Understanding European urban development:

A review of selected issues

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December 2012

Abstract

Why do cities matter? This paper offers a rationale for the investigation of the determinants of cities’ performance and related policy implications building on the reasons behind the relevance of the urban dimension in the economic, social and geographical landscape. Drawing from different strands of literature and focusing on specific features such as the economics of population, demography and migration, the structure of urban settlement and the relevance of technological change in cities we suggest that the urban scale is key for the understanding of modern spatial imbalances and regional disparities. The magnitude and the relevance of the urbanization phenomenon, as well as the exceptional challenges associated to the governance of cities, justify the focus of the paper and support the need for future research in the field.
1. Introduction

Urbanization has to be considered the most relevant phenomenon characterizing the social, economic and geographical landscape in recent years. For the first time in human history, more than 50% of world population now lives in cities. This fact is generally linked with positive economic outcomes since urbanization is often associated to development in the light of the higher productivity of urban centres. At the same time cities as cauldrons of diversity bring new exceptional challenges in terms of social equality and negative externalities of agglomeration. In spite of the broad attention devoted to the analysis of the bright and dark size of urban agglomeration, the empirical evidence in support of either one or the other view is still mixed and inconclusive.

Investigating the urbanization phenomenon in Europe has a particular relevance. Europe has a long history of urbanization and most of its economy is concentrated in cities. Despite that standardised data on European cities are not easily available and only recently the European Commission has released data on metropolitan NUTS-3 regions\(^1\) that allow carrying out empirical analyses on the characteristics and determinants of urban agglomerates in Europe. Table 1 reports some basic data on these geographical units.

![Table 1](image)

The magnitude of the urbanization phenomenon and the consensus on the relevance of cities within the social and economic landscape has stimulated the need for a much

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\(^1\) defined as a NUTS-3 region or a combination of NUTS-3 regions with at least 250,000 inhabitants 50% of which should be living in a single NUTS-3 region
stronger research effort devoted to the analysis of the determinants of their economic performance. It has been increasingly suggested that within the new globalized economy the urban dimension, more than the country dimension, is the most relevant geographical scale of analysis (McCann and Acs, 2011). The size of the city and its degree of connectivity, more than the size of the state, is nowadays a key determinant of the economic performance of countries and regions because of their increasing role in attracting investments, talents and firms and their capability to generate a “contextually enabling environment” for innovativeness and growth (Glaeser et al, 2010) developing themselves as “agglomeration centres for knowledge flows” (Miguelez et al, 2010). This implies further abandoning the traditional perspective of analysis that looked for a long time period at cities as very similar to countries, and based on the idea that human capital accumulation and the location of new firms had to be considered as key and self-sufficient determinant of growth and development. Alternative and more heterodox strands of literature have emphasized different and often complementary aspects concussing to determine the performance of cities. Recently, Storper (2008) has argued that institutions and physical geography need to be considered as key factors of urban growth as both forces may provide incentives to firm location and influence the rate of return of both physical and human capital.

Going more in depth in Storper’s argument it is important to underline that “Institutions” is a very broad concept which considers both de jure political institutions and de facto institutions which are the “ways that public sector agencies and private sector groups and individuals interact in detailed ways to shape the rules and resources of the economy” (Storper, 2008; p. 9). As for de jure institutions, the relevance of history has been convincingly documented and demonstrated. Starting from the
evidence provided by Acemoglu et al. (2001) and arguing on the link between the mortality rate of European settlers in former colonies and institutional quality there has been an increasing research effort on the role of institutional aspects focused on the role that the establishment of past institutions and their persistence play in shaping current growth perspectives (Nunn, 2008). Similar arguments are also at the heart of the well-known Putnam’s (1993) interpretation of regional development patterns in Italy, for which he hypothesizes that past political institutions (i.e. experiences of free cities during the Early Middle Age) influence the present level of social capital and hence development.

As long as the “geography view” is concerned the proponents of this hypothesis, which has been often considered as in competition with the “institutions view”, have considered physical and economic geography (i.e., what Krugman (1991a) calls first and second natures) as important as institutions in determining economic development (Bosker and Garretsen, 2009; MacArthur and Sachs, 2001). However with very few exceptions (Acemoglu et al, 2005; Bosker et al., 2008; Percoco, 2011) and despite the increasing consensus on the relevance of the geographical dimension the existing literature has focused on cross-country development differentials with a limited focus on its role - often proxied simply by distance from the equator- and generally found as irrelevant in determining such differentials. The increasing consensus on the role of geography and the renewed relevance that highly geographically specific conditions play under the recent globalization trend has forced scholars and researchers to go beyond this simplistic approach overcoming a concept of development as insensitive to issues like space and locational factors. The coexistence of globalization and localization trends and the impressive evidence in favour of cities as critical context for
growth (McCann, 2008) has allowed for a more conscious understanding of real word phenomena. The study of cross-city variation of development has been progressively linked to different measures of geography which are meant to quantify the natural advantage of cities. In this view urban development is likely to be influenced by both geography and the quality of institutions.

Despite this renewed attention on the complementary and concurring factors shaping the economic performance of cities the understanding of the dynamics at play is still far from being straightforward. To shed more light on the future prospects of urban growth we believe that a more comprehensive perspective on the determinants of economic development is key. Although apparently in competition, both the “institution view” and the “geography view” point at the existence of path dependence of economic development. Through the persistence of de facto and de jure institutions, as well as through economies of agglomeration in economic activity, institutional history and geography concur in shaping paths of economic development (Martin and Sunley, 2006). However, in spite of being widely accepted by scholars in the community of economic geography, the concept of path dependence, in particular when applied at detailed geographical scale of analysis, remains vague with some sporadic pieces of evidence corroborating or rejecting this hypothesis, mainly because of the lack of data and of an appropriate framework.

Overall, although allowing for different perspectives and often lacking of a more comprehensive approach, the existing literature has focused on long run urban development with special emphasis on its primary determinants. The focus of this research is to build on this existing literature contributing to the systematization of the
several existing contributions and trying to shed more light both on the determinants of long run economic growth in cities and on the relevance and suitability of alternative levers for economic policy.

Within the context of the broad range of determinants of urban growth our primary interest will be oriented to the investigation of a number of selected issues that are in our understanding crucially important to analysis urban dynamics:

a) spatial equilibrium and the economics of population;

b) spatial structure of human settlements and its environmental consequences;

c) role of technological change and globalization in cities.

This review, despite not aiming at being exhaustive, is intended to focus on those aspects that in our opinion deserve a deeper attention in order to develop a more comprehensive understanding of the determinants of city growth that, in the perspective of this research, has to be considered in its turn a key determinant for the economic performance of regions and countries.

2. Spatial equilibrium and the economics of population

Population and its features are among the factors that are receiving most of the attention from urban scholars. The reason for such resurgence of academic interest can be found in the revitalization of the concept of spatial equilibrium (Glaeser and Gottlieb, 2009). According to this view, economic space is characterized by spatially homogeneous equilibrium utility as individuals maximize their individual utility with respect to location, i.e. the city in which they choose to live. Endogenous variables in this type of models are housing prices and wages across cities (Glaeser and Gottlieb, 2009). One of the main results of such models is the fact that equilibrium utility is homogeneous
across cities once the value of amenities is taken into account. By proxing utility with income, empirical evidence has found strong support for this view for American cities (Glaeser and Gottlieb, 2009).

Interestingly, Cheshire and Magrini (2009) could not find a similar pattern for European cities since national borders are found to play still a key role. In other words, in a spatial equilibrium model where migration flows are the mechanism through which economic shocks are absorbed throughout the space, Cheshire and Magrini (2009) argue that Europeans are less mobile than Americans and this in its turn imply limited spatial adjustment in Europe.

Bearing in mind that comprehensive data on migration flows among EU regions is lacking for a reasonably long time period to test explicitly for the spatial equilibrium hypothesis, the evidence in support for differences in the migration behavior between Europe and United States tends to be widely supported by the existing literature. Table 2 reports a comparison between EU NUTS-2 regions and US States in terms of labor mobility. Comparing the share of working age population who moved from other regions or countries in the year before 2006 a clear evidence emerges: Europeans are more sticky than Americans. However, if we consider an alternative measure of labour mobility, such as the net migration rate, the figure changes slightly.

[Table 2]

Besides considerations on the spatial equilibrium model and the controversial policy implications that can be drawn from this theoretical framework, the main problem with migration flows within the context of urban and regional development is that the theory
assumes that those flows are not heterogeneous in terms of quality (e.g. productivity or human capital) of workers. Migration in this context is interpreted as an adjustment mechanism able to equalize the economic differences between cities simply by moving people to the richest places – those more endowed with assets such as physical capital – with the effect of equalizing the capital to labour ratio and hence wages and income per capita.

However this is just part of the story and other theoretical approaches demonstrated that the effect of migration is not so straightforward and that a number of additional factors may generate heterogeneous outcomes. In the new economic geography core-periphery models (since Krugman 1991), migration generally has a dual effect on disparities, as it also reinforces agglomeration, with richest regions attracting labour and in this way increasing their home markets, which in turn contributes to the emergence of positive externalities and furthers agglomeration.

Also when endogenous growth mechanisms are included, the convergence effects of migration are not granted. For example in Faini (1996), a model of regional growth is built considering mobile factors, increasing returns to scale and diminishing returns to the reproducible factor. In such a context the paper concludes that convergence only takes place under certain circumstances.

The same holds true when endogenous growth is included in new economic geography models (e.g. Baldwin, 1999), as the dual effect of migrations remains.

Some empirical studies cross fertilizing a number of existing theoretical contributions suggested that the individual heterogeneity of migrants has also to be taken into account. Human capital externalities associated to the mobility of skilled individuals (Moretti, 2004, Gagliardi, 2011, Duranton, 2007) may operate as further agglomeration
force strengthening the economic prospects of those areas that are more able to attract and take advantage from these new available sources of human capital.

Also in models without agglomeration but with labour market distortions, factor mobility can be detrimental to the labour market and income of poorest regions. In Blanchard and Katz (1992), in a model in which states produce different bundles of goods with constant returns to scale, non-idiosyncratic shocks to labour demand lead to fluctuations in wages and unemployment rates as far as there are differences between states in terms of expected income. Those differences are meant to drive migration flows which, in their turn, generate the aforementioned fluctuations.

Overall the aforementioned evidence suggests that the equalization effect of migration cannot be taken for granted and that policies based on the spatial equilibrium approach and devoted at targeting specific spatial contexts are likely to underestimate a number of concurring factors as well as the sequential ripple effects at the local level, such as displacement effects and vacancy chains, that may implies an inefficient use of resources due to the failure of accounting for the real structure of local labour markets (Gordon, 1999). In particular, according to the spatial equilibrium view, regional disparities in terms of GDP per capita will tend to equilibrate in the long run because of migration flows. However, this view considers the movement of people in space as frictionless and technologically neutral. On this point, in what follows, we will review the literature on selective migration (i.e. migration of human capital) and on population aging, both postulating the relevance of place-based policies.

Drawing from these insights this paper is aimed at contributing to a recent and expanding line of work, which looks at workers heterogeneity as supportive argument for the fact that migration does not necessarily operate as an adjustment mechanism.
Those who move out of the poorer areas are often the most skilled ones, so that the poorest regions and countries lose considerable portions of their human capital stock to the richer areas, a phenomenon referred to as brain drain (Beine et al., 2001; Mountford and Rapoport, 2011).

Kanbur and Rapoport (2005), in an economic geography model, show that there are reasons for migration to produce convergence as well as divergence. In particular, they focus on selectivity by education and show that the final effect is different for different values of the parameters and for the endogeneity of the education investment decision. Moreover, their model is extended to allow for network effects where past migrants increase the possibility that prospective migrants will move.

Fratesi and Riggi (2007) show that skill-selective migration flows may be due either to different wage-setting mechanisms in the regions or to the existence of different regional endowments of regional-specific assets, so that skill-selective flows take place even if workers receive a wage that equalizes their marginal productivity and labour is homogenous. As a result, the effect of migration on regional disparities is not determined in advance.

More recently a small number of recent empirical studies have tried to tackle the issue of regional convergence and migration. An analysis without labour differentiation is performed by Maza (2006), who concludes that interregional migration flows have had a convergence effect in Spain over the period 1995-2002.

Ostbye and Westerlund (2007) analyzed the case of Norway and Sweden over 1980-2000 considering the heterogeneity across migrants as a key factor affecting the endowment of human capital in recipient areas. They conclude that the composition of migration effect dominates over the quantity effect for Norway, so that migration tends
to have a divergence effect, whereas in Sweden the opposite is true and migration appears to contribute to convergence.

Coulombe and Tremblay (2009) focus on the skill intensity of native residents, international migrants and internal migrants in the case of Canadian provinces, finding that inter-provincial migrants tends to be more skilled compared to international migrants (consideration that also applies to the Italian case). Their paper does not analyze the effects of migration on income differentials, but shows that, in Canada, inter-provincial migration increases skill disparities whereas international migration lowers them, with the latter prevailing.

Hierro and Maza (2010) concentrate on the internal migration of foreign-born people across Spanish provinces. Adopting a convergence equation approach they showed that this type of migrations does not significantly affect the convergence/divergence process.

Fratesi and Percoco (2012) study Italy, a country where interregional migration flows were a large and very well known phenomenon during the period between the 1950s and 1970s and in recent years, after three decades of very low labor mobility, thousands of Southern graduates have been moving again to Northern regions. On using data covering the period 1980-2001, they find that, although a slight process of convergence occurred between Italian regions, the loss of human capital in the South was detrimental to regional growth.

Finally for the sake of completeness and in addition to migration trends it has to bear in mind that the demographic structure of each geographical context is likely to be significantly affected by the natural change in population. Population ageing driven by an increase in life expectancy and a decrease in fertility rate represents an important dimension. In Europe, life expectancy rose from 69 years to 74 for men and from 76 to
80 for women in the period 1980-2005. The fertility rate declined from 2.5 to 1.5 in the period mid-60s-1995, approaching the low-lowest fertility rate generally set at 1.3 (Billari and Kohler, 2004). This trend is only indicative of the general population pyramid trend as shown in table 3.

[Table 3]

Demographic change may have important economic outcomes at local level, according to the demographic dividend hypothesis proposed by Bloom et al. (2001), as population age is likely to have a significant impact on both aggregate productivity changes and the human capital stock of the local labor force. This is because older workers may be endowed with lower education and hence be less productive implying that regions and cities with older population may show lower growth rates, in the long run, or different levels of income.

Interestingly enough, potential imbalances in the spatial equilibrium can hardly be absorbed through the movement of individuals in case of population ageing as older people are notably less mobile than young workers.

In conclusion to this section and as supported by a number of theoretical and empirical evidences, it is worth mentioning that the economics of European population tends to make the hypothesis of spatial equilibrium less likely to hold and this, in its turn, implies that the econometrics of urban development cannot be reduced to the analysis of the dynamics of housing rent and wage, given amenities.
3. **Urban spatial structure**

The consumption of land is one of the most hotly debated topics in urban policy making both in Europe and US. Perhaps, the engines of such process are cities with their continuing spatial evolution, which brings new housing to be located on the urban fringe.

Urban sprawl is hence a major challenge for policies aimed to promote sustainable development with several actions having been put in place by both local and national governments. Brueckner (2001) has argued that the determinants of sprawl are all related to negative externalities, i.e. discrepancies between private and social costs of transportation, of green spaces on the fringe (that is, market price for buildable plots may not take into account the non-use value) and infrastructure provision to houses built relatively far from the city center.

Opponents and supporters of sprawl disagree on the costs and benefits of the phenomenon, where costs are usually expressed in terms of higher pollution, congestion, energy consumption, public finance imbalances and more recently in terms of productivity.

Brueckner (2001) proposes a review of the causes of sprawl by focusing on market failures as the major driver of suburbanization. The proposed tools to internalize external costs are all Pigouvian taxes (road pricing, impact fees, development fees), while urban growth boundaries are assumed to produce a lower welfare level with high housing prices. In a similar vein, Brueckner (2005) proposes a numerical analysis in which urban growth boundary control tools are found to be inferior (in terms of welfare gains) to the first best congestion toll. Similar results are found in Anas and Rhee (2006).
The effect of urban sprawl on development is not clear a priori. The literature on agglomeration economies has found strong empirical support to the view for which denser places are also more productive since lower distance between firms boosts pecuniary externalities (Ciccone, 2002; Ciccone and Hall, 1996; Duranton et al., 2010). Wheeler (2001) also suggests from a labor market perspective, that lower search costs and better matching also characterize more compact cities. Denser places are also likely to magnify the human capital externalities coming from the exchange and recombination of valuable, individual embodied, tacit knowledge.

Finally sparsely populated areas also reduce the probability of social interactions and this, in its turn, may result in a lower stock of social capital (Putnam, 2002). This situation may also lead to higher transaction costs and a lower economic efficiency of urban systems.

Although this literature points at a negative effect of sprawl on development, it must be stated that new technologies may also reduce the need to cluster as spillovers may function through channels other than face-to-face interactions. These arguments lead Glaeser and Kahn (2004) to argue for a beneficial effect of well-functioning dispersed cities for development. The latter statement remains however controversial because of the existence of a strong supporting evidence in favor of an heterogeneous effect of new technologies on the extent to which different kinds of knowledge and information are efficiently exchanged. Despite facilitating the circulation of codified knowledge the recent improvements in communication technologies is unlikely to exert a major effect on the circulation of the tacit knowledge that is traditionally considered at the root of innovation and technological change (Storper and Venables, 2004, McCann, 2008).
The literature on urban sprawl is mainly centred on US cities and its forms, whereas the European literature has focused on the spatial organization of population within urban regions. In this framework, Cheshire (2006), Kloosterman and Musterd (2001), Mijers (2008), Parr (2004; 2008) have speculated on the possible implications of policentricity for economic development. Interestingly enough, they have argued that policentricity may conjugate the benefits of agglomeration and the avoidance of congestion costs due to excessive density.

Empirical evidence on the impact of urban sprawl on economic development of cities is rather limited and mainly confined to specific cases and US Metropolitan Statistical Areas, whereas research on European urban regions is almost inexistent. Fallah et al. (2012) analyse the effect of population dispersion within MSAs in 1990 on labor productivity in 2001. By using both OLS and IV estimates they find a negative correlation between the considered variables, pointing at a crucial role for agglomeration economies through face-to-face interactions.

Meijers and Burger (2010) focus on the spatial organization of settlements within MSAs and propose measures of dispersion and monocentricity. In particular, monocentricity is approximated by the Zipf’s coefficient in a rank-size regression within each MSA whereas dispersion is measured as the share of population living in smaller cities within MSAs. Results are mixed in the sense that dispersion is found to be not significant in explaining productivity whereas policentricity shows a positive association with productivity and its effect increases as the size of the MSA decreases.

Finally Lee (2007) proposes an analysis of US metropolitan areas in the period 1980-2000 finding different patterns of spatial development so that some cities are characterized by job dispersion whereas others by policentricity.
4. Technological change and globalization

There is a large consensus in the literature on the substantial existence of a competitive advantage of cities in the context of the knowledge economy because cities, as dense urban agglomerates, are the natural empirical counterpart of that concept of local buzz (Storper and Venables, 2004) that is at the root of the emergence of relevant knowledge outcomes (patents, innovation, copyrights etc). Starting from Marshall (1890) with its “Knowledge is in the air” paradigm to the concept of urbanization economies popularized by Jacobs (1960) cities, as places characterized by diversity and variety have been considered a “contextually – enabling environment” for innovativeness (Glaeser et al, 2010). Human capital externalities are likely to be magnified in cities favouring an increase in aggregate productivity that goes beyond the direct effect of human capital on individual productivity (Moretti, 2004). Learning through social interactions and the possibility to share tacit knowledge through formal (market mediated) and informal (not market mediated) channels plays a key role in cities and it favours the emergence of new ideas coming from the recombination of complementary knowledge. In this context cities as cauldrons of diversity and openness operate as font of creativity and innovativeness (Florida, 2003).

A well-documented evidence supports the existence of a relevant link between the urban dimension and the emergence of technological change and innovation (Feldman and Audretsch, 1999), however within the existing literature this value added associated to cities is closely linked to the degree of density of urban agglomerates. Among some recent studies Carlino et al (2006) demonstrated that a city with twice the employment density of another exhibits a 20 percent higher patent intensity. Building on the complementarities between cities and skills and on the idea that density in cities
facilitates taking advantage of local human capital, Glaeser and Ressenger (2009) suggested that proximity, by favouring the spread of knowledge, leads to higher productivity. Finally Florida (2003) merging a social capital and a human capital perspective suggests that cities, operating as agglomeration centres for knowledge flows and facilitating the interactions among knowledgeable actors, generate innovation and economic development.

The concept of cities as key dimension for innovativeness and technological change has relevant policy implications because technological change is unlikely to be neutral (Acemoglu, 2002). In the light of this view technological change is both induced by the concentration of skilled individuals in urban areas and inducing a cumulative pattern of human capital growth. Starting from the twentieth century, skill biased technological change favoured the replacement of unskilled labour and increase wage inequality (Acemoglu, 2002). Earlier contributions such as Machin and Van Reenen (1998) applying this hypothesis to the analysis of six OECD countries found that technological change stimulated skill upgrading. Autor et al (1998) demonstrated that technological change affected positively the increase of skilled labour while Autor et al. (2003) showed that computerization is associated with reduced labour inputs for routine activities and increased labour inputs for non-routine cognitive tasks. Interestingly enough empirical patterns seems to support the idea that at least in the last two decades skill biased technological change has been a typical European rather than an American phenomenon (Pianta, 2005). Despite the fact that the negative effects in terms of wage polarization and skill biased employment have been attenuated by European labour market institutions (e.g. stronger labour unions), technological change is likely to exacerbate the problems associated with unemployment concentration in specific
segments of the population. This is in its turn a major concern for the governance of cities where hot spots of unemployment and lower education attainment are likely to be reinforced by residential segregation and social exclusion.

It remains to question if this “mainstream” view on cities as repositories of substantial competitive advantages is still reasonable in the new globalized economy with the world seen as a “global village”, where location-specific characteristics do not matter anymore and new technologies increasingly reduce the importance of density. It has been suggested that the end of geography and the death of distance characterize the major impact of globalization. More recently the metaphor of the “flat world” popularized by Thomas Friedman has pursued the idea that the world is becoming flatter in the perspective of economic geography and spatial economics mainly due to the role of new information and communication technologies reducing the advantages of “being in the same place”. Despite being intrinsically appealing this approach fails to explain the conflicting evidence on the simultaneous trends toward globalisation and localisation (McCann, 2008). What seems to be evident is that the effect of globalization on the location of economic activities is strongly dependent on their degree of knowledge intensity. Spatial transaction costs have fallen for mundane, standardized activities, for which there are strong economic incentives in locating outside denser agglomerates, while they have risen for creative, non-standardized activities that remain concentrated in specific places (Leamer, 2007). In this framework the role of cities does not seem to be automatically weakened by globalization because the geography of economic activities is likely to become even more polarized, with high value outputs produced in a small number of locations where knowledge inputs, particularly those embodied in human capital, are concentrated (McCann, 2005,
In a context in which knowledge intensive activities are produced in increasing return to scale environments based on agglomeration economies, the competitive advantage of cities becomes more and more dependent on the capability to attract human capital and favour innovativeness and technological change.

The latter consideration has strong policy implications. Not every city can be the winner of the global economy and places where cities based their success on the capability to develop themselves as knowledge centres are likely to benefit substantially from the challenges coming from globalization. In this context the role of Multinational Corporations (MNEs) as carriers of foreign investments and channels of global market engagement justify why cities are increasingly competing to attract global firms implying that they compete in their differential ability to operate as human capital-intensive knowledge hubs (McCann and Acs, 2011).

5. Concluding remarks

The key role of cities is one of the most impressive evidence of the modern economy. Cities are crucibles of innovation; they create major economies of scale and they are increasingly improving in terms of environmental impact and spatial footprint per inhabitant (Glaeser, 2011). However, despite this increasing focus on the potential advantages related to the urban dimension it has to be bear in mind that cities offers benefits and costs and the capability to deal with these diseconomies of agglomeration is key for their future prospects. Drawing on this framework we believe that a deeper investigation of the determinants and impact of urbanization in the European case is particularly relevant for two key reasons. First Europe has a long history of urbanization implying that it can represent a relevant context for the investigation of the mechanisms
determining city growth and decline, second the empirical evidence on European cities is still scant mainly due to the limited availability of data.

This paper has been aimed at providing a preliminary overview of the exiting literature on urban growth selecting a number of issues that we believe are key for the analysis of urbanization in Europe. We suggest that the magnitude and the relevance of this phenomenon deserve a deeper research effort in order to disentangle the causal mechanisms driving city performance. Cross-fertilizing different stands of literature we argued that an in depth understanding of urbanization has to be based on the insights coming from perspectives that were often considered as substitute rather than complement by existing studies. In particular a more conscious approach to the role of geography, beyond the simple concept of distance, allows overcoming the limitations of the standard spatial equilibrium approach including in the analysis a number of additional and concurring factors that are likely to shape the final outcome.

Furthermore this paper devoted a relevant effort to a more detailed investigation of those that are, in our understanding, key features to provide a more comprehensive picture of the concept of urban growth.

We analysed the current state of research in respect to three different areas, namely the economics of population, demography and migration, the spatial structure of urban settlements and the related environmental implications and the role of technological change in cities within the new globalized economy with the aim of identifying opportunities and challenges as well as new research areas.

We conclude that cities are increasing their relevance as crucial actors of the new economic, social and geographical landscape and that the urban scale is key to understand major differences between regions and countries. Despite that it has to be
bear in mind that cities in the developed world are nowadays facing exceptional challenges in terms of demographic change and planning and well as increasing competition in terms of capability to attract talents and develop themselves as knowledge centers. This further suggest a great need for new research in this field aimed at shedding more light on the dynamics at play in order to build up updated informative platform for well-designed future policy interventions.

References


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<tr>
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<td>68.7</td>
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<td>54</td>
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<td>23 SI</td>
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<tr>
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<td>0.5</td>
<td>66.9</td>
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</table>

Source: Dijkstra (2009)
Table 2: Labour mobility in US and Europe (2006)

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>EU-27</th>
<th>EU-15</th>
<th>EU-12</th>
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</thead>
<tbody>
<tr>
<td>Share of working age residents who moved from a different region/state</td>
<td>1.98%</td>
<td>0.96%</td>
<td>1.12%</td>
<td>0.34%</td>
</tr>
<tr>
<td>Share of working age residents who moved from abroad</td>
<td>0.76%</td>
<td>0.30%</td>
<td>0.34%</td>
<td>0.16%</td>
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<tr>
<td>Net migration</td>
<td>0.40%</td>
<td>0.32%</td>
<td>0.40%</td>
<td>-0.03%</td>
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</tbody>
</table>

Source: Gakova and Dijkstra (2008)

Table 3: Population ageing in Europe 2005-2050

<table>
<thead>
<tr>
<th>Eurostat base scenario, EU-25</th>
<th>2005-2050 (in %)</th>
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<tbody>
<tr>
<td>Total population</td>
<td>-2.1</td>
</tr>
<tr>
<td>Children (0-14)</td>
<td>-19.4</td>
</tr>
<tr>
<td>Young people (15-24)</td>
<td>-25.0</td>
</tr>
<tr>
<td>Adults (25-39)</td>
<td>-25.8</td>
</tr>
<tr>
<td>Adults (40-54)</td>
<td>-19.5</td>
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<tr>
<td>Adults (55-64)</td>
<td>+8.8</td>
</tr>
<tr>
<td>Adults (65-79)</td>
<td>+44.1</td>
</tr>
<tr>
<td>Adults (80+)</td>
<td>180.5</td>
</tr>
</tbody>
</table>

Source: Eurostat, EUROPOP2008