

## OUTLOOK ON EUROPE

# KNOWLEDGE AND THE EUROPEAN CITY

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### ABSTRACT

**This paper discusses and illustrates the ‘knowledge turn’ in urban policy across Europe. We identify four manifestations of it: 1) widespread efforts to lure knowledge workers; 2) a growing involvement of knowledge institutes in urban development and planning processes, 3) an explicit ‘knowledge based’ approach to planning and the design of public space, and 4) efforts to underline a ‘knowledge city’ identity using all kinds of marketing and branding techniques.**

**Key words:** knowledge-based development, urban planning, cities, urban policy

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### INTRODUCTION

The now widely used term ‘knowledge economy’ refers to the increased economic significance of knowledge production, distribution and use. The OECD defines knowledge economies as ‘economies which are directly based on the production, distribution and the use of knowledge information’ (OECD 1996). Moreover, knowledge and creativity are considered as engines for economic growth (Romer 1986), and therefore, human capital and R&D have obtained a more central place in economic theory and policy. Powell and Snellman (2004) also stress the increased speed of technological change. They define the knowledge economy as ‘production and services based on knowledge-intensive activities that contribute to an accelerated pace of technological and scientific advance as well as equally rapid obsolescence’ (p. 201).

There are signs that the emerging knowledge economy has reinforced the role of cities. First, the diversity of people, firms and cultures in cities constitute a fertile ground for new ideas and innovations (Jacobs 1969). Second, the dif-

fusion of new knowledge and technology is faster in urban areas, thanks to the density and physical concentration of large numbers of knowledge workers and knowledge-based firms (Audretsch & Feldman 1996). Third, big cities have large and specialised labour markets. This makes them attractive for knowledge-based firms (that need specialised skilled staff) and for knowledge workers, who can more easily find the job they want, and have better career opportunities in the longer run (Polèse 2005). Fourth, due to rising incomes, consumers spend more on luxury goods, and large cities are relatively specialised in this type of goods. The ‘consumption value’ of cities has gone up, especially for well-paid knowledge workers (Glaeser *et al.* 2000). Finally, large cities are traditionally specialised in sectors that show high rates of growth in the knowledge economy: the creative industries and knowledge-intensive services. In sum, agglomeration economies have become more significant in the knowledge economy.

The urban revival is not visible everywhere, however. Some cities (national capitals, global cities, international service hubs, academic centres) have grown very fast, acting as a magnet

for talent and investments, but others (small cities in rural areas, cities with an outdated economic specialisation) have lost out in relative terms: They have severe difficulties in retaining knowledge workers and knowledge-intensive companies. Van Winden *et al.* (2007) discuss the differences between city types concerning their role in the knowledge economy. 'Winning' cities have particular characteristics that make them benefit from the shift towards a knowledge economy: a strong knowledge infrastructure, dense knowledge resources, large numbers of knowledge workers, a diversified economic base, an international airport, and attractive amenities that help to lure knowledge workers.

Despite wide differences in endowments, opportunities and context, cities across Europe have one ambition in common: the desire to be successful in the knowledge economy. In policy documents produced by cities of any type, knowledge has obtained a central place (Knight 1995, was one of the first to apply the term 'knowledge-based development' to cities, and elaborate policy implications). Urban policy initiatives are increasingly aimed at attracting higher educated people, promoting entrepreneurship, developing clusters of knowledge-based industries and 'creative' industries.

In this paper, we first discuss this 'knowledge turn' in urban policy across Europe. We identify four manifestations: (1) widespread and intense efforts to lure knowledge workers and the creative class; (2) a growing role for knowledge institutes in urban development and planning; (3) an explicit 'knowledge-based' approach to planning and the design of public space, and (4) efforts to underline the identity of the 'knowledge city' using marketing and branding techniques. Each aspect is illustrated with examples from European cities.

In the third section, we discuss the various roles of EU and national policies in this respect. We argue that the knowledge turn in city policy and planning goes hand in hand with an 'urban turn' in spatial economic policy. Thanks to their knowledge resources and innovative potential, cities are increasingly considered as economic powerhouses of national interest. Moreover, we discuss the impact of the Lisbon agenda on urban policy at the European level before presenting some concluding remarks.

## **THE KNOWLEDGE TURN IN URBAN ECONOMIC POLICY: FOUR MANIFESTATIONS**

**Knowledge workers as the Holy Grail** – Rather than physical assets, European cities have come to consider knowledge workers or the 'creative class' (loosely defined by Florida 2000, as people with a Bachelor or Master degree) as drivers of growth. The work of Florida has played a very influential role in the proliferation of the idea that economic success is related to the ability of a place to attract the creative class, and that quality of place is a key determinant in that respect. Members of the 'creative class' do not want to live in boring and ugly places: they prefer lively and mixed environments, top-quality urban infrastructures and cultural facilities. And indeed, several studies confirm that high-amenity cities have performed relatively well in economic terms (Florida 2000; Glaeser *et al.* 2000; Carlino & Saiz 2008). Florida's books became a must-have-read for urban policy-makers, and the 'creative class' has become their preferred prey. City governments throughout Europe explicitly recognise that 'urban attractiveness' is a key to lure and retain these desired and supposedly highly mobile people. Industrial cities have especially followed Florida's recommendations. These cities realised that their legacy made it hard to thrive in an increasingly knowledge-based economy. Compared to capitals or service towns, industrial cities suffer not only from a legacy of slow growth industries, but linked to that, they typically also have a backdrop in terms of urban amenities, culture (factory workers were not big culture consumers), quality of housing stock (large stocks of poor quality social housing for industrial workers), and quality of public space. To halt the decline, many industrial cities have bet on investments in culture, amenities and landmark architecture. Well-known examples are the English industrial cities of Manchester and Newcastle that have invested substantially in culture and other urban amenities to realise their ambition of changing their economic destiny. This policy can be classified as economisation: public investments in quality of life (in the form of culture, parks, public space) are being justified in economic terms: they help

to attract or retain knowledge workers to the city.

**Higher education institutes (HEIs) as significant players in urban policy and planning** – A second, related manifestation of the knowledge turn in economic policy is that institutes of higher education and knowledge institutes are increasingly considered as significant players in the urban economy. Throughout Europe, city governments increasingly regard higher education institutes as sources of growth and prosperity. They see universities as breeding grounds of new firms, and therefore enthusiastically support the creation of ‘incubator’ facilities. Moreover, cities encourage the creation of networks between university researchers and local companies by all sorts of subsidy arrangements and network events, based on the belief that university-business interaction is an important source of innovation. Moreover, embedding firms in local knowledge networks is believed to reduce the likeliness of relocation.

Some cities actively try to attract universities or research institutes from elsewhere, in an effort to strengthen their knowledge base. The Dutch city of The Hague does not have a university within its borders and considers this a major drawback. For some years, the city has actively lured establishments from neighbouring university towns. It focuses on legal schools and departments that fit the cities’ profile as an international city of peace and justice (The Hague is the seat of some UN institutions, among which the International Criminal Court).

Also, universities appear ever more prominently on the radars of urban planning departments. Urban planners consider universities as catalysts for the regeneration of urban areas, or as integrated parts of new mixed ‘knowledge districts’ (to be discussed later). Moreover, city planners have come to recognise the economic significance of the student population. Previously sometimes seen as a nuisance, students are now believed to make a city more lively, and they are recognised as the future workforce for the local knowledge economy (Russo *et al.* 2007). Some cities design explicit strategies to attract and retain students. Rotterdam, for instance, set up a ‘student city taskforce’ consisting of city departments, housing corpora-

tions, firms and experts, with the aim of making the city more attractive for Dutch and foreign students. This ‘economisation’ of higher education is a global trend, and is supported and reinforced by influential organisations such as the OECD. In its policy documents, this organisation consistently recommends cities and regions to make more out of their knowledge base, by connecting universities with local industries (see for instance, OECD 2006).

**Changing views on urban planning** – Third, the knowledge turn in urban policy is expressed in the design of public space and architecture. Several cities have invested in landmark architecture and other ‘grand projects’ to underline their ambitions as a ‘knowledge city’. Spain is the country where this is most visible. A well known example is the city of Valencia. One of its prominent residents, the architect Calatrava, created a futuristic ‘city of arts and sciences’, a multimillion euro investment presenting Valencia as a knowledge centre of the twenty-first century. Smaller cities play their part, too. Zaragoza, an industrial city in North-central Spain, has created its Milla Digital (Digital Mile) initiative, a big urban project that transforms more than 100 hectares of former railway facilities in the city centre into ‘a space for innovation and creativity’. The ambition is to create a city of innovation and knowledge, with a mix of residential and business premises as well as research facilities. The area is to be equipped with the most advanced ICT infrastructures.

An interesting expression of the knowledge turn in urban policy is the Europe-wide trend to link knowledge-based activity to urbanity. An increasing number of cities seek to create or foster ‘knowledge quarters’ or ‘creative quarters’ as integrated part of the urban fabric. This ‘re-urbanisation’ of knowledge is fuelled by the growing conviction of policy-makers that innovation and knowledge creation is an iterative and interactive process that thrives in diverse and mixed environments. This development trend marks a contrast with the 1970s and 1980s, when knowledge and science parks were typically created at ‘greenfield’ suburban locations.

The city of Dortmund exemplifies this shift from isolation to integration. Like much of the

Ruhr area, this former industrial powerhouse faced massive economic decline due to deindustrialisation. Since the 1980s, knowledge-based development has been the cornerstone of local economic policy. Back in the 1980s and 1990s, the city developed a mono functional technology park, physically remote from the city. Currently, the city is developing a second, 'new generation' knowledge hotspot on the Phoenix site, a former industrial site near the city centre. In contrast to the first technology park, this one is being redeveloped as a mixed-use area, including residential functions, leisure, and all sorts of amenities. Moreover, to give it identity, the development is explicitly linked to the industrial past of the area. Parts of the industrial heritage are preserved and reconverted. This attempt to preserve or create 'identity' is typical for post-modern knowledge locations.

The city of Newcastle-upon-Tyne is another fine example. Over the last years, the city has successfully transformed its industrial image, through heavy investments in culture and flagship architecture. The city's next ambition is to become a significant 'city of knowledge' in the UK. Among other things, Newcastle intends developing a large 'science quarter' at a former brewery site in the city centre. To realise this ambition, the City Council works together with the University of Newcastle and ONE Northeast, the regional development company for the Northeast of England. The partners have the intention to transform the brewery site into a new mixed-used central district, focused on attracting and developing world-class knowledge and business in science and technology.

The shift from the isolated campus model to integrated approaches has brought knowledge-based development to the heart of Europe's cities. New ideas about the significance of user (read: citizen) involvement in innovation reinforce this tendency. It reflects a neoschumpeterian view of innovation as an interactive iterative process with multiple actors involved.

**Creating a new 'knowledge-identity' through branding** – Finally, in line with their policy ambitions, cities throughout Europe are making efforts to underline their image and

identity as distinctive knowledge cities. The image of a city is generally recognised as a significant soft location factor for companies and people (Braun 2008), and cities deploy increasingly sophisticated marketing and branding techniques to change their image in the 'right' direction. In their external presentation, cities typically seek to associate themselves with knowledge and creativity. The Dutch city of Eindhoven for instance brands itself as 'brainport', and Munich sells itself as 'stadt des wissens' (city of knowledge). In their brochures for foreign investors, many cities stress the quality of local knowledge assets (number of students, skilled labour force, universities, etc). Moreover, events are used to support and sustain the urban image as 'knowledge city'. Industrial cities work especially hard to change their image from industrial city to 'knowledge city'. Birmingham has set up Marketing Birmingham, a partnership that is concerned with modern image management. It aims to bridge the 'perception gap': people associate the city with polluting manufacturing industries, an outdated image (Braun 2008).

## THE URBAN TURN IN SPATIAL POLICY

We have described how the emerging knowledge economy is reflected in changing views and priorities in urban economic policy and city planning. This tells the story from the city perspective. But meanwhile, the EU and some national governments have also become increasingly aware of the significance of cities as drivers of the knowledge economy.

EU policy has stimulated many cities across Europe to formulate their knowledge ambitions. In the second half of the 1990s, the EC (mainly DG Regio) launched a number of initiatives that encouraged cities and regions to create regional and local innovation strategies. Examples are the RIS (regional innovation strategies) and RITTS (regional innovation and technology transfer strategies) programmes. The main threat was to create and support knowledge clusters of firms and knowledge institutes. Although the initiatives were small in terms of funding, they had a significant impact on the awareness of urban policy-makers on the importance of urban innovation policy and the potential of knowledge as driver

for growth. Moreover, these initiatives helped to spread ideas on cluster building and systemic innovation across European cities.

Also, national governments have become more aware of the role of cities as kernels of innovation, and increasingly stress the national economic importance of knowledge cities. Some countries are making a gradual shift from traditional spatial cohesion policy (promoting the economy of poor regions) towards fuelling national engines of growth. In the Netherlands for instance, regional policy has long focused on promoting economic development in rural and peripheral areas, and shifting economic activity from the densely populated Randstad area to reduce the negative external effects of concentration (Lambooy 1992). A policy paper entitled 'peaks in the delta' marks a significant change of orientation (Ministry of Economic Affairs 2004). Regional policy has become an instrument to promote national economic growth in the knowledge-based economy: 'To promote national growth, instead of reducing regional inequalities we need to capitalise on the comparative advantages of regions: the peaks' (p. 11). The new criterion for regional investments by the national government is the 'return for the national economy'. The government wants to focus its investments on a small number of promising urban regions in the country, and to phase out the traditional financial support for the peripheral and predominantly rural Northern part of the country. In France, a similar shift can be observed. Like the Netherlands, France has a long policy tradition of encouraging growth outside its main economic centre (the Paris agglomeration) and to support weaker areas. In 2004, the government launched an ambitious policy initiative that broke with this tradition, and focused on the promotion of strong knowledge-based clusters (many of which are in the Paris region). The idea behind the initiative was to stop the exodus of companies and jobs, and to improve the innovative performance of the country (Loos 2005). It is a large programme: total public expenses to support a number of 'pôles de compétitivité' amount to a substantial €1.5 bn for a 3-year period. The amount is spent on tax exemptions (€300 m), loans (€400 m) and subsidies for R&D institutes and agencies (€800 m) (*Le Figaro* 2005).

**The Lisbon agenda** – The launch of the Lisbon agenda (adopted in March 2000; later complemented by the Gothenburg agenda) has reinforced the trend towards knowledge-based development strategies. It entailed a reorientation of EU structural funds and programmes towards economic growth and knowledge-based development.

This can be exemplified by the URBACT programme, funded by the European Regional Development Fund (ERDF). URBACT aims to foster the exchange of experience among European cities on urban development and management. In the first cycle of the programme, most exchange projects focused on social cohesion and inclusion rather than economic topics. The second cycle of the programme, (starting from 2007) however is much more 'Lisbon oriented' (see URBACT 2007). The majority of funded projects are related to knowledge-based development and innovation.

The Lisbon agenda also affects cities in an indirect way. By signing it, EU member states committed themselves to invest more in knowledge, education and R&D in order to raise productivity and create economic growth. The most concrete ambition was to increase R&D expenditure to 3 per cent of Europe's GDP. This was, at least in principle, good news for cities (which are, after all, the places where the majority of research activity takes place): more money would be channelled to their universities and research institutions. Since, some cities have indeed witnessed a significant expansion of their university sector, thanks to higher investments in higher education by the national government. This happened for instance in the Portuguese city of Porto. Under influence of the national policy to dramatically increase spending on public research and development, the number of PhD students exploded, and so did the scientific output of the university. So far, the economic spin-offs are somewhat disappointing, however, due to the weak links between public sector research and private enterprise and a low absorptive capacity (Van Winden & Carvalho 2008).

## CONCLUSION

In this paper, we have briefly sketched the knowledge turn in urban policies, as well as

signs of an urban turn in national and EU policies. Cities seek to elaborate their knowledge potentials, and national governments and the EU recognise the significance of cities as drivers of the knowledge economy.

A red thread in these developments (on urban and national levels) is the 'economisation' of knowledge. Policy-makers tend to consider knowledge as a form of capital with significant 'yields' for the urban economy, and knowledge institutions are seen as economic assets. Investments in R&D and knowledge institutions are justified in economic terms rather than in terms of their intrinsic value. The economisation of knowledge has broadened the scope of economic policy to a number of urban policy domains. Under influence of Florida's ideas, city politicians increasingly apply an economic justification for investments in leisure, culture and other urban amenities, which would help to build and sustain a knowledge-based economy. More research would be needed to discover to what extent this knowledge turn in urban policy leads to different priorities in urban investments.

A related point concerns the changing identity of cities. An increasing number of cities position and 'sell' themselves as knowledge cities. In fact, the so-applauded 'creative class' is small, and even in the widest definition most citizens are not part of it. Typically, only 20–30 per cent of the working population has enjoyed higher education and works in knowledge-intensive occupations. Therefore, the vast majority of the urban population may not identify with an elitist 'knowledge' image of the city. This may lead to forms of alienation, especially when cities continuously stress the importance of knowledge workers, knowledge clusters and the creative class, and justify urban investments in these terms as well.

Finally, in this paper, we observe a 're-urbanisation' of knowledge in the sense that knowledge-based development is increasingly linked to urbanity (knowledge quarters instead of science parks), and urban investments are channelled accordingly. But in fact, we know little about the added value: To what extent are 'integrated' knowledge quarters superior to the traditional campus and science park models (is there a 'diversity premium'), and how could we measure the differences in performance? To

what extent can city governments 'create' the type of urbanity that would benefit knowledge-based development?

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