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ACRE report 3

Zoltán Kovács
Alan Murie
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Accommodating Creative Knowledge – Competitiveness of European Metropolitan
Regions within the Enlarged Union

Amsterdam 2007
AMIDSt, University of Amsterdam

ACRE

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EXECUTIVE SUMMARY

This report is based on 13 individual reports, one for each metropolitan region that is participating in ACRE. It involves a comparison of these regions, their development paths and the ways in which these development paths leave positive or negative legacies that help to shape the future development. The focus is on the following overarching questions:

- Can we distinguish certain common elements in development paths (and the legacies from them) that relate to the current and future state of creative and knowledge intensive industries?
- How have these regions developed as creative and knowledge intensive regions?
- Can we explain and understand the emerging similarities and differences between city regions through the three theoretical frameworks we have referred to?

In an attempt to connect the empirical findings with the theoretical perspectives several hypotheses have been formulated. One of them is that generally urban regions with better **‘classic’ location conditions** or assets for regional economic development will have better opportunities to develop creative and/or knowledge intensive industries. From this perspective it is suggested that opportunities are best for Milan, Munich, and Amsterdam; followed by a group consisting of Helsinki, Barcelona, Dublin, and Leipzig. Less favourable, but still good appear the conditions in Birmingham, Budapest, Riga and Toulouse. Basic ‘classic’ conditions do not seem to be met yet in Poznan and Sofia.

Some cities also came to the fore with an evident **‘soft conditions’ profile**. Amsterdam and Barcelona, as well as Munich, in that order, are among the economically established cities with the best ‘assets’ in terms of ‘soft’ conditions.

Pathways of economic and cultural/political development depend upon various factors, although several can be considered as most important: 1) the historical background and the ‘age’ of the cities looked at from the perspective of the European urban system; 2) the ‘trajectory’ of industrial development; 3) the impact of geopolitical changes; 4) public policy. Referring to these pathways we expected the following **hypotheses to be supported**:

- Cities known as national or international political and economic decision-making centres have a better chance for innovative restructuring (in our case, for creative and knowledge-based industries) than cities without a pronounced decision-making function.
- Cities that are welcoming and pluralistic have a better chance of attracting people with different life styles and from different cultures and a better chance of benefiting from the innovation associated with these factors than cities that are closed and unwelcoming for these groups.

- Cities associated with small firms, specialised in high-skilled activity, engineering and high-technology activity, as well as cities with an early service profile, where industry has never been a dominating sector, have a better starting point for creative and knowledge-based industries than those, which still have remnants of heavy industry.
- Cities, internationally known as historical-cultural centres, especially those with a preserved urban core, are more attractive for the creative class and therefore have advantage as potential creative cities;
- Cities with good governance and financial and organisational resources to respond to the modernisation of the city required by successive waves of population and economic change have greater capacity to provide the environment for creative industry than others
- Active, well formulated properly financed and well organised and managed innovation and technology policy may be a powerful factor of positive restructuring, emphasizing the advantages or overcoming the disadvantages of the past economic pathway.

The empirical studies on the pathways we carried out provided support for these hypotheses, but also showed that the situation is in fact more complicated and that development paths can be characterised by discontinuities, or factors may influence each other (like socialist regimes, promoting industrialisation and damaging the chances of cities, which before socialism had very favourable preconditions).

When applied to our 13 metropolitan regions, these hypotheses suggest that:

- Amsterdam and Barcelona would be expected to have the best chances for economic success and creative and knowledge industries, with all of the six conditions present;
- They are followed by Munich and Dublin which lag behind only in tolerance and level of pluralism;
- Toulouse ranks high but is further behind the first four cities by not being a pronounced decision-making or cultural centre;
- Birmingham, Helsinki and Milan do not have advantages of the other Western cities but are still expected to be in a better position than Eastern Europe and Leipzig;
- East European cities seem to be in a relatively disadvantageous position because of the inadequate level of city governance, lack of proper financial and organisational resources and the weakness of innovation policy.

In a summary table, reflecting **different background conditions for creative and knowledge intensive industries**, urban regions have been located according to four dimensions that are central to the hypotheses identified earlier.

The economic dimension is represented by three categories, where the strong presence of industry is crucial, especially of heavy industry with its negative consequences. The ‘societal’ dimension is represented by the status as a decision making centre, subdivided into ‘age’ and stability of this status (for instance, old and new capital cities). The key distinguishing factors highlighted separate older, historic cities from others and distinguish between those whose development has been strongly shaped by policy intervention or not.

The table indicates that the state of the metropolitan economy in the 13 city regions is closely related to their historical development path. This is most clearly expressed where cities and regions have more or less bypassed the earlier phases of the Industrial Revolution. Where that situation is combined with a capital or prime city position in the administrative or political field, there is a very different economic position than is associated with regions in which (heavy) manufacturing industries or, for example, mining was important. The level of government intervention has also played a key role.

It is also evident that there are metropolitan regions that do not conform to this pattern. Perhaps Leipzig is the best example of this in our set of regions. This region used to be a major commercial, trade fair and cultural platform located in the heart of Europe. That profile, however, changed into a heavy industry profile during the GDR period. Yet, since 1990 the city-region has been changing its profile again on the basis of a multidimensional transformation process. Leipzig has succeeded in attracting new, high-technology manufacturing activities, but also is heading towards a wider and more varied economic profile, which has links with the pre-communist period.

The attempt to check whether our earlier hypotheses can be supported by empirical findings resulted in some general conclusions.

- 1) It appears that currently most of the West European cities don't generally have a higher share of employment in creative and knowledge-based industries, although the East-European cities started almost from scratch and still have to invest a lot of effort into general economic restructuring and creating and improving the system of city governance. This result may also be partly explained by the level of statistics in the post-socialist countries, which provides only relatively aggregated figures without subdivision into smaller categories and sectors. These figures can very possibly be on the high side.
- 2) As it was assumed on the basis of the evaluation of hard and soft factors, as well as historical pathways, Munich, Amsterdam, Barcelona, Dublin and Toulouse are indeed successful in accommodating creative and knowledge based industries. Birmingham, Helsinki and Milan, which seem to be in a less favourable position according to the complex of success factors identified, are in fact doing really well. They are not only not lagging behind, but sometimes are ahead of the expected leaders.
- 3) The expected leadership of the 'golden triangle' (Amsterdam, Barcelona, and Munich) of cities which most often appeared on the top of the list suggested by the factors associated with success is also not strongly demonstrated by their statistical economic profiles.
- 4) The difference between the expected and real results may to some extent be explained by the strength of policy interventions. At this stage this can be no more than a hypothesis: it suggests an important agenda for further research on the role, necessity and efficiency of policy in accommodating creative knowledge and reinforcing the competitiveness of European urban regions.

There is a huge **variation in the type and nature of policy interventions** influencing the state of creative and knowledge intensive industries among the European cities. However there are some general trends. Strategies fostering the development of creative and knowledge intensive industries can involve both direct and indirect policies. State (national) economic and/or regional development policies generally formulate broad – and sometimes vague – goals for the development of the creative sector, and involve indirect measures e.g. through policies on innovation, R&D or education. On the other hand at local (municipal) level more concrete policy interventions can be observed with a clear orientation, policy guidelines and actions. These policies may, for example, involve projects and support for **economic cluster development**. Policies initiated at national, regional and local levels very often overlap, but there is hardly any coordination between them. Consequently synergy is very low.

The development of creative and knowledge intensive industries has some potential adverse consequences especially in the social domain. The competitiveness agendas of most of the European cities seem to be targeting a rather selective population category: higher educated young people. A broader integrated vision and programme addressing wider issues of inequality and polarisation associated with the development of the creative knowledge city should, however, be developed as well.

Developing clear strategies regarding creative and knowledge-intensive industries is important for cities to recognise their own historically grown qualities and use them to strengthen their economic profiles and reinforce their competitiveness.

1 INTRODUCTION

1.1 The questions to answer

Creative and knowledge intensive economic activities do not develop ‘out of the blue’. Although there are various theories that can be applied to explain economic transformations (see below and ACRE report 1), one view seems to be shared by almost everyone: the need to have a concise, up-to-date analysis and understanding of the different development paths that regions have journeyed along. In order to develop this understanding the early phase of the ACRE project has involved the development of thirteen individual reports, one for each metropolitan region that is participating (ACRE reports 2.1-2.13).

The current document draws the most important findings of these approximately 1000 pages together in a more condensed way. The central aim is to provide a broad based international comparison of the development paths of different European metropolitan regions, including the policies designed for improving the competitiveness of the region. This account involves a comparison of regions, their development paths and the ways in which these development paths leave positive or negative legacies that help shape future development. We will not and can not deal with all the questions mentioned in detail, but focus on the following overarching questions:

- Can we distinguish certain common elements in development paths (and the legacies from them) that relate to the current and future state of creative and knowledge intensive industries?
- How have these regions developed as creative and knowledge intensive regions?
- Can we explain and understand the emerging similarities and differences between city regions through the three theoretical frameworks we have referred to?

1.2 Selection of 13 metropolitan regions

All the case studies in this project represent city regions, which are not leading in the European urban hierarchy and do not belong to the first range global cities. These first range global cities (including London, Paris and Rome) are able to demonstrate the successful development of creative industry – but our questions relate to developments outside these leading cases. And in looking beyond the leading exemplars we have not only selected obvious success stories. Studying the biggest European cities and/or only the cities with a clear economic success would easily result in insights that are difficult to implement in other, substantial but ‘more ordinary’ European cities.

The idea is to study the efforts, made by other city regions to accommodate creative industries and knowledge intensive industries and to improve their competitiveness. The aim is to find out if and how these European cities, in the East and in the West, in the North and in the South can be competitive in the field of creative and knowledge intensive industry and to discover the factors that promote and/or prevent success in this respect. We have included regions of various kinds in order to identify factors affecting success, the difficulties that city regions experience in becoming successful and the ways to overcome these difficulties.

The case studies include eight West European metropolitan regions and five post-socialist metropolises of Central and Eastern Europe. Five of the thirteen consortium partners are in South Europe. Among the case studies there are several national capitals (Amsterdam, Dublin, Sofia, Riga, Budapest, Helsinki) cities with ‘partial’ capital city functions (like Milan and Munich), as well as several cities with a long or recent, but rich industrial history (Birmingham, Barcelona, Toulouse, Leipzig, Poznan). These cities function within different national economies with different levels of wealth and different political, economic and social histories and traditions. The geographical and structural variety of case studies highlights the diversity in Europe.

1.3 Framing creative knowledge cities: Theoretical starting points

The theoretical framework we apply in the ACRE study is built on three interrelated pillars, which are also dealt with individually, but we regard them to be part of one theoretical system: ‘classic’ location theory, path dependence and cluster theory, and ‘soft’ conditions theory. We elaborated on these theories in the literature review of the ACRE project (Musterd et al., 2007). Here we briefly summarise the central elements of these theories.

a) Classic location theory

‘Classic’ or neo-classic theories, as developed by economic geographers like Weber, Christaller, and others, state that the location behaviour of firms should be interpreted on the basis of economies of scale, on agglomeration economies, and on the connectedness between places. Dimensions, such as the extent and quality of infrastructure in its widest sense (communication networks, roads, railroads, waterways, air-connections) are extremely important in these theories since they imply good or bad conditions for forward and backward linkages of firms, with customers and with suppliers. Accessibility and communication opportunities are thus regarded as amongst the most important driving forces in the location decision-making process. In addition to these dimensions, the availability of capital (and thus financial institutions) and labour (the supply of properly skilled labour) and the wider institutional structure are regarded of great importance. Tax regimes and related factors, like rent levels, levels of wages, legislation regarding labour and wages (the existence of minimum wages, available benefit systems in the sphere of health and housing, employment regulations, the ease of access and exit with regard to the labour market, and many other factors of that kind), are also regarded to be crucial dimensions because they directly impact upon the potential cost-benefit balance of firms. Since these factors vary regionally, they can make an important difference in the decision to locate somewhere.

b) Path dependency and embeddedness

‘Path dependency’ refers to the notion that ‘history matters’. Path dependence applies to the development of economic organisation and clusters, but also to the impacts of political and social and other institutional and organisational structures. These often have their origins in the past and their ways of working are affected by this. The role of formal and informal institutions, which are place-specific, is considered as extremely important for the understanding of relevant forms of entrepreneurial and corporate practices in the field of production, communication, and learning. Universities and other institutions of learning are particularly prominent in discussion of institutional legacies that are seen as providing an advantage in relation to the development of creative and knowledge intensive industry. A second institutional dimension of path dependency relates to institutional and organisational change of local, regional and national political-economic systems. Social and political scientists studying institutional and organisational change in East Central Europe frequently use the ‘path dependency’ concept. The dependence on history implies, for example, that privatisation and institutional change in these countries does not necessarily result in the establishment of a West European type market economy or social and cultural milieu (Harloe 1996).

Findings of economic-geographic path dependency studies point towards the significance of (unintended or intended) events, ‘institutional thickness’ and ‘windows of opportunity’, but also of talented and charismatic persons for path creation and reproduction of clusters. There are also legacies in the form of skills and businesses, infrastructure and built environment – legacies that can be of value in the modernisation of economies as well as those that may hamper such response.

The geographies and sociologies of urban regions are also based on long-term development paths. This has resulted in urban regional structures that do or do not fit the actual requirements of the present. Some urban regions have to ‘re-invent’ themselves to a considerable extent. This may be especially true for those that until recently specialised in manufacturing and were cut off from global restructuring. This again especially holds for former state-socialist countries.

The notion of ‘embeddedness’ was initially used by Polanyi (1944) to designate the fact that in traditional societies, commercial trade depended upon social relations. However, the concept is still alive, as is shown by Grabher (2002, 2004) who stresses the importance of interdependencies between projects, personal ties, local relations and organisational affiliations. This introduces a criterion for differentiation, on the basis of the origin of the relationships that are being used: including family (traditional districts), professional groups and university milieu (technological systems), or professional groups (systems based on tertiary or cultural activities). In a recent study Taylor (2005, p. 70) referred to embeddedness as: “the incorporation of firms into place-based networks involving trust, reciprocity, loyalty, collaboration, co-operation and a whole raft of untraded interdependencies”.

c) Soft conditions theory

Path dependency and embeddedness may refer to so-called ‘hard’ as well as ‘soft’ location factors. However, while the ‘hard’ and more classic location factors are still very important in

explaining the location patterns of companies, the academic debate has shifted towards a growing emphasis on ‘soft’ location factors. Such ‘soft’ factors include, for example, an attractive residential environment (Musterd and Deurloo 2006), tolerance of alternative lifestyles and/or ethnic diversity (Florida 2002), a lively (sub) cultural scene, a specific urban atmosphere and ‘look and feel’ (Helbrecht 2004) and the creation of (preferably public) meeting places for business and leisure purposes. Some of these factors are associated with the histories of cities – they include legacies in terms of built environment, culture and tradition. Many associate this potential shift in location preferences of companies from ‘hard’ to ‘soft’ with the global transformation from a Fordist, production-based economy to a post-Fordist, creative and knowledge-based economy.

d) Cluster formation

The – much older – cluster concept is linked to the classic theory. As early as the end of the 1970s Italian economists (Beccatini, 1979) and French sociologists (Ganne, 1983; Raveyre and Saglio, 1984) showed that small and medium-sized enterprises specializing in the same industry were forming a system in which both competition and cooperation relationships were taking place. These were based on social relations and shared conventions. Porter defines clusters as “geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition” (Porter 1998, p. 78). Among these ‘other entities’, Porter mentions suppliers of specialised inputs and infrastructure, customers, manufacturers of complementary products, companies related by skills, technology or common inputs, governmental and knowledge institutions, and trade associations. Porter’s cluster concept rapidly became dominant in academic and policy discussions about urban, regional and national competitiveness. Encouraged by success stories like the knowledge intensive ICT cluster in Silicon Valley (Saxenian, 1994), the Cambridge region (Keeble et al., 1999) or the Third Italy (Bathelt, 1998), many cities, regions and countries enthusiastically started to develop cluster policies.

The cluster concept is of high value, but should not be seen in isolation. Therefore clusters cannot be easily ‘constructed’ overnight, for example through policies. We share the view of Ivan Turok (2004) that city-regions need to be understood as part of wider economic systems and external business connections. The efficiency of communications and transport links should be taken into account, as well as wider national and international (e.g. EU) policies and frameworks. We would add that the way that these clusters have developed should also be taken into account. Globalisation and increasing communication through efficient transport links are relevant, but not sufficient conditions. Increased and almost instantaneous interaction certainly does not imply that places do not matter anymore. Concepts like ‘path dependency’ and ‘embeddedness’ of firms and people are useful to underline that historically grown local conditions are highly relevant indeed (Storper, 1992; Kloosterman and Lambregts, 2001; Musterd, 2004).

It is this theoretical framework which will guide us through the ACRE programme and therefore also is the basis for the evaluation and interpretation of the various development paths we present in this report.

In the following chapters we consider these development paths more fully. We first develop a set of hypotheses based on a more general and ‘distant’ treatment of the theoretical framework while elaborating on the various pathways cities have followed over their history, focusing on the broad economic, societal, historical and geopolitical dimensions that influenced these pathways (chapter 2). The second step is more specifically related to the empirical studies in the ACRE programme and describes the various pathways followed by the thirteen urban regions (chapter 3). This forms the basis for an evaluation of the hypotheses and the construction of a typology of different pathways (Chapter 4). The connection with state and local policies is the focus of attention in Chapter 5. Finally, some future prospects are discussed in chapter 6.

2 DEVELOPMENT PATHS IN ECONOMIC AND SOCIETAL TERMS: SOME HYPOTHESES

2.1 Economic and societal dimensions influencing development paths

We can distinguish between the economic and the more societal, historical and political dimensions that underlie the types of development pathways experienced in metropolitan regions.

a) **Economic.** The economic dimension relates to general technological change, industrialisation ‘models’ and macro-structural trends (changing proportion of manufacturing industry and the service sector, sometimes with long or short domination of manufacturing industries, sometimes without it). In addition this relates to economic organisation, institutional, organisational and financial systems for business and the development of the labour market and skills.

b) **‘Societal’.** This includes historical, cultural, demographic, political and geopolitical dimensions in a broad sense, as well as innovation, technological and creative policy.

Current conditions for development in the creative and knowledge-based industries are to a large extent dependent upon the sophisticated twists of these dimensions over the course of centuries. These have formed a distinctive pathway for each individual city or urban region. These pathways cannot of course be neatly explained by a simple combination of economic and social conditions parameters but are also often influenced by sudden interventions of some external factor that impacts on the trajectory.

There are important breaks in continuity and the accounts of many cities include extended periods in which the momentum previously generated is slowed down or halted. Even in these cases, however, there are examples of economic activity that connect with longer historical patterns and that are revived when political and other factors are favourable. In addition to that we must keep in mind that the meaning of culture has changed. From a more representational function in absolutist times, it has become one of the driving economic forces in today’s society.

2.2 From pre-industrial to industrial to post-industrial economies

At this stage in the research process it is helpful to identify some broadly formulated dimensions of city development in order to formulate some initial hypotheses about path dependency. The dimensions identified below impacted upon the development of the

European urban regions at broadly the same time and consequently provide a common thread for the discussion of individual cities.

The European city system was shaped in Roman times and developed considerably in the Middle Ages. By the time the industrial revolution started in the late 18th century, Europe (especially its Western part) had a high density of cities, which were mostly handicraft, service and trade. Quite a few of these cities had by that time attractive old city centres, some of them not surviving big fires, common for that time, some remaining well preserved. Many European cities were already known at the time as important cultural centres (Milan), university centres or trade and handicraft metropolises, growing around major seaports (Amsterdam).

The industrial revolution brought new developments to the existing European cities and gave birth to new ones. For some of those which experienced growth in the first wave of the industrial revolution, heavy industry later became a serious burden, hampering further restructuring. Urban regions such as Leipzig were ‘damaged’ by later industry and drastic policy measures were needed to promote the new innovative industries and improve the image of these cities.

Some cities, which were not significantly affected by the development of heavy industry but rose on the second wave of the industrial revolution, are in a more beneficial position, with a good platform for technological innovation, based on ‘classic conditions’ such as the availability of skilled labour, R&D and good geographical connectivity. Many of these cities were not strongly affected by heavy and/or intensive industrialisation and retained a service industry profile (often in combination with a wide range of light industries). Some of these cities were able to avoid the restructuring and industrial dereliction problems familiar elsewhere.

It is important to remember that all the phases of industrial revolution and later post-industrial transformation were not happening simultaneously throughout Europe: in Eastern and Southern Europe (on the European semi-periphery or periphery) similar phases started about 30-50 years later than in the old industrial European core (North-Western Europe). This means that cities, located in different parts of Europe can at a given time point be in different technological and economic phases.

While this perspective is valuable it is important that it should not involve a reductionism or create a false dualism that classifies cities as either historic or industrial; or refers solely to when and in what form industrialisation took place. Within the historic/cultural centre cities there are important differences – not just relating to their economies but to the societal factors referred to above. And the label ‘industrial city’ hides the differences between these cities – in nineteenth century Birmingham’s case the small and skilled industry associated with the city of a thousand trades sets it apart from single industry cities. Pathways for industrial cities diverge just as much as those between cities labelled as industrial and others.

2.3 Economic change, policy and the dynamic of the urban system

Simultaneously with the industrial transformation of the last 200-250 years, the European urban network was reshaped by geopolitical changes in Europe, which also influenced the pathways of the cities. Rivalry between the European empires, nationalist movements and European wars were constantly changing the map of Europe. Some cities became capitals of the newly formed national units or influential national sub-centres. The newly acquired political or economic decision-making function became a powerful stimulus for the development of a more competitive and innovative economic structure, which was relatively quickly renewing itself or recuperating after economic ups and downs. Those cities, which are historically known as national or regional capitals (like Amsterdam, Munich or Budapest) are mostly multifunctional cities. A multifunctional profile is a well-known key to a quick recovery and structural flexibility; it helped these cities to avoid extremes of hyper-industrialisation and it provided *a priori* the conditions for a high innovative capacity. In addition to multifunctional legacies, cities may have pluralistic legacies, welcoming legacies associated with educational and other institutions and different legacies in terms of governance and the built environment. All of these begin to build complex cities which are shaped by a variety of development elements.

A powerful mutation diverting Eastern and Central European cities from relatively ‘linear’ city pathways was the socialist period. The emphasis on industrial development, the priority of the industrial sector and the neglect of the service sector resulted in a delay of ‘tertiarisation’ and the preservation of a substantial heavy industry up to the 1990s. Heavy industry was part of almost each large socialist city, and only the countries where market forces were strong enough from the beginning (like Hungary) succeeded in getting rid of heavy industry relatively quickly. The rest (even Leipzig, which had substantial subsidies from the German government) experienced a lot of problems with restructuring and reshaping old industrial landscapes and re-modelling or re-functioning old factory buildings.

The last example brings us to a more general class of important ‘societal’ interferences in a historical economic pathway: public policy, which may be oriented in various directions but is anyway able to influence the economic development pathways rather powerfully if the goal is clear and sufficient financial support is provided.

2.4 The role of policies

Policies aimed at stimulating regional economies have changed focus since the Second World War. In most cities the immediate post war agenda was about reconstruction and rebuilding economies and there were important decisions related to the relocation of key economic activities, deconcentration and decentralisation. In some cases new governance arrangements and the form of the organisation of innovation and technological policy were of critical importance. Additional resources from regional, national or supranational levels also had an impact on the successful moderation of economic modernisation and change. The state socialist regimes in East and Central Europe adopted distinctive approaches to economic planning. Apart from the very specific interventions right after the War (including the

Marshall Plan), the pattern of change over time has been for policy attention to shift from a dominant focus on reconstruction and economies of scale and scope, with a crucial role for infrastructure and communication, towards a dominant focus on working with the private sector, cluster policy, and finally towards creating the proper conditions for creative talent. This also includes a wider social change such as the acceptance of different lifestyles and the incorporation of social diversity into economic policy. Shifting concerns about deconcentration and the revival of city centres also connect with these agendas.

In chapters 5 and 6 we return to this and elaborate on actual interventions in the urban regions under consideration.

2.5 Framing creative knowledge cities: Developed hypotheses

If we draw together the most important theoretical perspectives and concrete evidence about development paths, referring to hard and soft conditions, we are able to formulate hypotheses that incorporate both the economic and the social realms simultaneously. These hypotheses address the economic and demographic position of the cities in the urban network, social and economic policy, the function of culture, the resources available and governance practices.

- Cities known as national or international political and economic decision-making centres have a better chance for innovative restructuring (in our case, for creative and knowledge-based industries) than cities without a pronounced decision-making function.
- Cities that are welcoming and pluralistic have a better chance of attracting people with different life styles and from different cultures and a better chance of benefiting from the innovation associated with these factors than cities that are closed and unwelcoming for these groups.
- Cities associated with small firms, specialised in high-skilled activity, engineering and high-technology activity, as well as cities with an early service profile, where industry has never been a dominating sector, have a better starting point for creative and knowledge-based industries than those, which still have remnants of heavy industry.
- Cities, internationally known as historical-cultural centres, especially those with a preserved urban core, are more attractive for the creative class and therefore have advantage as potential creative cities;
- Cities with good governance and financial and organisational resources to respond to the modernisation of the city required by successive waves of population and economic change have greater capacity to provide the environment for creative industry than others
- Active, well formulated properly financed and well organised and managed innovation and technology policy may be a powerful factor in positive restructuring, emphasizing the advantages or overcoming the disadvantages of the past economic pathway.

These hypotheses will be evaluated after we have elaborated on specific development paths and investigated the importance of various hard and soft conditions for each of the urban regions under consideration.

3 DEVELOPMENT PATHS IN 13 URBAN REGIONS: EMPIRICAL FINDINGS

3.1 Thirteen pathways

The separate reports prepared for each of the thirteen cities provide full accounts of their development paths. These accounts are of unique pathways but there are important common themes as well as sources of distinctiveness (see appendix 1).

This section goes on to connect the accounts of development paths with the main theoretical perspectives outlined previously. Initially we consider how the different city-regions can be characterised in terms of classic location factors. We then consider the various economic development paths which have shaped regions' economic profiles (including the types of activities that dominate, in terms of the level of specialisation; and whether or not specific and strong economic clusters have been formed). These economic development paths are embedded in wider development frameworks which also incorporate the social and political regimes. Finally, in this chapter, attention is given to the extent to which the regions are developing a profile in which 'soft' conditions are becoming more important.

Understanding the path of economic development is important if we are to understand why cities have the economic structures and other attributes that they have. Through this the past also exercises an influence over the future pattern of change and may close off some routes that exist for other cities. But there is not only one development path available for the future – there are at least variants within the trajectory arising from past development. Which of the alternatives future paths, compatible with established trajectories, are followed may be influenced by policy and other factors.

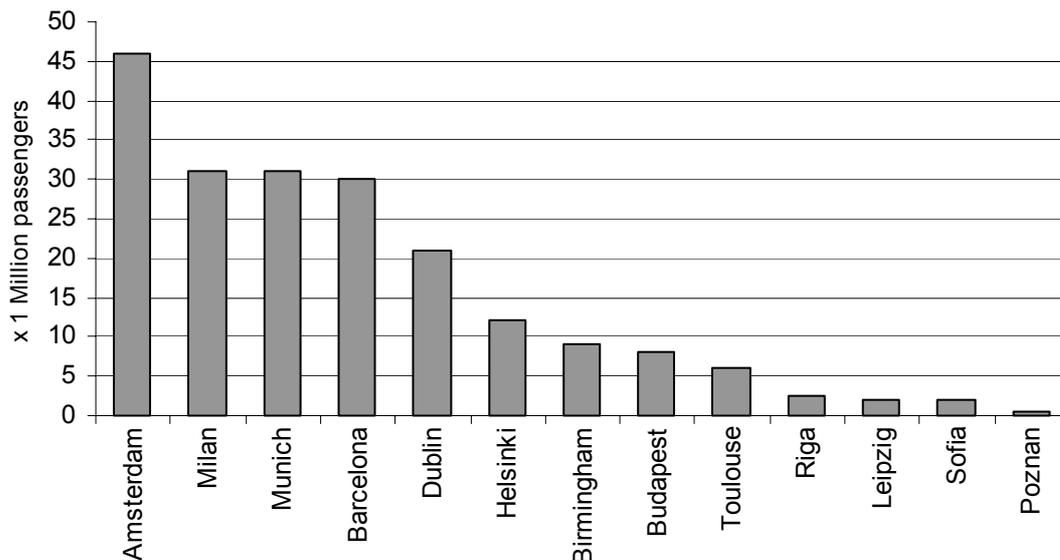
a) Connecting with theoretical perspectives: Classic conditions

Today's cities and urban regions are able to meet 'classic' location conditions at least at a basic level. Larger cities are generally able to offer agglomeration economies, and connections with the outside world tend to become better and better almost everywhere. However, there still are differences between the regional communication networks, road systems, railway-links, and accessibility by water and by air. Availability of capital and labour and the wider institutional setting are also important. Tax regimes, rent levels, the price of labour, and legislation regarding labour and wages remain essential factors, which are offering different opportunities to different urban regions.

Even though most cities have been able to create the necessary 'classic' conditions, there are still differences between them as to the extent these conditions are regarded an important asset or not. Due to the geography of the Western European cities and the evolution of Europe's

urban system after World War II, cities in Western Europe are in a more favourable position. Their agglomeration economies are situated in territories with a high density of internationally related economic activity. Only Toulouse is found at the periphery of the Western European core. The Eastern European cities of Sofia, Poznan and Riga, however, are still in the process of improving the situation for their agglomeration economies. A similar pattern holds for the international connectedness of the cities. Within their own national and international frames of reference, regions may be well connected, but if we compare them in one system, (Figure 1 refers to air transport) differences are substantial.

Figure 1. Ranking of the 13 urban regions on the basis of the annual number of passengers transported through the air (2006)



Source: Airport Council International, 2005

These data show that although most cities are well connected within their national network, there are differences between Western European cities and also between Western and Eastern European cities. The Western cities of Milan, Munich and Amsterdam are ‘hubs’, which are transfer airports for international passengers. Although Barcelona is not established as a ‘hub’, it is also internationally well connected. Most of the Eastern European cities have constructed new port terminals and new airports recently (Sofia, Riga, Budapest), and this indicates a further successful end of the transformation process of Eastern European cities.

Due to the high level of education in Eastern European states, cities in the East possess advantages in the transformation into a knowledge society. For some fields of the creative industries, the advent of new economic activities such as advertising requests an adjustment of qualifications. But there are no indications of labour shortages in those fields in Eastern European cities. Strongly industrialised cities in Western Europe such as Birmingham and Barcelona, however, are strongly challenged to re-train their former industrial workforce and to provide new labour market opportunities for migrant labour. Both cities already host various educational institutions and policies (especially Birmingham) to reduce the existing mismatch of qualifications.

In addition to classic relocation factors, governance structure should be also taken into account. Apart from Milan, all Western European cities share an institutional context, which is seen as an asset. Half of the East European cities consider their institutional framework also as positive feature (Budapest, Leipzig and Sofia). Public-private partnerships for a creative knowledge city are less common. A prominent exception is Toulouse with strong public-private alliances for knowledge industries.

On the basis of the information related to some of the classic location factors, we may conclude that urban regions which are characterised by a number of relevant conditions or assets for regional economic development will have better opportunities to develop as creative and/or knowledge intensive urban regions as well. So we would suggest that opportunities are best for Milan, Munich, and Amsterdam; followed by a group consisting of Helsinki, Barcelona, Dublin, and Leipzig. Less favourable, but still good, conditions exist in Birmingham, Budapest, Riga and Toulouse. Basic ‘classic’ conditions do not seem to be met yet in Poznan and Sofia. However, their positions differ if we look at their individual development paths as described in section 1, and if we compare the urban regions on the basis of the so-called soft conditions and the level on which they have managed to create economic clusters, new qualities may show up as well. We pay attention to these two dimensions in the following sections.

b) The rise of soft conditions: Creative industries as ‘protagonists’ of a new phase

As outlined in Chapter 1, the academic debate has shifted towards a growing emphasis on ‘soft’ location factors. In the UK that shift has been labelled ‘the new conventional wisdom’ and has been particularly influenced by Richard Florida’s ideas. ‘Soft’ factors may include a range of dimensions: in Chapter 1 we referred to an attractive residential environment, tolerance of alternative lifestyles and/or ethnic diversity, a lively (sub) cultural scene, a distinctive urban atmosphere, available (public) meeting places for business and leisure purposes. But also levels of inequality and social cohesion are often mentioned, as well as the quality of life in the city as a whole.

Here we present some information on these dimensions, again derived from individual reports on the conditions that are regarded relevant for the opportunities for economic development, especially in the spheres of creative industries and knowledge intensive industries.

Clearly, there are major differences between the urban regions in our research project as far as their position in terms of so-called soft factors for economic development is concerned. Based on systematic inventories, some cities come to the fore with a particularly strong ‘soft conditions’ profile. Amsterdam, Munich and Barcelona are among the economically established cities with the best ‘assets’ in terms of ‘soft’ conditions. However, urban regions located in former socialist countries also show much potential. Budapest, Leipzig, and Riga seem to stand out most, but also Sofia is not without potential in these spheres. Most of the other urban regions show moderate positions in terms of the conditions labelled as ‘soft factors’, although all cities show at least some positive qualities.

Most cities seem to be strong in culture and entertainment (Birmingham, Poznan and Toulouse do not emphasise this aspect). Attractive urban milieus were mentioned frequently in a range of cities. Tolerance and diversity are only identified as a strong asset by a few cities. Apart from the acceptance of gay relations which is used as an indicator by Florida (e.g. Amsterdam), there are other forms of social inclusion of minorities. This is either related to a long history of mixed cohabitation of various ethnic groups (in the case of Sofia) or the integration of new labour migrants. Although Western European cities which had continuously been migrant destinations for the last 130 years employed various programmes for the integration of the labour migrants, some cities were more successful in developing and supporting acceptance and upward mobility for immigrants (Birmingham and Amsterdam). Dublin as well as Eastern European cities which were only faced with immigration recently appear to be more challenged to secure tolerance, understanding and support for newly arriving immigrants from non-EU countries.

Tolerance and diversity should not only be conceived in terms of immigration and gay culture. In addition the social position of women should also be taken into account. While the women's movement supported the change in gender relations in Western Europe and led to a strong participation of women especially in creative industries, the social infrastructure in most Eastern European cities changed in favour of women's' labour participation at all qualification levels at a much earlier stage. Although they were unable to occupy the highest echelons in society and economy in Eastern Europe, female labour participation rates were much higher than in most West European countries and women were more visible in knowledge industries. Both factors, a strong social infrastructure for family and an active public negotiation of the position in women, are only found together in Helsinki, which has the highest women's participation and voice in creative and knowledge economies. Similar to tolerance and diversity, only a few cities can profit from their image of attractiveness. This includes Amsterdam, Barcelona, Dublin and Munich in Western Europe, but also Budapest and Riga in Eastern Europe which can count on long history of popular tourist destinations in Eastern and even Western Europe (especially Budapest).

Quality of life was discussed differently in the various ACRE-reports. Fast growing cities including Milan and Dublin mentioned lack of public transport and long daily commuting times as a severe threat to the quality of life. Other reports brought up safety and equality, whereas most of the research teams did not make any statement about the quality of life in their reports. In other words, this soft factor is interpreted differently amongst European cities. In the ongoing research more attention is needed to specify all of the elements of influence here.

The housing market situation reveals that in many cities the housing market does not seem to be functioning well enough to be attractive to potential inhabitants. This often means that the existing stock is in high demand, but that simply insufficient housing is available. In addition to that, the maintenance of the overall quality of housing is challenged in some East European cities (e.g. Budapest and Sofia). Only two cities, Leipzig and Poznan, see their housing market as a soft condition asset. This is related to the availability of adequate housing and even the oversupply of housing.

c) Cluster formation

In most urban regions urban economic development, whether driven by soft condition, or by classic conditions, or by historically developed pathways to growth, is connected to the formation of specific spatial economic clusters. Clustering as a mechanism to allow profiting from agglomeration advantages is a very strong process. As said before, over time clustering also tends to result in increasing strength of economic conglomerations. The development paths often result in the production of interrelated functions and institutions, which together create new conditions for the attraction of again other firms and institutions. Sometimes it is not so much the real interaction between firms or the direct exchange of knowledge that results in attraction of new activities, but it is the presence of ‘buzz’, ‘creative vibes’, and the like, which is regarded as an important reason ‘to be there’.

In all of our case studies plenty of examples of cluster-formation could be shown: media clusters in Amsterdam, Leipzig and Munich; craft and jewellery clusters in Birmingham; ICT in Helsinki, Budapest and Munich; aeronautics and ICT in Toulouse; textile, furniture, fashion and design in Milan. Many of these clustering processes resulted from private decisions related to firms. In most of the urban regions, governments also actively intervened and developed techno-parks, brain-parks and comparable business parks, aimed at certain economic activities. In fact, the exceptions may be more interesting than the rules.

One of the interesting exceptions we found was in the Sofia case. There, until very recently, the Sofia government did not deliberately aim for cluster formation. There are clusters in the urban region, but these have been formed in a slow incremental process. Because of the lack of organised modern and well-accessible business parks it became economically viable for big investors to create one in the private market. That park, Sofia Business Park, was recently established between the airport and the mountains, well connected to the rest of the world. Consequently, it became a great success for the developer, but perhaps not so much for other parts of the urban region. The joint development of an upper middle class residential park, adjacent to the business park, may even result in a development of a new city, better equipped and better accessible compared to other parts of the region, and because of that potentially a big competitor of the older parts of the city of Sofia.

3.2 The state of the metropolitan economy

The thirteen urban regions we consider are characterised by different economic structures. Even though it is difficult to compare the urban economies across the metropolitan regions, because it is hard to find comparable data and because the regions are not defined in exactly the same way, remarkable variation can be detected.

All urban regions we consider have experienced a similar trend away from manufacturing industries towards more service oriented, and towards more ‘creative’ and ‘knowledge intensive’ industries, including many services. Despite these trends, there are obvious differences. Clearly there are urban regions that are characterised by the fact that traditional manufacturing industries have almost disappeared. Amsterdam, Helsinki and Dublin are the most evident examples of that kind, with very low percentages of employees still in industry

categories C-E. Other regions, however, like Milan and Poznan, are characterised by still a very large share of employment in these industries. In between there is a category of cities and metropolitan regions that is still relying on a relatively large number of manufacturing industries. That category includes Budapest, Riga and Sofia, but also Toulouse, Barcelona, Munich and Birmingham. The more precise types of industries, however, vary substantially between these metropolitan regions. The Munich region, for example, is currently characterised by a large mixture of activities, the Munich Mix: a mixture in terms of size as well as the sector structure. Other urban regions, such as those of Toulouse and Helsinki are characterised by a relatively large weight of one particular sector (electricity and aeronautics was already an early specialisation of Toulouse, and ICT and wireless communication became the key activity in the Helsinki region); however, the dominance of these industries does not imply that this is the only activity important for these regions.

The historical development of the regions is extremely important for their current profiles. This is most clearly expressed where cities and regions have more or less bypassed the earlier phases of the Industrial Revolution. This is true for Amsterdam, Munich, Dublin, Toulouse and Riga, for example. They have had manufacturing industries, but not as many and as dominant as the other cities. Where that situation could be combined with a capital or prime city position in the administrative or political field, the implications for the economic structure are that they deviate even more from those regions in which (heavy) manufacturing industries and also for example mining played a big role. Also the level of government intervention seems to have played a role.

Other regions, however, long continued to rely upon manufacturing industries. This can be seen in Budapest, Birmingham and Barcelona, for example. The type of industries that have developed in these regions is important, though; some seem to have a rather differentiated manufacturing industry profile, including strong small business and craft-type of industry character. Those cities that have such profiles may experience easier transformation to a creative cities profile than cities with a more one-sided heavy industry profile.

There are also exceptional metropolitan regions. Perhaps Leipzig is the best example of this in our set of regions. This region used to be a major commercial, trade fair and cultural platform located in the heart of Europe. That profile, however, changed into a heavy industry profile during the GDR period. Yet, since 1990 the city-region has been changing its profile again on the basis of a multidimensional transformation process. Leipzig succeeds in attracting new, high-tech manufacturing activities, but also is heading towards a wider and more varied economic profile, which has links with the pre-communist period.

3.3 The state of the creative and knowledge intensive industries

The common pattern of economic transformation of the metropolitan regions under consideration, away from manufacturing, does not imply that all of these regions have now adopted a profile that can be labelled: creative and/or knowledge intensive. None of the metropolitan regions had more than 35 percent of the employment in these two sectors.

The creative industries we distinguished in the ACRE programme include: advertising; architecture; arts and antiques; crafts; design and designer fashion; video, film, music and photography; visual and performing arts and music; publishing; computer games; software and electronic publishing; and radio and TV. There is a shared opinion that these sectors effectively represent the creative industries (Kloosterman 2004, Musterd et al 2007). The knowledge intensive industries we considered are information and communication technology; the financial sector, including insurance; law and other business services, such as accounting, auditing, tax consultancy, market research, management consultancy; and R&D and higher education.

The activities in these areas, which are the focus of our research project, are again not easy to compare. Even though we applied international NACE classification codes, some activities are treated differently in different contexts. Therefore, some caution is required. The arts and antiques sector, for example, may include all second hand sales – including charity as well as antique shops. In some contexts these are included in this sector; yet in other contexts, they are not.

Moreover, some sectors are not one-dimensional. Architecture, for example, includes the creative part of the job: designing a building; but also the construction design and calculation work that is routine and non-creative. These peculiarities and differences in the way concepts are defined have implications for comparisons between cities.

A crude comparison, however, is helpful in our endeavour to understand what the relevant conditions are for the settlement of the firms under consideration. Table 1 provides some information derived from the individual reports and focussing on employment figures.

For the creative industries as a whole the shares of employment in the metropolitan region vary between 6 and 14 per cent. High shares of creative industry related employment are found in Milan, Budapest, Barcelona and Dublin. For Barcelona, the relatively high score seems to be related to the arts and antiques sector, which is defined more widely than in Amsterdam, Helsinki and Toulouse for example. A more detailed comparison of sub-sectors may shed more light on the various profiles. It then becomes clear that Leipzig and Munich, for example, stand out in their activities in video, film, music production and photography; Helsinki, Munich and Amsterdam are strong in software, computer games and electronic publishing. The share of total employment in each of the sub-sectors is generally modest. A closer inspection of the creative industries along with their growth perspectives revealed that over all of the thirteen regions computer games, software, and electronic publishing; motion pictures and video activities; radio and TV activities; and advertising were the most important. However, there were also clear differences between the regions.

Table 1. Employment in creative and knowledge intensive industries in 13 European metropolitan regions; data collected between 2000 and 2006¹

City regions	Employment in creative industries (%)	Employment in knowledge intensive industries (%)	Employment in creative and knowledge intensive industries (%)
Amsterdam	8	18	26
Barcelona	12	10	22
Birmingham	6	19	25
Budapest	13	16	29
Dublin	11	10	21
Helsinki	7	17	24
Leipzig	9	16	25
Milan	14	17	31
Munich	8	21	29
Poznan	7	11	18
Riga	6	23	29
Sofia	8	19	27
Toulouse	6	16	22

Source: ACRE reports 2.1-2.13

In Amsterdam and Helsinki, apart from these general sectors, publishing also played a crucial role; Birmingham is strong in crafts, next to radio and TV and music, visual and performing arts. Riga, Toulouse and Poznan have a potential in architecture; Sofia, Budapest, Dublin and Barcelona show a lot of activities in architecture as well, but also in publishing. Milan stands out in terms of the presence of design and especially fashion design.

For the knowledge intensive industries a similar exercise resulted in the conclusion that over all of the thirteen regions activities in the law sector (legal sector, accounting, book keeping, auditing, etc.); the financial sector; and the R & D, and higher education sector were regarded the most important and/or the most promising economic activities. However, here too, differences could be found. Cities like Munich, Birmingham, Amsterdam, Riga and Sofia expose a strong ICT profile. That ICT component is – in comparative terms – on the weaker side in Barcelona, Dublin and Poznan.

It is important to remember that in most of the post-socialist countries a big share of the labour in knowledge intensive industries is low-skilled and low-paid, which may explain such high employment figures. As a result the importance of knowledge intensive industries in the city regions of Eastern Europe may be considerably overestimated.

On the whole this very approximate comparison brings us to an assumption that our 13 city regions tend to develop two different profiles, one based on the creative sector, the other on knowledge intensive industries. There are hardly any city regions where both sectors are equally strong, even considering possible errors in figures due to the different quality of statistics. This means that for the further research factors promoting the development of one of these two profiles should be explored in a more detailed way.

¹ In the case of Toulouse the figures are for 1999

4 THE VARIETY OF URBAN REGIONS: THE PAST AND THE PRESENT

4.1 An evaluation of the hypotheses

The various development paths we summarised in chapter 3 and the state of the urban economies we briefly described in this chapter reflect the cultural, economic and political heritages and other conditions that are shaping the current economic profiles. The question now is whether our earlier hypotheses can be supported by empirical findings.

The hypotheses formulated in chapter 2 indicate how the urban regions would be theoretically positioned based on the most important factors that impact upon their economic perspectives. Six conditions are assumed to be most beneficial for metropolitan regions to provide better chances for innovative restructuring (creative and knowledge-based industries).

a) The status of an international or national decision-making centre.

In our case 9 out of 13 cities have this advantage, as national capitals (Amsterdam, Budapest, Helsinki, Dublin, Sofia and Riga), or with partial capital city functions (Munich, Milan and Barcelona).

b) Being known as welcoming and pluralistic.

This refers mostly to the most developed Western cities with long traditions of democracy which provide conditions for the tolerance towards ethnic or sexual minorities, mostly towards the low-skilled 'new' immigrant minorities (Amsterdam, Barcelona, and Birmingham) or East European multi-ethnic cities with a stable tradition of peaceful co-existence of the 'old' ethnic minorities (Sofia).

c) Specialisation in high-skilled activities (engineering and high-tech) or the early service profile without domination of industry.

This group includes the well-known high-tech centres as Munich, Toulouse or Helsinki (which has joined this group recently due to the success of Nokia), as well as the multifunctional, mostly service oriented centres as Amsterdam, Barcelona, Dublin and Poznan.

d) The status of a historical-cultural centre and/or well-preserved urban core.

Cities with traditionally rich cultural life, most of them being once or remaining national capital cities, make the core of this group (Amsterdam, Budapest, Munich, Dublin, Riga), joined by a more recent success stories, combining the historical heritage with the new cultural functions (Milan, Barcelona).

e) Good governance and availability of financial and organisational resources for modernisation.

The cleavage lies between the cities in the North-Western Europe, where city governance is strong enough to develop and implement different kinds of policies, and the cities of Southern and Eastern Europe (Milan, Budapest, Riga, Poznan, Sofia), which either lack sufficient resources or sufficient regulation instruments for making urban policy successful, even when the direction is chosen correctly.

f) Active, well-organised and financed innovation and technology policy.

Good governance not always results in the presence of a well-elaborated innovation and technology policies. It is well pronounced in the high-tech city regions like Munich and Toulouse, plus in those of the Western cities, which are actively promoting the restructuring (Birmingham, Barcelona, Dublin and Amsterdam). At the same time Helsinki and Milan seem to be more passive in pursuing a targeted innovation policy. In some East European cities the innovation policy does exist but so far mostly on paper.

Taking together all the six conditions results in a following rank order (Table 2):

- Amsterdam and Barcelona would be expected to have the best chances for economic success and creative and knowledge industries, with all the six conditions present;
- They are followed by Munich and Dublin, which lag behind only in tolerance and level of pluralism;
- Toulouse ranks high but behind the first four cities by not being a major decision-making or cultural centre;
- Birmingham, Helsinki and Milan do not have advantages of the other Western cities are in a better position than Eastern Europe and Leipzig.

Table 2. Ranking cities according to the suggested hypotheses

	Cities known as national or international political and economic decision-making centre	Internationally known historical-cultural centres	Cities with good governance and financial and organisational resources	High-tech activity or early service profile, where industry has never been a dominating sector	Active innovation and technology policy	Cities known as welcoming and pluralistic
Amsterdam						
Barcelona						
Dublin						
Munich						
Helsinki						
Budapest						
Milan						
Riga						
Sofia						
Leipzig						
Toulouse						
Birmingham						
Poznan						

Source: ACRE reports

East European cities seem to be in a relatively disadvantageous position because of the inadequate level of city governance, lack of proper financial and organisational resources and the weakness of innovation policy. Nevertheless, the entrepreneurial spirit, detected in most of them is positive and gives Eastern Europe great potential for the future.

This is a ‘theoretical’ view on our 13 city-regions. The first empirical research results of the ACRE project showed that although our initial hypotheses in general prove to be realistic, there are quite a few deviations from the expected result. Some city-regions are doing substantially better and some worse than it was assumed given their ‘theoretical chances’. It is also important to keep in mind the difference between the real state of the economy and its perception by local policy-makers, politicians and researchers. The ability or inability to look at one’s city in a broad international context has an important impact on formulating the problems and policy issues.

4.2 Thirteen pathways: An initial typology

Figure 2 brings together some of the key dimensions referred to in our analyses and positions the urban regions on the basis of the empirical analyses carried out.

Figure 2. Initial typology of cities with different background conditions for creative and knowledge intensive industries

Economic profile		Economic profile by 1990s								
		With heavy industry and/or seaport activities		More mixed industrial economy, specialised in engineering and high-tech		Early service profile, diverse industry				
		active	not active	active	not active	active	not active			
Role as a political or economic decision-making centre (national or international)	Innovation and technology policy after 1990	Internationally known as a hist.-cult. centre	Acquired before 19 th century	yes	Leipzig	Riga	Munich	Budapest Milan	Dublin Amsterdam	
			Existing from 19 th century	yes					Barcelona	
				no		Sofia				Helsinki
			Not a major decision-making centre	no			Toulouse Birmingham			Poznan*

* Not active at the state level; more active at the local level

Urban regions have been located according to four dimensions that are central to the hypotheses generated in chapter 2.

The economic dimension is represented by the three categories, where the strong presence of industry is crucial, especially of heavy industry with its negative consequences. The 'societal' dimension is represented by the status as a decision making centre, subdivided according to era and by the stability of this status (for instance, old and new capital cities).

The key distinguishing factors highlighted separate older, historic cities from others and distinguish between those whose development has been strongly shaped by policy intervention or not. Older capital cities tend to also be cultural and educational centres and to carry forward important traditions in these fields. However they do not have a monopoly of positive attributes and the skills, diversity and inventiveness associated with successful modern cities often flourished partly because older cities were more closed to new ideas and enterprises.

The picture we get from this classification helps to evaluate the starting conditions for the creative and knowledge-based industries by early 1990s.

Some two thirds of our urban regions are decision-making centres. More than a half of the cities are internationally known as historical-cultural centres.

It is symptomatic that heavy industry remains important for the economic profile only in the post-socialist cities (Sofia, and Riga), with Budapest and Leipzig already standing one step ahead in industrial restructuring. Those of the West European cities, which have previously been known for industrial or seaport activities (Birmingham, Barcelona, Amsterdam) are passing the stage of radical economic restructuring much earlier and are leaving this category.

Innovation and technology policy after 1990 is the only parameter on this picture which reflects the effort made to achieve restructuring in recent years. The matrix shows that policy efforts (especially those which are successful) are much more evident in the Western cities (apart from Helsinki and Milan). The question of whether it is success that stimulates efforts for regulation and improvement, or whether, on the contrary, efficient policies provide the conditions for economic success remains open.

Although figure 2 incorporates an historical perspective, it is evident that it cannot capture the uneven and dissimilar histories of the cities. Periods of economic growth and restructuring and of dramatic political and regime change do not follow the same pattern in all of these cities. We have remarked on the sharp discontinuities that are critical in some cases. Nevertheless, it is evident that there are both long established traits that survive short term changes (cultural, traditional and some organisational features including those related to education and skills) and legacies associated with shorter time scales (e.g. physical infrastructure and policy).

Other factors also influence development pathways and some factors may offset one another. For instance, socialist industrialisation, artificially supported by the state damaged the chances

of cities which, before socialism, had very favourable pre-conditions and ones that are important now for the creative sector (Riga, Budapest, Leipzig). The strong industrial profile of these cities has not provided an asset to re-establish the former competitiveness of those cities. In addition, the capacities in creative and knowledge industries that existed before World War II were distributed to other cities. A new urban system of economic specialisation was established in Europe between 1945-1990. Due to the strong inter-urban competition, it has been difficult for those cities to re-call and to re-establish their former economic power in creative and knowledge industries after the fall of the Iron Curtain. The loss of the printing industry in Leipzig and its relocation to Frankfurt am Main provides an excellent illustration.

A series of coincidences around the development of mobile phones has had major impact on the development path of Helsinki urban region; and a major decision about the European location of production of aircrafts has had huge impact on the development of Toulouse. Even though the fact these cities offered good ‘classic’ conditions, and had experienced pathways which brought them into the right position for the ‘next step’, individual decisions, individual actors and unforeseen factors still play a role in the steps towards new economic development.

4.3 Behind the brackets: Reality versus theory

It is too early to assess how well the real scale and dynamics of creative and knowledge-based industries matches the ‘theoretical’ position of the 13 metropolitan regions. Such an evaluation is the final objective of the larger research we will continue for the next few years. Nevertheless, a general picture can already be seen.

It appears that most of the West European cities don’t generally have a higher share of employment in creative and knowledge-based industries, although the East-European cities started almost from scratch and still have to invest a lot of effort into general economic restructuring and creating and improving the system of city governance. This result may also be partly explained by the level of statistics in the post-socialist countries, which provides only relatively aggregated figures without subdivision into smaller categories and sectors. These figures can very possibly be on the high side.

At the same time, starting from scratch (many of these industries practically did not exist under socialism) sometimes turns into a potential advantage, when there is already a well-qualified labour force and, for example, no constraints connected with competition in the market or housing barriers. In this context new innovative sectors mushroom very quickly, especially if there are few alternative employment opportunities, and the creative knowledge sectors remain dynamic. Budapest is a good example of such a case, apparently having benefited from its more favourable position in terms of the previous development path (historical-cultural traditions, long established capital city status and with heavy industry practically absent by the early 1990s). The unique position of Leipzig, that has taken advantage of the large governmental investments into the restructuring of East German cities, also provides the city with better opportunities to cope with the legacy of socialism.

As it was assumed on the basis of the evaluation of hard and soft factors, as well as historical pathways, Munich, Amsterdam, Barcelona, Dublin and Toulouse are indeed quite successful in accommodating creative and knowledge based industries. Nevertheless, Milan, Birmingham, Helsinki and Sofia, which seem to be in a less favourable position according to the whole complex of success factors, in fact turn out to be doing really well. Not only are they not lagging behind, but sometimes they are even ahead of the expected leaders.

There may be different explanations for this situation: efficient restructuring policy in Birmingham, an attractive international image of Milan and the favourable combination of 'classic' conditions in Milan and Helsinki, which stimulate positive developments even if policy is weak.

The expected leadership of the 'golden triangle' Amsterdam, Barcelona, and Munich, cities which most often appeared on the top of the list by investigating the success factors, is also not that strongly pronounced according to their statistical economic profiles. Even considering the problem of data compatibility and the inadequate quality of statistics in different countries, there are definitely plenty of questions to be answered to explain the real processes which make theories work or fail to work.

The difference between the expected and real results may to some extent be explained by the strength of policy interventions. Figure 2 provides some support for this. Those cities, where the conditions for the development of the creative and knowledge intensive sector appear most favourable, often have less active innovation policy. In other cities where the potential looks weaker policy is stronger. Active and sustained innovation and technology policy appears to be effective in increasing the level of employment in the creative and knowledge intensive sector and rebalances the other attributes and may explain why these other attributes do not predict outcomes. At this stage this can be no more than a hypothesis: it suggests an important agenda for further research on the role, necessity and efficiency of policy in accommodating creative knowledge and reinforcing the competitiveness of European urban regions. Part of this agenda also relates to how policy operates with the level of freedom and non-regulation that also appears to be a necessary element for the success of the creative knowledge economy.

5 PREVAILING AND RECENT STATE AND LOCAL POLICY INTERVENTIONS

There are huge differences within Europe relating to recent policy interventions designed to facilitate the growth of creative and knowledge-intensive industries. In this section we summarise the most important findings of recent state and local policy interventions aimed at stimulating the growth of creative and knowledge intensive firms in the respective cities. We also briefly pay attention to regional co-operative networks, if they are present.

5.1 Policy interventions in 13 metropolitan regions

The reports prepared for each of the thirteen cities provide detailed overviews of a wide variety of policy interventions in these cities and their regions. A summary of the policy interventions in each of the metropolitan regions can be found in appendix 2.

It is evident that there is a huge variation in the type and nature of policy interventions influencing the state of creative and knowledge intensive industries among the European cities. However there are some general trends.

a) Policy intervention

Strategies fostering the development of creative and knowledge intensive industries involve direct or indirect policies. State (national) economic and/or regional development policies generally formulate broad – and sometimes vague – goals for the development of the creative sector, and involve indirect measures e.g. through policies on innovation, R&D or education. On the other hand at local (municipal) level more concrete policy interventions can be observed with clear orientation, policy guidelines and actions (i.e. projects). Policies initiated at national, regional and local levels very often overlap, but there is hardly any coordination between them. Consequently synergy is very low.

However, policy is not everything. Clear policy formulation does not necessarily mean above average growth of the creative sector, and vice versa. The lack of a coherent national and local policy framework does not result in zero development of creative industry. The creative and knowledge intensive economy is strongly market based and, although its development can be influenced by national and local strategies, it does not depend on public policy and action. There are several situations where cooperation between public and private stakeholders has generated astonishing growth of creative activities. A good example is provided by Budapest, where a new centre of knowledge and cultural industries has been planned and developed to the South of the city centre on either side of the Danube. The project was initiated by the national government but it has been implemented mainly by private investors. (Kovács and Wiessner, 2004).

b) Change of regional policy

The shift in policies from fulfilling the classic conditions to enabling the formation of clusters and subsequently to attracting talent to the urban region seems to be a fairly general trend, but it is certainly not the only one.

In the cities of East and Central Europe the role of ‘soft’ location factors in urban and regional development policy was completely neglected before 1990, but in some of those cities (including Poznan and Sofia) it is still not fully recognised. In other cities, including Leipzig, there is clear recognition of the importance of these factors and also evident growth in creative knowledge industries. This is not least because of the positive impact of previous policies implemented in the western part of Germany. At the same time in Leipzig the urban region has to rely heavily upon manufacturing industries, to be able to reduce the level of unemployment to at least a bearable level. This is also true for other East Central European cities. In Western Europe, manufacturing histories can also play a crucial role in current attitudes towards investments. In the Birmingham case, for example, some policy makers find it difficult to think of investing in things other than those they were used to and which were mainly directly related to facilitating the development of manufacturing industries.

c) Enacting governance: A growing fragmentation

One important theme emerging from the discussion of policy approaches relates to the fragmentation of responsibility and actions to achieve co-ordination and co-operation between different public sector stakeholders. Four examples outside East and central Europe merit some repetition.

The Toulouse success in developing a leading role in key areas of technology, research and investment attributes considerable importance to national laws that changed the institutional and governance framework and have successfully achieved a more coherent approach to the development of the urban area. The governance of the urban area is based on a polycentric model and new forms of governance in the fields of high technology and biotechnology emerged with a growing influence of private firms which have benefited from the active policy conducted by the State and the Region to support industrial development.

In Amsterdam the co-operation between municipalities in the region is only informal and there is no formal regional government. Nevertheless the co-operation has been effective. It gives maximum flexibility for frequently changing co-operations, depending on the functions under consideration and depending on changing dynamics in the region. Some of the co-operations cover many municipalities – the smaller or bigger metropolitan area – and focus on various issues.

In Barcelona, regional co-operation is also on a voluntary basis, unless activities can be organised at the level of the Generalitat de Catalunya. The next level below this more or less autonomous large unit is the level of the municipality. Apart from these governmental bodies, there also are quasi non-governmental bodies that aim at supporting economic development; the most well-known are Barcelona Activa; and Barcelona Regional.

Finally Milan metropolitan area is an example of a relative lack of regional co-operation and consequential lack of regional investment strategy. Investments in innovation and research are lagging behind other major metropolitan areas in Europe. In recent years, however, there have been some changes with the Lombardy Region stimulating and promoting collaboration between local industries and the knowledge centres in the region with limited amounts of financial support.

6 FUTURE PROSPECTS

6.1 Prospects for creative and knowledge intensive industries

Sometimes, cities have to be helped to recognise their own historically grown qualities. In cases like Amsterdam and Munich, for example, the creative knowledge potential was only recently recognised and clear strategies are still only developing hesitantly (Musterd and Deurloo, 2006; Musterd and Ostendorf, 2004; Bontje and Crok, 2005). The situation is even less encouraging in the cities of East Central Europe where the role of ‘soft’ location factors in urban and regional development policy was completely neglected before 1990, and is still not fully recognised, as could be seen in Sofia or Poznan.

However, it can be stated that the future growth sectors in the investigated urban regions will be creative and knowledge intensive industries.

In some of these cities like Birmingham the creative industries are now recognised in the local policy literature as key areas of growth and future prosperity for the city. Cities like Amsterdam, Birmingham, and Helsinki are now in an era of ‘soft’ policy measures such as business support and education and training, introduced to encourage new firm formation, business development and economic growth. However, it has taken some time for city governments and organisations involved, first, to understand these new types of soft measures, second, to find their standing in the new regional ‘mix’ of policy making organisations, and third, to start coordinating their action.

One of the questions related to potential for the future development of knowledge intensive and creative industry concerns path dependency – the extent to which the past restricts or enhances the possibility of such development in the future. In some of the cases the pathway points in directions that are positive, but it has also taken directions that are less so, and what we have is a confusion of tracks. This is likely to be true in all cities and we should not confuse path dependency with path determinacy. The past influences the future pattern of change and may close off some routes that exist for other cities, but there are still opportunities for the future path to follow different routes within its own trajectory. The finished ACRE reports show that cities have different assets for overcoming any obstacles that appear: there are specific economic and social attributes represented by both hard and soft factors, the legacies from an individual urban development path, specific institutional arrangements, policies, practices and forms of governance and, in some cases, economic and financial resources from outside. One thing seems to be certain: future competition among the cities under investigation will increase, and competitiveness of these cities will largely depend upon their capacity to accommodate creative activities. But they can rely and must rely on their specific resources and assets. Although the lack of specific factors represents a severe hurdle, they are able to substitute one factor by another. A successful vision of future urban development should not be based on the creation of identical urban clones.

6.2 The interdependence of economic and social development and the current neglect of social challenges in creative knowledge city policies

The creative knowledge policies and strategies that have been developed mainly address economic, although they recognise the interdependence of the economic and the social by discussing issues of freedom, tolerance and social integration. However, treating creative knowledge policy as mainly economic policy generates some adverse consequences, especially in the social domain. In this section of the report, we elaborate on some of these social issues, based on the reports of the individual case studies. Some issues are mentioned in several metropolitan regions, whereas other issues seem to be especially relevant for single regions only.

The competitiveness agendas of most of the European cities seem to be targeting a rather selective population category: highly educated young people. A broader integrated vision and programme addressing wider issues of inequality and polarisation associated with the development of the creative knowledge city should, however, be developed as well. This social challenge was mentioned in almost all of the metropolitan regions included in our study. There may, however, be serious conflicts with other policy objectives. In the city of Amsterdam, for example (as the core area of the urban region), there may be conflicts between the ambitions of ‘Amsterdam Top City’ and other strategic policy documents like the Social Structure Plan. Comments were made as to how a competitive city can become or remain a social, liveable, mixed and sustainable city; and how to turn the city’s competitiveness programme into a socio-economically inclusive strategy to the benefit of the entire city population, or at least a majority of it? These comments and questions were put forward and also hold for the entire region.

In Budapest, problems related to inclusion have also been recognised. After 1990 a lot of innovative activities started, but these were accompanied by an increase in social polarisation - most clearly manifested in the growing number of homeless people. Increasing social polarisation was also reported in Leipzig, where a growth of the extremes of the social distribution went hand in hand with a decline of the middle. These social divisions were also translated in space and visible as increasing social and spatial segregation. Some inner city boroughs of the city of Leipzig in particular tend to accumulate socially deprived citizens. These neighbourhoods are characterised by low incomes, few job opportunities, poor housing conditions and thus often high rates of social instability, together resulting in an unprecedented degree of urban poverty. Forms of social spatial inequality were reported in several other cities. In Toulouse, for example, the contrasting social development between neighbourhoods in the central city and the suburbs, with a dominance of highly qualified and well-paid professionals, and other neighbourhoods with a high concentration of less educated and unemployed people, many of them migrants from Maghreb. These inequalities are generally regarded as unwanted and local authorities therefore make efforts to reduce the social disparities.

In our first analyses of the conditions related to the rise of creative and knowledge intensive industries, the functioning of the housing market appears to be a recurring issue. In Barcelona the rise of new creative and knowledge intensive industries parallels an increase of problems

on the housing market. High and constantly rising house prices are dramatically problematic in the city of Barcelona. These developments have hit lower income categories, but increasingly also other groups. It is regarded a challenge to guarantee the right of people to affordable housing in order to maintain social cohesion and equal opportunities. It is, however, not just Barcelona that experiences these housing market problems. In Amsterdam, Munich and Toulouse a similarly overstressed housing market contributes to social and equality problems, firmly related to affordability issues. For these cities, and also for other cities, such as Helsinki and Birmingham, an additional question is whether the housing stock is actually sufficiently fit to what 'people with talent' want to live in. This connects with current debates about the diversity of dwelling types and sizes and the quality and diversity of neighbourhoods and local services. While Birmingham, for example, has high quality and affluent zones and a new vibrant City Centre living environment, recent decades have been marked by outward migration of more affluent groups. Differential migration has exacerbated the pattern of spatial and social inequality within the city, as well as partly explaining it. The implication is that strategies for housing and planning related to urban renaissance are also strategies that are relevant to future economic development.

The housing issue gets yet another dimension in urban regions with insufficient demand for some of the sectors within the housing market. Leipzig is a case in point. Whereas the city has a very good 'record' in terms of its educational profile, the housing market suffers from enormous oversupply in some sections. In 2004 over 20 per cent of the entire housing stock was vacant.

Some cities also suffer from extreme pockets of income and employment deprivation. These cities face significant social challenges. In Birmingham a history of lower levels of educational attainment and/or higher levels of unemployment were seen as the big challenges. Not all of these challenges can wait for successful economic restructuring towards creative and knowledge intensive industries. In fact, some factors, such as the educational level of the population, should be regarded as conditions, which have to be met before the city can be sufficiently competitive in the current economic climate. This was also recognised in Riga, where it was stressed that creating a pleasant urban atmosphere, good quality housing, a sustainable social structure and good social conditions are prerequisites for continued economic development.

In Leipzig the economic crisis of the city region has resulted in a slow and silent decline of old social bonds, family ties, and the devaluation of existing social networks and its related social fabrics. This creates extra problems and additional challenges in these contexts.

Another relevant issue related to the current economic development of several metropolitan regions relates to the increasing levels of diversity resulting from immigration. Occasionally this has led to racist and intolerant behaviour towards immigrants of different ethnic and racial backgrounds. Racism and discrimination are challenges facing many cities.

The social and economic development of today's cities should not be conceived as different spheres of development. The consequences if this happens can be evident in competing aims in strategic development plans, social and spatial divide and fragmentation, a tense housing market and a contested notion of diversity. The rise of the creative knowledge economy is a

recent phenomenon which needs to be rooted in new forms of social negotiation and governance which guarantees equal opportunities for all social groups.

In only some of the metropolitan regions included in our project, social issues were not very prominently mentioned. We mention Poznan and Sofia. Further analyses will have to show the reasons for that. A preliminary hypothesis is that the economic challenges in these cities are still so big, that when asked to report on the biggest urban challenges, obstacles for economic development are mentioned first, and in these contexts, the 'classic' obstacles, in terms of connections, space, infrastructure, etc. are still highly dominant.

Appendix 1. Development paths in 13 city regions (short summaries)

Amsterdam

Amsterdam is the capital and largest city of the Netherlands. The Amsterdam Metropolitan Area is growing mainly within ‘new towns’ in the wider region, while growth in the core city is stagnating because of limited building space. The region has a relatively young and diverse population and is especially characterised by high shares of ‘non-Dutch’ residents and single-person households. The region is relatively mixed in socio-economic terms and also has a relatively highly educated active population.

Amsterdam has a rich history as a trade centre and was especially successful in the 17th century, the so-called ‘Golden Age’. In the 18th and 19th centuries, Amsterdam’s economy stagnated and the city region missed the Industrial Revolution. The city never had a ‘primate city’ status in the Netherlands; tasks have always been divided between Amsterdam (financial centre), Rotterdam (industrial centre) and The Hague (political centre). This development path is still structuring Amsterdam’s economy which is dominated by the service sector and has only modest industrial and governmental sectors.

The Amsterdam region’s strengths are associated with accessibility to markets, the availability of highly-educated and bilingual staff, the high quality transport connections (especially Schiphol airport) and high living standards. Related to this are ‘soft-factors’: safety; the presence of many (cultural) facilities; the availability of many green spaces in the city and the variety of landscapes in the wider region; diversity in ethnicity and lifestyles; a tolerant and liberal climate; the historic and unique inner city of Amsterdam and several attractive historic towns in the wider region. Negative aspects include high costs of living, the shortage of (affordable) housing and high personnel costs.

Amsterdam’s rich history as a trade and cultural centre is still visible in the early 21st century in the strength and diversity of the economy – including its tourist position – and its population. It is evident that Amsterdam is not the only important economic centre and the wider region also provides resources and environments that are attractive to live in and locate businesses in. The current housing stock in the region offers possibilities that are not available in the core city: large single-family houses are scarce in Amsterdam, but can be found in other sub-regions. The region also offers green spaces, and especially diversity of landscapes, which are highly valued by creative and knowledge workers. Finally, Amsterdam’s main economic motor, Schiphol international airport, is also located outside the municipal borders of Amsterdam. These points make clear that we should speak of a creative knowledge *region*, rather than a creative knowledge *city*. In fact, Amsterdam and its neighbouring municipalities are highly interdependent.

Barcelona

Barcelona is the second biggest city of Spain. Although it can still be considered the industrial capital of the country, its industrial history is associated with diversification and not based on specialisation. This makes Barcelona a place where new activities can quickly emerge. Barcelona has changed from an industrial city, oriented to the Spanish internal market, and become outward looking. Its strong service sector tradition in the inner city has also left it in a stronger position to develop services than cities, in the wider region, with greater dependence on manufacturing.

The development of Barcelona has been historically determined by the strategic geographical and political position of the city. The situation of the city on the coast and the existence of a significant harbour have allowed the extension of Barcelona's *hinterland* beyond its metropolitan region. Barcelona has, thus, become a city with a strong trading tradition that in medieval times rivalled Italian cities. Its trading tradition also favoured the emergence of a solid bourgeoisie in the nineteenth century.

The development path has been significantly interrupted by social conflicts and civil war. After the Spanish Civil War (1936-39) the city faced a huge economic and social crisis and it is not possible to talk of economic recovery until the 1950s. From then onwards, the country experienced economic growth and profound changes in social structure. Barcelona played a vital role in this development, and its metropolitan region began to take shape. The consolidation of the democratic political system after Franco's death coincided with the effects of economic recession that were particularly felt at the beginning of the 1980s. The changes of the 1980s effected a transition from a Fordist model to a flexible industrial model and involved new residential and working patterns.

Other factors in the development path of the city of Barcelona include:

- An entrepreneurial bourgeoisie playing a key role in stimulating culture and creativity.
- The harbour as a key element for trading and exporting.
- Cultural development and tradition as an asset for the attractiveness of the city.
- Cultural and architectural assets of the city generate a favourable environment for creativity.
- A widespread culture of association
- Event-related urban development, in particular the successful organisation of the Olympic Games. This enabled urban regeneration and a new global public image of the city emerged.
- Political stability at the municipal level

While the city of Barcelona has become a core for creative industries, medium sized cities elsewhere in the region are turning into poles for knowledge and technological innovation. This pattern repeats the experience of industrial development with the city, Barcelona, as the spearhead of the development process with the region following at a slower speed.

Birmingham

Birmingham is neither a capital city nor an historic centre of education and learning. Its rapid growth to become Britain's second city occurred following the industrial revolution and was associated with industry and manufacturing. However this industrial bias should not be assumed to be unfavourable to the development of creative or knowledge intensive industry. Birmingham was a city of a thousand trades, of small enterprises, highly skilled workers and innovation. A combination of factors associated with religious and social tolerance, politics and economic achievement enabled Birmingham to attract entrepreneurs, craftsmen and businesses in the 19th century. Birmingham's industrial structure left it with fewer very wealthy people and more skilled and relatively well-paid craftsmen. It was less class-divided than other British cities and this as well as continuing economic prosperity meant that it remained a city of immigration and a home to different migrant groups. This may, in turn, have become a source of tolerance. Other factors identified in the Birmingham case are:

- Strong municipal government contributing to periodic modernisation of the City during the 19th and 20th centuries.
- The skilled and innovative small firm tradition is a strong platform on which to build.
- The City's location and accessibility by road but also by air and rail are also positive attributes.
- Relative proximity to London has advantages and disadvantages.
- The development of a strong Higher Education sector over the last 100 years.
- New local tourism, cultural and leisure facilities.
- A young and diverse population.

While these dimensions may be seen as assets in the current restructuring of the economy around more knowledge based activity, others may be liabilities:

- Low educational aspirations and achievement of younger people in the City.
- The image created by recent industrial decline and dereliction and high levels of deprivation and unemployment.
- Whether the City offers sufficient housing and neighbourhoods that 'people with talent' want to live in.

Budapest

As a major historic capital city and cultural centre with strong educational traditions and a well-established middle class Budapest has a development path that would favour the creative and cultural industries. National political and institutional changes as well as the period of state-socialist economic management weakened the legacy from this longer history but have not left it without influence and the skilled workforce continues to be an asset for the knowledge based industries.

During its modern history Hungary played a prominent role in European development. As the state capital Budapest was a leading European city in economic, social and cultural respects and it dominated the Hungarian economy. Urbanisation of the metropolitan region saw the

emergence of a middle class and intelligentsia in Budapest. Major investment (and foreign investment) within Hungary was concentrated in Budapest, and this pattern continued.

Following World War I an overwhelming part of historical Hungary was ceded to neighbouring countries and this left an oversized Budapest within the settlement and transport network of the country and its economic and cultural life. There was a loss of momentum and retrenchment of Budapest. The development of the Metropolitan Region slowed down and social openness and tolerance toward minorities declined. One consequence was that prominent representatives of science and creative art left the country in increased numbers. While this undermined the position of the domestic intelligentsia, it strengthened the international impact of Hungarian culture and this remains important. After World War II Hungary became part of the Soviet zone of influence and took the state-socialist course of socio-economic development. Its social-economic position deteriorated in comparison with Western Europe. The 1960s saw increasing migration into Greater Budapest but its role in the national economy diminished and the financial indebtedness of the Hungarian state and escalating problems of the Communist regime reduced its ability to compete with cities in the West. Although social-economic oppression in Hungary was indisputably 'softer' than in other East European countries, the creative and innovative social strata were mostly losers within the political system.

The change of regime in 1990 was a shock for Hungarian society and the economy. The system of state administration had to be reorganised and new institutional frameworks created for the economy, the banking sector and the housing sector. The restructuring of the economy - especially heavy industry and agriculture generated unemployment and contributed to social and spatial polarisation while the impact on different groups among the former middle classes led to increasing social tensions.

However, simultaneously, Budapest was the first destination of foreign direct investment in knowledge industries (financial services). Transnational corporations opened their first regional branch in Eastern Europe often in Budapest. In the 1980s an off-scene in the art, cinema and theatre sector developed that was also unique for East European countries.

Dublin

Dublin is a historic capital city and centre for education and learning. It has a history of urban primacy in Ireland. Since independence from the United Kingdom in the early 1920s Dublin has stood as the economic, political, social, and cultural centre of the country. The Irish economy was largely agricultural and the industrial revolution had relatively little direct impact on Dublin. The economic development path has been strongly influenced by government policy – the free trade approach prior to and immediately after independence, the development of protectionism and self-sufficiency and, subsequently, active policies to modernise the economy. Ireland's economic development strategies shifted from the promotion of self-sufficiency in the pre-1950 period to a more outward-looking agenda that embraced foreign direct investment and promoted international competitiveness. The policy focused on industrializing a predominantly rural society and reducing levels of unemployment by attracting branch-plant manufacturing activities. This spatially selective strategy of economic development, favoured industrial development outside Dublin and this facilitated Dublin's focus on services, and particularly professional services.

Dublin's development path can therefore be characterised as having emerged from a relatively weak industrial base with the aid of significant pro-market government intervention to a situation where currently the development and promotion of a 'knowledge-intensive city' has become a central aspect of the national economic imperative. While Dublin has become a model for economic development for many other countries, particularly some of the newer EU states, this success has been built on many decades of government intervention across a range of policy domains.

Dublin has been a city of changing fortunes. Population change has occurred in a cyclical pattern with emigration being a significant factor in the 1950s and 1980s. However since the 1990s, this has been dramatically reversed and now natural increase is being complemented by increasing in-migration leading to a demographic boom. This however has resulted in the emergence of new challenges around racism and tolerance in a city that was previously much more homogeneous. However the record on other issues such as gender equality, civil rights and equal employment opportunities has significantly improved in response to the requirements of European and national legislation and the reducing influence of the church on legislators.

This industrial restructuring had generated spatial segregation of economic activity and this was closely linked to social segregation and marked polarisation between social groups. This has been compacted by the continued suburbanisation of the city that began in the early twentieth century with the expansion of the tram line transportation system and culminated in the physical extension of Dublin into at least three surrounding counties.

Helsinki

The development path of Helsinki and its surrounding area towards the current status of middle sized European metropolitan area began from its establishment as the capital city in 1812. Capital city status created a platform for growth in population and business and resulted in the creation of the oldest and the most important educational institutions in the country. Helsinki has been the administrative, educational and cultural centre of Finland and the emergence of the institutions establishing social security and the "welfare" society further supported the importance of the city. Helsinki has led the Finnish urban hierarchy and it, along with the other cities of the metropolitan area, has developed as the only international sized concentration of business and inhabitants in Finland.

In a predominantly rural and agricultural economy both industrialisation and urbanisation came later to Finland than most of the rest of Europe and the development path is associated with a modern urban and economic infrastructure without the legacies associated with earlier industrialisation.

The key elements in the development path of Helsinki include:

- The size of the metropolitan area population (in terms of economic activities, number of businesses and number of students) relative to others in Finland.
- Its attractiveness to migrants.
- The history of education.

- Because of the size difference to other Finnish regional nodes national and international companies have located their headquarters in the Helsinki region.
- The global success of some Finnish companies with headquarters in the metropolitan area has been critical for Helsinki's growth. These global players have also generated a large subcontracting network benefiting the whole region through SMEs.
- Because of its capital status, size and economic wealth Helsinki has also been the centre of cultural attractions and cultural life in Finland.
- Helsinki produces professionals and offers professional appointments. It absorbs graduates from all parts of Finland.

Leipzig

Leipzig has historically been a major commercial, trade fair, educational and cultural platform in the heart of Europe. However its economic development path has been interrupted and more recently it also developed as a heavily industrialised city in the former GDR, with an orientation towards different markets and activities than previously or subsequently. Its historical position as the gateway between East and West in the context of a rapidly changing geography in Europe was not continually developed.

The rapid decline in manufacturing in recent years could not be compensated for by new job opportunities initiated by state-subsidised large infrastructural, transportation and modern manufacturing projects. High rates of long-term unemployment, social imbalances between new elites and less qualified marginalised groups and especially the city's youth represent the major social problems facing Leipzig today. The brain drain of young and relatively well qualified women, especially in the 1990s, must be seen as a reaction to the limited job opportunities on the regional labour market and a consequence of the discontinuity of economic development. Over the course of this development, disillusionment with local politics because of disappointed expectations forced the public administration from the mid 1990's onwards to strengthen and reconsider Leipzig's urban, cultural and economic potential.

In spite of the interruption of the development path there is the potential to revive the city's historic role within the wider context of the metropolitan region. Leipzig's position is critically affected by its position in the metropolitan region Sachsen-Dreieck ("Saxony triangle": Leipzig, Dresden, Chemnitz). This regional position can mean that it faces severe local competition. However, it also means that there is a capacity to pool different regional strengths and to benefit from the development path affecting the region more widely. The metropolitan region represents a cultural product with a distinct identity and tradition. This may be a stimulus to creative industries that are able to invent symbolic and other products associated with the idea of a "Saxony triangle".

The more recent economic and political history of Leipzig has been associated with radical transformation and rapid change. The legacies in terms of industrial dereliction and unemployment have presented real challenges. The city-region has faced ongoing and multi-layered transformation processes and Leipzig has been described as a structurally "perforated city". This reflects the existence with new urban structures and large suburban single-family

housing alongside large areas of derelict industrial plants and newly renovated houses from the 19th century (*Fin de Siècle*) in the inner city.

Milan

Milan is a historic city and centre of education and learning. These have generated a long tradition of innovation and entrepreneurship that contributed both to the city's development as a major industrial city and to the development of leading roles in creative and knowledge intensive industry including fashion, design and bio-technology. The development of these sectors is not the outcome of a cohesive and structured strategy or of national or local policies. On the contrary, it has been generated by the slow and persistent work of innovative and inventive entrepreneurs who have transformed skills that were "forged" in heavy industry and applied them to new and innovative sectors.

The richness of the Milan metropolitan area can not be found in the infrastructures, the welcoming capacities of the local administrations, but in the high skills present in the local population, the universities and the centres of excellence formed by leading companies involved in heavy industry. A stimulating cultural and political atmosphere has also facilitated the active economic environment of Milan. The cultural and political life of Milan has continuously attracted people from all round Italy.

Other factors that are identified as important for Milan's development path include:

- Position in relation to transport and communication in Europe, infrastructure and natural resources.
- Design and manufacturing traditions and the development of clusters particularly related to the textile and fashion industry, furniture and design.
- A long tradition as a centre for literary and artistic innovation including independent communication and broadcasting.
- Attractive residential and other neighbourhoods. Some of these, with the decline of heavy industries, can offer space for conversion; others have long traditions in artistic production and creativity, and pleasant urban landscapes.

Recently, the force of attraction seems slowing down. Milan is becoming more and more economically inaccessible (increasing of the housing prices and of the cost of leaving) environmentally problematic (ex. high level of pollution). The competitiveness of Milan metropolitan area respect to other European city is losing position. Is Milan still part of the blue-banana? Is Milan still attractive to creative groups? The future of the area cannot be based anymore on the straightness of the individual entrepreneurship. Local and national policies are very recently started to promote the territory. The recent history seems to partially show a new trend, but it is still not clear where it is leading to.

Munich

Munich has been the capital and the administrative centre of Bavaria since the 15th century. Being the residence of the Bavarian king and the royal family, Munich profited heavily from the high investment in the arts, architecture and the sciences. The royal patronage of the sciences in the 19th century was of great importance for the development of quality industries

which capitalised on new technologies and inventions (e.g. the media, technical instrumentation). Munich's central function for the whole of Bavaria enhanced theatre and other cultural institutions, architecture and a broad range of training facilities. Munich was a commercial rather than a heavily industrialised city. Its strong bourgeoisie supported entrepreneurship and the strong entrepreneurial spirit and its late industrialisation spared the city the difficult task of dealing with structural economic change.

The vote of the city council in favour of a tradition-oriented reconstruction after the massive destruction during World War II preserved the historic cityscape and now contributes to its attractiveness for tourists. Post-war migrants like the Sudeten Germans and the Silesians from the former German territories provided a reservoir of well-educated workers and the move of Siemens from Berlin to Munich created the nucleus for the attraction of other German and international companies. Munich's economy, especially in the field of micro-electronics, profited heavily from national and Bavarian technology policy and an important impetus came from the Federal defence department in the 1950s and 1960s. The reconstruction years marked the beginning of the Bavarian technology policy especially through investment in R&D and the arms industry.

After the Oil crisis temporarily halted the economic upturn, the Munich region developed into the leading German High tech region. This economic development was supported by infrastructure policies of the Freestate of Bavaria as well as the city of Munich: crucial measures in the 1990s were the relocation of the airport and the trade fair as these enabled the city to develop new neighbourhoods and industrial estates.

Munich's ability to attract and retain highly qualified and creative people is associated with a high quality of life and a mix of cultural and leisure opportunities. Munich offers plenty of cultural amenities, especially the formal "high culture" institutions such as concert halls, museums of modern art and theatres, which target elites and are well financed. The "cityscape" or architecture of the inner city also meets the needs of creative knowledge professionals.

Negative location factors for small and new businesses include high living expenses and the fact that there are no cheap sites available. There is also a view that Munich lacks a thriving urban atmosphere, is over-regulated and clean and saturated. Munich does not have the image of being a city where cultural trends are set. It appears that it is not so much openness and tolerance but environmental beauty, the presence of cultural activities, and the attractiveness of the built environment that draw highly skilled people to Munich.

Poznan

Poznan is one of the fastest-growing and most dynamic cities in Poland. It is a historic city and the leading centre of university education. It is the fifth largest city in Poland and not a capital city. It is the capital of the Wielkopolska (Greater Poland) region where the Polish state originated more than 1,000 years ago. Poznan is located in the west-central part of the country and its location halfway between Warsaw and Berlin puts the city under strong competitive pressure from those two capitals and with good overland but poor air travel connections.

The long history of Poznan city provides a basis for the building of a creative region. In the 14th and 15th centuries, its favourable location on one of the major trade routes of Central Europe made Poznan an important centre of trade and crafts. As a result of the partitioning of Poland in 1793, Wielkopolska was incorporated into Prussia and this greatly limited the city's growth. In spite of restrictive policies the operation of Polish institutions and private enterprises meant that Poznan's scientific and economic life flourished in the 19th century and the resources of creativity and entrepreneurship enabled successful competition with Prussian firms. The regaining of independence by Poland in 1918 further stimulated Poznan and saw the establishment of the Poznan University (1920), the organisation of the first Poznan International Fair (1925), and the setting up of numerous banking institutions and industrial enterprises. The Second World War and subsequent period of communist rule saw a deteriorating socio-economic situation but Poznan did not become a heavily industrialised city and developed commercial functions. These are both seen as positive legacies in the present phase of economic and social development and leave the city without the difficult task of dealing with structural economic change that affects some other cities. One response to the economic failures of this period was the development of the Independent Self-governed Trade Union Solidarity in the early 1980s. This movement contributed to releasing the creative potential of both the country and the city and led to the political changes of 1989. The new political and economic situation allowed the rebirth of entrepreneurship and organisational skills among the residents of Poznan and restored the city's traditional openness associated with its commercial and communication functions.

The discontinuity of the city's development path and its inability to keep up with global processes under the communist system has serious implications for accommodating creative knowledge. The ethnic structure of Poznan is highly homogeneous with the number of foreigners and the inflow of immigrants being relatively small. Nevertheless the development path has left the city with a diversified economy with a dominating service sector, efficient institutions and well-managed city finance, a tradition of entrepreneurship and high work standards, a high quality of life and attractive housing and a rich cultural milieu (especially music and dance).

Riga

Since its foundation in 1201 Riga has played a pivotal role as a regional centre for trade and commerce. This role predates the emergence of the Latvian nation state of which it is now the capital. Its position as a port and access to continental markets made it an important historical trading centre. It has been the main national and regional attractor of investment and employment and has held primacy over Latvia's economic, political, social and cultural functions. Riga has always been a multiethnic city and ethnic Latvians have been in minority in the city for almost all of the period since its foundation when either Baltic Germans or Russians represented a majority. Until the second half of the 19th century, the Baltic German hegemony of Riga was economic as well as cultural.

The development path of Riga has been repeatedly interrupted by political and institutional changes and economic development has been affected by shifting dependency links with other economies.

The key stages of the development of Riga involved:

- The period 1860-1914 saw the industrialisation of what was by then the third largest city in the Russian Empire and by the Latvian national awakening.
- The period 1918-1940 comprises the first period of Latvian independence and is characterised by smaller scale industry and more technologically advanced enterprises. This was a period of Latvian “culture building” with roots in the late 19th century and several important Latvian cultural institutions were established.
- Soviet occupation (1945-1991) saw large scale industries established in Riga again and largely staffed by migrants from the Soviet Union. The cultural policy imposed selective destruction of the Latvian intellectual heritage.
- Following the break up of the Soviet Union and the restoration of Latvian independence in 1991 the large scale Soviet industry in Riga collapsed and an industrial structure mainly based on small service sector enterprises emerged. However initially this development was largely driven by decisions made elsewhere. One of the legacies of the historic pattern of economic change is that, by European standards, Riga and Latvia generally have relatively low labour costs. This has attracted some businesses to outsource relatively low-skilled activities to Latvia. This has particularly involved outsourcing from European countries, predominantly Nordic countries which have higher labour costs. The consequence is that many jobs in the service sector and the creative and knowledge intensive sectors are low-skilled and low-wage jobs in labour intensive production processes.

With the fall of the Soviet Union, Riga moved from a strategic geographical location within the hierarchy of Soviet economic space to a peripheral location in the hierarchy of the European Union economic space. The Soviet heritage continues to cast its shadow over the Latvian civil society and is also visible in the infrastructure built to serve the Soviet Union and in the Riga cityscape, architecture and location of industrial complexes.

Sofia

Sofia is Bulgaria’s capital city and its major administrative, economic, political, cultural, commercial and tourist centre. The institutional infrastructure for governance and administrative functions at the international, national, local and metropolitan level are concentrated in the city and impact on all spheres of social and economic life. The availability of major academic institutions, research institutes, financial services and public services contributes further to the development of the administrative and intellectual potential of the capital city.

Although the earlier development of the city was as a centre for industry the city is no longer a heavy industry area and the bulk of Bulgaria’s existing creative industries are concentrated in Sofia. Although this earlier development of the city has left behind aspects that are unattractive to the creative class the bulk of amenities required by creative individuals are concentrated in Sofia and it has considerable ethnic mix, public interaction areas, highly profiled and segmented cultural life and a diversity of lifestyles. The rapid and largely unplanned recent economic development have left a legacy of congestion and inadequate

transport and travel arrangements that are seen as presenting a problem for future development and may inhibit growth within the core city areas.

One of the natural advantages of Sofia is the existence of a number of characteristic landmarks inside the 'compact' city and the opportunity to highlight them through new construction. An especially valuable feature of Sofia is the interspersing of the 'compact' city with open areas, as well as the still existing big areas of low buildings and rich greenery. This particular legacy of the past development of the city is seen as an asset currently and in the future development of the city as a location that is attractive to creative individuals.

The creative individuals producing high value in these areas are very different from the type of people (clerks and industrial workers) for whom Sofia was built and areas outside the city boundary but within the city-region are often preferred by households with sufficient resources to exercise choice. These areas have not been highly developed in the past and have relatively low population density and a capacity to take in new residents in new housing zones situated in a natural environment.

Toulouse

The Urban Area of Toulouse dominates the central part of the Midi-Pyrénées region, the largest region in France, both economically and demographically. Toulouse now ranks 5th among the urban areas in France in terms of population after Paris, Lyon, Marseille-Aix-en-Provence and Lille (4th when only considering the city of Toulouse). With an annual growth rate of 1.6 per cent between 1990 and 1999 Toulouse is one of the most dynamic urban areas in France.

Toulouse presents a clearly identifiable development path based on an early specialisation in electricity and aeronautics and major investments in higher education and research. The city was a commercial and administrative centre in the 19th century with no heavy industry (except chemicals). It had missed the Industrial Revolution (and escaped the subsequent problems faced by industrial cities), and lagged behind other cities but relocation of key military and aerospace industries reawakened the city. With the development of high technology (aeronautics, space sector, electronics, and computer activities) over the past decades the city has affirmed itself as a technopolis and a knowledge-intensive regional centre. Whereas cities in other parts of Europe had to face critical restructuring processes linked to the decline of heavy industries, Toulouse has been able to follow a steady development path without rupture or major bifurcation. The city has been able to engage in a cumulative process of capitalising on and building on assets in technical and human capital. Economic specialisation in high technology and the importance of Research & Development have been largely driven by public policies. Deconcentration and decentralisation policies also included the transfer and the creation of several education institutions specialised in engineering and research.

While public policies played a key role in shaping the economic bases of Toulouse, private stakeholders have also contributed to local dynamics in the field of high technology. New forms of governance have emerged with the growing influence of private firms, in particular the large ones. Private firms have benefited from the active policy conducted by the State and

the Region to support industrial development through technological innovation and applied research.

Key distinctive features in the development path of Toulouse are:

- The key role played by public institutions, in particular the central State, in shaping the economic base of the city. Decentralisation policies and the recent emergence of inter-communal structures have resulted in more involvement of local authorities in Local Economic Development policies.
- Economic and urban development has taken place in a context of highly fragmented political institutions until inter-communal schemes emerged and were structured in the 1980s.
- The growing influence of private firms in Local Economic Development policies in the field of high technology.

As a result Toulouse emerged as a technopole and a knowledge-intensive regional centre as early as in the 1960s. Toulouse appears more as a city of knowledge and technological innovation than as a creative city in terms of art, culture and other creative industries.

Appendix 2. Policy interventions in 13 metropolitan regions (short summaries)

Amsterdam

In Amsterdam there is only informal co-operation between municipalities in the region; there is no formal regional government. However, over the last decade these informal co-operations seem to function well. It gives maximum flexibility for frequently changing co-operation, depending on the functions under consideration and depending on changing dynamics in the region. Some co-operation covers many municipalities – the smaller or bigger metropolitan areas – and focuses on various issues. Apart from that, target specific co-operations are also functioning, such as the ‘Amsterdam Airport Area’ coalition, which is encouraging the development of Schiphol Airport as a traffic hub, and as an employment and facilities centre. On top of this co-operation, there is a substantial volume of organisations that aim to help the development of the entire region.

Although the variation of initiatives is large, what has become clear over the past decade is that most partners aim at strengthening regional co-operation. There seems to be a common understanding that the whole is more than the sum of the parts and that a region that presents itself as a set of complementary units, is more attractive compared to a number of individual municipalities putting most of the energy in competing with each other. As regards the concrete policy interventions, there are a range of initiatives at the level of (parts of) the metropolitan region, with fancy acronyms such as OPERA, or ‘Going for Gold’, supported by the Chambers of Commerce, by the Amsterdam Innovation Motor (AIM), by iMMovator (cross-media network and expertise centre), Kenniskring, and several others. These organisations stimulate new investments in the region by bringing people together, organising events, debates and conferences, removing barriers for investment, linking sectors with each other (such as influencing housing policies in order to facilitate economic growth), etc. There also are specific Development Companies for the acquisition of new firms. National stimulation programmes (such as ‘Peaks in the Delta’) support many initiatives.

On top of these policies, which aim at attracting new firms and visitors, and try to facilitate a creative and knowledge intensive climate and attract highly qualified people, and thus also pay attention to elevating the quality of housing and living, there are also very special programmes. An example is the recent housing policy programme, which aims at increasing the share of owned dwellings *and* aims at keeping the level of segregation low. Another example is the so-called ‘broedplaatsen’ policy (incubator policy), which fosters new creative talent in particular by assisting them with putting the first steps in their professional careers. This is mainly seen as supporting marginal activities, but some of these marginal activities will develop further.

Barcelona

In Barcelona regional co-operation is also on a voluntary basis, unless activities can be organised at the level of the *Generalitat de Catalunya*. The next level below this more or less autonomous large unit is the level of the municipality. Apart from these governmental bodies,

there also are quasi non-governmental bodies that aim at supporting economic development; the most well-known are Barcelona Activa; and Barcelona Regional.

Barcelona represents an urban area that has adopted a strategy that even has become known – although much disputed – as the Barcelona Model. Its main character is the efficient management of the urban development of the region through, among others, the organisation of very large-scale events such as the Olympics or the Forum de les Cultures. The special character of the Olympic Games effect in Barcelona was the public sector participation and the political and collective consensus that was reached. The managerial ability shown in certain events such as the Olympics is identified as the main reflection of the Barcelona Model. The concrete urban development and economic transformation, with a particular focus on the municipality of Barcelona, were initially almost all carried out at the level of the municipality of Barcelona. The most important frames of reference were the municipal action plans (MAP), which were further developed in departments or agencies (Economic Promotion Sector, Chamber of Commerce, etc.). In the 21st century a clear move towards regional development was established. From the early 2000s onwards Metropolitan Plans have been developed; in 2003 the 1st Metropolitan Strategic Plan has been approved; the revisions were just approved in 2007.

A recent and more specific initiative to further develop the Barcelona knowledge economy is the 22@ plan in Poblenou. The plan is to develop a new high-tech city district in this formerly differentiated and varied manufacturing and residential area. Manufacturing was mainly small-scale. However, residents' associations in the district reacted negatively to some of the contents of the project such as the building of skyscrapers. Thus, the involved parties entered negotiations and some changes in the initial plans were made in order to accommodate resident's demand.

A real threat in the recent development strategy of Barcelona is 'culture'. A Strategic Plan of Culture has to make sure that this 'gold' of the city does not get crushed in the metropolitan development process. A range of special culture related programmes has been developed to support this programme.

Birmingham

There is a wide range of organisations involved in supporting the development of creative and knowledge intensive industries in Birmingham at a national, regional and local level. Further, there are a complex set of overlapping policies, strategies and initiatives operating at each of these three levels. There has been a major growth in the attention given to creative and knowledge intensive industry generally (for example in the Regional Economic Strategy) and there have also been considerable number of innovative strategies, projects and programmes including specific strategies to support creative industries. Some of these strategies are led at a national level, some regionally and others by different local actors. The large number of bodies involved and problems of coordination and alignment of strategies has affected the operation of policy. The initiatives taken at a national level and the existence of a Regional Development Agency as well as the energy and enthusiasm at a local level have all resulted in a growth of activity in this area but strong city-region governance arrangements continue to be absent. The region has developed a high profile cluster policy, but does not recognise cultural industries as a designated priority cluster. However, there are important initiatives at a

city level involving different stakeholders and in many cases formally constituted partnerships. These include the Creative Birmingham Partnership which brings together all the key public agencies investing in the creative and cultural sector in Birmingham; and the Birmingham Cultural Partnership which is responsible for the City's Cultural Strategy and involves a partnership of city council heads of cultural services, and representatives of the key cultural agencies and non-departmental public bodies.

Budapest

In Budapest policies facilitating directly or indirectly the growth of creative and knowledge intensive industries can be identified on three different levels: national, regional and local. None of these policies are clear-cut 'policy on creative industries', instead they can be perceived as broader policy interventions and strategies that try to influence the economic competitiveness of the country and its urban and regional development. In the policy making of the creative industries the most powerful players are the national and local governments, the regional level being traditionally weak in Hungary.

On the national level R+D and the innovation policies has permanently been shifting among government offices and ministries since 1990, which reflects the relative weakness of the field compared to other areas. Among national policies the most influential is the New Hungary Development Plan (NHDP) which defines the strategy for sustainable growth and competitiveness of Hungary for the period between 2007 and 2013. Comprehensive and specific development objectives have been defined in the NHDP together with thematic and regional priorities in the related Operational Programmes to implement them. Among the thematic priorities creative economy appears with great emphasis (e.g. establishment of the innovative knowledge based economy, development of human resources required for research/development and innovation etc.). In addition, the new Hungarian Cultural Strategy that sets the targets of cultural policy until 2020 also treats culture as means of stimulating economic growth and increase economic competitiveness.

At the regional level, the development of R&D and creative industries enjoy high priority in the new support scheme of the Operational Programmes. The Central Hungary Operational Programme aims to increase the international competitiveness and strengthen the growth of knowledge-based economy in the Budapest region. In this respect, the most significant targets are the stimulation of co-operation between the players of knowledge based economy, the development of economic sectors (creative and cultural industries) producing high added value and the creation of new innovative jobs. Within the Operational Programme the role of Budapest is highlighted as that of a 'development pole' called "*Innopolis*" which is aimed to be the primary centre of R+D and innovation activities in Hungary.

At the local level, the Medium-term Urban Development Programme for Budapest also gives clear orientation and priorities for the development of creative and innovative industries (cultural life, knowledge-based economy, IT sector). The programme outlines concrete projects within the full spectrum of sustainable urban development which aim to strengthen the position of Budapest amongst the competing metropolitan regions of Europe. The main priorities include the establishment of 'technopolis' areas in the Northern and Southern part of Budapest, the establishment of links between university, governmental and commercial

bodies, the creation of technology clusters, the support of the development of science parks and urban 'technopolis' quarters, the development of key organisations of a knowledge-based society (education, libraries, e-government etc.).

Dublin

Within Ireland the weight of Dublin and its region is absolutely dominant both in the economy and population (40% of total population), therefore most State policy interventions have direct impact on the city's economic development. In Ireland there have been several policies from the early 1990s onwards, which contributed to the development of Dublin towards a pattern of employment and economic activity which may be classified as a knowledge city. From the beginning of the 1990s following the Culliton Report (1992) on Industrial Policy, the direction of policy toward enterprise was fundamentally altered in a number of respects, including the recognition of the importance in attracting new growth sectors (e.g. ICT, pharmaceuticals and financial services) to Ireland, and the recognition of the importance of the proximity new industry to universities and colleges. Subsequent repositioning Ireland in the global market placed emphasis on Dublin's perceived strengths. These included achieving recognition as a high skill, low taxation, low cost gateway for FDI to European Union markets with minimal regulatory and planning restrictions.

Current policy through the National Development Plan 2000-2006 was heavily influenced by the Technology Foresight Ireland report (1999). This report essentially devised possible scenarios in relation to the development of the IT and Biotechnology sectors in Ireland and recommended certain courses of action for implementation at policy level. Specific reference is made to facilitating the development of a Biotechnology Cluster in Ireland, which would be based on the development of strong links between the university sector and industry, agriculture and the financial services sectors. In addition to this the current National Development Plan 2000-2006 aims to significantly upgrade the innovation capacity of the Irish economy through the provision of both hard and soft infrastructure and generate key linkages between existing university and higher-education institutions and industry engaged in innovation. There is a clear recognition of this at policy levels and expenditure on R&D has begun to be targeted at the higher education sector. At the local level, the recent Dublin City Development Plan 2005-2011 (Dublin City Council 2005) also makes explicit the strategic move of the region towards a dependence on its intellectual capital to develop and sustain a knowledge economy.

Helsinki

Helsinki appears to have a relatively uncomplicated policy approach to the development of creative and knowledge intensive industry involving four sets of policies: related to science, technology, information society and innovation. The three major cities of the metropolitan region work closely together and are strongly supported through government funding. The Helsinki region is regarded as the key to the international competitiveness of the whole country and receives a disproportionate share of national resources. There are strong management arrangements in place including a development organisation owned by the three major cities of the metropolitan area (Helsinki, Espoo and Vantaa), Uusimaa Region Council, universities and other public and private sector organisations. This is an important organisation in the execution of the local development programmes and it manages various

projects and action plans. These arrangements mean that there is a strong shared strategy and cooperation between key organisations to improve the international competitiveness of the Helsinki region. Actions to strengthen the capacity to function as a world-class centre for businesses and international organisations include further improving the provision and opportunities of housing, education, work and enterprise.

Germany

In Germany, due to the federal system 3 distinct levels of policy making can be considered: the national, federal and local level. Since national strategies are the same for Munich and Leipzig, first we give an overview about the role of State, then the policies of the respective federal states and cities will be analysed.

Generally, in Germany the national parliament and government formulates broad strategies for the support of the development of new technologies and innovation, including the creative industries. A good example for that is the 'High-Tech-Strategy' (2006), where one of the main aims is to reach the goal of spending 3 percent of GDP for R&D in the year 2010, as it is put forward in the Lisbon-Strategy. On the other hand culture and cultural industries as a distinct field of national development policy has only been discovered and developed in recent years: the position of a state secretary has been established in 1998 and since then not only culture but also topics such as cultural economy and creative industries have appeared on the agenda of the Bundestag (German parliament). Within the federal system, regional governments (*Länder*) are the main agents for policies concerning R&D, higher education and creative industries (especially in the field of culture, art, film and the media). There are also several examples for strong cooperation between the national government and federal states in these areas like the 'Initiative for excellence of the federal state and the Länder' (*Exzellenzinitiative des Bundes und der Länder*) which aims at promoting high quality research at the universities. In the framework of the programme universities will be supported by 1.9 billion Euros, two third of the amount is financed by the federal state.

Munich

Munich and Bavaria were among the first regions in Europe where policies for supporting innovation and technology were formulated. Since the 1980s the government of Bavaria has set up several programmes in which resources were spent on R&D, training, infrastructure development, support for start-ups and technology transfer to make Bavaria an attractive location for the high-tech industry. Most important programmes in the 1980s for targeted support of innovation and technology were the Bavarian Innovation Programme (BayIP) and the Bavarian Technology Introduction Programme (BayTEP), which in 2000 were combined in the Bavarian Technology Programme (BayTP). The BayTP programme financially supports the transition of new technologies into profitable products and services.

In the 1990s, research and development policy gained new impetus and the Bavarian government started two new programmes: in 1994 the 'Future Bavaria Initiative' (*Offensive Zukunft Bayern*) and in 1999 its continuation the 'High-Tech Initiative'. These programmes aimed at making Bavaria even more attractive location for high-tech industry. 'The High-Tech Initiative' concentrates its support on various key technologies, including life sciences, ICT, environmental technology and mechatronics, and it supports the development of start-up

centres, the promotion of innovative networks, the construction of new university and research centres etc. Since February 2006, the *Cluster Initiative* (Bavaria's cluster campaign) has been implemented which is a subsequent stage of Bavarian innovation and economic policy. The cluster campaign is a new feature of the modernisation strategy designed to enhance Bavaria's role as a top location for business and science, which systematically follows on from the Bavarian High-Tech Initiative. Its aim is to build state-wide networks interlinking business and scientific potential in 19 defined clusters of industry and competence, and thus to activate innovation and productivity potential in these clusters.

Although most of the efforts of the federal state were directed to the entire territory of Bavaria, Munich region has benefited most from these investments since it has the highest concentration of knowledge-intensive firms, university and research institution.

Compared to the state of Bavaria, the activities of Munich municipal government appear to be modest – particularly as the city does not have the same financial means as the state of Bavaria. However, distinctive measures have been taken by the City of Munich in recent years, especially by the Department of Labour and Economic Development, to promote a knowledge-based economy. The measures essentially focus on supporting start-ups and enterprise networks, as well as providing space or buildings. One example for sector-specific innovation support is the Munich Technology Centre (MTZ, Münchner Technologiezentrum), which was founded in 1983 by the city of Munich and the chamber of industry and commerce. It offers office space for start-ups at below-market rents and administrative services such as telecommunications and office management. The companies are also helped to build their client network, to get access to finance, or to market their products at trade exhibitions. Another example for improving the knowledge base in Munich is the MEB (Münchner Existenzgründungsberatung), a consultancy office for start-ups, organised by the City of Munich with the chamber of industry and commerce. In addition to that, the city is also developing a life science park in Freiham in the western part of the city, as well as a park designed for media. Currently, the importance of positioning Munich as a knowledge-based city is slowly being recognised by the responsible players, especially by the Department of Labour and Economic Development. Although the city of Munich has not yet formulated a comprehensive strategy concerning development into a creative knowledge-based city, one can observe certain elements of activity in building a cohesive approach.

If we analyse co-operation between the federal state actors and the city of Munich, we may come to the conclusion that there is virtually no co-operation between the two actors and no strategic vision as to what direction the local economic development in the Munich region as a whole should take.

Leipzig

Similarly to Munich the city of Leipzig enjoys the simultaneous implementation of national, federal and local policies facilitating above average growth rates of creative and knowledge-intensive industries. However, as opposed to Munich, Leipzig and other East German cities have profited a lot from national policies which aimed at the re-development of East Germany. As part of these national policies (e.g. regional development policy, economic policy) large scale investments have been realised in order to improve the infrastructural basis for innovative technologies, high-tech production, high quality business services, transport and telecommunication.

On the regional level, the implementation of the Sachsen-Dreieck (“Saxony triangle”) is the most notable policy designated to enhance regional development in Saxony. The creation of the metropolitan region “Saxony triangle” in classic terms, with high population and job density rates, strong economic traditions, and a distinct cultural life aims to increase regional competitiveness. Nevertheless creative industries are not seen by the programme as a tool for strengthening regional competitiveness.

On the local level the city has launched several programmes after 1990 to improve its competitiveness. This is especially true for the media (as part of the creative industries) and “media industry” has been integrated in the cluster policy of the city of Leipzig.

The development of existing creative scenes (core creative producers in the field of design, art, painting, fashion, film, music, architecture and photography etc.) and creative milieus play a crucial, though not very visible, role in the local policy of Leipzig. Mainly located in the core inner city (with the exception of the “Spinnerei”, a former industrial plant in Plagwitz in the western part of Leipzig with a cluster of 50 galleries), each of these professional creative scenes has its fairly individual networks, meeting places and social practices. Interestingly enough, the city’s marketing policy also considers some parts of the historical cultural potential as important element of economic development, such as music. While the existing label “Leipziger Freiheit” (“Leipzig’s liberty”) seems to highlight the openness as well as the diversity of cultural life, creative scenes, and a heterogeneous civil society. Despite all these efforts, creative industries in general have not yet been identified as a distinct strategic field of action by the local government of Leipzig. In respect to the positive factual performance in this field, primarily in the media industry, integrative public-private partnership strategies between educational institutions, R&D facilities, cultural production and a coherent urban and economic policy have also not yet been registered.

Milan

Milan metropolitan area presents an example of a relative lack of regional co-operation and consequently the absence of a regional investment strategy. Investments in innovation and research lag behind other major metropolitan areas in Europe. In recent years, however, there seem to be some changes. Since 2003, the Lombardy Region has stimulated and promoted collaboration between local industries and the knowledge centres in the region with limited amounts of financial support. At the level of the Province a series of strategic plans have appeared from 1999 onwards, aimed at bridging the gap between the EU discourse of innovation and the local context. Subsequent plans have a different focus within a more general strategy. The second plan (2001-2004), for example, gave special attention to so-called ‘incubators’ (also see Amsterdam); incubators are places where start-up companies can be localised and where they can receive adequate support services. For the future strategic policy high expectations are related to the organisation of the EXPO 2013, which will be focused on ‘tradition’, creativity, and innovation in the food sector.

It seems that Milan is so full of confidence about its position in design and fashion (again supported by established names as Versace, Armani, Prada, etc.) that no special strategic

efforts are relating to that kind of activities. Likely, these creative industries are well able to take care of fostering this image themselves without any public support.

Poznan

In Poznan there is no specific cohesive policy facilitating the development of creative sector in the city and its surroundings. A notable step forward in this field was the preparation of a report on “Knowledge-based development of the city of Poznan” under the World Bank Competitive Funding Scheme in 2002. In the currently updated Study of the Conditions and Directions of the Spatial Development of Poznan (2007) special emphasis was placed on the future role of the city as an academic and scientific technological centre. Local authorities seem to getting understanding that the development of Poznan as a creative and knowledge-based city will determine its future competitiveness in the network of the European metropolitan regions.

A strategic intermediate document between the long-term growth strategy and the annual planning within the task-oriented budget is the Plan of City Development for 2005-2010. It is a medium-term plan with a 6-year framework of implementation which set eight main priorities. There are two priorities that come closest to the creative-city philosophy: investment in knowledge and new jobs. These priorities rest on the conception of a knowledge-based economy and refer to the documents of the OECD and the European Union (Lisbon Strategy). The ‘Investment-in-knowledge priority’ is implemented in Poznan via three programmes: 1) Academic Poznan, 2) High Quality of Education, and 3) Education for Work. Representatives of higher education, R&D institutions and the city government worked out the programme. The main strategic goals of the programme include improving the quality of education and the innovation content of the local economy, as well as increasing its attractiveness of Poznan both as a place of study and a site for business activity with a strong scientific and academic base. In addition to this the ‘New jobs priority’ is implemented via four programmes: 1) Innovative economy, 2) Competitiveness of SMEs, 3) Work for the active, and 4) Conference Poznan. Following examples of projects under the Innovative Economy programme can be mentioned: the Poznan Scientific-Technological Incubator - a company with the participation of the local authorities, R&D institutions and high-schools; it is intended to include an Innovative Enterprise Incubator and a Centre for Commercialisation and Technology Transfer. Another project is the Poznan Technological-Industrial Park - a scientific-industrial complex created on a municipal plot in the form of a commercial company to house investments by high-tech firms, and the Technological Industrial Zone, which includes investment sites for innovative firms that are planning to make significant investments over a 5-year period and which will then be entitled to property tax relief.

Riga

Riga provides an example that local policies are not always harmonised with national development goals and strategies. If compared with the priorities of the Latvian National Development Plan (NDP), the Riga priorities are very much in line with those of the NDP, although the time horizon of the NDP is shorter (until 2013), whereas the Riga documents to some extent cover the period up to 2025. The City Council recognises that very little has been done to foster the potential of Riga as the centre of higher education and science in generating new knowledge and innovation. Considerably more is done and proposed at a national level,

especially in the light of the newly adopted National Development Plan that stipulates the advancement of science and technological excellence as one of the keystones of prioritised knowledge economy. With regards education and culture policies are prepared and managed at national level and therefore no specific policy measures are taken by the municipality in this regard (this is recognised)). In late 2006 a new long-term Strategy for Cultural Development has been proposed by the Department of Culture of Riga Municipality. Interestingly enough, the strategy does not give any priority for creative industries, as opposed to the Latvian National Development Plan. In Riga the analysis of the policies aimed at increasing city's competitiveness has been partly addressed by the *Riga Long term development strategy of Riga City till 2025* and the *Riga City development programme 2006-2012* both of these umbrella type documents were prepared in 2005, and officially accepted recently.

Sofia

Existing plans at national, regional and local levels do address the 'hard' factors of economic development but generally ignore 'soft' location factors. The "historic development path" of the city shows that after WWII Sofia has not been developed according to sound and comprehensive planning. Plans occasionally implemented here were often based on unrealistic assumptions. In this respect little has changed after 1990, current development plans of different levels (national, regional, local) are partly based on imprecise data and projections thus they mean a continuation of imperfect planning heritage. Undoubtedly, the economy of Sofia has gone through deep restructuring over the last decade, however, the 'creative' part of the economy was entirely the outcome of private (foreign) interests and investments. Given the lack of strong traditions of planning in the mid-term it can be expected that the evolution of Sofia into creative city remain unplanned.

Toulouse

Toulouse has established a leading role in key areas of technology, research and investment and its strategy is to capitalise on and build from this strong base. In developing its strategy there is no single management unit at the scale of the urban area but a complex pattern of inter-communal structures. While the lack of a single centralised structure does not prevent economic policies to be implemented at local level, this is an impediment to implementing social policies and town planning policies that require more inter-communal cooperation. In the 1990s economic interventions were characterised by have a high degree of fragmentation but national laws changed the institutional and governance framework and have successfully achieved a more coherent approach with a 'Charter for the Urban Area' adopted by most local authorities and providing the framework and the method for spatial planning of the urban area.

The outcome is that the governance of the urban area is no longer based on a centre-periphery opposition and shifting alliances, but on a more polycentric model. In addition to inter-communal structures, new forms of governance emerged with a growing influence of private firms which have benefited from the active policy conducted by the State and the Region to support industrial development through technological innovation and applied research (through the Pôles de compétitivité, the National Agency for Research and the Agency for Industrial Innovation). Support for major projects illustrates consensus among public and

private local, regional and national stakeholders. The regional policies that promote the two Pôles de Compétitivité in Midi Pyrénées since 2005 reflect both the contribution of public policy but also the commitment to bring high technology firms, higher research and education institutions and local and regional public authorities closer together. Pôles de Compétitivité focus on aeronautics, space and airborne systems, and on biotechnologies and health targeted to cancer treatment. Local Economic Development policies deployed in Toulouse and involving public private partnerships are innovative, especially in their governance arrangements. They have generated stable working arrangements between industrial, scientific and institutional stakeholders. Although there are a large number of institutions involved, there are shared objective of increasing the competitive advantage of high technology industries and services, and of strengthening relationships and the production and circulation of knowledge between firms to achieve technological innovation.

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