</td>
<td>11,360</td>
<td>17,638</td>
<td>60.8%</td>
<td>53.0%</td>
</tr>
<tr>
<td>Pitești</td>
<td>18,315</td>
<td>17,544</td>
<td>48.9%</td>
<td>31.3%</td>
</tr>
<tr>
<td>Bacău</td>
<td>8,777</td>
<td>15,255</td>
<td>63.5%</td>
<td>39.6%</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>12,755</td>
<td>13,643</td>
<td>51.7%</td>
<td>29.3%</td>
</tr>
<tr>
<td>Galați</td>
<td>7,469</td>
<td>11,299</td>
<td>60.2%</td>
<td>42.7%</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>10,182</td>
<td>10,941</td>
<td>518%</td>
<td>34.1%</td>
</tr>
<tr>
<td>Suceava</td>
<td>5,857</td>
<td>10,531</td>
<td>64.3%</td>
<td>33.0%</td>
</tr>
<tr>
<td>Bușău</td>
<td>9,266</td>
<td>9,698</td>
<td>51.1%</td>
<td>33.1%</td>
</tr>
<tr>
<td>Deva</td>
<td>5,069</td>
<td>9,439</td>
<td>65.1%</td>
<td>42.4%</td>
</tr>
<tr>
<td>Foțani</td>
<td>5,516</td>
<td>9,074</td>
<td>62.2%</td>
<td>38.5%</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>9,543</td>
<td>8,908</td>
<td>48.3%</td>
<td>30.1%</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>3,255</td>
<td>8,739</td>
<td>72.9%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Bistrița</td>
<td>2,936</td>
<td>7,832</td>
<td>72.7%</td>
<td>40.8%</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>4,536</td>
<td>7,591</td>
<td>62.6%</td>
<td>29.7%</td>
</tr>
<tr>
<td>Satu-Mare</td>
<td>8,160</td>
<td>7,521</td>
<td>48.0%</td>
<td>31.4%</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>4,441</td>
<td>7,326</td>
<td>62.3%</td>
<td>38.0%</td>
</tr>
<tr>
<td>Brăila</td>
<td>1,268</td>
<td>7,170</td>
<td>85.0%</td>
<td>62.3%</td>
</tr>
<tr>
<td>Drobeta</td>
<td>1,991</td>
<td>6,314</td>
<td>76.0%</td>
<td>38.9%</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>6,360</td>
<td>6,174</td>
<td>49.3%</td>
<td>33.4%</td>
</tr>
<tr>
<td>Zalău</td>
<td>2,959</td>
<td>5,746</td>
<td>66.0%</td>
<td>39.0%</td>
</tr>
<tr>
<td>Tulcea</td>
<td>1,759</td>
<td>5,503</td>
<td>75.8%</td>
<td>410%</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>4,679</td>
<td>4,618</td>
<td>49.7%</td>
<td>27.7%</td>
</tr>
<tr>
<td>Slobozia</td>
<td>2,049</td>
<td>4,350</td>
<td>68.0%</td>
<td>46.9%</td>
</tr>
<tr>
<td>Vaslui</td>
<td>1,370</td>
<td>4,329</td>
<td>76.0%</td>
<td>40.9%</td>
</tr>
<tr>
<td>Botoșani</td>
<td>692</td>
<td>4,291</td>
<td>86.1%</td>
<td>518%</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>2,924</td>
<td>4,254</td>
<td>59.3%</td>
<td>419%</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>1,376</td>
<td>4,101</td>
<td>74.9%</td>
<td>58.9%</td>
</tr>
<tr>
<td>Reșița</td>
<td>401</td>
<td>3,722</td>
<td>90.3%</td>
<td>514%</td>
</tr>
<tr>
<td>Călărași</td>
<td>1,845</td>
<td>3,108</td>
<td>62.7%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Alexandria</td>
<td>680</td>
<td>2,058</td>
<td>75.2%</td>
<td>32.7%</td>
</tr>
<tr>
<td>Slatina</td>
<td>1,305</td>
<td>1,853</td>
<td>58.7%</td>
<td>37.0%</td>
</tr>
</tbody>
</table>

Data Source: Romanian National Institute of Statistics

**Overall, in the migration processes taking place in Romania in the last 5-6 decades, urban areas reported a positive balance of around 1.6 million people.** This in-country migration is also the main source of the modest increase in the urbanization rate, given that the natural growth has been negative in the last 20 years, and out-migration has led to population decline in most localities – urban and rural. While Romanian cities have become increasingly attractive to internal migrants, rural-urban migration underwent a slight decline in the last two decades, with multiple explanations and implications:

- first of all, the mass of young, and highly mobile people residing in rural areas is much smaller than it was before 1990, as a result of pronounced demographic decline (the fertility rate in Romania has been hovering at around 1.3 for several years).
- the decline of urban economies, particularly those that were developed during the Communist period but were unable to compete in a market economy, led to a surplus of labor force and unemployment in several urban areas. Thus, many small and medium-sized mono-industrial centers, and several big ones, became a prime source of out-migration – both outside and inside the country;

- the urban economies of the dynamic cities in Romania, based on high and medium-high services and industries, require labor force with a higher level of education and qualification, which is easier to find in urban areas. This explains why urban-urban flows are becoming more intense than rural-urban ones;

- an estimated 3 million Romanians have chosen to move to a different country and have thus limited the capture area of Romanian cities. As Romanian cities will become more competitive, it may be possible for them to gain back some of the people that have moved abroad.

*Figure 15. Population dynamics between 2002 and 2011*

*Within Romania, cities and their FUAs have been the most attractive places for in-country migration.* More than 2/3 of the Romanian migrants moved to the functional urban areas of the 41 county capitals in Romania, out of which 36.2% moved to the FUAs of Bucharest and the seven growth poles (which together have only 19% of the national population).
County capitals are the main destination for long-distance mobility, with 57% of the migrants coming from outside the county. The cities attracting the largest share of long-distance migrants were Bucharest, Brașov, Timișoara, Deva and Resita (over 60%). Their capture area covers almost the entire country, especially in the case of the capital city. All these cities developed significantly in the last 50 years, in some cases by doubling or even tripling their stable population, and were surrounded by areas with traditionally moderate natural growth (the western part of the country), both factors contributing to a deficit of labor forced that had to be covered by internal migration.

Figure 16. The total number of migrants, at FUA level, in 2011

On the other hand, cities such as Alexandria, Bușău, Târgu Mureș, Satu Mare and Oradea gathered more than 70% of the total migrants from inside the county. In the cases of Alexandria and Bușău, the large share of inner-county migrants can be explained by the limited attractiveness of the two relatively small cities for people outside the county. On the other hand, both of them are placed in the middle of extended, and relatively dense rural areas, which provide plenty of demographic resources. In the cases of Târgu Mures, Satu Mare and Oradea, cultural factors may have played a role, given that all of these cities host important Hungarian communities that generally preferred to stay close to a larger Hungarian community. Nonetheless, the fact they had to territorially compete with bigger cities, such as Cluj-Napoca, Timișoara, Bucharest or Brașov, in order to attract people from other areas of the country also explains why they did not perform so well in the past years.

Data Source: Romanian National Institute of Statistics
It is important to note here that rural-urban migration flows were generally short-distance ones and primarily took place within the same county. This was especially the case in the Communist period, when the need to quickly supply new state-owned industrial plants with labor force required massive movements of people from rural to urban areas. Considering the poor transport connections existing at the time, most of the migrants or commuters were brought from the surrounding rural areas, generally less than 30-50 km. Moreover, some industrial plants were built only to ensure the employment of the available labor force resources existing in a certain area, regardless of costs, resources or expertise existing in the area.

The shift from state-planned to market-oriented economy also engendered a natural mobility of the populations to opportunity centers, especially dynamic urban areas. Rural-urban mobility was almost completely replaced by urban-urban flows, which are generally long-distance ones. In 2011, 46.2% of the migrants that choose to move to the 40 county seats and Bucharest, came from other urban settlements. The cities with the largest share of urban immigrants are Timișoara, Cluj-Napoca, Baia Mare, Alba Iulia and Târgu Mureș, all from the intra-Carpathian region, which has an urbanization rate above average. Timișoara and Cluj-Napoca, the most developed cities in Romania after Bucharest, are attracting a lot of young people for studies and jobs, especially from other cities in the northern, center and western part of the country. Baia Mare, Alba Iulia and Târgu Mureș, beside the fact they are also university centers attract young people from different towns around them. The cities that were less attractive to urban migrants in recent years include Brăila, Giurgiu, Tulcea, Călărași and Drobeta Turnu Severin - all with less than 1/3 of the migrants coming from urban areas. In these cities, the majority of migrants came from rural areas during the Communist period.
The influence of the forced industrialization and urbanization implemented during the Communist period is reflected also in the age structure of migrants. Almost 60% are over 45, corresponding to the significant flows of people moving from rural areas between the 60s and the 80s. On the other hand, only 26% of the migrants are below 35, most of them being students that move from small and medium cities to a limited number of university centers. When these cities are also able to provide jobs for people with higher education, some of the university graduates decide to stay. Strong universities are therefore critical for city development. Where universities are already present, they should be strengthened: when they are absent or weak, local authorities should consider strengthening other educational institutions present there (vocational schools, high-schools, art schools, etc.). Not every city can become a hotbed for tertiary education, but all can do something about strengthening and enlarging their human capital pool. Human capital is not necessarily represented by people with tertiary education, but by people who have skills that few other people have (e.g. craftsmen, artists, artisans).

Between 2001 and 2011, the period of rapid economic boom, an overwhelming share of migrants (66.3%) were young people (less than 35 years of age). The most successful cities in attracting young people were largely the important university centers in the country – Cluj-Napoca (80.1%), Iași (74.4%); Timișoara (70.2%); Bucharest (69.5%); Sibiu (68.4%); Craiova (67.6%).
If rural-urban migration fueled the urbanization process in the Communist period, it is now a burden for most cities, as migrants coming in from rural areas are to a large extent of non-productive age. Bucharest is a case in point, as migrants represent almost 2/3 of the stable population aged 65 plus, and less than 10% of those below the age of 25.
The cities with the largest share of young immigrants are Cluj-Napoca, Timișoara and Iași, the top three university centers in Romania, each attracting a significant number of students from an area of over 250 sq. km. Cities that developed a strong industrial footprint during Communism, but failed to compete properly in a market economy, and on top of things also lost a significant share of their human capital to Bucharest or to more developed countries, will likely face significant demographic challenges in the coming years. Such cities include, among others, Brăila, Ploiești, Galați or Deva. Brăila, for example, is the county capital with the highest mortality rate in Romania – one the main reasons being the aged population.

Figure 21. The share of migrants by major age groups, at FUA level, in 2011

Between 2001 and 2011, 56.6% of people migrated for personal reasons, 19.4% for studies, and 11.1% for work. An overwhelming share of people who migrated for studies clustered in the country’s large university centers. In Cluj-Napoca, 46.4% of migrants came for studies; in Iași, 43.7%; in Timișoara, 34.5%; in Bucharest, 24.9%; in Craiova, 19.9%; in Sibiu, 18%; in Brașov, 17.7%.

Out of the total number of migrants, 42.9% are male and 57.1% female, females being not only more mobile, but also more willing to undertake long-term migration. Men tend to be more stable in terms of residence, but more inclined to commute for work. 58% of migrants move for personal reasons (e.g. marriage); 21% move for work; 13% move for study; the rest have other reasons to move. Studies were indicated as the main motivation for moving only for the migrants that choose Cluj-Napoca and Iași, well known for attracting a significant number of students to their strong regional universities, whereas personal reasons are generally indicated by those that moved to cities with a poor job market, such as Bușău, Râmnicu Vâlcea or Alexandria.

Most migrants to the 40 county seats, namely 34%, have upper secondary studies, followed by those with primary (25.9%), tertiary (23%) and lower secondary education (15.8). Migrants are generally better educated than the average population of the country but slightly less educated than the residents born in urban areas.
Figure 22. The share of migrants to county capitals by main education attainment, in 2011

- Tertiary: 26%
- Upper secondary: 34%
- Lower secondary: 16%
- Primary: 7%
- Other situations: 23%

Data Source: Romanian National Institute of Statistics

Figure 23. The share of migrants to county capitals by main reason to move, in 2011

- Personal reasons: 58%
- Job: 14%
- Studies: 21%
- Business: 7%
- Tourist/visitor: 1%
- Asylum & refugee: 34%
- Other reasons: 26%

Data Source: Romanian National Institute of Statistics

Figure 24. The share of migrants by main reason to move, at FUA level, in 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Zones
- Enclaves
- Share of migrants to county seats by main reason to move
- Personal reasons
- Job
- Studies
- Business
- Tourist/visitor
- Asylum & refugee
- Other reasons

Data Source: Romanian National Institute of Statistics
There is a strong link between educational attainment, age and previous residence. The young migrants originating from urban areas usually hold at least a bachelor degree, whereas those aged over 65 with the previous residence in rural areas generally have only primary or lower secondary studies. These are generally the migrants that moved to urban areas in the Communist period and were employed in the industrial sector.

The cities with the largest share of immigrants with tertiary education are those that managed to attract young people in the recent years, especially university centers such as Cluj-Napoca, Bucharest, Iași or Timișoara. On the other hand, the cities that faced a decline in the last two decades (e.g. Giurgiu, Călărași, Brăila, Galați, Tulcea etc.), after attracting numerous rural workers with basic competences in the Communist period, are those hosting most migrants with primary and secondary education. Between 2001 and 2011, 31% of migrants had tertiary education, suggesting a much higher mobility of people with higher education in times of economic boom. The most attractive places for people with higher education were Bucharest (41% of all migrants), Cluj-Napoca (37% of all migrants), Timișoara (29%), Iași (30%), and Brașov (31%).

Figure 25. The share of migrants by main education attainment, at FUA level, in 2011

Most migrants to the county capitals are active people – 49.6%, more than the national average, out of which 46.8% are employed. The unemployment rate among migrants is 5.6%, also less than the national average. One third of migrants are retirees (compared to only 23.3% of the total population nationwide), generally corresponding to the people that moved in the Communist period. Pupils and students represent 7% of the total number of migrants and homemakers approximately 6%.

Employed people represent the largest share of migrants to the 40 county capitals, except Brăila, Deva and Resița (where the retirees are the main migrant group). This confirms that the main function of inner migration is to balance the job market. Pupils and students represent over 15% of the migrants only in the second and third biggest university centers in Romania – Cluj-Napoca and Iași.

Figure 26. The share of migrants to county seats by current economic status, in 2011
The highest unemployment rate among migrants is reported in medium-sized cities with a poor economic performance, such as Vaslui, Drobeta Turnu Severin and Botoșani. Homemakers are over-represented in cities with limited job opportunities, such as Călărași, Constanța, Drobeta Turnu Severin, Giurgiu or Galați.

54.8% of the migrants to the 40 county capitals are qualified workers, generally requiring secondary education and corresponding to groups 4-8 in the ISCO-08 classification; 27.6% are managers and professionals with higher education, the two groups that are best ranked and remunerated; 10.7% are technicians; and only 6.9% are elementary workers with basic studies. The share of migrants that are employed as elementary workers is below the nationwide average, since major urban economies usually require a higher skilled labor force.

Larger cities, such as Cluj-Napoca, Bucharest and Iași, are reporting the largest share of immigrants working as managers and professionals, thanks to their service-based economies and multiple public functions – administrative, educational, health or cultural centers of national importance. On the other hand, cities with a more industry-oriented economy (e.g. Giurgiu, Călărași,
Tulcea, Arad, Galați, Bușău etc. attracted less highly qualified people and more workers with lower secondary or basic education. These are also generally the cities that were less attractive to young migrants in recent years.

Figure 29. The share of employed migrants by major occupation groups, at FUA level, in 2011

With respect to the field of activity, 58.4% of the immigrants work in the service sector, 22.5% in industry, 11.5% in agriculture, forestry and fishing and 7.7% in construction. This dynamic is in line with national averages. Nonetheless, there was a significant shift from industry, which used to employ over half of the urban labor force before 1990.

In major cities, such as Bucharest, Cluj-Napoca, Constanța or Iași, the service sector employs most of the migrants (60-70%), with industry being less well represented. These cities also gather most of the highly qualified people, with higher income expectations, which in turn make industrial activities less competitive and attractive. Medium-sized cities, with a well-developed industrial sector (especially automotive), such as Arad, Pitești, or Bistrița, attract the largest share of migrants working in manufacturing.
Figure 30. The share of employed migrants by economic sector, at FUA level, in 2011

Data Source: Romanian National Institute of Statistics

Figure 31. The share of employed migrants by economic sector, at FUA level, in 2011

Data Source: Romanian National Institute of Statistics
However, most of the migrants activating in the service sector are actually working in low added-value sub-sectors, such as trade or transport. From this perspective, it is more relevant to look at the share of migrants working in the so-called KIS (Knowledge Intensive Services) activities. Bucharest, Cluj-Napoca and Iași are the cities with the largest share of people working in these sectors (IT&C, financial services, education, health, public administration), that generally provide also the best paid jobs.

**Figure 32. The share of employed migrants active in the KIS sector, at FUA level, in 2011**

![Graph showing the share of employed migrants active in the KIS sector, at FUA level, in 2011.](image)

Data Source: Romanian National Institute of Statistics

If we consider only the share of migrants working in the most competitive and best remunerated private activities, namely IT&C and financial services, the city ranking remains almost the same. The first three university centers in Romania (Bucharest, Cluj-Napoca and Iași) are the most attractive for migrants working in these top sectors.

**Figure 33. The share of employed migrants active in IT&C and financial services, at FUA level, in 2011**

![Graph showing the share of employed migrants active in IT&C and financial services, at FUA level, in 2011.](image)

Data Source: Romanian National Institute of Statistics

The increasing share of people working in IT&C and financial services in Bucharest and Cluj-Napoca led also to an increase in the medium net wage, placing these cities in the top two urban agglomeration with the best paid jobs in Romania.
Commuter patterns in Romania

Who is commuting?

In 2011, when the last Census was completed, 21.2% of the employed people in Romania (1.81 million people) were working in another settlement than the one they resided in, out of which around 247,000 in another country. The number of commuters has increased significantly over the previous census (2002), when only 1.31 million Romanians (16.8% of the total number of employed people) were working in another settlement. Romanian workers became more mobile in the last 10 years in all counties, excepting Prahova and Gorj. The share of commuters to another county than the one they live in increased from 23.7% to 39.8% since the previous census, whereas the share of commuters within the same county decreased over the same time period.

The labor force in the less developed southern and eastern part of the country became more mobile, as these regions have grown over the past years, while the labor force in the northern and western areas remained more or less equally mobile. Thus, the counties around Bucharest, most of them predominantly rural and confronted with significant socio-economic disparities, are becoming more and more dependent on the job opportunities provided by the capital city. In this
context, the number of commuters from the counties of Teleorman, Ialomița, Giurgiu or Călărași towards Bucharest almost tripled in the last 10 years.

Most commuters are males (61.1%), while female workers seem to be less mobile both in terms of number and commuting distance. The gender disparity increased over 2002, when only 55.7% of the total commuters where men. This gender difference can be explained by the fact that over 55% of the overall employees in Romania are males, but also by some cultural patterns. The development of light industries and services in many urban and even rural settlements, providing jobs mostly for female workers, together with the decline of heavy industries, generally targeting the male employees, obliged the second group to be more mobile. The limited accessibility of some remote areas and the challenging commuting conditions also prevent more female workers from pursuing job opportunities in other areas.

The functional urban areas with the largest share of male commuters are Galați, Tulcea, Drobeta Turnu Severin, Giurgiu and Slobozia (over 70%), cities with an underdeveloped service sector and largely depending on heavy industries (ship building, metallurgy, machinery etc.) and agriculture. A more balanced structure of commuters by gender is specific for the cities in central and western part of the country (Bistrița, Sfântu Gheorghe, Alba Iulia, Cluj-Napoca, Sibiu, Miercurea Ciuc, Vaslui, Focșani), where more service and light industry jobs (e.g. textiles, footwear, food production) are available.

Figure 35. Number of commuters by age and destination, nationwide, in 2011

Young workers are also more mobile than the older ones. Over 30% of the workers aged 20-29 are commuting, whereas 87% of the ones over 60 are working in the same settlement they live in. Compared to 2002, labor mobility has significantly grown for all age groups. The number of commuters aged over 50 increased from 106,000 to 228,000 during this interval, also influenced by the aging demographic trend.

Young workers are also more mobile in terms of distance, the ones aged 25-29 being more involved in long-distance commuting (outside the county they live or abroad). Youngsters aged below 25 tend to be less involved in long-term commuting than in 2002, also because more of them are enrolled in the tertiary education and often pursue part-time jobs in the university centers where they live.
Competitive cities, with a dynamic economy and significant inflows of foreign direct investments seem to attract more young commuters. Over 50% of the workers commuting to Cluj-Napoca, Bucharest, Sibiu and Oradea are aged below 35. High shares of young commuters are also recorded in Timișoara, Iași, Arad, Baia Mare, Bistrița, or Satu Mare. To some extent, cities with a high concentration of university students (Cluj-Napoca, Bucharest, Iași, Timișoara, Sibiu, Oradea) also have a high share of young commuters, reflecting both commuting done for educational purposes, and commuting done by young graduates that have found work in the university center post-graduation. As it will be discussed later, universities are a critical people magnet, and given that they attract a lot of young and well qualified people, they are also critical for city’s economy – they make the cities more attractive to high value-added investors.

Cities that do not attract a lot of commuters, also seem to be less attractive for young commuters. Cities like Alexandria, Giurgiu, Slobozia, Galați or Drobeta Turnu Severin, have struggling economies and an aging population. As such, they attract both fewer commuters and fewer young commuters. Cities with a struggling economy basically lose on two fronts. For one, they lose a lot of their young population, as young people leave for opportunities elsewhere. And, by losing their young population they become less attractive to young commuters and migrants, which are essential for the revigoration of the city economy. This vicious cycle makes it difficult for these cities to enter a new development phase, based on higher value-added activities, given that investors face difficulties in recruiting qualified employees.
Over 62% of the commuters reside in rural areas, although 54% of the country’s total population lives in urban areas. 29.2% of the rural workforce is commuting compared with only 14.6% of the urban workforce, since most job opportunities are concentrated in cities. The large share of urban-urban commuting flows, almost double against 2002, also indicates that small towns with a declining economy are depending more and more on the jobs provided by big and medium-size cities.
Commuter flows are higher in and around dynamic cities, but overall commuter flows seem to be less intensive than in the Communist times. The census in 2002 was the first one to gather exhaustive data on the commuting flows in Romania. Nonetheless, a team coordinated by Prof. Dumitru Sandu from the University of Bucharest estimated, based on a “migration community census” the number of commuters from each rural settlement in 1992. The results indicate that 1.25 million Romanians living in rural areas commuted to urban centers at the beginning of the 90s, compared with 825,000 in 2002 and 961,000 in 2011. The decreasing number of rural commuters in the 90s can be explained by the decline of small industrial urban centers that are currently sources of labor force for big urban centers, but also for external migration. For example, in Cluj county, the number of workers commuting from rural areas to the secondary cities of Turda (including Câmpia Turzii) and Dej (including Gherla) dropped by more than 40% against 1992 and these four cities are currently providing 12.3% of the total commuters to Cluj-Napoca.

The more intensive commuter flows in Communist times also reflect barriers to migration at the time. During Communism, migration of people from place to place was strictly regulated by the Central Government, and people had difficulties moving where they wanted to move. Rather, people were “allocated” to different localities, based on estimated needs by the central authorities. As such, people commuted to work, but had a harder time to move for work. Also, commuter patterns were more evenly distributed across the territory of the country, reflecting the policy of the Communist Government to spread economic activity evenly – i.e. in an attempt to have balanced regional growth by fiat.

Currently, the largest cities in Romania attract most of the commuting workforce from rural areas. Nevertheless, some of those that are at the heart of a larger urban system, such as Bucharest, Ploiești, Pitești, Brașov, Constanța, Baia Mare, Deva, Alba Iulia, Râmnicu Vâlcea, attract a significant number of commuters from their satellite urban settlements.

When analyzing the rural-urban commuting flows in Romania, one must also consider the existing settlement ranking in Romania. The suburbanization process that took place around the most important cities in the last two decades resulted in so-called ‘dorm neighborhoods’ with a rural status, with a fast growing number of inhabitants. For example, 20% of the employees that are commuting to Cluj-Napoca are living in Florești, a suburban commune with over 30,000 inhabitants, more than most small cities in Romania. Thus, the share of rural-urban commuting is actually smaller than it may appear.

26.2% of the employees commuting to the 40 county seats in Romania have tertiary education, more than average percentage for the whole labor force in Romania (22.8%). 58% of commuters to the 40 county capitals had completed a form of secondary education (e.g. high school, vocational education), while 16% only had a primary degree. Overall, commuters are more educated than residents. One of the explanations for this occurrence is that most of the workers with tertiary and secondary education cannot find suitable jobs in their place of residence, especially in rural areas.

Most high-skilled commuters work in big cities (62.5% of them only in the eight growth poles), the ones concentrating the job offer for their level of education, especially in the service sector, and the ones with the highest average wage. Thus, the cities with the largest share of commuters holding at least a bachelor degree are Cluj-Napoca and Bucharest, the ones that managed to attract most investors and entrepreneurs in high added value sectors in the last decade.

The cities with a dominant industrial sector, such as Galați, Bistrița, Tulcea, Bușău or Călărași, generally attract less educated commuters, since they do not provide attractive jobs for workers with superior education. There is also a strong correlation between age and education. The cities that are less attractive to young people, generally report a small share of well-educated commuters.
From the ISCO-08 (International Standard Classification of Occupations) occupational structure perspective, most commuters are craft and related trade workers and professionals. Overall, only 18% of the jobs occupied by commuters require university studies (although 26% hold at least a bachelor degree, indicating that at least 8% of them are overqualified for the position they are currently occupying), 67% required a secondary degree, and 15% required just basic alphabetization. The highly-skilled commuters tend to be more mobile than the ones with basic studies. Over 47% of the commuting managers are working outside the county they live in (hinting to possible masked migration), whereas only 22% of workers engaged in elementary occupations do the same. Most professionals, clerical support, service and sale commuters are female workers, whereas the male one are mostly industrial and construction operators.
The comparison with the results of the 2002 census, indicate a tendency towards a higher specialization of commuters as well as a reorientation from the industry-related occupations to the service ones, in line with the nationwide job market tends. Thus, the share of blue-collar workers decreased from 43% to 15%, whereas the share of professionals commuting almost doubled. A significant share (25%) of commuters are craft and related trade workers, most of them working in retail.

Occupational and educational commuter dynamics are strongly interlinked, in the sense that top jobs are generally occupied by the employees with the highest level of education. Thus, the cities with the largest share of managers and professionals commuting are the most dynamic ones, such as Cluj-Napoca and Bucharest. This is also the case of some small county seats (Vaslui, Resita etc.) with a very small number of overall commuters, most of them being professionals in the public sector (education, public administration etc.). On the other hand, mostly industrial cities, such as Arad, Buşău, Bistriţa, Călăraşi or Tulcea attract the largest share of qualified commuters with secondary and lower secondary education (craftsmen, operators, assemblers etc.).

Figure 41. Share of commuters to county seats by occupation, at FUA level, in 2011

56% of the total number of commuters to the county seats in Romania are working in the service sector. Services sectors have offered the largest average monthly wage and have created most new jobs in the past years, especially in big cities. Industry employs 29.2% of commuters, while the construction sector employs 12.4%, thus being the sector with the most mobile workers. Agriculture, forestry and fishing only employ 2.5% of commuters.

Compared to the 2002 Census, the share of commuters working in the service sector has grown by almost 17%, reflecting the overall structural change of the national economy, especially the decline of some low added-value industrial activities, such as mining, clothing or heavy machinery, that used to attract many commuters in the Communist period.

The primary sector (agriculture, forestry, fishing) is the least appealing for commuters, largely because it already informally employs most of the labor force in rural areas (over 50%) and because of the low level of remuneration in the formal sector. Even in the agricultural poles of the country, such as Călăraşi, Brăila, Sâlaj, Focşani (vineyards), Vaslui, Alexandria, Tulcea, Giurgiu, less than 5-10% of registered commuters work in this sector.
**Figure 42. Share of commuters to county seats by occupation, at FUA level, in 2011**

Data Source: Romanian National Institute of Statistics

**Figure 43. Share of commuters to county seats by sector, at FUA level, in 2011**

Data Source: Romanian National Institute of Statistics
The secondary sector (industry, including energy, extraction, processing, water and waste management) is, on the other hand, the main employer for commuters in a few industrial poles, such as Pitești, Arad, Satu Mare, Bistrița (over 45% of total commuters) – cities that were very successful in attracting foreign investors, especially active in the automotive sector. Nonetheless, most commuters work in low and medium-low technology industries, such as food processing, textiles and wearing apparel, footwear, wood processing etc. – requiring less skilled personnel, with below-average wages. This is the case for some small and medium-sized county seats, such as Vaslui, Focșani, Botoșani, Brăila, Sfântu Gheorghe, Bistrița, Baia Mare, or Satu Mare.

The share of commuters working in high technology sectors (pharmaceuticals, computers, and electronics) and medium high technology industries (chemistry, electrical equipment, machinery, automotive, aeronautics, railway, and shipping transport equipment), based on the classification of EUROSTAT and EC, is below 50% in most Romanian cities, with the notable exception of Pitești, where an important car plant operates.

The construction sector attracts most commuters in areas with less available jobs in industry and services, such as the cities in the eastern and southern part of the country (Bacău, Botoșani, Galați, Suceava, Iași, Tulcea, Vaslui, Drobeta Turnu Severin – 15-20% of the total commuters).

The main employer in Romania, the service sector, employs more than 40% of the total number of commuters in almost all county capitals, with a maximum in the big cities, such as Bucharest, Constanța, or Cluj-Napoca (over 61%). Nonetheless, most of the commuters working in this sector are actually employed in low value-added service activities, such as retail or road transport. The share of commuters working in knowledge intensive high tech services (KIS), according to the EUROSTAT classification, is much smaller.

Figure 44. Share of commuters to county capitals working in the industrial sector, by level of technology, at FUA level, in 2011
Nonetheless, one should also consider that the KIS definition has its limitations, at least in the case of Romania, in the sense that it includes also service activities with low added value, such as security, but also the public ones, such as central and local administration, in the broad sense. If only IT&C and financial services are considered, the activities with the biggest average monthly wage in Romania, the city ranking is quite different. Bucharest and Cluj-Napoca are the most attractive destinations for commuters active in these two top sectors.

The automotive industry is the most dependent on commuters (46% of the total labor force in 2011, against 31% in 2002), followed by the petrochemical sector, mineral extraction, constructions, HR services, air transportation and forestry. On the other hand, only 3% of the labor force in agriculture is commuting because of the existing large share of informal employment in this sector,
especially in remote rural areas. Nonetheless, the sectors that still gather the highest absolute number of commuters are the ones that employ most staff nationwide – construction, trade/retail, transport, public administration or agriculture.

**Figure 47. Top industries by number of commuters, nationwide, in 2011 versus 2002**

Compared to 2002, the number of commuters increased in most sectors, with the exception of a number of declining industries, such as mineral extraction, clothing, machinery, chemistry and petro-chemistry, conventional energy, wood processing and furniture.

The data indicates that entrepreneurs are less mobile than employees, since only 12% of the employers and 6% of the freelancers are commuting compared with 28% of employed staff (up to 64% in rural areas). Employers and freelancers generally prefer to stay close to their businesses explaining why they tend to be highly concentrated in big cities.

The counties with the most mobile labor force are the ones that have strong centers of opportunities or are close to strong centers of opportunity (i.e. areas with a high concentration of firms and jobs), such as Ilfov (the informal metropolitan area of Bucharest), Prahova (with Ploiești being one of the most dynamic industrial and logistic hubs in Romania), Argeș (around the Pitești-Mioveni area, the core of the Romanian automotive industry), Dâmbovița (part of the triangle of economic and demographic concentration formed by Bucharest, Ploiești and Pitești), Satu Mare and Arad (at the western border, with important industrial hubs) – all with over 25% of the labor force commuting. Counties with less mobile workers include Brăila, Vaslui, Galați, Botoșani, Dolj, Mehedinți, Olt, Tulcea, Bistrița-Năsăud (less than 20% of the total labor force). The common characteristic of these counties is the lack of dynamic and competitive cities able to attract labor force from a significant distance.
The strong links between local development and commuter numbers were already pointed out by Professor Dumitru Sandu from the Faculty of Sociology in Bucharest. He tested the correlation between the value of the Local Human Development Index (LHDI) at territorial administrative unit (TAU) and the share of commuters for the Ploiești Growth Pole Metropolitan Area, the one with the highest intensity of labor force mobility in Romania. The results indicated that the settlements with the highest rate of commuting to the core city were also the most developed ones in terms of social-economic development, since they benefit from significant bigger financial inflows. This comes to strengthen the theory that dynamic cities diffuse development to the areas around them, but require good accessibility to do this job.
In terms of commuting distance, the only counties with over 10% of the labor force working outside the county are the ones around Bucharest (Ilfov, Giurgiu, Călărași, Ialomița, Dâmbovița and Teleorman), indicating that the capital city is the only one capable of attracting a significant number of workers from more than 50 km. Nonetheless, despite attracting the biggest number of commuters, Bucharest is the only growth pole in Romania that has no official metropolitan area, indicating the need for a coherent and clear definition of functional urban zones.

Where are people commuting?

Out of the 1.8 million commuters in Romania, more than 51% are working in the 40 county capitals and Bucharest – 67% if their metropolitan/functional urban areas are considered. This percentage has increased in the last two decades because most of the small cities that resulted from the forced industrialization and urbanization strategy of the Communist government did not adjust well to the requirements of a market-driven economy.

In 2011, when the last Census was completed, these 41 metropolitan/functional urban areas provided 61% of the total jobs existing in Romania and over 70% of the non-agricultural ones. They also generate 90% of the national corporate income, out of which 75% is generated by the one-hour driving areas around Romania’s 8 growth poles.

Figure 50. Total corporate income (turnover) – mil. Lei, at FUA level, in 2015

Data source: Borg Design (Listafirme.ro) Database
Economic performance and commuting are strongly connected. The top cities in Romania, from the perspective of corporate income and total number of jobs, are, in general, also the ones attracting most commuters (see figure below). Bucharest and the seven regional growth poles themselves pool 36% of the total number of commuters in Romania.

However, not only economic density and performance matters when it comes to commuting. Distance is vital and demographic density is also important. The share of commuters that pass the county border for work does not exceed 10%, excepting a few counties around Bucharest although the income disparities between different regions in Romania are quite significant. On the other hand, cities with rather poor economic performance, such as Târgoviște, had intensive commuting flows because they are surrounded by dense rural areas.

The city that attracts the highest number of commuters is Bucharest (over 252,000 workers only to the city and 331,000 if its functional urban area is also considered). Beside the fact the city itself generates approximately 25% of the national GDP and over 11 million jobs, it is the core of the area with the highest density of population and companies. The capture area of the capital city extends up to 100 km (e.g. the northern part of Teleorman county), especially in easy accessible areas with poor economic development. The average monthly net wage in Bucharest is at least double than in most of the surrounding counties (Ialomița, Călărași, Giurgiu, Teleorman), making it attractive also for long-distance commuting.

Figure 51. The FUAs with the strongest private sector attract most commuters

Data Source: Romanian National Institute of Statistics and Borg Design (ListaFirme.ro)

Other cities that are very attractive for non-resident workers are larger urban agglomerations such as Ploiești, Timișoara, Cluj-Napoca, Constanța, Brașov, Pitești and Iași. However, from a relative perspective, the cities of Pitești, Ploiești, Târgoviște, Deva, Târgu Mureș, Alba Iulia, Miercurea Ciuc and Brașov report the largest share of jobs occupied by commuters (over 25%). Despite the fact some of them are medium-size county seats, these cities are at the center of more extended urban system (Brașov, Pitești, Deva, Alba Iulia) or are surrounded by densely populated rural areas (Târgoviște, Miercurea Ciuc). Cities such as Reșița, Tulcea, Botoșani, Vaslui, Giurgiu or even Craiova have the lowest commuting rate not only because their economies have shrunk in the last two decades, but also because their surroundings are scarcely populated (the counties of Caraș-Severin and Tulcea have the lowest population density per sq. km in Romania – one is a mountainous area, the other houses much of the Danube Delta). In sum, density and concentration seem to be important triggers for commuters.
Commuting is also strongly linked with suburbanization, with people moving to live outside core cities and subsequently commuting for work/study in the core cities. Cities such as Ploiești, Pitești, Brașov and Constanța are attracting a significant number of commuters in their metropolitan/functional urban areas either because more and more companies migrated from the city center to the outskirts under cost, environmental or infrastructure-related (e.g. industrial parks) pressures, or because they inherited a more balanced distribution of economic platforms inside the metropolitan area. This was especially the case of cost-sensitive and medium-low added value activities such as industry, construction and even trade. Other cities, such as Cluj-Napoca, although performing above average, are largely depending on high and medium-high added value services (IT&C, financing, higher education, health, public administration etc.) that are more geographically concentrated in the core city. The employees in these sectors are in fact less mobile than the ones in industry, constructions and even trade. Other medium-size county seats with a less developed economy (e.g. Reșița, Giurgiu, Vaslui, Botoșani, Alexandria, Călărași, Slobozia, Slatina etc.) simply did not manage to diffuse growth and development to surrounding areas, resulting in poor demographic and economic suburbanization. Thus, almost all the commuters they attract work in the core city.
WHAT MAKES CITIES ATTRACTIVE
Which cities are most attractive to migrants?

As indicated in the previous subchapter, inner migration, primarily from rural to urban areas, was the main source of urbanization growth in the communist period. The table below shows that at the end of the Second World War there were significant differences in the population of the top 10 cities in Romania, in 1992, just two years after the collapse of the Communist regime, Romania had seven secondary cities with almost the same population (over 300,000 inhabitants each). This was the result of the centralized urbanization and industrialization plan implemented by the communists. In order to balance the migration flows, that were naturally oriented towards these growth poles, the authorities even decided to ban migration to the big cities and to force people to move to medium-size cities. As a result, cities such as Zalău and Vaslui artificially doubled their population in less than 15 years.

Figure 53. Population and Ranking of largest 10 Romanian cities over time

<table>
<thead>
<tr>
<th>City</th>
<th>Stable population and ranking (1930-2011 censuses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>639,040</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>100,844</td>
</tr>
<tr>
<td>Timișoara</td>
<td>91,451</td>
</tr>
<tr>
<td>Iași</td>
<td>102,872</td>
</tr>
<tr>
<td>Constanța</td>
<td>59,164</td>
</tr>
<tr>
<td>Craiova</td>
<td>63,215</td>
</tr>
<tr>
<td>Brașov</td>
<td>59,232</td>
</tr>
<tr>
<td>Galați</td>
<td>100,611</td>
</tr>
<tr>
<td>Ploiești</td>
<td>79,149</td>
</tr>
<tr>
<td>Oradea</td>
<td>82,687</td>
</tr>
</tbody>
</table>

Data Source: Romanian National Institute of Statistics

The last decades, and especially the recent years after the EU accession, rebalanced these state-planned migration flows, based on market-driven forces. The natural growth poles, such as Bucharest, Cluj-Napoca or Timișoara continue to attract young people, whereas some cities which have grown “artificially” in the communist period are shrinking and losing population. For example, the city of Vaslui gained almost 40,000 inhabitants in the 1980s and lost 25,000 people after 1990, most of them moving to Iași, to Bucharest, to out-migration, or even to the rural areas they came from 20-30 years back.
In this context, it is relevant and useful to analyze the migration flows to the county seats and their functional urban area in different time intervals:

- The period before 1970: involves migration flows that took place before the peak of the industrialization and urbanization process conducted during Communism. It is characterized by more urban-urban movements, especially in the 50s;

- The 1970s: this interval overlaps with the industrialization and urbanization process, but with no limitations with respect to inner migration. Most flows are rural-urban ones and targeting both big and medium-sized cities;

- The 1980s: this interval also corresponds to the Communist industrialization and urbanization process, but also brings legal barriers in moving to big cities and an important economic decline, especially in the second half. Flows are again mostly rural-urban ones, but targeting especially medium-sized cities;

- The 1990s: the first ten years after the collapse of the communist regime led to a severe decline of urban economies. After 1997, a certain increase in the urban-rural migration can be observed, corresponding to a reverse-migration process. People that moved from rural areas to cities in the 70s and 80s decided to move back to their previous residences once they lost their jobs or could not afford the cost of urban living;

- The last decade (after 2000): corresponds to a period of economic growth that was not equally distributed at national level, leading to an increase in the territorial mobility of the labor force. For the first time, urban-urban flows became quite important, because of the surplus of labor and young people living in medium and small-sized cities with a weak economic base. Some competitive poles, especially Bucharest and the cities that were close to the western border entered a period of intensive growth, that also resulted in a suburbanization process – an issue that is discussed at length in this report.

**Data Source:** Romanian National Institute of Statistics
Figure 55. The migration flows to growth poles and other county capital FUAs, by period

Data Source: Romanian National Institute of Statistics

Figure 56. Migration flows to county capital FUAs, by period

Data Source: Romanian National Institute of Statistics
Bucharest and the seven regional growth poles attracted most migrants in the last 50 years, except in the 80s, when migration to big cities was banned by the Communist authorities in order to balance the territorial development of the country. The last decade shows that these large agglomerations are becoming more and more attractive, especially for young people from small and medium-sized cities.

Figure 57. The number of migrants to the eight growth poles in Romania, at FUA level, by period

Bucharest is the city that attracts most migrants every year, also because it is at least six time bigger than any other city in Romania. Brașov was the second most attractive city in the 1960s and 1970s, when it was a symbol of the industrialization policy implemented by the Communist Party. Timișoara occupied the second position in the 1980s and 1990s, being an important industrial center that managed to maintain its competitiveness during the shift to the market economy, owing to its good location on the Western border of Romania. Timișoara is closely followed by Cluj-Napoca, especially in recent years, a city that is becoming the most attractive educational center after Bucharest and developing a very competitive service sector, with a strong IT&C industry (software development already provides approximately 10% of the total number of jobs). Between 2001 and 2011, 63% of migrants that came to the Timișoara FUA came from outside Timiș County (the county of Timișoara); in the case of the Cluj-Napoca FUA, 61.3% of migrants came from outside Cluj County in the same time period.
Other cities, such as Constanța, Craiova and Galați, were very competitive in the Communist period, but did not manage to maintain their attractiveness in recent years, one of the reasons being that they have to territorially compete with Bucharest. The migrants these FUAs have attracted were primarily from their respective counties (i.e. they had smaller attraction areas) – 58% for Constanța, 57% for Craiova, or 57.3% for Galați. This unequal competition affects also cities such as Brașov and Ploiești, surrounded by areas with strong migration flows to Bucharest. From this perspective, Cluj-Napoca and Timișoara, both situated at around 500 km away from Bucharest and close to the western border, have the best premises to continue to attract people from their capture area without competing with a bigger FUA.

Figure 58. The dominant migration flows to the eight growth poles in Romania, at county level, by period

Data Source: Romanian National Institute of Statistics
**Bucharest and the seven growth poles have large migration catchment areas.** The migration flows to Bucharest are dominant in 18 counties from the southern and eastern part of the country, those to Cluj-Napoca in 10 counties, covering the entire historical region of Transylvania (excepting Brașov and Hunedoara), to Timișoara in 6 counties (all the western and south-western part of the country), to Iași in 5 counties (the north-eastern part of the country), to Constanța in two counties (Constanța and Tulcea), one to Brașov (Covasna County), and one to Craiova (Dolj).

**Compared to the previous census, the migration capture area of Cluj-Napoca and Iași extended with 5, respectively 4 counties**. The one of Timișoara remained the same. The other growth poles, including Bucharest, have had a shrinking capture area, especially by becoming less attractive to (a shrinking base of) university students.

**All university centers lost students in the last decade, as a direct effect of the severe decline of birth rate after 1990, but some universities managed to remain more competitive than others**. While the student population in Cluj-Napoca dropped by less than 8% in 2015 over 2002, Timișoara, Iași and Bucharest lost 28% of their student base; in Brașov the decrease was 27%; in Constanța 22%; in Craiova 40%; in Ploiești 23%. As a result, Cluj-Napoca currently hosts 12.2% of the entire student population in Romania, compared to a share of 9.1% in 2002.

*Figure 59. The student capture area of the University of Bucharest in 2015*
Figure 60. The student capture area of the Babes-Bolyai University of Cluj-Napoca in 2015

Source: https://www.rei.gov.ro

Figure 61. The student capture area of the West University of Timișoara in 2015

Source: https://www.rei.gov.ro
The maps above indicate that only Bucharest and Cluj-Napoca are attracting students from several regions of Romania, some from a long-distance, while the other large university centers have a limited regional capture area. This influences the overall competitiveness of the cities, given that the availability of skilled labor force became the main driver for business development, especially in high added-value sectors, such as IT&C or BPO.

The Zipf Law – Destiny or Policy Tool?

Geographers and urban development specialists know the Zipf Law well, and it does seem to predict quite well how the system of cities will develop in a country that grows organically. The Zips Law states that in a country that grows organically, there will usually be a primate city, which rarely loses its position in the country’s hierarchy. The primate city is usually followed by 1-2 cities with a population around half that of the primate city, then 2-3 cities with a population around 1/3 that of the primate city, and so on. Thus, when you plot on a graph the log of the city’s population and the log of its rank in the national hierarchy, you get almost a perfect distribution. The graphs below show how this distribution looks like in six countries that have developed organically.
Figure 63. Zipf City Population Distribution, in selected countries, in 2010

Of course, Romania did not develop organically before 1989. When the centrally planned system was removed, Romania had a system of cities that was more or less skewed – in essence, it had no real secondary cities. There was Bucharest, the unquestionable primate city, with a population of around 2 million, and 6 cities with a population of around 300,000. There was no city with a population of around 800,000 - 1,000,000, and no city with a population of around 500,000-600,000. Things did not change substantially by 2002, given that the Romanian economy did not make any substantial progress in this timeframe.

![Figure 64. Romanian Cities Zipf Distribution, in 2002](image1)

![Figure 65. Romanian Cities Zipf Distribution, in 1992](image2)

![Figure 66. Romanian Cities Zipf Distribution, in 2011](image3)

However, things took a turn for the “normal” in 2011. As the economy of Romania embarked on an aggressive growth path, the system of cities seems to have also followed suit. For one, Bucharest lost some of its population – both due to demographic decline, but also due a suburbanization process, with a lot of people moving to the neighboring Ilfov county, or even further. In fact, all major cities have lost population between 2002 and 2011, with the exception of Cluj-Napoca and Timişoara. It is these two cities that seem to distance themselves from the pack, and play the role of main secondary cities. It is also these cities, and their FUAs, that have attracted the largest number of migrants between 2002 and 2011. This is a particular important dynamic, given that it is in this decade that cities in Romania managed to attract the largest number of people over the past 50 years.

This points deserves repeating: at no point during the history of Romania, did the FUAs of the 41 capitals in Romania manage to attract as many migrants as they did between 2001 and 2011. Before, migration was tightly controlled by the central government, or people were simply not on the move because of the lack of economic opportunities. The 1980s and the 1990s, two decades of economic decline, were also the two time periods with the lowest migration levels.
Obviously, the more dynamic an economy is, the more people are on the move. Conversely, the more people are on the move, the better off the economy is. A mobile population is a sign that resources in the economy are adequately allocated. Basically, people move to the places where they can be most productive, and the most productive firms usually move to the places with the most productive people.

And sure enough, the moment the Romanian economy took off, so did people. However, unlike the Communist times, people did not move where the Government told them to, but rather where they wanted to. The most attractive cities in this time of economic expansion seem to be Bucharest, Cluj-Napoca, Timișoara, and Iași – together, these four FUAs have attracted 46% of the migrants moving to the 41 county capitals. Bucharest and the seven regional growth poles, taken together, received 59% of all migrants going to the 41 county capitals. There is also another interesting dynamic.

Cluj-Napoca, Timișoara, and Iași, received proportionally more migrants than Bucharest did. More specifically, while Bucharest has a population that is around 6 times as large as the population of these three cities, the number of migrants it received between 2001 and 2011 is only three times at large. Thus, if we do the Zipf distribution for the number of migrants, we see a pattern that more closely resembles what we would expect to see in a country that grows organically (see figures below).

If these trends will continue, moreover, if the trends will be augmented by strong economic growth, it is possible that the secondary city gap will be filled in the future. 40% of all migrants that moved to Cluj-Napoca after 1970, have done so after 2011; the share was 36% in the case of Iași, and 35% in the case of Timișoara. By comparison, this share was only 27% in Bucharest (which was also the average for the other 40 FUAs), indicating a more reduced migration dynamic in this time-period.

Now, another thing the Zipf Rule tells us, is that secondary cities rarely grow beyond half the population of primate cities. There seems to be a clear limit to how big secondary cities can grow, although it is often secondary cities that are the most dynamic places in a country. Given the population size of the City of Bucharest, Romania should normally have 1-2 cities with a population of around 800,000 – 1,000,000.

Another thing we learn from the Zipf Rule is that the distribution in the system of cities holds over time, although the rank of individual cities may change. In the most dynamic economies, such as that of the US, secondary cities change rank quite frequently. The industrial
hubs of the Rust Belt have in the past decades been replaced with the high-tech hubs of the Sun Belt. In Europe, cities change rank less frequently, but it still happens. Cluj-Napoca was the fifth largest city in Romania in 1992, at the beginning of the transition, but it is second now. In Poland, Katowice is the second largest urban agglomeration, but it is smaller cities like Poznan and Wroclaw that are the dynamic urban hubs in the country.

The Primacy Effect and the Secondary City Gap

All things being equal, it is likely the Bucharest will remain the most attractive place for migrants in the future. The Zipf Law and the experience of most developed countries indicates that primate cities rarely change their place in the hierarchy of a national city system, and they usually also remain the most attractive places for migrants. Their size also translates into a strong gravitational pool – both for people and firms, and usually also for tourists. Primate cities are usually also the easiest to get to, as they tend to be a country’s most important transport hub.

Cluj-Napoca and Timișoara are likely to be the runners-up for filling the secondary city gap, so they are likely to be very attractive places for migrants in the future. Whether these two cities manage to keep their leadership position also depends on how well they are managed, not only on pure market dynamics. The Zipf Rule teaches us that secondary cities often lose their rank in a country’s hierarchy, and it is usually human intervention, both by public and private actors, which makes the difference.

While this may be a hard pill to swallow for most policy makers, it is likely that around 5-7 cities in Romania will attract an overwhelming share of internal migrants in the following years. If this dynamic would happen in a context of overall population growth, all would be nice and dandy. However, when this happens in a context of overall demographic decline, some places will likely lose people that may never come back. Although it is unlikely to have a widespread phenomenon of ghost towns/villages (even in countries with widespread migration, such as the US, this did not happen), it is likely that many places will face socio-economic problems due to population decline. Without a concentration of people and resources in a few dynamic places though, it will be hard for the Romanian economy to stay competitive – no country has managed such a feat.

The Size and Location Effect

Figure 11, earlier in the report, highlights a clear territorial development dynamic in Romania: the West of the country has developed faster than the East and the South, and larger cities have by and large fared better than smaller cities. Being close to the western border brings clear advantages, as the West is generally preferred by investors due to the closer location to Western European markets. The map below shows clearly the advantage of good location. Thus, localities
inside the Carpathian Arc have a disproportionate share of their exports going to the EU (where 70% of all Romanian exports go to), whereas localities in the East and South are less connected to the EU.

**Figure 69. Share of exports going to the EU by locality in Romania, 2010**

![Share of Locality Exports going to the EU, in 2010](Source: World Bank. 2013. “Competitive Cities: Reshaping the Economic Geography of Romania”)

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**Larger cities have generally fared better than smaller cities, although not always** In the North-East Region, it is the City of Iași, the largest urban area, which has developed the fastest; in the South-East Region, it is Constanța that has had the best performance; and, in the South-West, Craiova is the best performer. However, smaller cities from the West of the country, such as Sibiu or Arad, have had higher productivity rates than these large cities from the East and the South.

**Thus, geography and size matter for the attractiveness of the city.** This is a pattern that can be observed in almost every New EU Member Country. The World Bank has developed poverty maps for most countries in Central and Eastern Europe and has witnessed this dynamic everywhere. Thus, the regions closer to the EU core are more developed, and overall larger cities, particularly those in good locations, do better than smaller cities.
Cities that are close to Bucharest suffered in the transition years, as a significant share of their qualified labor force moved to the capital. Cities that are close to Bucharest, such as Ploiești, Bucău, Constanța, Brăila, or Pitești, have sent a large number of migrants to the capital. This dynamic has negatively affected those cities. However, as the economic cup of the capital has gotten full, development is now spilling back to these urban centers. Given that salaries have been growing continuously in Bucharest, many firms, particularly manufacturing firms, have moved to nearby urban centers, in search of lower costs. Thus, while proximity to Bucharest was initially a handicap, it may now turn into a boon.

Table 4. Localities that have sent most migrants to the Bucharest FUA after 1991

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ploiești</td>
<td>3,309</td>
<td>6,361</td>
</tr>
<tr>
<td>2 Bucău</td>
<td>2,839</td>
<td>6,233</td>
</tr>
<tr>
<td>3 Constanța</td>
<td>2,522</td>
<td>5,471</td>
</tr>
<tr>
<td>4 Brăila</td>
<td>2,202</td>
<td>4,870</td>
</tr>
<tr>
<td>5 Pitești</td>
<td>2,379</td>
<td>4,806</td>
</tr>
<tr>
<td>6 Alexandria</td>
<td>2,444</td>
<td>4,124</td>
</tr>
<tr>
<td>7 Craiova</td>
<td>1,751</td>
<td>4,119</td>
</tr>
<tr>
<td>8 Galați</td>
<td>1,915</td>
<td>3,921</td>
</tr>
<tr>
<td>9 Târgoviște</td>
<td>1,809</td>
<td>3,480</td>
</tr>
<tr>
<td>10 Giurgiu</td>
<td>1,797</td>
<td>3,270</td>
</tr>
</tbody>
</table>

Data Source: Romanian National Institute of Statistics

The one-hour access area, by car, around the capital amasses a quarter of the population in the country and generates a half of registered firm revenue – it is basically the economic heart of Romania. Cities that are close to Bucharest, such as Ploiești, Bucău, Constanța, Brăila, or Pitești, have sent a large number of migrants to the capital. This dynamic has negatively affected those cities. However, as the economic cup has filled, benefits have started to spill over to these neighboring cities. Given that salaries in Bucharest have been growing continuously, firms, particularly manufacturing firms, are now locating around Bucharest, as a way of lowering costs, but still being close to the “action”.

A good performance of the Romanian economy will inevitably entail a good performance of this large urban agglomeration around Bucharest. This will require good connective infrastructure in the region, to allow a seamless movement of people, goods, and ideas in the region. In addition, it will be critical to do planning for the larger urban agglomeration rather than just for individual localities. There are several large cities that anchor the urban agglomeration around Bucharest (Pitești to the West; Târgoviște to the North-West; Ploiești and Brașov to the North; Constanța to the East; and, Giurgiu to the South). The same way the Bos-Wash-Meg (the megalopolis stretching from Boston, via New York and Philadelphia, to Washington, DC) functions as the economic heart of the US, so can the Bucharest urban agglomeration function better as the economic heart of Romania.
A large enough pool of human capital is for several decades recognized by economists as being one of the chief ingredients for sustained economic growth. Those that live in developing countries know fully well that an educated population is not merely enough to sustain growth. Without proper access to large markets, a good idea and or a good product/service can only go so far. Even countries with state-of-the art education systems are not immune to the fickleness of the economy. The Finns, although they have one of the best educated populations in the World, have been in a recession since Nokia went belly-up.

Nonetheless, we do know that it is much easier to sustain economic growth if you do have an educated population. Bucharest, Cluj-Napoca, Timișoara, and Iași, the cities that have been most successful in attracting migrants between 2001 and 2011, are also the strongest university centers in Romania. However, at around the same population, Cluj-Napoca has an economy that is more than twice as large as that of Iași – banking largely on its better geographic location (closer to the rich markets in the West).
Universities also play another critical role: they provide private firms with a continuous supply of qualified labor force. Thus, cities without universities have a hard time competing with large university centers. A traditional manufacturing town will always face some limits to growth, as there is only so much one can raise the salary of a blue-collar worker, before the company becomes un-competitive on global markets. On the other hand, in high value-added sectors, which require the input of people with specialized expertise, salaries can grow in a much more flexible way. Ultimately, the cities that can sustain growth are those that manage to generate high salary jobs that can offset the rising cost of living in the respective cities.

The table below, indicates the FUAs with the highest concentration of people with higher education. Obviously, the strongest university centers also have a high concentration of well educated people. But, economic performance of the respective FUA also seems to be a factor in attracting qualified people. Thus, Constanța, which is a less developed university center than Iași, has about the same number of people with higher education. Sibiu and Târgu Mureș, which are more established university centers than Ploiești and Pitești, have none-the-less fewer people with higher education.

Table 5. The number of people with higher education, in Bucharest and the 40 county capitals (in 2011)

<table>
<thead>
<tr>
<th>FUA Core City</th>
<th>Bucharest</th>
<th>Cluj-Napoca</th>
<th>Timișoara</th>
<th>Constanța</th>
<th>Iași</th>
<th>Brașov</th>
<th>Craiova</th>
<th>Ploiești</th>
<th>Pitești</th>
<th>Oraș</th>
<th>Galați</th>
<th>Sibiu</th>
<th>Arad</th>
<th>Târgu Mureș</th>
<th>Bacău</th>
<th>Baia-Mare</th>
<th>Râșnovul Vâlcea</th>
<th>Brăila</th>
<th>Buzău</th>
<th>Târgoviște</th>
<th>Târgu Jiu</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>653,882</td>
<td>109,277</td>
<td>105,468</td>
<td>89,149</td>
<td>89,080</td>
<td>80,395</td>
<td>73,391</td>
<td>69,216</td>
<td>56,550</td>
<td>54,829</td>
<td>48,395</td>
<td>45,573</td>
<td>43,959</td>
<td>37,608</td>
<td>34,644</td>
<td>32,808</td>
<td>31,668</td>
<td>28,420</td>
<td>27,890</td>
<td>26,894</td>
<td>26,223</td>
</tr>
<tr>
<td></td>
<td>577,122</td>
<td>94,877</td>
<td>88,861</td>
<td>70,086</td>
<td>80,615</td>
<td>61,660</td>
<td>68,747</td>
<td>51,111</td>
<td>40,548</td>
<td>47,036</td>
<td>46,321</td>
<td>37,427</td>
<td>34,710</td>
<td>30,167</td>
<td>31,281</td>
<td>26,183</td>
<td>23,825</td>
<td>27,748</td>
<td>22,730</td>
<td>19,067</td>
<td>21,104</td>
</tr>
</tbody>
</table>

Data Source: National Institute of Statistics
Ultimately however, a city cannot sustain growth if its private companies cannot continuously become more productive and offer higher salaries to their staff, and such growth cannot be sustained without a continuous supply of qualified people. Particularly for cities that have passed a certain development threshold, it is critical to be able to attract and retain human capital. There are few examples of boom-cities without a strong university nearby.

The Good Leadership Effect

An unlimited supply of books on leadership tells us that good leaders can help turn the tide for a city. How much of a city’s performance is simply a result of market forces, and how much a result of human engineering, is hard to say, and even harder to estimate. The boundary between market force and human engineering is not as fine as we might like to think. Every decision taken by a person in the markets, is in effect also human engineering. The sum of these humanly engineered decisions is in fact what we call markets – Adam Smith’s “invisible hand”.

However, the decisions taken by one person, or a few people, may have a larger impact than the sum of individual decisions taken. Mayors, and the decisions they take, do matter for a city’s competitiveness. Strong mayors play an active role in attracting high value-added investors, they allocate lots of energy and resources to raising the quality of life in their city, and they know how to build coalitions with the private sector and civil society representatives.

Land and Housing Markets

Efficient and dynamic land and housing markets are critical for rapidly developing cities – when these markets work properly, the inflow of people and businesses is made easier. The World Bank has prepared for the Romanian Ministry of Regional Development, two analyses that discuss both land and housing markets in detail.

The report “Enhanced spatial planning as a precondition for sustainable urban development” indicates that land markets in Romania are dysfunctional. For one, the ownership situation is not always clear. Following 1989, lands were restituted to their rightful owners, but ownership could not always be clearly established. As such, a significant share of urban land in Romania (it is not clear how much) has no clear ownership or is disputed in court. The figure below is evocative from this point of view. It represents one of the most prime pieces of real estate in Romania – the Esplanada site, around 11 hectares of land, right in the heart of Bucharest. Before communism, the site was part of the Jewish Quarter in Bucharest. During Communism, it was raged to the ground and a large Opera House was proposed for development there. When the Revolution of 1989 came, only the foundation of the Opera was finished. The transition years have seen many attempts at redeveloping this site, all of which have failed because of the murky ownership issues. As the figure below indicates, only 6% of the Esplanada site has been restituted to its rightful owners; 20% of the land is disputed in court; and, for 74% of the land no claim was made. Many parcels of urban and suburban land have a similar murky ownership structure.
Another key issue is the fragmentation of suburban and peri-urban land. Urban extension, in the absence of clear and efficient spatial planning, has followed an “organic” pattern, going for the point of easiest entry – i.e. plots of land where the owner could be identified and was willing to sell, and were close enough to existent infrastructure networks (roads, water, wastewater, gas) to make the development of these plots of land cost-effective. How this “organic” development looks in practice is well evidenced by the image below, which showcases new developments in the Commune of Florești, on the outskirts of Cluj-Napoca – the largest rural area in Romania now. Development of this type is neither efficient nor sustainable nor desirable.

Lastly, the lack of a full functioning cadaster and the poor access to information on land ownership (when ownership is actually known) are also important barriers to efficient land development. Given that land is so fragmented, and given a relative penury of large, contiguous and
developable tracts of urban land, developers often face significant transaction costs in getting large enough pieces of land together. If the information on the land plots would be easy to access (e.g. if it would be easy to identify the owner and his/her contact information), some of these transaction costs would be lower.

The report “Towards a National Housing Strategy” indicates that housing markets are also dysfunctional in Romania. For one, a combination of low affordability, high mortgage rates (10%-12%), high construction costs, and atomization of households (with a significant increase in the share of one-person households) has effectively skewed the demand for housing – in terms of type, quality, and size. Basically, an overwhelming share of new housing stock coming into the market is represented by small 1-2 room units (50-55 m²), for the most part being built in the most dynamic functional urban zones.

Of the around 982,000 new housing units developed between 1990 and 2015, 64% were developed in the functional urban areas of Bucharest and the 40 county capitals. Moreover, around 52% of the housing units developed in these 41 FUAs (around 326,000 in total), were developed outside the core city, indicating a very rapid process of suburbanization. Most of these new developments were undertaken with a weak or absent spatial planning system. Particularly troublesome is the fact that although 52% of new units were developed in suburban and peri-urban areas, no efforts at metropolitan planning were undertaken. Of course, this un-controlled sprawl has clear negative effects on the cost of transport and other public infrastructure investments (e.g. water and wastewater, solid waste management, street lighting).

Table 6. New Dwellings Developed between 1990 and 2015

<table>
<thead>
<tr>
<th></th>
<th>Core City</th>
<th>FUA</th>
<th>% in Outer FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>68,435</td>
<td>154,631</td>
<td>55.74%</td>
</tr>
<tr>
<td>Constanța</td>
<td>20,181</td>
<td>43,531</td>
<td>53.64%</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>18,068</td>
<td>42,753</td>
<td>57.74%</td>
</tr>
<tr>
<td>Iași</td>
<td>12,772</td>
<td>26,598</td>
<td>51.98%</td>
</tr>
<tr>
<td>Timișoara</td>
<td>9,831</td>
<td>26,482</td>
<td>62.88%</td>
</tr>
<tr>
<td>Pitești</td>
<td>7,517</td>
<td>22,801</td>
<td>67.03%</td>
</tr>
<tr>
<td>Brașov</td>
<td>11,845</td>
<td>20,146</td>
<td>41.20%</td>
</tr>
<tr>
<td>Sibiu</td>
<td>11,309</td>
<td>19,962</td>
<td>43.35%</td>
</tr>
<tr>
<td>Craiova</td>
<td>11,118</td>
<td>17,335</td>
<td>35.86%</td>
</tr>
<tr>
<td>Ploiești</td>
<td>4,964</td>
<td>17,101</td>
<td>70.97%</td>
</tr>
<tr>
<td>Arad</td>
<td>13,750</td>
<td>16,827</td>
<td>18.29%</td>
</tr>
<tr>
<td>Oradea</td>
<td>10,038</td>
<td>15,975</td>
<td>37.16%</td>
</tr>
<tr>
<td>Suceava</td>
<td>5,647</td>
<td>15,915</td>
<td>64.52%</td>
</tr>
<tr>
<td>Bacău</td>
<td>5,245</td>
<td>14,639</td>
<td>64.17%</td>
</tr>
<tr>
<td>Galați</td>
<td>8,146</td>
<td>14,585</td>
<td>44.15%</td>
</tr>
<tr>
<td>Focșani</td>
<td>3,964</td>
<td>13,406</td>
<td>70.43%</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>5,807</td>
<td>12,827</td>
<td>54.73%</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>4,006</td>
<td>11,723</td>
<td>65.83%</td>
</tr>
<tr>
<td>City</td>
<td>Core City</td>
<td>FUA</td>
<td>% in Outer FUA</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------</td>
<td>-------</td>
<td>----------------</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>3.973</td>
<td>10.490</td>
<td>62.13%</td>
</tr>
<tr>
<td>Brăila</td>
<td>7.935</td>
<td>9.480</td>
<td>16.30%</td>
</tr>
<tr>
<td>Bistrița</td>
<td>6.392</td>
<td>9.063</td>
<td>29.47%</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>3.219</td>
<td>8.717</td>
<td>63.07%</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>4.048</td>
<td>8.174</td>
<td>50.48%</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>4.387</td>
<td>8.049</td>
<td>45.50%</td>
</tr>
<tr>
<td>Bușău</td>
<td>3.646</td>
<td>6.957</td>
<td>47.59%</td>
</tr>
<tr>
<td>Botoșani</td>
<td>3.569</td>
<td>5.956</td>
<td>40.08%</td>
</tr>
<tr>
<td>Slobodița</td>
<td>2.925</td>
<td>5.717</td>
<td>48.84%</td>
</tr>
<tr>
<td>Slatina</td>
<td>2.720</td>
<td>5.686</td>
<td>52.16%</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>2.784</td>
<td>4.955</td>
<td>43.81%</td>
</tr>
<tr>
<td>Călărași</td>
<td>3.056</td>
<td>4.784</td>
<td>36.12%</td>
</tr>
<tr>
<td>Deva</td>
<td>2.563</td>
<td>4.764</td>
<td>46.20%</td>
</tr>
<tr>
<td>Zalău</td>
<td>2.898</td>
<td>4.724</td>
<td>38.65%</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>3.487</td>
<td>4.624</td>
<td>24.59%</td>
</tr>
<tr>
<td>Vaslui</td>
<td>2.697</td>
<td>4.328</td>
<td>37.68%</td>
</tr>
<tr>
<td>Tulcea</td>
<td>2.748</td>
<td>3.440</td>
<td>20.12%</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>2.306</td>
<td>3.400</td>
<td>32.18%</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>1.655</td>
<td>2.821</td>
<td>41.33%</td>
</tr>
<tr>
<td>Alexandria</td>
<td>1.839</td>
<td>2.668</td>
<td>31.07%</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>2.212</td>
<td>2.491</td>
<td>11.20%</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>1.412</td>
<td>2.480</td>
<td>43.06%</td>
</tr>
<tr>
<td>Reșița</td>
<td>1.291</td>
<td>1.565</td>
<td>17.51%</td>
</tr>
</tbody>
</table>

Data Source: National Institute of Statistics

“Towards a National Housing Strategy” also notes the lack of a functioning rental market. Unofficial figures indicate that around 15-20% of the housing stock in Bucharest and other major cities are rental units, the large majority being rented out informally. The rental laws, which have a strong pro-tenant bias, the high VAT, and the high taxes on rental income, have in essence stunted the development of the rental market (few housing units are developed for the stated purpose of being rented out) and have also sharply increased the incentives for buying rather than renting housing units. This owner-renter imbalance can create perverse disincentives for mobility and can artificially inflate housing prices in the most sought-after places. Largely, the places that have attracted the most migrants in recent years, also have the highest property prices in Romania. If property prices will keep going up in these places (a possible sign of the failure of land and housing markets), they will act as a dis-incentive for potential in-migrants.
### Table 7. Property prices in Bucharest and the 40 County Capitals

<table>
<thead>
<tr>
<th>UAT</th>
<th>Average price (Euro) per square meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
<td>1,099</td>
</tr>
<tr>
<td>Bucharest</td>
<td>1,014</td>
</tr>
<tr>
<td>Timișoara</td>
<td>942</td>
</tr>
<tr>
<td>Constanța</td>
<td>915</td>
</tr>
<tr>
<td>Iași</td>
<td>903</td>
</tr>
<tr>
<td>Brașov</td>
<td>866</td>
</tr>
<tr>
<td>Craiova</td>
<td>806</td>
</tr>
<tr>
<td>Tulcea</td>
<td>780</td>
</tr>
<tr>
<td>Pitești</td>
<td>773</td>
</tr>
<tr>
<td>Sibiu</td>
<td>765</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>745</td>
</tr>
<tr>
<td>Ploiești</td>
<td>737</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>716</td>
</tr>
<tr>
<td>Suceava</td>
<td>701</td>
</tr>
<tr>
<td>Oradea</td>
<td>697</td>
</tr>
<tr>
<td>Bacău</td>
<td>687</td>
</tr>
<tr>
<td>Arad</td>
<td>670</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>667</td>
</tr>
<tr>
<td>Galați</td>
<td>667</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>657</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>630</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>UAT</th>
<th>Average price (Euro) per square meter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Piatra Neamț</td>
<td>625</td>
</tr>
<tr>
<td>Slatina</td>
<td>620</td>
</tr>
<tr>
<td>Bușău</td>
<td>612</td>
</tr>
<tr>
<td>Botoșani</td>
<td>600</td>
</tr>
<tr>
<td>Slobozia</td>
<td>600</td>
</tr>
<tr>
<td>Deva</td>
<td>599</td>
</tr>
<tr>
<td>Vaslui</td>
<td>591</td>
</tr>
<tr>
<td>Focșani</td>
<td>586</td>
</tr>
<tr>
<td>Bistrița</td>
<td>582</td>
</tr>
<tr>
<td>Brăila</td>
<td>561</td>
</tr>
<tr>
<td>Alexandria</td>
<td>555</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>548</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>525</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>521</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>500</td>
</tr>
<tr>
<td>Zalău</td>
<td>492</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>491</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>481</td>
</tr>
<tr>
<td>Călărași</td>
<td>470</td>
</tr>
<tr>
<td>Reșița</td>
<td>448</td>
</tr>
</tbody>
</table>

Source: ANEVAR
Dynamic cities do not generate only positive effects – they can also create and exacerbate existent cleavages. From a social point of view, cities that are growing at a very fast pace can end up pricing out of the local economy entire groups of people. The example of high-school teachers that cannot afford the rents in Silicon Valley are quite famous. Similar dynamics are underway in some of the most dynamic cities in Romania. For example, dynamic sectors like IT, pharmaceuticals, or consulting, have continuously increased revenues for a number of people in Cluj-Napoca. This has triggered a growth in rents, property prices, and generally in the cost of living (e.g. the price of a meal at a restaurant). However, while IT specialists can afford these higher living costs, kindergarten teachers cannot. A continued expansion of the IT sector in Cluj, may continue to widen the gap between the haves and the have-nots. It is important therefore that policy makers address social issues early on.

Urban marginalization in Romania has not yet reached alarming levels, but it is important that social cleavages are addressed wherever they are encountered. The World Bank has prepared for the Romanian Ministry of Regional Development an Atlas of Urban Marginalization, identifying for all the towns and municipalities in the country the share of people living in marginalization. By-and-large, the more developed cities also have a lower share of people living in marginalization, while the less developed cities seem to fare worse. At the same time, it has to be noted that larger and more developed cities, also have a higher absolute number of marginalized people. For example, around 150,000 people in Bucharest live in areas disadvantaged on housing – more than the entire population of 28 of the 40 county capitals. Obviously, dealing with marginalized groups in Bucharest takes on a different magnitude than dealing with marginalized groups in Sfântu Gheorghe.

Table 8. Urban Marginalization Figures for Bucharest and the 40 County Capitals

<table>
<thead>
<tr>
<th>Locality</th>
<th>Population</th>
<th>% population in non-disadvantaged areas</th>
<th>% population in areas disadvantaged on housing</th>
<th>% population in areas disadvantaged on employment</th>
<th>% population in areas disadvantaged on human capital</th>
<th>% population in marginalized areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tulcea</td>
<td>73,707</td>
<td>61.31%</td>
<td>7.13%</td>
<td>7.76%</td>
<td>15.21%</td>
<td>6.81%</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>56,006</td>
<td>80.03%</td>
<td>3.54%</td>
<td>4.65%</td>
<td>5.35%</td>
<td>6.29%</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>123,738</td>
<td>81.37%</td>
<td>1.89%</td>
<td>4.13%</td>
<td>7.65%</td>
<td>4.55%</td>
</tr>
<tr>
<td>Alexandria</td>
<td>45,434</td>
<td>62.36%</td>
<td>2.13%</td>
<td>22.29%</td>
<td>8.77%</td>
<td>3.71%</td>
</tr>
<tr>
<td>Reșița</td>
<td>73,282</td>
<td>69.50%</td>
<td>2.51%</td>
<td>12.66%</td>
<td>10.16%</td>
<td>3.59%</td>
</tr>
<tr>
<td>Vaslui</td>
<td>55,407</td>
<td>67.68%</td>
<td>7.81%</td>
<td>7.03%</td>
<td>12.88%</td>
<td>3.33%</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>79,610</td>
<td>77.65%</td>
<td>2.68%</td>
<td>9.14%</td>
<td>6.35%</td>
<td>3.19%</td>
</tr>
<tr>
<td>Botoșani</td>
<td>106,847</td>
<td>56.69%</td>
<td>1.94%</td>
<td>28.31%</td>
<td>7.71%</td>
<td>2.92%</td>
</tr>
<tr>
<td>Bușău</td>
<td>115,494</td>
<td>80.30%</td>
<td>4.99%</td>
<td>4.44%</td>
<td>7.02%</td>
<td>2.91%</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>92,617</td>
<td>62.72%</td>
<td>5.58%</td>
<td>23.39%</td>
<td>4.01%</td>
<td>2.61%</td>
</tr>
<tr>
<td>Brăila</td>
<td>180,302</td>
<td>66.17%</td>
<td>3.45%</td>
<td>17.09%</td>
<td>9.87%</td>
<td>2.58%</td>
</tr>
<tr>
<td>Aroa</td>
<td>159,074</td>
<td>75.80%</td>
<td>7.91%</td>
<td>2.97%</td>
<td>8.83%</td>
<td>2.58%</td>
</tr>
<tr>
<td>Ploiești</td>
<td>209,945</td>
<td>79.92%</td>
<td>5.48%</td>
<td>3.29%</td>
<td>6.62%</td>
<td>2.44%</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>134,290</td>
<td>86.43%</td>
<td>5.22%</td>
<td>0.78%</td>
<td>3.56%</td>
<td>2.29%</td>
</tr>
<tr>
<td>Slobozia</td>
<td>45,891</td>
<td>72.85%</td>
<td>2.90%</td>
<td>4.76%</td>
<td>15.45%</td>
<td>2.25%</td>
</tr>
<tr>
<td>Locality</td>
<td>Population</td>
<td>% population in non-disadvantaged areas</td>
<td>% population in areas disadvantaged on housing</td>
<td>% population in areas disadvantaged on employment</td>
<td>% population in areas disadvantaged on human capital</td>
<td>% population in marginalized areas</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>----------------------------------------</td>
<td>-----------------------------------------------</td>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Bistrița</td>
<td>75,067</td>
<td>72.13%</td>
<td>10.63%</td>
<td>2.79%</td>
<td>10.71%</td>
<td>2.24%</td>
</tr>
<tr>
<td>Călărași</td>
<td>65,181</td>
<td>52.96%</td>
<td>3.61%</td>
<td>11.95%</td>
<td>28.08%</td>
<td>2.14%</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>85,055</td>
<td>83.20%</td>
<td>159%</td>
<td>6.07%</td>
<td>6.37%</td>
<td>2.04%</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>82,504</td>
<td>80.56%</td>
<td>3.75%</td>
<td>6.24%</td>
<td>5.62%</td>
<td>192%</td>
</tr>
<tr>
<td>Galați</td>
<td>269,432</td>
<td>73.82%</td>
<td>6.75%</td>
<td>9.97%</td>
<td>5.27%</td>
<td>189%</td>
</tr>
<tr>
<td>Deva</td>
<td>61,123</td>
<td>88.83%</td>
<td>181%</td>
<td>1.32%</td>
<td>4.14%</td>
<td>185%</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>102,411</td>
<td>82.64%</td>
<td>1.49%</td>
<td>0.26%</td>
<td>12.67%</td>
<td>184%</td>
</tr>
<tr>
<td>Slatina</td>
<td>70,293</td>
<td>80.73%</td>
<td>0.26%</td>
<td>10.90%</td>
<td>5.55%</td>
<td>180%</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>61,353</td>
<td>68.11%</td>
<td>0.70%</td>
<td>16.66%</td>
<td>10.32%</td>
<td>177%</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>38,966</td>
<td>76.51%</td>
<td>8.82%</td>
<td>2.24%</td>
<td>7.12%</td>
<td>151%</td>
</tr>
<tr>
<td>Zalău</td>
<td>56,202</td>
<td>77.49%</td>
<td>2.11%</td>
<td>0.71%</td>
<td>17.21%</td>
<td>138%</td>
</tr>
<tr>
<td>Bacău</td>
<td>144,307</td>
<td>76.93%</td>
<td>9.35%</td>
<td>4.31%</td>
<td>5.62%</td>
<td>137%</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>63,536</td>
<td>86.50%</td>
<td>2.74%</td>
<td>1.06%</td>
<td>5.88%</td>
<td>128%</td>
</tr>
<tr>
<td>Bucharest</td>
<td>1,883,425</td>
<td>80.73%</td>
<td>7.82%</td>
<td>1.72%</td>
<td>7.73%</td>
<td>116%</td>
</tr>
<tr>
<td>Suceava</td>
<td>92,121</td>
<td>82.05%</td>
<td>6.19%</td>
<td>3.60%</td>
<td>5.52%</td>
<td>114%</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>324,576</td>
<td>79.23%</td>
<td>10.21%</td>
<td>1.18%</td>
<td>1.17%</td>
<td>113%</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>98,776</td>
<td>85.54%</td>
<td>5.61%</td>
<td>2.36%</td>
<td>5.03%</td>
<td>112%</td>
</tr>
<tr>
<td>Craiova</td>
<td>269,506</td>
<td>83.93%</td>
<td>1.76%</td>
<td>7.10%</td>
<td>3.76%</td>
<td>105%</td>
</tr>
<tr>
<td>Focșani</td>
<td>79,315</td>
<td>80.54%</td>
<td>3.56%</td>
<td>9.55%</td>
<td>4.11%</td>
<td>98%</td>
</tr>
<tr>
<td>Constanța</td>
<td>283,872</td>
<td>80.35%</td>
<td>3.76%</td>
<td>8.86%</td>
<td>3.81%</td>
<td>78%</td>
</tr>
<tr>
<td>Oradea</td>
<td>196,367</td>
<td>81.99%</td>
<td>10.53%</td>
<td>0.88%</td>
<td>3.86%</td>
<td>64%</td>
</tr>
<tr>
<td>Iași</td>
<td>290,422</td>
<td>73.74%</td>
<td>13.09%</td>
<td>1.04%</td>
<td>2.77%</td>
<td>53%</td>
</tr>
<tr>
<td>Brașov</td>
<td>253,200</td>
<td>85.84%</td>
<td>6.45%</td>
<td>2.14%</td>
<td>1.95%</td>
<td>51%</td>
</tr>
<tr>
<td>Sibiu</td>
<td>147,245</td>
<td>86.51%</td>
<td>6.35%</td>
<td>0.00%</td>
<td>2.90%</td>
<td>41%</td>
</tr>
<tr>
<td>Pitești</td>
<td>155,383</td>
<td>92.19%</td>
<td>3.32%</td>
<td>1.83%</td>
<td>1.37%</td>
<td>26%</td>
</tr>
<tr>
<td>Timișoara</td>
<td>319,279</td>
<td>75.30%</td>
<td>11.20%</td>
<td>4.17%</td>
<td>2.32%</td>
<td>23%</td>
</tr>
</tbody>
</table>


**Similarly, it is important to also take into consideration marginalization in suburban and peri-urban areas.** Social inclusion policy often targets neighborhoods in center cities, as this is where marginalization problems in Western countries are often the worst. However, unique data on urban and rural marginalization in Romania has allowed the team to identify the extent of marginalization in both core cities and extended functional urban area. Interestingly, in several FUAs in Romania, marginalization is more of an issue in outlying areas than in the center city. For example, Brașov, Constanța, Iași, Oradea, Târgu Mures, Satu-Mare, Focșani, or Suceava, have a disproportional share of their marginalized people living in the outer-core areas of the FUA. Obviously, in these instances, social inclusion policies should be metropolitan, rather than urban or rural.
Table 9. Number of marginalized people

<table>
<thead>
<tr>
<th>City</th>
<th>Core City</th>
<th>FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>14,890</td>
<td>49,963</td>
</tr>
<tr>
<td>Brașov</td>
<td>1,279</td>
<td>24,592</td>
</tr>
<tr>
<td>Constanța</td>
<td>2,201</td>
<td>15,752</td>
</tr>
<tr>
<td>Iași</td>
<td>1,531</td>
<td>10,709</td>
</tr>
<tr>
<td>Oradea</td>
<td>1,262</td>
<td>10,496</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>3,070</td>
<td>10,343</td>
</tr>
<tr>
<td>Ploiești</td>
<td>5,130</td>
<td>8,564</td>
</tr>
<tr>
<td>Baia-Mare</td>
<td>5,631</td>
<td>8,487</td>
</tr>
<tr>
<td>Bușău</td>
<td>3,363</td>
<td>8,253</td>
</tr>
<tr>
<td>Sătul-Mare</td>
<td>1,882</td>
<td>7,653</td>
</tr>
<tr>
<td>Arad</td>
<td>4,109</td>
<td>7,459</td>
</tr>
<tr>
<td>Focșani</td>
<td>779</td>
<td>6,752</td>
</tr>
<tr>
<td>Suceava</td>
<td>1,047</td>
<td>6,693</td>
</tr>
<tr>
<td>Craiova</td>
<td>2,826</td>
<td>6,414</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>3,525</td>
<td>5,731</td>
</tr>
<tr>
<td>Galați</td>
<td>4,725</td>
<td>5,715</td>
</tr>
<tr>
<td>Bacău</td>
<td>1,977</td>
<td>5,356</td>
</tr>
<tr>
<td>Sibiu</td>
<td>602</td>
<td>5,304</td>
</tr>
<tr>
<td>Pitești</td>
<td>409</td>
<td>5,038</td>
</tr>
<tr>
<td>Tulcea</td>
<td>5,018</td>
<td>5,018</td>
</tr>
<tr>
<td>Deva</td>
<td>1,130</td>
<td>4,974</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>City</th>
<th>Core City</th>
<th>FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
<td>3,660</td>
<td>4,766</td>
</tr>
<tr>
<td>Bistrița</td>
<td>1,681</td>
<td>4,726</td>
</tr>
<tr>
<td>Brăila</td>
<td>4,643</td>
<td>4,643</td>
</tr>
<tr>
<td>Vaslui</td>
<td>1,846</td>
<td>4,482</td>
</tr>
<tr>
<td>Călărași</td>
<td>1,394</td>
<td>4,155</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>1,107</td>
<td>3,971</td>
</tr>
<tr>
<td>Botoșani</td>
<td>3,122</td>
<td>3,788</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>1,734</td>
<td>3,633</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>2,538</td>
<td>3,400</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>2,419</td>
<td>3,374</td>
</tr>
<tr>
<td>Timișoara</td>
<td>731</td>
<td>3,368</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>588</td>
<td>2,715</td>
</tr>
<tr>
<td>Reșița</td>
<td>2,634</td>
<td>2,634</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>1,582</td>
<td>2,362</td>
</tr>
<tr>
<td>Slatina</td>
<td>1,266</td>
<td>2,318</td>
</tr>
<tr>
<td>Zalău</td>
<td>777</td>
<td>2,260</td>
</tr>
<tr>
<td>Alexandria</td>
<td>1,685</td>
<td>2,193</td>
</tr>
<tr>
<td>Slobozia</td>
<td>1,032</td>
<td>1,880</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>816</td>
<td>1,327</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>1,083</td>
<td>1,083</td>
</tr>
</tbody>
</table>

Data Source: World Bank

As Romanian cities will continue to develop, it is important that local and national policy makers heed the lessons from more developed countries. A local economy is not really developed when a certain share of the population, regardless how large or small, is living in marginalization. Addressing social issues head-on is ultimately also good for overall economic performance, as socially inclusive urban areas are often more developed areas.

**Environmental Considerations**

When one talks about a city’s attractiveness, one inevitably talks about centripetal forces (which draw people and businesses in) and centrifugal forces (which push people out). When centrifugal forces are discussed, environmental considerations usually rank highest. Obviously, as cities develop, they also put a significant strain on the environment – e.g. land consumption, deforestation, CO₂ emissions from increased car usage and industrial activity, more trash being generated, more energy being consumed. The more un-sustainably cities develop, the more serious the negative environmental side-effects tend to be. And, unfortunately, Romanian cities have not developed in a sustainable way after 1989.
The World Bank has studied sustainable development patterns in Bucharest and the 7 growth poles (Brașov, Cluj-Napoca, Constanța, Craiova, Iași, Ploiești, Timișoara) and has identified many areas for improvement. For example, the report “A Technical Assessment of the Energy and Emission Impacts of Alternative Development Patterns in the Bucharest-Ilfov Region” has found that the uncontrolled sprawl of Bucharest has had adverse environmental side-effect, many of which will be difficult to counter. Similarly, the TRACE (Tool for Rapid Assessment of City Energy) reports for the 7 growth poles in Romania, have provide energy efficiency diagnostics which highlight some of the key challenges faced by the largest secondary cities in Romania. Uncontrolled sprawl, the growth in private car ownership and use, and dysfunctional public transport systems are generally identified as some of the areas that have led to higher energy consumption and pollution generation in these cities.

The “Je Ne Sais Quoi” Effect

As much as one tries to buttress markets, markets often have a mind of their own. Some cities perform well despite poor leadership and poor location; while other cities struggle despite having a strong administration, easy access to markets, and a strong university.

Currently, out of 254 primate and secondary cities in the EU, Romanian cities are the fastest growing (see figure below). Why they have managed to have an almost universal good performance is not clear. They likely performed better than Bulgarian cities because of the better geographic location: their growth rate may fall down in coming years to resemble the growth rate of Polish cities; and it may flatten to resemble the Spanish and Italian cities at some point in the future.

It is primate and secondary cities that drive the economic performance of a country. The good performance of the growth poles in Romania is largely responsible for the good performance of the Romanian economy. Between 2000 and 2013, all of the 8 growth pole grew faster than the national economy, indicating that they were economic growth engines. As a comparison, in Bulgaria, secondary cities like Varna or Plovdiv did worse than the national economy as a whole, which may also explain the relatively poorer performance of the Bulgarian economy.

Figure 73. GDP per Capita (Euro PPS) growth rate between 2000 and 2013

Source: EuroStat
Without dynamic secondary cities, Romania cannot stay competitive. To be competitive, cities have to be attractive for people and firms. The next section will discuss in more detail some of the factors that can help make a city more attractive.

A Categorization of Functional Urban Areas

Everybody likes a ranking. Knowing where you are in certain pecking order can be both stimulating and irritating – it’s hard to be neutral. And of course, popular magazines and researchers that want to reach a larger audience, often resort to ranking of all sorts. There are rankings on city competitiveness, quality of life, real estate prices, absorption of EU funds, or success in attracting tourists.

After 1989, cities in Romania have been categorized for normative and programmatic reasons. The National Spatial Plan, Section IV on the Network of Settlements in Romania, has been revised in 2016, organizing 103 municipalities, 217 towns, and 943 peri-urban villages in 8 categories:

**Category I – Capital City** (Bucharest), of national importance, with a European and international vocation, the headquarter of the central administration and of European and international institutions.

**Category II – Main Regional Poles** (Cluj-Napoca, Constanța, Iași, Timișoara, Craiova), municipalities of national and trans-national importance, county residences, with a major role at the regional and cross-border level, headquarters for national and supranational institutions, large university centers; a population of more than 250,000 and regional influence.

**Category III – Secondary Regional Poles** (Bacău, Botoșani, Piatra-Neamț, Suceava, Brașov, Satu Mare, Brașov, Sibiu, Târgu Mureș), municipalities of regional importance, county residences, headquarters for county and cross-county institutions, significant cultural centers; over 100,000 people and cross-county and cross-border influence.

**Category IV – Main County Poles** (Alba Iulia, Alexandria, Bistrița, Călărași, Deva, Focșani, Giurgiu, Miercurea-Ciuc, Reșița, Sfântu Gheorghe, Slatina, Slobozia, Târgoviște, Târgu Jiu, Tulcea, Vaslui, Zalău), municipalities that are county residences, headquarters for county administrations; over 40,000 people.

**Category V – Secondary County Poles** (40 municipalities), municipalities with a balancing role at the county level, with institutions that service a wider area (hospital, high-school, social assistance centers, employment agencies, museums, cultural centers, etc.); a population of over 20,000 and at least 50,000 in the area of influence.

**Category VI – Zonal Urban Centers** (~110 municipalities and towns), municipalities and towns that cater to sub-county areas, smaller than secondary county poles; with a population of 5,000 to 20,000, and around 20,000-50,000 in the area of influence.

**Category VII – Specialized Urban Centers** (~130 municipalities, towns, transport hubs, tourist resorts), municipalities and towns that are not included in Category VI, and which usually are subordinated to a Category I-V Municipality, with a mono-functional character (tourism, transport, energy, residency); size varies.

**Category VIII – Other Urban Localities** (943 villages that are part of an urban administrative unit), villages and localities that are part of a municipality or town.
Cities have also been grouped for the implementation of EU funds. Thus, for the 2007-2013 Programming Period, Axis 1 of the Regional Operational Programme had pre-allocated funds for 7 growth poles (Brașov, Cluj-Napoca, Constanța, Craiova, Iași, Ploiești, and Timișoara) and 13 urban development poles (Arad, Baia-Mare, Bacău, Brăila, Galați, Deva, Oradea, Pitești, Râmnicu-Vâlcea, Satu Mare, Sibiu, Suceava, Târgu-Mureș). In addition, all urban areas with more than 10,000 people were eligible to compete for a pool of funds dedicated to them. The 7 growth poles are the largest cities in their respective regions (Bucharest-Ilfov, as the 8th region, did not receive dedicated funding, as it already reached a high development level), and by strengthening these growth poles, it was hoped that regional economies would be strengthened too.

For the 2014-2020 Programming Period, Axis 4 of the Regional Operational Programme provides dedicated funding for 39 county capitals. Tulcea, the 40th county capital, receives dedicated funding through the Danube Delta Integrated Territorial Investment (ITI). Axis 3 of the ROP provides funding, on a competitive basis to all other urban areas.

Migration and commuter patterns are other variables that work well for establishing sub-national hierarchies. Particularly migration numbers, provide a good proxy for the success of a city, or functional urban area (FUA). The FUAs that manage to attract the most people, particularly well-qualified human capital, are usually those that provide the proper package of incentives (e.g., jobs, good education, quality healthcare, affordable housing, good quality of life). Of course, the size of migration inflows is not an immediate indication of good economic performance, but, by and large, larger cities and cities that manage to attract people are both more productive and more dynamic than other cities in that particular country.

Another issue that migration flows are relevant for, is the determination of a FUA’s gravitational field – i.e. the area a FUA manages to attract people from. Global cities like New York, Paris, or London, attract people from all over the World. Continental hubs like Muenchen, Barcelona, or Milano, are attractive for people from several countries. National hubs like Bucharest, Warsaw, or Bratislava, are primarily interesting for the people within those countries. Regional hubs, like Cluj-Napoca, Poznan, or Kosice, are primarily attractive to people within that particular region.

Obviously, the larger the gravitational field of a particular FUA, the better off that FUA will be. A city like London can attract qualified people from all over the World, and thus has the proper resources for sustained growth. A regional hub will be only as performant as the people it already has and the people it will attract from within the region. Obviously, a FUA that is attractive to human capital from all over the World is better off than a FUA that is only attractive to a limited number of people.

Cities are in a global competition for the best and most qualified people, and the cities that have the largest gravitational field and the strongest gravitational pull, will also be the most developed. While Romania has no global or continental hubs, it has to strengthen its most successful FUAs – both as a way of curbing out-migration and as a way of strengthening regional economies. The number of emigrants is much larger than the number of in-migrants (3 million emigrants as opposed to 1.8 million in-country-migrants, between 1991 and 2011), and without strong and attractive urban areas, Romania cannot hope to reverse this negative trend. Moreover, without strong urban areas, one cannot have strong regions. The performance of almost every leading region in the EU is linked to the performance of its main FUAs.

In what follows, we will discuss the main categories of FUAs in Romania, based on how successful they have been in attracting people, and based on their area of influence. This analysis will also indicate which FUAs can best sustain regional growth and development. We will also discuss how these FUAs could be strengthened, and thus help their economies perform better. Annex 2, includes a statistical clustering of FUAs using a dendogram methodology, and the end results are quite close to the ranking discussed below.
The National Magnet

Bucharest, the primate city in Romania, and the capital, is the most attractive urban area in the Country. People have moved to Bucharest from virtually every locality in Romania, although a disproportional number of people moved from the areas around Bucharest, and from other large urban centers. It is likely that, similar to other primate cities around the World, Bucharest will continue to be attractive to Romanians even if public authorities don’t do anything about it. In essence, Bucharest does not have competition within the country. However, it is important that local authorities in Bucharest gear up for an international competition, and think about what needs to be done to transform Bucharest in a continental hub.

Interestingly, Bucharest has a higher GDP per Capita than other capitals in Central and Eastern Europe, but it still has some way to go until it becomes as attractive as these capitals. Bucharest is more developed than Lisbon, but nowhere near as cosmopolitan. The city, and the larger FUA, have attracted a lot of foreign investment, but not a lot of foreign people. In 2015, according to the Romanian General Inspectorate for Immigration, 30,000 foreign citizens lived in Bucharest (30% of all immigrants in Romania) - 1.6% of the total city’s population. Most immigrants came from China (4,234), Turkey (3,210), Syria (2,109), and Iraq (1,720). The largest sending countries in the EU include Italy (1,748), France (1,447), Greece (813), and Germany (810). In Romania, overall, only 0.5% of the population comes from somewhere else. By comparison, 3.5% of Portugal’s population comes from outside Portugal.

Figure 74. Bucharest migration catchment area

Data Source: Romanian National Institute of Statistics
To become a continental hub, local authorities in Bucharest should work harder at making the city more attractive to expats. Some of the key interventions that should be considered include:

1. **Urbanism.** Bucharest is rich, but it does not look the part. Streets and sidewalks are in poor shape, buildings are poorly maintained and are often falling apart, historical areas are in a state of disrepair, and many apartment block neighborhoods have not seen any intervention since 1989. First impressions count, and the more coifed a city is, the more people it is likely to attract.

2. **Airport.** The easier it is to reach a city the more people are likely to come – especially if the city has something to show. The airport in Bucharest has one of the fastest passenger growth rates in Europe. In 2011 it handled around 5 million passengers, and in 2016 that figure went up to 11 million. The airport infrastructure has not however kept up with the dynamic, and it faces concrete challenges in handling more passengers and flights in the future. The Bucharest Airport handles about the same number of passengers as the airport in Warsaw (Poland), but the airport infrastructure is significantly smaller.

3. **Public Transport.** Bucharest is one of the densest and most compact cities in Europe, and it has a good public transport system. However, the public transport system is very hard to use for someone that is not familiar with it, and for people who don’t speak Romanian. It is important to make public transport stops visible and retrofit them with clear guidance on time-tables and routes serviced, and wherever possible, the information should also be provided in English.

4. **Enforcement of Rules and Regulations.** Romania excels in the elaboration of laws, rules, and regulations, but leaves much to be desired when it comes to actually enforcing these rules and regulations. Bucharest is an epitome of the failure of enforcement. Cars are parked everywhere (often forcing pedestrians to walk on the road), although the law prohibits it; sidewalks are not cleaned of snow in the winter although owners are obliged to clear the area in front of their building, the aged stucco on buildings is often falling on pedestrians, although the law obliges property owners to rehab these buildings. This lack of enforcement, and lack of order, may be charming for some, but it tends to be off-putting for most foreign nationals – particularly for those coming from countries with a clear enforcement of rules.

5. **Quality Education.** Particularly for foreign nationals that come with their families to Bucharest, the availability of quality education for their kids is important. There are a number of good international schools in Bucharest, but these tend to be very expensive and very hard to reach (many are in peripheral neighborhoods).

6. **Metropolitan Infrastructure.** 330,000 people commute across administrative boundaries in the Bucharest FUA every day, and the number will likely continue to grow in coming years, with more and more people (including expats) preferring the suburbs to the center city. As such, Bucharest is in dire need of revamping its connective infrastructure. There are plans to complete the city’s ring road and upgrade it to four lanes, and develop a highway belt, which will connect the A1 (to Ploiești), A2 (to Constanța), and the A3 (to Ploiești and Brașov) highways. The metro system will be expanded to service the airport and a number of large and growing neighborhoods. The bus system will be extended to services commuter localities in Ilfov County, and the tram system will be modernized. In addition, there are plans for several park-and-ride facilities, which would make commuting by public transport easier and more efficient.
7. **Regional Infrastructure.** The functional urban area of Bucharest extends way beyond its administrative borders. The two gravitational maps below show the concentration of the population and of economic activity in the South Region, with the entirety of the Bucharest-Ilfov Region cut out. What becomes immediately evident is that economic activity of the capital region has started to spill well beyond the boundaries of Ilfov County. However, this economic activity has followed the path of least resistance – i.e. it has primarily clustered along the A1 Highway from Bucharest to Pitești and along the DN1 National Road from Bucharest to Ploiești. The demographic gravity model indicates, on the other hand, that the area bounded by Bucharest, Ploiești, Târgoviște, and Pitești, has a very high population density (it is in fact the densest population area in Romania), but not necessarily a lot of economic activity. The proper development of connective and business infrastructure in this area could catalyze and attract private sector activity. For example, the National Transport Masterplan provides for an Expressway that will connect Ploiești to Târgoviște and the A1 Highway, and for a modernized four-lane road connecting Târgoviște to Bucharest. These infrastructure projects could help catalyze development in an area with a very strong development potential.

![Figure 75. Demographic (left) and economic (right) gravity model for the South Region](image)


**Obviously, making Bucharest more attractive to expats, should not trump making the city more attractive and livable for the people living there.** These two goals are almost never mutually exclusive, and Bucharest still has a long way to go before adequately answering the needs of its current citizens. For example, the public transport system is not functional at the metropolitan level and still has some ways to go in terms of efficiency and quality; housing, both old and new, is generally of poor quality and requires upgrading, modernization, and retrofitting (e.g. seismic retrofitting); public spaces are often in a state of disrepair and neglect; congestion, pollution, and the lack of parking places are repeatedly on the list of discontents with the residents of Bucharest; the airport infrastructure is hopelessly under-developed and has difficulties dealing with the rapidly growing air traffic flow.
Identifying the secondary cities in a country with the biggest promise is neither easy nor foolproof. Different cities do well on different indicators, and unlike the primate city, they are in a constant competition with each other. Such hierarchies are also not exactly conducive to making friends – there are only a few spots at the top, and a lot of spots further down. Nonetheless, there is merit in identifying, or trying to identify the top performers – it enables better policy making and a better targeting of public investments.

Migration numbers provide a good proxy for FUA performance, and the most attractive FUAs outside Bucharest are Timișoara, Cluj-Napoca, and Iași. They did not only have the highest number of migrants after Bucharest, between 2001 and 2011 (83,000, 82,000, and 61,000 people respectively), but also the highest share of migrants in the total population (16.5%, 17.4%, and 14.7% respectively). Timișoara and Cluj-Napoca also perform well on a number of other socio-economic indicators: GDP, GDP per Capita, Firm Turnover, Average Salary, Real Estate Prices. They all do well on human capital measures, such as Number of Students, Share of Population with Higher Education, Share of Young People, Share of People Working in High Value-Added Activities.

Timișoara, Cluj-Napoca, and Iași also performed well in terms of their area of influence. The map below shows which of the 7 growth poles defined for the Regional Operational Programme 2007-2013 have the largest areas of influence – i.e. the counties where a majority of migrants moved to that particular county.

Figure 76. Dominant migration flows for largest regional centers, between 2001 and 2011

Data Source: Romanian National Institute of Statistics
What becomes immediately clear when looking at this map is that although there are 8 regions in Romania, the country seems to be de facto split between 4 major areas of influence – that of Bucharest, Cluj-Napoca, Timișoara, and Iași. What also becomes clear is that, again, distance from primacy matters. The economic performance of the growth poles close to Bucharest (i.e. Constanța, Brașov, Craiova, and Ploiești), was affected by this proximity. Think only of the performance of the universities in these cities. As we discussed earlier, universities are a major magnet for migrants. However, the universities in the growth poles close to Bucharest could not develop fully, as they had a tough competition from the universities in the capital. The Bucharest universities managed to attract not only the lion’s share of students in the area, but also most of the university professors. On the other hand, distance has been a boon for Cluj-Napoca, Iași, and Timisoara, enabling them to grow as strong university centers, attract human capital from the region, and thus become dynamic economic hubs.

These three cities also have the right pre-requisites to sustain economic growth – they perform well on the Hachman Index. The Hachman Index measures the complexity of a local economy as compared to the national economy. The closer a locality’s Hachman Index is to 1, the more the economy of that locality resembles the national economy. Among the 7 growth poles, Cluj-Napoca, Iași, and Timisoara registered the highest values (see figure below). A locality with a diverse economy can much better hedge risk and volatility than mono-industrial towns, or than cities with a few dominant sectors.

Figure 77. Hachman Index for 7 Growth Poles in Romania

This dynamic, of course, poses an interesting conundrum. The Growth Poles policy, devised for the 2007-2013 Programming Period, aimed to strengthen the largest cities in the 7 regions outside Bucharest-Ilfov, and thus strengthen regional economies. The intentions of the policy were very good, but it is possible that the outcomes do not necessarily correspond to what was intended. The capacity of 4 of the growth poles to spread growth to surrounding areas is limited by the influence of other large urban centers. For example, in the South Region, Bucharest plays the dominant role. In the South-East Region, Bucharest exercises a powerful draw for people in four of the counties in the region – Brăila, Bugău, Galați, and Vrancea. Constanța exercises a more powerful draw on the people in Constanța County and Tulcea County. The Cluj-Napoca FUA exercises a powerful draw on 4 counties in the Center Region – Alba, Harghita, Mureș, and Sibiu. Brașov dominates migration...
flows in only two counties in the Center Region – Brașov County and Covasna County. The areas of influence in the South-West Region are divided between Bucharest (Olt and Vâlcea counties), Timișoara (Gorj and Mehedinți counties), and Craiova (Dolj County).

Romania requires a clear urban development policy that takes such dynamics into consideration. Strengthening functional urban areas with the highest potential, especially when key interventions are outside their means (e.g. metropolitan connective infrastructure), is absolutely critical for strengthening regional economies. Some of the key issues that could be considered include:

1. **Universities.** Universities play an important role in migration, and a particularly important role in countries with demographic decline. When a university is located in a large city with a diverse economic base, it provides a constant flow of qualified labor to the businesses in the area. Moreover, it enables the emergence of high value-added businesses and economic sectors, and, when the local economy is mature enough, it enables the generation of innovation and technological change. In a context where the general population is aging (the number of people aged 0-24, in Romania, dropped from 9.3 million in 1990 to 5.6 million in 2016), universities also supply a constant, albeit decreasing flow of young people. 62% of students in Romania go to one of the universities in Bucharest, Cluj-Napoca, Iași, and Timișoara. Having access to cutting edge research and the best qualified professors in the West, being able to do applied research, and building strong links to the private sector are only some measures that can help strengthen the universities in these regional magnets.

2. **Private Sector Development.** Without a strong private sector, universities don’t help too much. If students don’t have jobs when they graduate, there is not much to keep them in the area. Private sector development has to be done however in a purposeful way. A large majority of local authorities in Romania are only too happy to receive whatever private investment comes their way, but few actually take the time to purposefully focus on a number of high value-added investors. Business infrastructure is important in attracting and keeping investors, but good negotiation and communication skills, and the ability to build and maintain partnerships, matters more.

3. **Quality of Life.** While the notion of quality of life is rather esoteric and difficult to put in a neat formula, we all innately know it matters. We like to visit cities that are beautiful, we prefer to live in nice neighborhoods, we spend our free time in cozy areas, and we seem to be more productive when we are in a well designed space. Investing in public art, culture, and urban design is neither trifle nor expensive – one can have big impact with little money. Moreover, it is likely that cities will increasingly include good urban design in the arsenal of measures required to win hearts and funds.

4. **Clusters.** Another thing to keep in mind is that people like to cluster. When they move to a different place, they often prefer places where there are more people like them. As the saying goes, ‘birds of a feather flock together’. Now, when you start working for a company you like, you inevitably will be surrounded by like-minded people. But the more such companies are in the area, the better – particularly for the creative class, which thrives on being able to exchange ideas with others. Local authorities can lend support to innovation and business hubs, and facilitate the mingling of professionals, academics, and civil society.

5. **Connectivity.** Connectivity is important for migration from two points of view: a) making it easier for people to move to the place; b) making it easier to keep the connection to the place of origin. Thriving urban areas are almost always important transport hubs. The development of better connective infrastructure is inevitable when
a city is growing, but careful and strategic planning can ensure that this connective infrastructure is developed in an efficient and sustainable way. Of particular importance will be the extension and modernization of airport infrastructure, with air traffic growing continuously to and from these important economic hubs. Of importance will also be the development of metropolitan transport infrastructure, and metropolitan public transport. The FUAs of Timişoara, Cluj-Napoca, and Iași have a high number of commuters (around 50,000 people commute every day to and within these FUAs), but they all lack the infrastructure required to accommodate all these commuters. For example, the stretch of road between Cluj-Napoca and Florești (Cluj-Napoca’s largest suburb, and the largest village in Romania) has the highest traffic numbers in the country and the highest incidence of traffic accidents.

6. Metropolitan Spatial Planning. A significant number of people will likely continue to move to these regional magnets, and it is important that all these new people are accommodated in an efficient and sustainable way. Local authorities do not have to build housing for all in-migrants, but they can ensure that new housing developments are done in an efficient and sustainable way. In the past years, new housing neighborhoods have gone up in a haphazard and speculative way, with no space allocated for parks, wide enough streets and sidewalks, public institutions (e.g. schools, clinics), and not in an urbanistically coordinate way. Worse over, even when a good spatial plan has been elaborated for the center city of a FUA, it was not done in a coordinated manner at the full metropolitan level – although new private investments and housing developments tend to be completed in suburban and peri-urban areas.

7. Capacity. Regional magnets are not lonely rocks in the sea – they are part of complex and dynamic functional zones, and their well-being hinges, to a significant extent, on how well they are able to cooperate with other stakeholders (e.g. neighboring localities, private sector, civil society, county and national authorities). Without such strong partnerships, regional magnets risk to be less competitive – which is particularly bad if they hope to compete on equal footing with secondary cities in the EU.

It is important to remember though that policies geared to attract migrants, should not be seen as a zero-sum game (with a few cities in competition for potential migrants), nor should these policies be promoted at the expense of the people and firms already located in a particular FUA (e.g. export promotion, encouraging entrepreneurship and new firm formation, or the efficient provision of basic services).

The Cross-County Magnets

Cross-county Magnets are FUAs that received at least 25,000 migrants between 2001 and 2011, from at least two counties. In this group we have Constanța, Brașov, Ploiești, Pitești, Oradea, Arad, Sibiu, Târgu Mureș, and Craiova. These FUAs are a mixed bag, and it is difficult to find clear traits that bind them together. There are commonalities nonetheless. We will discuss some of these in what follows.
Figure 78. Migration catchment areas for 41 FUAs in Romania

Data Source: Romanian National Institute of Statistics

Note: The map indicates, by locality, where the largest share of migrants went to.
All cross-county magnets are university centers of sub-regional importance, and together they attract 26% of all students in Romania. Each cross-county magnet had between 7,600 and 24,000 students in 2015, and their universities helped attract younger migrants. Strengthening these university centers will be an important step towards stronger FUAs.

Several of the cross-county magnets are important tourism hubs in Romania. The counties of Constanța, Brașov, Mureș (where Târgu Mureș is located), Prahova (where Ploiești is located), and Sibiu, are the largest tourist destinations after Bucharest. Bihor (where Oradea is located) and Arad are other important tourist destinations. Among the 41 FUAs considered here, the FUAs of Brașov, Constanța, Sibiu, Târgu Mureș, and Oradea have the highest concentration of tourists (number of tourists compared to total FUA population). The fact that they are attractive to tourists indicates that they may be attractive to some migrants too. If you like a spot enough to visit it, you also consider living there. Investments in quality of life are therefore critical for these cities.

All cross-county magnets are also important commuter hubs. The FUAs of Ploiești, Pitești, and Constanța receive the highest number of daily commuters after the FUA of Bucharest – around 69,000, 60,000, and 53,000 commuters respectively. Brașov, Oradea, Arad, Sibiu, Târgu Mureș, and Craiova, also are in the top with respect to the number of commuters they attract, with around 51,000, 35,000, 32,000, 23,000, 22,000, and 20,000 daily commuters respectively. When daily traffic numbers on a road (which most often include transit flows, not just commuter flows) exceeds 15,000, it is recommended that the respective road be upgraded to a highway. This in itself indicates that all of the cross-county magnets will require an upgrade of their metropolitan connective infrastructure. For the 2014-2020 Programming Period, all county residences had to develop mobility plans and indicate the needed investments in connective infrastructure through 2030.

With the exception of Constanța, which is a logistics, tourism, and oil processing hub, and Târgu Mureș, which houses a large energy company, all over cross-county magnets are significant industrial hubs, and several of them are dependent on one large or several large companies. The FUAs of Pitești (where Dacia, the largest car manufacturer in Romania is located), Târgu Mureș (with eON Energy and Distribution), and Brașov (where several automobile component manufacturers are located), generate the largest firm revenues per employee after Bucharest. These are industrial hubs of significant importance for the Romanian economy. Constanța, Arad, Ploiești, Sibiu, and Oradea, also rank high on this metric, as they house big industrial plants with large exports. The table below ranks FUAs based on total firm revenues they generate.

### Table 10. Firm revenues generated by 41 FUAs in Romania, in 2015

<table>
<thead>
<tr>
<th>FUA/Municipality</th>
<th>Firm Revenues (mil. RON)</th>
<th>% Firm Revenues generated by outer FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FUA Center City</td>
<td></td>
</tr>
<tr>
<td>Bucharest</td>
<td>499,528</td>
<td>416,141</td>
</tr>
<tr>
<td>Pitești</td>
<td>41,481</td>
<td>12,975</td>
</tr>
<tr>
<td>Timișoara</td>
<td>40,519</td>
<td>29,975</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>39,924</td>
<td>33,713</td>
</tr>
<tr>
<td>Constanța</td>
<td>39,085</td>
<td>24,071</td>
</tr>
<tr>
<td>Brașov</td>
<td>38,186</td>
<td>25,231</td>
</tr>
<tr>
<td>Ploiești</td>
<td>31,683</td>
<td>19,325</td>
</tr>
<tr>
<td>Arad</td>
<td>21,694</td>
<td>17,215</td>
</tr>
<tr>
<td>FUA/Municipality</td>
<td>Firm Revenues (mil. RON)</td>
<td>% Firm Revenues generated by outer FUA</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td></td>
<td>FUA</td>
<td>Center City</td>
</tr>
<tr>
<td>Târgu-Mureș</td>
<td>20,840</td>
<td>17,411</td>
</tr>
<tr>
<td>Craiova</td>
<td>19,792</td>
<td>16,128</td>
</tr>
<tr>
<td>Oradea</td>
<td>19,630</td>
<td>14,953</td>
</tr>
<tr>
<td>Galați</td>
<td>18,882</td>
<td>17,906</td>
</tr>
<tr>
<td>Iași</td>
<td>17,346</td>
<td>13,676</td>
</tr>
<tr>
<td>Sibiu</td>
<td>16,545</td>
<td>12,271</td>
</tr>
<tr>
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<td>13,155</td>
<td>11,576</td>
</tr>
<tr>
<td>Bușău</td>
<td>11,679</td>
<td>10,450</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>11,449</td>
<td>3,522</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>10,525</td>
<td>7,549</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>9,395</td>
<td>6,982</td>
</tr>
<tr>
<td>Slatina</td>
<td>8,981</td>
<td>8,854</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>8,113</td>
<td>6,866</td>
</tr>
<tr>
<td>Bistrița</td>
<td>7,209</td>
<td>6,096</td>
</tr>
<tr>
<td>Brăila</td>
<td>6,613</td>
<td>5,928</td>
</tr>
<tr>
<td>Suceava</td>
<td>6,309</td>
<td>4,052</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>5,873</td>
<td>5,546</td>
</tr>
<tr>
<td>Deva</td>
<td>5,716</td>
<td>3,010</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>5,704</td>
<td>3,625</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>5,396</td>
<td>3,673</td>
</tr>
<tr>
<td>Botoșani</td>
<td>4,946</td>
<td>4,292</td>
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<td>Tulcea</td>
<td>4,913</td>
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<td>Focșani</td>
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<td>Sloboșia</td>
<td>4,257</td>
<td>3,533</td>
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<td>Zalău</td>
<td>4,211</td>
<td>3,923</td>
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<tr>
<td>Călărași</td>
<td>3,885</td>
<td>3,402</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>3,013</td>
<td>2,764</td>
</tr>
<tr>
<td>Alexandria</td>
<td>2,884</td>
<td>2,474</td>
</tr>
<tr>
<td>Reșița</td>
<td>2,512</td>
<td>2,005</td>
</tr>
<tr>
<td>Vaslui</td>
<td>2,400</td>
<td>2,132</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>2,295</td>
<td>1,947</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>2,024</td>
<td>1,836</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>1,854</td>
<td>1,687</td>
</tr>
</tbody>
</table>

All of the other cross-county magnets are significant economic hubs. Some of these industrial hubs, such as Arad, have reached an upper threshold, with much of the able labor force in the area being gainfully employed, and with
difficulties of sustaining regional growth because of the lack of labor force. Others, like Craiova, still have many people in the area that are not yet gainfully employed. Almost all of the cross-county magnets, now have a significant share of economic output being generated in outer areas – 36% of all firm revenues generated by cross-county magnets are generated in outer FUA areas (i.e. suburban and peri-urban areas). This metropolitan dynamic is typical of industrial centers, with a significant share of industrial activity being located on the outskirts of cities.

**Strengthening these cross-county hubs will require will require interventions both from the national level, and from the regional and local level.** Given that cross-county magnets have a weaker gravitational pool than the regional magnets (they usually attract migrants from around 2 counties), their capacity to sustain growth is inevitably limited. All of the cross-county magnets, with the exception of Târgu Mureș, have less than 100,000 people of 0-29 years of age, in their respective counties and outside the FUA area – i.e. the people that have the highest likelihood of migrating to the FUA, given their small migration catchment area and given the small number of people that could potentially migrate. Cross-county magnets will likely have limited long-term growth potential, unless they manage to attract migrants from abroad. Some key interventions that could be taken into consideration include:

1. **Universities.** As is the case for regional magnets, cross-county magnets need to strengthen their universities, as these will constitute the main draw for a young and well-educated population. However, the focus should be on strengthening niche academic areas where these FUAs have a comparative advantage. For example, Constanța has a strong Naval Academy and Ploiești has a strong Petroleum and Gas University. In addition to niche fields, cross-country magnets should strengthen links with companies in the area, and try to cater to their needs. For example, these companies could teach courses on topics of interest to them. Lastly, a stronger focus should be given to engineering fields, given the importance industry plays in the economies of cross-county magnets.

2. **Quality of Life.** Tourism is an important source of revenue for several of the cross-county magnets (e.g. Constanța, Brașov, Sibiu, Oradea, Arad), and this attractiveness for visitors is likely to also encourage migration. It is therefore important to play on these strengths and attempt to enhance them. This means that local authorities should work on: improving building facades; repairing and modernizing sidewalks, plazas, and public spaces; modernizing, rehabilitating and extending green spaces and parks; improving public transport and making it more accessible and easy-to-use for foreign tourists; investing in culture and public art.

3. **Connective Infrastructure and Public Transport.** Cross-county magnets attract a large number of commuters, particularly large industrial centers like Ploiești, Pitești, Brașov, Oradea, or Arad. This will require a rehabilitation, modernization, and extension of their transport infrastructure, to enable the seamless movement of people within the FUA. All county residences were obliged to elaborate mobility plans, and these mobility plans will likely include the key projects required to make the entire area more accessible. Unfortunately, only the growth poles (Constanța, Brașov, Craiova, and Ploiești) were required to elaborate the mobility plan for the metropolitan area. For FUAs like Oradea, Pitești, Sibiu, or Arad, which have very low unemployment, the challenge will be to enable easy commuting from more distant areas.

4. **Metropolitan Spatial Planning.** As is the case for the regional magnets, the cross-county magnets have strong metropolitan dynamics. Particularly when it comes to metropolitan transport infrastructure and housing, it is important to have cogent and coherent metropolitan spatial plans that ensure efficient and sustainable infrastructure development.
5. **Private Sector Development.** Unemployment is not exactly a problem for cross-county magnets (they are among the FUAs in Romania that have benefited from significant private investments in the past years), but a dearth of high value-added investments is indeed a problem. Many of the firms operating in these FUAs offer relatively low salaries, and some only offer the minimum salary. Thus, while there are plenty of jobs in these FUAs they are not always high quality jobs. Local authorities should therefore allocate both time and attention to continually strengthening innovative sectors and attracting high value-added investments.

6. **Vocational Education.** Cross-county hubs are not high value-added service driven economy. The companies operating in these FUAs require labor force that caters to their needs. Thus, the tourism industry in Constanța likely requires people that have a training in hospitality. Industrial centers like Oradea or Sibiu require people with vocational training, or on-the-job training, rather than people with a Ph.D. in philosophy.

7. **Capacity.** As is the case of regional markets, cross-county magnets require strong partnerships and coalitions with a variety of stakeholders (private sector, public sector, NGOs, and civil society) if they are to thrive.

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### The County Magnets

County magnets are FUAs that have attracted more than 10,000 migrants between 2001 and 2011, primarily from the county they were part of. County magnets include 13 FUAs: Bacău, Râmnicu Vâlcea, Bușău, Galați, Târgoviște, Suceava, Satu Mare, Focșani, Baia Mare, Târgu Jiu, Alba Iulia, Piatra Neamț, Bistrița. These FUAs are more of a motley crue than the cross-country magnets. To the extent that there are common threads, these apply usually to groups of FUAs rather than to all county magnets.

![Figure 79. Potential migrants to county residence FUAs in Romania](image)
Four of the county magnets (Bacău, Piatra Neamț, Suceava, and Târgoviște) are latent urbanizers. These FUAs have a large population pool around them, which, if offered the proper opportunities, could migrate to and strengthen these FUAs. The map above showcases the population aged 0 to 29 in 2011, located within the particular county, but outside the FUA. This population group is, according to the data on migration we have collected, the most likely to migrate, and the most likely to contribute to urban growth in these latent urbanizers.

Virtually all of the county magnets require a strengthening of the private sector. The share of the active population is below the national average for all county magnets, and the same is the case for average salaries at the county level (see table below). The basic recommendation for the local authorities in charge of the county magnets is to strategically focus on attracting private investors, which could best take advantage of the labor force available in the area. By and large, county magnets have a labor force that does not have higher education, and the areas from which they attract migrants is relatively limited and primarily rural in nature. As such, most of the county magnets will require additional industry sector investments.

Table 11. Average salaries (in RON), by county

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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>2507</td>
<td>2506</td>
<td>2721</td>
<td>2902</td>
<td>3022</td>
<td>3148</td>
<td>3338</td>
<td>3687</td>
<td>4005</td>
</tr>
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<td>Timis</td>
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<td>1923</td>
<td>2034</td>
<td>2158</td>
<td>2324</td>
<td>2499</td>
<td>2809</td>
<td>3435</td>
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<tr>
<td>Ilfov</td>
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<td>2742</td>
<td>2695</td>
<td>2874</td>
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<td>3409</td>
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<tr>
<td>Cluj</td>
<td>1772</td>
<td>1882</td>
<td>1897</td>
<td>2012</td>
<td>2153</td>
<td>2287</td>
<td>2535</td>
<td>2763</td>
<td>3386</td>
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<tr>
<td>Sibiu</td>
<td>1659</td>
<td>1766</td>
<td>1836</td>
<td>1917</td>
<td>1964</td>
<td>2123</td>
<td>2232</td>
<td>2510</td>
<td>3097</td>
</tr>
<tr>
<td>ROMANIA</td>
<td>1761</td>
<td>1845</td>
<td>1902</td>
<td>1980</td>
<td>2063</td>
<td>2163</td>
<td>2328</td>
<td>2555</td>
<td>3005</td>
</tr>
<tr>
<td>Brașov</td>
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<td>1788</td>
<td>1777</td>
<td>1898</td>
<td>2013</td>
<td>2045</td>
<td>2207</td>
<td>2457</td>
<td>2959</td>
</tr>
<tr>
<td>Gorj</td>
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<td>2083</td>
<td>2114</td>
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<td>2219</td>
<td>2424</td>
<td>2666</td>
<td>2807</td>
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<tr>
<td>Iași</td>
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<td>1806</td>
<td>1841</td>
<td>1880</td>
<td>2048</td>
<td>2265</td>
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<td>2800</td>
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<tr>
<td>Arad</td>
<td>1521</td>
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Several of the county magnets have good tourism potential, and they should exploit this advantage. Alba Iulia is home to the largest Vauban Fortress in Romania, and one of the most important and appreciated tourist attractions in the country. Bistrița and Baia Mare have beautiful historic centers, and are surrounded by several tourist attractions (e.g. the UNESCO wooden churches in Maramureș, the Sâpânța Cemetery, the "Dracula" Bârgău pass – where Bram Stoker placed the action of his 'Dracula' novel). Suceava and Piatra Neamț are surrounded by several historical, cultural, and natural sites of importance (e.g. the UNESCO painted monasteries).

County magnets are also, surprisingly, important commuter hubs. In the FUAs of Târgoviște, Alba Iulia, Piatra Neamț, Râmnicu Vâlcea, Bușău, Focșani, Suceava, Baia Mare, Târgu Jiu, more than 20% of the work force commutes across administrative borders for work. This in itself will require some measure of metropolitan planning. All of the county magnets receive more than 10,000 commuters every day, and some (e.g. Târgoviște, Bușău, Râmnicu Vâlcea, and Bacău) receive more than 20,000 commuters daily. Târgoviște, in fact, receives more commuters than Craiova.

### County Population (2008-2016)

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Source: Romanian National Institute of Statistics
Key recommendations for the county magnets include:

1. **Private Sector Development.** The key word for local authorities in county magnets should be investments, investments, investments. They face a particular tough challenge keeping people, particularly those with higher education, from moving somewhere else, so it is important that they provide people with opportunities – particularly well-paying jobs. If FUAs like Cluj-Napoca, Timișoara, Iași, Sibiu, Oradea, Arad, Brașov, will naturally attract investments, county magnets will have to be more purposeful in their efforts. The focus will be primarily on industrial enterprises, but to the extent possible these industrial enterprises should be high value-added ones. The most developed NUTS 3 regions in the EU are Wolfsburg and Ingolstadt, cities of around 125,000 people (like the county magnets in Romania), and home to Volkswagen and Audi. County magnets could follow a similar model and become industrial super-powers, although they will have to guard against the pitfalls of high specialization in just one sector, or in a few sectors. Unfortunately, given their smaller size, county magnets don’t have the luxury of a heterogeneous and efficient economic base – they are much better off, if the limited labor force they have specializes in one or a few sectors.

2. **Vocation Education.** Because of their small size, county magnets will find it harder to attract high value-added service industries. Most will rely on industrial enterprises to fuel their growth and development. And, of course, these industrial enterprises require people with the proper training and willingness to work in the sector they cover. Local authorities in county magnets can play an important role in matching people to jobs and they can help facilitate on-the-job learning, as well as strengthening the vocational education system.

3. **Regional Connective Infrastructure.** County magnets have a relatively high share of commuters, have industrial facilities that increasingly locate in peri-urban areas, and have tourist attractions in nearby locations. As is the case for the other magnets, county magnets would benefit from a focus on the rehabilitation, modernization, and extension of county level connective infrastructure – particularly county roads and local roads. A strong cooperation and joint planning with county councils is critical in this respect. This connective infrastructure will not only facilitate commuting, but will also facilitate the process of urbanization, enabling the strengthening of some urban areas with high population density around them.

4. **Urban Regeneration.** With the exception of the cities with well defined historic centers (Bistrița, Baia Mare, Alba Iulia), the dominating feature of county magnets is that they were primarily developed during Communism. Communist apartment blocks is the defining feature of these cities, and it is a feature that has not weathered the test of time very well. Many of the Communist apartment blocks have surpassed their warranty period, most have not received any major improvements in the past years, and facades have been scarred by interventions of private owners (e.g. closing of balconies, changing of window panes, painting of facades). Consequently, most of these apartment blocks look like dirty Christmas trees today and require urgent intervention. A drop in the quality of living spaces (including the areas around apartment blocks – e.g. green spaces, pedestrian paths, playgrounds) will inevitably lead to a drop in quality of life, which may increase the likelihood that people in the county magnets will chose to move elsewhere.

5. **Quality of Life.** Some of the county magnets have beautiful historic cores that deserve to be rehabilitated and improved – both for the benefit of people living there, and as a way of attracting more tourists.
6. **Capacity.** Local authorities in county magnets need to be properly equipped for efficiently accessing EU and State-Budget funds (they often lack the means required to improve much needed development infrastructure). Moreover, they need a strengthening of their capacity to implement multi-annual investment programs, and their capacity to attract, keep, and nurture high value-added investors.

**The Local Magnets**

Local magnets are those FUAs that have largely attracted less than 10,000 migrants between 2001 and 2011, and have a migration catchment area that is rather local (i.e. a sub-region in the county). The local magnets include 15 FUAs: Deva, Miercurea Ciuc, Zalău, Drobeta Turnu Severin, Sfântu Gheorghe, Slobozia, Vaslui, Giurgiu, Botoșani, Călărași, Reșița, Slatina, Alexandria, Tulcea, and Brăila. Interestingly, among the poor performers in this category we find Brăila (which is a historical and cultural heritage jewel, and a former rich port on the Danube) and Slatina (which is doing very well economically, housing two large industrial giants – ALRO Slatina and Pirelli). Local magnets are largely the FUAs that have fared worst in the transition years. Overall they have failed to attract large investors (with a few exceptions, such as Slatina), a significant share of their labor force works for the public sector, and they have lost a significant share of their qualified labor force to bigger magnets in Romania, and to emigration.

While the challenges local magnets face vary, all of them have to focus proactively and aggressively on attracting investments. Without decent well-paid jobs, it will be difficult for local magnets to stem the tide of out-migration and continue to attract people from surrounding rural areas. Most of them do not have a lot of potential people they could attract to begin with, given their small area of influence. Attracting, creating, and keeping private capital should be the main priority and area of focus for local administrations of local magnets. Without a strong private sector, these FUAs stand little chance of performing well in the future.

Most of the local magnets will inevitably require assistance from the central government – both funds for development and technical assistance for strengthening local capacity. For example, most face difficulties in maintaining and upgrading their public utilities networks, they lack qualified people to run the local administration, and they usually lack a proper vision for the future. Some of the local magnets, such as Brăila, require targeted national programs of their own. Romania cannot afford to lose the cultural and historical heritage of Brăila. A similar approach should be considered for the industrial heritage in Reșița, where the building blocks of the Eifel Tower were crafted. Tulcea, or rather the Danube Delta, already benefit from an integrated territorial investment for the 2014-2020 Programming Period, with €1.3 billion allocated for territorially targeted interventions in the Danube Delta. The Romanian Government has also expressed interest in developing integrated territorial investments for the Valea Jiului mining areas (in Hunedoara County, close to Deva), and for a larger poor area around Vaslui County.

Other local magnets can strengthen their economic base, by strengthening ties with the larger magnets around them. An easy flow of people may encourage some out-migrants to move back and invest at home. For example, Giurgiu, Călărași, Slobozia, Alexandria can benefit from their proximity to Bucharest; Reșița and Deva could benefit from their proximity to Timișoara; Zalău can benefit from its proximity to Cluj-Napoca; Botoșani and Vaslui can benefit from their proximity to Iași, although the Iași FUA is not yet strong enough to spill over economic benefits that far; Tulcea can benefit from its proximity to Constanța; Sfântu Gheorghe benefited from its proximity to Brașov.
How Big Can FUAs Get in the Future

Being able to predict how large a FUA can grow can go a long way in ensuring better planning and more efficient investments. Of course, the one thing we know with certainty about the future is that it will be different. Still, working with a few simple assumptions, we can estimate at the level of big orders of magnitude, the population these FUAs could achieve, based on the migrants they will be able to attract (and obviously, based on the people they might lose to out-migration). With respect to the population that could be convinced to migrate to one of the 41 FUAs, we estimated that around 3 million people live outside the 41 FUAs and have a high likelihood to move at least once during their life-time. They largely represent people aged 0-29 in 2011 (5-35, currently) not living in one of the analyzed FUAs. Obviously, not all of these people will move to the FUAs – this is neither realistic nor desirable. With respect to migration flows, we took into consideration the migration intensities these FUAs have registered between 2001 and 2011.

Thus we take three large scenarios into consideration:

1. **Optimistic Scenario.** The optimistic scenario assumes that all of the 0-29 year olds currently not living in one of the 41 FUAs analyzed here will move to the FUAs, and none will move abroad or to other areas in Romania. Moreover, it assumes that nobody already living in the FUAs will move out. If the population of Romania will not change, then the 41 FUAs will amass under this scenario 73% of the country’s population (currently, the 41 FUAs amass 58% of the country’s population).

2. **Moderate Scenario.** The Moderate Scenario is similar to the Optimistic Scenario, with one difference – it assumes that around 62.5% of the 0-29 year olds will not migrate to the 41 FUAs but will migrate abroad. This is the current proportion of migrants that chose to move abroad rather than moving within the country. Under this scenario, the 41 FUAs would end up amassing 70% of the country’s population (in a situation where Romania’s population would drop to 18.1 million due to out-migration).

3. **Pessimistic Scenario.** The Pessimistic Scenario is similar to the Moderate Scenario, with the difference that it considers that 13% of the population of the 41 FUAs would migrate abroad (this is the current national out-migration rate). In this scenario, the 41 FUAs would amass 68% of the national population (in a situation in which the Romanian population would drop to 16.6 million due to out-migration).

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<td>86,620</td>
<td>76,108</td>
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A FEW WORDS on EXTERNAL MIGRATION
While the focus of this work is on the internal movement of people within Romania, it is important to also discuss the external movement of people. Between 1990 and 2011, 1.8 million Romanians migrated to the 41 FUAs discussed here, but 3 million migrated outward. The opportunities offered by more developed economies obviously are more attractive than the opportunities offered by Romanian FUAs – maybe with the notable exception of Bucharest. Thus, it is not surprising that Romanians have been much more willing to move abroad than within the country.

Capturing the exact magnitude of external migration is difficult to ascertain, given that people that emigrate are not registered in any database when they move out. According to the National Institute of Statistics (NIS), the phenomena of external migration was undercounted both in the population estimations that are done yearly, and in the final results of the 2011 Census. According to the 2011 Census, only 1.1 million Romanian live abroad, although EUROSTAT indicates that around 3 million Romanians are living abroad.

This mismatch appears because a lot of emigrants, or their relatives, are not present to provide inputs to the census surveyors. A decent estimate of the real magnitude of outmigration can be however given if several data sources are correlated, namely: 1) the legal population of each administrative unit (i.e. the number of citizens with fixed abode in the respective administrative unit); 2) the citizens with permanent residence registered at the Census and included in the stable population of each territorial unit. The difference between these two groups (including the short-term migrants that are methodologically included in the stable population determined at the Census) is represented by the citizens with permanent residence abroad, namely 2.7 million in 2011, almost identical with the estimations of EUROSTAT. If the estimation at national level has a degree of confidence of more than 95%, the one at county or locality level has a degree of confidence of 80%, being influenced by underestimated internal migration flows (especially within functional urban areas). This approach allows only a quantitative evaluation of migration, in terms of number, age and gender – i.e. it provides only the big picture.

The qualitative assessment of the external migration (country, duration, gender, urban/rural origin, occupation, economic status and sector, motivation etc.) is based on the only available data originating from the 2011 Census. This data is based on approximately 400,000 (12.5% of the total number of Romanians living abroad) questionnaires filled-out by temporary migrants. From a statistic point of view, this sample is representative, although we can assume that there are some differences between short and long-term migrants that should be further explored.

Figure 80. The balance of external migration between 2007 and 2014, by country (in million)

Data source: EUROSTAT Database
**Romania is one of the EU Member States most affected by out-migration.** EUROSTAT estimates that around 3 million Romanians left the country after 1990, of which 1.5 million only after EU accession in 2007. This makes Romania the 6th largest emigration source in EU in absolute figures, respectively the 1st in relative terms (i.e. percentage of the total population). The high out-migration rate, coupled with a smaller immigration rate, has led to a negative external migration balance, which currently represents the main source of labor force decline, and one of the main sources of demographic decline. Around 500 inhabitants move from Romania to another country every day, which makes out-migration one of the key challenges for policy makers.

**The first massive outmigration flows were represented by German and Hungarian minorities that moved to Germany and Hungary respectively.** This ethnic outmigration wave was gradually replaced, especially after the EU accession, by the outmigration of native Romanians in search for better opportunities. Currently, Romania is the main source of immigrants for Spain, Italy and Hungary (see map below).

*Figure 81. The main outmigration destinations, by country of provenience (in 2015)*
Even at the regional and county level some external migration patterns can be observed. People from the east of Romania are predominantly moving to Italy, while those in the center and south of the country prefer Spain. Greece is a top destination for the people in the south of Romania, while Germany and Hungary is a top destination for people in the west of the country, where these two ethnic communities traditionally resided.

Figure 83. The main country-destination for external migration, by county (in 2011)
The final results of the 2011 Census show that 65% of all emigrants left the county for at least one year. This pattern applies to most counties in the country, with the exception of Dâmbovița, Harghita, Maramureș and Satu Mare – where short-term migrants prevail. Short-term migrants are actually commuters that travel abroad to work especially in seasonal activities, such as agriculture, tourism or constructions. Most of the short-term commuters come from rural areas (65%), whereas the long-term migrants primarily come from urban areas (54%).

Over 46% of emigrants are aged 20-34, and only 16% are over 45. In 2011, over a third of Romanian citizens aged 25-29 were living abroad. The figure is rather alarming and indicates that policymakers need to do more to keep some of these people at home, and cities, particularly secondary cities, hold the key. The more opportunities secondary cities will offer, and the better quality of life people will be able to enjoy there, the more people they will be able to attract and keep.

Figure 8. The share of long and short-term external migrants, by county (in 2011)

Data Source: The National Institute of Statistics
The number of emigrants aged 0-14 is relatively low, and underscores a social issue that is quite pressing in today’s Romania – the significant number of children left behind by one or both parents working abroad. A significant number of Romanian children growing up in households with migrant parents are raise up by grandparents, siblings, or other relatives. It is a dynamic which will likely negatively affect these children’s development, and will most likely have a negative effect on the future development of the country.

Figure 85. The age groups most likely to emigrate

![Bar chart showing the age groups most likely to emigrate](chart1.png)

Data Source: The National Institute of Statistics

Figure 86. The estimated real emigration rate, by county

![Map showing the emigration rate by county](chart2.png)

Data Source: The National Institute of Statistics
A look at the demographic structure of population and emigrants indicates an over-representation, both in total numbers and numbers of emigrants, of people aged 20-44. Interestingly, these people represent the “Decretelilor” Generation – people that were born after Ceaușescu’s 1966 Decree 770 that outlawed abortion. These people came of age after 1989, and many did not manage to find opportunities at home. As such, the rate of out-migration among these “decreței” is much larger than the number for the rest of the population – in part also because “the decreței” outnumber both the generations born before 1966 and the generations born after 1989.

The areas most affected by external migration are the remote and densely populated ones, lacking a large and dynamic urban center, such as the Subcarpathian Moldova (the counties of Suceava, Neamț, Bacău, Vrancea), Satu-Mare, Maramures, and Bistrița. These regions are predominantly rural, with small and medium cities that do not have the economic capacity to absorb the excedentary labor force resulted after abortion was outlawed through the Decree 770/1966. It is important to note that these regions are peripheral both in the national and the EU context, being clustered at the external border of both Romania and the EU.

Figure 87. The estimated real emigration rate, by locality

External migration and underdevelopment do not necessarily go hand in hand. The team ran a regression comparing the number of people that emigrated after 1990 with the level of development of the sending locality7, and found a positive and significant (99% confidence level) correlation (see Annex 3). In plain speak, this means that emigrants disproportionately hail from more developed localities (e.g. larger urban centers), although in relative terms they primarily leave poor rural areas. For a lot of people living in poor rural areas, commuting and internal migration were not attractive enough, because of poor urbanization, distance from opportunities, and poor transport infrastructure. External migration was for many of the people living in those areas the simplest path to a better life.

7 As measured through the Local Human Development Index, developed by Dumitru Sandu and the World Bank. See: World Bank. 2013. Competitive Cities: Reshaping the Economic Geography of Romania.
Another interesting dynamic is the importance of dynamic urban centers in limiting out-migration. Thus, as the map above clearly shows, the large area around Bucharest is constituted by localities with a relatively low (less than 6%) out-migration rate. This indicates that the capital provides enough of a draw, to dissuade some of the people around it to move abroad. Other dynamic functional urban areas, such as Cluj-Napoca, Ploiești, Oradea, or Pitești, also have a lower outmigration rate.

In terms of gender, 51.3% of migrants were male. The poor job offer in sectors that traditionally employ male workers, such as heavy industry, transport, agriculture or constructions lead to higher migration rates among this group. The female workforce has been more mobile internally (57% of internal migrants are female), being more adept at filling the growing number of service jobs created by the new economy.

In terms of motivation, 70.6% of the migrants went abroad in search of a job, 15.6% for personal reasons and only 1.9% for studies. Better paid jobs are the main motivation Romanians move to other countries, with the exception of the Republic of Moldova, Canada and some Arab countries, where most migrants move for personal reasons (e.g marriage). Student primarily prefer Italy, UK, Spain, Hungary and France, while tourists Asia and Africa.

Figure 88. Why Romanians emigrate

Only 7% of emigrants hold a bachelor degree, compared with over 14% of the stable population in Romania, while 52% have graduated only lower secondary education. Although we have to keep in mind the sample is made only of short-term migrants, that usually activate abroad in seasonal activities (agriculture, tourism, construction) we can assume that the education attainment level of most Romanian migrants is below average, since the unemployment rate among people with tertiary education remains low. However, some patterns can be noticed when analyzing the distribution of migrants by country: the share of migrants with tertiary education is much higher among those who choose US, Canada or the Scandinavian countries (over 20%), well-developed countries with a more selective immigration policy, and decreases to less than 10% in the case of Spain, Italy, Portugal or Greece, in search for seasonal workers with basic education.
71.9% of Romanian emigrants have an occupation, compared to less than 50% of the total population residing in the country. However, only 67.9% are registered as employees, while the rest are either freelancers or unpaid family workers. 57% of Romanian migrants are employed as qualified workers, 37% as elementary workers, and only 5% are white-collar workers (managers, professionals and technicians). Emigrants to US and Canada are disproportionately white-collar workers and students, while an overwhelming share of people emigrating to the EU are blue-collar workers. Only 5% of the Romanian immigrants work in KIS (Knowledge Intensive Services) sectors, most of them in Italy, Germany, Spain, the UK, and Hungary.

With respect to the targeted economic activity, 44% of the Romanian emigrants are working in the services sector (especially trade, tourism, transport, housekeeping, cleaning), 27% in construction, 20% in agriculture and only 9% in industry. Most of the emigrants working in Italy, Spain, Germany, Hungary, Austria, US and UK are employed in services sectors, while those choosing France and Belgium primarily work in constructions. The largest share of emigrants working in agriculture and industry was reported in Portugal, Denmark and Spain (30-35%), respectively Slovakia and the Czech Republic (25-35%).
MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
The INDEX of MAGNETISM
The data analyzed so far indicates that people in Romania migrate for three main reasons: personal reasons (e.g., marriage), job, or studies. Thus, the FUAs with the most people (e.g., you are likely to find more marriage partners in larger places), the most job openings, and the most places for students, are also likely to attract the most people. Similarly, people chose to move to a different city for a better quality of life, to move up in the world (often people migrate from smaller towns to bigger cities), or to take advantage of business development opportunities. In addition, a number of enabling factors (e.g., proximity to large markets, average housing/land prices, the quality of the local administration, tolerance of people in the destination city) also play a role in a person’s decision to move somewhere.

Clearly, the FUAs that offer the best combination of a large population, plenty of jobs, a lot of spots for students, and good quality of life, are also the places most likely to attract a lot of people. We have therefore decided to test this hypothesis and identify the FUAs that are most likely, from a statistical point of view, to attract people. This would allow us to identify the cities in Romania that over-perform or under-perform when it comes to in-migration. Annex 2 includes a more detailed analysis of all independent variables considered for this analysis, the methodology that was employed to identified the most significant variables, and the steps taken to identify the individual weights of each independent variable.

The independent variables that seem to impact internal migration most include:

1. The total stable population (weight: 23%);
2. The number of students (weight: 21%);
3. The average monthly wage (Euro) (weight: 21%);
4. Firm revenues per capita (weight: 20%);
5. Investments per capita (weight: 6%);
6. Distance from Bucharest (weight: 9%).

These weights were then used with a simple rank method to identify the FUAs in Romania, outside Bucharest, that are statistically most attractive for migrants:

<table>
<thead>
<tr>
<th>FUA</th>
<th>RANK Pop</th>
<th>RANK Stud</th>
<th>RANK DistBuc</th>
<th>RANK Wage</th>
<th>RANK FirmRev</th>
<th>RANK Invest</th>
<th>Final Index</th>
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Table 13. The Index of Magnetism applied to the 40 county residences FUAs in Romania
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<tr>
<th>FUA</th>
<th>Rank Pop</th>
<th>Rank Stud</th>
<th>Rank DistBuc</th>
<th>Rank Wage</th>
<th>Rank FirmRev</th>
<th>Rank Invest</th>
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<td>40</td>
<td>34.85</td>
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</table>

The table below compares the ranking of the 40 FUAs on the Index of Magnetism to their ranking on actual migration between 1991 and 2011. The FUAs that significantly underperform may manage to attract migrants in higher numbers if the proper policies are put into place. For example, the City of Arad scores high on the Index of Magnetism, but does less well in terms of actual in-migration. Encouraging more dynamic land and housing markets may bring more people to the area, given that economically the FUA is doing quite well.
Table 14. Comparison between rank on Index of Magnetism and rank on actual migration numbers

<table>
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<tr>
<th>FUA</th>
<th>Rank on Index of Magnetism</th>
<th>Rank on migration between 1991 and 2011</th>
<th>Difference between predicted rank and actual rank</th>
</tr>
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<td>Brașov</td>
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<tr>
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<tr>
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<td>11</td>
<td>-3</td>
</tr>
<tr>
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<td>12</td>
<td>-3</td>
</tr>
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<td>Ploiești</td>
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<td>4</td>
</tr>
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<td>8</td>
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<tr>
<td>Alba Iulia</td>
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<td>-9</td>
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<td>Slatina</td>
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<td>21</td>
<td>-1</td>
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<td>Târgoviște</td>
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<td>Bistrița</td>
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<td>25</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>26</td>
<td>28</td>
<td>-2</td>
</tr>
<tr>
<td>Tulcea</td>
<td>27</td>
<td>32</td>
<td>-5</td>
</tr>
<tr>
<td>Reșița</td>
<td>28</td>
<td>38</td>
<td>-10</td>
</tr>
<tr>
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<td>29</td>
<td>24</td>
<td>5</td>
</tr>
<tr>
<td>Brăila</td>
<td>30</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Botoșani</td>
<td>31</td>
<td>37</td>
<td>-6</td>
</tr>
<tr>
<td>Zalău</td>
<td>32</td>
<td>27</td>
<td>5</td>
</tr>
<tr>
<td>Călărași</td>
<td>33</td>
<td>35</td>
<td>-2</td>
</tr>
<tr>
<td>Focșani</td>
<td>34</td>
<td>20</td>
<td>14</td>
</tr>
<tr>
<td>Slobozia</td>
<td>35</td>
<td>31</td>
<td>4</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>36</td>
<td>30</td>
<td>6</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>37</td>
<td>33</td>
<td>4</td>
</tr>
<tr>
<td>Vaslui</td>
<td>38</td>
<td>34</td>
<td>4</td>
</tr>
<tr>
<td>Alexandria</td>
<td>39</td>
<td>40</td>
<td>-1</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>40</td>
<td>36</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Red indicates under-performers
Blue indicates over-performers
WHERE do PEOPLE ACTUALLY WANT to MOVE
In the previous chapters we have seen where people in Romania have moved in the past, and we developed an index that shows which are the most attractive places in Romania now. In this chapter, we will discuss the results of a survey where we asked people where they are thinking of moving in the future. The survey was submitted to a representative sample of 1,250 people in Romania, using a “random route” sampling method that took into consideration the territorial distribution of the population, the demographic make-up, as well as the distribution by sex and by urban and rural areas.

The first question we asked in the survey was: “Do you intend to move from the locality where you currently live within the next 5 years, and how likely are you to move?” 18% of respondents (representative for around 3.6 million people) indicated that they intend to move within the next 5 years, with an average certainty rate of 85%. 82% indicated that they have not considered moving within the next 5 years. Of those that consider moving, a disproportionate share are young people – the average age for the people that consider moving is 35 years. 75% of the people considering a move within the next 5 years do not have children, and of the 25% that do have a child, the majority only have one child. By-and-large, people that consider moving have a higher educational attainment, have higher incomes, and are to a larger degree employed in the private sector than the country average. Territorially, people in less developed regions (e.g. South-Muntenia, North East) are more likely to move than people in more developed regions (e.g. West, Center).

When asked where they would like to move, 66.5% of respondents indicated they would prefer to move within Romania, while 31.3% indicated they would prefer to move outside the country. Thus, the results indicate that around 2.4 million Romanians are considering moving within the country in the next 5 years, while 1.1 million are considering emigration – a switch from the dynamic in previous years, when a majority of Romanians preferred to move abroad. From a territorial perspective, people in the West of Romania are to a larger extent considering a move abroad, whereas the people living close to Bucharest are more likely to move within the country. Urban residents and people with higher education are more prone to out-migration, while people with lower education attainment and rural residents are more likely to move within the country. Men prefer emigration, while women prefer in-country migration.

When asked where in Romania they would like to move, 71.4% of respondents indicated a preference for urban areas. The people that are considering moving to an urban area within the next 5 years are representative for around 1.7 million people in Romania. Territorially, people from regions with a higher urbanization rate (e.g. Center) have a higher likelihood of moving to an urban area. From a demographic point of view, young people, and people with higher education tend to disproportionately prefer urban areas to rural areas.

Figure 91. Potential in-country migrants disproportionately prefer urban areas to rural areas
live in if they would have the option to move to any of those cities. 32.6% indicated they would like to stay in the city where they currently live; 27% would like to live in a city from a different region; 10.7% would like to live in a city within their county; 8.5% would like to live in a city within their region; 21.2% did not provide an answer. Territorially, the regions with the most attractive urban centers are Center, West, North West, and Bucharest-Ilfov. The regions with the least attractive urban centers include South-Muntenia, North-East, South-West, and South-East.

The table below shows the cities people in Romania would most like to live in. A total of 77 cities were named by respondents, but only county residences were included in the table, to ensure consistency with the rest of the analysis in this report. The most attractive cities are Bucharest, Cluj-Napoca, Timișoara, and Brașov. In particular, Cluj-Napoca, Timișoara, and Brașov, have a disproportionate share of people wanting to live there – i.e. the share of people that would like to live in these cities is much higher than the share of their FUA population in the national population. For example, the FUA of Cluj-Napoca amasses 2.34% of the country’s population, but 11.37% of survey respondents would like to live there. High scores were also registered for Constanța, Sibiu, Iași, or Oradea.

<table>
<thead>
<tr>
<th>FUA</th>
<th>Which city would you most like to live in?</th>
<th>Which city, different than the one you live in now, would you most like to live in?</th>
<th>Share of FUA in total national population</th>
<th>Why do you prefer this city?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Job</td>
</tr>
<tr>
<td>Bucharest</td>
<td>15.23%</td>
<td>14.46%</td>
<td>13.43%</td>
<td>4.24</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>11.37%</td>
<td>15.32%</td>
<td>2.34%</td>
<td>4.22</td>
</tr>
<tr>
<td>Timișoara</td>
<td>9.14%</td>
<td>11.88%</td>
<td>2.52%</td>
<td>4.29</td>
</tr>
<tr>
<td>Brașov</td>
<td>8.53%</td>
<td>11.53%</td>
<td>2.27%</td>
<td>3.8</td>
</tr>
<tr>
<td>Constanța</td>
<td>5.18%</td>
<td>3.96%</td>
<td>2.72%</td>
<td>3.37</td>
</tr>
<tr>
<td>Sibiu</td>
<td>4.06%</td>
<td>5.16%</td>
<td>1.34%</td>
<td>4</td>
</tr>
<tr>
<td>Iași</td>
<td>3.76%</td>
<td>4.30%</td>
<td>2.06%</td>
<td>4.09</td>
</tr>
<tr>
<td>Oradea</td>
<td>2.64%</td>
<td>2.24%</td>
<td>1.67%</td>
<td>4.35</td>
</tr>
<tr>
<td>Suceava</td>
<td>2.23%</td>
<td>1.89%</td>
<td>0.91%</td>
<td>2.89</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>2.13%</td>
<td>1.56%</td>
<td>1.25%</td>
<td>3.8</td>
</tr>
<tr>
<td>Pitești</td>
<td>193%</td>
<td>2.41%</td>
<td>1.73%</td>
<td>3.68</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>193%</td>
<td>1.72%</td>
<td>0.74%</td>
<td>3.63</td>
</tr>
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<td>Râmnicu Vâlcea</td>
<td>173%</td>
<td>1.90%</td>
<td>1.16%</td>
<td>2.88</td>
</tr>
<tr>
<td>Arad</td>
<td>162%</td>
<td>1.20%</td>
<td>1.48%</td>
<td>3.38</td>
</tr>
<tr>
<td>Galați</td>
<td>152%</td>
<td>0.34%</td>
<td>1.69%</td>
<td>2</td>
</tr>
<tr>
<td>Ploiești</td>
<td>152%</td>
<td>0.52%</td>
<td>2.52%</td>
<td>3.13</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>132%</td>
<td>1.03%</td>
<td>1.07%</td>
<td>3.63</td>
</tr>
<tr>
<td>Craiova</td>
<td>132%</td>
<td>1.38%</td>
<td>1.89%</td>
<td>4</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>102%</td>
<td>0.17%</td>
<td>0.49%</td>
<td>2.9</td>
</tr>
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<td>City</td>
<td>FUA</td>
<td>Job</td>
<td>Quality of Life</td>
<td>Educational Services</td>
</tr>
<tr>
<td>------------------</td>
<td>-----</td>
<td>-----</td>
<td>----------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>1.02%</td>
<td>4.4</td>
<td>4.1</td>
<td>4.1</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>0.91%</td>
<td>3.44</td>
<td>3.78</td>
<td>3.56</td>
</tr>
<tr>
<td>Bacău</td>
<td>0.91%</td>
<td>3.22</td>
<td>3.89</td>
<td>3.11</td>
</tr>
<tr>
<td>Alexandria</td>
<td>0.81%</td>
<td>3.75</td>
<td>3.88</td>
<td>3.13</td>
</tr>
<tr>
<td>Bușău</td>
<td>0.81%</td>
<td>4.2</td>
<td>4.8</td>
<td>3.8</td>
</tr>
<tr>
<td>Deva</td>
<td>0.81%</td>
<td>4.67</td>
<td>4.5</td>
<td>3.63</td>
</tr>
<tr>
<td>Reșița</td>
<td>0.81%</td>
<td>4.43</td>
<td>2.43</td>
<td>4.25</td>
</tr>
<tr>
<td>Brăila</td>
<td>0.81%</td>
<td>3.25</td>
<td>3.75</td>
<td>2.5</td>
</tr>
<tr>
<td>Foșani</td>
<td>0.71%</td>
<td>2.5</td>
<td>4.14</td>
<td>3.43</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>0.71%</td>
<td>3.43</td>
<td>4.29</td>
<td>2.57</td>
</tr>
<tr>
<td>Slatina</td>
<td>0.71%</td>
<td>4.8</td>
<td>4.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Botoșani</td>
<td>0.71%</td>
<td>3.29</td>
<td>4.14</td>
<td>2.71</td>
</tr>
<tr>
<td>Vaslui</td>
<td>0.61%</td>
<td>4.5</td>
<td>4.5</td>
<td>3.25</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>0.51%</td>
<td>2.25</td>
<td>3.5</td>
<td>3.4</td>
</tr>
<tr>
<td>Bistrița</td>
<td>0.51%</td>
<td>2.8</td>
<td>4.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>0.51%</td>
<td>4.4</td>
<td>4.8</td>
<td>3.6</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>0.51%</td>
<td>3.2</td>
<td>4.8</td>
<td>2.2</td>
</tr>
<tr>
<td>Slobozia</td>
<td>0.41%</td>
<td>3.5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Zalău</td>
<td>0.41%</td>
<td>1.5</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Drobeta-Turnu</td>
<td>0.30%</td>
<td>3.33</td>
<td>4</td>
<td>3.67</td>
</tr>
<tr>
<td>Severin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Călărași</td>
<td>0.20%</td>
<td>2</td>
<td>2.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Tulcea</td>
<td>0.20%</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

When asked about the reason for picking a particular city, a vast majority chose “quality of life” as a main motivation. This underscores again the need for investment in urban infrastructure, and the need for a concerted effort to make cities more attractive and appealing to people. The second reason people chose particular cities was “jobs”. As is the case in most countries, access to jobs is an important magnet for migrants. The third reason, people chose particular cities was specialized healthcare. In a context of demographic decline and aging, easy access to healthcare facilities is of particular importance. As a fourth reason, people indicated a different option than the ones provided (job; quality of life; education; healthcare). The most cited reasons are listed in the figure below. For example, several people chose Brașov because it’s a ‘beautiful city’, and several people chose Constanța for ‘family, friends, or acquaintances’.
From a territorial point of view, people generally prefer cities that are close to them. The cities that have managed to attract the largest number of migrants between 2001 and 2011 (Bucharest, Cluj-Napoca, Timișoara, Iași, Constanța) were also chosen by the survey respondents from all over Romania – i.e. they have a relatively large migration catchment area. Interestingly, cities that are favored tourist destinations (e.g. Brașov, Sibiu) also ranked quite high in the preference of survey respondents. For example, survey respondents from 30 different counties chose Brașov as a preferred city to live in.

This data also enables a rough estimate of the people local administrations could, potentially, expect to receive in coming years. Thus, we know that around 1.7 million people in Romania are considering moving to an urban area within the country, different from the locality they currently reside in, within the next 5 years. We also know, which cities people would prefer if they were to move. If we put the two together, we get a rough picture of the absolute number of people interested in moving to Bucharest or one of the county capitals in the proximate future (see table below, with the 15 most favored urban locations).

Table 16. An estimation of the potential number of migrants in the proximate future

<table>
<thead>
<tr>
<th>No.</th>
<th>FUA</th>
<th>Potential migrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cluj-Napoca</td>
<td>260,440</td>
</tr>
<tr>
<td>2</td>
<td>Bucharest</td>
<td>245,820</td>
</tr>
<tr>
<td>3</td>
<td>Timișoara</td>
<td>201,960</td>
</tr>
<tr>
<td>4</td>
<td>Brașov</td>
<td>196,010</td>
</tr>
<tr>
<td>5</td>
<td>Sibiu</td>
<td>87,720</td>
</tr>
<tr>
<td>6</td>
<td>Iași</td>
<td>73,100</td>
</tr>
<tr>
<td>7</td>
<td>Constanța</td>
<td>67,320</td>
</tr>
<tr>
<td>8</td>
<td>Pitești</td>
<td>40,970</td>
</tr>
<tr>
<td>9</td>
<td>Oradea</td>
<td>38,080</td>
</tr>
<tr>
<td>10</td>
<td>Râmnicu Vâlcea</td>
<td>32,300</td>
</tr>
<tr>
<td>11</td>
<td>Suceava</td>
<td>32,130</td>
</tr>
<tr>
<td>12</td>
<td>Piatra Neamț</td>
<td>29,240</td>
</tr>
<tr>
<td>13</td>
<td>Târgu Mureș</td>
<td>26,520</td>
</tr>
<tr>
<td>14</td>
<td>Craiova</td>
<td>23,460</td>
</tr>
<tr>
<td>15</td>
<td>Arad</td>
<td>20,400</td>
</tr>
</tbody>
</table>

Obviously, the data above is nothing but a rough estimate, and an expression of intent, not a reflection of an actual dynamic. Still, for the local administrations of Cluj-Napoca, Timișoara, or Brașov, these numbers should be an incentive to gear up for growth. More specifically, these administrations should identify ways to make people’s intentions a reality. Most importantly, they should identify ways of creating new jobs and enable land and housing markets to work efficiently – a key prerequisite if people are to actually move. The last section of the report discussed a number of other recommendations that local administrations could take into consideration to make themselves more attractive and competitive.
CAN SECONDARY CITIES SUSTAIN REGIONAL GROWTH?
One of the key policy questions this report has tried to answer is whether secondary cities can sustain regional growth. Every piece of evidence we have collected to this end seems to indicate that indeed, without strong cities, regions cannot have a strong economy. Moreover, it seems that secondary cities play a particularly important role in the performance of both regional and national economies. As was discussed earlier, in all EU countries, regardless of the performance of the primate city (with high performers, such as Bucharest, Bratislava, Paris, Brussels, or Amsterdam), national economies seem to very closely resemble the performance of their secondary cities. In essence, national economies seem to be only as strong as the economies of secondary cities. And, the more performant secondary cities are, the better off the national economy is likely to be.

Secondary cities are also critical for regional economies. In Romania, the economy of all seven regions outside Bucharest-Ilfov are dominated by the largest FUAs. Regardless of the level of development of these regions, from lagging to leading, it is a handful of FUAs that generate an overwhelming share of economic output. This seems to indicate that without strong FUAs, one cannot have strong regions.

The summary table below gives a clear and telling picture of the importance of secondary cities for regional economies. The growth poles (Brașov, Cluj-Napoca, Constanța, Craiova, Iași, Ploiești, and Timișoara) have a share in the regional economic output that is usually double their share in the regional population – indicating that they are the economic growth engines for these regions. There seems to be a clear premium to size, with the largest urban centers in every region being also the most productive – generating between 24% and 47% of firm revenues in their respective region.

**Table 17. Performance of county capital FUAs at the regional level**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>North West (Lagging)</td>
<td>1,435,123</td>
<td>55.2</td>
<td>646,030</td>
<td>60.4</td>
<td>€ 20,199</td>
<td>81.7</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>470,939</td>
<td>18.1</td>
<td>215,275</td>
<td>20.1</td>
<td>€ 8,872</td>
<td>35.9</td>
</tr>
<tr>
<td>Oradea</td>
<td>336,538</td>
<td>12.9</td>
<td>154,595</td>
<td>14.5</td>
<td>€ 4,362</td>
<td>17.7</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>215,129</td>
<td>8.3</td>
<td>91,812</td>
<td>8.6</td>
<td>€ 2,339</td>
<td>9.5</td>
</tr>
<tr>
<td>Satu Mare</td>
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<td>77,998</td>
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<td>6.0</td>
<td>€ 1,602</td>
<td>6.5</td>
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<td>3.5</td>
<td>41,931</td>
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<td>€ 936</td>
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<td>1,435,123</td>
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<td>646,030</td>
<td>60.4</td>
<td>€ 20,199</td>
<td>81.7</td>
</tr>
<tr>
<td>North East (Lagging)</td>
<td>1,184,628</td>
<td>35.9</td>
<td>550,814</td>
<td>38.2</td>
<td>€ 11,080</td>
<td>68.8</td>
</tr>
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<td>Iași</td>
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<td>193,830</td>
<td>13.5</td>
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<td>108,638</td>
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<td>85,310</td>
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<td>€ 1,268</td>
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<td>56,509</td>
<td>3.9</td>
<td>€ 1,099</td>
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<td>€ 533</td>
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</tr>
<tr>
<td>FUAs Total</td>
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<td>550,814</td>
<td>38.2</td>
<td>€ 11,080</td>
<td>68.8</td>
</tr>
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<td>747,169</td>
<td>100.0</td>
<td>€ 19,213</td>
<td>100.0</td>
</tr>
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<td>236,703</td>
<td>31.7</td>
<td>€ 9,004</td>
<td>46.9</td>
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<td>131,041</td>
<td>17.5</td>
<td>€ 4,821</td>
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<td>Deva</td>
<td>158,650</td>
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<td>76,433</td>
<td>10.2</td>
<td>€ 1,270</td>
<td>6.6</td>
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<td>Reșița</td>
<td>81,091</td>
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<td>33,375</td>
<td>4.5</td>
<td>€ 558</td>
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<td>63.9</td>
<td>€ 15,654</td>
<td>81.5</td>
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<td>POPULATION (2011)</td>
<td>%</td>
<td>EMPLOYED PEOPLE (2011)</td>
<td>%</td>
<td>FIRM REVENUES (mil. Euro), in 2015</td>
<td>%</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------</td>
<td>-----</td>
<td>------------------------</td>
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<td>-----------------------------------</td>
<td>-----</td>
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<tr>
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<td>2,360,805</td>
<td>100.0%</td>
<td>940,345</td>
<td>100.0%</td>
<td>€ 26,183</td>
<td>100.0%</td>
</tr>
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<td>455,830</td>
<td>19.3%</td>
<td>202,138</td>
<td>21.5%</td>
<td>€ 8,486</td>
<td>32.4%</td>
</tr>
<tr>
<td>Târgu-Mureș</td>
<td>251,523</td>
<td>10.7%</td>
<td>110,199</td>
<td>11.7%</td>
<td>€ 4,631</td>
<td>17.7%</td>
</tr>
<tr>
<td>Sibiu</td>
<td>270,064</td>
<td>11.4%</td>
<td>124,109</td>
<td>13.2%</td>
<td>€ 3,677</td>
<td>14.0%</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>113,461</td>
<td>4.8%</td>
<td>54,331</td>
<td>5.8%</td>
<td>€ 2,544</td>
<td>9.7%</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>84,341</td>
<td>3.6%</td>
<td>36,307</td>
<td>3.9%</td>
<td>€ 670</td>
<td>2.6%</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>97,627</td>
<td>4.1%</td>
<td>42,672</td>
<td>4.5%</td>
<td>€ 510</td>
<td>19.0%</td>
</tr>
<tr>
<td>FUAs Total</td>
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<td>569,756</td>
<td>60.6%</td>
<td>€ 20,517</td>
<td>78.4%</td>
</tr>
<tr>
<td>South East</td>
<td>2,545,923</td>
<td>100.0%</td>
<td>1,048,866</td>
<td>100.0%</td>
<td>€ 21,484</td>
<td>100.0%</td>
</tr>
<tr>
<td>Constanța</td>
<td>546,900</td>
<td>21.5%</td>
<td>219,753</td>
<td>21.0%</td>
<td>€ 8,686</td>
<td>40.4%</td>
</tr>
<tr>
<td>Galați</td>
<td>339,408</td>
<td>13.3%</td>
<td>151,776</td>
<td>14.5%</td>
<td>€ 4,196</td>
<td>19.5%</td>
</tr>
<tr>
<td>Bușău</td>
<td>258,137</td>
<td>10.1%</td>
<td>111,139</td>
<td>10.6%</td>
<td>€ 2,595</td>
<td>12.1%</td>
</tr>
<tr>
<td>Brăila</td>
<td>196,818</td>
<td>7.7%</td>
<td>76,422</td>
<td>7.3%</td>
<td>€ 1,470</td>
<td>6.8%</td>
</tr>
<tr>
<td>Tulcea</td>
<td>94,092</td>
<td>3.7%</td>
<td>70,114</td>
<td>6.7%</td>
<td>€ 1,092</td>
<td>5.1%</td>
</tr>
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<td>Focșani</td>
<td>172,530</td>
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<td>77,227</td>
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<td>€ 1,060</td>
<td>4.9%</td>
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<tr>
<td>FUAs Total</td>
<td>1,607,885</td>
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<tr>
<td>South (Lagging)</td>
<td>3,136,446</td>
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<td>1,344,065</td>
<td>100.0%</td>
<td>€ 26,381</td>
<td>100.0%</td>
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<tr>
<td>Pitești</td>
<td>348,981</td>
<td>11.1%</td>
<td>183,206</td>
<td>13.6%</td>
<td>€ 9,218</td>
<td>34.9%</td>
</tr>
<tr>
<td>Ploiești</td>
<td>506,213</td>
<td>16.1%</td>
<td>213,284</td>
<td>15.9%</td>
<td>€ 7,041</td>
<td>26.7%</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>210,410</td>
<td>6.7%</td>
<td>99,872</td>
<td>7.4%</td>
<td>€ 1,199</td>
<td>4.5%</td>
</tr>
<tr>
<td>Slobozia</td>
<td>80,950</td>
<td>2.6%</td>
<td>33,639</td>
<td>2.5%</td>
<td>€ 946</td>
<td>3.6%</td>
</tr>
<tr>
<td>Călărași</td>
<td>104,323</td>
<td>3.3%</td>
<td>43,774</td>
<td>3.3%</td>
<td>€ 863</td>
<td>3.3%</td>
</tr>
<tr>
<td>Alexandria</td>
<td>70,409</td>
<td>2.2%</td>
<td>31,766</td>
<td>2.4%</td>
<td>€ 641</td>
<td>2.4%</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>80,932</td>
<td>2.6%</td>
<td>33,276</td>
<td>2.5%</td>
<td>€ 412</td>
<td>1.6%</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,401,838</td>
<td>44.7%</td>
<td>638,817</td>
<td>47.5%</td>
<td>€ 20,320</td>
<td>77.0%</td>
</tr>
<tr>
<td>South West</td>
<td>2,075,642</td>
<td>100.0%</td>
<td>857,119</td>
<td>100.0%</td>
<td>€ 11,352</td>
<td>100.0%</td>
</tr>
<tr>
<td>Craiova</td>
<td>380,641</td>
<td>18.3%</td>
<td>171,052</td>
<td>20.0%</td>
<td>€ 4,398</td>
<td>38.7%</td>
</tr>
<tr>
<td>Slatina</td>
<td>132,789</td>
<td>6.4%</td>
<td>63,374</td>
<td>7.4%</td>
<td>€ 1,996</td>
<td>17.6%</td>
</tr>
<tr>
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<td>233,497</td>
<td>11.2%</td>
<td>106,795</td>
<td>12.5%</td>
<td>€ 1,803</td>
<td>15.9%</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>144,618</td>
<td>7.0%</td>
<td>67,396</td>
<td>7.9%</td>
<td>€ 1,305</td>
<td>11.5%</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>120,762</td>
<td>5.8%</td>
<td>56,541</td>
<td>6.6%</td>
<td>€ 450</td>
<td>4.0%</td>
</tr>
<tr>
<td>FUAs Total</td>
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<td>48.8%</td>
<td>465,158</td>
<td>54.3%</td>
<td>€ 9,952</td>
<td>87.7%</td>
</tr>
</tbody>
</table>

Data Source: The National Institute of Statistics and Listă Firme

There are of course a number of FUAs that are underperforming – particularly the smaller ones. For example, Reșița, Sfântu Gheorghe, Miercurea Ciuc, Focșani, Călărași, Giurgiu, Drobeta Turnu Severin, or Brăila, have shares in the regional economic output of the region that are lower than their share in regional population. Generally, the bigger the FUA, the more productive it tends to be. Which, again, is a strong argument for demographic and economic concentration.

The strengthening of functional urban areas is of particular importance for lagging regions. In this case, ‘lagging regions’ were defined using the methodology of the European Commission – i.e. low income regions with a GDP per Capita (PPS) below 50% of the EU average. It is important to note here that when the European Commission first presented the methodology for identifying low-income lagging regions, the South-East Region in Romania was identified as a low-income region.
The GDP data for 2014 was made available in the mean-time, and the South-East Region passed the 50% threshold. By 2017, when this report was finalized, it is likely that also the North-West Region managed to achieve the same feat. The least developed regions in Romania (North East, South West, and South) have one thing in common: as opposed to the other regions, a majority of their population lives outside the existent FUAs. More specifically, the population of these regions is predominantly rural or living in small towns. Without strong FUAs, it will be very difficult for these regions to perform well. Particularly for the North-East Region, which has dense rural areas, the strengthening of urban areas will be of paramount importance in the coming years.

Evidence also indicates that people that move to FUAs also achieve a higher standard of living. The table below gives a vivid picture in this respect. For one, it shows that FUAs have a growing share in the population of their respective regions – i.e. people prefer the main FUAs to other places in the region. Also, virtually all of the FUAs, with the exception of Miercurea Ciuc, have registered a Local Human Development Index above the regional one – i.e. people that moved to these FUAs also moved to a higher standard of living. It has to be noted here though, that between 2001 and 2011, all regions, and all county capital FUAs, with the exception of the Cluj-Napoca FUA, have registered population decline – primarily due to outmigration and low fertility rates. However, on average, regional FUAs have decreased slower than the regions themselves.

Table 18. People that Moved to Regional FUAs also moved to a Higher Standard of Living

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>North West (Lagging)</td>
<td>2,804,284</td>
<td>2,600,132</td>
<td>-7.3%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>58.9</td>
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<tr>
<td>Cluj-Napoca</td>
<td>449,448</td>
<td>470,939</td>
<td>4.8%</td>
<td>16.0%</td>
<td>18.1%</td>
<td>2.1%</td>
<td>72.4</td>
<td>94.4</td>
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<td>Oradea</td>
<td>355,047</td>
<td>336,538</td>
<td>-5.2%</td>
<td>12.7%</td>
<td>12.9%</td>
<td>0.2%</td>
<td>57.7</td>
<td>78.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>233,792</td>
<td>215,129</td>
<td>-8.0%</td>
<td>8.3%</td>
<td>8.3%</td>
<td>0.0%</td>
<td>67.6</td>
<td>84.3</td>
<td>8.4</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>210,034</td>
<td>195,584</td>
<td>-6.9%</td>
<td>7.5%</td>
<td>7.5%</td>
<td>0.0%</td>
<td>60.4</td>
<td>76.2</td>
<td>0.4</td>
</tr>
<tr>
<td>Bistrița</td>
<td>139,938</td>
<td>126,860</td>
<td>-9.3%</td>
<td>5.0%</td>
<td>4.9%</td>
<td>-0.1%</td>
<td>68.9</td>
<td>84.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Zalău</td>
<td>108,061</td>
<td>90,073</td>
<td>-16.6%</td>
<td>3.9%</td>
<td>3.5%</td>
<td>-0.4%</td>
<td>66.4</td>
<td>83.1</td>
<td>7.3</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,496,320</td>
<td>1,435,123</td>
<td>-4.1%</td>
<td>53.4%</td>
<td>55.2%</td>
<td>1.8%</td>
<td>65.8</td>
<td>85.1</td>
<td>9.3</td>
</tr>
<tr>
<td>North East (Lagging)</td>
<td>3,801,237</td>
<td>3,302,217</td>
<td>-13.1%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>52.3</td>
<td>67.5</td>
<td></td>
</tr>
<tr>
<td>Iași</td>
<td>437,378</td>
<td>414,869</td>
<td>-5.1%</td>
<td>11.5%</td>
<td>12.6%</td>
<td>1.1%</td>
<td>69.2</td>
<td>88.6</td>
<td>21.1</td>
</tr>
<tr>
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<td>267,504</td>
<td>228,656</td>
<td>-14.5%</td>
<td>7.0%</td>
<td>6.9%</td>
<td>-0.1%</td>
<td>65.4</td>
<td>84.1</td>
<td>16.6</td>
</tr>
<tr>
<td>Suceava</td>
<td>199,727</td>
<td>182,955</td>
<td>-8.4%</td>
<td>5.3%</td>
<td>5.5%</td>
<td>0.2%</td>
<td>61.1</td>
<td>79.5</td>
<td>12.0</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>177,381</td>
<td>148,011</td>
<td>-16.6%</td>
<td>4.7%</td>
<td>4.5%</td>
<td>-0.2%</td>
<td>60.7</td>
<td>77.4</td>
<td>9.9</td>
</tr>
<tr>
<td>Botoșani</td>
<td>138,127</td>
<td>129,276</td>
<td>-6.4%</td>
<td>3.6%</td>
<td>3.9%</td>
<td>0.3%</td>
<td>65.4</td>
<td>84.1</td>
<td>16.6</td>
</tr>
<tr>
<td>Vaslui</td>
<td>104,365</td>
<td>80,861</td>
<td>-22.5%</td>
<td>2.7%</td>
<td>2.4%</td>
<td>-0.3%</td>
<td>61.3</td>
<td>78.6</td>
<td>11.1</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,324,482</td>
<td>1,184,628</td>
<td>-10.6%</td>
<td>34.8%</td>
<td>35.9%</td>
<td>1.1%</td>
<td>64.5</td>
<td>83.3</td>
<td>15.8</td>
</tr>
<tr>
<td>West</td>
<td>2,004,849</td>
<td>1,828,313</td>
<td>-8.8%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>60.5</td>
<td>77.7</td>
<td></td>
</tr>
<tr>
<td>Timișoara</td>
<td>511,418</td>
<td>508,037</td>
<td>-0.7%</td>
<td>25.5%</td>
<td>27.8%</td>
<td>2.3%</td>
<td>67.9</td>
<td>91.0</td>
<td>13.3</td>
</tr>
<tr>
<td>Arad</td>
<td>320,494</td>
<td>297,681</td>
<td>-7.3%</td>
<td>16.0%</td>
<td>16.2%</td>
<td>0.2%</td>
<td>62.4</td>
<td>80.3</td>
<td>2.7</td>
</tr>
<tr>
<td>Deva</td>
<td>180,351</td>
<td>158,650</td>
<td>-12.0%</td>
<td>9.0%</td>
<td>8.7%</td>
<td>-0.3%</td>
<td>68.6</td>
<td>83.3</td>
<td>5.6</td>
</tr>
<tr>
<td>Reșița</td>
<td>89,753</td>
<td>81,091</td>
<td>-9.7%</td>
<td>4.5%</td>
<td>4.4%</td>
<td>-0.1%</td>
<td>68.5</td>
<td>84.8</td>
<td>7.2</td>
</tr>
<tr>
<td>FUAs Total</td>
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<td>1,044,759</td>
<td>-5.2%</td>
<td>55.0%</td>
<td>57.1%</td>
<td>2.1%</td>
<td>66.4</td>
<td>86.2</td>
<td>8.6</td>
</tr>
</tbody>
</table>

8 For a detailed overview of the methodology behind the Local Human Development Index see: World Bank. 2013. Competitive Cities: Reshaping the Economic Geography of Romania.
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Center</td>
<td>2,576,337</td>
<td>2,360,805</td>
<td>-8.4%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>65.0</td>
</tr>
<tr>
<td>Brașov</td>
<td>490,944</td>
<td>455,830</td>
<td>-7.2%</td>
<td>19.1%</td>
<td>19.3%</td>
<td>0.2%</td>
<td>72.5</td>
</tr>
<tr>
<td>Târgu-Mureș</td>
<td>259,942</td>
<td>251,523</td>
<td>-3.2%</td>
<td>10.1%</td>
<td>10.7%</td>
<td>0.6%</td>
<td>68.0</td>
</tr>
<tr>
<td>Sibiu</td>
<td>279,924</td>
<td>270,064</td>
<td>-3.5%</td>
<td>10.9%</td>
<td>11.4%</td>
<td>0.5%</td>
<td>73.7</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>118,263</td>
<td>113,461</td>
<td>-4.1%</td>
<td>4.6%</td>
<td>4.8%</td>
<td>0.2%</td>
<td>70.0</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>95,743</td>
<td>84,341</td>
<td>-11.9%</td>
<td>3.7%</td>
<td>3.6%</td>
<td>-0.1%</td>
<td>66.2</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>118,754</td>
<td>97,627</td>
<td>-17.8%</td>
<td>4.6%</td>
<td>4.1%</td>
<td>-0.5%</td>
<td>62.9</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,363,570</td>
<td>1,272,846</td>
<td>-6.7%</td>
<td>52.9%</td>
<td>53.9%</td>
<td>1.0%</td>
<td>70.5</td>
</tr>
<tr>
<td>South East</td>
<td>2,903,654</td>
<td>2,545,923</td>
<td>-12.3%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>54.3</td>
</tr>
<tr>
<td>Constanța</td>
<td>576,181</td>
<td>546,900</td>
<td>-5.1%</td>
<td>19.8%</td>
<td>21.5%</td>
<td>1.7%</td>
<td>60.2</td>
</tr>
<tr>
<td>Galați</td>
<td>393,824</td>
<td>339,408</td>
<td>-13.8%</td>
<td>13.6%</td>
<td>13.3%</td>
<td>-0.3%</td>
<td>63.3</td>
</tr>
<tr>
<td>Bușău</td>
<td>287,533</td>
<td>258,137</td>
<td>-10.2%</td>
<td>9.9%</td>
<td>10.1%</td>
<td>0.2%</td>
<td>56.6</td>
</tr>
<tr>
<td>Brăila</td>
<td>237,597</td>
<td>196,818</td>
<td>-17.2%</td>
<td>8.2%</td>
<td>7.7%</td>
<td>-0.5%</td>
<td>64.2</td>
</tr>
<tr>
<td>Tulcea</td>
<td>114,590</td>
<td>94,092</td>
<td>-17.9%</td>
<td>3.9%</td>
<td>3.7%</td>
<td>-0.2%</td>
<td>58.0</td>
</tr>
<tr>
<td>Focșani</td>
<td>213,933</td>
<td>172,530</td>
<td>-19.4%</td>
<td>7.4%</td>
<td>6.8%</td>
<td>-0.6%</td>
<td>59.5</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,823,658</td>
<td>1,607,885</td>
<td>-11.8%</td>
<td>62.8%</td>
<td>63.2%</td>
<td>0.4%</td>
<td>60.6</td>
</tr>
<tr>
<td>South (Lagging)</td>
<td>3,483,168</td>
<td>3,136,446</td>
<td>-10.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>53.0</td>
</tr>
<tr>
<td>Pitești</td>
<td>350,755</td>
<td>348,981</td>
<td>-0.5%</td>
<td>10.1%</td>
<td>11.1%</td>
<td>1.0%</td>
<td>66.6</td>
</tr>
<tr>
<td>Ploiești</td>
<td>540,050</td>
<td>506,213</td>
<td>-6.3%</td>
<td>15.5%</td>
<td>16.1%</td>
<td>0.6%</td>
<td>617</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>233,644</td>
<td>210,410</td>
<td>-9.9%</td>
<td>6.7%</td>
<td>6.7%</td>
<td>0.0%</td>
<td>64.1</td>
</tr>
<tr>
<td>Slobozia</td>
<td>94,645</td>
<td>80,570</td>
<td>-14.9%</td>
<td>2.7%</td>
<td>2.6%</td>
<td>-0.1%</td>
<td>58.3</td>
</tr>
<tr>
<td>Călărași</td>
<td>111,504</td>
<td>104,323</td>
<td>-6.4%</td>
<td>3.2%</td>
<td>3.3%</td>
<td>0.1%</td>
<td>53.4</td>
</tr>
<tr>
<td>Alexandria</td>
<td>78,833</td>
<td>70,409</td>
<td>-10.7%</td>
<td>2.3%</td>
<td>2.2%</td>
<td>-0.1%</td>
<td>57.9</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>93,375</td>
<td>80,932</td>
<td>-13.3%</td>
<td>2.7%</td>
<td>2.6%</td>
<td>-0.1%</td>
<td>56.3</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,409,431</td>
<td>1,401,838</td>
<td>-0.5%</td>
<td>43.1%</td>
<td>44.7%</td>
<td>1.6%</td>
<td>61.8</td>
</tr>
<tr>
<td>South West</td>
<td>2,388,580</td>
<td>2,075,642</td>
<td>-13.1%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>0.0%</td>
<td>54.0</td>
</tr>
<tr>
<td>Craiova</td>
<td>422,695</td>
<td>380,641</td>
<td>-9.9%</td>
<td>17.7%</td>
<td>18.3%</td>
<td>0.6%</td>
<td>66.4</td>
</tr>
<tr>
<td>Slatina</td>
<td>147,598</td>
<td>132,789</td>
<td>-10.0%</td>
<td>6.2%</td>
<td>6.4%</td>
<td>0.2%</td>
<td>60.2</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>256,415</td>
<td>233,479</td>
<td>-8.9%</td>
<td>10.7%</td>
<td>11.2%</td>
<td>0.5%</td>
<td>58.7</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>164,914</td>
<td>144,618</td>
<td>-12.3%</td>
<td>6.9%</td>
<td>7.0%</td>
<td>0.1%</td>
<td>68.3</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
<td>134,618</td>
<td>120,762</td>
<td>-10.3%</td>
<td>5.6%</td>
<td>5.8%</td>
<td>0.2%</td>
<td>62.7</td>
</tr>
<tr>
<td>FUAs Total</td>
<td>1,126,240</td>
<td>1,012,307</td>
<td>-10.1%</td>
<td>47.2%</td>
<td>48.8%</td>
<td>1.6%</td>
<td>63.7</td>
</tr>
</tbody>
</table>

Not all FUAs have performed equally strong though. By-and-large, the larger FUAs have performed better than smaller FUAs – which again indicates that there is a clear premium to size. Thus, all the seven regional growth poles have registered a growing share in the regional population, albeit generally a small increase, and all of them had a Local Human Development Index (LHDI) that was well above the regional mean – from 10.5 additional points in Constanța to 21.1 in Iași.
Overall, smaller FUAs have had shrinking shares in the regional population. Their relatively poorer performance is likely due to outmigration, as well as migration to the larger FUAs. Some of the FUAs, such as Vaslui, Focșani, Tulcea, Brașlia, Miercurea Ciuc, Piatra Neamt, or Zalău, have lost more than 15% of their population between 2001 and 2011 – a dramatic drop, often double the regional average drop.

At the same time, smaller FUAs have in several cases a high Local Human Development Index, despite a drop in population and relatively poor economic performance. Thus, all of the FUAs in the North East Region, the poorest region in Romania, have an LHDI that is at least 10 points above the regional average. Târgu Jiu and Drobeta-Turnu Severin in the South West Region also perform quite well. The same is the case for Brăila, Galati, or Târgoviște in their respective regions. Although these FUAs are not top economic performers, they offer people living there a standard of living that is well above the regional mean.

In addition to providing a higher standard for the people moving there, FUAs have also raise the standard of living for the people living in surrounding localities – i.e. the benefits have spilled over to surrounding areas. Figure 11, earlier in the report, nicely shows this spill-over effect. Virtually all localities around a dynamic city have benefited from being around that dynamic city. By-and-large, the least developed localities in Romania are those that are some distance away from a large urban center, with the most remote localities being also the least developed.

How close does a locality need to be to a city to benefit from positive development spill-overs from that city. This is a question of critical importance for regional development specialists, and a question without a clear answer. We have tried to test different hypotheses regarding the positive, or potentially negative impact, of dynamic cities on the region as a whole.

What is quite clear is that regions without strong cities, do not have strong economies. However, strong and dynamic cities do not all have the same effect on the regions they are part of. Figure 11, shows, for example, that cities like Bucharest, Cluj-Napoca, and Iași directly benefit an immediate territory that is much smaller than the territory influenced by cities such as Timișoara, Arad, Brașov, or Sibiu. This difference can partly be explained by the economic make-up of these cities. Bucharest, Cluj-Napoca and Iași are large university centers with strong service economies (e.g. IT, consulting, medicine, academia). As such, they have a higher share of jobs in high value-added sectors, which pay salaries that can offset the higher cost of living in those cities, and they attract people from further distances. Timișoara, Arad, Brașov, and Sibiu are important industrial hubs, with a lot of new investments undertaken in suburban and peri-urban areas. Salaries in manufacturing usually grow slower than the salaries in the services sector, and many people prefer commuting to work from surrounding localities, rather than migrating to the urban center.

The hotspot map below shows this dynamic quite nicely. Thus, the areas with the most positive population dynamic between 2002 and 2011 are usually situated around a dynamic urban center. However, service centers like Cluj-Napoca and Iași have benefited a smaller immediate area than industrial hubs like Brașov or Timișoara. Annex 4 shows that the level of development of the localities surrounding Cluj-Napoca and Iași drops quite soon – beyond 10 km of the city center. In the case of Timișoara, there is a significant drop in the level of development of surrounding localities only beyond 25 km, while in the case of Brașov this inflexion point is as far out as 50 km. Figure 78 helps explain this dynamic.

Basically, Bucharest, Cluj-Napoca and Iași are high value-added service hubs that have attracted qualified people from other urban areas within the country or within their respective regions. There are clear benefits to clusterization in high value-added sectors. Usually the larger number of people that work in a high value-added sector, the higher productivity they can achieve, and the higher the salaries that are offered in these clusters. As such, there is a clear premium for highly specialized people to move to existent clusters in their area of expertise.
**Manufacturing hubs, like Brașov or Pitești, on the other hand, attract people from the immediate surroundings.** Usually people commute for manufacturing jobs, they don’t move to them. One could say that manufacturing hubs benefit territories, while service hubs benefit people. Both types of hubs play a critical role in the development of their respective regions and countries, but they do so in different ways. Service hubs lead in innovation and economic growth, making people more productive by clustering them together, while manufacturing hubs make the people already living in the surrounding territories more productive. Both dynamics are important for regional development.

*Figure 93. The areas with the most positive (in red) and most negative (in blue) population dynamic between 2002 and 2011*

When we look at where development levels have grown the fastest, we see another interesting dynamic. First and foremost, we see a very fast growth in the areas surrounding dynamic cities in lagging regions. The growth hotspots are largely clustered in the North East, South West, and South Regions – Romania’s least developed regions. Moreover, the hotspots are clustered around significant urban hubs in those regions – e.g. Iași, Bacău, and Botosani in the North East Region; Craiova and Râmnicu Vâlcea in the South West Region; and, Bucharest-Ilfov in the South Region. Another important dynamic is the significant improvement in development outcomes around the country’s most important service hubs – Bucharest, Cluj-Napoca, and Iași.
Interestingly, growth has been the slowest (i.e. the cold spots) in the most urbanized region – the Center Region. The Center Region is not only the most urban in the country, but also among the most developed. As such, most of the localities in this region have a higher level of development than the rest of the country, and as such, their convergence rate has been slower. The relatively poorer localities in the North East, South West, and South Regions have started their transition from a lower development level and have converged at a faster pace between 2002 and 2011.

We can thus conclude that FUAs play a critical role for regional development, although they play this role differently. Manufacturing hubs seem to have a wider territorial impact on the area around them, while service hubs concentrate (through in-migration) specialized work-force within a core urban area. As such, in the short- and medium-term, manufacturing hubs are likely to have more positive regional benefits than service hubs. But, over the long-term, it is service hubs that will likely drive regional and national growth.

While an overwhelming amount of evidence indicates that FUAs are critical for a country’s growth and development, few countries have elaborated clear urban development strategies/policies – Romania makes no exception. The National Territorial Development Strategy for Romania has been finalized in 2015 and it clearly delineates the importance of urban areas in driving national growth and development. However, as of the writing of this report, the strategy had yet to be approved by the Parliament. At no point in its history did Romania have an urban development strategy/policy, recognizing the importance of cities in the development of the country, and the government offers little targeted assistance to cities and metropolitan areas (e.g. investment programs that encourage metropolitan development).
HAVE FUAs in ROMANIA RECEIVED the PROPER SUPPORT?
The largest sub-national investment program, the PNLD (the National Local Development Program) has virtually no allocations for urban investments. In 2017, a multi-annual PNLD budget of 30 billion RON (around 6.6 billion Euro) was approved, and these funds are primarily destined to rural areas.

In the past years, urban authorities had to largely depend on their own funds and on EU funds for critical capital expenditures. The table below provides an overview of capital expenditures between 2007 and 2015 for Bucharest, the 40 county capitals, and their FUAs. The interesting thing is that while county capitals have managed to attract 32% of EU funds absorbed by local public administrations, they only spent 18% of total local public capital expenditures. This reflects both the budget equalization process (with poorer localities getting extra funds to enable their functioning), and a disproportionately larger allocation of funds form the state-budget for investments in rural localities.

### Table 19. Capital Expenditures between 2007 and 2015

<table>
<thead>
<tr>
<th></th>
<th>EU Funds</th>
<th>Own Budget Expenditures</th>
<th>Total Capital Expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Core City</td>
<td>FUA</td>
<td>Core City</td>
</tr>
<tr>
<td>Bucharest</td>
<td>€ 93,757,980</td>
<td>€ 262,295,385</td>
<td>€ 3,093,395,693</td>
</tr>
<tr>
<td>Brașov</td>
<td>€ 68,662,721</td>
<td>€ 102,547,686</td>
<td>€ 161,140,723</td>
</tr>
<tr>
<td>Timișoara</td>
<td>€ 104,598,212</td>
<td>€ 140,555,747</td>
<td>€ 116,984,885</td>
</tr>
<tr>
<td>Constanța</td>
<td>€ 24,540,445</td>
<td>€ 100,860,854</td>
<td>€ 123,687,222</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>€ 103,639,043</td>
<td>€ 161,054,582</td>
<td>€ 122,474,038</td>
</tr>
<tr>
<td>Oradea</td>
<td>€ 139,499,081</td>
<td>€ 175,476,436</td>
<td>€ 85,882,351</td>
</tr>
<tr>
<td>Craiova</td>
<td>€ 130,975,305</td>
<td>€ 146,436,114</td>
<td>€ 123,352,629</td>
</tr>
<tr>
<td>Ploiești</td>
<td>€ 56,141,819</td>
<td>€ 71,669,899</td>
<td>€ 87,364,096</td>
</tr>
<tr>
<td>Pitești</td>
<td>€ 39,695,798</td>
<td>€ 81,152,356</td>
<td>€ 84,735,458</td>
</tr>
<tr>
<td>Iași</td>
<td>€ 152,791,778</td>
<td>€ 181,519,695</td>
<td>€ 115,889,503</td>
</tr>
<tr>
<td>Sibiu</td>
<td>€ 15,309,095</td>
<td>€ 41,423,869</td>
<td>€ 125,902,440</td>
</tr>
<tr>
<td>Arad</td>
<td>€ 40,865,359</td>
<td>€ 63,738,590</td>
<td>€ 117,916,614</td>
</tr>
<tr>
<td>Galați</td>
<td>€ 34,838,308</td>
<td>€ 58,010,583</td>
<td>€ 157,941,530</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>€ 24,212,883</td>
<td>€ 66,024,345</td>
<td>€ 54,909,318</td>
</tr>
<tr>
<td>Bacău</td>
<td>€ 79,053,034</td>
<td>€ 100,219,161</td>
<td>€ 96,747,847</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>€ 48,588,795</td>
<td>€ 70,724,705</td>
<td>€ 60,863,528</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>€ 57,100,409</td>
<td>€ 87,313,395</td>
<td>€ 32,866,447</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>€ 32,766,077</td>
<td>€ 43,241,704</td>
<td>€ 88,337,721</td>
</tr>
<tr>
<td>Deva</td>
<td>€ 22,645,403</td>
<td>€ 52,179,499</td>
<td>€ 53,879,285</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>€ 51,752,361</td>
<td>€ 70,280,123</td>
<td>€ 24,323,423</td>
</tr>
<tr>
<td>Băia Mare</td>
<td>€ 11,011,747</td>
<td>€ 35,905,432</td>
<td>€ 58,048,595</td>
</tr>
<tr>
<td>Brăila</td>
<td>€ 66,520,269</td>
<td>€ 67,446,149</td>
<td>€ 59,941,264</td>
</tr>
<tr>
<td>Slatina</td>
<td>€ 28,196,508</td>
<td>€ 44,078,042</td>
<td>€ 61,551,826</td>
</tr>
</tbody>
</table>
Also interesting to note is the fact that if EU expenditures are taken out, capital expenditures are higher in peri-urban areas than in core cities. The FUA localities located outside Romania’s 40 county capitals, were responsible for 19% of total local public capital expenditures, as opposed to 18% of expenditures in the county capitals. Basically, this means that the FUA localities outside Romania’s core cities spent more on capital expenditures then the core cities of the FUAs. This is in itself not a bad thing, given the significant needs of peri-urban areas. However, most of these investments have been done in a piece-meal fashion, resolving individual problems of these localities, rather than solving metropolitan issues. The metropolitan level represents currently both an administrative and investment gap in Romania, which has not yet been properly filled.

There is also evidence that the large and dynamic cities unders pend while smaller cities and rural areas overs pend. The World Bank has developed a simple tool (the operational budget) for the Romanian Ministry of Regional Development and Public Administration, which enables public authorities to prepare multi-annual investment programs. The tool starts from the premise that public authorities have almost limitless needs, but limited resources. Thus, proper prioritization of needs is paramount. And, the first step in a prioritization process is identifying how much money can the public authority realistically allocate to fulfilling those needs. The operational budget does just that. It looks at budget expenditures over the past five years, takes an average value for those years, and projects it over a program implementation period. The non-earmarked revenues are isolated for the particular implementation period, and 30% is taken out of these non-earmarked revenues – this is the operational budget for that particular public authority. The basic premise of this tool is that
every capital expenditure a public authority undertakes, will most likely also require operation and maintenance costs further down the road. And, if capital expenditures are undertaken at an unsustainable pace, the public authority risks wasting valuable resources. For example, a local authority that modernizes its street network but is unable to maintain these roads, will sooner or later be in the same position where it was when it first modernized these roads. The operational budget (i.e. 30% of non-earmarked revenues) gives public authorities as simple way of determining how much they should allocate for capital expenditures over a certain time-period. It is not an exact tool, but it can let public authorities know that they are either under-spending or over-spending.

The table below indicates that over 2007 and 2015, the localities in the outer FUAs of Bucharest and the 40 county capitals, and the smaller cities, have overspent, while the most dynamic urban centers (Bucharest, Cluj-Napoca, Timișoara, Constanța) have underspent. Of course, the overspending or underspending is a matter of finesse – it depends on how large an economy is, and also on how big the difference is to the operational budget. A small variation from the operational budget for a large economy (e.g. Arad, Sibiu) is an indication of relatively sound budgetary planning for that particular public authority, whereas a large variation (e.g. Bucharest, Iași, outer Cluj FUA) indicates relatively poor budgetary planning. Strong FUAs require adequate investments in dynamic core cities, proper investments in metropolitan infrastructure (e.g. transport network, public transport, business infrastructure), and appropriate investments in peri-urban and suburban localities.

**Table 20. Who has overspent and underspent between 2007 and 2015**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Core City</td>
<td>Outer FUA</td>
<td>Core City</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>€ 76,075,784</td>
<td>€ 87,333,146</td>
<td>€ 44,613,708</td>
</tr>
<tr>
<td>Alexandria</td>
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<td>€ 12,560,301</td>
<td>€ 32,353,936</td>
</tr>
<tr>
<td>Arad</td>
<td>€ 158,781,973</td>
<td>€ 122,564,087</td>
<td>€ 158,447,796</td>
</tr>
<tr>
<td>Bacău</td>
<td>€ 175,800,881</td>
<td>€ 72,363,476</td>
<td>€ 123,030,465</td>
</tr>
<tr>
<td>Baia Mare</td>
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<td>€ 89,936,249</td>
<td>€ 84,890,478</td>
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<td>€ 56,550,961</td>
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<td>€ 16,114,190</td>
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<tr>
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<td>€ 100,830,014</td>
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<tr>
<td>Brașov</td>
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<td>€ 243,839,940</td>
<td>€ 217,024,267</td>
</tr>
<tr>
<td>Bugău</td>
<td>€ 34,402,089</td>
<td>€ 80,540,418</td>
<td>€ 91,869,624</td>
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<tr>
<td>Călărași</td>
<td>€ 37,942,646</td>
<td>€ 32,631,742</td>
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<td>Craiova</td>
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</tr>
<tr>
<td>Deva</td>
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<td>€ 53,617,150</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------------------------------</td>
<td>------------------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Core City</td>
<td>Outer FUA</td>
<td>Core City</td>
</tr>
<tr>
<td>Drobeta Turnu Severin</td>
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<td>€ 29,035,901</td>
<td>€ 58,374,980</td>
</tr>
<tr>
<td>Focșani</td>
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<tr>
<td>Galați</td>
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<td>Giurgiu</td>
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<td>€ 44,191,718</td>
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<tr>
<td>Iași</td>
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<td>€ 91,164,891</td>
<td>€ 206,752,399</td>
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<td>Miercurea-Ciuc</td>
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<td>€ 56,932,114</td>
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<td>Oradea</td>
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<td>€ 158,912,517</td>
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<td>€ 219,246,548</td>
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<td>€ 173,063,532</td>
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<td>€ 33,813,183</td>
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<td>€ 25,490,012</td>
<td>€ 52,471,920</td>
<td>€ 40,396,915</td>
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</tbody>
</table>

Data Source: Ministry of Regional Development, Public Administration, and European Funds
IMPLICATIONS for EU, NATIONAL, and LOCAL POLICY
Knowing what the strength and weaknesses of cities are, is the first step in devising better policies for enabling regional growth and development – particularly in lagging regions. Cities are regional and national growth engines, and they will continue to play this role in the future. However, in order for the Romanian economy to compete head to head with established economies in the West, its secondary cities have to first compete head to head with secondary cities in the West. It is these secondary cities where the battle for a strong Romanian economy will be fought.

To catalyze the growth and development of secondary cities, it is not enough to rely solely on market forces – one also needs strategic public sector interventions. For example, good connective infrastructure is critical in ensuring better access to markets, better mobility for people, and a better allocation of resources where they are most needed. Often, the most needed connective infrastructure projects cannot be completed by local authorities on their own. Investment in quality of life (more and better parks, pedestrian areas and bike paths, good public transport systems, culture, art, entertainment) can make cities more attractive to people and investors, and thus more competitive. Similarly, better integrated planning at the metropolitan level can make a functional urban zone more attractive for investors and people, by unlocking available land for construction and by better connecting the region.

The analysis above, and the statistical and GIS analysis in Annex 1, 2, and 3 clearly show that secondary cities in Romania require assistance from different administrative levels. For example, Annex 3 indicates that there is a very powerful correlation between the growth of the labor force and the growth in the number of people that commute across administrative boundaries. This is a very powerful message as it indicates that economic growth in Romanian cities is intimately linked to an increase in commuter numbers. More specifically, urban economic growth is inherently metropolitan economic growth. For local administrations, this reinforces a key message: urban development planning is ultimately metropolitan development planning. More specifically, if you are a mayor and you want your city to do well, you need to have a mechanism to coordinate and plan with the localities around you. In Romania, this is utterly absent – no urban center has managed to develop, on its own, metropolitan infrastructure in the past 27 years, although almost every large FUA now has commuter numbers that would actually warrant the development of metropolitan expressways. Transport norms in Romania indicate that it is advisable to upgrade a road to highway when you have over 15,000 cars passing daily on it. 23 of the FUAs analyzed here receive over 15,000 daily commuters (in addition to the daily transit traffic). Moreover, as the map below indicates, despite a general demographic and urban decline, functional urban areas have been sprawling aggressively in the past years, and are continuing to do so.
Universities, and a strong education sector in general, also play a vital role in the vibrancy and dynamism of a city. Inevitably, the top performing FUAs in Romania are university towns. These universities also play a critical role in strengthening the local business environment, as they provide to local firms and potential investors a constant supply of educated and well-qualified people. Where a strong university is missing (obviously, not every town can be a university town), it is nonetheless important to properly link private sector to the education sector, to ensure the adequate labor force is delivered to firms.

Demography is also important. Larger FUAs have by and large a stronger gravitational pool than smaller cities. These FUAs primarily attract young people (people of 0 to 29 years have been most mobile in Romania), and their capacity to sustain growth over the long-term is inevitably linked to the size of their gravitational fields and the number of young people living in this gravitational field. Obviously, the smaller the gravitational field of a FUA, and the smaller the number of people living in this gravitational field, the bleaker are the future growth prospects for the FUA. The correlation analysis indicates that the localities with a higher share of people aged 40 and above, are more likely to have a lower development level (and a less mobile population). FUAs with an aged population will need to identify targeted solutions to demographic decline and aging, as this will likely be the most important challenge they will have to deal with.

Lastly, quality of life will become increasingly important for the FUAs fighting to attract the best and the brightest from within Romania, and, increasingly, from abroad. Quality of life is something that is hard to quantify and difficult to capture in hard numbers. Although there is
an increasing number of studies that show how good places can improve community satisfaction\(^9\), policy makers don’t put a high premium on this measure. Although they themselves prefer to spend their vacation in beautiful places (the places with the highest number of tourists are those with abundant cultural and historical heritage), and although they prefer to spend their free time in well-designed spaces (a well designed park attracts more people than a wild forest), they do not always invest in providing a better quality of life for their residents. Owners of bars and restaurants know that a good interior design is critical to attracting more customers, but mayors are often blind to this reality. Interestingly, the survey we have done to assess where people would like to live, indicates that quality of life is a key factor when deciding to move to a different place.

### Implications for EU Policy

In the absence of a stand-alone national urban development policy, it is EU policy that has guided urban development in Romania in the past years. If one travels from city to city, it becomes immediately obvious that the most ambitious projects of the past years are those that have been financed from EU funds. Local development strategies in Romania are most often adjusted to include projects that are eligible for EU funding. This in essence requires EU policy to better respond to the needs of Romanian cities, and ensure that a “one-size-fits-all approach” (for all EU cities) is avoided.

The **Europe 2020 Strategy** has a clear focus on smart, sustainable, and inclusive development, and it sets a number of clear targets for all Member Countries. The EU-wide 2020 targets are as follows: 1) Employment -> 75% of people aged 20-64 to be in work; 2) Research and Development (R&D) -> 3% of the EU’s GDP to be invested in R&D; 3) Climate Change and energy -> a) greenhouse gas emissions 20% lower than 1990 levels; b) 20% of energy coming from renewables; c) 20% increase in energy efficiency. 4) Education -> a) rates of early school leavers below 10%; b) at least 40% of people aged 30-34 having completed higher education. 5) Poverty and social exclusion -> at least 20 million fewer people in – or at risk of – poverty/social exclusion. These targets were adjusted for individual Member Countries, to better respond to realities on the ground. Thus, the targets for Romania, for the 2014-2020 Programming Period are as follows: 1) Employment -> 70% of people aged 20-64 to be in work; 2) Research and Development (R&D) -> 2% of the EU’s GDP to be invested in R&D; 3) Climate Change and energy -> a) greenhouse gas emissions 20% lower than 1990 levels; b) 24% of energy coming from renewables; c) 19% increase in energy efficiency. 4) Education -> a) rates of early school leavers below 11.3%; b) at least 26.7% of people aged 30-34 having completed higher education. 5) Poverty and social exclusion -> at least 580,000 fewer people in – or at risk of – poverty/social exclusion. These targets acknowledge, for example, that educational attainment is much lower in Romania than in other EU countries, while the share of energy coming from renewables is higher in Romania than the EU average.

Although the Europe 2020 targets are adjusted to fit realities in individual Member Countries, individual funding programs introduce some rigidities. For example, the European Regional Development Fund (ERDF) 2014-2020 requires that a large share of funds allocated for regional development focus on one of the following “thematic concentration”: 1) innovation and research; 2) the digital agenda; 3) support for SMEs; 4) the low-carbon economy. The mandated ERDF shares are as follows: 80% for more developed regions (in the case of Romania, this applies to the Bucharest-Ilfov Region); 60% in transition regions; 50% in less developed regions (all regions in Romania outside Bucharest-Ilfov). Romanian authorities have chosen to focus much of the ERDF funding for ‘low-carbon economy’ activities, although the country performs relatively well on this indicator.

Ideally, as the evidence in this report highlights, a larger share of EU funds should focus on encouraging sustainable urban and metropolitan development – particularly in low-income regions with a small urbanization rate. Without strong cities, one cannot have strong regions.

For the 2014-2020 Programming Period, EU countries had to allocate at least 5% of their ERDF allocation for Sustainable Urban Development activities. In the view of the team elaborating this report, this mandated allocation is not enough. Given that primate and secondary cities generate 50%-70% of the GDP in most EU countries, it is important to allocate a more substantial share of funds to urban and metropolitan development.

For the 2007-2013 and the 2014-2020 programming periods, the EU funds that have been allocated specifically for urban areas in Romania, and the funds that urban authorities could access, have been relatively limited. For the 2007-2013 Programming Period, only around 6% of EU Funds targeted urban areas specifically, and another 19% represented funds that urban authorities could access. For the 2014-2020 Programming Period, the allocation to urban areas increased significantly (to around 14%), but it is still far from where it should be. Moreover, only around 4% of total EU funds are allocated for integrated urban development programs.

We recommend that a larger share of future ERDF funds be allocated to integrated sustainable urban development activities. The reasons for this are manifold. In the EU, primate and secondary cities amass 23% of the population and generate 63% of the GDP. They are absolutely essential for strong national and regional performance. Moreover, when we look at how EU funds at the subnational level have been spent in Romania in the 2007-2013 Programming Period, we see that 32.3% have been absorbed by secondary cities. Mind you though, that this is not a share of ERDF funds, but rather a share of EU funds absorbed by local government (i.e. municipalities, towns, and communes). If funds are guaranteed to cities or metropolitan areas (for example, through an Integrated Territorial Investment instrument), and if the accessing of these EU funds is mandated on having a clear strategy and clear list of priorities, there is a higher chance of having these funds address key urban and metropolitan development challenges in Member Countries.

A stronger focus on secondary cities is particularly important for New EU Member Countries. In New Member Countries, secondary cities have to be strengthened to compete on equal footing with their Western counterparts (the same way primate cities have managed to do in recent years). Without strong secondary cities, it will be difficult to have strong regions, and without strong cities, lagging regions cannot improve their performance. This in essence also raises the question of increased decentralization and the provision of the proper levers and tools for local leaders.

In what follows we will discuss a number of key aspects to be taken into consideration for the 2021-2027 Programming Period.
Large Infrastructure

Many of the necessary interventions at the metropolitan level are outside the means of local authorities, or they require very burdensome transaction costs. For example, all investments in national roads can only be undertaken by the central government – county councils are responsible for county roads, and local authorities are in charge of local roads. Similarly, the financing of infrastructure projects across administrative boundaries requires the collaboration of different public authorities, and even when public authorities agree on the project to be undertaken, there are limitations imposed by the convoluted legal system. Even metropolitan public transport systems are hard to implement because of the legislative vacuum, although 23% of employed people in the FUAs commute across administrative boundaries. Inter-jurisdictional projects often require that the wealthier center city provides financial assistance to the less wealthy surrounding localities. This is almost impossible to do in Romania.

Currently, the Operational Programme Large Infrastructure 2014-2020 and the National Transport Masterplan provide many of the major interventions required in the Bucharest FUA, but are somewhat silent on the major interventions required in other large urban areas. While the Transport Masterplan was being elaborated, all the growth poles were elaborating in parallel mobility plans for their functional urban zones. These mobility plans include critical interventions required for a better functioning of these FUAs. Several of the required interventions (e.g. bypasses, large bridges, modernization of commuter rail lines) are outside the jurisdiction or the means of local administrations, and they should be considered as priority interventions for the next programming period.

For the 2021-2027 Programming Period, it will be important to have a dedicated Operational Programme funding line for major metropolitan infrastructure projects. Projects that could be financed under this funding line include:

a) The rehabilitation/modernization/construction of roads that improve connectivity within metropolitan areas. Investments could include: the development of new ring roads, the development of new connective roads between peri-urban localities and the center city, the modernization of existing roads (e.g. addition of an extra lane and/or the addition of bicycle infrastructure), the development/modernization/rehabilitation of bridges to improve connectivity, the development of road infrastructure that could sustainably guide the future expansion of the metropolitan areas.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

b) The rehabilitation/modernization of commuter rail lines and the acquisition of commuter trains. In most developed countries, a significant share of commuter trips is done by commuter trains. Investments in metropolitan rail infrastructure does not only enable the population in the larger functional urban area to be more mobile, but it also guides development in a sustainable way, by encouraging higher density developments around the main rail hubs. Obviously, commuter trains don’t make sense everywhere. The map below indicates the population within a one-hour rail-access to Bucharest and the 7 regional growth poles – i.e. the people that could immediately benefit from improved rail connections. The FUAs where investments in commuter rail would make most sense include Bucharest, Timișoara, Ploiești, and Constanța. Also, it would make sense to develop high-speed rail for the Brașov-Ploiești-Bucharest-Constanța axis. The rail on this corridor was modernized in recent years, but high-speed trains cannot yet operate on this route.

[The FUAs this measure most applies to: Bucharest, Timișoara, Ploiești, Constanța]
c) **The modernisation of airport infrastructure to enable faster and easier air commuting and cargo transport.** More and more people commute between large urban centers by plane. The growth in air traffic in Romania, is among the highest in the EU. The table below shows that passenger numbers have been growing at a breakneck speed for the largest airports in Romania. Budget airlines now make it easy and convenient to travel between urban centers at very low costs (one can fly from Bucharest to Cluj-Napoca, Timișoara, and Iași for around 10 Euros). Airport infrastructure should therefore be modernized to make in-country commuting easier. While most airports have been modernized in recent years, nearly all of them are under-sized when compared with current traffic volumes. Airport infrastructure should therefore be continuously modernized and extended. Interventions could include: addition of runways to enable a higher frequency of planes; enlargement of passenger processing infrastructure (the busiest airport in Romania cannot cope with passenger inflows at peak travel times); development of intermodal infrastructure to enable seamless further travel in the destination metropolitan area, or beyond. In addition, airports should be modernized to allow easier cargo air shipments. Particularly for the urban centers that are further away from the developed markets in the West (Iași, Craiova, Constanța, Bacău, Suceava), such infrastructure is critical.
Table 21. Passenger numbers for Romania’s main airports

<table>
<thead>
<tr>
<th>Airport</th>
<th>2005</th>
<th>2016</th>
<th>Compound Annual Growth Rate</th>
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</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>2,972,799</td>
<td>10,981,652</td>
<td>12.6%</td>
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<tr>
<td>Cluj-Napoca</td>
<td>202,556</td>
<td>1,880,319</td>
<td>22.5%</td>
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<tr>
<td>Timișoara</td>
<td>611,705</td>
<td>1,160,482</td>
<td>6.0%</td>
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<td>Iași</td>
<td>41,960</td>
<td>881,157</td>
<td>31.9%</td>
</tr>
<tr>
<td>Bacău</td>
<td>36,261</td>
<td>414,676</td>
<td>24.8%</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>12,408</td>
<td>287,412</td>
<td>33.1%</td>
</tr>
<tr>
<td>Sibiu</td>
<td>45,494</td>
<td>366,065</td>
<td>20.9%</td>
</tr>
<tr>
<td>Craiova</td>
<td>5,133</td>
<td>222,320</td>
<td>40.9%</td>
</tr>
</tbody>
</table>

Source: Wikipedia and individual airport web-pages

[The FUAs this measure most applies to: Bucharest, Cluj-Napoca, Timișoara, Iași, Bacău, Târgu Mureș, Sibiu, Craiova, Constanța]

d) The environmental cleanup of brownfields and their preparation for future investments. Such interventions are now eligible for financing under the Regional Operational Programme, but most local authorities lack the expertise, willingness, and/or financial means to undertake such interventions. Brownfields occupy large swaths of land in most metropolitan areas in Romania, but because of an unclear legal framework, and because of the lack of involvement of public authorities in this area, have largely remained idle in the past year. Even in Bucharest there are significant plots of land in the center city, with high real estate value, that have not seen any interventions on them in the past 26 years. These brownfields could accommodate not only new housing units, but also much needed office space and mixed-used developments – particularly needed in the regional magnets.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

e) The development of metropolitan business infrastructure. Of the 11 million people that migrated to the FUAs of Bucharest and the 41 county capitals, 47% settled in peri-urban areas of the FUA, outside the center city. A similar pattern is followed by private investors, particularly manufacturing companies – more than 27% of firm revenues for the FUAs of the 40 county capitals in Romania are generated outside the core city. To be able to receive these investors, and to be able to more pro-actively attract high value-added investors, it is critical to have the proper business infrastructure, where companies could easily settle. Unfortunately, the localities where such business infrastructure should be located, and the county councils themselves, cannot afford to finance such infrastructure, and it is important for them to receive assistance. Investments in business infrastructure are usually done by private companies, or, most frequently, by county councils. However, county councils generally have limited budgetary resources to their disposal, and a wide array of responsibilities they cover (e.g. county roads, solid waste management, social assistance, health). The table below indicates the estimated operational budget (i.e how much can be allocated for capital expenditures) for the 2014-2023 Implementation Period. In most cases (with the exception of Hunedoara, Teleorman, Vaslui, and Harghita), county councils have significantly less funds to their disposal than county residences. Given however that often new business infrastructure has to be developed outside the administrative limits of county residences, it is important...
Table 22. Estimated operational budgets for County Councils and County Residences, for the 2014-2023 Implementation period

<table>
<thead>
<tr>
<th>County</th>
<th>Operational Budget for 2014-2023</th>
<th>County Residence</th>
<th>Operational Budget for 2014-2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj</td>
<td>€ 200,246,884</td>
<td>Cluj-Napoca</td>
<td>€ 419,769,525</td>
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<td>Constanța</td>
<td>€ 170,744,238</td>
<td>Constanța</td>
<td>€ 347,545,474</td>
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<tr>
<td>Timiș</td>
<td>€ 158,867,689</td>
<td>Timișoara</td>
<td>€ 417,669,040</td>
</tr>
<tr>
<td>Prahova</td>
<td>€ 144,255,311</td>
<td>Ploiești</td>
<td>€ 271,626,657</td>
</tr>
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<td>Iași</td>
<td>€ 140,860,468</td>
<td>Iași</td>
<td>€ 293,573,282</td>
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<td>Dolj</td>
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<td>Craiova</td>
<td>€ 274,330,186</td>
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<td>Brașov</td>
<td>€ 122,779,119</td>
<td>Brașov</td>
<td>€ 351,355,206</td>
</tr>
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<td>Argeș</td>
<td>€ 115,051,102</td>
<td>Pitești</td>
<td>€ 175,617,591</td>
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<tr>
<td>Arad</td>
<td>€ 109,195,790</td>
<td>Arad</td>
<td>€ 232,769,605</td>
</tr>
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<td>Sibiu</td>
<td>€ 103,467,305</td>
<td>Sibiu</td>
<td>€ 213,315,669</td>
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<tr>
<td>Suceava</td>
<td>€ 102,241,913</td>
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<td>€ 123,734,102</td>
</tr>
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<td>€ 188,467,721</td>
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Source: World Bank calculations using budget execution data from the Ministry of Regional Development, Public Administration, and European Funds

[The FUAs this measure most applies to: all, based on clear business case]
Local Infrastructure

The Regional Operational Programme finances a number of local investments that should be continued, but it should add a number of other investment types to its portfolio. In particular, for the 2021-2027 Programming Period, the Regional Operational Programme (or, potentially, regional operational programmes) should focus more on investments that raise the quality of life in Romanian cities and make them more attractive for migrants, including return migrants from abroad, and expats. The survey undertaken by the Bank team at the national level, indicates that quality of life is one of the key factors in people’s decision to move to a city. Key interventions that could be considered include:

a) **Rehabilitation/modernization/creation of public spaces.** Public spaces, such as plazas, squares, meeting points, is what many people use to define quality of life, and often a decision to move to a place is taken based on how attractive urban spaces are. It is critical to make as many public spaces as possible more attractive for people, and interventions can include: closure of public spaces to car use and making them more accessible for pedestrians; introduction of greenery; rehabilitation of building facades in and around public spaces; introduction of urban and street art elements.

* [The FUAs this measure most applies to: all]

b) **Rehabilitation of historic buildings and of buildings located in central areas.** The buildings in the city, are the city’s face to the World, and the better they look, the more attractive the city becomes for people, investors, and tourists.

* [The FUAs this measure most applies to: all]

c) **Rehabilitation/modernization of apartment block neighborhoods and the public spaces in and around the apartment blocks.** In 1989, around 85% of the built stock in Romania was developed during Communism. Much of this built stock was of low quality and requires proper maintenance and upgrading. Significant EU funds are now available for the thermal rehabilitation of apartment blocks, but no EU funds are available for the spaces around the apartment blocks. Potential interventions for the 2021-2027 Programming Period could include: improvement of green spaces in apartment block neighborhoods; creation of recreational infrastructure (e.g. playgrounds, training equipment, spaces for retired people, sports infrastructure); rehabilitation/modernization of pedestrian infrastructure and development of neighborhood level bike infrastructure.

* [The FUAs this measure most applies to: all]

d) **Creation/modernization/rehabilitation of green spaces.** There are numerous studies that show that green spaces can improve the overall well-being of people, and such investments should be encouraged whenever possible. Moreover, good quality green spaces should be protected from real estate interests. Where deemed necessary (e.g. no green spaces available), existent brownfields could be converted into new green spaces. Potential interventions could include: planting of trees and greenery along urban streets; rehabilitation/modernization of existing parks; development of new green areas; better pedestrian and bike access to existent green areas; green parking lots; introduction of green spaces on the top of apartment blocks with flat roofs. Ideally, no city in Europe should have streets without at least a speck of green.

* [The FUAs this measure most applies to: all]
e) **Extension/modernization/rehabilitation of pedestrian and bike infrastructure.**
The easier it is to get around town in a sustainable way, the more people will choose to do it. Such investments are financed generously for the 2014-2020 Programming Period, and they should be continued for the next programming period.

[The FUAs this measure most applies to: all]

f) **Extension/modernization/rehabilitation of metropolitan public transport infrastructure.** Good public transport infrastructure is critical for each dynamic urban area. It is a priority for local authorities in most developed countries, and it should be a priority for local administrations in Romania.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

g) **Targeted interventions for urban marginalized communities.** No economy can hope to have a long life, if social cleavages are widening. Consequently, EU funds should continue to be offered for addressing the challenges faced by marginalized communities. The most successful cities will attract a wide range of migrants, and among them there will also be considerable numbers of poor and marginalized people. The better local authorities are able to deal with these marginalized groups, the better prepared they will be for future swells. Immigration is one of the main challenges faced by developed countries and cities, and it is a challenge Romanian cities will also likely deal with in the future.

[The FUAs this measure most applies to: all]

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**Human Capital**

An economy is the sum of its people, and it cannot grow sustainably if it cannot rely on a large enough pool of human capital. It is tough to properly target human capital investments, as every individual has different needs. There are however certain things that can help cities strengthen the human capital they have and certain things that can help them be more attractive to human capital. Some key interventions include:

a) **On-the-job training programs.** Not every city can be a university center of excellence. At the same time human capital does not necessarily require university training. Most of the people that have generated disruptive innovations, do not have a university degree. Often, the skills required to innovate are generated on the job. As such, it is important to have programs (including EU funded ones) that allow local companies to do on-the-job training to interns and new recruits. This can allow them both to offer higher entry salaries, and to spend more time and attention to critical training programs. The programs should primarily target high value-added companies that can sustain long-term growth. Well trained people can attract investors, and investors attract other people – it is a virtuous circle that vocational education and on-the-job training or work-based learning programs can achieve.

[The FUAs this measure most applies to: all]

b) **Scholarships for university students.** As good as the universities in Romania are, they can hardly compete with the universities in the developed world – there is no university in Romania that is in the Top 500 Shanghai University Ranking. This means that it is important for students from Romanian universities to be exposed to professors, other students, teaching methods, and the last technical/academic advances from top-notch global universities. EU funds have financed such scholarships in the past, and they will play an important role in strengthening the Romanian education system in
the future. Such programs will be particularly important for Bucharest, the regional magnets, and the cross-county magnets.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

c) Internships programs. Internship programs play a critical role in matching students with potential jobs, once they finish school. Internship programs should target not only local companies, but also international ones. The local job offer often does not cover the entire spectrum of needs, wants, and desires.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

d) Twinning programs for professors, private companies, and NGOs. It is professors, private companies, and NGOs that are best equipped to spread knowledge and ideas to a larger group of people, and they have to learn from those that are better than them how to advance in their field of activity.

[The FUAs this measure most applies to: Bucharest, regional magnets, cross-county magnets]

e) Translation of critical works in distinct fields, which are not profitable enough to translate for private publishing companies. The West generates an amount of knowledge that is very hard to absorb by developing countries. Usually there are curators of knowledge that know what are the pieces of work that deserve a wider national and local audience (e.g. guides for urban development), and they should be offered the means to translate and publish works that are particularly useful and needed in the society.

f) Open knowledge repositories. Cities and metropolitan areas in Romania are routinely faced with challenges they have no clear solutions for. Some local authorities are more astute than others in finding the proper solutions, but these solutions remain local and don’t find their way to other local authorities. Moreover, local authorities in other EU countries may have perfected the same solutions over decades. These solutions (e.g. templates for terms of reference, pieces of local legislation, tax incentive systems, land redevelopment mechanisms) could be made available in an open knowledge repository, to enable as many stakeholders as possible to access them.

g) Extension of the number of courses/classes offered in English. English is the business and academic lingua franca of the World. If you don’t speak English, you risk being cut off from the main knowledge flows in the World. It is therefore important to expand the offering of course/classes in English that help people not only deepen their knowledge of English, but also acquire the technical language in a field they are interested in.

Competitiveness

Competitive cities require competitive companies and competitive individuals. Conversely, competitive companies require competitive individuals, and vice versa. Some measures that could be undertaken include:

a) Access to internet infrastructure for everybody. Internet is increasingly recognized as a public good, and all citizens should be offered easy access to internet. In areas where internet is not offered, public authorities should strive to provide the service. Moreover, free WiFi should ideally be offered in as many public spaces as possible – preferably all
(this may also work to make these public spaces more attractive). The internet is one of the most powerful tools created by humanity, as it offers individuals from all over the World access to a vast library of knowledge. Those that have access to the internet also have the basic tools for becoming autodidacts.

b) **Revolving fund for start-ups and SMEs.** Start-ups and SMEs rarely are the economic engine of an economy, although they often are the main employers. It is usually large and super-productive companies that sustain economic growth. However, start-ups and SMEs provide the seeds for potential endogenous technological growth – i.e. they may create the innovations that can launch a city on an accelerated growth path. Moreover, homegrown companies are much more stable than multi-national corporation, and much more likely to stick around during times of economic hardship. For these startups and companies to be able to play the role of innovator, it is important for them to have easy access to financing.

c) **Incubators for start-ups.** Start-ups have a difficult time in their early years, and they lack the experience and resources required to overcome the first business incubation years. Public authorities can provide incubator spaces, which allow startups to go easier through their early years.

[The FUAs this measure most applies to: regional magnets, cross-county magnets]

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**Implications for National Policy**

**Romania has never had a clear urban development policy.** While better data and recent evidence indicates that functional urban areas are critical for the country’s good economic performance, relatively little attention has been paid to this subject. As the figure below highlights, the FUAs of Bucharest and the 40 county capitals generate over 90% of all firm revenues in Romania, amass 80% of the population with higher education, attract 65% of in-country migrants, and are the places where 63% of new housing developments were completed after 1990. **However, the allocation of resources to urban areas, particularly to secondary cities and functional urban areas, has not been proportional to needs, or even proportional to these cities’FUAs’ population.**

*Figure 98. Key indicators for the main FUAs in Romania*
For a country its size, Romania has relatively weak secondary cities. As the map below indicates, with the exception of Bucharest-Ilfov, Romania has no other “predominantly urban region” (i.e. large metropolitan area). Evidence from all over the EU indicates that it is these “predominantly urban regions” that are responsible for an overwhelming share of the EU economic output. Without policies, investments, and interventions that encourage the development of strong urban areas, it will be difficult for Romania to sustain long-term growth. Currently, around 43% of the EU population lives in “predominantly urban regions”, while only 11.3% do so in Romania.

Figure 99. Romania currently has weak urban regions

The accession to the EU, and the access to EU funds, have more or less obliged Romanian national authorities to think more about cities and regions. And it is EU funds and policies that have triggered the most dramatic changes and interventions at the urban level. The Romania Government should ideally complement EU-level resources and policies, and develop an endogenous and coherent assistance package for urban areas. This has to be coupled with the continued decentralization of administrative responsibilities, but doing this in a strategic way, with a strategic allocation of responsibilities, tools, and levers based on what the local administrations can actually handle. Many people predict that “mayors will rule the world”, and Romania should also take bold steps towards this future.

In what follows, we will discuss a few ideas on how the central government could help FUAs become more competitive, and more attractive to migrants and commuters.
National Urban Development Strategy

Romania has a strong National Territorial Development Strategy, but it has no clear Urban Development Strategy. The National Territorial Development Strategy envisions a polycentric Romania, with strong secondary cities, and lower rank urban areas. It acknowledges the importance of cities in driving national growth and development, and proposes a number of large scale interventions (e.g. large infrastructure projects, metropolitan development) that could help Romanian cities become more competitive. There is however no clear policy/strategy targeting urban areas, and responding to their concrete needs.

Obviously, a national policy that promotes some areas over others is a difficult political sell. Promoting migration from rural areas to urban areas, because of the positive socio-economic outcomes, will likely be challenged by many. However, an urban development policy should not be conceived in opposition to a rural development strategy. Rather, they should be seen as complementary. Rural areas will be unable to perform well without strong urban areas, and, urban areas require the proper territorial integration of rural areas for sustainable expansion and development. It’s difficult to have one without the other. The experience of virtually all developed countries indicates that it is almost impossible to sustain economic growth and development without strong cities, and without properly linking rural areas and smaller towns to these strong cities.

A proper urban development strategy could help identify the FUAs with the best promise of sustaining regional/national growth, and it could identify concrete measure the central government could take to help thee FUAs fulfill that role. Such an urban development strategy would be not only the foundation for the allocation of EU funds to urban areas, but could also provide the foundation for a state-budget funded investment program targeting urban areas.

National Metropolitan Investment Program

Romania does not have a state-budget investment program, or funding line, targeting urban areas. The largest sub-national investment program, the National Local Development Program (PNDL), primarily targets small-scale infrastructure in rural areas. Rural areas are unfortunately seen not as parts of larger socio-economic and territorial systems, but rather as ‘islands’ that have to be rescued from going under. The fear is that without quality infrastructure in rural areas, people will move out and leave these rural areas empty. While this is a valid fear, it is important to understand that no amount of quality infrastructure will keep people in rural areas if they have difficult access to jobs, quality education, specialized healthcare facilities, or proper entertainment opportunities. In most cases, rural areas that are not well connected to a strong urban area, will find it difficult to thrive. It is therefore paramount to integrate rural areas in larger socio-economic and territorial systems, and metropolitan planning and development become key in this respect.

This report has identified the functional urban areas for Bucharest and the 40 county capitals. It employed a uniform OECD-EC methodology that was also used under the Regional Operational Programme 2014-2020, to define the FUAs for the 39 county residences that are eligible for pre-allocated sustainable urban development funds. This methodology could be expanded to determine the FUAs for the other urban centers in Romania. Once all these FUAs have been identified, it will be easier to devise policies and interventions that cater to the needs of these areas. Inevitably, FUAs incorporate a large rural territory, which has to be properly integrated in the FUA and properly connected to opportunities within the FUA and beyond. The map below shows quite clearly that few localities exist and function in a vacuum – the large majority are part of smaller or larger territorial systems. The more integrated and inter-connected these systems are, the better the outcomes for the people living there.
Provided that urban/metropolitan development is seen as a priority by the government, several options could be considered for devising a metropolitan development program:

a) **Stand-alone investment program.** Depending on estimated investment needs for metropolitan areas, and depending on resources local authorities can rely on, an independent Metropolitan Development Program with state-budget funding could be created. Preparations for the Regional Operational Programme 2014-2020 have put county residences in a good position, as they had to prepare Urban Mobility Plans and Integrated Urban Development Strategies, with concrete lists of priority projects. The World Bank has also provided assistance to the Ministry of Regional Development and Public Administration with the estimation of operational budgets (i.e. financially sustainable allocations for capital expenditures) for the 2014-2023 Implementation Period. We have computed the operational budgets for the FUAs of Bucharest and the 40 county capitals (core cities and outer FUAs). The total operational budget for these FUAs was estimated at around €15.3 billion. Of this sum, around €6.6 billion is just the operational budget for the Bucharest FUA. In essence, the operational budget looks at budget executions and estimates how much a public administration could allocate for capital expenditures, over a given time-period, in a financially sustainable way (i.e. ensuring that future operation and maintenance costs for the new investments can be ensured). This total sum, gives an idea of how big an integrated investment program in metropolitan areas should be. Thus, if only the FUAs of the 40 county capitals are considered, the investment program would have a total value of around €8.8 billion. Obviously, most of the needed investments in these FUAs would be undertaken by the local public administrations themselves, but the central government could bring a significant contribution to covering existent needs in those areas.
b) **Funding line within an existent investment program.** Investments in metropolitan areas could also be encouraged through one or more funding lines within an existent investment program. For example, the National Local Development Program (PNDL), the largest sub-national investment program in Romania, could have a dedicated funding lines for metropolitan infrastructure. Unfortunately, the program has received funding applications, primarily from rural localities, with a total value well in excess of the allocated multi-annual budget. This, in essence, means that there may live little money under the PNDL for interventions in urban/metropolitan areas.

[The FUAs this measure most applies to: all]

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Source: World Bank calculations using budget execution data from the Ministry of Regional Development, Public Administration, and European Funds

**IMPLICATIONS FOR EU, NATIONAL, AND LOCAL POLICY**

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<td>€ 56,798,556</td>
<td>€ 20,510,019</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>€ 11,714,843,831</td>
<td>€ 3,629,790,795</td>
</tr>
</tbody>
</table>

[The FUAs this measure most applies to: all]

c) **Transfers from the state-budget for targeted investments in metropolitan areas.** A third option includes direct transfers from the state-budget to local budgets for targeted interventions. This measure has the benefit of providing incentives for two or more local administrations to jointly implement an infrastructure project. Nonetheless, close coordination and harmonization of approaches would be necessary.

[The FUAs this measure most applies to: all]
An urban/metropolitan investment program, financed from the state-budget, could help local authorities in Romania cover needs that they have been unable to cover on their own in recent years. For example, few local authorities have managed to finance metropolitan projects because of legal challenges in implementing projects across jurisdictional lines. Similarly, many of the needed interventions require funds well in excess of what local authorities can afford. Some interventions that could be considered include:

a) **Metropolitan road infrastructure.** Virtually every major city in Romania requires additional access roads and connective infrastructure. All county capitals, as well as smaller cities, are now developing urban mobility plans, where they identify their key infrastructure needs. The table below indicates the county capitals with completed mobility plans, and highlights the ones that have new road construction planned. More often than not, local public administrations cannot afford to finance such infrastructure, or have difficulties in financing infrastructure that crosses administrative boundaries. In addition, such infrastructure is not eligible for financing from EU funds. Central authorities could therefore come to the rescue and provide financing/incentives for metropolitan roads, which would enable two or more local authorities to undertake a transport investment together.

### Table 23. Do available mobility plans propose metropolitan infrastructure?

<table>
<thead>
<tr>
<th>County Residence</th>
<th>Is there a Mobility Plan Available?</th>
<th>Are there provisions for metropolitan infrastructure (e.g. ring road)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alba-Iulia</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Alexandria</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Arad</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bacău</td>
<td>No (under elaboration)</td>
<td>N/A</td>
</tr>
<tr>
<td>Băia-Mare</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bistrița</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Botoșani</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Brăila</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Brașov</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Bucharest</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Buzău</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Călărași</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Constanța</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Craiova</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Deva</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>No (under elaboration)</td>
<td>N/A</td>
</tr>
<tr>
<td>Focșani</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Galați</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Iași</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oradea</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Source: Individual municipality web-sites

*The FUAs this measure most applies to: all*
b) **Metropolitan business infrastructure.** Most new industrial facilities are nowadays built outside the administrative territory of core urban areas. The localities where these business facilities are located, usually cannot afford to pay for such infrastructure. It is therefore important to have funding from the national/regional level, with a focus on areas where a strong business case for such infrastructure is made.

[The FUAs this measure most applies to: all, based on business case made for such infrastructure]

c) **Public transport vehicles, and public transport infrastructure, servicing the metropolitan area (e.g. buses, trams, minibuses).** There are few operational metropolitan transport systems in Romania right now, although commuter data indicates that such systems are needed in most large cities. Financing metropolitan public transport infrastructure (e.g. transit stops, park-and-ride facilities) and vehicles, could encourage more localities to develop such systems – for the benefit of all people living in the FUA.

[The FUAs this measure most applies to: all]

d) **Rehabilitation/modernization/extension of district heating systems.** District heating systems represent a sustainable way of providing heating and electricity (if co-generation systems are available) to a community. Unfortunately, such systems are expensive to maintain and operate, and most cities have had difficulties with them. In some cities (see table below), district heating systems have disappeared completely; in others they have shrunk considerably, being replaced by individual heating units; while in other cities they are maintained at a significant expense for the local authority, and usually require very high subsidies. Obviously, in places where maintaining a district heating system does not make economic sense anymore, one should not invest more. But in areas where such a system could be run efficiently, it is important to consider assistance from the central level.

**Table 24. The situation of district heating systems in Bucharest and the 40 county capitals**

<table>
<thead>
<tr>
<th>County Residence</th>
<th>Does the city have a district heating system?</th>
<th>How many apartments are connected?</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bucharest</td>
<td>Yes</td>
<td>562,192</td>
<td>Bucharest City Hall subsidised district heating system with around 133 million Euro every year.</td>
</tr>
<tr>
<td>Constanța</td>
<td>Yes</td>
<td>78,226</td>
<td>Subsidies are provided for poor households.</td>
</tr>
<tr>
<td>Oradea</td>
<td>Yes</td>
<td>64,370</td>
<td>Significant EU investments were undertaken to modernise the system.</td>
</tr>
<tr>
<td>Craiova</td>
<td>Yes</td>
<td>61,092</td>
<td>Many households have debranched themselves from the district heating system.</td>
</tr>
<tr>
<td>Timișoara</td>
<td>Yes</td>
<td>60,306</td>
<td>Many households have debranched themselves from the district heating system.</td>
</tr>
<tr>
<td>Ploiești</td>
<td>Yes</td>
<td>55,805</td>
<td>District heating system is in private ownership and management. Many people have debranched themselves from the system because of the high heating costs.</td>
</tr>
<tr>
<td>Iași</td>
<td>Yes</td>
<td>37,088</td>
<td>District heating system is in private ownership, after a dramatic decrease of clientelle.</td>
</tr>
<tr>
<td>Galați</td>
<td>Yes</td>
<td>36,167</td>
<td>District heating system has financial difficulties.</td>
</tr>
<tr>
<td>Arad</td>
<td>Yes</td>
<td>31,535</td>
<td>District heating system has accumulated large debts and has lost many customers over the years.</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>Yes</td>
<td>29,299</td>
<td>District heating system has financial difficulties.</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>Yes</td>
<td>28,383</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>County</td>
<td>Residence</td>
<td>Does the city have a district heating system?</td>
<td>How many apartments are connected?</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------</td>
<td>---------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>Yes</td>
<td>27,766</td>
<td>The district heating company faces significant financial difficulties.</td>
</tr>
<tr>
<td>Pitești</td>
<td>Yes</td>
<td>23,015</td>
<td>Many households have debranched themselves from the system. Debranching is now prohibited for people living in apartment blocks where everybody is connected to the district heating system.</td>
</tr>
<tr>
<td>Suceava</td>
<td>Yes</td>
<td>17,895</td>
<td>The old district heating company went bankrupt and was taken over by a private company.</td>
</tr>
<tr>
<td>Bacău</td>
<td>Yes</td>
<td>16,233</td>
<td>Old district heating system went bankrupt. Many people debranched themselves.</td>
</tr>
<tr>
<td>Bușău</td>
<td>Yes</td>
<td>14,415</td>
<td>More than half of the households have debranched themselves from the system (around 38,000 households were connected in the past).</td>
</tr>
<tr>
<td>Focșani</td>
<td>Yes</td>
<td>12,604</td>
<td>Co-generation plant was built with EU funds. Nonetheless, number of branched households has dropped dramatically, from a total of around 30,000.</td>
</tr>
<tr>
<td>Tulcea</td>
<td>Yes</td>
<td>11,324</td>
<td>Many households have debranched themselves from the district heating system, and several were debranched because of accumulated debts.</td>
</tr>
<tr>
<td>Botoșani</td>
<td>Yes</td>
<td>11,249</td>
<td>District heating system was modernized with EU funds.</td>
</tr>
<tr>
<td>Deva</td>
<td>Yes</td>
<td>7,000</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>Yes</td>
<td>4,522</td>
<td>Many people have debranched themselves from the system.</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>Yes</td>
<td>2,845</td>
<td>Many people have debranched themselves from the system.</td>
</tr>
<tr>
<td>Sibiu</td>
<td>Yes</td>
<td>757</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>Vaslui</td>
<td>Yes</td>
<td>662</td>
<td>Many households have debranched themselves from the district heating system, and several were debranched because of accumulated debts.</td>
</tr>
<tr>
<td>Alexandria</td>
<td>Yes</td>
<td>433</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>Călărași</td>
<td>Yes</td>
<td>402</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>Yes</td>
<td>260</td>
<td>Most households have debranched themselves from the system.</td>
</tr>
<tr>
<td>Alba-Iulia</td>
<td>No</td>
<td>0</td>
<td>District Heating system was closed down in 2011, as people switched to individual heating units</td>
</tr>
<tr>
<td>Baia-Mare</td>
<td>No</td>
<td>0</td>
<td>In 2000 the district heating system lost its last customers.</td>
</tr>
<tr>
<td>Bistrița</td>
<td>No</td>
<td>0</td>
<td>District heating system was closed down in 2006.</td>
</tr>
<tr>
<td>Brăila</td>
<td>No</td>
<td>0</td>
<td>District heating system ceased to operate in 2013, because of accumulated debts. Brăila City Hall offered subsidies to households for the purchase of individual heating units.</td>
</tr>
<tr>
<td>Brașov</td>
<td>No</td>
<td>0</td>
<td>District heating companies went bankrupt.</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>No</td>
<td>0</td>
<td>District heating system was closed down in 2014. The City Hall offered individual heating units for the renter flats.</td>
</tr>
<tr>
<td>Reșița</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2014.</td>
</tr>
<tr>
<td>Satu-Mare</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2003.</td>
</tr>
<tr>
<td>Slatina</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2001.</td>
</tr>
<tr>
<td>Slobozia</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2006.</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>No</td>
<td>0</td>
<td>District heating system was closed down in 2013. The City Hall offered individual heating units for the renter flats.</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>No</td>
<td>0</td>
<td>The district heating system, which was developed in Communist times was never made operational. In 2006 the existent unoperational facilities were sold to scrap metal.</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2013.</td>
</tr>
<tr>
<td>Zalău</td>
<td>No</td>
<td>0</td>
<td>The district heating system was closed down in 2014.</td>
</tr>
</tbody>
</table>

Source: ANRSC (the National Authority for Regulating and Monitoring the Public Services of Communal Household), Adevârul.ro, and individual press clippings.

[The FUAs this measure most applies to: applied on a case-by-case basis, where a strong business case is made]
a) **Urban regeneration of apartment block neighborhoods.** An investment program of the Ministry of Regional Development and Tourism, targeting the thermal-insulation of apartment blocks, has subsequently triggered investments (from public, EU, and private sources) all over Romania. Thermal insulation investments are now financed by the Regional Operational Programme 2014-2020, and in many cities investments are financed, to a large extent, from private sources. Similar to the thermal insulation program, the Government could provide financing for an urban regeneration program, which would focus not only on the apartment blocks themselves, but also on the interior and exterior communal spaces (e.g. green areas, playgrounds, parking lots, alleyways, bike paths).

[The FUAs this measure most applies to: all]

b) **Rehabilitation of historic buildings and historic city centers.** Many of the historic cities in Romania are relatively small and have small budgets. As such, they are often incapable of taking proper care of their historic and cultural heritage, and thus deprive themselves of potential tourism revenues, while also missing the chance of making themselves more attractive to people and firms. As the table below highlights, FUAs often have a higher concentration of architectural monuments in the outer FUA (e.g. Pitești, Ploiești, Râmnicu Vâlcea), usually located in localities with scarce budgetary resources. Even the most dynamic cities lack sufficient sources for taking care of their historic heritage. Moreover, the current legal framework and its enforcement leave much to be desired. Thus, architectural monuments that are in private property are often left to the elements by their owners, with no punitive measures imposed.

<table>
<thead>
<tr>
<th>FUA</th>
<th>Core City</th>
<th>Outer FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Architectural Monuments</td>
<td>Category A Monuments</td>
</tr>
<tr>
<td>Bucharest</td>
<td>2,081</td>
<td>172</td>
</tr>
<tr>
<td>Iași</td>
<td>452</td>
<td>48</td>
</tr>
<tr>
<td>Brașov</td>
<td>335</td>
<td>83</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>286</td>
<td>37</td>
</tr>
<tr>
<td>Craiova</td>
<td>264</td>
<td>17</td>
</tr>
<tr>
<td>Sibiu</td>
<td>225</td>
<td>99</td>
</tr>
<tr>
<td>Bistrița</td>
<td>191</td>
<td>40</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>174</td>
<td>49</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>146</td>
<td>44</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>135</td>
<td>11</td>
</tr>
<tr>
<td>Arad</td>
<td>118</td>
<td>7</td>
</tr>
<tr>
<td>Botoșani</td>
<td>107</td>
<td>16</td>
</tr>
<tr>
<td>Slatina</td>
<td>100</td>
<td>4</td>
</tr>
<tr>
<td>Foșani</td>
<td>95</td>
<td>13</td>
</tr>
<tr>
<td>Pitești</td>
<td>92</td>
<td>13</td>
</tr>
<tr>
<td>Timișoara</td>
<td>92</td>
<td>39</td>
</tr>
<tr>
<td>Constanța</td>
<td>91</td>
<td>31</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>87</td>
<td>17</td>
</tr>
<tr>
<td>FUA</td>
<td>Core City</td>
<td>Outer FUA</td>
</tr>
<tr>
<td>----------------</td>
<td>----------</td>
<td>----------</td>
</tr>
<tr>
<td></td>
<td>Architectural Monuments</td>
<td>Category A Monuments</td>
</tr>
<tr>
<td></td>
<td>Architectural Monuments</td>
<td>Category A Monuments</td>
</tr>
<tr>
<td>Oradea</td>
<td>84</td>
<td>25</td>
</tr>
<tr>
<td>Ploiești</td>
<td>79</td>
<td>27</td>
</tr>
<tr>
<td>Galați</td>
<td>77</td>
<td>5</td>
</tr>
<tr>
<td>Brăila</td>
<td>74</td>
<td>1</td>
</tr>
<tr>
<td>Câlărași</td>
<td>73</td>
<td>4</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>72</td>
<td>2</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>66</td>
<td>19</td>
</tr>
<tr>
<td>Reșița</td>
<td>62</td>
<td>9</td>
</tr>
<tr>
<td>Suceava</td>
<td>60</td>
<td>53</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>55</td>
<td>9</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>51</td>
<td>6</td>
</tr>
<tr>
<td>Bușău</td>
<td>49</td>
<td>16</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>47</td>
<td>24</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>45</td>
<td>5</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>44</td>
<td>11</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>40</td>
<td>15</td>
</tr>
<tr>
<td>Bacău</td>
<td>35</td>
<td>6</td>
</tr>
<tr>
<td>Tulcea</td>
<td>35</td>
<td>3</td>
</tr>
<tr>
<td>Alexandria</td>
<td>33</td>
<td>0</td>
</tr>
<tr>
<td>Zalău</td>
<td>31</td>
<td>0</td>
</tr>
<tr>
<td>Deva</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Vaslui</td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td>Slobozia</td>
<td>6</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: The Romanian Ministry of Culture

**c) Housing development.** A lack of access to affordable housing can hamper migration to dynamic cities and price-out some people living in those cities. The Ministry of Regional Development, Public Administration, and European Funds finances a number of housing development programs (from social housing, to housing for the Roma, or housing for young people), but these programs are haphazard, sporadic, and not always strategic. The World Bank has provided a number of recommendations for the development of a unitary housing development program, which could respond to clear needs in Romanian FUAs. It is also important to note that 52% of investments in new housing units in the FUAs of the 40 county residences, have been done in outer FUA areas, not in the core city. More often than not, the localities in these outer FUAs lack the budgetary means for investments in housing, and national assistance is often necessary – particularly housing for less wealthy people.

* [The FUAs this measure most applies to: county magnets, local magnets]
d) **Rehabilitation of public spaces.** Quality of life is identified as one of the key factors that draws people to cities, and the better quality of life cities offer, the more attractive they are to people. Investments in the rehabilitation of public spaces, the extension/rehabilitation/modernization of parks and green spaces, the development of pedestrian and bike paths, go a long way in making cities more attractive. Many of the cities in Romania lack the necessary resources to raise the quality of life as fast as some migrants would require.

[The FUAs this measure most applies to: county magnets, local magnets]

e) **Creation of metropolitan parks.** The majority of urban areas in Romania have a significant dearth of properly maintained green spaces. EU indicates that every urban center should provide its citizens with at least 26 square meters of green space per capita. As the table below indicates, most of the large cities in Romania fall below this limit. Ensuring that as many people as possible will have access to green areas will require in many cases the development of parks at the metropolitan level – particularly in cases where the core cities lack reserves of land that could be converted to green areas.

Table 26. Square meters of green space per capita

<table>
<thead>
<tr>
<th>Locality</th>
<th>2000</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baia Mare</td>
<td>15</td>
<td>141</td>
</tr>
<tr>
<td>Miercurea-Ciuc</td>
<td>15</td>
<td>46</td>
</tr>
<tr>
<td>Bistrița</td>
<td>11</td>
<td>43</td>
</tr>
<tr>
<td>Craiova</td>
<td>34</td>
<td>39</td>
</tr>
<tr>
<td>Suceava</td>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>Călărași</td>
<td>20</td>
<td>29</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>14</td>
<td>27</td>
</tr>
<tr>
<td>Bacău</td>
<td>9</td>
<td>27</td>
</tr>
<tr>
<td>Oradea</td>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Alba Iulia</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Bucharest</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>Iași</td>
<td>14</td>
<td>24</td>
</tr>
<tr>
<td>Vaslui</td>
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</tr>
<tr>
<td>Slobozia</td>
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<tr>
<td>Piatra Neamț</td>
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<td>22</td>
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<tr>
<td>Alexandria</td>
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<td>Botoșani</td>
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<td>Slătina</td>
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<tr>
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<td><strong>Devă</strong></td>
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<tr>
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<td><strong>Brăila</strong></td>
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<td>18</td>
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<tr>
<td><strong>Drobeta-Turnu Severin</strong></td>
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<td>17</td>
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<tr>
<td><strong>Timișoara</strong></td>
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<tr>
<td><strong>Târgu Mureș</strong></td>
<td>11</td>
<td>15</td>
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<tr>
<td><strong>Constanța</strong></td>
<td>18</td>
<td>15</td>
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<td><strong>Sibiu</strong></td>
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<td>14</td>
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<tr>
<td><strong>Târgoviște</strong></td>
<td>7</td>
<td>14</td>
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<tr>
<td><strong>Sfântu Gheorghe</strong></td>
<td>8</td>
<td>14</td>
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<tr>
<td><strong>Ploiești</strong></td>
<td>10</td>
<td>13</td>
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<tr>
<td><strong>Focșani</strong></td>
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<td>9</td>
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<tr>
<td><strong>Giurgiu</strong></td>
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<td>9</td>
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<tr>
<td><strong>Tulcea</strong></td>
<td>7</td>
<td>9</td>
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<tr>
<td><strong>Târgu Jiu</strong></td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td><strong>Arad</strong></td>
<td>15</td>
<td>7</td>
</tr>
<tr>
<td><strong>Brașov</strong></td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: National Institute of Statistics

[The FUAs this measure most applies to: all]
Two key laws guide urban and metropolitan development in Romania – Law 215/2001 on Local Public Administration and Law 350/2001 on Spatial Planning. Law 215/2001 indicates that the sub-national administrative divisions in Romania are the following: 1) counties; 2) localities, which are of three types: communes, towns, municipalities (see map below). The Municipality of Bucharest and its six sectors have a special status, with divided responsibilities between Bucharest City Hall and the six sector city halls.

Unfortunately, Law 215/2001 does not take into consideration recent development dynamics. Although much of urban growth has happened in rural areas around larger urban centers, these areas continue to be considered rural and are treated as such in national and regional policies. The image below provides an extreme example in this sense. The Commune of Florești, is basically a suburb of Cluj-Napoca, and the largest rural locality in Romania (estimated to now house around 40,000 people). For all intents and purposes, Florești keeps being treated as a rural area by national policy. In addition to Florești, there are several other suburbs that continue to be defined as rural, although they are de facto suburbs. Thus, there are 25 communes in Romania with a population above 10,000. As a point of comparison, 134 of legally defined towns (out of a total of 217) have a population of less than 10,000. 399 communes have a population larger than 5,000, in a context where 29 towns have less than 5,000 people.
Metropolitan areas are here, and they are here to stay – if their development is not guided now in a sustainable way, there is risk of permanent damage for years to come. Unfortunately, much of the damage has already been done. To ensure a better planning and development of metropolitan areas, the Romanian legislation should recognize metropolitan areas and provide the proper governance mechanisms for a more sustainable development of these areas. Several options exist in this respect:

a) **Administrative merger.** While not exactly easy to digest politically, administrative mergers have been used in the past in Romania, to expand the administrative territory of an urban center that has grown to reach surrounding villages. Mergers also make sense from an economic point of view. An OECD report\(^\text{10}\) shows that there is a clear downside to administrative fragmentation in metropolitan areas, with a direct impact on area productivity.

b) **Metropolitan governance.** Several countries have introduced another administrative level – the metropolis. For example, in Turkey, mayors are elected for the metropolitan area and for the constituent municipalities, and responsibilities are shared between the metropolitan government (buyükşehir) and the lower municipalities (belediyesi) – similar to how it is actually done in the case of Bucharest. For example, the metropolitan government may be in charge of the large boulevards, which are serviced by public transport, while the constituent municipalities are in charge of the smaller side-streets. Metropolitan governments are, however, not always a straight forward affair, with frequent confusion on where the responsibility of one administrative entity ends and the responsibility of another one begins. A simple solution would be to allocate the responsibility for the management of well-defined metropolitan infrastructure (e.g. metropolitan roads, metropolitan public transport, business infrastructure) to the

administration of the core city, while the smaller municipalities would be mainly in charge of small local infrastructure (e.g. communal roads, educational facilities, cultural centers).

c) **Inter-communal development associations.** The Romanian legislation, mimicking the French legislation, allows individual localities to form inter-communal development associations (IDAs) to jointly address common needs and challenges. Thus, IDAs have been successfully set up all over the country to better manage water and waste-water provision, the delivery of solid waste management services, or the implementation of EU-funded strategies. There are currently 13 established metropolitan IDAs, which have joined forces in the Romanian Federation of Metropolitan Areas and Urban Agglomerations (FZMAUR). In some cases, such as Constanța, these metropolitan IDAs have managed to implement projects at the metropolitan level. In practice however, metropolitan projects have proven difficult to implement – both because of a lacunary legislative framework, and because of the reticence of local administrations to make these IDAs truly operational. Following a push from the EU, several localities in Romania are now in the process of setting up metropolitan public transport companies, following the example of metropolitan areas where such systems are already operational (e.g. Oradea and Alba Iulia).

d) **Administrative agreements.** To lower transaction costs and the administrative burden, local administrations can also enter simple administrative agreements to deliver certain projects in partnership. For example, two adjacent localities can agree to build together a road that services and benefits them both. Such agreements are easy to enter into, but difficult to operationalize. Building a road together would require the two (or more) administrations to coordinate the financing and elaboration of the feasibility study and the technical project, the tendering of the works, the attribution of the projects, and the actual implementation. Such a level of coordination, along all those steps, is hard to achieve in practice.

The existence of metropolitan governance system is a key pre-condition for sound metropolitan planning. It does not help that the core city of a metropolitan area has a sound spatial planning system, if the localities around it don’t. Strict rules and norms can be rendered meaningless, if they don’t also apply across administrative boundaries. In either case, many county residences have outdated spatial plans – a situation that could be turned into an opportunity given the possibility of elaborating the spatial plan at the metropolitan level.

**Table 27. Many county residences have outdated spatial plans**

<table>
<thead>
<tr>
<th>County Residence</th>
<th>Year the Spatial Plan was approved</th>
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<tbody>
<tr>
<td>Alba-Iulia</td>
<td>2014</td>
</tr>
<tr>
<td>Arad</td>
<td>1997</td>
</tr>
<tr>
<td>Pitești</td>
<td>2011</td>
</tr>
<tr>
<td>Bacău</td>
<td>2012</td>
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<tr>
<td>Oradea</td>
<td>2016</td>
</tr>
<tr>
<td>Bistrița</td>
<td>2013</td>
</tr>
<tr>
<td>Botoșani</td>
<td>1999</td>
</tr>
<tr>
<td>Brăila</td>
<td>2001</td>
</tr>
<tr>
<td>Brașov</td>
<td>2011</td>
</tr>
<tr>
<td>Bușău</td>
<td>2009</td>
</tr>
<tr>
<td>Călărași</td>
<td>2008</td>
</tr>
<tr>
<td>Reșița</td>
<td>2011</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>2014</td>
</tr>
<tr>
<td>Constanța</td>
<td>N/A</td>
</tr>
<tr>
<td>Sfântu Gheorghe</td>
<td>1996</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>1998</td>
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<tr>
<td>Craiova</td>
<td>2000</td>
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<tr>
<td>Galați</td>
<td>2008</td>
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<tr>
<td>Giurgiu</td>
<td>2011</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>1998</td>
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</tbody>
</table>
In this respect, it is critical to have proper metropolitan spatial planning. A metropolitan spatial plan ensures that urban areas develop in a sound and sustainable way. Unfortunately, many cities in Romania have not yet managed to update their old spatial plans, let alone prepare such plans for the metropolitan level. Baia Mare and Brăila are among the few cities that have developed metropolitan spatial plans. The negative effects of poor or no metropolitan spatial planning can be gleaned in many poorly planned metropolitan areas around the Developed World. The image below provides an example from the US, where the City of New Orleans, although it blends fully with the neighboring Chalmette parish, it has a completely de-synchronized street grid. In effect, there are only two major thoroughfares connecting the two communities – the secondary street grid stops basically at the administrative border dividing the two communities. Without proper metropolitan spatial planning, urban areas in Romania risk following a similar pattern, with wide negative repercussions – e.g. congestion, inefficient public transport, pollution. "Streets are forever", the saying goes, and if they are not properly planned from the get-go, they risk being ill-planned forever.

Figure 104. The effects of poor metropolitan planning in New Orleans
Unless metropolitan planning and development becomes a national priority, it will be difficult to convince local administrations to make it a priority. The relatively limitless array of needs cities have, represents a barrier to thinking on a grander scale. Mayors often have a myopic focus on the territory they manage, although they are well aware that their locality does not function in a vacuum. Thus, unless the Central Government provides incentives for metropolitan planning and development, few localities will purposefully choose to do this on their own. Consequently, the Central Government could finance, fully or partially, metropolitan spatial plans for the largest cities in Romania, while also providing finance for the development of metropolitan infrastructure identified in these spatial plans. This will create the preconditions for sustainable development.

National Standards and Tools

Another way in which the central government can help localities become more attractive is through the provision of standards and tools that help guide local authorities. Most local authorities, for example, lack experience in elaborating proper terms of reference for urban development works. The quality of urban infrastructure developed throughout Romania is a testimony to this. As such, it would be important to have proper standards and guides, which would enable local authorities to request a basic level of quality from developers. Some of the things that could be considered include:

a) **Standards for urban roads.** The Ministry of Regional Development, Public Administration, and European Funds, already provides cost standards for county roads and communal roads. It would make sense to have similar standards, or guiding elements, which would help local authorities identify the minimum requirements they should require from developers (e.g. the type and thickness of bitumen, the type and thickness of the asphalt base, the type of crushed stones to be used for different types of soil).

b) **Standards for the thermal insulation of apartment blocks.** The Government’s thermal insulation program has been one of the most successful public investment programs after 1989. It has not only provided a solution to a problem that remained un-addressed for 20 years (the poor energy efficiency of Communist apartment blocks and the decaying aspect of these buildings), but it also triggered similar investments done from private funds and from local government budgets. The Ministry of Regional Development and Public Administration has elaborated a guide meant to help achieve quality thermal insulation projects, but the guide is primarily used for projects financed from public funds. Privately funded interventions don’t follow any clear guidelines, and a larger attention is paid to cost than to quality. Moreover, only few cities (e.g. Oradea) have elaborated chromatic guides for the repainting of apartment blocks in a coherent and harmonious fashion.

c) **Guides for sustainable transport infrastructure.** The most attractive cities tend to be cities designed for people – i.e. cities that are walkable, bikeable, and easy to navigate. For the 2014-2020 Programming Period, cities in Romania will have access to substantial EU funds dedicated for the development / extension / modernization of sustainable transport infrastructure – particularly pedestrian and bike paths.

d) **Guides for the rehabilitation / modernization / extension of public spaces.** Quality public spaces are an important factor in raising a city’s quality of life. Public spaces are where people congregate, socialize, and exchange ideas. The more inviting the public space the more people it will attract. Romanian cities already have a relatively rich experience with public spaces that have been modernized and transformed into people magnets – the Old City of Bucharest, Piața Mușeului in Cluj-Napoca, the Craiova
Old City Center, the Iași Palas Park, or the Constanța Old City. A guide targeting improvements of public spaces could provide local authorities with key elements they should take into consideration when elaborating a terms of reference (e.g. identifying ways to stimulate pedestrian traffic, creating attractors that keep people in the area for longer, and providing amenities that attract investors).

e) Guides for the regeneration of apartment block neighborhoods. Most people living in urban areas in Romania live in an apartment block neighborhood. More often than not, these neighborhoods play the role of dormitories. It is important to devise ways of rethinking these neighborhoods and transforming them in spaces that are used 24/7. This would require a re-thinking of how these spaces are used by children, teens, young professionals, families, single-person households, and retired people. Different types of people have different needs, and they are likely to use the public spaces around them at different times of the day.

Implications for Local Policy

A famous book quips that “mayors will rule the world”, and the evidence presented in this report indicates that there is truth to this saying. The question is: what can mayors do to enable their cities to play a more strategic role? The simple answer is: a lot. While assistance from the EU and the Central Government is key for Romanian cities, it is local administrations that should lead the charge in making their cities more competitive and more attractive to people. To do so, mayors should see their role going beyond mainly ensuring the provision of basic public services. The local administrations that will undertake the most changes that people are looking for, may also attract a higher share of people on the move – to the detriment of the cities that fail to do so. Below, we will discuss a few recommendations that local administrations may take into consideration.

Strengthening the Private Sector

No amount of investment in public infrastructure will make a city competitive if it does not also have a strong private sector. More often than not, a city with a strong and dynamic private sector tends to also be a city with a good administration, a city with better and improving public infrastructure, a city with a bustling culture and art scene, and a city with a good quality of life. Unfortunately, when it comes to encouraging private sector development, local administrations are more often than not at a loss for ideas. In what follows, we will discuss a few directions that could be considered:

a) Strategically targeting foreign investors. Romania has the advantage of having access to the largest market in the World, and this access has been a boon for the economy, and particularly for the most dynamic cities. Access to the EU market went hand in hand with a transformation of the Romanian economy to more closely resemble the EU economy – i.e. there has been a growth in three key sectors that dominate the EU economy: 1) transport (e.g. automobiles, auto parts, buses, trains, airplane components); 2) electronics (e.g. coffee machines, TVs, toasters, microwaves); 3) chemicals (e.g. detergents, cleaning liquids, fertilizers). This growth and transformation of the Romanian economy has been driven by foreign companies (primarily from the EU) that have invested in the country. Foreign companies are important for a developing economy for several key reasons: 1) they bring technological change with them. 2) they
have an already developed distribution and logistics network; 3) they have long-standing relations with clients and know the Western markets well. These are advantages that are hard to overcome by local companies. Consequently, the quickest way to develop a local nascent economy is to attract foreign investment. This has to be done however in a strategic way – i.e. by focusing on companies with a high value-added, with high productivity, and high salaries. Unfortunately, though, local administrations rarely play an active and strategic role in promoting their area to high value-added investors. More often than not, they are happy to welcome whoever comes through the door. Obviously, an investment is better than no investment, but if local authorities would be more pro-active in searching for, communicating with, and negotiating a move with potential investors, they could also ensure better economic outcomes for the community they represent. Often times, all that is needed in strategically attracting investors, is a person that communicates well in English, and an involved and responsive mayor.

[The FUAs this measure most applies to: all]

b) **Responding to the needs of the local private sector.** While attracting foreign investors can help boost local economic growth, local administrations should not forget about the companies already active locally. It is crucial in this respect to periodically engage private sector representatives and determine ways of responding to their needs. Often times, private companies are willing to donate time and money to make the locality where they operate better (e.g. they could offer free IT solutions to the public administration, provide funding for local charity events, or fund infrastructure that benefits others), and all is needed is an administration that does not say no to these efforts.

[The FUAs this measure most applies to: all]

c) **Spatial planning and land information system.** One has to view investment decisions as a river running down a valley. The same way a river finds the easiest way to the bountiful sea, similarly investor follow the path of least resistance to qualified labor force and markets. If local administrations want to steer investors towards them, they should remove as many barriers as possible to potential investments. And, one of the most important factors in this respect is land and easy access to land. A city that has a good and functioning spatial plan, which lets an investors know immediately which land parcels are zoned for which use, may make it easier for that investor to take a positive decision. If in addition the city has a good land information system, which enables an investor to figure out quickly who owns the land, whether they are interested in selling the land, and what the price of the land is, they may be closer to creating more jobs.

[The FUAs this measure most applies to: all]

d) **Business infrastructure.** Investments in business infrastructure are critical for a city that wants to attract investors, but these should be done only after a careful business-case is made. Virtually every city, even the smaller ones, can attract investors, but before they develop business infrastructure, they first have to understand well what they have to offer. A city with a burgeoning service sector and a dynamic university, may require incubator space for new start-ups; a small town with few higher educated people, may instead need to invest in an industrial platform. And, it is important that the infrastructure alone is not enough – it is critical to have the people that will help fill the available space up (i.e. a management team for the infrastructure).

[The FUAs this measure most applies to: all, based on a clear business case]
Improving Quality of Life

Quality of life seems to weigh more heavily in people’s decision to move to a city than the availability of good jobs. This is a critical piece of information for mayors. Investments in quality public spaces, rehabilitation of historic buildings, extension/modernization of pedestrian and bike paths, or the urban regeneration of apartment block neighborhoods, become really important. Of course, a beautiful city is not the only factor that goes in achieving good quality of life. It is people, first and foremost, that make a city more attractive. We instinctively prefer places that are alive, dynamic, and interesting, places where we can find plenty of people like us. As Eric Weiner noted, “happiness is other people”. In what follows, we will discuss a series of interventions local authorities could undertake to make their localities more attractive to people:

a) Rehabilitation / modernization / extension of public spaces. If happiness is other people, local authorities should strive to create many places where people can meet and spend time with other people. Public spaces are the preferred venue in this respect. Luckily, there are already several cities in Romania that have invested in the rehabilitation of public spaces and have seen them come to life with new businesses and increased pedestrian traffic (good examples can be seen in Sibiu, Craiova, Oradea, Alba Iulia, Cluj-Napoca, Brașov, Iași, Constanța, Baia Mare, Bistrita, Slatina, Timișoara, Miercurea Ciuc, Suceava, or Târgu Mureș). They can serve as good examples for other cities interested in undertaking similar programs. Ideally, investments in public spaces within city centers, should be continued with investments in neighborhood public spaces. This way, people have a variety of things to do in various city locations.

[The FUAs this measure most applies to: all]

b) Rehabilitation / modernization / extension of pedestrian and bike paths. For people to socialize and enjoy other people, they need to be able to easily interact with other people. This means that cities should be designed for people, not for cars. The more people spend in their cars going from place to place, the less time they spend interacting with other people. The easier and more pleasant it is to go from place to place by foot / bike, the more chances people have of interacting with other people.

[The FUAs this measure most applies to: all]

c) Urban regeneration of apartment block neighborhoods. Many of the apartment block neighborhoods in Romanian cities are nothing more than dormitory neighborhoods. They were not designed for pleasure and comfort. It is therefore important for local authorities to determine ways in which these neighborhoods can be transformed in places where people also want to spend their free time. This means that different types of amenities should be provided for the different type of people living there (babies, youngsters, teenagers, singles, families, young professionals, retired people). Few local administrations in Romania have found good solution for the regeneration of apartment block neighborhoods.

[The FUAs this measure most applies to: all]

d) Rehabilitation / extension of green spaces and parks. In “Happy City”, Charles Montgomery shows that investments in green spaces are among the most efficient ways of raising the quality of life in a city. Green spaces and parks have a clear and measurable positive effect on people. It is therefore important for local authorities to ensure that citizens have easy access to such spaces. For example, the local authorities in Stockholm (Sweden) strive to have as many of their citizens as possible within a
5-minute walk from a green space or water area. Romanian local authorities should strive to achieve a similar standard. At the very minimum, they should look to ensure that every street in the city has at least a speck of green (i.e. a “No Street without Greenery” program).

[The FUAs this measure most applies to: all]

e) Creating a mandatory façade improvement and upkeep policy. In most developed countries, building owners have to maintain their facades and rehabilitate the building exterior at regular intervals. The legislation in Romania enables local authorities to raise property taxes by 500% for owners of historic buildings that do not properly maintain these buildings. Normally, local administrations should make it mandatory that building facades are rehabilitated at regular intervals. The legislation enables the enforcement of punitive measures for the poor maintenance of historical patrimony buildings, and local administrations can promote and enforce punitive measures for the poor maintenance of all buildings. The reasoning for such measures goes beyond esthetic considerations. There are also clear economic considerations. A poorly maintained building can lower the property value for other buildings around it, and as such can lower the city’s tax income.

[The FUAs this measure most applies to: all]

f) Encouraging cultural and artistic events. A city without culture could be considered a city without soul. Not every city can hope to be a cultural Mecca, but it is within the purview of most local administration to ensure that cultural activities are periodically organized. For many people, the availability of such cultural events is a key factor in the decision to move to a city. Several cities in Romania (e.g. Alba Iulia, Arad, Bacău, Baia Mare, Brăila, Brașov, Botoșani, Bucharest, Cluj-Napoca, Craiova, Iași, Sfântu Gheorghe, Suceava, Târgu Mureș, or Timișoara) have prepared cultural development strategies in their bid to become European Capital of Culture in 2021. Timișoara ultimately won this contest, but all local administrations that have prepared such strategies can implement them, even though they haven’t actually won.

[The FUAs this measure most applies to: all]

g) Addressing parking issues. Up to a certain threshold, economic growth and car ownership growth go hand in hand. Romanian cities make no exception here. Car ownership and car use have gone up exponentially, but the places where these cars can be parked have remained relatively stable. Moreover, with more and more people choosing suburban and peri-urban areas as a place to live, commuting has also gone up significantly. It is therefore important for local authorities to identify ways of creating more parking spaces, while at the same time ensuring that illegal parking is properly addressed. Moreover, as Donald Shoup argues in “The High Cost of Free Parking”, parking should not be seen as a free amenity. A parking spot occupies the equivalent surface of a small apartment. A small apartment fetches a certain revenue, and so should the parking spot – because it is real estate that is not used for other purposes. For example, a summer terrace on that spot could generate tax revenues for the city.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]
Fostering Partnerships

No man is an island, and no city is a self-sustaining enclave. As was discussed in this report, there is a clear premium to size. Large cities are by-and-large more productive than smaller cities because they benefit from economies of scale and scope. Large cities also offer people a series of amenities that smaller cities can’t offer, such as: a larger number of jobs and a larger variety of jobs; better connectivity to the outside world (e.g. airports, high-cadence trains, highway connections); a greater variety of cultural and entertainment opportunities; higher education; specialized healthcare, etc. No other city in Romania can offer the type of amenities that Bucharest offers. Large cities basically create their own success. To be able to compete on a better footing, smaller cities are obliged to form partnerships. Some of the partnerships that local administrations could consider include:

a) **Partnerships with other public administrations.** It is one thing if a local administration promotes itself as a city of 300,000, and another thing if it promotes itself as a conurbation of 600,000, or a functional urban zone of 1,000,000. Size matters, and partnerships with other local administrations can bring multiple benefits. Urban areas with higher demographic mass tend to be more attractive both to firms and to people. Similarly, partnerships can help fill expertise gaps. For example, one local administration may provide advice to the partner administration on how to prepare terms of reference for an urban regeneration program. In the same vein, if smaller cities make partnerships with larger cities, they can benefit from some of the assets of the larger cities. Thus, the smaller city could promote its attraction in the airport of the larger city; the university in the larger city could come recruit students in the high-schools form the smaller city; the two cities could promote and subsidize public transport links that serve both their communities. Such partnerships can be done with different types of public institutions. Local administrations can, and often do, form partnerships with the county council. They can have partnerships with the local universities, to make cities more attractive to students. They can have partnerships with public land-owners (e.g. the Army), to unlock unused or under-used land reserves for strategic urban development.

[The FUAs this measure most applies to: all]

b) **Partnerships with the private sector.** Companies are not pure profit-driven machines. They often have a social mandate, and are willing to allocate money, time, and energy to make the community where they operate a better place to live. Private companies, for example, could sponsor or organize social, cultural, and artistic events; they can develop and maintain public spaces (e.g. green areas, roundabouts, pedestrian areas next to their buildings); they can develop new infrastructure that benefits all (e.g. a road that can cut commuting times); they can teach courses at schools and universities, to better prepare children for future jobs. Companies in the FUAs of Bucharest and the 40 county capitals have generated revenues of around 228 billion Euro in 2015 – not a negligible sum. At least part of this revenue could contribute to making the community where the company is located better, and smart partnerships can unlock these capital flows.

[The FUAs this measure most applies to: all]

c) **Partnerships with civil society.** A city is only as strong as its citizens, and the more a local administration knows how to capitalize on the strength of the community living there, the better off the city will be. People don’t adhere to strictly assigned roles – they can play, and often want to play multiple roles. People can get involved in maintaining the green spaces around their apartment blocks; they can “police” the neighborhood at night to ensure it is safe; they can organize community events; they can develop new infrastructure that benefits all; they can get involved in keeping the city clean; they can act as PR agents for potential investors or for potential tourists when travelling abroad; they can create public designs; they can provide their expertise for solving some of the
city’s problems. Citizens are a force that local administrations seldom capitalize on. However, the more involved citizens are in the future of their city, the more vested they are in that future. When you know you have contributed, even if a tiny bit, to making your city better, you become more attached to your city. An involved citizen is also a more loyal citizen, and a citizen that is more likely to invest time, energy, and money to ensure that his/her city will prosper.

[The FUAs this measure most applies to: all]

Investing in Education

A more educated citizenry is a more productive citizenry. Investments in education can bring high rewards, although a good education system, on its own, is not a guarantee for good economic performance. As the report has shown, strong universities are a significant contributor to in-migration. The cities with the largest universities are also the cities that have attracted the most migrants in recent years – particularly younger and well-qualified people. A good education system also can contribute to strengthening the private sector, by better responding to the needs of firms. In what follows, we will discuss some investments in education local administrations could consider:

a) **Strengthening universities.** Universities are autonomous public or private entities, with their own budgets and charters. The performance of these universities depends largely on the management of the university, on the professors that teach there, and on the students that chose to study there. However, universities do not operate in a vacuum – they often need properly zoned land to expand, they need a good quality of life for professors and students, and they sometimes require funding assistance for certain projects. Local administrations should therefore strive to have open communication channels with the universities operating within their boundaries, and to try to assist these universities in becoming more competitive. The better off the universities will be, the better off the city will be.

[The FUAs this measure most applies to: regional magnets, cross-county magnets, but also other FUAs with larger or specialized universities]

b) **Encouraging vocational and on-the-job training programs.** Unfortunately, the education system and educational curricula, changed much slower than the economy. In just a few years, the economy of Romania has gone through a dramatic transformation process. Many of the old and inefficient factories from the Communist period have went bankrupt, and their place has been taken by different economic agents. Moreover, the volume of Romanian exports has grown 8 times since 1989, indicating a much larger and much more diverse economy. The curricula of educational facilities have not always kept pace with this change. That is why many companies offer to teach classes at schools/universities, to better prepare students for the types of jobs they offer. Such programs are critical because they shorten the distance dramatically between future employers and employees. Whenever possible, local administrations should assist with establishing and nurturing the link between educational service providers and employers.

[The FUAs this measure most applies to: all]

c) **Good school management.** While local administrations in Romania fund the salaries of school teachers and are to a large extent responsible for investments in schools, they don’t have a say in hiring and firing decisions of the school personnel – this is the job of the county school inspectorates. This in itself is not a bad thing (it ensures that HR policies are not politicized), but it is important for local administrations to at least play a consulting role when the management of educational facilities is chosen. Moreover, whenever possible, private sector entities should be consulted when school curricula are elaborated – particularly in the case of vocational and technical schools. A strong link
between private sector labor needs and school curricula can help increase the number of local jobs and firm productivity.

[The FUAs this measure most applies to: all]

d) Kindergartens in suburban areas. The most dynamic FUAs have seen a dramatic rise of the population in suburban and peri-urban areas, particularly younger people and families. Since this peri-urban growth has happened quite fast, many local authorities in these areas have been unable to build the necessary educational infrastructure to accommodate the population growth. In particular, the rate at which new kindergartens have been developed has been slow, forcing parents to drive their kids to kindergartens in the core city. This problem is not equally distributed, but some FUAs that have underserviced outer areas include Cluj-Napoca, Iași, Sibiu, Baia Mare, or Piatra Neamț.

Table 28. Number of kindergartens

<table>
<thead>
<tr>
<th>FUA</th>
<th>Core City</th>
<th>Outer FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alba Iulia</td>
<td>17</td>
<td>39</td>
</tr>
<tr>
<td>Alexandria</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Arad</td>
<td>48</td>
<td>74</td>
</tr>
<tr>
<td>Bacău</td>
<td>45</td>
<td>57</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>31</td>
<td>6</td>
</tr>
<tr>
<td>Bistrița</td>
<td>27</td>
<td>32</td>
</tr>
<tr>
<td>Botoșani</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td>Brăila</td>
<td>46</td>
<td>7</td>
</tr>
<tr>
<td>Brașov</td>
<td>47</td>
<td>85</td>
</tr>
<tr>
<td>Bușău</td>
<td>22</td>
<td>87</td>
</tr>
<tr>
<td>Călărași</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Cluj-Napoca</td>
<td>81</td>
<td>22</td>
</tr>
<tr>
<td>Constanța</td>
<td>63</td>
<td>119</td>
</tr>
<tr>
<td>Craiova</td>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>Deva</td>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>Drobeta-Turnu Severin</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>Focșani</td>
<td>19</td>
<td>73</td>
</tr>
<tr>
<td>Galați</td>
<td>56</td>
<td>45</td>
</tr>
<tr>
<td>Giurgiu</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Iași</td>
<td>62</td>
<td>40</td>
</tr>
<tr>
<td>Miercurea Ciuc</td>
<td>14</td>
<td>32</td>
</tr>
<tr>
<td>Oradea</td>
<td>53</td>
<td>139</td>
</tr>
<tr>
<td>Piatra Neamț</td>
<td>20</td>
<td>8</td>
</tr>
<tr>
<td>Pitești</td>
<td>33</td>
<td>68</td>
</tr>
<tr>
<td>Ploiești</td>
<td>50</td>
<td>177</td>
</tr>
<tr>
<td>Râmnicu Vâlcea</td>
<td>28</td>
<td>115</td>
</tr>
<tr>
<td>Reșița</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Satu Mare</td>
<td>25</td>
<td>51</td>
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<tr>
<td>Sfântu Gheorghe</td>
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<tr>
<td>Sibiu</td>
<td>39</td>
<td>42</td>
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<tr>
<td>Slatina</td>
<td>23</td>
<td>35</td>
</tr>
<tr>
<td>Slobozia</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Suceava</td>
<td>14</td>
<td>54</td>
</tr>
<tr>
<td>Târgoviște</td>
<td>18</td>
<td>81</td>
</tr>
<tr>
<td>Târgu Jiu</td>
<td>28</td>
<td>68</td>
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<tr>
<td>Târgu Mureș</td>
<td>32</td>
<td>103</td>
</tr>
<tr>
<td>Timișoara</td>
<td>66</td>
<td>127</td>
</tr>
<tr>
<td>Tulcea</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Vaslui</td>
<td>25</td>
<td>22</td>
</tr>
<tr>
<td>Zalău</td>
<td>18</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: National Institute of Statistics

[The FUAs this measure most applies to: select FUAs where the growth of population in peri-urban areas has been quite fast, and where the need for new kindergartens is clearly identified]

e) Developing new nurseries. While the economy has been developing at a very rapid pace, with people becoming more and more productive and having less and less time available for other activities, there has been a dearth of new educational infrastructure development, catering to babies – i.e nurseries. As the table below highlights, the infrastructure of nurseries is underdeveloped in virtually every FUA in Romania, particularly when one compares it with the existent kindergarten infrastructure. This unfortunately forces a lot of young professionals to either postpone having a baby, to avoid having a baby altogether, to reduce workload, or to put the professional career on hold for a while. Many of these decisions could be avoided if the proper infrastructure were in place, to respond to the needs of young families.

"See MIT Observatory of Economic Complexity."
Investing in Specialized Healthcare

The population of Romania is aging, putting more and more pressure on the healthcare system, but also requiring adequate responses to growing challenges from the public administration. The Government of Romania is working with the World Bank on a project that aims to rationalize the health-care infrastructure in the country, with a focus on increasing outpatient care and decreasing in-patient care. However, a lot of attention should also be paid to the management of health-care infrastructure at the local level. The health sector underwent a significant decentralization process, with most of the health-care facilities being passed under the administration of county councils or local administrations. As such, sub-national authorities provide part of the funding required to operate and maintain these health-care facilities, and part of the funding for rehabilitation / modernization / extension works. As these sub-national authorities prioritize their capital investments, it is important for them to determine how to also respond to people’s health care needs. For example, the World Bank has developed, together with the Office of the Ploiești Growth Pole, the integrated urban development strategy for the Ploiești Growth Pole. As part of the project prioritization exercise, the team has run a survey to find out what people’s public infrastructure priorities were. Healthcare infrastructure came in as the first priority. It is likely that this is the first priority for the citizens of other cities in Romania, particularly those with an aging population, but not exclusively.

[The FUAs this measure most applies to: all]
**Investing in Public Transportation**

**Good public transport is critical for commuters and for ensuring that people have a cost-efficient way of getting around.** For the 2014-2023 Implementation Period, virtually all larger cities in Romania have elaborated, or are in the process of elaborating urban mobility plans, and most of these plans include provisions for public transport development. These mobility plans already provide key strategic directions the cities/FUAs should take, but it is worth mentioning some key areas for intervention:

a) **Subsidize metropolitan public transport systems.** 12 million Romanians commute every day to the FUAs of Bucharest and the 41 county capitals. Of these, more than half commute to Bucharest and the 7 growth poles. As Romanian cities will develop, the number of commuters is likely to go up. It is therefore critical to have efficient public transportation systems in place that can ensure a seamless movement of people within a functional urban zone. Public transport systems have to service the entire metropolitan area, and center cities, which have the largest budgets, should subsidize, where needed, the functioning of these system. They are critical for the good operation of the metropolitan economy. Surprisingly, it is small cities, that have been leaders in this field. For example, the City Alba Iulia and several of its surrounding localities have set up a metropolitan transport system, operated by a private public transport company, which now serves as an example to other cities.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]

b) **Develop inter-modal transportation hubs to enable easier commuting.** Some of the key interventions that can be considered include: 1) parking structures next to outlying public transport hubs, to enable as many commuters as possible to use public transport. 2) installing bike sharing facilities next to large public transport stops. 3) developing commuter bus line close to airports and railway stations, and connecting airports to main railway lines.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]

c) **Make public transport system more attractive.** Public transport is always a good alternative to private care use. However, to ensure that as many people as possible use public transportation instead of the personal car, it is important to make the public transport system easily accessible, comfortable, and ubiquitous. Higher ridership numbers can also ensure a higher profitability of public transport companies.

[The FUAs this measure most applies to: all]

**Improving Land and Housing Markets**

**Dynamic and efficient land and housing markets are critical for cities that have a positive development dynamic.** As cities grow, they have to make it easier for people and firms to find suitable places to live or operate in. If such suitable places are difficult to find, land, housing, and office prices tend to go up, with potential negative effects on the local economy. Local authorities cannot control land and housing markets, but they do have tools that can enable a more efficient functioning of these markets. Some of these tools include:
a) **Inventory of public lands.** Local public authorities in Romania often have a poor understanding of the land parcels and properties that are in their ownership. It is therefore critical that all local administrations do a full inventory of their assets and determine whether some of these assets could be put to productive use. In Cluj-Napoca, for example, the local administration responded to the housing demand by preparing a piece of land it owns (i.e. 82 hectares of land in the Borhanci Area) for new housing development (spatial plan, utility networks, and road extensions) and it plans to concession this land to private developers.

[The FUAs this measure most applies to: all]

b) **Super-taxes for unused and underused lands.** The decline of the former Communist industrial enterprise has left large parcels of unused and underused lands throughout Romanian cities. Often times, these lands are not brought into productive use, because the owners hope to sell the lands at a premium. Unfortunately, though, while the owners wait for their big investor, these land parcels lie idle and unproductive, depriving the city of potential tax revenues. It is therefore important that local administrations use the option of super-taxing unused and underused lands, which the law currently permits.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]

c) **Rental controls.** Rental controls are used in many developed countries as a way of addressing rampant rental price increases. Rental control basically provide protection to long-term renters, by prohibiting the owners to increase rental prices to fast or too high.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]

d) **Affordable housing.** To offset the rise in land and housing prices, local administrations can develop targeted affordable housing policies, which respond to the need of the less-well-off. Some options for developing affordable housing include: 1) public investments in new social housing units; 2) allowing private investors to build higher density buildings, as long as a certain share of the units (e.g. 15%-20%) will be affordable units; 3) offering land concessions to private developers in exchange for a certain number of affordable housing units.

[The FUAs this measure most applies to: primarily Bucharest, regional magnets, and cross-county magnets]

### Targeting Social Inclusion

**Economic growth and development does not have only winners.** As cities develop, there is a risk that some people will be left behind. Currently, marginalized communities seem to overwhelmingly be clustered in rural areas, but the experience of developed countries shows that social pressures are likely to follow a rapid development process. It is therefore important that local authorities address issues pertaining to urban marginalization and exclusion early on, to ensure that small problems do not become big problems. Focusing on social inclusion is also smart economics, as more people in the community are thus enabled to reach their productive potential.

[The FUAs this measure most applies to: all, based on clearly identified needs]

The issues discussed here provide only a glimpse of policies that could be considered by local administrations. In addition, Annex 5 includes a framework that local authorities can use to become better at attracting people, firms, and tourists.
ANNEX 1
Overview of migration and commuter trends

Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011 /Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011
Alba Iulia, AB

Functional Urban Area
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters:
- retail
- construction
- food processing
- electrical equipment
- public administration

Stable population (FUA) | Employed population (FUA) | Commuters (FUA)
---|---|---
113,461 | 54,331 | 14,751

Share of commuters in total employed (% FUA)
- 27.2%

Average net monthly wage (Euro, county level)
- 416

Unemployment rate (% county)
- 4.8%

Share of long-distance commuters
- outside the county limits 27.2%

Share of commuters by gender (% FUA)
- male 58.9% / female 41.1%

Share of commuters by age groups (% FUA)
- aged below 35 - 44.6% / 35-44 - 30.3% / over 45 - 25.1%

Share of commuters by education attainment (% FUA)
- tertiary 23.4% / upper secondary 42.7% / secondary 21.6% / primary 11.6%

Share of commuters by occupations (% FUA)
- manager and professionals 16.6% / technicians 7.0% / qualified workers 62.0% / elementary workers 14.3%

TAUs providing most commuters during 2001-2011

- Alba Iulia (1,156)
- Aiud (1,130)
- Ighi (1,013)
- Zlatna (803)
- Sebeș (761)
- Teiș (737)
- Ciugud (728)
Migrants to the Alba Iulia FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Alba Iulia
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Alba Iulia FUA, in 2011
Student Catchment Area of the “December 1st, 1918” University, Alba Iulia, in 2015
Arad, AR

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- automotive
- retail
- wearing apparel
- transport
- constructions

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
296,981 | 126,830 | 42.7%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
11,023 | 176,826 | 5.7%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---|---|---
424 | 33 | 4,821

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
91 | -0.01 | 51
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- automotive
- retail
- transport
- constructions
- wearing apparel

Stable population (FUA) 296,981
Employed population (FUA) 131,041
Share of commuters in total employed (% FUA) 24.7%
Commuters (FUA) 32,304
Average net monthly wage (Euro, county level) 424
Unemployment rate (% county) 2.4%

Share of long-distance commuters outside the county limits 12.6%
Share of commuters by gender (% FUA) male 60.5 % / female 39.5%
Share of commuters by age groups (% FUA) aged below 35 - 45.9% / 35-44 - 30.2% / over 45 - 23.9%
Share of commuters by education attainment (% FUA) tertiary 19.8% / upper secondary 36.4% / secondary 20.7% / primary 22.9%
Share of commuters by occupations (% FUA) manager and professionals 13.4% / technicians 6.9% / qualified workers 67.8% / elementary workers 11.8%

TAUs providing most commuters during 2001-2011

Vladimirescu (2,587)
Arad (2,028)
Pecica (1,588)
Sântana (1,376)
Macea (1,209)
Zimandu Nou (1,179)
Curtici (883)
Lipova (817)
Migrants to the Arad FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Arad
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Arad FUA, in 2011
Student Catchment Area “Aurel Vlaicu” University of Arad, in 2015

Student Catchment Area of “Vasile Goldiș” Western University of Arad, in 2015
Alexandria, TL

Functional Urban Area

county
functional urban area
county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- education
- health
- constructions
- wearing apparel

Table showing economic indicators:

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>70,409</td>
<td>14,460</td>
<td>20.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of students (FUA)</th>
<th>Number of tourists (FUA)</th>
<th>Unemployment rate (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>623</td>
<td>6,232</td>
<td>5.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Number of modern retail units</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>335</td>
<td>14</td>
<td>641</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Human Development Index (LHDI)</th>
<th>Cultural vitality index</th>
<th>Distance to the western border (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>86</td>
<td>-0.22</td>
<td>556</td>
</tr>
</tbody>
</table>

Migrants to the FUA between 2001 and 2011

TAUs providing most migrants in the 2001-2011 period

- București (431)
- Alexandria (393)
- Rețeaua de Vezi (123)
- Turnu Măgurele (117)
- Zimnicea (66)
- Oradea (47)
- Mărășești (44)

- Share of migrants that moved from outside the county (% FUA):
  - long-distance migrants 23.5%

- Share of migrants by previous residence (% FUA):
  - urban 32.0% / rural 68.0%

- Share of migrants by current economic status (% FUA):
  - employed 53.1%
  - unemployed 30.1%
  - students 6.6%
  - retirees 29.8%
  - other non-employed groups 10.7%

- Share of migrants by age groups (% FUA):
  - below 25 - 20.6%
  - 25 to 64 - 64.1%
  - over 65 - 15.3%

- Share of migrants by education attainment (% FUA):
  - tertiary 22.0%
  - upper secondary 39.1%
  - secondary 15.4%
  - primary education 23.4%

- Share of employed migrants by occupations (% FUA):
  - managers and professionals 22.8%
  - technicians 14.0%
  - qualified workers 56.8%
  - elementary workers 6.4%

- Share of migrants by migration period (% FUA):
  - before 1990: 62.7%
  - 1991 to 2000: 18.4%
  - 2001 to 2011: 18.9%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- retail
- education
- constructions
- wearing apparel
- health

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 8.6 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>70,409</td>
<td>31,766</td>
<td>6,311</td>
<td></td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>Share of commuters by gender (% FUA) male 64.3% / female 35.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.9 %</td>
<td>Share of commuters by age groups (% FUA) aged below 35 - 37.6% / 35-44 - 31.7% / over 45 - 30.7%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>Share of commuters by education attainment (% FUA) tertiary 21.1% / upper secondary 42.8% / secondary 21.6% / primary 14.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>335</td>
<td>Share of commuters by occupations (% FUA) manager and professionals 15.7% / technicians 11.5% / qualified workers 60.4% / elementary workers 12.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment rate (% county) TAUs providing most commuters during 2001-2011</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.8%</td>
<td>Poroschia (563)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Vitality Index</td>
<td>Târgoviște (466)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-0.22</td>
<td>Nanov (464)</td>
<td></td>
<td></td>
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<tr>
<td>Total private income / company turnover (mil. Euro – FUA) Roșiorii de Vede (417)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>641</td>
<td>Alexandria (336)</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Orbeasca (291)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Migrants to the Alexandria FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- Capital

Total Number of Migrants to Alexandria
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469

Migrants to the Alexandria FUA between 2001 and 2011
Commuters to the Alexandria FUA, in 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment:
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Alexandria:
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Bacău, BC

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- retail
- public administration
- food processing
- wearing apparel

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 15.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td>228,656</td>
<td>108,638</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Share of commuters in total employed (% FUA)
- 19.1%

Share of commuters by gender (% FUA)
- male 62.7%
- female 37.3%

Share of commuters by age groups (% FUA)
- aged below 35 - 44.3%
- 35-44 - 30.0%
- over 45 - 25.6%

Share of commuters by education attainment (% FUA)
- tertiary 21.4%
- upper secondary 31.1%
- secondary 30.1%
- primary 17.2%

Share of commuters by occupations (% FUA)
- manager and professionals 16.7%
- technicians 8.1%
- qualified workers 62.2%
- elementary workers 13.0%

TAUs providing most commuters during 2001-2011
- Mărgineni (1,460)
- Bacău (1,329)
- Letea Veche (1,255)
- Hemeiuș (985)
- Măgura (914)
- N. Bălcescu (878)
- Săucești (782)

Average net monthly wage (Euro, county level)
- 411

Unemployment rate (% county)
- 6.4%

Total private income / company turnover (mil. Euro – FUA)
- 2,923

Cultural Vitality Index
- -0.06
Migrants to the Bacău FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>County</th>
<th>Territorial Administrative Units</th>
<th>Functional Urban Area</th>
<th>County Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Migrants to Bacău</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 - 100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101 - 250</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>251 - 500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>501 - 1000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1001 - 3469</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Commuters to the Bacău FUA, in 2011

Commuters to the Bacău FUA in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

- Share of Commuters in Total Employment
  - 0% - 15%
  - 15.1% - 25%
  - 25.1% - 35%
  - 35.1% - 45%
  - 45.1% - 55%

- Total Number of Commuters to Bacău
  - 1 - 50
  - 51 - 200
  - 201 - 500
  - 501 - 1000
  - 1001 - 5000
Student Catchment Area of “Vasile Alecsandri” University of Bacău, in 2015

Student Catchment Area of “George Bacovia” University of Bacău, in 2015

MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Baia Mare, MM

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUA between 2001 and 2011

Top economic activities employing migrants
- trade
- furniture
- wood processing
- constructions
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>215,129</td>
<td>53,957</td>
<td>25.1 %</td>
</tr>
</tbody>
</table>

Number of students (FUA)

Number of tourists (FUA)

Unemployment rate (% FUA)

5,153

96,611

5.5 %

Average net monthly wage (Euro, county level)

Number of modern retail units

Total private income / company turnover (mil. Euro – FUA)

356

28

2.339

Local Human Development Index (LHDI)

Cultural vitality index

Distance to the western border (km)

96

-0.01

75

TAUs providing most migrants in the 2001-2011 period

Baia Mare (4,313)

Satu Mare (391)

Cluj-Napoca (390)

Târgu Lăpuș (415)

Share of migrants that moved from outside the county

long-distance migrants: 46.9%

Share of migrants by previous residence (% FUA)

urban: 53.1% / rural: 46.9%

Share of migrants by current economic status (% FUA)

employed: 46.7% / unemployed: 2.7% / students: 4.6% / retirees: 35.5% / other non-employed: 10.9%

Share of migrants by age groups (% FUA)

below 35: 22.0% / 35 to 65: 59.3% / over 65: 18.7%

Share of migrants by education attainment (% FUA)

tertiary: 21.3% / upper secondary: 35.4% / secondary: 45.2% / primary education: 27.1%

Share of employed migrants by occupations (% FUA)

manager and professionals: 23.2% / technicians: 8.6% / qualified workers: 57.3% / elementary workers: 9.8%

Share of migrants by migration period (% FUA)

before 1990: 57.5% / 1991 to 2003: 19.3% / 2004 to 2011: 23.2%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

<table>
<thead>
<tr>
<th>Top economic activities attracting commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>• trade</td>
</tr>
<tr>
<td>• furniture</td>
</tr>
<tr>
<td>• constructions</td>
</tr>
<tr>
<td>• public administration</td>
</tr>
<tr>
<td>• wood processing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>215,129</td>
<td>91,812</td>
<td>19,000</td>
<td>outside the county limits 11.3%</td>
<td>male 59.6 % / female 40.4%</td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>Share of commuters by age groups (% FUA)</td>
<td>Share of commuters by education attainment (% FUA)</td>
<td>Share of commuters by occupations (% FUA)</td>
<td>TAUs providing most commuters during 2001-2011</td>
</tr>
<tr>
<td>20.7 %</td>
<td>aged below 35 - 46.7% / 35-44-319% / over 45 - 21.4%</td>
<td>tertiary 23.2% / upper secondary 40.9% / secondary 18.7% / primary 17.1%</td>
<td>manager and professionals 16.1% / technicians 0.1% / qualified workers 61.5% / elementary workers 14.4%</td>
<td>Baia Sprie (2,733) Tâuții-Mâgherăuș (1,388) Recea (1,376) Baia Mare (1,099) Șișești (831) Dumbrăvita (757) Grosî (731) Satulung (654)</td>
</tr>
</tbody>
</table>

Average net monthly wage (Euro, county level) | Unemployment rate (% county) | Cultural Vitality Index | Total private income / company turnover (mil. Euro – FUA) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>356</td>
<td>3.4%</td>
<td>-0.01</td>
<td>2,339</td>
</tr>
</tbody>
</table>
Migrants to the Baia Mare FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Baia Mare
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Baia Mare FUA, in 2011

**Legend**
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

**Share of Commuters in Total Employment**
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

**Total Number of Commuters to Baia Mare**
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

Commuters to the Baia Mare FUA, in 2011
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- automotive
- trade
- textiles
- constructions
- transport

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA) | 126,860 | 49,321 | 38.9 %

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA) | 1,299 | 63,834 | 4.4 %

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro - FUA) | 344 | 21 | 1,602

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km) | 99 | 0.52 | 200

TAUs providing most migrants in the 2001-2011 period

Migrants to the FUA between 2001 and 2011

Migrants to the FUA between 2001 and 2011

Share of migrants that moved from outside the county
- long-distance migrants 35.0%

Share of migrants by previous residence (% FUA)
- urban 32.6% / rural 67.4%

Share of migrants by current economic status (% FUA)
- employed 56.4%
- unemployed 26.5%
- students 3.5%
- retirees 19.0%
- other non-employed groups 10.6%

Share of migrants by age groups (% FUA)
- below 35 - 20.6%
- 35 to 64 - 63.2%
- over 65 - 16.2%

Share of migrants by education attainment (% FUA)
- tertiary 19.9%
- upper secondary 32.8%
- secondary 18.3%
- primary education 28.9%

Share of employed migrants by occupations (% FUA)
- manager and professionals 23.1%
- technicians 8.6%
- qualified workers 63.3%
- elementary workers 5.1%

Share of migrants by migration period (% FUA)
- before 1990: 61.0%
- 1991 to 2000: 17.2%
- 2001 to 2011: 21.8%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- automotive
- constructions
- trade
- transport
- textiles

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Share of commuters in total employed (% FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 12.1%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>126,860</td>
<td>64,419</td>
<td>18.7%</td>
<td>12,063</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Unemployment rate (% county level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>344</td>
<td>3.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,602</td>
<td>0.52</td>
</tr>
</tbody>
</table>

Share of commuters by gender (% FUA)
- male 56.8%
- female 43.2%

Share of commuters by age groups (% FUA)
- aged below 35 - 46.4%
- 35-44 - 29.0%
- over 45 - 24.7%

Share of commuters by education attainment (% FUA)
- tertiary 17.3%
- upper secondary 35.7%
- secondary 21.6%
- primary 25.2%

Share of commuters by occupations (% FUA)
- manager and professionals 12.8%
- technicians 7.6%
- qualified workers 70.9%
- elementary workers 8.8%

TAUs providing most commuters during 2001-2011
- Bistrița (817)
- Liv ezile (569)
- Lechința (520)
- Prundu Bărgăului (514)
- Șieu-Măgheruș (499)
- Beclean (437)
Migrants to the Bistrița FUA between 2001 and 2011.

**LEGEND**

- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

**Total Number of Migrants to Bistrița**

- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Bistrița FUA, in 2011

Legend
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Bistrița
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Botoșani, BT
Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- construction
- wearing apparel
- health
- trade
- public administration

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
--- | --- | ---
129,276 | 26,743 | 20.7%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
--- | --- | ---
0 | 33,108 | 7.6%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
--- | --- | ---
353 | 12 | 1,099

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
--- | --- | ---
89 | -0.05 | 508

TAUs providing most migrants in the 2001-2011 period

Iași (591)
Sucuana (239)
Dorohoi (231)
Botoșani (555)
București (610)
Sălaj (161)
Târgușoroaia (82)
Mihăilesti (84)
Fălticeni (82)

Share of migrants moved from outside the county
- long-distance migrants 32.3%
- urban 36.9% / rural 53.1%
- employed 51.1%
- unemployed 4.2%
- students 2.8%
- retirees 30.8%
- other non-employed groups 10.8%
- below 35 - 18.0%
- 35 to 64 - 65.6%
- over 65 - 16.4%
- tertiary 38.8%
- upper secondary 34.5%
- secondary 22.0%
- primary education 4.7%
- manager and professionals 23.7%
- technicians 9.1%
- qualified workers 58.6%
- elementary workers 8.5%
- before 1990 - 66.3%
- 1991 to 2000 - 15.1%
- 2001 to 2011 - 18.6%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- trade
- wearing apparel
- health
- public administration

Stable population (FUA) 129,276
Employed population (FUA) 56,509
Share of commuters in total employed (% FUA) 11.4%
Commuters (FUA) 6,423
Average net monthly wage (Euro, county level) 353
Unemployment rate (% county) 5.0%
Total private income / company turnover (mil. Euro – FUA) 1,099
Cultural Vitality Index -0.05

Share of long-distance commuters outside the county limits 12.3%
Share of commuters by gender (% FUA) male 61.4% / female 38.6%
Share of commuters by age groups (% FUA) aged below 35 - 43.8% / 35-44 - 31.7% / over 45 - 24.5%
Share of commuters by education attainment (% FUA) secondary: 28.6% / upper secondary: 38.6% / tertiary: 32.8%
Share of commuters by occupations (% FUA) manager and professionals 15.6% / qualified workers 63.9% / elementary workers 13.0%

TAUs providing most commuters during 2001-2011
- Mihai Eminescu (863)
- Curtești (484)
- Dorohoi (417)
- Râchiți (329)
- Botoșani (300)
- Bucecea (269)
Migrants to the Botoșani FUA between 2001 and 2011

LEGEND

County
Territorial Administrative Units
Functional Urban Area
County Capital

Total Number of Migrants to Botoșani:
1 - 100
101 - 250
251 - 500
501 - 1000
1001 - 3469
Commuters to the Botoșani FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Botoșani
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Brăila, BR

Functional Urban Area

county
functional urban area
county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants

- constructions
- wearing apparel
- transport
- trade
- agriculture

Migrants to the FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>FUA</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brâila</td>
<td>72,054</td>
<td>36.6%</td>
</tr>
<tr>
<td>Galați</td>
<td>66,886</td>
<td>7.4%</td>
</tr>
<tr>
<td>Brăila</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Galați</td>
<td>1,470</td>
<td></td>
</tr>
<tr>
<td>Brăila</td>
<td>86</td>
<td></td>
</tr>
<tr>
<td>Galați</td>
<td>675</td>
<td></td>
</tr>
</tbody>
</table>

Number of students (FUA)

- Brâila: 765
- Galați: 19

Average net monthly wage (Euro, county level)

- Brâila: 344
- Galați: 66

Number of tourists (FUA)

- Brâila: 66,886
- Galați: 19

Total private income / company turnover (mil. Euro – FUA)

- Brâila: 1,470
- Galați: 675

Distance to the western border (km)

- Brâila: 86
- Galați: 675

Share of migrants that moved from outside the county

- Brâila: 49.9%
- Galați: 35.6%

Share of migrants by previous residence (% FUA)

- Brâila: urban 27.9% / rural 72.1%
- Galați: urban 35.6% / rural 64.4%

Share of migrants by current economic status (% FUA)

- Brâila: employed 39.8%, unemployed 32.5%, students 18.1%, retirees 4.6%, other non-employed groups 4.8%
- Galați: employed 35.6%, unemployed 61.4%, students 2.9%, retirees 1.9%

Share of migrants by age groups (% FUA)

- Brâila: below 35: 35.4%, 35 to 64: 28.6%, over 65: 36.0%
- Galați: below 35: 35.4%, 35 to 64: 28.6%, over 65: 36.0%

Share of migrants by education attainment (% FUA)

- Brâila: tertiary 15.1%, upper secondary 29.0%, secondary 18.4%, primary education 35.6%
- Galați: tertiary 15.1%, upper secondary 29.0%, secondary 18.4%, primary education 35.6%

Share of employed migrants by occupations (% FUA)

- Brâila: manager and professionals 21.7%, technicians 10.6%, qualified workers 61.4%, elementary workers 8.3%
- Galați: manager and professionals 21.7%, technicians 10.6%, qualified workers 61.4%, elementary workers 8.3%

Share of migrants by migration period (% FUA)

- Brâila: before 1990: 78.7%, 1991 to 2000: 9.6%, 2001 to 2011: 11.7%
- Galați: before 1990: 78.7%, 1991 to 2000: 9.6%, 2001 to 2011: 11.7%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities attracting commuters

- constructions
- wearing apparel
- trade
- agriculture
- transport

Stable population (FUA) 196,818
Employed population (FUA) 84,361
Commuters (FUA) 7,429
Share of commuters in total employed (% FUA) 8.8%
Average net monthly wage (Euro, county level) 344
Unemployment rate (% county) 6.8%

Share of long-distance commuters outside the county limits 22.6%
Share of commuters by gender (% FUA) male 6.7% / female 32.3%
Share of commuters by age groups (% FUA) aged below 35 - 44.0% / 35-44 - 39.9% / over 45 - 25.1%
Share of commuters by education attainment (% FUA) tertiary 20.3% / upper secondary 32.5% / secondary 23.7% / primary 23.5%
Share of commuters by occupations (% FUA) manager and professionals 15.1% / technicians 8.5% / qualified workers 64.8% / elementary workers 11.6%

TAUs providing most commuters during 2001-2011

Brăila (820)
Galați (747)
Chișcăni (536)
Cazasu (482)
Tichilești (371)
Tufesti (317)
Ianca (267)
Commuters to the Brăila FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Brăila
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

219
Brașov, BV
Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- transport
- automotive
- trade
- machinery and equipment

Stable population (FUA) 455,830
Migrants (FUA) 178,066
Share of migrants in total stable population (% FUA) 39.1%

Number of students (FUA) 21,366
Number of tourists (FUA) 960,625
Unemployment rate (% FUA) 6.8%

Average net monthly wage (Euro, county level) 444
Number of modern retail units 74
Total private income / company turnover (mil. Euro – FUA) 8,486

Local Human Development Index (LHDI) 101
Cultural vitality index 0.17
Distance to the western border (km) 469

TAUs providing most migrants in the 2001-2011 period

Brașov (10.074)
București (1,648)
Făgăraș (858)
Sfântu Gheorghe (964)

Share of migrants that moved from outside the county
- long-distance migrants 74.7%
- urban 51.0% / rural 49.0%
- employed 42.8% / unemployed 31.1% / students 6.2% / retirees 39.0% / other non-employed groups 8.8%
- below 35 - 21.1% / 35 to 64 - 56.8% / over 65 - 22.1%
- tertiary 19.9% / upper secondary 32.9% / secondary 18.9% / primary education 27.3%
- manager and professionals 23.4% / technicians 10.2% / qualified workers 56.8% / elementary workers 9.6%
- before 1990 - 63.6% / 1991 to 2003 - 13.7% / 2004 to 2011 - 22.7%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- trade
- transport
- constructions
- automotive
- machinery and equipment

Stable population (FUA) | Employed population (FUA)
---|---
455,830 | 202,138

Share of commuters in total employed (% FUA) | Commuters (FUA)
---|---
25.2% | 50,880

Average net monthly wage (Euro, county level) | Unemployment rate (% county)
---|---
444 | 3.8%

Total private income / company turnover (mil. Euro – FUA) | Cultural Vitality Index
---|---
8,486 | 0.17

Share of long-distance commuters | outside the county limits 22.7%
Share of commuters by gender (% FUA) | male 62.0% / female 38.0%
Share of commuters by age groups (% FUA) | aged below 35 - 45.0% / 35-44 - 28.4% / over 45 - 26.6%
Share of commuters by education attainment (% FUA) | tertiary 27.6% / upper secondary 37.3% / secondary 21.4% / primary 13.7%
Share of commuters by occupations (% FUA) | manager and professionals 20.0% / technicians 9.3% / qualified workers 56.7% / elementary workers 13.6%

TAUs providing most commuters during 2001-2011

Brașov (6,456)
Zârnești (4,702)
Săcele (4,320)
Râșnov (3,326)
Cobleștii (3,129)
Șfântu Gheorghe (1,518)
Prejmer (1,338)
Sângățel (1,282)
Cristian (1,068)
Hărman (1,050)
Ghimăței (1,039)
Târguleni (979)
Vulcan (847)
Migrants to the Brașov FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Brașov
- 1 – 100
- 101 – 250
- 251 – 500
- 501 – 1000
- 1001 – 3469
Commuters to the Brașov FUA, in 2011
Bucharest, IF
Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- transport
- public administration
- trade
- security

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
--- | --- | ---
2,703,015 | 1,016,548 | 37.6%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
--- | --- | ---
170,290 | 1,851,565 | 5.1%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
--- | --- | ---
629 | 594 | 111,006

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
--- | --- | ---
102 | - | 598

TAUs providing most migrants in the 2001-2011 period
- Brăila (4,870)
- Ploiești (4,806)
- Constanța (5,471)
- Ploiești (6,361)
- Buzău (6,233)

Share of migrants that moved from outside the county
- long-distance migrants 85.5% (excluding Ilfov County)
- urban 51.6% / rural 48.4%
- employed 48.2% unemployed 26.5% students 6.8% retirees 34.2% other non-employed groups 8.2%
- below 35 - 27.8%, 35 to 64 - 51.1%, over 65 - 21.1%
- tertiary 29.8%, upper secondary 31.4%, secondary 12.3%, primary education 26.5%
- manager and professionals 35.2%, technicians 12.7%, qualified workers 45.9%, elementary workers 6.2%
- before 1990: 56.0%, 1991 to 2003: 15.3%, 2001 to 2011: 28.7%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

<table>
<thead>
<tr>
<th>Top economic activities attracting commuters</th>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
<th>Share of commuters by age groups (% FUA)</th>
<th>Share of commuters by education attainment (% FUA)</th>
<th>Share of commuters by occupations (% FUA)</th>
<th>TAUs providing most commuters during 2001-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>trade</td>
<td>2,703,015</td>
<td>1,472,565</td>
<td>330,572</td>
<td>outside the county limits 37.3%</td>
<td>male 61.5% / female 38.5%</td>
<td>aged below 35 - 50.5% / 35-44 - 29.8% / over 45 - 20.7%</td>
<td>tertiary 33.0% / upper secondary 34.1% / secondary 15.2% / primary 17.4%</td>
<td>manager and professionals 24.3% / technicians 12.1% / qualified workers 50.8% / elementary workers 12.8%</td>
<td>Bucharest (27,344) Voluntari (11.886) Ploiești (8,853) Pantelimon (7,215) Popești-Leordeni (6,817) Bragadiru (5,421) Chișinău (5,319) Buftea (4,123) Chitila (3,992) Constanta (3,686) Giurgiu (3,633) Oțopeni (3,595) Dobroștei (2.870), Magurele (2.738), Pitești (2.785)</td>
</tr>
<tr>
<td>transport</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>constructions</td>
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<td>security</td>
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</tr>
</tbody>
</table>

BUCHAREST
Student catchment area of the Bucharest University, in 2015

Student catchment area of the Academy of Economic Sciences, Bucharest, in 2015
Student catchment area of the Polytechnic University Bucharest, in 2015

Student catchment area of Spiru Haret University, Bucharest, in 2015
Student catchment area of the Technical University of Civil Engineering, Bucharest, in 2015

Student catchment area of the National University of Theatre and Film “I.L Caragiale”, Bucharest, in 2015
Student catchment area of the “Ion Mincu” University of Architecture and Urbanism, Bucharest, in 2015

Student catchment area of the National University of Music, Bucharest, in 2015
Student catchment area of the National Arts University, Bucharest, in 2015

Student catchment area of "Artifex" University, Bucharest, in 2015
Student catchment area of “Hyperion” University, Bucharest, in 2015

Student catchment area for the Romanian-American University, Bucharest, in 2015
Student catchment area of the National University of Political Studies and Public Administration, Bucharest, in 2015.
Student catchment area of the “Carol I” National Defense University, Bucharest, in 2015

Student catchment area of the “Nicolae Titulescu” University, Bucharest, in 2015
Student catchment area for the University of Agronomic Sciences and Veterinary Medicine, Bucharest, in 2015

Student catchment area of the Ecological University Bucharest, in 2015
Student catchment area of the Carol Davila University of Medicine and Pharmacy, Bucharest, in 2015

Student catchment area of the “Bioterra” University, Bucharest, in 2015
Student catchment area of the National Academy of Physical Education and Sport, Bucharest, in 2015

Student catchment area of “Alexandru Ioan Cuța” Police Academy, Bucharest, in 2015
Student catchment area of "Dimitrie Cantemir" Christian University, Bucharest, in 2015

Student catchment area of the Pentecostal Theological Institute, Bucharest, in 2015
Student catchment area of the Business Management Institute, Bucharest, in 2015

Student catchment area for the “Mihai Viteazul” National Intelligence Academy, Bucharest, in 2015
Buzău, BZ

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

### Top economic activities employing migrants
- trade
- constructions
- public administration
- wearing apparel
- transport

### Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
--- | --- | ---
258,137 | 79,889 | 30.9%

### Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
--- | --- | ---
502 | 50,480 | 4.2%

### Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
--- | --- | ---
382 | 16 | 2,595

### Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
--- | --- | ---
91 | -0.19 | 625

### TAUs providing most migrants in the 2001-2011 period

- **Buzău**
  - (4,759)
- **Vintilă Vodă**
  - (395)
- **Râmnicu Vâlcea**
  - (451)
- **București**
  - (1,483)

- **Share of migrants that moved from outside the county (% FUA)**
  - Buzău 32.8%
  - Vintilă Vodă 66.5%
  - Râmnicu Vâlcea 12.3%
  - București 66.5%

- **Share of migrants by age groups (% FUA)**
  - below 25 - 20.2%
  - 25 to 64 - 61.0%
  - over 65 - 18.8%

- **Share of migrants by education attainment (% FUA)**
  - tertiary 9.5%
  - secondary 34.5%
  - primary education 31.0%

- **Share of employed migrants by occupations (% FUA)**
  - manager and professionals 9.4%
  - technicians 8.8%
  - qualified workers 62.7%
  - elementary workers 8.5%

- **Share of migrants by migration period**
  - before 1990: 57.9%
  - 1991 to 2000: 18.3%
  - 2001 to 2011: 23.7%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters

- constructions
- trade
- wearing apparel
- transport
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
<th>Share of commuters by age groups (% FUA)</th>
<th>Share of commuters by education attainment (% FUA)</th>
<th>Share of commuters by occupations (% FUA)</th>
<th>TAUs providing most commuters during 2001-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>258,137</td>
<td>111,139</td>
<td>24,731</td>
<td>outside the county limits 9.1%</td>
<td>male 64.1% / female 35.9%</td>
<td>aged below 35 - 41.2% / 35-44 - 34.4% / over 45 - 24.4%</td>
<td>tertiary 15.6% / upper secondary 42.2% / secondary 24.5% / primary 17.4%</td>
<td>manager and professionals 13.4% / technicians 6.7% / qualified workers 66.0% / elementary workers 13.9%</td>
<td>Mărăcineni (1,733)</td>
</tr>
<tr>
<td>382</td>
<td>10.2%</td>
<td>Cultural Vitality Index</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vadu Pâșii (1,644)</td>
</tr>
<tr>
<td>2,595</td>
<td>-0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Buzău (1,598)</td>
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<td></td>
<td></td>
<td></td>
<td>Vernoști (1,058)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Poșta Călnău (888)</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>Merel (833)</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>Berca (822)</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>Râmnicu Sărat (770)</td>
</tr>
</tbody>
</table>
Migrants to the Buzău FUA between 2001 and 2011
Commuters to the Buzău FUA, in 2011

Commuters to the Buzău FUA in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Buzău
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

249
Călărași, CL

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- food processing
- agriculture
- constructions
- wearing apparel

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
104,323 | 32,201 | 30.9%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
341 | 14,109 | 5.7%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---|---|---
388 | 8 | 863

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
83 | -0.33 | 728
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters

- trade
- constructions
- wearing apparel
- food processing
- agriculture

Stable population (FUA) 104,323

Employed population (FUA) 43,744

Commuters (FUA) 6,748

Share of long-distance commuters outside the county limits 14.3%

Share of commuters by gender (% FUA) male 63.1% / female 36.9%

Share of commuters by age groups (% FUA) aged below 35 - 40.0% / 35-44 - 32.5% / over 45 - 27.5%

Share of commuters by education attainment (% FUA) tertiary 15.5% / upper secondary 38.1% / secondary 26.2% / primary 19.8%

Share of commuters by occupations (% FUA) manager and professionals 12.6% / technicians 7.5% / qualified workers 66.1% / elementary workers 13.8%

TAUs providing most commuters during 2001-2011

- Modelu (1,501)
- Roseți (706)
- Călărași (434)
- Cuza Vodă (425)
- Grădiștea (360)
- Jegălia (319)
- București (241)

Average net monthly wage (Euro, county level) 388

Unemployment rate (% county) 7.3%

Total private income / company turnover (mil. Euro - FUA) 863

Cultural Vitality Index -0.33
Migrants to the Călărași FUA between 2001 and 2011
Commuters to the Călărași FUA, in 2011

Commuters to the Călărași FUA, in 2011

Commuters to the Călărași FUA, in 2011

Commuters to the Călărași FUA, in 2011

Commuters to the Călărași FUA, in 2011
Cluj-Napoca, CJ
Functional Urban Area

- county
- functional urban area
- county capital
### Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

#### Migrants to the FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>Area</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
<td>16,610</td>
<td>43.3%</td>
</tr>
<tr>
<td>Baia Mare</td>
<td>2,286</td>
<td>41.1%</td>
</tr>
<tr>
<td>Turda</td>
<td>2,288</td>
<td>40.5%</td>
</tr>
<tr>
<td>Zalău</td>
<td>2,843</td>
<td>39.2%</td>
</tr>
<tr>
<td>Bistrița</td>
<td>2,785</td>
<td>38.7%</td>
</tr>
</tbody>
</table>

#### Top economic activities employing migrants
- trade
- transport
- education
- constructions
- health

#### Key indicators for Cluj-Napoca (16,610)
- Stable population (FUA): 470,939
- Migrants (FUA): 203,964
- Share of migrants in total stable population (% FUA): 43.3%
- Number of students (FUA): 66,534
- Number of tourists (FUA): 366,153
- Unemployment rate (% FUA): 4.5%
- Average net monthly wage (Euro, county level): 522
- Number of modern retail units: 62
- Total private income / company turnover (mil. Euro - FUA): 8,872
- Local Human Development Index (LHDI): 106
- Cultural vitality index: 1.09
- Distance to the western border (km): 164

#### Other indicators
- Share of migrants that moved from outside the county: long-distance migrants 49.9%
- Share of migrants by previous residence (% FUA): urban 54.2% / rural 45.8%
- Share of migrants by current economic status (% FUA): employed 45.3% / unemployed 21% / students 4.6% / retirees 27.2% / other non-employed groups 3.5%
- Share of migrants by age groups (% FUA): below 35 - 30.2% / 35 to 64 - 43.9% / over 65 - 26.5%
- Share of migrants by education attainment (% FUA): tertiary 30.7% / upper secondary 38.5% / secondary 12.2% / primary education 18.6%
- Share of employed migrants by occupations (% FUA): manager and professionals 37.1% / technicians 11.1% / qualified workers 46.1% / elementary workers 6.5%
- Share of migrants by migration period (% FUA): before 1990 43.3% / 1991 to 2003 - 45.4% / 2001 to 2011 - 40.1%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters

- trade
- transport
- constructions
- health
- education

**Stable population (FUA)**

<table>
<thead>
<tr>
<th>Commuters to the FUA in 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
</tr>
</tbody>
</table>

**Commuters to the FUA in 2011**

<table>
<thead>
<tr>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
</tr>
</tbody>
</table>

**Share of commuters (%) in total employed**

<table>
<thead>
<tr>
<th>Share of commuters in total employed (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.1%</td>
</tr>
</tbody>
</table>

**Average net monthly wage (Euro, county level)**

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>522</td>
</tr>
</tbody>
</table>

**Unemployment rate (% , county)**

<table>
<thead>
<tr>
<th>Unemployment rate (% , county)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0%</td>
</tr>
</tbody>
</table>

**Total private income / company turnover (mil. Euro – FUA)**

<table>
<thead>
<tr>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>8,872</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>109</td>
</tr>
</tbody>
</table>

**Share of long-distance commuters**

<table>
<thead>
<tr>
<th>Share of long-distance commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>outside the county limits 23.7%</td>
</tr>
</tbody>
</table>

**Share of commuters by gender (%) FUA**

<table>
<thead>
<tr>
<th>Share of commuters by gender (%) FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>male 59.1% / female 40.9%</td>
</tr>
</tbody>
</table>

**Share of commuters by age groups (%) FUA**

<table>
<thead>
<tr>
<th>Share of commuters by age groups (%) FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>aged below 35 - 54.0% / 35-44 - 26.2% / over 45 - 19.8%</td>
</tr>
</tbody>
</table>

**Share of commuters by education attainment (%) FUA**

<table>
<thead>
<tr>
<th>Share of commuters by education attainment (%) FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>tertiary 36.1% / upper secondary 34.0% / secondary 16.3% / primary 13.5%</td>
</tr>
</tbody>
</table>

**Share of commuters by occupations (%) FUA**

<table>
<thead>
<tr>
<th>Share of commuters by occupations (%) FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>manager and professionals 25.9% / technicians 11.0% / qualified workers 52.2% / elementary workers 10.9%</td>
</tr>
</tbody>
</table>

**TAUs providing most commuters during 2001-2011**

<table>
<thead>
<tr>
<th>Florești (8,279)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca (3,373)</td>
</tr>
<tr>
<td>Baciu (2,955)</td>
</tr>
<tr>
<td>Apahida (2,872)</td>
</tr>
<tr>
<td>Turda (2,339)</td>
</tr>
<tr>
<td>Gherla (1,579)</td>
</tr>
<tr>
<td>Gilău (1,310)</td>
</tr>
<tr>
<td>Dej (1,284)</td>
</tr>
<tr>
<td>Aghireșu (1,106)</td>
</tr>
<tr>
<td>Câmpia Turzii (906)</td>
</tr>
<tr>
<td>Feleacu (836)</td>
</tr>
</tbody>
</table>
Commuters to the Cluj-Napoca FUA, in 2011
Student catchment area of the “Babeș-Bolyai” University, Cluj-Napoca, in 2015

Student catchment area of the Technical University Cluj-Napoca, in 2015
Student catchment area for the “Iuliu Hațieganu” University of Medicine and Pharmacy, Cluj-Napoca, in 2015

Student catchment area for the University of Agricultural Sciences and Veterinary Medicine, Cluj-Napoca, in 2015
Student catchment area for the University of Art and Design, Cluj-Napoca, in 2015

Student catchment area of the “Gheorghe Dima” Musical Academy, Cluj-Napoca, in 2015
Student catchment area of the “Sapientia” University, Cluj-Napoca, in 2015

Student catchment area of the “Bogdan Vodă” University, Cluj-Napoca, in 2015
Student catchment area of the Teological Protestant Institute, Cluj-Napoca, in 2015

Student catchment area of the “Avram Iancu” University, Cluj-Napoca, in 2015
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- transport
- constructions
- trade
- security
- public administration

Commuters to the FUA in 2011

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 16.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>546,900</td>
<td>219,753</td>
<td>52,749</td>
<td></td>
</tr>
</tbody>
</table>

Share of commuters in total employed (% FUA) aged below 35 - 42.4% / 35-44 - 29.3% / over 45 - 28.3%

Share of commuters by gender (% FUA)
- male 68.1%
- female 31.9%

Share of commuters by age groups (% FUA)
- aged below 35 - 42.4%
- 35-44 - 29.3%
- over 45 - 28.3%

Share of commuters by education attainment (% FUA)
- tertiary 24.5%
- upper secondary 41.0%
- secondary 18.5%
- primary 15.7%

Share of commuters by occupations (% FUA)
- manager and professionals 15.8%
- technicians 10.5%
- qualified workers 63.5%
- elementary workers 10.2%

TAUs providing most commuters during 2001-2011

- Constanța (5,268)
- Năvodari (5,154)
- Medgidia (3,228)
- Cumpăna (3,018)
- Ovidiu (2,751)
- Valu lui Traian (2,724)
- Murfatlar (1,853)
- Lumina (1,662)
- Agigea (1,440)
- Eforie (1,321)
- Tchirești (1,223)

Average net monthly wage (Euro, county level) 425

Unemployment rate (% county level) 2.8%

Total private income / company turnover (mil. Euro - FUA) 8,686

Cultural Vitality Index 0.34
Migrants to the Constanța FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Constanța:
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Constanța FUA, in 2011
Student catchment area for “Ovidius” University, Constanța, in 2015

Student catchment area for Maritime University, Constanța, in 2015
Student catchment area for Naval Academy “Mircea cel Bătrân”, Constanța, in 2015

Student catchment area for “Andrei Șaguna” University, Constanța, in 2015
Craiova, DJ

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- transport
- security
- constructions
- public administration

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
380,641 | 124,437 | 32.7%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
21,687 | 92,932 | 6.2%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro - FUA)
---|---|---
405 | 26 | 4,398

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
98 | 0.27 | 418
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters

- trade
- transport
- constructions
- public administration
- security

Stable population (FUA) 380,641
Employed population (FUA) 171,052

Share of commuters in total employed (% FUA) 14.6% 24,926

Average net monthly wage (Euro, county level) 405
Unemployment rate (% county) 9.5%

Share of long-distance commuters outside the county limits 24.9%
Share of commuters by gender (% FUA) male 68.4% / female 31.6%
Share of commuters by age groups (% FUA) aged below 35 - 42.3% / 35-44 - 32.5% / over 45 - 25.2%
Share of commuters by education attainment (% FUA) tertiary 23.0% / upper secondary 42.3% / secondary 22.4% / primary 12.2%
Share of commuters by occupations (% FUA) manager and professionals 16.6% / technicians 8.7% / qualified workers 62.9% / elementary workers 11.8%

TAUs providing most commuters during 2001-2011

Craiova (2,759)
Filişani (930)
Podari (821)
Cârcel (762)
Bucovăţ (740)
Malu Mare (674)
Şimnicu de Sus (656)
Pieleşti (531)
Segarcea (417)
Commuters to the Craiova FUA, in 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment:
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Craiova:
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

279
Student catchment area of the Craiova University, in 2015

Student catchment area of the Craiova University of Medicine and Pharmacy, in 2015
Deva, HD
Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- automotive
- trade
- energy
- constructions
- transport

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
--- | --- | ---
158,650 | 75,647 | 47.7%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
--- | --- | ---
0 | 72,354 | 6.6%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
--- | --- | ---
373 | 47 | 1,270

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
--- | --- | ---
93 | -0.42 | 205

TAUs providing most migrants in the 2001-2011 period

Migrants to the FUAs between 2001 and 2011

MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA

MIGRANTS TO THE FUAS BETWEEN 2001 AND 2011

282 | MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- automotive
- transport
- trade
- constructions
- energy

Stable population (FUA) | Employed population (FUA) | Commuters (FUA)
---|---|---
158,650 | 76,433 | 22,074

Share of commuters in total employed (% FUA)
- 28.9%

Average net monthly wage (Euro, county level)
- 373

Unemployment rate (% county)
- 5.3%

Total private income / company turnover (mil. Euro – FUA)
- 1,270

Cultural Vitality Index
- -0.42

Share of long-distance commuters
- outside the county limits 8.8%

Share of commuters by gender (% FUA)
- male 63.5% / female 36.5%

Share of commuters by age groups (% FUA)
- aged below 35 - 40.2% / 35-44 - 32.3% / over 45 - 27.5%

Share of commuters by education attainment (% FUA)
- tertiary 25.5% / upper secondary 44.3% / secondary 18.2% / primary 12.0%

Share of commuters by occupations (% FUA)
- manager and professionals 17.8% / technicians 9.2% / qualified workers 63.0% / elementary workers 10.0%

TAUs providing most commuters during 2001-2011
- Hunedoara (4,155)
- Deva (2,846)
- Simeria (1,601)
- Câlan (1,294)
- Bâlia (646)
- Brad (608)
- Șoimuș (591)
- Orăștie (589)
- Certeju de Sus (554)
Migrants to the Deva FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Deva
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Deva FUA, in 2011
Drobeta-Turnu Severin, MH

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- energy
- chemistry
- trade
- transport

Stable population (FUA)
- Bucharest (286)
- Cluj-Napoca (169)
- Craiova (239)

Migrants (FUA)
- 45,674

Share of migrants in total stable population (% FUA)
- 37.9%

Number of students (FUA)
- 1.680

Number of tourists (FUA)
- 61,498

Unemployment rate (% FUA)
- 8.2%

Average net monthly wage (Euro, county level)
- 381

Number of modern retail units
- 19

Total private income / company turnover (mil. Euro – FUA)
- 450

Local Human Development Index (LHDI)
- 86

Cultural vitality index
- -0.04

Distance to the western border (km)
- 304

Share of migrants that moved from outside the county
- long-distance migrants 31.6%

Share of migrants by previous residence (% FUA)
- urban 31.9% / rural 58.1%

Share of migrants by current economic status (% FUA)
- employed 50.4%
- unemployed 4.5%
- students 3.0%
- retirees 28.4%
- other non-employed groups 13.7%

Share of migrants by age groups (% FUA)
- below 35 - 17.0%
- 35 to 64 - 67.1%
- over 65 - 15.8%

Share of migrants by education attainment (% FUA)
- tertiary 18.9%
- upper secondary 42.0%
- secondary 16.4%
- primary education 22.6%

Share of employed migrants by occupations (% FUA)
- manager and professionals 22.6%
- technicians 10.8%
- qualified workers 60.8%
- elementary workers 5.8%

Share of migrants by migration period (% FUA)
- before 1990: 65.9%
- 1991 to 2003: 15.9%
- 2004 to 2011: 18.1%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- energy
- trade
- transport
- chemistry

Stable population (FUA) | Employed population (FUA)
---|---
120,762 | 56,541

Share of commuters in total employed (% FUA)

Commuters (FUA)

Share of long-distance commuters
outside the county limits 10.9%

Share of commuters by gender (% FUA)
male 72.8% / female 27.2%

Share of commuters by age groups (% FUA)
aged below 35 - 32.7% / 35-44 - 33.3% / over 45 - 34.0%

Share of commuters by education attainment (% FUA)
tertiary 19.0% / upper secondary 46.9% / secondary 21.3% / primary 12.7%

Share of commuters by occupations (% FUA)
manager and professionals 14.9% / technicians 9.8% / qualified workers 63.2% / elementary workers 12.1%

TAUs providing most commuters during 2001-2011

Drobeta Turnu Severin (1,990)
Şimian (1,568)
Brezniţa Ocloc (608)
Malovăţ (336)
Orsova (312)
Hînoa (296)
Strehaia (251)
Izvoru Bârzii (222)
Migrants to the Drobeta-Turnu Severin FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Drobeta-Turnu Severin
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Drobeta-Turnu Severin FUA, in 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment:
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Drobeta-Turnu Severin:
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Focșani, VN
Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- wearing apparel
- public administration
- trade
- agriculture

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
----------------------|---------------|----------------------------------
172,530               | 59,268        | 34.4 %                           

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
-------------------------|--------------------------|----------------------
303                      | 28,157                   | 6.3 %                

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---------------------------------------------|-------------------------------|---------------------
356                                        | 17                           | 1,060               

Distance to the western border (km)
-------------------------
94                         | -0.50                        | 646                 

Share of migrants that moved from outside the county
- long-distance migrants 35.5%
- urban 37.3% / rural 62.7%
- employed 48.8% / unemployed 33.3% / students 4.8% / retirees 29.6% / other non-employed groups 13.5%
- below 35 - 23.8% / 35 to 64 - 58.6% / over 65 - 17.6%
- tertiary 17.0% / upper secondary 32.5% / secondary 17.4% / primary education 33.1%
- manager and professionals 22.0% / technicians 8.7% / qualified workers 62.2% / elementary workers 7.1%

TAUs providing most migrants in the 2001-2011 period
- București (676)
- Focșani (3,209)
- Odobești (377) Galati (356)
- Vrida (339) Râmnicu Sărat (257)
**Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011**

### Top economic activities attracting commuters
- wearing apparel
- public administration
- agriculture
- trade
- constructions

### Commuters to the FUA in 2011

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>172,530</td>
<td>77,227</td>
<td>16,558</td>
</tr>
</tbody>
</table>

### Share of commuters in total employed (% FUA)

- **214 %**

### Average net monthly wage (Euro, county level)

- **356**

### Unemployment rate (% count)

- **5.7 %**

### Cultural Vitality Index

- **-0.50**

### Share of long-distance commuters outside the county limits 17.9%

### Share of commuters by gender (% FUA)

- male 57.2 % / female 42.8%

### Share of commuters by age groups (% FUA)

- aged below 35 - 41.8 % / 35 - 44 - 32.1 % / over 45 - 26.0%

### Share of commuters by education attainment (% FUA)

- tertiary 18.5 % / upper secondary 40.6 % / secondary 20.5 % / primary 19.9%

### Share of commuters by occupations (% FUA)

- manager and professionals 16.0 % / technicians 7.2 % / qualified workers 65.7 % / elementary workers 11.1 %

### TAUs providing most commuters during 2001-2011

- **Focșani (1,276)**
- Odobești (935)
- Golești (856)
- Câmpineanu (838)
- Vâlca (838)
- Gugestei (689)
- Mârășești (637)
- Râmnicu Sărat (612)
Migrants to the Focșani FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- Capital

Total Number of Migrants to Focșani
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469

MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Commuters to the Focșani FUA, in 2011

LEGEND

- County
- Territorial Administrative Units
- Functional Urban Area
- Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Focșani
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

297
Galați, GL

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

**Migrants to the FUA between 2001 and 2011**

### Top economic activities employing migrants
- constructions
- transport
- public administration
- trade
- metallurgy

### Stable population (FUA)
- 339,408

### Migrants (FUA)
- 110,443

### Share of migrants in total stable population (% FUA)
- 32.5%

### Number of students (FUA)
- 14,790

### Number of tourists (FUA)
- 66,512

### Unemployment rate (% FUA)
- 7.1%

### Average net monthly wage (Euro, county level)
- 425

### Number of modern retail units
- 35

### Total private income / company turnover (mil. Euro – FUA)
- 4,196

### Local Human Development Index (LHDI)
- 89

### Cultural vitality index
- -0.02

### Distance to the western border (km)
- 734

---

**TAUs providing most migrants in the 2001-2011 period**

<table>
<thead>
<tr>
<th>TAUs</th>
<th>Migrants (2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galați</td>
<td>(5,125)</td>
</tr>
<tr>
<td>Brăila</td>
<td>(1,378)</td>
</tr>
<tr>
<td>București</td>
<td>(5,73)</td>
</tr>
<tr>
<td>Târgu Mureș</td>
<td>(2,53)</td>
</tr>
</tbody>
</table>

**Additional statistics**

- Share of migrants that moved from outside the county: long-distance migrants 50.1%
- Share of migrants by previous residence (% FUA): urban 34.5% / rural 65.5%
- Share of migrants by age groups (% FUA): employment 41.9% unemploy 32.6% students 4.6% retirees 38.9% other non-employed groups 11.5%
- Share of migrants by education attainment (% FUA): tertiary 15.5% upper secondary 31.3% secondary 20.5% primary education 32.7%
- Share of migrants by migration period (% FUA): before 1990: 70.2% 1991 to 2000: 12.8% 2001 to 2011: 17.0%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- transport
- trade
- metallurgy
- public administration

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Migrants to the Galați FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Galați:
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Galați FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Galați
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

303
Student catchment area of the “Lower Danube” University, Galați, in 2015

Student catchment area of the “Danubius” University, Galați, in 2015
Giurgiu, GR

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- transport
- public administration
- trade
- metallurgy

Stable population (FUA) 80,932
Migrants (FUA) 27,136
Share of migrants in total stable population (% FUA) 33.5%

Number of students (FUA) 0
Number of tourists (FUA) 13,364
Unemployment rate (% FUA) 5.1%

Average net monthly wage (Euro, county level) 374
Number of modern retail units 16
Total private income / company turnover (mil. Euro – FUA) 412

Local Human Development Index (LHDI) 79
Cultural vitality index -0.11
Distance to the western border (km) 656

TAUs providing most migrants in the 2001-2011 period
București (1,486)
GIugiu (910)
Fălticeni (150)
Veedea (88)

Share of migrants that moved from outside the county
- long-distance migrants 47.5%

Share of migrants by previous residence (% FUA)
- urban 30.6% / rural 69.4%

Share of migrants by current economic status (% FUA)
- employed 43.3%
- unemployed 2.3%
- students 3.0%
- retirees 34.1%
- other non-employed groups 17.3%

Share of migrants by age groups (% FUA)
- below 35 - 18.8%
- 35 to 64 - 60.9%
- over 65 - 20.4%

Share of migrants by education attainment (% FUA)
- tertiary 14.0%
- upper secondary 34.9%
- secondary 15.9%
- primary education 35.2%

Share of employed migrants by occupations (% FUA)
- manager and professionals 16.6%
- technicians 16.6%
- qualified workers 66.9%
- elementary workers 6.9%

Share of migrants by migration period (% FUA)
- before 1990 65.5%
- 1991 to 2003 14.3%
- 2004 to 2011 20.2%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters:
- construction
- trade
- transport
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 36.8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,932</td>
<td>33,276</td>
<td>4,848</td>
<td>male 71.2% / female 28.8%</td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>Share of commuters by gender (% FUA)</td>
<td>Share of commuters by age groups (% FUA)</td>
<td>Share of commuters by education attainment (% FUA)</td>
</tr>
<tr>
<td>14.6%</td>
<td></td>
<td></td>
<td>aged below 35 - 37.3% / 35-44 - 32.0% / over 45 - 30.6%</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>Comuters (FUA)</td>
<td>Share of commuters by education attainment (% FUA)</td>
<td>Share of commuters by occupations (% FUA)</td>
</tr>
<tr>
<td>374</td>
<td></td>
<td></td>
<td>tertiary 23.1% / upper secondary 40.7% / secondary 17.8% / primary 16.4%</td>
</tr>
<tr>
<td>Unemployment rate (% county)</td>
<td>Cultural Vitality Index</td>
<td>TAUs providing most commuters during 2001-2011</td>
<td></td>
</tr>
<tr>
<td>5.8%</td>
<td>-0.11</td>
<td></td>
<td>București (679)</td>
</tr>
<tr>
<td>Total private income / company turnover (mil. Euro – FUA)</td>
<td></td>
<td></td>
<td>Frătești (466)</td>
</tr>
<tr>
<td>412</td>
<td></td>
<td></td>
<td>Slobozia (326)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Oinăc (283)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Giurgiu (251)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stănăști (223)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Malu (206)</td>
</tr>
</tbody>
</table>
Migrants to the Giurgiu FUA between 2001 and 2011

LEGEND

County
Territorial Administrative Units
Functional Urban Area
County Capital

Total Number of Migrants to Giurgiu

1 - 100
101 - 250
251 - 500
501 - 1000
1001 - 3469
Commuters to the Giurgiu FUA, in 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment:
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Giurgiu:
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Iași, IS

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUA between 2001 and 2011

Top economic activities employing migrants
- constructions
- transport
- education
- trade
- health

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
--- | --- | ---
414,869 | 167,677 | 40.4%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
--- | --- | ---
54,653 | 231,180 | 5.7%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
--- | --- | ---
437 | 39 | 3,855

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
--- | --- | ---
99 | 0.56 | 587

TAUs providing most migrants in the 2001-2011 period

- Iași (15,431)
- Vaslui (2,878)
- Botoșani (3,609)

- Share of migrants that moved from outside the county: long-distance migrants 49.9%
- Share of migrants by previous residence (% FUA): urban 50.2%, rural 49.8%
- Share of migrants by current economic status (% FUA): employed 43.7%, unemployed 2.7%, students 16.2%, retirees 30.4%, other non-employed groups 7.3%
- Share of migrants by age groups (% FUA): below 35 to 64, 40.3%
- Share of migrants by education attainment (% FUA): tertiary 27.2%, upper secondary 36.7%, secondary 16.0%, primary education 20.1%
- Share of employed migrants by occupations (% FUA): manager and professionals 33.5%, technicians 10.8%, qualified workers 49.7%, elementary workers 6.0%
- Share of migrants by migration period (% FUA): before 1990 4.8%, 1991 to 2003 46.6%, 2004 to 2011 36.5%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- construction
- transport
- trade
- health

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>414,869</td>
<td>193,830</td>
<td>36,341</td>
<td>outside the county limits 16.7%</td>
<td>male 62.7% / female 37.3%</td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>Commuters (FUA)</td>
<td>Share of commuters by age groups (% FUA)</td>
<td>Share of commuters by education attainment (% FUA)</td>
<td>Share of commuters by occupations (% FUA)</td>
</tr>
<tr>
<td>18.7%</td>
<td>36,341</td>
<td></td>
<td>aged below 35 - 46.9% / 35-44 - 28.8% / over 45 - 24.3%</td>
<td>tertiary 25.4% / upper secondary 35.1% / secondary 22.8% / primary 16.5%</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>Unemployment rate (% county)</td>
<td>TAUs providing most commuters during 2001-2011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>437</td>
<td>4.6%</td>
<td>Holboca (3,053)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total private income / company turnover (mil. Euro – FUA)</td>
<td>Cultural Vitality Index</td>
<td>Tomești (2,809)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3,855</td>
<td>0.56</td>
<td>Ciurea (2,373)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Iași (2,332)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Miroslava (2,182)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Valea Lupului (1,581)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bârnova (1,346)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Popricani (1,109)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lețcani (960)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Rediu (942)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Pașcani (676)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Migrants to the Iași FUA between 2001 and 2011
Student catchment area of the “Alexandru Ioan Cuza” University, Iași, in 2015

Student catchment area of the “Gheorghe Asachi” University, Iași, in 2015
Student catchment area of the “Grigore T. Popa” University of Medicine and Pharmacy, Iași, in 2015

Student catchment area of the “Ion Ionescu de la Brad” University of Agricultural Sciences and Veterinary Medicine, Iași, in 2015
Student catchment area of the George Enescu Arts University, Iași, in 2015

Student catchment area of the “Apollonia” University, Iași, in 2015
Student catchment area of the “Petre Andrei” University, Iași, in 2015
Miercurea Ciuc, HR
Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- constructions
- public administration
- wood processing
- transport

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>97,627</td>
<td>34,956</td>
<td>35.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of students (FUA)</th>
<th>Number of tourists (FUA)</th>
<th>Unemployment rate (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,124</td>
<td>43,528</td>
<td>5.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Number of modern retail units</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>342</td>
<td>12</td>
<td>510</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Human Development Index (LHDI)</th>
<th>Cultural vitality index</th>
<th>Distance to the western border (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>0.44</td>
<td>399</td>
</tr>
</tbody>
</table>

TAUs providing most migrants in the 2001-2011 period

Gheorgheni (217)
Ciucasăngheorgiu (214)
Odorheiul Secuiesc (371)

Share of migrants that moved from outside the county (% FUA)
- long-distance migrants 33.5%
- urban 38.1% / rural 61.9%
- employed 45.2%, unemployed 26.1%, students 6.0%, retired 32.9%, other non-employed groups 13.3%
- below 25 - 25.3%, 25 to 64 - 56.4%, over 65 - 56.4%
- tertiary 16.8%, upper secondary 38.1%, secondary 13.6%, primary education 31.5%
- manager and professionals 23.2%, technicians 10.7%, qualified workers 60.1%, elementary workers 6.0%
- before 1990 56.6%, 1991 to 2000 17.0%, 2001 to 2011 26.6%

Miercurea Ciuc (2,185)
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- trade
- transport
- construction
- public administration
- wood processing

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Share of commuters in total employed (% FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
<th>Share of commuters by age groups (% FUA)</th>
<th>Share of commuters by education attainment (% FUA)</th>
<th>Share of commuters by occupations (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>97,627</td>
<td>42,672</td>
<td>26.3%</td>
<td>11,231</td>
<td>outside the county limits 113%</td>
<td>male 59.5% / female 40.5%</td>
<td>aged below 35 - 47.3% / 35-44 - 31.2% / over 45 - 21.5%</td>
<td>tertiary 19.5% / upper secondary 48.9% / secondary 20.1% / primary 11.5%</td>
<td>manager and professionals 17.1% / technicians 9.2% / qualified workers 65.1% / elementary workers 8.6%</td>
</tr>
</tbody>
</table>

Average net monthly wage (Euro, county level) 342
Unemployment rate (% county) 5.7%

Total private income / company turnover (mil. Euro – FUA) 510
Cultural Vitality Index 0.44

TAUs providing most commuters during 2001-2011
Miercurea Ciuc (686)
Sândomînic (596)
Cîrcu (593)
Frumoasa (547)
Ciucășowieciu (497)
Păuleni-Cicău (400)
Cârța (395)
Sânsimioiu (389)
Lălăcei (387)
Siculei (381)
### Migrants to the Miercurea Ciuc FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>County</th>
<th>Territorial Administrative Units</th>
<th>Functional Urban Area</th>
<th>County Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Total Number of Migrants to Miercurea Ciuc FUA

- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469

---

**LEGEND**

- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

---

**MIGRANTS TO THE FUA BETWEEN 2001 AND 2011**
Commuters to the Miercurea Ciuc FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Miercurea Ciuc
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Oradea, BH

Functional Urban Area
# Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

## Top economic activities employing migrants

<table>
<thead>
<tr>
<th>Activity</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td>122,852</td>
<td>36.5%</td>
</tr>
<tr>
<td>Transport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constructions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Footwear</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## TAUs Providing Most Migrants in the 2001-2011 Period

- **Oradea** (9,500)
- **Alba Iulia** (622)
- **Sălaj** (672)
- **Bihor** (946)
- **Mureș** (739)

## Stable Population and Migrants (FUA)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Stable Population</th>
<th>Migrants</th>
<th>Share of Migrants in Total Stable Population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(FUA)</td>
<td>336,538</td>
<td>122,852</td>
<td>36.5%</td>
</tr>
</tbody>
</table>

## Economic Indicators

- **Number of Students (FUA)**: 16,304
- **Number of Tourists (FUA)**: 319,154
- **Unemployment Rate (% FUA)**: 4.4%
- **Average Net Monthly Wage (Euro, County Level)**: 362
- **Number of Modern Retail Units**: 40
- **Total Private Income / Company Turnover (mil. Euro – FUA)**: 4,362
- **Local Human Development Index (LHDI)**: 91
- **Cultural Vitality Index**: 0.33
- **Distance to the Western Border (km)**: 13
- **Share of Migrants that Moved from Outside the County (% FUA)**: 29.6%
- **Share of Migrants by Previous Residence (% FUA)**: 41.2% urban, 58.8% rural
- **Share of Migrants by Current Economic Status (% FUA)**: employed 48.1%, unemployed 2.2%, students 6.3%, retired 35.5%, other non-employed groups 6.4%
- **Share of Migrants by Age Groups (% FUA)**: below 25 – 25.6%, 25 to 64 – 50.7%, over 65 – 25.2%
- **Share of Migrants by Education Attainment (% FUA)**: tertiary 21.8%, upper secondary 35.6%, secondary 17.4%, primary education 25.2%
- **Share of Employed Migrants by Occupations (% FUA)**: manager and professionals 25.0%, technicians 10.7%, qualified workers 57.9%, elementary workers 6.4%
- **Share of Migrants by Migration Period (% FUA)**: before 1990 54.6%, 1991 to 2000 18.1%, 2001 to 2011 27.3%
<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total private income / company tax (€/FUA)</td>
<td>4,362</td>
</tr>
<tr>
<td>Cultural Vitality index</td>
<td>362</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>3.2%</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>224%</td>
</tr>
</tbody>
</table>

**Commuters to the FUA in 2011**

- Commuters to the FUA: 329
- Employed population (FUA): 365,588
- Stable population (FUA): 154,595

**TAUs providing most commuters during 2001-2011**

- Brașov (272,235)
- Cluj-Napoca (218,740)
- Timișoara (187,935)
- Arad (160,546)
- Oradea (144,466)
- Hârlău (126,491)
- Sălaj (124,054)

**Top economic activities attracting commuters**

- Trade
- Food and beverages
- Transport
- Footwear
- Electronics

**Share of commuters by gender (FUA)**

- Male: 59.65%
- Female: 40.35%

**Share of commuters by education**

- Tertiary: 48.97%
- Secondary: 20.17%
- Primary: 10.17%

**Share of commuters by occupation**

- Managers and professionals: 77.56%
- Qualified workers: 6.15%
- Semi-skilled workers: 3.98%
- Skilled workers: 6.96%
- Unskilled workers: 1.78%
Migrants to the Oradea FUA between 2001 and 2011

LEGEND

County
Territorial
Administrative
Units
Functional
Urban Area
County
Capital

Total Number of Migrants to Oradea

1 - 100
101 - 250
251 - 500
501 - 1000
1001 - 3469
Commuters to the Oradea FUA, in 2011
Student catchment area of the Oradea University, in 2015

Student catchment area of the “Emanuel” University, Oradea, in 2015
Student catchment area of the “Partium” Christian University, Oradea, in 2015

Student catchment area of the Agora University of Oradea, in 2015
Piatra Neamț, NT

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants

- trade
- chemistry
- wood processing
- constructions
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>148,011</td>
<td>55,004</td>
<td>37.2 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of students (FUA)</th>
<th>Number of tourists (FUA)</th>
<th>Unemployment rate (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>369</td>
<td>79,757</td>
<td>5.8 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Number of modern retail units</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>344</td>
<td>17</td>
<td>1,268</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Human Development Index (LHDI)</th>
<th>Cultural vitality index</th>
<th>Distance to the western border (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>90</td>
<td>0.25</td>
<td>456</td>
</tr>
</tbody>
</table>
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters:
- trade
- chemistry
- wood processing
- constructions
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>148,011</td>
<td>66,598</td>
<td>16,044</td>
<td>outside the county limits 9.5%</td>
<td>male 62.6% / female 37.4%</td>
</tr>
</tbody>
</table>

Share of commuters by age groups (% FUA):
- aged below 35 - 38.4% / 35-44 - 30.9% / over 45 - 30.7%

Share of commuters by education attainment (% FUA):
- tertiary 21.4% / upper secondary 32.9% / secondary 26.4% / primary 19.2%

Share of commuters by occupations (% FUA):
- manager and professionals 19.0% / technicians 7.6% / qualified workers 63.7% / elementary workers 9.5%

TAUs providing most commuters during 2001-2011:
- Piatra Neamț (2,977)
- Dumbrava Roșie (1,074)
- Alexandru cel Bun (877)
- Roznov (698)
- Zânești (628)
- Girov (556)
- Roman (521)
- Pângărați (474)
- Gârcina (463)
Migrants to the Piatra Neamț FUA between 2001 and 2011

Legend:
- County
- Territorial Administrative Units
- Functional Urban Area
- Capital

Total Number of Migrants to Piatra Neamț:
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Piatra Neamț FUA, in 2011

Legend
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Piatra Neamț
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

339
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- automotive
- constructions
- public administration
- trade
- transport

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
348,981 | 132,453 | 38.0%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
9,745 | 91,591 | 5.0%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---|---|---
428 | 38 | 9,218

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
98 | 0.10 | 505

TAUs providing most migrants in the 2001-2011 period

- București (2,144)
- Constanța (1,195)
- Suceava (1,028)
- Cluj-Napoca (653)
- Iași (426)
- Galați (317)
- Săcea (282)

Share of migrants that moved from outside the county
- long-distance migrants 35.3%
- urban 38.2% / rural 51.8%
- employed 52.5% / unemployed 26.8% / students 4.6% / retirees 10.3% / other non-employed groups 5.2%
- below 24.7% 35 to 64 59.6% 65 - 85 15.7%
- tertiary 20.9% / upper secondary 40.2% / secondary 18.4% / primary education 20.6%
- manager and professionals 22.6% / technicians 10.2% / qualified workers 63.6% / elementary workers 2.8%
- before 1990 53.4% / 1991 to 2000 19.0% / 2001 to 2011 27.6%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- automotive
- constructions
- trade
- transport

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>348,981</td>
<td>183,206</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share of commuters in total employed (% FUA)</th>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32.6 %</td>
<td>59,657</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Unemployment rate (% county)</th>
</tr>
</thead>
<tbody>
<tr>
<td>428</td>
<td>4.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,218</td>
<td>0.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share of long-distance commuters</th>
<th>outside the county limits 16.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share of commuters by gender (% FUA)</td>
<td>male 68.1% / female 31.9%</td>
</tr>
<tr>
<td>Share of commuters by age groups (% FUA)</td>
<td>aged below 35 - 42.4% / 35-44 - 29.3% / over 45 - 28.3%</td>
</tr>
<tr>
<td>Share of commuters by education attainment (% FUA)</td>
<td>tertiary 24.5% / upper secondary 41.0% / secondary 18.5% / primary 15.7%</td>
</tr>
<tr>
<td>Share of commuters by occupations (% FUA)</td>
<td>manager and professionals 15.8% / technicians 10.5% / qualified workers 63.5% / elementary workers 10.2%</td>
</tr>
</tbody>
</table>

TAUs providing most commuters during 2001-2011
- Pitești (9,965)
- Mioveni (3,579)
- Ștefănești (3,075)
- Bascov (2,814)
- Călărași (1,999)
- Bradu (1,956)
- Costești (1,151)
- Moșoaia (1,427)
- Mărcăceni (1,311)
- Topoloveni (1,284)
- Buzoieni (1,039)
Migrants to the Pitești FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Pitești
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469

MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Commuters to the Pitești FUA, in 2011

LEGEND

County
Territorial
Administrative
Units
Functional
Urban Area
County
Capital

Share of Commuters
in Total Employment

0% - 15%
15.1% - 25%
25.1% - 35%
35.1% - 45%
45.1% - 55%

Total Number of
Commuters to
Pitești

1 - 50
51 - 200
201 - 500
501 - 1000
1001 - 5000
Student catchment area of the Pitești University, in 2015

Student catchment area of the “Constantin Brâncoveanu” University, Pitești, in 2015
Ploiești, PH

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUA between 2001 and 2011

Top economic activities employing migrants
- automotive
- transport
- constructions
- public administration

Stable population (FUA)
- 508,213

Migrants (FUA)
- 140,843

Share of migrants in total stable population
- 27.8%

Unemployment rate
- 6.8%

Total private income / company turnover (mil. Euro - FUA)
- 7,041

Number of students (FUA)
- 7,594

Average net monthly wage (Euro, county level)
- 433

Number of modern retail units (FUA)
- 59

Distance to the western border (km)
- 575

Development Index (LHDI)
- 94

Cultural vitality index
- 0.04

Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Table providing most migrants in the 2001-2011 period

Ploiesti
(7,983)

Vulturii de Munte
(1,004)

Vaslui (797)

Moldovița (322)

Buzău (261)

%

States of migrants by the activity group
- employees 42.8%
- self-employed 14.2%
- non-salaried workers 11.9%
- students 6.8%
- retirement 5.1%
- other 22.9%
- total 100%

States of migrants by the education attainment
- primary education 31.3%
- secondary education 25.3%
- university education 23.3%
- other 3.6%
- total 100%

States of migrants by the state of residence
- residing within the county 26.6%
- residing outside the county 73.4%
- total 100%

States of migrants by the period of migration
- 2001-2006 43.6%
- 2007-2011 56.4%
- total 100%

Average price for apartments 2,727 lei/m²

Sources: 2001 and 2011 IIPR.
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

<table>
<thead>
<tr>
<th>Stabile population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
<th>Share of commuters by age groups (% FUA)</th>
<th>Share of commuters by education attainment (% FUA)</th>
<th>Share of commuters by occupations (% FUA)</th>
<th>TAUs providing most commuters during 2001-2011</th>
</tr>
</thead>
</table>
| 506,213                  | 213,284                   | 68,786           | outside the county limits 12.2% | male 61.9% / female 38.1%          | aged below 35 - 40.0% / 35-44 - 34.4% / over 45 - 25.6% | tertiary 21.4% / upper secondary 38.8% / secondary 24.7% / primary 15.0% | manager and professionals 17.0% / technicians 7.2% / qualified workers 65.6% / elementary workers 10.2% | Ploiești (6,458)  
Blejoi (2,029)  
Băicoi (1,993)  
Valea Călugărească (1,992)  
Bucov (1,951)  
Târgușor Vechi (1,950)  
Bolduști-Scăieni (1,755)  
Bârcași (1,722)  
Aricești-Rahtivani (1,532)  
Plopieni (1,453)  
Berceni (1,298) |

Top economic activities attracting commuters
- trade
- transport
- constructions
- wearing apparel

Stable population (FUA)
Employed population (FUA)
Commuters (FUA)
Share of long-distance commuters
Share of commuters by gender (% FUA)
Share of commuters by age groups (% FUA)
Share of commuters by education attainment (% FUA)
Share of commuters by occupations (% FUA)

Sustainable development indicators:
- Average net monthly wage (Euro, county level)
- Unemployment rate (% county)

Stable population (FUA) = 506,213
Employed population (FUA) = 213,284
Commuters (FUA) = 68,786
Share of long-distance commuters outside the county limits 12.2%
Share of commuters by gender (% FUA) male 61.9% / female 38.1%
Share of commuters by age groups (% FUA) aged below 35 - 40.0% / 35-44 - 34.4% / over 45 - 25.6%
Share of commuters by education attainment (% FUA) tertiary 21.4% / upper secondary 38.8% / secondary 24.7% / primary 15.0%
Share of commuters by occupations (% FUA) manager and professionals 17.0% / technicians 7.2% / qualified workers 65.6% / elementary workers 10.2%

Sustainable development indicators:
- Average net monthly wage (Euro, county level) = 433
- Unemployment rate (% county) = 4.3%

Total private income / company turnover (mil. Euro – FUA) = 7,041
Cultural Vitality Index = 0.04
Migrants to the Ploiești FUA between 2001 and 2011
Commuters to the Ploiești FUA, in 2011
Student catchment area of the Petroleum-Gas University of Ploiești, in 2015.
Râmnicu Vâlcea, VL
Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- chemistry
- transport
- trade
- food processing

Stable population (FUA) 233,497
Migrants (FUA) 83,553
Share of migrants in total stable population (% FUA) 35.8%

Number of students (FUA) 841
Number of tourists (FUA) 240,535
Unemployment rate (% FUA) 6.4%

Average net monthly wage (Euro, county level) 362
Number of modern retail units 13
Total private income / company turnover (mil. Euro - FUA) 1,803

Local Human Development Index (LHDI) 95
Cultural vitality index -0.06
Distance to the western border (km) 424

TAUs providing most migrants in the 2001-2011 period

Râmnicu Vâlcea (4,059)

Bucharest (1,104)

Share of migrants that moved from outside the country long-distance migrants 33.2%
Share of migrants by previous residence urban 42.9% / rural 57.1%
Share of migrants by current economic status employed 48.9% unemployed 3.3% students 4.7% retirees 33.2% other non-employed groups 10.1%
Share of migrants by age groups below 35 - 23.3% 35 to 64 - 59.4% over 65 - 17.3%
Share of migrants by education attainment tertiary 19.8% upper secondary 39.3% secondary 14.9% primary education 25.9%
Share of employed migrants by occupations manager and professionals 23.1% technicians 10.1% qualified workers 50.7% elementary workers 15.1%
Share of migrants by migration period before 1990 53.1% 1991 to 2000 21.6% 2001 to 2011 25.3%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- trade
- chemistry
- food processing
- transport

Stable population (FUA) | Employed population (FUA)
---|---
233,497 | 106,795

Share of commuters in total employed (% FUA) | Commuters (FUA)
---|---
22.7% | 24,268

Average net monthly wage (Euro, county level) | Unemployment rate (% county)
---|---
362 | 5.4%

Total private income / company turnover (mil. Euro – FUA) | Cultural Vitality Index
---|---
1,803 | -0.06

Share of long-distance commuters | outside the county limits 10.3%
Share of commuters by gender (% FUA) | male 63.0% / female 37.0%
Share of commuters by age groups (% FUA) | aged below 35 - 39.3% / 35-44 - 35.1% / over 45 - 25.6%
Share of commuters by education attainment (% FUA) | tertiary 20.6% / upper secondary 45.6% / secondary 21.8% / primary 11.9%
Share of commuters by occupations (% FUA) | manager and professionals 16.0% / qualified workers 63.6% / elementary workers 12.4%

TAUs providing most commuters during 2001-2011

Râmniciu Vâlcea (2,128)
Budești (1,200)
Mihăești (1,062)
Băbeni (1,003)
Bujoreni (841)
Vlădești (702)
Galicia (654)
Călimănești (643)
Pâușești-Mâglași (631)
Ocnele Mari (560)
Migrants to the Râmnicu Vâlcea FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Râmnicu Vâlcea

1 - 100
101 - 250
251 - 500
501 - 1000
1001 - 3469

356 | MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Commuters to the Râmnicu Vâlcea FUA, in 2011
Reșița, CS

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants

- constructions
- machinery
- human resources
- trade
- public administration

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Share of migrants in total stable population (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>81,091</td>
<td>32,749</td>
<td>40.4%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of students (FUA)</th>
<th>Number of tourists (FUA)</th>
<th>Unemployment rate (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,635</td>
<td>30,133</td>
<td>7.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Number of modern retail units</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>367</td>
<td>21</td>
<td>558</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local Human Development Index (LHDI)</th>
<th>Cultural vitality index</th>
<th>Distance to the western border (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>-0.36</td>
<td>167</td>
</tr>
</tbody>
</table>

TAUs providing most migrants in the 2001-2011 period

- Timișoara (364)
- Caransebeș (229)
- Oravița (196)
- Resița (245)

- Share of migrants that moved from outside the county
- long-distance migrants 63.1%
- urban 36.9% / rural 53.2%
- employed 41.4%, unemployed 3.2%, students 3.2%, retirees 42.3%, others not employed groups 3.9%
- Share of migrants by age groups (% FUA)
  - below 35 - 10.9%
  - 35 to 64 - 61.9%
  - over 65 - 23.1%
- Share of migrants by education attainment (% FUA)
  - tertiary 58.7%
  - upper secondary 33.6%
  - secondary 17.3%
  - primary education 30.4%
- Share of employed migrants by occupations (% FUA)
  - manager and professionals 23.5%
  - technicians 11.3%
  - qualified workers 58.6%
  - elementary workers 6.8%
- Share of migrants by migration period (% FUA)
  - before 1990: 76.0%
  - 1991 to 2003: 14.4%
  - 2004 to 2011: 12.6%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- public administration
- constructions
- trade
- machinery
- human resources

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Share of commuters in total employed (% FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 17.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>81,091</td>
<td>33,375</td>
<td>10.2%</td>
<td>3,399</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro, county level)</th>
<th>Unemployment rate (% county)</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>367</td>
<td>2.0%</td>
<td>558</td>
<td>-0.36</td>
</tr>
</tbody>
</table>

TAUs providing most commuters during 2001-2011
- Bocșa (505)
- Caransebeș (232)
- Târnova (193)
- Anina (154)
- Ezeriș (128)
- Oravița (115)
- Reșița (102)
Migrants to the Reșița FUA between 2001 and 2011

LEGEND
County
Territorial Administrative Units
Functional Urban Area
Capital

Total Number of Migrants to Reșița
1 - 100
101 - 250
251 - 500
501 - 1000
1001 - 3469
Commuters to the Reșița FUA, in 2011

<table>
<thead>
<tr>
<th>County</th>
<th>Territorial Administrative Units</th>
<th>Functional Urban Area</th>
<th>County Capital</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Share of Commuters in Total Employment</th>
<th>0% - 15%</th>
<th>15.1% - 25%</th>
<th>25.1% - 35%</th>
<th>35.1% - 45%</th>
<th>45.1% - 55%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number of Commuters to Reșița</td>
<td>1 - 50</td>
<td>51 - 200</td>
<td>201 - 500</td>
<td>501 - 1000</td>
<td>1001 - 5000</td>
</tr>
</tbody>
</table>

363
Student catchment area of the “Eftimie Murgu” University, Reșița, in 2015
Satu Mare, SM

Functional Urban Area
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- trade
- constructions
- automotive
- food processing

Stable population (FUA) | Employed population (FUA)
------------------------|------------------------
195,584                | 77,998

Share of commuters in total employed (% FUA) | Commuters (FUA)
20.5%                                      | 16,006

Average net monthly wage (Euro, county level) | Unemployment rate (% county)
355                                          | 3.7%

Total private income / company turnover (mil. Euro – FUA) | Cultural Vitality Index
2,088                                         | -0.24

Share of long-distance commuters | outside the county limits 9.1%
Share of commuters by gender (% FUA) | male 59.6% / female 40.4%
Share of commuters by age groups (% FUA) | aged below 35 - 48.3% / 35-44 - 30.5% / over 45 - 21.2%
Share of commuters by education attainment (% FUA) | tertiary 18.6% / upper secondary 42.8% / secondary 19.6% / primary 10.6%
Share of commuters by occupations (% FUA) | manager and professionals 15.2% / technicians 6.1% / qualified workers 69.1% / elementary workers 9.7%

TAUs providing most commuters during 2001-2011
- Satu Mare (1,533)
- Lazuri (981)
- Păulești (925)
- Ardud (834)
- Odoreu (832)
- Carei (803)
- Vetiș (797)
- Dorolț (618)
- Culciu (589)
- Viile Satu Mare (524)
## Migrants to the Satu Mare FUA between 2001 and 2011

### Total Number of Migrants to Satu Mare

<table>
<thead>
<tr>
<th>Range</th>
<th>Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - 100</td>
<td>368</td>
</tr>
<tr>
<td>101 - 250</td>
<td></td>
</tr>
<tr>
<td>251 - 500</td>
<td></td>
</tr>
<tr>
<td>501 - 1000</td>
<td></td>
</tr>
<tr>
<td>1001 - 3469</td>
<td></td>
</tr>
</tbody>
</table>

### Legend
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

### Map

[Map showing migrants to Satu Mare FUA between 2001 and 2011]

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**MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA**

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368 | MIGRANTS TO THE FUA BETWEEN 2001 AND 2011 | MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA
Commuters to the Satu Mare FUA, in 2011
Sfântu Gheorghe, CV

Functional Urban Area
<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (%)</th>
<th>Share of commuters by age groups (%)</th>
<th>Share of commuters by education attainment (%)</th>
<th>Share of commuters by occupations (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>84,341</td>
<td>36,307</td>
<td>6,281</td>
<td>outside the county limits 14.5%</td>
<td>male 58.7% / female 41.3%</td>
<td>aged below 35 - 48.4% / 35-48 - 27.1% / over 45 - 24.4%</td>
<td>tertiary 24.4% / upper secondary 38.7% / secondary 20.3% / primary 16.4%</td>
<td>manager and professionals 19.9% / technicians 0.2% / qualified workers 59.8% / elementary workers 12.1%</td>
</tr>
</tbody>
</table>

Top economic activities attracting commuters

- construction
- transport
- trade
- public administration
- education

Average net monthly wage (Euro, county level)

- 348

Unemployment rate (%

- 5.0%

Cultural Vitality Index

- 670

- 0.86
Migrants to the Sfântu Gheorghe FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Sfântu Gheorghe:
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Sibiu, SB

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- constructions
- footwear
- transport
- automotive

Stable population (FUA) 270,764
Migrants (FUA) 106,891
Share of migrants in total stable population (FUA) 39.6%

Number of students (FUA) 16,448
Number of tourists (FUA) 365,894
Unemployment rate (FUA) 4.8%

Average net monthly wage (Euro, county level) 475
Number of modern retail units 34
Total private income / company turnover (mil. Euro – FUA) 3,677

Local Human Development Index (LHDI) 104
Cultural vitality index 0.88
Distance to the western border (km) 328
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

### Commuters to the FUA in 2011

<table>
<thead>
<tr>
<th>Location</th>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibiu</td>
<td>379</td>
</tr>
</tbody>
</table>

### Top economic activities attracting commuters

- trade
- constructions
- footwear
- transport
- automotive

### Stable population (FUA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>270,064</td>
</tr>
</tbody>
</table>

### Employed population (FUA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Employed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>124,109</td>
</tr>
</tbody>
</table>

### Share of commuters in total employed (% FUA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Commuters (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24.7%</td>
</tr>
</tbody>
</table>

### Average net monthly wage (Euro, county level)

<table>
<thead>
<tr>
<th>Location</th>
<th>Wage (Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>475</td>
</tr>
</tbody>
</table>

### Unemployment rate (% county)

<table>
<thead>
<tr>
<th>Location</th>
<th>Unemployment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.4%</td>
</tr>
</tbody>
</table>

### Total private income / company turnover (mil. Euro – FUA)

<table>
<thead>
<tr>
<th>Location</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3,677</td>
</tr>
</tbody>
</table>

### Cultural Vitality Index

<table>
<thead>
<tr>
<th>Location</th>
<th>Index</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.88</td>
</tr>
</tbody>
</table>

### Share of long-distance commuters

- outside the county limits 21.5%

### Share of commuters by gender (% FUA)

- male 59.4%
- female 40.6%

### Share of commuters by age groups (% FUA)

- aged below 35 - 50.3%
- 35-44 - 27.6%
- over 45 - 22.1%

### Share of commuters by education attainment (% FUA)

- tertiary 23.5%
- upper secondary 35.4%
- secondary 22.1%
- primary 10.8%

### Share of commuters by occupations (% FUA)

- manager and professionals 18.1%
- technicians 7.0%
- qualified workers 59.8%
- elementary workers 15.2%

### TAUs providing most commuters during 2001-2011

<table>
<thead>
<tr>
<th>Location</th>
<th>Commuters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibiu (2,549)</td>
<td></td>
</tr>
<tr>
<td>Cisnădie (2,468)</td>
<td></td>
</tr>
<tr>
<td>Avrig (1,958)</td>
<td></td>
</tr>
<tr>
<td>Șeînlîmbar (1,917)</td>
<td></td>
</tr>
<tr>
<td>Rășinari (1,165)</td>
<td></td>
</tr>
<tr>
<td>Tâlmaciu (922)</td>
<td></td>
</tr>
<tr>
<td>Șura Mare (871)</td>
<td></td>
</tr>
<tr>
<td>Cristian (813)</td>
<td></td>
</tr>
<tr>
<td>Ocna Sibiului (799)</td>
<td></td>
</tr>
<tr>
<td>Roșia (758)</td>
<td></td>
</tr>
<tr>
<td>Gura Răului (714)</td>
<td></td>
</tr>
</tbody>
</table>
Migrants to the Sibiu FUA between 2001 and 2011
Commuters to the Sibiu FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Sibiu
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Student catchment area for the “Alma Mater” University, Sibiu, in 2015

Student catchment area for the “Romanian-German” University, Sibiu, in 2015
Slatina, OT

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUA between 2001 and 2011

Top economic activities employing migrants
- constructions
- trade
- rubber and plastics
- metallurgy
- public administration

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
132,789 | 10,814 | 8.1%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
522 | 29,567 | 3.9%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---|---|---
386 | 19 | 1,996

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
94 | -0.32 | 505

TAUs providing most migrants in the 2001-2011 period

Slatina (797) | Craiova (237)
---|---
Pitești (113) | București (250)

Share of migrants that moved from outside the county (% FUA)
- long-distance migrants 33.6%
- urban 51.5% / rural 48.5%

Share of migrants by previous residence (% FUA)
- employed 58.6%
- unemployed 24.1%
- students 4.5%
- retirees 23.6%
- other non-employed groups 11.1%

Share of migrants by current economic status (% FUA)
- below 25 - 29.4%
- 35 to 64 - 50.7%
- over 65 - 10.8%

Share of migrants by age groups (% FUA)
- tertiary 21.2%
- upper secondary 37.0%
- secondary 17.2%
- primary education 24.6%

Share of migrants by education attainment (% FUA)
- manager and professionals 22.5%
- technicians 9.7%
- qualified workers 60.6%
- elementary workers 7.2%

Share of migrants by migration period (% FUA)
- before 1990: 50.0%
- 1991 to 2000: 20.8%
- 2001 to 2011: 29.2%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- constructions
- trade
- metallurgy
- public administration
- rubber and plastics

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters</th>
<th>Share of commuters by gender (% FUA)</th>
<th>Share of commuters by age groups (% FUA)</th>
<th>Share of commuters by education attainment (% FUA)</th>
<th>Share of commuters by occupations (% FUA)</th>
<th>TAUs providing most commuters during 2001-2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>132,789</td>
<td>63,374</td>
<td>10,529</td>
<td>outside the county limits 12.3%</td>
<td>male 67.8% / female 32.2%</td>
<td>aged below 35 - 39.8% / 35-44 - 35.3% / over 45 - 25.0%</td>
<td>tertiary 18.1% / upper secondary 41.5% / secondary 25.9% / primary 14.4%</td>
<td>manager and professionals 14.7% / technicians 6.4% / qualified workers 65.8% / elementary workers 13.0%</td>
<td>Curțișoara (646)</td>
</tr>
<tr>
<td>16.6%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slătioara (583)</td>
</tr>
<tr>
<td>386</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Piatra Olt (518)</td>
</tr>
<tr>
<td>8.3%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Gâneasa (442)</td>
</tr>
<tr>
<td>2,595</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Caracal (334)</td>
</tr>
<tr>
<td>-0.32</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Slatina (323)</td>
</tr>
</tbody>
</table>

Notes:
- TAUs: Trends Analysis Units
- FUA: Functional Urban Area

Slatina
Migrants to the Slatina FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Slatina

- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Slatina FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment

0% - 15%
15.1% - 25%
25.1% - 35%
35.1% - 45%
45.1% - 55%

Total Number of Commuters to Slatina

1 - 50
51 - 200
201 - 500
501 - 1000
1001 - 5000
Slobozia, IL
Functional Urban Area
### Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

#### Top economic activities employing migrants

- trade
- public administration
- agriculture
- constructions
- transport

#### Stable population (FUA) vs Migrants (FUA) vs Share of migrants in total stable population (% FUA)

<table>
<thead>
<tr>
<th>Metric</th>
<th>FUA</th>
<th>Migrants</th>
<th>Share of migrants in total stable population (%)</th>
<th>FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,570</td>
<td>30,187</td>
<td>37.5%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Number of students (FUA) vs Number of tourists (FUA) vs Unemployment rate (% FUA)

<table>
<thead>
<tr>
<th>Metric</th>
<th>FUA</th>
<th>Migrants</th>
<th>Unemployment rate (% FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>179</td>
<td>30,291</td>
<td>5.1%</td>
<td></td>
</tr>
</tbody>
</table>

#### Average net monthly wage (Euro, county level) vs Number of modern retail units vs Total private income / company turnover (mil. Euro – FUA)

<table>
<thead>
<tr>
<th>Metric</th>
<th>FUA</th>
<th>Migrants</th>
<th>Total private income / company turnover (mil. Euro – FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>352</td>
<td>12</td>
<td>946</td>
<td></td>
</tr>
</tbody>
</table>

#### Local Human Development Index (LHDI) vs Cultural vitality index vs Distance to the western border (km)

<table>
<thead>
<tr>
<th>Metric</th>
<th>FUA</th>
<th>Migrants</th>
<th>Distance to the western border (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>89</td>
<td>0.20</td>
<td>724</td>
<td></td>
</tr>
</tbody>
</table>
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Commuters to the FUA in 2011: 393

Top economic activities attracting commuters:
- trade
- constructions
- transport
- public administration
- agriculture

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>80,570</td>
<td>33,539</td>
<td>6,311</td>
</tr>
</tbody>
</table>

Share of commuters in total employed (% FUA):
- 18.8%

Average net monthly wage (Euro, county level):
- 352

Unemployment rate (% county):
- 6.9%

Share of long-distance commuters:
- outside the county limits: 14.4%

Share of commuters by gender (% FUA):
- male 70.6% / female 29.4%

Share of commuters by age groups (% FUA):
- aged below 35 - 39.3% / 35-44 - 34.1% / over 45 - 276.6%

Share of commuters by education attainment (% FUA):
- tertiary 20.3% / upper secondary 36.7% / secondary 25.4% / primary 17.4%

Share of commuters by occupations (% FUA):
- manager and professionals 15.9% / technicians 9.3% / qualified workers 60.9% / elementary workers 13.9%

TAUs providing most commuters during 2001-2011:
- Amara (1,088)
- Slobozia (541)
- Tândearei (382)
- Peretiță (364)
- Bucu (262)
- Cosâmbesti (242)
- Ciulnița (223)
- Fetești (219)

Total private income / company turnover (mil. Euro – FUA):
- 946

Cultural Vitality Index:
- -0.20
Migrants to the Slobozia FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Slobozia
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Slobozia FUA, in 2011

Legend
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Slobozia
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Suceava, SV

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- transport
- agriculture
- constructions
- public administration

Stable population (FUA)
182,955

Migrants (FUA)
62,001

Share of migrants in total stable population (% FUA)
33.9%

Number of students (FUA)
8,899

Number of tourists (FUA)
113,089

Unemployment rate (% FUA)
6.8%

Average net monthly wage (Euro, county level)
341

Number of modern retail units
30

Total private income / company turnover (mil. Euro – FUA)
1,402

Local Human Development Index (LHDI)
95

Cultural vitality index
0.16

Distance to the western border (km)
464

TAUs providing most migrants in the 2001-2011 period

Suceava (4,028)

Botoșani (6,13)

Fălticeni (7,60)

Share of migrants that moved from outside the county
long-distance migrants 33.9%

urban 45.1% / rural 54.9%

employed 47.4% unemloyed 3.6% students 8.6% retirees 34.0% other non-employed groups 8.5%

below 35 - 24.5% 35 to 64 - 58.2% over 65 - 17.3%

tertiary 22.0% upper secondary 33.8% secondary 21.1% primary education 23.1%

manager and professionals 25.9% technicians 15.9% qualified workers 55.3% elementary workers 6.9%

before 1990 57.9% 1991 to 2000 15.6% 2001 to 2011 26.4%
### Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

#### Top economic activities attracting commuters

- Trade
- Transport
- Constructions
- Public administration
- Education

#### Stable population (FUA) vs Employed population (FUA)

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>182,955</td>
<td>85,310</td>
</tr>
</tbody>
</table>

#### Share of commuters in total employed (% FUA)

<table>
<thead>
<tr>
<th>Commuters (FUA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>17,799</td>
</tr>
</tbody>
</table>

#### Average net monthly wage (Euro. county level)

<table>
<thead>
<tr>
<th>Average net monthly wage (Euro. county level)</th>
</tr>
</thead>
<tbody>
<tr>
<td>341</td>
</tr>
</tbody>
</table>

#### Unemployment rate (% county)

<table>
<thead>
<tr>
<th>Unemployment rate (% county)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.2%</td>
</tr>
</tbody>
</table>

#### Total private income / company turnover (mil. Euro – FUA)

<table>
<thead>
<tr>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,402</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cultural Vitality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.16</td>
</tr>
</tbody>
</table>
Migrants to the Suceava FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Suceava
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Suceava FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Suceava
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
- 401
Student catchment area of the “Ștefan cel Mare” University, Suceava, in 2015
Târgoviște, DB

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- trade
- public administration
- transport
- constructions
- metallurgy

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
210,410 | 68,247 | 32.4%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
5,080 | 36,940 | 7.3%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
389 | 24 | 1,199

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
95 | 0.47 | 561
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters
- trade
- public administration
- transport
- constructions
- metallurgy

<table>
<thead>
<tr>
<th>Stable population (FUA)</th>
<th>Employed population (FUA)</th>
<th>Commuters (FUA)</th>
<th>Share of long-distance commuters outside the county limits 6.6%</th>
</tr>
</thead>
<tbody>
<tr>
<td>210,410</td>
<td>99,872</td>
<td>28,890</td>
<td>male 61.6% / female 38.4%</td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>Share of commuters by gender (% FUA) aged below 35 - 40.5% / 35-44 - 33.0% / over 45 - 26.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.9 %</td>
<td>Share of commuters by age groups (% FUA) tertiary 22.7% / upper secondary 45.6% / secondary 18.4% / primary 13.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>Share of commuters by education attainment (% FUA) manager and professionals 17.5% / technicians 8.2% / qualified workers 63.0% / elementary workers 11.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>389</td>
<td>Unemployment rate (% county)</td>
<td>TAUs providing most commuters during 2001-2011</td>
<td></td>
</tr>
<tr>
<td>6.8%</td>
<td>Târgoviște (1,815) Răzvad (1,668) Aninoasa (1,371) Șotânga (1,296) Dragomirești (1,284) Glodeni (981) Gura Ocniței (877) Ulmi (868)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total private income / company turnover (mil. Euro – FUA)</td>
<td>Cultural Vitality Index</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,199</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Migrants to the Târgoviște FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

<table>
<thead>
<tr>
<th>County</th>
<th>Total Number of Migrants to Târgoviște</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - 100</td>
</tr>
<tr>
<td></td>
<td>101 - 250</td>
</tr>
<tr>
<td></td>
<td>251 - 500</td>
</tr>
<tr>
<td></td>
<td>501 - 1000</td>
</tr>
<tr>
<td></td>
<td>1001 - 3469</td>
</tr>
</tbody>
</table>
Commuters to the Târgoviște FUA, in 2011
Student catchment area of the “Valahia” University, Târgoviște, in 2015
Târgu Jiu, GJ

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUAs between 2001 and 2011

410

MAGNET CITIES - MIGRATION AND COMMUTING IN ROMANIA

[Map and data related to migration trends and commuting in Romania]
### Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

#### Top economic activities attracting commuters

<table>
<thead>
<tr>
<th>Activity</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td></td>
</tr>
<tr>
<td>Construction</td>
<td></td>
</tr>
<tr>
<td>Public Administration</td>
<td></td>
</tr>
</tbody>
</table>

#### Commuters to the FUA in 2011

- **Târgu Jiu**: 411

#### TAUs providing most commuters during 2001-2011

- **Bălești**: 1,063
- **Târgu Jiu**: 863
- **Bumbești-Jiu**: 641
- **Runcu**: 619
- **Dănești**: 517
- **Drăgutești**: 504
Migrants to the Târgu Jiu FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Târgu Jiu
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469

MIGRANTS TO THE FUA BETWEEN 2001 AND 2011
Commuters to the Târgu Jiu FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Târgu Jiu
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Student catchment area of the “Constantin Brâncuși” University, Târgu Jiu, in 2015
Târgu Mureș, MS

Functional Urban Area

- county
- functional urban area
- county capital
### Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

#### Migrants to the FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>Development Index</th>
<th>Cultural Vitality Index</th>
<th>Distance to the Western Border (km)</th>
<th>Local Human Development Index (LHDI)</th>
<th>Average net monthly wage (Euro, country level)</th>
<th>Number of tourists (FUA)</th>
<th>Number of students (FUA)</th>
<th>Total private income / retail units (mil. Euro - FUA)</th>
<th>Stable population (FUA)</th>
<th>Migrants (FUA)</th>
<th>Stable population in total stable population (%) FUA</th>
<th>Unemployment rate (%) FUA</th>
</tr>
</thead>
<tbody>
<tr>
<td>98</td>
<td>36</td>
<td>263</td>
<td>410</td>
<td>11563</td>
<td>251523</td>
<td>835571</td>
<td>4967</td>
<td>25.1%</td>
<td>33.2%</td>
<td>Top economic activities employing migrants: constructions, trade, transport, health, public administration</td>
<td></td>
</tr>
</tbody>
</table>

#### Migrants providing most migrants in the 2001-2011 period

- **Târgu Mureș** (9,462)
- **Reghin** (1,032)
- **Tulcea** (791)
- **Rădăuți** (460)
- **Constanța** (327)
- **Iași** (321)

#### Notes:
- The diagram illustrates the migration patterns and economic activities of migrants in Romanian county seats in 2011.
### Migrants to the Târgu Mureș FUA between 2001 and 2011

<table>
<thead>
<tr>
<th>County</th>
<th>Total Number of Migrants to Târgu Mureș</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 - 100</td>
</tr>
<tr>
<td></td>
<td>101 - 250</td>
</tr>
<tr>
<td></td>
<td>251 - 500</td>
</tr>
<tr>
<td></td>
<td>501 - 1000</td>
</tr>
<tr>
<td></td>
<td>1001 - 3469</td>
</tr>
</tbody>
</table>

**Legend**
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

**Total Number of Migrants to Târgu Mureș**
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Târgu Mureș FUA, in 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Share of Commuters in Total Employment
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

Total Number of Commuters to Târgu Mureș
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000
Student catchment area of the University of Medicine and Pharmacy, Târgu Mureș, in 2015

Student catchment area of the “Petru Maior” University, Târgu Mureș, in 2015
Student catchment area of the Târgu Mureș Arts University, in 2015
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- transport
- automotive
- trade
- public administration

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
508,037 | 234,847 | 46.2%

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
39,989 | 314,522 | 4.8%

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro - FUA)
---|---|---
487 | 67 | 9,004

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
100 | 0.84 | 71

TAUs providing most migrants in the 2001-2011 period
- Timișoara (18,396)
- Lugoj (2,356)
- Arad (2,210)
- Drobeta Turnu Severin (3,669)
- Reșița (3,176)

Share of migrants that moved from outside the county long-distance migrants 68.1%
- Share of migrants by previous residence (% FUA) urban: 55.5%, rural: 44.5%
- Share of migrants by current economic status (% FUA) employed: 45.9%, unemployed: 23.2%, students: 14.0%, retirees: 27.2%, other non-employed groups: 10.6%
- Share of migrants by age groups (% FUA) below 35: 34.7%, 35 to 64: 40.5%, over 65: 24.8%
- Share of migrants by education attainment (% FUA) tertiary: 24.2%, upper secondary: 32.7%, secondary: 13.7%, primary education: 29.4%
- Share of employed migrants by occupations (% FUA) manager and professionals: 28.3%, technicians: 9.1%, qualified workers: 55.2%, elementary workers: 7.4%
- Share of migrants by migration period (% FUA) before 1990: 46.1%, 1991 to 2000: 16.2%, 2001 to 2011: 35.7%
Commuters to the Timișoara FUA, in 2011

**Legend**
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

**Share of Commuters in Total Employment**
- 0% - 15%
- 15.1% - 25%
- 25.1% - 35%
- 35.1% - 45%
- 45.1% - 55%

**Total Number of Commuters to Timișoara**
- 1 - 50
- 51 - 200
- 201 - 500
- 501 - 1000
- 1001 - 5000

---

**Commuters to the Timișoara FUA, in 2011**

- **Share of Commuters in Total Employment**
  - 0% - 15%
  - 15.1% - 25%
  - 25.1% - 35%
  - 35.1% - 45%
  - 45.1% - 55%

- **Total Number of Commuters to Timișoara**
  - 1 - 50
  - 51 - 200
  - 201 - 500
  - 501 - 1000
  - 1001 - 5000
Student catchment area of the “Victor Babeș” University of Medicine and Pharmacy, Timișoara, in 2015

Student catchment area of the Banat University of Agricultural Sciences and Veterinary Medicine, Timișoara, in 2015
Student catchment area of the “Tibiscus” University, Timișoara, in 2015

Student catchment area of the “Ioan Slavici” University, Timișoara, in 2015
Tulcea, TL

Functional Urban Area

- county
- functional urban area
- county capital
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Migrants to the FUA between 2001 and 2011

Top economic activities employing migrants
- ship building
- trade
- public administration
- constructions
- transport

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA)
---|---|---
94,092 | 37,088 | 39.4 %

Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA)
---|---|---
0 | 48,460 | 5.8 %

Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA)
---|---|---
373 | 10 | 1,092

Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---
83 | -0.25 | 836

TAUs providing most migrants in the 2001-2011 period
- Tulcea (1,057)
- Buzău (303)
- Bălăbănești (300)
- Constanța (403)

Share of migrants that moved from outside the county
- long-distance migrants: 32.8%
- urban 30.9% / rural 69.1%
- employed 52.3% unemployed/unemployed students 3.2%
- retired 28.7% other non-employed groups 12.8%
- below 35 - 18.4% 35 to 64 - 64.5% over 65 - 17.1%
- tertiary education 15.6% upper secondary 33.8% secondary 16.7% primary education 33.7%
- manager and professionals 18.1% technicians 9.7% qualified workers 65.9% elementary workers 6.3%
- before 1990 66.8% 1991 to 2003 13.6% 2004 to 2011 19.6%
Migrants to the Tulcea FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Tulcea
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Tulcea FUA in 2011
Vaslui, VS

Functional Urban Area
Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

Top economic activities employing migrants
- constructions
- trade
- public administration
- wearing apparel
- food processing

Stable population (FUA) | Migrants (FUA) | Share of migrants in total stable population (% FUA) | Number of students (FUA) | Number of tourists (FUA) | Unemployment rate (% FUA) | Average net monthly wage (Euro, county level) | Number of modern retail units | Total private income / company turnover (mil. Euro – FUA) | Local Human Development Index (LHDI) | Cultural vitality index | Distance to the western border (km)
---|---|---|---|---|---|---|---|---|---|---|---
80,861 | 29,834 | 36.9 % | 0 | 21,556 | 7.7 % | 364 | 12 | 533 | 89 | -0.39 | 600

TAUs providing most migrants in the 2001-2011 period
- Vaslui (930)
- Bălți (347)
- Hâncești (292)
- Iași (836)
- Buzău (284)
- Dolj (256)
- Cluj-Napoca (211)
- Galați (192)
- Constanța (174)
- Pitești (157)
- Bucharest (216)
- Botoșani (110)
- Craiova (105)
- Iași (104)
- Targu Mureș (96)
- Ploiești (94)
- Constanta (93)
- Tulcea (92)
- Bacău (88)
- Arad (87)
- Timișoara (85)
- Satu Mare (84)
- Hârlău (83)
- Sibiu (82)
- Brăila (81)
- Prahova (80)
- Argeș (79)
- Vâlcea (78)
- Dolj (77)
- Neamț (76)
- Tulcea (75)
- Galați (74)
- Suceava (73)
- Vâlcea (72)
- Vâlcea (71)
- Hârșova (70)
- Vâlcea (69)
- Vâlcea (68)
- Neamț (67)
- Neamț (66)
- Neamț (65)
- Neamț (64)
- Neamț (63)
- Neamț (62)
- Neamț (61)
- Neamț (60)
- Neamț (59)
- Neamț (58)
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- Neamț (46)
- Neamț (45)
- Neamț (44)
- Neamț (43)
- Neamț (42)
- Neamț (41)
- Neamț (40)
- Neamț (39)
- Neamț (38)
- Neamț (37)
- Neamț (36)
- Neamț (35)
- Neamț (34)
- Neamț (33)
- Neamț (32)
- Neamț (31)
- Neamț (30)
- Neamț (29)
- Neamț (28)
- Neamț (27)
- Neamț (26)
- Neamț (25)
- Neamț (24)
- Neamț (23)
- Neamț (22)
- Neamț (21)
- Neamț (20)
- Neamț (19)
- Neamț (18)
- Neamț (17)
- Neamț (16)
- Neamț (15)
- Neamț (14)
- Neamț (13)
- Neamț (12)
- Neamț (11)
- Neamț (10)
- Neamț (9)
- Neamț (8)
- Neamț (7)
- Neamț (6)
- Neamț (5)
- Neamț (4)
- Neamț (3)
- Neamț (2)
- Neamț (1)

Share of migrants that moved from outside the county
- long-distance migrants 30.8%
- urban 34.0% / rural 66.0%
- employed 50.9% / unemployed 4.1% / students 2.9% / retirees 31.5% / other non-employed groups 10.4%
- below 35 - 18.0% / 35 to 65 - 60.3% / over 65 - 13.6%
- tertiary 17.0% / upper secondary 34.0% / secondary 22.2% / primary education 26.8%
- manager and professionals 21.5% / technicians 9.4% / qualified workers 63.8% / elementary workers 5.4%
- before 1990: 66.0% / 1991 to 2003: 49.9% / 2004 to 2011: 19.1%
Vas lui

Com m utters to th e FUA i n 201 1

Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

439


Migrants to the Vaslui FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Vaslui

- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Zalău, SJ

Functional Urban Area

- county
- functional urban area
- county capital
### Overview of Migration Trends to the 42 County Seats in Romania, at FUA Level, in 2011

#### Migrants to the FUAs between 2001 and 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Migrants (FUAs)</th>
<th>Share of migrants in total stable population (% FUAs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cluj-Napoca</td>
<td>2,082</td>
<td>42.1%</td>
</tr>
<tr>
<td>Oradea</td>
<td>1,242</td>
<td>52.3%</td>
</tr>
<tr>
<td>Timișoara</td>
<td>1,082</td>
<td>44.8%</td>
</tr>
</tbody>
</table>

#### Top economic activities employing migrants

- Trade
- Construction
- Rubber and plastics
- Transport
- Public administration

#### Economic Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable population (FUAs)</td>
<td>90,073</td>
</tr>
<tr>
<td>Migrants (FUAs)</td>
<td>37,877</td>
</tr>
<tr>
<td>Number of students (FUAs)</td>
<td>396</td>
</tr>
<tr>
<td>Number of tourists (FUAs)</td>
<td>23,985</td>
</tr>
<tr>
<td>Unemployment rate (% FUAs)</td>
<td>6.7%</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>354</td>
</tr>
<tr>
<td>Number of modern retail units</td>
<td>9</td>
</tr>
<tr>
<td>Total private income / company turnover (mil. Euro – FUAs)</td>
<td>936</td>
</tr>
</tbody>
</table>

#### Distance to the western border (km)

- Zalău: 90 km

#### Share of migrants by migration period

- Before 1990: 57.7%
- 1991 to 2003: 19.7%
- 2004 to 2011: 23.0%
Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

Top economic activities attracting commuters:
- constructions
- transport
- trade
- public administration
- rubber and plastics

Stable population (FUA) | Employed population (FUA)
------------------------|------------------------
90,073                  | 41,931                 

Share of commuters in total employed (% FUA)

Commuters (FUA)
17.9%                  

Average net monthly wage (Euro, county level)

Employed population (FUA)
354

Unemployment rate (% county)
5.5%

Total private income / company turnover (mil. Euro – FUA)
936

Cultural Vitality Index
-0.44

Share of long-distance commuters outside the county limits 8.9%
Share of commuters by gender (% FUA) male 65.1% / female 34.9%
Share of commuters by age groups (% FUA) aged below 35 - 43.0% / 35-44 - 31.6% / over 45 - 25.4%
Share of commuters by education attainment (% FUA) tertiary 22.8% / upper secondary 41.3% / secondary 24.3% / primary 11.6%
Share of commuters by occupations (% FUA) manager and professionals 18.1% / technicians 6.5% / qualified workers 66.1% / elementary workers 9.3%

TAUs providing most commuters during 2001-2011

Migrants to the Zalău FUA between 2001 and 2011

LEGEND
- County
- Territorial Administrative Units
- Functional Urban Area
- County Capital

Total Number of Migrants to Zalău
- 1 - 100
- 101 - 250
- 251 - 500
- 501 - 1000
- 1001 - 3469
Commuters to the Zalău FUA, in 2011
## Indicators and Data Sources

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable population (FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Number of students (FUA) (see below map(s) with student catchment area)</td>
<td>NIS. Tempo Online Database</td>
<td>2015</td>
</tr>
<tr>
<td>Number of tourists (FUA)</td>
<td>NIS. Tempo Online Database</td>
<td>2015</td>
</tr>
<tr>
<td>Distance to the western border (km)</td>
<td>GIS</td>
<td>2015</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>NIS. TEMPO Online Database</td>
<td>2016</td>
</tr>
<tr>
<td>Unemployment rate (%, FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Number of modern retail units</td>
<td>Revista Piața: The map of modern retail</td>
<td>2015</td>
</tr>
<tr>
<td>Cultural vitality index</td>
<td>NICRT</td>
<td>2010</td>
</tr>
<tr>
<td>Local Human Development Index (LHDI)</td>
<td>World Bank &amp; Prof. Dumitru Sandu</td>
<td>2011</td>
</tr>
<tr>
<td>Migrants (FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants in total stable population (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>TAUs providing most migrants in the 2001-2011 period</td>
<td>Own calculations based on NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants that moved from outside the county (long-distance migrants) (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Top economic activities employing migrants</td>
<td>Own calculations based on NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants by previous urban/rural residence (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants by current economic status (employed / unemployed / students / retirees / other non-employed groups) (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants by age groups - aged below 35, 35-64, 65 plus (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of migrants by education attainment – tertiary, upper secondary, secondary and primary education (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of employed migrants by occupations – manager and professionals, technicians, qualified workers, elementary workers (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Migrants to the FUAs between 2001 and 2011 (maps)</td>
<td>Own calculations based on NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Student migration maps</td>
<td><a href="https://www.rei.gov.ro">https://www.rei.gov.ro</a></td>
<td>2015</td>
</tr>
</tbody>
</table>
## Overview of Commuting Trends for the 42 County Seats in Romania, at FUA Level, In 2011

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Data source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable population (FUA)</td>
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<td>2011</td>
</tr>
<tr>
<td>Employed population (FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Commuters (FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of commuters in total employed (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Average net monthly wage (Euro, county level)</td>
<td>NIS. TEMPO Online Database</td>
<td>2016</td>
</tr>
<tr>
<td>Unemployment rate (% county)</td>
<td>NIS. TEMPO Online Database</td>
<td>2016</td>
</tr>
<tr>
<td>TAU providing most commuters</td>
<td>Own calculations based on NIS.</td>
<td>2011</td>
</tr>
<tr>
<td>Share of long-distance commuters (outside the county limits)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Top economic activities attracting commuters</td>
<td>Own calculations based on NIS.</td>
<td>2011</td>
</tr>
<tr>
<td>Share of commuters by gender – male / female (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of commuters by age groups - aged below 35, 35-44, 45 plus (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Share of commuters by education attainment – tertiary, upper secondary, secondary and primary education (% FUA)</td>
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<tr>
<td>Share of commuters by occupations – manager and professionals, technicians, qualified workers, elementary workers (% FUA)</td>
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<td>2011</td>
</tr>
<tr>
<td>Share of employed migrants by occupations – manager and professionals, technicians, qualified workers, elementary workers (% FUA)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
<tr>
<td>Commuters to the FUAs in 2011 (maps)</td>
<td>NIS. 2011 Census</td>
<td>2011</td>
</tr>
</tbody>
</table>
ANNEX 2

The Index of Magnetism
Methodology

The target of the analysis are the 40 county residence FUAs analyzed in the report, and the dependent variable (i.e. the measure of success of these 40 FUAs) is the number of migrants these FUAs have managed to attract between 1990 and 2011 – the period of transaction to a market economy. As independent variables (i.e. factors that may have generated higher migration numbers), we have tested a number of factors: total stable population in the FUA; share of population of 0-29 years of age; share of population of 0-39 years of age; the number of students; GDP per Capita for the county; net average wage; firm revenues per capita within the FUA; the Local Human Development Index; the share of people working in high value-added sectors; investments expenditure per capita; unemployment share; share of students in the total population; share of people with tertiary education; total FUA public budget; number of tourists to the FUA; cultural vitality index of the FUA core city; average housing unit prices in the FUA core city; new housing units; capital expenditures per capita in FUA core cities (a measure of the efficiency of the local administration); share of active population by FUA; construction permits issued in the FUA; total number of employees in the FUA. In addition, given that access to markets can have both a positive effect (boosting economic growth and private sector activity) and a negative one (losing people and resources to the more developed place), we have also tested to geography-related indicators: distance to the Western border; distance to Bucharest.

To avoid multicollinearity problems and reduce the number of relevant factors, the Principal Component Analysis (PCA) was used. The PCA methodology groups independent variables into several components or factors, based on the intensity of the correlation (e.g. firm revenues is likely to be correlated with GDP output). The components that are independent of each other can be used as regressors. The analysis is carried out in several steps, and in each step, variables that show no clear correlation are excluded from the analysis. The number of final components is established based on variance. The first component will have the highest variance possible. Individual components are homogeneous inside and heterogeneous among them.

The PCA methodology is based on the standardization of data, which allows for the computation of indexes, and can be interpreted similarly to the standardized coefficients in linear regressions. For each component, a score can be computed for each analyzed statistical unit. Several methods can be employed for this. In this case, we used the regression approach.

After going through all the steps of the methodology, the following factor variables remained in the analysis:

1. The total stable population;
2. The number of students;
3. The average monthly wage (Euro);
4. Firm revenues per capita;
5. Investments per capita;
6. Distance from Bucharest.
The first four variables compound the first component, while the last two variables make up the second component. The equations based on which the scores of the two components were computed are:

1. \[ C_1 = 0.908 \times \text{lpop} + 0.778 \times \text{lstud} + 0.779 \times \text{lturnover} + 0.831 \times \text{lwage} + 0.046 \times \text{linvest} + 0.19 \times \text{ldistBuc} \]

2. \[ C_2 = -0.065 \times \text{lpop} + 0.198 \times \text{lstud} - 0.133 \times \text{lturnover} - 0.194 \times \text{lwage} + 0.754 \times \text{linvest} + 0.704 \times \text{ldistBuc} \]

To test the impact of these components on internal migration, a linear regression was undertaken. The first step was to test the linearity of the relationship between the regressor and the regressant. After the regression was run, it was validated through post-estimation procedures. Both components turned out to be significant, with the first component having the most significant influence. Using the regression results and the PCA equations the individual weights of all the independent variables.

Migration between 1991 and 2011, follows according to this analysis the standardized formula below:

\[ \text{Migration 1991-2011} = 0.847 \times C_1 + 0.193 \times C_2 \]

This means that a 1 unit growth in \( C_1 \), leads to a 0.847 growth in \( \text{Migration 1991-2011} \). The influence of each independent variable can be assessed with the following formula:

\[ \text{Migration 1991-2011} = 0.847 \times (0.908 \times \text{lpop} + 0.778 \times \text{lstud} + 0.779 \times \text{lturnover} + 0.831 \times \text{lwage} + 0.046 \times \text{linvest} + 0.19 \times \text{ldistBuc}) + 0.193 \times (-0.065 \times \text{lpop} + 0.198 \times \text{lstud} - 0.133 \times \text{lturnover} - 0.194 \times \text{lwage} + 0.754 \times \text{linvest} + 0.704 \times \text{ldistBuc}) \]

The weights of each independent variable have been identified in the table below:

<table>
<thead>
<tr>
<th>Total absolute effect</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>lpop</td>
<td>0.756531</td>
</tr>
<tr>
<td>lstud</td>
<td>0.69718</td>
</tr>
<tr>
<td>lturnover</td>
<td>0.634144</td>
</tr>
<tr>
<td>lwage</td>
<td>0.666415</td>
</tr>
<tr>
<td>linvest</td>
<td>0.184484</td>
</tr>
<tr>
<td>ldistBuc</td>
<td>0.296802</td>
</tr>
</tbody>
</table>

The figure below includes the dendogram that shows how the 41 FUAs analyzed here can be statistically arranged by clusters. The end result is very close to the clusters/categories provided in this report.
Figure A2.1. Clustering of 41 FUAs using dendogram methodology

Dendrogram using Ward Linkage

Botoșani
Vaslui
Miercurea Ciuc
Sfântu Gheorghe
Giurgiu
Reșița
Călărași
Slobozia
Tulcea
Zalău
Alexandria
Slatina
Cluj-Napoca
Timișoara
Iași
Bucharest
Arad
Constanța
Brasov
Bacău
Sibiu
Pitești
Ploiești
Oradea
Craiova
Alba Iulia
Târgu Jiu
Târgoviște
Baia Mare
Drobeta Turnu Severin
Brăila
Piatra Neamț
Bistrița
Satu Mare
Buzău
Suceava
Deva
Focșani
Galați
Râmnicu Vâlcea
Târgu Mureș

Rescaled Distance Cluster Combine

0 5 10 15 20 25 30 35 40 45

ANNEx 2: THE INDEX OF MAGNETISM METHODOLOGY
To provide more heft to some of the arguments made in this report, a large correlation matrix was run for all the around 3,300 localities in Romania, to test a number of assumptions. Correlation analysis enables the evaluation of the interactions between a host of variables. The significance of the correlation is considered for the three standard levels: 99%, 95%, and 90% (with significance levels at 1%, 5%, and 10%).

The direction of the relationship is given by the sign of the coefficient. A positive sign indicates a direct relationship, indicating that the growth of one of the variables would be accompanied by a similar growth in the other variable. The negative correlation coefficient indicates a reverse relationship – growth of one of the variables is accompanied by a decrease for the other variables.

Another feature is the intensity of the relationship, which can be attributed as follows:

- [0 – 0.3) – low intensity relationship.
- [0.3 – 0.7) – medium intensity relationship.
- [0.7 – 1) – high intensity relationship.

The variables used, the direction of the relationship between the variables, and the intensity of the relationship are included in the matrix below.
Table A3.1. Correlation Matrix on Migration and Commuting

<table>
<thead>
<tr>
<th>% of people aged 0-29 in total population</th>
<th>% of people aged 0-39 in total population</th>
<th>% of people aged 40+ in total population</th>
<th>Local Human Development Index 2011</th>
<th>External Migration Rate</th>
<th>Commuting - Number of people working in a different locality</th>
<th>Number of employed people</th>
<th>Internal Migration Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>970**</td>
<td>259**</td>
<td>.498**</td>
<td>0.010</td>
<td>0.013</td>
<td>-0.030</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.613</td>
<td>0.483</td>
<td>0.123</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>% of people aged 0-39 in total population</td>
<td>Pearson Correlation</td>
<td>970**</td>
<td>1</td>
<td>-1000**</td>
<td>.413**</td>
<td>.533**</td>
<td>.050**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.009</td>
<td>0.013</td>
<td>0.507</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>% of people aged 40+ in total population</td>
<td>Pearson Correlation</td>
<td>-970**</td>
<td>-1000**</td>
<td>1</td>
<td>-413**</td>
<td>-533**</td>
<td>-050**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.009</td>
<td>0.013</td>
<td>0.507</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>Local Human Development Index 2011</td>
<td>Pearson Correlation</td>
<td>.259**</td>
<td>.413**</td>
<td>1</td>
<td>.288**</td>
<td>.253**</td>
<td>.222**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.009</td>
<td>0.013</td>
<td>0.507</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>External Migration Rate</td>
<td>Pearson Correlation</td>
<td>.498**</td>
<td>.533**</td>
<td>.288**</td>
<td>1</td>
<td>.047</td>
<td>.049**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.014</td>
<td>0.010</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>Commuting - Number of people working in a different locality</td>
<td>Pearson Correlation</td>
<td>0.010</td>
<td>0.050**</td>
<td>-0.050**</td>
<td>253**</td>
<td>.047**</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.613</td>
<td>0.009</td>
<td>0.009</td>
<td>0.000</td>
<td>0.014</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
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<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>Number of employed people</td>
<td>Pearson Correlation</td>
<td>0.013</td>
<td>.048**</td>
<td>.222**</td>
<td>.049**</td>
<td>.990**</td>
<td>1</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.483</td>
<td>0.013</td>
<td>0.013</td>
<td>0.000</td>
<td>0.010</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
<tr>
<td>Internal Migration Rate</td>
<td>Pearson Correlation</td>
<td>-0.030</td>
<td>-0.013</td>
<td>.132**</td>
<td>.068**</td>
<td>.094**</td>
<td>.076**</td>
</tr>
<tr>
<td>Sig (2-tailed)</td>
<td>0.123</td>
<td>0.507</td>
<td>0.507</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>N</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
<td>2738</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
ANNEX 4

How Far Do Positive Urban Spillover Reach
Distribution of LHDI by distance from Cluj-Napoca (within 50 km), in 2002 and 2011

- Cluj-Napoca is the most populous secondary city in Romania, and its LHDI is the highest among the 12 county capitals analyzed.
- However, LHDI decays quite fast outside of Cluj-Napoca.
- LHDI starts dropping to half of Cluj-Napoca within 10 km from the city (6.6 km in 2002 and 9.9 km in 2011).

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Cluj-Napoca</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>83.8</td>
<td>6.6 km</td>
<td>49.9 (60%)</td>
<td>52.0 (62%)</td>
<td>47.6 (57%)</td>
</tr>
<tr>
<td>2011</td>
<td>106.3</td>
<td>9.9 km</td>
<td>64.5 (61%)</td>
<td>71.4 (67%)</td>
<td>62.2 (59%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Timișoara experienced an increase in LHDI by 31.2% between 2002 – 2011 (3.1% annually), which is the second-largest following Oradea, Bihor.

Overall, only a small number of areas scored below half of Timișoara’s LHDI both in 2002 and 2011.

The distance from Timișoara where those areas started appearing had gotten further over time (from 12.1 km in 2002 to 24.3 km in 2011).

### Table: LHDI, Distance from Timișoara

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Timișoara</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>76.4</td>
<td>12.1 km</td>
<td>48.7 (64%)</td>
<td>54.4 (71%)</td>
<td>52.2 (68%)</td>
</tr>
<tr>
<td>2011</td>
<td>100.3</td>
<td>24.3 km</td>
<td>57.4 (57%)</td>
<td>63.2 (63%)</td>
<td>64.0 (64%)</td>
</tr>
</tbody>
</table>

**Note:**
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Despite its location disadvantage, Iași ranked 5th in the LHDI in 2011. However, high LHDI is not retained too far: low-LHDI areas start appearing within 10 km of the capital both in 2002 and 2011, and the majority of areas are below the half of the LHDI line.

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Distribution of LHDI by distance from Constanța (within 50 km), in 2002 and 2011

- Constanța’s LHDI in 2011 is still below the mid-point among the 12 county capitals analyzed.
- However, the city experienced a large increase between 2002 and 2011 (34.3% total, 3.3% annual).
- Interestingly, LHDI decays faster over time. In 2002, only 3 communes scored below half point and they started appearing beyond 30 km of the city.
- On the other hand, in 2011, 6 communes appearing from 14.5 km of the city scored below half point.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Constanța</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>67.9</td>
<td>34.5 km</td>
<td>46.4 (68%)</td>
<td>44.6 (66%)</td>
<td>51.5 (76%)</td>
</tr>
<tr>
<td>2011</td>
<td>91.2</td>
<td>14.5 km</td>
<td>59.0 (65%)</td>
<td>57.6 (63%)</td>
<td>62.7 (69%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Distribution of LHDI by distance from Craiova (within 50 km), in 2002 and 2011

- Craiova’s LHDI is around the mid-point among 12 county capitals both in 2002 and 2011.
- However, LHDI decays very fast outside of Craiova.
- In particular, south and west of Craiova form a large low-low cluster.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Craiova</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>76.0</td>
<td>4.0 km</td>
<td>44.6 (59%)</td>
<td>42.9 (56%)</td>
<td>45.1 (59%)</td>
</tr>
<tr>
<td>2011</td>
<td>98.4</td>
<td>10.9 km</td>
<td>56.8 (58%)</td>
<td>55.0 (56%)</td>
<td>58.1 (59%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Distribution of LHDI by distance from Brașov (within 50 km), in 2002 and 2011

- Brașov had lost population by 11% between 2002 and 2011; however, its High-High population cluster had expanded as much as the Bucharest region.
- With respect to LHDI, the areas within 50 km of Brașov show a noticeable improvement.

### 2002
- LHDI, Brașov: 79.3
- Half-point distance: 14.5 km
- Average LHDI around 30 km: 40.6 (51%)
- Average LHDI around 40 km: 41.3 (52%)
- Average LHDI around 50 km: 39.6 (50%)

### 2011
- LHDI, Brașov: 100.9
- Half-point distance: 22.0 km
- Average LHDI around 30 km: 56.3 (56%)
- Average LHDI around 40 km: 55.5 (55%)
- Average LHDI around 50 km: 50.2 (50%)

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Ploiești is located between Bucharest and Brașov, thus has a larger potential than the rest of the regions in the country.

In 2011, all the surrounding areas within 30 km of the city scored above half of Ploiești’s LHDI.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Ploiești</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>73.9</td>
<td>115 (km)</td>
<td>45.2 (61%)</td>
<td>46.0 (62%)</td>
<td>48.3 (65%)</td>
</tr>
<tr>
<td>2011</td>
<td>94.0</td>
<td>30.0 (km)</td>
<td>57.8 (61%)</td>
<td>64.1 (68%)</td>
<td>64.1 (68%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
**Distribution of LHDI by distance from Oradea (within 50 km), in 2002 and 2011**

Among the 12 county capitals analyzed, Oradea experienced one of the largest increase in LHDI between 2002 and 2011 (32.1% total; 3.1% annual).

In 2011, LHDI s of those below 50% of Oradea’s do not deviate much from the half point.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Oradea</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>68.9</td>
<td>8.1 km</td>
<td>40.6 (59%)</td>
<td>47.3 (69%)</td>
<td>45.3 (66%)</td>
</tr>
<tr>
<td>2011</td>
<td>90.9</td>
<td>16.3 km</td>
<td>53.5 (59%)</td>
<td>60.2 (66%)</td>
<td>57.7 (63%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
Distribution of LHDI by distance from Arad (within 50 km), in 2002 and 2011

- Arad itself is not a large city, but forms one of the largest High-High clusters with respect to both population and LHDI in Romania.
- Almost all the areas within 50 km of Arad (except only one in 2002) can be placed above half point.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Arad</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>70.8</td>
<td>38.3 (km)</td>
<td>38.3 (54%)</td>
<td>416 (59%)</td>
<td>371 (52%)</td>
</tr>
<tr>
<td>2011</td>
<td>90.8</td>
<td>-</td>
<td>519 (57%)</td>
<td>50.7 (56%)</td>
<td>48.7 (54%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
**Distribution of LHDI by distance from Pitești (within 50 km), in 2002 and 2011**

- Pitești is relatively close to Ploiești and Bucharest.
- However, its growth rate of LHDI between 2002 and 2011 is the second lowest among 12 county capitals (23.8% total, 2.4% annual), following Sibiu.
- As shown in the plots above, the spatial distribution of LHDI had not improved much during the period.
- LHDI of surrounding areas start dropping to the half of Pitești’s roughly around the same distance in 2002 and in 2011.

<table>
<thead>
<tr>
<th>Year</th>
<th>LHDI, Pitești</th>
<th>Half-point distance</th>
<th>Average LHDI around 30 km</th>
<th>Average LHDI around 40 km</th>
<th>Average LHDI around 50 km</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>79.5</td>
<td>12.1 (km)</td>
<td>35.5 (45%)</td>
<td>39.6 (50%)</td>
<td>42.0 (53%)</td>
</tr>
<tr>
<td>2011</td>
<td>98.5</td>
<td>13.4 (km)</td>
<td>45.9 (47%)</td>
<td>50.1 (51%)</td>
<td>52.4 (53%)</td>
</tr>
</tbody>
</table>

Note:
1. % values in the parentheses are relative to the LHDI of the city in the corresponding year.
2. Half-point distance is the distance from the city where LHDI drops to the half LHDI of the city.
The World Bank has provided direct technical assistance to the City of Alba Iulia in Romania, and has helped the municipality develop a methodology for the prioritization of projects that takes into consideration the needs of citizens, the private sector, and tourists. In essence, every project a local administration undertakes should be seen through such a lenses – i.e. how does the project respond to the needs of citizens, investors, and tourists. To this end, the City Pyramid of Needs methodology was developed, and this methodology was designed to help local authorities think about how they can better cater to these three stakeholder groups.

The City Pyramid of Needs

The same way people define for themselves the issues that are most poignant for their personal development, so can city leaders define the priorities that are critical for their locality. Abraham Maslow has defined a pyramid of needs that has been used in the social sciences for over 70 years. In a similar fashion, a city’s pyramid of needs can be defined, and identify how local authorities can respond better to the needs of those in the city. In effect, we discuss three types of pyramids of needs: 1) the Citizens Pyramid of Needs; 2) the Private Sector Pyramid of Needs; 3) the Tourist Pyramid of Needs. These three pyramids will be discussed in more detail below.

The Citizens Pyramid of Needs

A city’s citizens are without a doubt its main constituent group. Citizens elect the mayor and the local council, and local authorities are directly responsible to them. Citizen needs can largely be clustered in the following five categories: opportunities; housing and basic infrastructure; connectivity; effective and efficient administration; quality of life. These will be discussed in more detail below.
Opportunities. The main attraction of cities are the opportunities they offer. People usually flock to cities because that is where they can find jobs, where they can get education, healthcare, or where they can access larger markets. Usually, the more opportunities a city offers, the larger it will be. And, conversely, the larger a city is, the more opportunities it tends to attract – in a virtuous cycle. Consequently, city leaders have to identify ways to attract and generate opportunities in their city, to make it more attractive to people – both from outside and from within the city.

Housing and basic infrastructure. The many slums of the world are a testament to the magnetic pull of cities. Many people chose to live in squalor so they can have access to the opportunities the city offers. However, city leaders are aware that such a situation is neither desirable nor sustainable. As such, one of the key functions of local governments is to provide basic infrastructure and to allow housing markets to function properly.

Connectivity. For a city to thrive, it has to be well connected. The largest cities in the world are former port cities situated on the coastline of major continents. Good connectivity means that people will have easier access to more opportunities in the area (e.g., it will be easier for them to find another job), while firms will have easier access to a larger labor pool and to larger markets.

Effective and efficient administration. Once a city provides opportunities, basic infrastructure, and connectivity, people will expect and demand a good administration. They will want to be able to get to work without a hassle, to have their streets cleaned, to be able to obtain licenses and permits easily, and so on. This requires continuous improvement on the part of local administrations, as well as open communication channels to the general population and the engagement of local communities.

Quality of life. Cities from the developed world largely provide all of the four ingredients described below. This in essence means that people have a range of options to choose from. In order to attract and keep people, cities increasingly resort to quality of life measures. Among other things this translates into a burgeoning cultural life, entertainment opportunities, places for people to meet and greet, an active restaurant and bar scene, access to green spaces and water bodies, beautiful buildings, good urban planning and good urban design. A recent study has shown that aesthetic beauty is one of the things people valued most about a city.12

In addition to these key building blocks of the City Pyramid of Needs, there are two cross-beams that local authorities should use as a filter for all the projects they propose: social inclusion and climate change.

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Social inclusion. Regardless of how developed a city is, it will always have to deal with social inclusion issues – i.e., there will always be a share of the local population that will be less fortunate than the rest, or which will be directly or indirectly discriminated against. Actively promoting social inclusion not only helps achieve social desiderates, but is also a critical tool for achieving economic goals. For example, a World Bank study indicates that if the estimated Roma population in Romania would work at the average productivity level in the country, the overall GDP would be boosted by 3%. Consequently, whenever devising a new project, local authorities should think how that particular project could also help address social inclusion issues.

Climate change. The more cities develop, the more they tend to pollute. In fact, cities are responsible for around 70% of global GHG emissions. Since they are a major part of the problem, they should also be a major part of the solution. Initiatives, such as the Covenant of Mayors or ICLEI (Local Governments for Sustainability), have started to bring together city leaders from all over the world, to kick-start a joint effort towards solving the global climate change problem. Local authorities should therefore think their projects through a climate change lens, assessing whether that projects helps address climate change issues or whether it makes matters worse.

The Private Sector Pyramid of Needs

The private sector is a city’s source of economic dynamism, and an active local economy is a magnet for people. Without an active private sector, cities often wither away. For local authorities it is therefore important to identify ways to address some of the key needs of the private sector. These can be grouped in the following categories: qualified labor force; land and basic infrastructure; connectivity; effective and efficient administration; clusters.

Qualified Labor Force. The key source of a company’s productivity are its people. It is people that think and design products and services, it is people that ultimately produce these products and services, and it is people that market and sell products and services. Thus when a company decides where to locate, or where an entrepreneur decides where to start a business, the availability of qualified labor force is one of the first things they take into consideration.

Land, Office Space and Basic Infrastructure. Every business requires a place to operate from. Some companies simply rent out or purchase an existent office space, some require a new plot of land to develop their facilities on. It is therefore important for local authorities to have a good grasp of the availability of office space (i.e., vacancy rates) and land parcels in the area (e.g., brownfields or greenfields). A dearth of office space and developable land may restrict private sector development.

**Connectivity** Connectivity is paramount to the private sector. On the one hand, private companies require easy access to a large enough labor pool of qualified labor. On the other hand, private companies need easy access to markets – internal and external. Easy access to a qualified labor pool implies well developed local and regional infrastructure, to allow easy commuting to the city for a large number of people in the region. Easy access to markets may require a well-developed highway network, good airport, rail, and naval infrastructure, as well as the availability of a well-developed (information and communication) ICT infrastructure.

**Effective and Efficient Administration** Private companies require both public policies and public infrastructure to function effectively. Some require that construction permits be made available in a timely fashion, some may require a road connection to major infrastructure in the area, and some may require appropriate tax policies.

**Clusters** As counterintuitive as it may sound, private companies need other companies in the same sector to be effective. There is a wide literature, starting from the Alfred Marshall’s description of industrial districts in 19th century England that show the benefits of co-location. Having other similar companies around allows an easier flow of ideas, a more seamless access to qualified labor force, and higher productivity driven by local competition.

When attempting to attract businesses local authorities should also have in mind the two cross-beams mentioned for the citizens pyramid of needs: social inclusion and climate change. Attracting any business, just because it creates local jobs, may not be the best long-term strategy.

**Social Inclusion.** Most local authorities know that they cannot sustain growth if they only manage to attract low-wage businesses. At the same time, high-profile examples like Silicon Valley show that neither is it sustainable to attract only high-wage businesses. A healthy business mix includes both high-wage sectors (which are usually the source of a city’s long-term growth) and business sectors that allow access to jobs for people with lower skills. In addition, local authorities can encourage the location of businesses in poor neighborhoods and marginalized areas.

**Climate Change** Since cities are the place where most businesses are located, they are also the place where most green-house gases are generated. As such, local authorities have an obligation to address climate change challenges. Among other things this may imply requiring higher environmental standards and stewardship from businesses.

### The Tourist Pyramid of Needs

The large majority of cities are not a tourist attraction, even if they may be visited regularly by people. However, for some, tourism represent a significant source of revenue. Cities with a clear tourist potential should look for ways to meet the needs of tourists. These needs can be grouped in the following five categories: attractions, information, connectivity, accommodation, quality services. These will be discussed in more detail below.

*Figure A5.3. Tourist Pyramid of Needs*
**Attractions.** Tourists go to where there is something to visit. Many local authorities like to fashion their cities as tourist meccas, but when they look at the numbers they see that they did not manage to generate a lot of revenues from tourism, nor did they manage to attract a lot of tourists. Even cities that continuously have their hotels full, may in fact be visited by business travelers, not by people who were there to just visit the city. As such, local authorities have to be very clear about what attractions they can offer tourists (e.g., historic sites, cultural heritage, entertainment, gastronomy, culture) and find the best ways to showcase those attractions.

**Information.** Even the best attractions will remain unvisited if there is no information about them. If local authorities determine that they have something that is worth visiting, they also have to find creative ways to market those attractions to a well-defined target market.

**Connectivity.** The easier it is to an attraction, the more visitors it is likely to enjoy. Easy access to airports, major road infrastructure, rail and naval hubs is critical in this respect, although it is not always within the means of just one local authority to provide this connectivity.

**Accommodation.** If tourists do decide to visit a particular city, they have to have a place to stay. Local authorities are not in the hotel business (this is an area that is almost exclusively covered by the private sector), but they can identify creative ways to encourage the development of the sector – e.g., concession of land/buildings or the development of business associations. In many Romanian cities, the hotel infrastructure is not yet properly developed, so even if these cities have something worth visiting they are not prepared to receive tourists.

**Quality Services.** To have a sustainable source of revenue from tourism, it is important to continuously offer quality services – this includes not only services offered by the private sectors, but also services offered by the public sector (e.g., quality public infrastructure, good public transport, a safe environment). This ensures that the tourists that get there may consider coming back, or may consider recommending the place to someone else.

Attempting to meet the needs of tourist should also take issues pertaining to social inclusion and climate change into consideration.

**Social Inclusion.** If a city benefits from tourism development it should identify ways in which tourism can benefit the less well-off and the marginalized, while at the same time minimizing negative externalities. For example, the rehabilitation of a historic center may end up displacing poor people that live in the area. Similarly, a decision to only showcase the “good” parts of a city to tourists may end up isolating poor neighborhoods even more.

**Climate Change.** Issues pertaining to climate change should also permeate tourism development decisions. For example, local authorities may develop a public transport network that allows tourists to seamlessly go from attraction to attraction, rather than rely on cars to fill in this need.