# Policies and strategies for the creative knowledge economy in the region of Munich

## How to enhance the city's competitiveness

ISBN 978-94-90312-31-2

Printed in the Netherlands by Xerox Service Center, Amsterdam
Edition: 2010
Cartography lay-out and cover: Puikang Chan, AISSR, University of Amsterdam

All publications in this series are published on the ACRE-website
http://www.acre.socsci.uva.nl and most are available on paper at:

Dr. Olga Gritsai, ACRE project manager
University of Amsterdam
Amsterdam Institute for Social Science Research (AISSR)
Department of Geography, Planning and International Development Studies
Nieuwe Prinsengracht 130
NL-1018 VZ Amsterdam
The Netherlands
Tel. +31 20 525 4044
+31 23 528 2955
Fax +31 20 525 4051
E-mail O.Gritsai@uva.nl

# Policies and strategies for the creative knowledge economy in the region of Munich

## How to enhance the city's competitiveness

**ACRE report 10.7**

Anne von Streit
Giulia Montanari
Monika Popp
Sabine Hafner
Günter Heinritz
Manfred Miosga

Accommodating Creative Knowledge – Competitiveness of European Metropolitan Regions within the Enlarged Union

Amsterdam 2010
AISSR, University of Amsterdam

# ACRE

ACRE is an acronym of the international research project 'Accommodating Creative Knowledge – Competitiveness of European Metropolitan Regions within the Enlarged Union'.

The project is funded under the Priority 7 'Citizens and Governance in a Knowledge-based Society' within the Sixth Framework Programme of the European Union (contract no 028270).

Coordination:

**Prof. Sako Musterd**
University of Amsterdam
Amsterdam Institute for Social Science Research (AISSR)
Department of Geography, Planning and International Development Studies
Nieuwe Prinsengracht 130
NL-1018 VZ Amsterdam
The Netherlands

Participants:

- **Amsterdam** (Amsterdam Institute for Social Science Research, University of Amsterdam, the Netherlands)
  Marco Bontje ~ Olga Gritsai ~ Heike Pethe ~ Wim Ostendorf ~ Puikang Chan
- **Barcelona** (Centre de Recerca en Economia del Benestar – Centre for Research in Welfare Economics, University of Barcelona, Spain)
  Montserrat Pareja Eastaway ~ Joaquin Turmo Garuz ~ Montserrat Simó Solsona ~ Lidia Garcia Ferrando ~ Marc Pradel i Miquel
- **Birmingham** (Centre for Urban and Regional Studies, University of Birmingham, UK)
  Alan Murie ~ Caroline Chapain ~ John Gibney ~ Austin Barber ~ Jane Lutz ~ Julie Brown
- **Budapest** (Institute of Geography, Hungarian Academy of Sciences, Hungary)
  Zoltán Kovács ~ Zoltán Dövényi ~ Tamas Egedy ~ Attila Csaba Kondor ~ Balázs Szabó
- **Helsinki** (Department of Geography, University of Helsinki, Finland)
  Mari Vaattovaara ~ Kaisa Kepsu ~ Venla Bernelius
- **Leipzig** (Leibniz Institute of Regional Geography, Germany)
  Joachim Burdack ~ Günter Herfert ~ Bastian Lange ~ Katja Manz ~ Robert Nadler ~ Kornelia Ehrlich ~ Juliane Schröder
- **Munich** (Department of Geography, Ludwig-Maximilian University, Germany)
  Günter Heinritz ~ Sabine Hafner ~ Manfred Miosga ~ Anne von Streit ~ Monika Popp
- **Poznan** (Institute of Socio-Economic Geography and Spatial Management, Adam Mickiewicz University, Poland)
  Tadeusz Stryjakiewicz ~ Jerzy J. Parysek ~ Tomasz Kaczmarek ~ Michal Meczynski

- **Riga** (Stockholm School of Economics in Riga, Latvia)
  Anders Paalzow ~ Diana Pauna ~ Vjacheslav Dombrovsky ~ Roberts Kilis ~ Arnis Sauka
- **Sofia** (Centre for Social Practices, New Bulgarian University, Bulgaria)
  Evgenii Dainov ~ Vassil Garnizov ~ Maria Pancheva ~ Ivan Nachev ~ Lilia Kolova
- **Toulouse** (Interdisciplinary Centre for Urban and Sociological Studies, University of Toulouse-II Le Mirail, Toulouse, France)
  Denis Eckert ~ Christiane Thouzellier ~ Elisabeth Peyroux ~ Michel Grossetti ~ Mariette Sibertin-Blanc ~ Frédéric Leriche ~ Florence Laumière ~ Jean-Marc Zuliani ~ Corinne Siino ~ Martine Azam ~ Hélène Martin-Brelot
- **Milan** (Department of Sociology and Social research, University degli Studi di Milan Bicocca, Italy)
  Enzo Mingione ~ Francesca Zajczyk ~ Elena dell'Agnese ~ Silvia Mugnano ~ Marianna d'Ovidio ~ Carla Sedini
- **Dublin** (School of Geography, Planning and Environmental Policy, University College Dublin, Ireland)
  Declan Redmond ~ Brendan Williams ~ Niamh Moore ~ Veronica Crossa ~ Enda Murphy ~ Philip Lawton

# Table of contents

## EXECUTIVE SUMMARY

This report investigates the policies related to the creative knowledge economy in the Munich region. Such policies include the support of the creative knowledge sectors, innovation and technology policy, university support, support for culture and the arts as well as policies for highly qualified workers.

The following analysis is part of the project ACRE examining the creative knowledge industries in 13 European metropolitan regions. The two central research questions of the whole ACRE project are: what are the conditions for creating or stimulating 'creative knowledge regions' in different metropolitan regions of the EU? What is the role of so-called 'soft' factors in creating and stimulating 'creative knowledge regions'? This report addresses the third central question: Can we say something about the (potential) effectiveness of regional competitiveness policies that focus on a creativity- and knowledge-based metropolitan economy? This is done in two steps:

The first step is to identify the key stakeholders in the Munich region who are concerned with the above named policies on different spatial scales and to analyse their policies and strategies which focus on creativity, innovation and knowledge. The second one is to confront the existing programmes with results of three previous studies of the ACRE project. These previous reports had examined the attractiveness of the Munich region for three groups: (1) workers in both creative and knowledge industries; (2) creative knowledge companies; (3) transnational highly skilled migrant workers. The studies took account of Richard Florida's arguments that 'soft factors' have become increasingly important for cities to attract creative knowledge workers and – as a consequence – also creative knowledge firms. Contrary to the arguments of Florida, the most important regional conditions in Munich, both positive and negative, to emerge from the research previously undertaken, largely concern traditional hard location factors such as transport infrastructure, cost of living and housing, employment availability and the presence of a skilled and educated labour pool. The thick Munich labour market and the available labour pool are the most important pull factors whereas the high costs of living and the housing market in Munich are potential push factors. Soft factors like the high quality of life, the cultural and recreational offers as well as the surrounding country side predominantly play a role as retaining factors. The reports also highlight the high importance of being rooted in a city, of private reasons and of existing networks for business location strategies as personal trajectories turned out to be a core attracting and retaining factor in the decision making of the various target groups analysed. As more than half of the creative knowledge workers surveyed can be described as much tied to the Munich location, they can – with regard to their mobility behaviour and in their sense of connection to a place – neither be assigned to belong to a transnational class nor the creative class of Richard Florida. In the case of creative knowledge firms all small and medium sized younger companies (it does not apply to the big firms and so-called global players) report that personal and family reasons drove their initial decision to locate in Munich.

On the whole it can be argued that the policy measures and strategies analysed in this study have managed to support Munich's development into one of the leading European centres of the creative knowledge economy. One important part of Munich's current economic position in the national and European context can be attributed to the existence of numerous clusters classified under high-tech and knowledge intensive industries (including automotive, ICT, biotechnology, aerospace), the knowledge intensive service sector (including finance and insurance) and the creative sector (including media, software, internet publishing). Especially the "institutional thickness" is an important asset of the region. How much of this strong economic position can be attributed to policies measures and how much to other factors like for example path dependency remains a contested question.

In Germany the Federal State (Bund), the Länder (states) and the local government districts (municipalities or counties) represent the different levels of Germany's three-tiered administrative structure. These three levels have different responsibilities and tasks in respect to economic development policy within the German administrative system. The key stakeholders in the field of economic and innovation policies can be differentiated as follows: 1) public actors like elected governments on the national, the state and the municipal level as well as the administration on these spatial levels, namely the responsible ministries and departments, 2) parastatal actors like chambers of industry and commerce, 3) non-state actors like independent research institutions, 4) state administrative bodies like universities as well as 5) private actors such as federations, associations, and businesses.

Policies aiming at fostering R&D, innovation, as well as sectors of the creative knowledge economy have been established at all government levels in Germany. Due to the fact that the states (Länder) are largely responsible for education, R&D, culture and media policies in Germany, the Bavarian state is the most influential actor followed by the city of Munich. The policies of the national government only play a minor role in the Munich region. However, because of the financial crises the measures of the federal government aiming at fostering innovation and future oriented sectors have gained new impetus. The federal strategies focus very much on high tech sectors, on promoting close links between industry and research, on supporting clusters as well as on modernising Germany's science system. In contrast to these innovation based policies, creativity based policies only play a minor role. Culture as a distinct field of national policy has only been discovered and developed in the last years and so far the creative industries have been the target of only one initiative on the federal level: in 2007 the federal government has initiated the Culture and Creative Industry Initiative which has published a report on the culture and creative industries in German (employment, firms, and turnover) and has presented a harmonised basic model for the definition and classification of these industries for Germany. However, this definition and classification has not been adopted on the Bavarian state level and the city level.

The Bavarian state as the most influential actor concerning creative knowledge policies in the Munich region provides the bulk of funding in policy areas such as education, research, economic development as well as culture, media and the arts. Political support of especially the high tech industry has a long tradition in Bavaria and the region of Munich has profited by important location decisions relating to technology policy since the 1950s. Although the efforts of the High Tech Initiative in the 1990s and the current cluster campaign are directed at the entire territory of Bavaria, many of these investments have benefited the city and the

Munich region, since it has the highest concentration of knowledge-intensive firms, university institutes and research institutions: therefore e.g. numerous cluster platforms are based in the Munich region and it has profited heavily from the various former initiatives of the Free State of Bavaria like university buildings or start up centres.

Concerning the creative industries, the Bavarian government does not perceive the creative industries as a sector in its own right. Nevertheless, several sub-sectors of the creative industries like e.g. the media, games as well as software as being part of ICT have been promoted in various initiatives in the region of Munich. Furthermore, the varied cultural scene in Munich regarding theatres, orchestras and museums is financed to a large extent by the state of Bavaria or by state-run institutions and foundations.

Compared with the state of Bavaria, the activities of Munich as its capital city appear modest – particularly as the city does not have the same financial means as the state of Bavaria. But there are some measures taken by the City of Munich to promote a knowledge-based creative economy like the promotion of Munich as a business location or policies to support start-ups and theme-specific orientation in the designation of new commercial spaces (e.g. media parks). However, a coherent implementation strategy to reach the aim of extending the position of Munich as an international centre of knowledge, innovation and creativity still lies a good way off, not least because the political leadership of the city of Munich sees hardly any need for action in this area. The pressure to act is regarded as slight, as the outline conditions for economic prosperity and the future prospects of the city are essentially judged to be positive. This could also be the reason why the smaller units of the creative industries have no priority status in the economic policy of the city. Furthermore, due to the clear distribution of tasks between municipal departments – the Department of Labour and Economic Development focuses on the promotion of the creative sectors and especially the media and the Department of Culture and Arts focuses on the support of culture and the arts – the concept of the creative industries has not yet gained ground in Munich – at the moment, there are tentative movements to a closer collaboration discernable.

On the whole the policies of the Bavarian state as well as of the city of Munich can be characterised as top down approaches which focus more on innovation, knowledge and high tech sectors than on creativity, culture and the creative industries.

Confronting the existing policy measures with the results of previous work several conclusions can be drawn: Many of the policy measures of the Free State of Bavaria as well as the city of Munich largely concern traditional hard location factors. Firstly, both actors try to foster economic development through infrastructure provision: this concerns roads, traffic management, public transport, the relocation of the airport in the 1990s as well as housing projects and start up centres. Secondly, the technology policy and university support, as well as policy on education and science especially provided by the Free State of Bavaria follows this direction. The results of previous work project support this focus as they emphasise the ongoing importance of hard factors. Furthermore it can be argued that any policy aimed at fostering the establishment and nurturing of firms in the knowledge-intensive and creative sectors is always simultaneously a policy for highly qualified people. Unsolved problem areas are the high costs of living and the housing market in the Munich region.

Concerning the weaknesses of creative knowledge policies in the Munich region the most important points are: a lack of governance and co-operation between different actors in the region. This concerns primarily the lack of co-operation between the state of Bavaria and the city of Munich and the lack of co-operation between the city of Munich, the state of Bavaria and the municipalities within the region of Munich. But it concerns also a lack of co-operation between different ministries on the state level as well as between departments on the local level as creative knowledge policy is always a cross-sectoral policy which has economic, spatial, educational, cultural and social aspects.

# 1 INTRODUCTION

## 1.1 Aim of the report

In the shift from manufacturing and services to more cognitive cultural production and services (Scott 2006), a positive urban and regional development today is largely depend on the potentials and capacities of metropolitan regions in the field of knowledge-intensive and creative economic activities (Krätke and Taylor, 2004; Krätke, 2007). Thus, many European metropolises view an identity as a creative city as an opportunity to reposition themselves with respect to international and interregional competition. In the view of many cities culture, creativity, innovation and knowledge have become important location factors which are used extensively in their marketing strategies. This optimism on the possibilities of exploiting creativity as a driver for urban regional development, for economic transformation, for job creation, is also an expression of the search for new planning and steering instruments.

This optimism is not necessarily shared in academic debates where city regional development strategies with the focus on creativity have been discussed controversially. Whereas some authors regard creative knowledge industries and the "creative class" as necessary preconditions for positive future development (Florida, 2005; Landry, 2000), others like Hall (2004), Peck (2005) and Scott (2006) argue that those mainly consumption based policies which aim at attracting the creative class are too narrow to support sustainable economic development in the respective sectors and in effect might even lead to growing disparities in city regions (Wilson and Keil, 2008).

This report is part of a broader project examining the creative knowledge industries in 13 European metropolitan regions. The three central research questions of the whole ACRE project are: what are the conditions for creating or stimulating 'creative knowledge regions' in different metropolitan regions of the EU? What is the role of so-called 'soft' factors in creating and stimulating 'creative knowledge regions'? Can we say something about the (potential) effectiveness of regional competitiveness policies that focus on a creativity- and knowledge-based metropolitan economy?

This report follows three previous reports examining the attractiveness of the Munich region for three groups: (1) workers in both creative and knowledge industries; (2) creative knowledge companies; (3) transnational migrant workers. This report asks what lessons for regional economic development policies and strategies can be drawn from the survey based investigations done before.

There are two broad aims to this report. The first is to identify the key stakeholders in the Munich region concerned with economic development policies on different spatial scales and the second is to analyse their policies and strategies which focus on creativity, innovation and knowledge. Special attention will be paid to the question if the policies for becoming a competitive 'creative knowledge region' only aim at attracting certain types of economic activities, or if they also aim at providing 'soft location factors' like an attractive residential environment, inviting public spaces, and 'meeting places' for the 'talent pool' needed for these economic activities.

The report is structured as follows:

In the following chapter the study region will be presented in brief. Furthermore, it aims at giving an overview on the metropolitan economy and especially the creative knowledge economy in the Munich region. In the second chapter the theoretical background will be revealed and in chapter three the research design and methodology of this analysis is explained. The empirical results follow in chapter four to seven: in chapter four the key stakeholders who play a role in the decision-making process in the area of economic development at different spatial scales are identified. The overarching objective of chapter five is to describe the existing policies regarding the creative knowledge economy in the Munich region and to explain in detail the aims and objectives of the policies of the relevant actors on different spatial scales as well as their context of emergence. In the following chapter the types of interactions between the relevant stakeholders are discussed and in chapter seven the existing policy measures are confronted with the results of previous work packages. The report closes with some preliminary policy recommendations and open research questions.

## 1.2 Introduction to the region

Munich lies in the south of Germany and is the capital of the Free State of Bavaria. The city is the sole centre of the administrative district of Upper Bavaria (Nuts-2 region). Upper Bavaria belongs to the most dynamic regions of Europe in economic terms. Its economy is characterised by a strongly diversified economy and a high concentration of high-tech oriented firms as well as knowledge-intensive, business-oriented services. In contrast to many other regions in Germany, it shows also a positive demographic development resulting from migration, due to the wide-ranging employment opportunities of the region.

With a current population of approximately 2.4 million inhabitants, the Munich region has developed into one of the most dynamic and economically prosperous urban agglomerations in Europe. The region of Munich that is formed by the planning region 14 of the Bavarian planning regions encompasses not only the city itself, but also the surrounding administrative districts (*Landkreise*) of Dachau, Ebersberg, Erding, Freising, Fürstenfeldbruck, Landsberg am Lech, München and Starnberg (see figure 1.1 and 1.2). With a surface area of 5,504 square kilometres, it is the second largest of the 18 Bavarian planning regions. It is also one of the most densely populated regions in southern Germany. The region is strongly oriented toward the state capital.

The city of Munich, with a surface area of 310 square kilometres, makes up only 6 per cent of the planning region, but almost 50 per cent of the regional population. 1,337,030 people (July 2007) live in this area. Approximately 60 per cent of the total workforce (according to figures for those paying social insurance contributions) of the region has its place of work inside the city limits (1,026,330 workers).

**Figure 1.1 - Bavaria’s 18 Planning Regions**

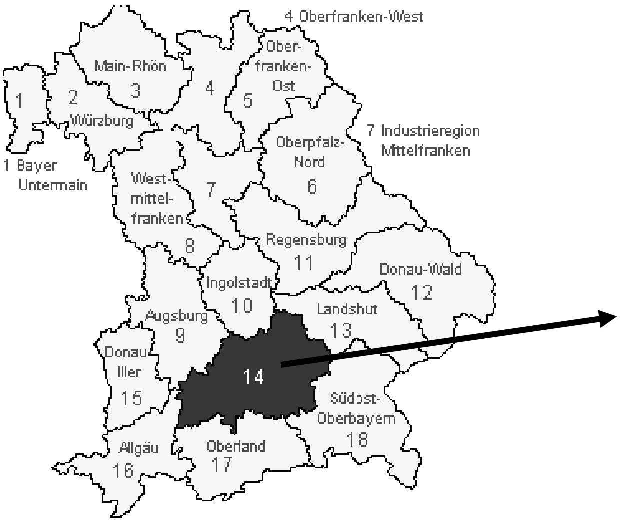
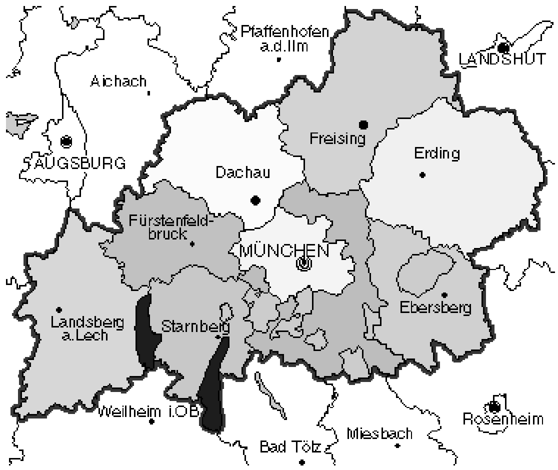



**Figure 1.2 - The Regional Planning Association of the Munich Region**




*Source: Regionaler Planungsverband München, 2006*

## 1.3 Characteristics of the urban economy

The sectors and workers of the creative knowledge economy in Munich have been the subject of several previous work packages of the ACRE project. This chapter aims at giving a statistical overview on the size of the creative knowledge economy in the Munich region.

The Munich region takes – compared to other German agglomerations - a leading position in economic aspects. The purchasing power as well as the GDP per capita rank among the highest in Germany: Today almost one third of the whole GDP of Bavaria is generated in the Munich region. In the year 2008 this has been 56,492 Euro per capita in the city of Munich in comparison to Germany with 28,194 Euro. In 2008 the city of Munich had with 6.2 per cent the lowest unemployment rate of all German metropolitan regions (INSM 2009).

There are 1.56 million employees in the region of Munich (1.08 million of them subject to social insurance). If one looks at the employees differentiated according to economic sectors, the high level of tertiarisation is reflected here: three quarter of all employees (subject to social insurance contribution) were working in services. An over-proportionate number of these employees are to be found in knowledge intensive services to business, such as consultancy and planning, which were able to create the most new jobs in the last years. Nevertheless, manufacturing continues to be of great importance, with almost a quarter of jobs in the Munich region (LH München, 2009).

One part of Munich’s strength as a business location is based on the diversity of its economic structure and the mixture of global players and SMEs. This modern and balanced economic structure is often referred to as ‘Munich Mix’ (Münchner Mischung). This term not only refers to the mixture of big and small enterprises, it also refers to the sectional structure of the economy. Another part of Munich's current economic position in the national and European context can be attributed to the existence of numerous clusters classified under high-tech and knowledge intensive industries (including automotive, ICT, biotechnology, aerospace), the knowledge intensive service sector (including finance and insurance) and the creative sector (including media and new media, software, internet publishing). They form the innovative growth poles of the region. Studies have shown that the clusters do not only comprise links among enterprises in the respective sectors, but also embrace links to the numerous research and educational institutions in the Munich area, by the networks of SMEs and large enterprises, as well as links to commercialisation protagonists (for the example of microelectronics see Stenke 2002, 2008; for the media sector see Biehler et al. 2003 or Mossig, 2004; for biotechnology see Ossenbrügge and Zeller, 2002).

Being a prosperous region, the Munich region as a whole still records a positive population development. Concerning intraregional differentiation, an over-proportionate growth of the population takes place in the surrounding areas, with growth rates over 10 per cent per year, in contrast to growth of less than 0.5 per cent in the city. In the period between the 1960s and the early 1980s the percentage of the population living in the suburbs increased form around 37 to 44 per cent. This figures continued to climb to almost 48 per cent in 1993 and in the year 2006 more people have lived in the region (51 per cent) than in the city.

### *1.3.1 The creative knowledge economy in the Munich region: The sectors*

The creative knowledge economy as defined by the ACRE management team consists of the creative industries as well as the knowledge intensive sectors; following five sub-sectors had been defined by the ACRE project team:

> The **creative industries**, which are made up of advertising, architecture, the art and antiques market, crafts, design, designer fashion, film and video, interactive leisure software, music, the performing arts, publishing, software and computer services, television and radio (adapted from DCMS, 1998).
> The **knowledge industries** are made up of: information & communication technology (ICT) (adapted from OECD definition), finance, law and other business services, R&D and higher education[1]

Munich can be considered as an established centre of the knowledge intensive industry as well as knowledge intensive services (Krätke, 2007) in the German as well as in the European context. It can also be considered as a leading centre of the creative industries in Germany (Hafner & von Streit, 2007). In 2007, 30 per cent of all employees subject to social insurance contributions in the Munich region work in the creative knowledge sector, and in the city of Munich this even rises to almost 34 per cent of all employees. About 8 per cent of the total

[1] See annex 1 for a list of the selected NACE codes for each sector; it was decided to use the NACE codes and not the ISCO codes in this report as the *Länder* (states) are the lowest spatial level at which the ISCO codes are available in Germany and the NACE codes are also available for the *Landkreise* (counties).

workforce is employed in the creative industries and 22 per cent in the knowledge industries in the Munich region (see table 2.2). As table 2.2 shows, the share of employees in the creative knowledge sectors in relation to all employees is more than 10 per cent higher in the Munich region than in Bavaria and Germany.

In 2007, the creative knowledge sector comprised more than 41,000 enterprises in the region of Munich. Around 29 per cent of firms in the Munich region were active in the creative and knowledge-intensive sectors. In Munich, the proportion of companies from the creative and knowledge-intensive sectors is higher than in the Munich region: approximately 34 per cent of all firms are active in these sectors of industry here.

In 2004[2] they achieved a turnover of over 80.6 billion Euros, which corresponds to just under a quarter of the total turnover of all the firms based in the Munich region. In 2004, the companies in the capital of Bavaria achieved a turnover of just under 51.2 billions, i.e. 22.1 per cent of the total turnover of the city of Munich. A comparison of the knowledge-intensive and creative sectors shows that although about one third of the firms in the region and in the Bavarian capital are active in the creative and knowledge-intensive sectors, they achieve less than a quarter of the total turnover. It is particularly the companies in the creative sectors that achieve lower turnovers. Thus for example the economic importance and the relevance for the regional labour market of the knowledge-intensive sectors is much greater than that of the creative sector: although 52.5 per cent (region) and 55.2 per cent (Munich city) of all creative and knowledge-intensive firms are active in the artistic-creative sector, they achieved only 22.1 per cent (region) and 18.5 per cent (Munich city) of the total turnover in the creative and knowledge-intensive sectors (von Streit et al. 2008).

### *1.3.2 The creative knowledge economy in the Munich region: the workers*

The following statistical analysis concerning the number of employees of Munich's creative knowledge sector is based on data provided by the German Federal Employment Office. The data has some particularities/weaknesses: most importantly, the data covers only employees subject to social insurance contributions, which means that freelancers as well as civil servants are not included. Consequently, the number of people working in sectors such as for example advertising, with a high proportion of freelancers, or universities, with a high proportion of civil servants, is systematically underestimated.

[2] There is no data available on the turnover of firms for 2007.

### *Creative workers*

In 2007, 89,405 people worked in the creative industries in the region of Munich (see figure 1.1 for a map of the region of Munich), about 68 per cent of them within the city boundaries (see table 1.1).

**Table 1.1 - Employees in the creative knowledge sector subject to social insurance contributions, in absolute figures and in relation to all employees, in 2007**

| | **Germany** | | **Bavaria** | | **Region of Munich (*Planungsregion 14*)** | | **Munich city** | |
|---|---|---|---|---|---|---|---|---|
| | Employees (abs.) | % | Employees (abs.) | % | Employees (abs.) | % | Employees (abs.) | **%** |
| **All sectors** | 26,854,566 | 100 | 4,411,875 | 100 | 1,102,318 | 100 | 673,398 | 100 |
| **Creative knowledge sector (altogether)** | 4,800,808 | 17.9 | 836,959 | 19 | 330,568 | 30 | 226,315 | 33.6 |
| **1. Creative Industries** | **1,095,447** | **4.1** | **199,169** | **4.5** | **89,405** | **8.1** | **55,412** | **8.2** |
| Advertising | 106,004 | 0.4 | 15,983 | 0.4 | 8,204 | 0.7 | 5,903 | 0.9 |
| Architecture | 71,663 | 0.3 | 11,068 | 0.3 | 4,529 | 0.4 | 2,765 | 0.4 |
| Arts / antiques trade | 68,206 | 0.2 | 11,582 | 0.3 | 2,591 | 0.2 | 1,715 | 0.2 |
| Designer fashion | 149,881 | 0.6 | 35,560 | 0.8 | 2,961 | 0.3 | 1,464 | 0.2 |
| Video, film, music and photography | 86,125 | 0.3 | 14,020 | 0.3 | 8,927 | 0.8 | 4,653 | 0.7 |
| Music and visual and performing arts | 120,421 | 0.4 | 15,937 | 0.4 | 5,497 | 0.5 | 4,922 | 0.7 |
| Publishing | 143,941 | 0.5 | 31,518 | 0.7 | 14,874 | 1.4 | 11,229 | 1.7 |
| Computer games, software, electronic publishing | 288,403 | 1.1 | 51,923 | 1.2 | 31,622 | 2.9 | 17,464 | 2.6 |
| Radio and TV | 60,802 | 0.2 | 11,577 | 0.3 | 10,200 | 0.9 | 5,298 | 0.8 |
| **2. Knowledge industries** | **3,705,361** | **13.8** | **637,790** | **14.5** | **241,163** | **21.9** | **170,902** | **25.4** |
| ICT | 697,940 | 2.6 | 148,914 | 3.4 | 54,601 | 4.9 | 31,961 | 4.8 |
| Finances | 981,094 | 3.6 | 179,103 | 4.1 | 72,543 | 6.6 | 56,065 | 8.3 |
| Law and other business services | 1,628,524 | 6.1 | 254,844 | 5.8 | 82,616 | 7.5 | 64,234 | 9.5 |
| R&D and higher education | 397,803 | 1.5 | 54,929 | 1.3 | 31,403 | 2.9 | 18,642 | 2.8 |

*Source: BAA 2010, own calculations*

If employment alone is used to determine the importance of the sub-sectors, *computer games, software games, electronic publishing* is the most important creative sub-sector. About one third of all creative employees (31,622 people) are working in this sector. More than half of them work in the city of Munich. This means that software is less concentrated in the city of Munich than other creative branches like for example advertising, music, visual and performing arts as well as publishing. The second biggest subsector is publishing with about 17 per cent of all creative workers in the Munich region. Then follow the fields of radio, TV as well as video, film, music, photography each with around 10 per cent and finally advertising with almost 9 per cent of all employees in the creative field. More than 70 per cent of all employees in advertising are working within the city boundaries.

Over 8,900 people are employed in the field of video, film and photography in the region of Munich. When the more than 10,000 employees of the radio and TV sector are added to this number, around 18,900 employees subject to social security contribution work in the audiovisual media branch in the region of Munich. As freelancers are very common in these branches, it is estimated that at least one third of this number has to be added in order to determine how many people work in this field. The same applies for advertising. It is also estimated that the workforce is at least made up by one third up to a half of freelancers (LH München, 2003). Media has developed into one of the most important sectors of the Munich economy in the last two decades (Biehler et al., 2003). The media industry is mainly made up of small and medium-sized companies, with some 30 large scale enterprises. In terms of their influence and turnover, these large-scale enterprises can be regarded as ‘global players’.

Concerning the geographical location, only 55 per cent of the audio-visual workforce is employed in the city of Munich and 45 per cent in the region. But it must be stated that the majority of these 45 per cent are concentrated in the county of Munich (*Landkreis München)* as a lot of radio and TV enterprises are to be found in the media clusters of Ismaning and Unterföhring.

***Knowledge workers***

The biggest category within the knowledge sector is that of law and other business services with 7 per cent in the region and 9 per cent of the whole workforce in the city of Munich. In this sector almost 83,000 people are employed, which account for 7.5 per cent of the whole workforce in the region. Within this sector almost 50,000 people are employed in the heterogeneous field of legal accounting, book-keeping and auditing activities, tax consultancy, market research and public opinion polling, business and management consultancy. As professional workers like lawyers, notaries etc. are not represented in the data, the number may well be higher.

In 2004 the biggest subsector has been finance which has become the second biggest subsector in 2007. Finance is highly concentrated in the city of Munich: 80 per cent of all people working in the field of finance do so within the city boundaries. Within the sector of finance around 38,000 people are employed at banks and credit institutions and almost 34,000 at insurances in the region of Munich (see annex 3 for a detailed break down of NACE-Codes). After Frankfurt, Munich is Germany’s second most important banking centre, the number one place for insurance companies, and also a top location for asset management firms, funds, leasing companies and venture capital firms. Almost 5 per cent of all employees in the Munich region work in ICT and almost three per cent, namely about 31,000, in R&D. As mentioned before the number of people in R&D may well be higher as civil servants are not included in this data.

If we look at the development for the years 2004 to 2007 we see that the creative knowledge sector has developed more dynamic than the total economy on all geographic scales (see table 1.2). This positive development is reflected both in the rise in the number of employees and in the number of firms. Except for law and other business services as well as finances all sectors have developed more positively in the city and region of Munich than in Bavaria and Germany. If we take a closer look at the creative sub-sectors we see that all sub-sectors experienced an increase in numbers, with the exception of the sub-sectors of arts and antiques trade and designer fashion. The highest growth rates concerning employment as well as company numbers shows the sector of computer games, software and electronic publishing.

Concerning the knowledge intensive sub-sectors, the number of employees in ICT developed more dynamic in the region of Munich than in the city of Munich as well as Bavaria and Germany. The number of employees in finances decreased on all geographical scales – despite the fact that the data shows the situation before the financial crisis in 2007.

**Table 1.2 - Change in number of firms as well as employees 2004-2007 in the creative knowledge sector in relation to all firms and employees in per cent (employees subject to social insurance contributions only)**

| | **Germany** | | **Bavaria** | | **Region of Munich** *(Planungsregion 14)* | | **Munich city** | |
|---|---|---|---|---|---|---|---|---|
| | Employees (%) | Firms (%) | Employees (%) | Firms (%) | Employees (%) | Firms (%) | Employees (%) | Firms (%) |
| **All sectors** | **1.8** | **n.a.** | **2.9** | **n.a.** | **3.1** | **n.a.** | **1.4** | **n.a.** |
| **Creative knowledge sectors (altogether)** | **7.7** | **n.a.** | **8.7** | **n.a.** | **8.5** | **11.6** | **5.5** | **12.4** |
| **1 Creative Industries** | **1.5** | **n.a.** | **4.7** | **n.a.** | **9.2** | **11.4** | **6.9** | **11.9** |
| Advertising | 2.9 | n.a. | 7.5 | n.a. | 13.3 | 8.0 | 15.6 | 11.6 |
| Architecture | -0.2 | n.a. | 1.7 | n.a. | 18.9 | 11.7 | 8.0 | 14.6 |
| Arts/antiques trade | -1.3 | n.a. | 0.2 | n.a. | -33.1 | -6.6 | -49.2 | -8.8 |
| Fashion design | -13.3 | n.a. | -12.6 | n.a. | -11.2 | -12.7 | 2.8 | -15.4 |
| Video, film, music and photography | 8.2 | n.a. | 6.8 | n.a. | 3.9 | 9.1 | 2.4 | 10.0 |
| Music and the visual and performing arts | 4.2 | n.a. | 14.7 | n.a. | 6.3 | 12.9 | 5.8 | 10.9 |
| Publishing | -5.6 | n.a. | -0.6 | n.a. | 0.4 | 11.8 | 6.1 | 14.0 |
| Computer games, software, electronic publishing | 13.0 | n.a. | 19.3 | n.a. | 20.0 | 25.8 | 17.7 | 25.6 |
| Radio and TV | 1.4 | n.a. | 15.3 | n.a. | 17.5 | 16.4 | 11.3 | 18.4 |
| **2 Information and Communication Technology** | **4.1** | **n.a.** | **6.5** | **n.a.** | **15.3** | **1.7** | **1.9** | **3.3** |
| **3 Finances** | **-5.2** | **n.a.** | **-4.9** | **n.a.** | **-4.6** | **7.0** | **-6.3** | **10.6** |
| **4 Law and other business services** | **25.8** | **n.a.** | **24.7** | **n.a.** | **13.9** | **15.0** | **13.6** | **15.5** |
| **5 R&D and higher education** | **5.3** | **n.a.** | **15.6** | **n.a.** | **17.6** | **1.6** | **25.1** | **-0.5** |

*Source: BAA 2010, Statistische Landesamt Bayern, own calculations*

Although around 68 per cent of all jobs and about 63 per cent of all companies in the creative knowledge sectors are still located in the city of Munich, a more recent trend is that knowledge-intensive enterprises as well as headquarters locate themselves in suburbia – especially in the north-eastern part of the Munich region, on the so called airport axis, where the construction of the new airport in 1992 triggered a dynamic economic development in the North of Munich (Haas and Wallisch, 2008).

A comparison of the state of the creative industries by the ACRE programme carried out under a previous work package (Kovács et al., 2007) has shown that for the creative industries as a whole the shares of employment vary between 6 and 14 per cent in different European metropolitan regions. The employment in the creative industries in the Munich region is 8 per cent, as much as e.g. in the city region of Amsterdam (Barcelona 12 per cent). Concerning the knowledge intensive (service) sectors the shares of employment are much higher. The employment in knowledge intensive (services) accounts for 21 per cent in the region of Munich (Amsterdam 18 per cent, Barcelona 10 per cent). This means that some 28.5 per cent of all employees in the Munich region work in the creative knowledge sector, in the city of Munich almost one third of all employees (32 per cent) works in these sectors. However, it must be noted that several high tech sectors which are particularly strong in the Munich region like automotive, ICT, aerospace, biotechnology are not included in this data as the ACRE programme does not research production oriented activities.

According to the above mentioned comparative analysis of the European cities involved in the ACRE research project in terms of their respective development paths and their position in terms of their capacity to accommodate creative knowledge, Munich performs well in this comparison (Kovács et al., 2007). The following factors contribute to this positive evaluation: Munich has a long tradition as centre of power, culture and trade and it is a national and international economic decision making centre. Second, it is associated with small firm development and shows a long-run regional diversity. Third, Munich has a specialisation in high tech activities and heavy manufacturing has never been a dominating sector in Munich. Fourth, it is a good location as node of relevant communication networks, which have played a meaningful role in the city's development. Fifth Munich is internationally known as historical - cultural centre with a preserved urban core. Sixth it has well developed governance structures and the financial and organisational resources for modernisation are available as well as an active, well-organised and financed innovation and technology policy.

# 2 THEORETICAL BACKGROUND AND METHODOLOGY[1]

The conceptual and theoretical framework underlying the ACRE programme has been presented in length in the WP1 (Musterd et al., 2007). It is based on a critical review of literature on the role of creativity and knowledge in present and future economic development and the conditions for a successful development as a ‘creative knowledge region’. This review of literature, which has also pointed at gaps in knowledge, has framed the analysis of each case study in the following WPs, and has been refined over the course of the work.

A number of key questions have been raised in relation with this conceptual and analytical framework. They are addressed throughout this report and will in particular guide the analysis of policies and strategies, which includes the analysis of policy documents and interviews with stakeholders.

Key questions to be taken into consideration in the analysis of policies and strategies include the following ones:

- What is the role of creativity, innovation and knowledge in the metropolitan economic development strategies and visions in each case study?
- To what extent do local and regional governments in the case study regions want to build on existing regional strengths, and to what extent do they look for new strengths with regard to economic specialisations?
- What are the different types of policy approach adopted in different cities (e.g. promoting cultural quarters/infrastructures in the physical sense; or promoting creative industries in their industrial sector sense)?
- What is the role of ‘soft’ location factors in metropolitan economic development strategies when compared to the more traditional, ‘hard’ location factors?
- Do the metropolitan economic development strategies specifically address the conditions for attracting an international skilled labour force?
- Which regional geographic and administrative scale is the most relevant for regional competitiveness when aiming for ‘creative knowledge regions’? Should there be a focus on core city development or on the metropolitan regional level?
- To what extent can we speak of an integrated regional strategy, and on what geographic and administrative scale level?
- To what extent are the economic development strategies and visions embedded in broader urban development strategies and visions? Are economic development policies connected to

[1] This section has been written by the ACRE Toulouse team (Hélène Martin-Brelot, Elisabeth Peyroux, Denis Eckert, University of Toulouse), with help from the Leipzig team (Bastian Lange, Leibniz Institute of Regional Geography). The section is common to all ACRE reports within Work Package 10.

regional spatial development policies, housing market policies and/or policies to attract and cater for the desired 'talent pool'?

- How and to what extent do existing policies and strategies take into consideration issues of social cohesion and social integration?

The answers to these questions are informed by the refinement of the ACRE theoretical framework.

## 2.1 Refinement of ACRE theoretical framework

The WP1 has acknowledged that many authors have come to the conclusion that 'creativity plays an outstanding role in urban and regional development' and recognised '*the increasing coming together and co-mingling of technological innovation, cultural creativity and governance as the driving force of urban development in the 21st century*' (Musterd et al., 2007: 6). In relation to urban competitiveness theories, at least two important interrelated ideas – mostly supported by R. Florida – have been explored. The first one suggests that policies should concentrate on their attractiveness towards individuals rather than towards companies. As a consequence, cities should strive to improve urban atmosphere – e.g. increase openness, tolerance – and pay much less attention to hard classical location factors.

The ACRE analytical framework has been refined over the course of the work. In light of the ACRE empirical results, we are now able to revisit Florida's thesis on the mobility of people composing the 'creative class' and on the drivers that lie behind their decision to live in a city (2.1.1). Statements about the difference between hard and soft factors, creative and knowledge workers and above all the relatively trivial expectations of the respondents are used as first elements to fulfil the debate about urban competitiveness and policies (2.1.2).

### *2.1.1 Revisiting Florida's thesis on the mobility of the creative class and the role of 'soft factors'*

One objective of the ACRE programme was to test R. Florida's hypothesis on the mobility of highly skilled creative knowledge workers. According to the author of the '*Rise of the creative class*' (2001), these people would be increasingly attracted by places combining high levels of technology, talent and tolerance. In other words, the classical 'hard' location factors would lose importance compared to the increasingly prized 'soft' location factors. The latter relate to the global atmosphere of the city such as the openness, the cultural and ethnic diversity.

Each of the three surveys conducted from 2007 to 2009 among the target groups of employees, managers and transnational migrants aimed at answering the following questions:

- What are the main drivers behind their decision to locate in the city where they currently live?
- What is the relative weight of hard and soft location factors in their decision-making process?

It appeared quickly that reasons related to what we called the '**personal trajectory'** and reasons linked to classical factors such as **employment** or studies opportunities were highly significant to explain the surveyed people's choice to settle at a particular place. Soft factors seemed to weakly influence their decision.

By compiling the results of the first quantitative survey conducted among employees in the 13 participant cities, we indeed found out that 55 per cent of the respondents were born in the city or metropolitan region where they currently live. The place where higher education has been achieved seems to play an even more important role in their location choice, as 63.6 per cent of the sampled employees obtained their highest degree locally, ie. in the city or metropolitan region where they now reside.

Taking into account this 'personal trajectory factor' – measured by the places of birth and studies of the surveyed – allowed us to give more insight to the issue of the attractiveness of a city. We could indeed differentiate the people who already had an anterior link with the city and those who had none. Considered as 'creative migrants', the latter only represent 25 per cent of the sample. For them as for the rest of the sample, **the job-related hard factors, play the most dominant role in the selection of a place of residence**.

**Soft factors** only play a very marginal role to attract creative knowledge workers to a city, as only nine per cent of the people coming from outside the region cite this type of reason in a first position. They seem however important to retain them on the long term. Indeed soft factors tend to have more importance if respondents are living in the city for more than one year. As an opposite the role of hard factors is continuously decreasing with the time spent in the city. This result implies that hard factors work more as a reason for mobility (why coming), whereas soft factors are more the reason to stay (why not leaving the city).

Qualitative surveys among managers and employers in creative and knowledge industries confirmed the major role of hard factors, especially the availability of a skilled labour pool, which is often correlated to the presence of higher education institutions in the region. Access to clients and supporting services is also crucial and depends on the size of the city as well as on an efficient transport system. Entrepreneurs also insisted on the quality of the working environment and their professional networks for succeeding in their business.

The presence of universities and higher education institutions constitutes the major attraction factor for transnational migrants. Employment opportunities come up as an important reason to settle in the city. The drivers behind the decision to stay also relate to personal links (friends, family). We could also notice the relative importance of a strong image of the city as centre of creativity (Milan, Barcelona…) or centre of technology (Toulouse, Helsinki…).

These first outcomes thus do not confirm R. Florida's hypothesis of a highly mobile 'creative class'. On the contrary, the highly skilled creative and knowledge workers surveyed within the ACRE programme tend to have a rather sedentary way of life. And, whenever they move, their mobility is rather driven by classical hard factor, most of the time related to employment. Our results rather confirm those of Storper and Scott (2009: 161): '*most migrants – unless they enjoy a private income or are able to capitalize on some purely personal talent that can be practiced anywhere – are unlikely to be able to significant* *numbers from one location to another unless relevant employment opportunities are actually or potentially available*.'

### *2.1.2 Some elements for the debate on urban competitiveness*

According to our results, the size of the city, the quantity and quality of transport infrastructures, and above all the studies and job opportunities act as a significant driver behind the decision to settle in a certain region. The respondents are also heavily tied to their native and family environment or to the place where they have studied and built their social networks. On the other hand, soft factors are clearly not influential to directly attract creative and knowledge individuals – employees, entrepreneurs and transnational migrants – in a city. However this does not mean that they have no importance at all for the surveyed, especially to retain them on the long term. Several observations related to the 'quality of life' can be drawn from the empirical results and put into relation with current debates on urban competitiveness.

- **Evaluating hard and soft factors…**

First attempts of comparison between the 13 cities show a strong heterogeneity of the results, which can be explained by the differences of local conditions. In general, dissatisfactions are clearly expressed on what refers to material aspects of the city such as dwelling, transports, cleanliness of the streets etc. This can be put into relation with the crucial issue of the development pathway of each city, which is one of the dimensions to be taken into account for a typology. Conditions for success seem different in cities with a strong or a discontinued path. We could indeed notice a lower satisfaction with facilities and urban infrastructures in general among people living in ex-socialist cities of Sofia, Riga, Budapest and Poznan. But the situation also differs according to the level of infrastructure and the position of the city as a national or regional capital. The size of the city also has to be thoroughly considered in the way that it might offer more potential personal relations. Along this line, the presence of strong universities well integrated into the city's life appears to play a major role as pre-condition to the formation of further social networks. Let's also mention that a positive evaluation on one or several aspects of the city's environment does not necessary mean that the surveyed are not worried about the evolution of the city. In Munich for instance, the transport system and a large number of urban facilities and services are judged very efficient but the surveyed tend to be pessimistic on the city's future in general.

Soft factors seem to be much more difficult to evaluate than hard factors. Here it is important to distinguish between different types of soft factors. On the one hand there are conditions which policies cannot do anything, which relates to the natural assets of the city such as its location in a favourable natural environment or the sunny climate it enjoys or not. On the other hand, there are factors like openness and tolerance that can be more or less easily promoted or improved on the long term by the mean of political decision.

- **No specific expectations of the 'creative class'?**

The fact that the surveyed's concerns do not differ much than those of the rest of the population is one important statement that we can draw from the empirical results. This contradicts again R. Florida's on the idea of specific needs of a specific 'creative class'. For instance, worries about the availability of jobs and affordable housing are pregnant in most of the surveyed cities. Concerns about the efficiency of the urban transport system and the related issues of traffic congestion and air pollution, but also safety issues are important for a large part of the respondents. Moreover the above underlined role of soft factors as *retention* factors tend to confirm that policies should not only focus on the attractiveness of the city for a 'creative class' coming from outside but should be oriented towards inhabitants who already live and work in the city.

This leads to consider the complex issue of urban policies and the integration of various, often contradictory objectives such as the need to increase competitiveness, tackle social exclusion and preserve environmental resources.

The risks associated to policies focusing on economic excellence relate to the growth of social and spatial disparities within urban areas. This is one of the critics made to Florida's theory (Malanga, 2004; Peck, 2005; Scott, 2006). The elitism associated with the concept of 'creative class' also tend to live down the debate about social polarisation associated with economic restructuring. For instance, Thanki and Jefferys (2007) describe the informalised labour market of the media industries in London and show how the need for personal contacts to find work and the precariousness of the workforce have reinforced the dominance of the industry by a white middle-class elite.

- **The issue of scale**

The 'competitiveness-cohesion' binary, which is at the heart of the current debates about policies, has been scrutinised in a recent book in relation with a European research project running between 2004 and 2007 (COST[2] Action A26). The authors insist on the rescaling process that has gone hand in hand with globalisation – characterised by open markets, removal of barriers for trade, investments and migration of labour. Cities have become 'key territory for current capitalism' and 'place competition has become a key driver of spatial and urban policy'. At the same time, cities and regions are forced to redefine their objectives, their means, their institutions and their positions as socio-political units (Ache et al., 2008: 7).

The new meanings of the local and regional systems have been pointed out in a context of globalisation and it has been concluded that this should not be regarded as separated from global processes (Musterd and al., 2007). The analysis highlights the need to take into account the city, the city-region and the wider regional scale, both in geographic and in political-administrative terms, as well as the need to consider '*smaller areas (sometimes*

[2] COST is an intergovernmental framework for European Co-operation in the field of Scientific and Technical Research.

*neighbourhoods with specific characteristics) which either do or do not fit the requirements of residents and firms and thus demonstrate dynamic economic transformation or fail to do so'* (Ibid: 30).

The new importance of cities and regions in the global economy and the re-scaling process it entails let the neighbourhood appear as a new object of attention. One of our results relates to the idea that if soft factors do not influence people's choice to settle in a particular city, they might determine why they choose a certain district within an urban area (Martin-Brelot et al., 2010). This idea could at last be put into relation with the differences we found between creative and knowledge workers. The first ones seem to be more demanding in terms of cultural offer and social environment and the second ones more sensitive to hard factors. This has probably implications for policy makers who wish to favour a certain type of industries or individuals. Particularly in terms of scale, interventions on neighbourhoods might be more adapted to the needs of creative people, whereas strategies at the metropolitan and / or regional level might better suit a strategy targeting the development of knowledge intensive activities.

On the basis of the outcomes of this analysis and the surveys that have been carried out in the previous Work Packages, as well as on the basis of the synthesis reports which have been written, current policies and strategies are confronted with actual dynamics in the regions involved. Attention is paid in particular to the institutional dimension and the role of organisations (governments, trade associations, large companies, universities, citizen movements etc.) and the mode of governance in a comparative perspective.

## 2.2 Governance approaches and methodology

The purpose of this sub-section is not to review in details the different governance approaches and methods but to highlight key issues regarding comparative studies and identify a common ground for a comparative analysis of case studies.
The nature and scope of this research phase should be taken into consideration: it primarily involves a policy documents analysis, a study of governance arrangements in the field of economic development as well as interviews of stakeholders. The research mainly relies on existing knowledge and expertise of the topic under consideration and on previous research conducted by the researchers on every case study.

### *2.2.1 The diversity of governance concepts and theoretical approaches*

Over the past decades a number of theories and approaches have been developed within what has been referred to as a shift of paradigm from government to governance. Prominent urban governance approaches include the American 'growth-machine' and 'urban regime' theories (and the related notion of 'urban growth coalitions') (Stone, 1993; Stone, 1989; Elkin, 1987; Stoker, 1995). Those approaches rely on the notion of 'policy networks' which is based on the (contentious) assumption that political processes are not controlled by state actors alone and that governing increasingly depends on the interaction of public and private actors (Davies, 2002). Policy network analysis has been described as '*attempts to explain policy development by examining networks of actors concerned with a given policy problem, across the public and private sectors and throughout different levels of governance'* (Mikkelsen, 2006: 17-18). Whilst all analyses use the network as unit of analysis several approaches have been developed (Ibid.). The term 'policy network' can also be understood as '*as a generic label that embraces different forms of relations between state actors and private actors*' (Kriesi et al., 2006: 341).

### *2.2.2 Governance in creative and knowledge industries*

Despite their very different production conditions and marketing structures, the cultural and creative industries display characteristic features that are reflected in specific forms of governance. Micro-companies and/or project-based structures with a large portion of freelancers dominate. Some rare sub-areas are heavily dependent on state funds (theatres, even film industry). As a whole, the cultural economy is a high-risk area with extreme fluctuations in market success. Besides, creative industries lack organisational basis and industry associations that could serve as negotiation partners. In these particular conditions, traditional 'top-down' governance approaches seem hardly adequate. Establishing leadership in structurally unstable situations requires a more flexible, less hierarchical approach. Attention should be paid to intermediaries such as 'culturepreneurs' (Lange, 2007) or 'creativity brokers' (Bilton and Leary, 2002) that can mediate between agencies and creative industries.

The knowledge industries are far more institutionalised and rely on growth coalitions that often associate public agencies, big businesses and industry associations. Furthermore, long established policies and structures are critical (Hall, 2004). These sectors are less flexible, characterised by a strong inertia. Emerging spin-off companies and spillover effects are far from exceptional. The importance of educational assets in a given city for the progressive development of knowledge-intensive industries makes them more dependent on the support of public structures; top-down governance approaches are much more frequent (and might be more relevant) in that area than in that of the creative and cultural industries.

### *2.2.3 The difficulty of conducting comparative studies*

The comparative study of policies and strategies raises a number of theoretical and methodological issues that have been summarised as follow within the context of a study of two German and two U.S. cities[3]: '*an over-dominance of deductive approaches, the lack of explicit methodological guidelines and the less than rigorous application of what has become a multitude of overlapping theoretical concepts*' (Gissendanner, 2003: 3).

Whereas it is acknowledged that deductive studies make a valuable contribution to theory building, it is also pointed out that the use of different concepts for qualitative descriptions inhibits case comparisons. In addition prominent urban governance approaches such as the

[3] This study aimed at analysing the different ways in which cities responded to de-industrialisation and at exploring why some would respond in a relatively more strategic fashion.

'growth-machine' and 'urban regime' theories in particular are said to provide few explicit methodological guidelines and the authors that applied them do not usually specify the methodology they use, which also makes the comparison difficult[4]. Finally, the concepts used by the researchers may differ from the one originally defined in the source texts (Ibid.).

According to some scholars the dominant urban governance approaches present some shortcomings as well. The urban regime theory has been criticised in a number of aspects: its focus on political management and arrangements of internal governance coalitions and its failure to move beyond 'middle-level abstractions'; its tendency to overlook the role of higher level governments; a rigid and static conceptualisation of the division of labour between state and the market and the subsequent underestimation of the potential role played by the local state and community-based organisations in capital accumulation; as well as a narrow vision of the private sector that does not take into consideration small businesses as increasingly vital actors in the post-industrial era (Imbroscio, 1998; Gissendanner, 2003). Other criticisms of the urban regime theory underline the fact that it does not take into consideration the discursive dimension of partnerships and the power relationships (this is particularly relevant in urban regeneration policies, see Atkinson, 1999). The 'growth machine' approach has been criticised for its emphasis on the business communities and land use decision-making. Scholars also argue that the efficacy of local political structures and formal politics is not adequately considered and that the connections between the local state and the national state are neglected (Fox Gotham, 2000). Both approaches have been criticised for their under-estimation of local political conflicts.

The relevance of approaches in term of 'policy networks' in the context of European cities has also been critically explored (see Davies for an analysis of the inadequacy of the term 'governing by networks' to describe the politics of urban regeneration in the UK). The debates revolve around the role and influence of public actors, in particular the national state, in sub-national affairs. The relative prevalence and power of 'autonomous governing networks' in different political systems is also put into question (Davies, 2002).

Following these shortcomings some authors have called for a more inductive approach that requires qualitative methods '*that better uncover structural details of governance networks in ways that are less dependent on particular general concepts or on a logic of data selection that is independent from particular cases. Case study data must also be presented in ways that ease comparison*' (Gissendanner, 2003: 6).

We propose to adopt such an inductive approach in order to describe and analyse simple structural aspects of networks through a set of common questions.

[4] In addition to the fact that these theories are based on the U.S experience and context and do not necessarily fit the European ones.

### *2.2.4 Defining a common ground for comparative work*

Again, we have chosen to present a set of common questions to be answered in every case study rather than a single theoretical approach (see Appendix: Elements to address the types of interactions between stakeholders). A broad definition of 'policy network' is proposed (see the same appendix). This set of common questions builds on various analyses of networks that have been developed to analyse European policies (Kriesi et al., 2006; Peterson and Bomberg, 1999; Peterson, 2003; Rhodes, 1990, 1997).

The aim of this analysis is to identify and describe networks structures and functioning, including:

- The stakeholders involved in the definition and implementation of economic development policy, including identifying who is the most influential.
- The nature of their interactions.
- How and to what extent the structure and functioning of coalitions and networks 'may explain policy choice, democraticness, strategicness, openness to new policy ideas, effectiveness, and so on' (Gissendanner, 2003: 15).

## 2.3 Research design and methodology

For the empirical research two routes have been pursued: firstly, experts from the area of public administration and the cultural scene were consulted and secondly, policy documents as well as relevant literature were studied. In a final step, the information gathered from the expert interviews and policy documents was used to analyse the networks of stakeholders who are active in innovation and economic development policies in the Munich region.

### *2.3.1 Consultation of experts*

In order to investigate the policies concerning the creative knowledge economy in the region of Munich, relevant experts have been consulted in the region of Munich. The experts are representatives from areas of public administration (Bavarian ministries, departments of the city of Munich), of parastatal agencies (cluster platforms) and non-state associations (branch associations) (see table 2.1).

**Table 2.1 - Interviewed experts**

| Institution | Responsibilities |
|---|---|
| - FilmFernsehFonds Bayern (FFF Bayern) | Management |
| - Cluster Audiovisual Media (CAM) | Management |
| - Bavarian State Ministry of Economic Affairs, Infrastructure, Transport and Technology | Division management "Cluster Campaign" |
| - Department of Labour and Economic Development (RAW) (2 interviews) | Policy principles<br>Media Support |
| - Department of Culture (2 Interview partners) | Assistant of head of division, Special tasks |
| - Municipal Gallery (Platform 3) | Management / Curator |
| - Museum (Pinakothek der Moderne) | Management |
| - Association New Media (FIWM) (shut down) | Member of managing board |

For the topic-centred interviews, first of all a guideline was developed, which contained a catalogue of questions on the most important topics. Following topics were included in the interviews with the administration:

- **Aim of policy:** general aim and structure of the policy
- **Context of emergence:** reasons for implementation of policy; previous policies and measures
- **Cooperation with other actors:** contact with other relevant actors; kind of interaction (conventions, informal meetings, division of labour within specific projects)
- **Further development:** other existing measures with similar goals; future of specific policies; evaluation of policy

The information of the expert interviews were used above all for the description of policy measures (see chapter 5) and policy networks (see chapter 6). Furthermore, the information obtained from the experts, in other words, their "insider perspective", was of great importance for the evaluation of policy measures.

The analysis of the interviews is based on the principles of qualitative content analysis according to Mayring (2003). The aim of this evaluation procedure is to reduce the textual material to a category scheme that applies across cases, and which on the one hand results deductively from the guideline as well as from existing theoretical approaches or hypotheses, and on the other hand is obtained from the material (Bortz & Döring, 2006). This method enables a comparative analysis of the individual statements about thematic aspects, and helps with the identification of causal effects.

### *2.3.2 Analysis of relevant literature and of policy documents*

Besides a general consideration of relevant research literature on the creative development of urban regions, newspaper articles of the *Süddeutsche Zeitung* have been analysed in order to investigate the present picture about Munich in the media. What is the image of Munich as a cultural city in the media? Which problems of the city are discussed regularly?

As one major part of this study, policy documents have been analysed in order to shed light on current strategies and visions concerning the policies for the creative and knowledge-intensive sectors. This has been conducted on different spatial levels (national, federal, regional, local). Leading questions for the analysis have been:

- What is the context of emergence of specific policies?
- What are the aims of certain actors and how are they to be achieved?
- Which instruments and financial resources are available?
- How are the policy measures evaluated by different target groups?
- Depending on the spatial level: what are the implications of policy measures for the region of Munich?

The following documents have been analysed: the urban development plan of the city of Munich ("Perspektive München"); the budget plans of the Bavarian State as well as of the city of Munich; publications of ministries and departments (Bavarian State; City of Munich); profiles of ministries and departments on the internet; press releases; as well as evaluations documents for specific initiatives.

### *2.3.3 Analysis of policy networks*

Based on the expert interviews and the analysis of relevant literature and policy documents, an analysis of the network of relevant stakeholders has been conducted (see also chapter 2.2). Following questions guided the analysis:

- How do different stakeholders interact? What kinds of relations exist between the different stakeholders? How stable or instable is the network?
- How many actors are involved in the network? Where do the different actors come from? (state, parastatal, non-state institutions, private businesses)
- How is power distributed between the different actors?

The conceptual framework used for the analysis is the concept of "policy networks", which is a common used concept for describing the outcome of political decisions and policy-making in general – especially in the European Union (Peterson 2003). It focuses on actors and on clusters of actors that have interests on a specific policy field, and that influence the decision-making process.

Due to the fact that there are numerous networks in the creative knowledge economy in the Munich region and that a serious analysis of every single network and actor within these networks falls outside the scope of this study, it was decided to concentrate the network analysis on the administrative actors on the different spatial scales as well as on two initiatives.

# 3 KEY STAKEHOLDERS IN ECONOMIC DEVELOPMENT POLICY: FROM THE NATIONAL TO THE CITY LEVEL

The aim of the first part of this chapter is to identify the key stakeholders who play a role in the decision-making process in the area of economic development at different spatial scales: the national, the (Bavarian) state, the regional and the municipal level. These different levels have to be taken into account because the actors on these different scales have different responsibilities and tasks in respect to economic development policy within the German administrative system. To understand the different responsibilities and tasks, the German three-tiered administrative structure will be shortly introduced.

## 3.1 The German administrative system: Federalism and its consequence for economic development policy in Germany

The Federal State (Bund), the Länder (federal states) and the local government districts (municipalities or counties) represent the different levels of Germany's three-tiered administrative structure. These three levels have different responsibilities and tasks.

The Federal Republic of Germany consists of 16 federal states (see figure 3.1). The powers of the state are divided between government as a whole, the Federal Government and the federal states. The federal states have their own constitutions; own administrations and parliaments as well as their own responsibilities. The Federal Government has the legislative competence for areas such as immigration, foreign policy, defence, criminal law and telecommunications. The Länder are responsible for areas such as municipal law, culture, education and the media. There are three pan-state functions that the individual federal states exercise on their own: schooling (including to a large extent tertiary education), internal security (including policing) as well as the organisation of local self-government (Laufer & Muench, 1997). The distribution of power in the German federal system is administratively. This means that most policy areas are subject to a concurrent legislation of the federal parliament and the federal states: the federal parliament sets the general conditions and the federal states complement these by their own laws. In a reform of the federal organisation in 2006 some areas have been added to the competences of the Länder, e.g. in the area of civil service law, in the area of environmental law, in the penal system, in parts of the housing law, and the Federal Government has withdrawn itself almost completely from the regulations of university education (Muench 2008).

Spatial planning is also organised in accordance with a system of graded responsibilities in Germany. The Länder and the local government districts have legal competence for spatial planning; the Federal Government only provides the framework. This demands cooperation between the different levels of planning. There is no fixed and determined development plan for the whole of Germany, only frameworks and guidelines which are developed by the Federal Government and the Länder. The Länder ratify these models and concepts in concrete directives and the local government districts ultimately implement them in legal plans (BBR, 2001). This process very clearly illustrates the core concept of the federal structure: subsidiarity. According to this concept, the smallest unit in the social community is capable of handling problems, bearing responsibility and making decisions on a whole range of issues, starting with the individual and working its way upwards via the family, associations and local authorities to the states and the nation as a whole.

**Figure 3.1 - The 16 states of the Federal Republic of Germany**


*Source: BVA, 2007*

Due to the fact that there exist only voluntary associations of state actors on the regional scale (see chapter 3.2), the local government districts in Germany represent the lowest level in the three-tiered administrative structure after the Federal State (Bund) and the Länder. They also practice self-administration within the boundaries of their territory. Self-administration means that the local government district is responsible for all tasks relating to the local community. Local government districts' own activities represent the core activities undertaken by each local government district and may be voluntary (e.g. theatre, museums, buses, swimming pools etc.) or they may be prescribed by the state as obligatory (e.g. waste disposal, energy supply, construction of schools and nurseries, social services). The local government district is free to handle activities in these fields on its own or outsource them to private businesses (BVA, 2005). Restrictions are to be found in the area of common business development, which is only possible in indirect ways and not by direct subsidies.

So, self-administration by the local government districts has its limits. In a growing number of areas within local government policies, the state government is becoming involved in municipal affairs on the basis of legal provisions, standards and financial subsidies. In reality, the relationship between the state and the local government districts relies on a complex, intertwined system of responsibilities, controlling authorities and financing systems. Through this system, the ability of the local government districts in terms of self administration is therefore restricted (Hafner & Miosga, 2001).

To sum up, most competences in the area of education, research and innovation policy lie in the hands of the federal states (Länder). Whereas the big research facilities like the Fraunhofer Society etc. are financed both by the federal government and the federal states, the federal states are almost completely responsible for the universities and university education. Furthermore, the federal states as well as the local governments are largely responsible for regional structural policies as well as for regional business development whereas the federal government is responsible for the economic-political guidelines as well as national financial policies and tax administration.

## 3.2 Key stakeholders on different spatial levels

The key stakeholders in the field of economic and innovation policies can be differentiated in public actors like elected governments on the national, federal and municipal level as well as the administration on the several spatial levels, namely the responsible ministries and departments, in parastatal actors like chambers of industry and commerce, in non-state actors like independent research institutions, in state administrative bodies like universities as well as in private actors such as federations, associations, and businesses.

On the **national scale** the federal government and especially two ministries are concerned with economic and innovation policies: the first one, the Federal Ministry of Education and Research (BMBF) aims at strengthening education, research and innovation. Its task begins with early learning and includes continuing education and training, whilst school education and university teaching fall under the remit of the Länder. The ministry is responsible together with the Länder in the fields of non-school vocational training and continuing education as well as in promoting training. Further responsibilities are research funding, supporting the specially gifted, promoting up-and-coming scientists and funding international exchanges in the fields of initial and continuing training, higher education and research (BMBF 2010) (see figure 3.2). The second one is the Federal Ministry of Economics and Technology (BMWi). Its main objectives are to develop opportunities to ensure sustained economic growth and competitiveness and a high level of employment. The Ministry's legislative, administrative and coordinating functions in areas such as competition policy, SME policy, energy policy, and external economic policy are geared to these aims (BMWi 2010).

On the scale of the Länder, the Bavarian government and the Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology (BStMWIVT) as well as the Bavarian State Ministry of Sciences, Research and the Arts (BStMWFK, see figure 3.2) are the most important state actors.

**Figure 3.2 - Actors on different spatial scales**

| Scale | Political responsibility | Actor | Current programme |
|---|---|---|---|
| National | National government | Federal Ministry of Education and Research (BMBF)<br><br>Federal Ministry of Economics and Technology (BMWi) | High tech strategy<br>Initiative for Excellence<br>Pact for Higher Education 2020<br><br>High tech strategy<br>Culture and Creative Industry initiative |
| Federal state | Bavarian Government | Ministry of Economic Affairs, Infrastructure, Transport and Technology (BStMWIVT)<br><br>Ministry of Sciences, Research and the Arts (BStMWFK) | BayernFIT<br>Cluster Campaign |
| Region | | European Metropolitan Region (EMM) | |
| City | City council | Department for Labour and Economic Affairs (RAW)<br><br>Department of Arts and Culture | |

The BStMWFK is responsible for all Bavarian universities, academies of art, the arts and culture, and for some of the research institutes in Bavaria. One of the State Ministry's major goals is to maintain and increase the high quality of Bavaria's universities, and to promote their internationalisation and modernisation. The other field of responsibility is cultural life in Bavaria. The ministry attends to state-owned theatres, museums, libraries, archives etc. The Free State of Bavaria invests about 4.9 billion Euros of its regular budget in these fields annually (year 2009) (BStMWFK, 2010), half a billion of this amount is invested in the arts and culture annually. One aim of the Bavarian Ministry of Economic Affairs, Infrastructure, Transport and Technology (BStMWIVT) in the area of research and technology policy is to secure Bavaria's leading position in the high tech industries. The ministry has launched various initiatives to achieve this aim (see chapter 5) and is currently responsible for the cluster initiative (see figure 3.2).

Due to the fact that on the **regional scale** neither an elected government nor an institutionalised regional cooperation of state actors exists, parastatal as well as non-state actors can play an important role on this level. First, there is the newly founded association of the European Metropolitan Region Munich (EMM). Members of this association are the city of Munich, the counties and bigger cities in the greater Munich region, the chambers of commerce, the Freestate of Bavaria, as well as universities and business companies in the greater Munich area. Aim of the association is to enhance the attractiveness of Munich as a business location by pooling the resources of the different actors. The association focuses on the following areas of operation: knowledge, economy, mobility, environment and health (EMM 2010) (see figure 3.2). Another regional actor is the Regional Planning Association of the Munich Region (see figure 1.1) as well as the Planning Association Munich Economic Area (Äußerer Wirtschaftsraum München). The members of both associations are predominately the cities, municipalities and counties in the Munich region and both associations concentrate mainly on planning issues.

Other actors whose sphere of influence is also the region of Munich are the universities with their technology transfer centres as well as the numerous research institutions, the chamber of commerce for Munich and Upper Bavaria, as well as numerous business associations in different sectors.

On the **municipal scale** of Munich the local government (city council) as well as two departments are of special relevance in the area of culture and economic development policies: the Department of Labour and Economic Development and the Department of Arts and Culture. The Department of Arts and Culture is responsible for all municipal cultural facilities (museums, theatres, orchestras, libraries) and another task of the department is to promote cultural projects and artists in Munich.

The main tasks of the Department of Labour and Economic Development are the promotion of economic development, labour market policy, tourism and management of corporate investment (airport, municipal energy supplier, public transport) (see figure 3.2).

# 4 ANALYSIS OF EXISTING POLICIES AND FORMULATED STRATEGIES FOR THE FUTURE

The focus of this chapter is to identify the existing policies regarding the creative knowledge economy in the Munich region and to describe in detail the aims and objectives of the policies of the relevant actors on different spatial scales as well as their context of emergence. Due to the fact that in general different actors (e.g. ministries or departments) are responsible for the knowledge and the creative industries, the measures for these different sectors will be analysed separately on each scale.

Special focus will be paid to the concrete instruments how policy ends should be achieved and the extent of available resources of the actors on the different levels. The chapter will close with an assessment of the question if the current strategies are building on existing strengths or if the actors are aiming at initiating new developments.

## 4.1 The national level: Policies of the federal government

### *4.1.1 National policies concerning the knowledge economy*

As mentioned before, in the Federal Republic of Germany the Länder are largely responsible for R&D policy, university and education policy. However, the national government tries to support research and development through several initiatives which have gained new impetus especially after the financial crisis. In the wake of the crisis the Federal Government has launched several economic stimulus packages. Their financial priorities include investments in education, research and innovation. The so called second economic stimulus programme (Konjunkturprogramm II) provides an additional 11 billion euro, 2009 and 2010, for these areas of which a total of over 8.66 billion euro are being invested in education and science.

One important measure for education, science and research is the 'High-Tech-Strategy' which the federal government has launched in 2006. The Federal Ministry of Education and Research and the Federal Ministry of Economics and Technology are the two main ministries responsible for designing and implementing the High-Tech Strategy (see figure 3.2). It is Germany's first overarching national innovation strategy (BMBF 2009). One aim of the initiative is to reach the goal of spending 3 per cent of the GDP for R&D in the year 2010, how it was agreed upon in the Lisbon-Strategy. The financial amount of the High tech strategy is about 14.6 billions Euros in the years 2006 to 2009 and the biggest amount of this goes into research and development of new technologies in 17 high-tech-areas like ITC, biotechnology, aerospace, energy, optical instruments etc. (BMBF, 2006a). Secondly, the strategy aims at promoting close links between industry and science and the intensified use of

SMEs' potential by supporting SME funding and by supporting clusters. A core element of the High-Tech Strategy is the building of bridges between science and business in order to enhance innovation and to bring innovative potential quickly to the market. Clusters in which companies, scientific institutions and policy-makers cooperate are thought to offer conditions to achieve this end. The High tech strategy holds three rounds of cluster competition. In each round of the competition, up to 200 million Euro are made available to up to five excellence clusters over a period of no longer than five years. The implementation envisages a matching level of financial participation on the part of businesses and private investors. In January 2010 it was decided that the Biotech Cluster Munich will receive 100 Million Euro for the next five years to build up a new field of pharmaceutical development within the existing Biotech Cluster Munich. This funding comes from the national government, the state of Bavaria as well as private investors. The cluster competition can be regarded as a policy measure which makes German regions compete against each other and which finally strengthens the position of the successful regions.

Another focus of recent initiatives in the field of research and innovation policy is on highly skilled workers. Several programmes are aiming to address the growing demand for skilled workers, specialists and professionals primarily by intensifying training and further training within the country, and by increasing the numbers of women, older people and immigrants (already living in Germany) in the workforce. The Federal Government and the Länder have agreed on the goal of increasing expenditures on education and research, as a share of gross domestic product, to 10 per cent of the GDP by 2015. This is an ambitious goal as Germany invests today only about 5 per cent into education which is less than many other European countries (OECD, 2009). To attract more highly qualified migrants the access to the labour market of third country academics as well as academics from new EU member states has slightly been eased in 2009 (BMBF, 2009). This shows that the federal government has perceived the problem of skill shortage but as the German migration law concerning the labour migration of highly skilled third-country nationals is very restrictive (von Streit et al., 2008) only a slight relaxation of the law is not enough to solve the problem.

With the aim of modernising the German science system and making Germany more attractive as a science nation, the Federal Government has introduced the Excellence Initiative, the Higher Education Pact 2020 and the Joint Initiative for Research and Innovation. The Initiative for Excellence should encourage top-class university research and 1.9 billion Euros are available for the period 2006 to 2011 (BMBF, 2009). Especially selected universities receive 21 million Euros per year for the next five years. Two of the selected universities are in Munich, the University of Munich (LMU) and the Technical University (TU), the third university is the University of Karlsruhe (BMBF 2006b).

The Federal Government and Länder Pact for Higher Education 2020 aim at creating additional capacities for students and at reinforcing excellent research at higher education institutions. It should increase the share of people entering higher education to 40 per cent of a year group. The Federal Government is providing 565 million Euros so that the universities can admit approximately 91,000 additional students by 2010 (BMBF, 2009).

Finally, the Joint Initiative for Research and Innovation supports the large science and research organisations like the Helmholtz Association (HGF), the Max Planck Society

(MPG), the Fraunhofer Society (FhG), the Leibniz Science Association (WGL) and the German Research Association (DFG). The Federal Government and Länder intend to provide the non-university research institutions with planning certainty and to increase funding by at least 3 per cent per year up to 2010.

### *4.1.2 National policies concerning the creative industries*

Due to the federal system, the Länder (states) are also largely responsible for policies concerning culture, art, film and the media. Therefore, culture as a distinct field of national policy has only been discovered and developed in the last years: the position of a state secretary has been established in 1998 and from this time on, not only culture but also topics such as cultural economy and creative industries appeared on the agenda of the Bundestag (German parliament). Furthermore, several federal states (but not Bavaria) and some bigger cities (but not Munich) have detected creative industries as a strategic field of action and have systematically begun to evaluate these branches of industry.

Finally, in 2007 the federal government has initiated the Culture and Creative Industry Initiative which has published a report on the culture and creative industries in German (employment, firms, and turnover) and has presented a harmonised basic model for the definition and classification of these industries for Germany which is in line with international definitions. Other activities of this initiative are the development of support strategies for the cultural industries and especially for small business. The Federal Ministry of Economics and Technology is responsible for this initiative. The latest measure in this area is the set up of a national as well as eight regional offices (named competence centres) which offer consulting services for start ups in the creative industries (see http://www.rkw.de/projekte/kompetenzzentrum-kultur-und-kreativwirtschaft/).

### *4.1.3 Conclusion: National policies concerning the creative knowledge economy*

The region of Munich has profited from the national innovation policy in two respects: firstly, the two biggest universities in Munich recently received a considerable amount of money to promote high quality research (e.g. the University of Munich received (twice) 180 million Euros for the years 2006-2011) and secondly, the Biotech Cluster Munich will receive 100 Million Euro for the next five years to build up new fields of research. Concerning the cultural and creative industries as these sectors have been defined by the EU, the promotion of these industries is more an issue on the national than on the Bavarian level as the next chapter will show.

Concerning the stimulation and support of the creative knowledge industries, the national influence is severely limited due to the fact that the Länder (federal states) are bearing responsibility for the fields of policy of research and development, education as well as the media. Nevertheless, the federal government has become an important player to address the shortcomings and the chronic underfunding of the German education system. Regarding regional development policy and especially instruments like cluster development, the Länder are much more active and more experienced than the federal government (see chapter 4.2).

## 4.2 The (Bavarian) state level

Technology and innovation policies have a long tradition in the state of Bavaria. In the 1950s and 1960s, important location decisions relating to technology policy benefited Munich, such as the establishment of the Federal German research and development institutions, and the promotion of the armaments industry through the award of public sector contracts worth billions to Bavarian enterprises. The establishment of the state agency for development financing (Landesanstalt für Aufbaufinanzierung – LfA) in 1951 also represented a central element of Bavarian economic policy, since for 50 years, Bavaria's own bank has supported in particular medium-sized industry, which is characteristic of Bavaria. Through this, the structural change from an agricultural state to a high-tech industrial state has experienced marked acceleration.

In the 1980s, the Bavarian regional government set up programmes for targeted support of innovation and technology, namely the Bavarian Innovation Programme (BayIP) and the Bavarian Technology Introduction Programme (BayTEP), which in 2000 were combined to form the Bavarian Technology Programme (BayTP). The BayTP programme financially supported the transition of new technologies into profitable products and services.

### *4.2.1 Policy mainly for the knowledge economy: The High-Tech-Initiative and BayernFIT*

In the 1990s, research and development policy gained new impetus. The Bavarian government started two new programmes: the 'Future Bavaria Initiative' ('Offensive Zukunft Bayern') and the 'High-Tech Initiative'. The Bavarian government, under the leadership of Edmund Stoiber, the Bavarian minister-president elected in 1993 (in office until 2007), sold public shares to the value of 8 billion Deutschmarks, in order – with the aid of public investment – to strengthen Bavaria as a location in the increasing world-wide competition for locations. Together, the two initiatives accounted for around 4 billion Euros (2.9 billion Euros for the Future Bavaria Initiative; Bavarian State Chancellery, 2006). The money was spent on R&D, training and infrastructure, and aimed at making Bavaria an even more attractive location for the high-tech industry. In 1995, the Bavarian government initiated a corporation, the Bayern Innovativ GmbH, to implement, to promote and to coordinate the projects adjoint by the Initiatives (Bayern Innovativ GmbH 2010).

The priorities of the state campaign 'Future Bavaria Initiative', which ran from 1994 to 1999, were:

- Investment in the technological infrastructure like universities
- Promotion of co-operation between business and science
- Stimulation of networks to support technology transfer
- Support for start-ups: building of start-up centres, venture capital, patenting advice, business plan competitions, promotion of university spin-offs

The High-Tech Initiative continued the programme of ‘Future Bavaria Initiative’. At the end of 1999, Bavaria decided on a programme which was to be unique in Germany: around 1.35 billion Euros has been invested in this project in order to continue the expansion of Bavaria’s pioneering technological fields, and to maintain the state’s outstanding position in terms of the economy and employment policy. The High-Tech Initiative concentrated its support on various key technologies, including among others life sciences, ICT, environmental technology and mechatronics (Bavarian State Chancellery, 2006). The initiative had four pillars, which attract the following investment amounts:

**Table 4.1 - Four pillars of the High-Tech Initiative**

| | |
|---|---|
| Pillar 1: Expansion of world-class high-tech centres | € 663.6 million |
| Pillar 2: Technology concepts for all governmental districts (‘Regional concepts’) | € 179.0 million |
| Pillar 3: A state-wide programme of qualification, start-up promotion and technological infrastructure | € 267.4 million |
| Pillar 4: Internationalisation of the High-Tech Initiative | € 65.5 million |
| To these is added a Location programme (state road construction, expansion of airstrips) | € 175.4 million |

*Source: Bavarian State Chancellery, 2006*

In the following part, pillar 1 and 3, the pillars with the highest funding, will be looked at more closely:

- **Pillar 1**: Projects in pillar 1 aim at supporting high-tech centres in the fields of life science, information and communications technology (ICT), new materials, environmental technology and mechatronics. Projects supported in the area of Munich are e.g.
    - ***Start up centres***: The Bavarian State has financed four start-up centres in the Munich region. They offer a variety of forms of start-up support as well as technology transfer points which encourage the intensive networking of science and industry. They assist in the search for suitable co-operation partners, make contacts with holders of expertise, give patenting and financing advice, and engage in active knowledge transfer (Hafner et al, 2005). One of them is GATE (Garchinger Technologie und Transfer Zentrum), a centre for start-ups since 2002, situated in the north-east of Munich, in Garching. It is located near Munich Technical University, offering young high-tech enterprises good conditions for a successful business start, especially in ICT (gate, 2007). The state of Bavaria has supported two other innovation and start-up centres in the field of biotechnology in the region of Munich, the IZB Freising concentrating on green biotechnology and the IZB Martinsried concentrating on red biotechnology. Both centres are also located close to the life science research centres of the universities.
    - ***Promotion of innovative networks***: Another field of activity is that of policy initiatives aimed at improving co-operation between firms and universities, and making more of the regional knowledge base. One example is the ‘Software Initiative’, which supports research and development and training in the field of information and communication technologies. The initiative also aims to stimulate high-growth start-ups in the software industry, making Bavaria a top location for dynamic young businesses in the information and communications sectors (Software

Initiative Bayern, 2006). In the period from 2000 to 2004, the Software Initiative was funded to 51 billion Euros (Software Forum Bayern, 2003). Another example is BioM AG, which is a financing, service and consulting company whose aim is to promote the development of the BioTech-Region Munich as an internationally renowned centre of excellence in the field of innovative biotechnology. The BioM network includes all important players in the region (representatives from public offices, scientific institutions, venture capitalists and biotech companies), and BioM also assists Munich-based companies in finding the right contacts and partners (BioM AG, 2007).

- **New university buildings**: Examples in the Munich region are the relocation of university departments (mechanical engineering, IT and mathematics) of the Technical University out of the city centre to Garching, to the north of the city, and the creation of a biotechnology cluster in Martinsried in the south-west of Munich, where Bavaria has financed the new construction of the departments of Chemistry and Pharmacy of the University of Munich (LMU).

- **Pillar 3:** Pillar 3 aims at the promotion of start-ups and technological infrastructure as well as qualification:

  - ***Start-up programmes to raise entrepreneurial awareness***: One example is the FLÜGGE programme ('Förderprogramm zum leichteren Übergang in eine Gründerexistenz' [Bavarian support scheme for facilitating start-up transition]). It aims to increase the numbers of spin-offs from universities, and it supports for example the technology transfer centre at the University of Munich. Another example is the Munich Business Plan Competition (*Münchener Business Plan Wettbewerb* (MBPW)), which awards prizes to exceptional business plans and has been held since 1995. The awards have already helped many technology-oriented firms to become successful (LH München, 2002). This programme is also supported by the City of Munich. Another Munich-based network is the Munich Business Angel Network, which is an informal, regional platform for business start-ups, and which supports innovative and technological service companies in their early days (Software Initiative Bayern, 2007).

In 2008, the Bavarian Government introduced a following initiative, BayernFIT, which is based on a report published in 2007, named "Zukunft Bayern 2020"/"Future of Bavaria 2020" (Gutachtergruppe "Zukunft Bayern 2020" 2007; Bavarian State Government 2008). In this programme, it was announced to increase the investments in innovation and technology up to 3.6 per cent of the GDP (vs. 3 per cent today). To reach this aim, the Bavarian government made a pact with other economic actors in Bavaria. Members of this pact are the Association of Bavarian Craftsmen (Bayerische Handwerkstag), the Bavarian Chambers of Commerce and Industry (Bayerische Industrie- und Handelskammertag), as well as the Bavarian Business Association (Vereinigung der Bayerischen Wirtschaft e.V). The pact aims mainly at expanding innovation in medium-sized businesses, and at strengthening the pool of highly qualified workers in Bavaria (Bavarian State Government, 2008). The following table gives an overview of the allocation of funds in the program "Bayern 2020" in the years 2008 to 2012:

**Table 4.2 - Program "Bayern 2020" (2008-2012)**

| | |
|---|---|
| Program Bayern 2020 (funding for university buildings, the cluster campaign, funds for supporting entrepreneurs, and construction projects of research institutions) | € 955 million |
| Program Bayern 2020 plus (support of research activities with a Europe-wide scope, for example the construction of the vessel for Ariane 5) | € 215 million |
| FITness-Prgramm for Northern and Eastern Bavaria (support of businesses in the area of research, innovation, and technology in the less developed northern and eastern parts of Bavaria) | € 275 million |

*Source: Bavarian State Government, 2008*

In this context a newly introduced measure can be seen: so called Innovationsgutscheine / en. "innovation coupons" are to help smaller businesses (beside others handcraft businesses) to engage in R&D. They can use the coupons to commission universities or other research institutions with assignments like feasibility studies or the development of a prototype (BStMWIVT, 2010).

### 4.2.2 The Bavaria Cluster Campaign

Since February 2006, the *Cluster Initiative* (Bavaria's cluster campaign) has implemented 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 (which are partly managed by the Bayern Innovativ GmbH, see chapter 5.2.1). As announced in the programme "Bayern 2020" 70 million Euro will be invested in the cluster campaign (in the period between 2008 and 2012).

The clusters are classified into three basic types: high tech clusters, production oriented clusters and cross-sector technologies (see table 4.3).

**Table 4.3 - Cluster types**

| High-tech clusters | Production-oriented clusters | Cross-sector technologies |
|---|---|---|
| Biotechnology | Automotive engineering | Nanotechnology |
| Aerospace | Chemicals | New materials |
| Satellite navigation | Sensor technology and power electronics | Mechatronics/ Robotics/ Efficient production systems |
| ICT | Nutrition | |
| Environmental technology | Forestry and woodland | |
| Medical technology | Media<br>Financial services<br>Energy technology<br>Railway technology<br>Logistics | |

*Source: BStMWIVT, 2006*

The cluster campaign has been developed in a top-down process in the Ministry of Economic Affairs, Infrastructure, Transport and Technology. However, in many cases like e.g. media or finance in the region of Munich, the ministry made use of already existing structures or in other sectors existing associations were used as starting points for the cluster platforms. The cluster campaign does not intend to promote specific sectors but the promotion of value-creation chains (expert interview).

According to the Bavarian government, the 19 clusters provide a substantial degree of competence in terms of:

- universal value-creation chains
- an environment consisting of major user sectors
- efficiency and application-orientation in research
- availability of highly qualified staff

For each Bavarian cluster, platforms are created that bring together companies, research establishments and universities. These co-operation platforms intend to permit intensive co-operation, and hence release innovative potential. Their main tasks are to establish and maintain a contact network of companies, research establishments, associations, investors, support institutions, consultants and other players in the cluster in question. In order to ensure that the co-operation platforms can function successfully, a cluster spokesmen and the cluster management specifically build structures for contact and communication between industry and science as the motors driving the cluster process, and encourage innovative projects. The relevant cluster management is the contact partner throughout Bavaria for the existing cluster networks. It assists with the organisation of events, promotes the creation of thematic profiles and development of potential, and highlights new fields of application and projects, the implementation of which is then left to the discretion and responsibility of the cluster companies (expert interview).

The cluster strategy is a state initiative for 'stimulating a self-reinforcing growth process, whose concrete outline conditions are worked out and brought to life by the protagonists in the cluster' (BStMWIVT, 2006, p. 12). For this, a financial involvement is expected from the players in the cluster, since the financial provision of 70 million Euros is intended only for covering the costs of the cluster management. Projects that are initiated are intended to be jointly supported by the enterprises. The success of the cluster platforms is measured by the amount of money enterprises are willing to invest for the cluster management as the ministry will gradually reduce its financial involvement in the coming years. Therefore it might be that in a few years only those cluster platforms survive which are financed almost completely (about 75 per cent) by their non-state members (interview).

With the cluster initiative, in several respects the technology policy of Bavaria has reached a turning point. It is quickly apparent that compared with the High-Tech Initiative, the funds provided are much smaller. The funds obtained from privatisation revenues have been used up, and a follow-up of the same level is no longer possible. For this reason, the cluster campaign now aims at firstly mobilising private means. And secondly, the support of large-scale projects has now been replaced by modest support of project ideas. For the first time, Bavaria is now also supporting on a large scale communication processes and dialogue approaches, which in the past had tended to be rejected in favour of subsidising investments and projects.

Critics argue that the approach originally worked out with the help of the management consultants Arthur D. Little, of concentrating on a few future-oriented areas and technology sectors has been watered down considerably. What has now emerged from it is an approach that uses the modern term ‘cluster campaign’, but rather sets it sights on wide-ranging technological fields and industry sectors, in order to serve as many target groups and parts of Bavaria as possible. This is exemplified by the fact that there are 19 clusters in Bavaria which cover almost all fields of industrial and technological actors.

Furthermore, the cluster campaign is characterised by one conceptual contradiction. Clusters are constructs of economic space, which assume an agglomeration of enterprises along a value-added chain in a limited spatial environment. The cluster campaign run by the Bavarian government on the other hand is aimed at the whole of Bavaria as its backdrop. In the concept of the Bavarian cluster campaign the region is the whole of Bavaria. This makes developing an actual strategy for promoting spatial clusters very difficult. Nevertheless, the midterm evaluation draws a positive picture – especially smaller businesses profit from new contacts to research institutions (BStMWIVT, 2008 and interview).

Although the efforts of the cluster initiative are directed at the entire territory of Bavaria, many of these investments again benefit the city and the Munich region due to the “institutional thickness” of the region as well as the concentration of several knowledge intensive and creative sectors. Numerous cluster platforms are based in the Munich region: media, financial services, chemicals, aerospace, satellite navigation, biotechnology, forestry and woodland, nutrition, as well as ICT.

#### *4.2.3 Policies for the creative industries*

Bavaria does not follow the definition of the cultural and creative industries of the EU or the Federal government or does not perceive the cultural and creative industries as a sector in its own right. Nevertheless, parts of the cultural and creative industries like e.g. the media and games as well as software as being part of ICT have been promoted in various initiatives: The Bavarian Film Centre (Bayerisches Filmzentrum) was founded in 1992, its shareholders being the state of Bavaria (70%) and Bavaria Film GmbH (30%). On the Bavaria Film site, it offers up-and-coming producers and young enterprises in the media industry fully equipped offices, services, and individual assistance.

Another important infrastructure measure for the film industry is the large film studios on the Bavaria site, which has also been established with the help of the state of Bavaria. In 1996 the FilmFernsehFonds Bayern GmbH (FFF) was established by the state of Bavaria together with leading private and public broadcasters, with the aim of introducing high-quality support for the film industry in Bavaria, and of offering additional services for the film industry. In 2009, the total volume of support that was provided was 29.5 million Euros for film and television productions, games, scripts, young filmmakers as well as sales and marketing.

Additionally, audiovisual media is now being promoted by the cluster campaign. The cluster audiovisual media (CAM) has its base in Munich and it aims at supporting networks between different actors (in the fields of games, film, audiotechnology, advertisement and others) as well as strengthening the Munich location for the media sector (see chapter 5).

Furthermore, the Bavarian State Ministry of Sciences, Research and the Arts is responsible for operating the state theatres and state museums, the archives, heritage preservation and for the universities. It also assigns grants from the Cultural Fund to cultural investments or projects in the field of theatres, museums, music, arts, literature and cultural heritage. The fund commands about 153 million Euro in 2010 (BStMF, 2009), allocated within the "Future Bavaria Initiative". To compare: The Bavarian State Ministry for Sciences, Research and the Arts attends to state-owned theatres, museums, libraries, archives etc. and invests about 4.9 billion Euros of its regular budget in these fields in the year 2009 (BStMWFK, 2010), half a billion of this amount is invested in the arts and culture annually. A high amount of this money goes to institutions located in Munich: e.g. the three Pinakotheks, the National Theatre the State Theatre, and the State Opera. Thus, the varied cultural scene in Munich is financed to a large extent by the state of Bavaria or by state-run institutions and foundations. Another important current project for the city of Munich is the involvement of the ministry at the "Kunstareal" Munich. The "Kunstareal" Munich is the quarter where about 15 museums – among them the three Pinakotheks – as well as three universities will be located after the relocation of the University of Film and the museum of Egypt art into the quarter.

#### *4.2.4 Conclusion: Bavarian policies concerning the creative knowledge economy*

To sum up: The Bavarian policies have focused mainly on the knowledge intensive and high tech industries. Although the efforts of the High Tech Initiative and BayernFIT as well as the cluster campaign were directed at the entire territory of Bavaria, many of these investments have benefited the city and the Munich region, since the Munich region has the highest concentration of knowledge-intensive firms, university institutes and research institutions: therefore numerous cluster platforms are based in the Munich region (nine of nineteen cluster platforms are located in the region of Munich) and the region has profited heavily from the various former initiatives of the Free State of Bavaria like university buildings or start up centres. Concerning the creative industries, the measures of the Free State focus mainly on the promotion of the media and more recently of the games sector and both sectors are concentrated in the Munich region. Finally, being the capital of Bavaria, Munich profits highly from the investment of the State in the arts and cultural scene (state theatres, museums and libraries).

## 4.3 The regional level

On the regional level the only relevant actor is (or might become) the association of the European Metropolitan Region Munich (EMM) which was founded in 2009. As mentioned before the association focuses on enhancing the attractiveness of Munich as a business location by pooling the resources of the different state and non-state actors. The association has established working groups on the following topics: knowledge, economy, mobility, environment and health, as well as culture (EMM 2010). Until now the activities of the association in the area of “knowledge” and “economy” have been restricted to placing commissions for studies and research with external expert consultancies on the state of specific sectors in the region of Munich or on the economic effects of all research institutions including the universities in the region.

## 4.4 The city level: Policies of the city of Munich for the creative knowledge industries

Compared with the state of Bavaria, the activities of Munich as its capital city appear modest – particularly as the city does not have the same financial means as the state of Bavaria. But there are some measures taken by the City of Munich to promote a knowledge-based creative economy. Besides the city council the two most important administrative actors on the city level are the Department of Labour and Economic Development and the Department of Arts and Culture.

### *4.4.1 Measures of the Department of Labour and Economic Development*

The most important aim of the Department is to extend the position of Munich as an international centre of knowledge, innovation and creativity as well as a centre of future oriented sectors. Other aims are to develop further Munich’s diversified economic structure (the so called Munich mix, see before), to sustain and expand Munich’s labour market policy measures as well as to secure the services of public interest (LH München Stadtkämmerei, 2010). The annual budget of the Department of Labour and Economic Development amounts to about 109, 8 million Euros. Almost 60 per cent of this sum is spent on municipal participation in firms (e.g. transport, water and energy), a quarter is spent on labour market policies, and 7 per cent on the promotion of tourism. This means that only about 7 per cent of the whole budget can be spent on the most important aim of the Department – namely the measures to extend the position of Munich as an international centre of knowledge, innovation and creativity (LH München Stadtkämmerei, 2010).

Due to the restricted financial means, the Department is predominantly active in less costly activities.

***Promotion of Munich as a business location: presentation of Munich at fairs, networking activities, allocation of premises, consultancy***

The department takes part in numerous networks like e.g. media networks or the cluster platforms of the Bavarian cluster campaign in the Munich region, it supports events like e.g. the film festival, and engages in the allocation of premises and consultancy for firms which want to locate in Munich. Regular activities are to present Munich as a business location on international fairs. Due to the tight budget the Department normally has to find partners for their activities. For example, studies on economic sectors are jointly commissioned by the Chamber of Industry and Commerce for Munich and Upper Bavaria and the Department, the presentation of Munich at international Fairs takes place together with the Free state of Bavaria.

Most of the available budget is invested in:

***Policies to support start-ups and theme-specific orientation in the designation of new commercial spaces***

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 (LH München, 2002). Moreover, the city is also developing a life science park in Freiham in the western part of the city. These examples can be seen as prototypical for the city of Munich's policy on commercial space: in the new development of commercial areas, increasingly a thematic focus is being operated, through a selective policy of the establishment of enterprises from designated branches of industry, so that specific theme parks arise. Thus for example when the business park in the Riem Trade Fair City was set up, a policy of establishing new technology companies oriented with an affinity to trade fairs was operated. At the same time, economic and spatial objectives are being formulated for the new business park, which are anchored in the Munich city development plan, the 'Munich Perspective', under the guideline of 'creating and promoting jobs and economic prosperity'. Socially, it means the establishment of job opportunities for specific groups (especially part-time jobs) in the Riem Trade Fair City, forming the basis for linking the family and work-related sides of life. Spatially, the mix of living and working functions in the land-use is an overarching planning goal for the Trade Fair City (LH München, 2006).
Recently a second park especially for media – the "Medienfabrik" (Media factory) in the city quarter Westend - has been developed close to the city centre. In this case, the city consciously sold the land to an investor with the condition that only media firms can use the premises (interview).

***Policies relating to developing Munich into a creative knowledge city***

In the last few years, the importance of positioning Munich as a knowledge-based city has slowly been 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, e.g studies and research commissions, an action plan for Munich as a city of knowledge, and the integration of “knowledge” into the development plan of Munich.

- ***Studies and research commissions***

For some years, the Department has been placing commissions for studies and research with external expert consultancies as well as with university institutions, which analyse the branches of industry based in Munich and the region. Investigations thus appear regularly on the media economy, the I&T technologies, biotechnology and the pharmaceutical industry, as well as on medical technology. The department also continually publishes trade information, for example on aviation and astronautics, nanotechnology, the automobile economy etc.
The report ‘Munich – City of Knowledge’ (2002) and its follow-up study of the same name (2005) are concerned with Munich’s knowledge-related activities and strategies, and they also describe the enormous strength and variety of the city’s knowledge base. These studies relate to the profiling of Munich as a City of Knowledge in the form of an atlas. They show thematic maps relating to knowledge-intensive and trendsetting industries such as IT and biotechnologies, and relating to Munich as a location for research and development in universities and enterprises (LH München, 2002; Hafner et al, 2005).
The question of what importance creativity and knowledge have for the competitiveness of the Munich city region has been investigated on behalf of the Department of Labour and Economic Development, in the study ‘Munich - location factor creativity’. The Social and Economic Geography department of LMU has critically evaluated Richard Florida’s approach of the 3Ts (Technology, Talents and Tolerance) to German conditions, and has subjected Munich to a creativity ranking in comparison with other German metropolitan regions. Munich has been ranked on the first place. This study has also investigated the location requirements and location ties of highly qualified workers (Hafner & von Streit 2007).

- ***Action plan for Munich as a city of knowledge***

In addition to the analysis of the development conditions of knowledge-intensive and creativity-oriented sectors, and the investigation into the attractiveness of Munich to knowledge workers, the city has drafted an action plan for how the city of Munich would like to make Munich into a city of knowledge. In this action plan (see Hafner et al, 2005), the city has formulated several fields of activity which should be given priority in the next few years:

- ‘To strengthen the knowledge base’, especially in the fields of adult education and schooling. Munich has for example a ‘school and science network’ which has the aim of giving school classes hands-on experience of scientific institutes and laboratories (Hafner et al 2005, p. 52).
- To support the ‘application of knowledge’: mostly through the existing consultancies for start-up entrepreneurs, and the technology centre (MTZ).
- ‘Support growth industries’ through the provision of suitable sites.

- o ‘Attract and retain talented people’: The city wants to strengthen its image as a university city (Hafner et al, p. 52).
- o ‘To strengthen the organisational capacity of the region’: With regard to the so-called organisational capacity, there are some efforts being made to enhance the contact between the city, the universities and research institutes and business. Up to now, this takes place in the form of a round table once a year, and is initiated and managed by the city's Department of Labour and Economic Development (Hafner et al 2005, p. 52).

- ***Integration of “Knowledge” into the strategic development plan of Munich***

In 2008 it has been decided that ‘knowledge’ will be integrated into the strategic development plan ‘Munich Perspective’ (*Perspektive München*). This means that “knowledge” would become something like a guiding principle and a significant field of strategic action for the city of Munich (see 4.4.3). In a next step the Department of Labour and Economic Development would have to elaborate “knowledge” as a guiding principle in city development, present this elaboration to the public and provide the guideline with concrete projects (interview).
For a few years it seemed that the necessity of formulating strategic action concepts for the development of Munich as a city of knowledge has been taken on by the Department for Labour and Economic Development. However, neither the Action plan for Munich as a city of knowledge nor the guideline “knowledge” in the strategic action plan has been developed further in the last years. This lack of action might be caused by the fact that the head of the department has changed within this period of time and that therefore the topic “knowledge” has lost its priority status in the Department.

### *4.4.2 Measures of the Department of Culture and Arts*

The most important aim of the Department is to strengthen culture and the cultural infrastructure in the city of Munich. The chief components of municipal promotion of culture and the arts are providing cultural infrastructure, supporting innovative processes in approaching issues of Munich's cultural heritage and of the changes in the Munich society and scene (LH München, Department of Culture and Arts, 2010). The Department has an annual budget of 182, 7 million Euros. About 22 per cent of this amount goes into the support of art and culture (e.g. art projects in public space, studio programme), with the rest of the budget the municipal libraries, museums, orchestras and theatres are financed.

To address the shortage of available space for artists the Department runs a studio programme: at the moment there are two municipal studio houses with about 50 workplaces for temporary use and there is another studio house located on the former “artist colony” Domagstraße which the city has recently renovated for 5.35 million Euros and offers space for about 100 artists. The studio house is the result of a bottom-up initiative of artists who had been living on the Domagstraße-area before the area had been sold to an investor. All (temporary) studio houses in the area were threatened to disappear because of the surrounding real estate development pressure. Finally the city of Munich bought one house and renovated it – and the grass root initiative became institutionalised. Another recent project is the studio initiative “platform3” which is also supported by the Department of Labour and Economic Development and which offers 22 studios and exhibition space for young artists as well as qualification training for cultural mangers and curators. However, in the light of the shortage of affordable space for artists in Munich, these measures can only be regarded as a small scale projects which do not tremendously change the difficult situation of artists and freelancers in the cultural industries (interview).

The Department of Culture and Arts regards the scarce space for artists and the smaller units of the creative industries as one of the main problems (interview) and plans therefore the development of a „creative quarter“ together with the Department of Labour and Economic Development in the next years (see 6.1) where a mix of artists and creative industry start-ups would find affordable studio and office space. However, this plan is in a very early planning phase (interview).

### *4.4.3 Other policy fields*

To situate creative knowledge city policies within the wider context wider urban development policies the “Perspective München” (Munich Perspective) has been analysed. Being the urban planning concept of the city of Munich, it offers an outlook for the urban economic, social, spatial and regional development in the form of guidelines. These guidelines offer definitions for both the direction and ambition of urban planning and the document is therefore more a flexible guide than a rigid urban development plan for the next years.

On the whole, the guidelines speak for the will of the city council and the administration to combine economic prosperity, sustainability and social cohesion in urban development. The first guideline concerns securing and promoting employment and economic prosperity. Measures in this respect are to secure the diversified economic structure in Munich, known as the "Munich Mix", to expand the business-friendly infrastructure (mobility, communication, education, science) and to promote the image of Munich as an economic and cultural location. Other guidelines touch on social issues like the promotion and protection of social cohesion through communal social policies (second guideline). Such policies focus principally on housing, on the integration of foreign residents and on education policies. With the program “Living in Munich” the city wants to provide low cost housing especially for families. Two measures aim at providing adequate living space for people who are disadvantaged on the housing market and for those on middle incomes: In 1994 the municipal programme known as the ‘Munich Model’ came into being, which enables those on middle incomes who are looking for housing to find cheaper housing (both owned and rented) in the city. With this model, the intention is above all to keep families with children in the city. Also in 1994, the city council launched ‘socially just land use’ (*Soziale Bodennutzung – “SoBoN”*), in order to ensure the promotion of good-value housing and state-subsidised housing. The ‘socially just land use’-model means that private property owners share in the consequential costs of infrastructure that the city has to provide as a result of the granting of new construction rights (e.g. kindergartens, open spaces and green spaces), and in the financing of state-subsidised housing (Metzler and Zademach, 2003). Furthermore, the city plans to subsidise housing with 625 million Euros from 2007 to 2011 (LH München, 2009). Through these instruments the city of Munich seeks to influence the housing market and ensure the availability of affordable accommodation – for the local population.

Concerning the integration of foreigners two municipal offices in Munich are important: the advisory body for foreigners or the office for intercultural co-operation, which work towards an open, integrative urban society. However, it must be stated that the regional migration policy of Munich focuses on migrants from lower social classes and their problems on the labour market and housing market as well as in education. Until now, there have been no special programmes or contact persons at the city council for highly skilled migrants.

### *4.4.4 Conclusion: Municipal policies concerning the creative knowledge economy*

To sum up: concerning economic policies the aim of extending the position of Munich as an international centre of knowledge, innovation and creativity still has priority. However, a coherent implementation strategy to achieve this end still lies a good way off, not least because the political leadership of the city of Munich sees hardly any need for action in this area. The pressure to act is regarded as slight, as the outline conditions for economic prosperity and the future prospects of the city are essentially judged to be positive (LH München, 2007). Visions for the future economic development of the city are not formulated at the moment and the activities which were based on the vision to develop Munich into a city of knowledge have come to a standstill, presumably because the head of the Department has changed in the meantime.

Furthermore, at the moment there are no specifically tailored measures for the smaller units of the creative industries, neither from the Department of Labour and Economic Development nor the Department of Culture and Arts. The concept of the creative industries encompasses a public, an intermediate and a private sector and sub-areas that are heavily dependent on state funds, such as theatres, museums, orchestras as well as sub-areas which function independently and purely on an economic base like architecture or design. Due to the clear distribution of tasks between these two municipal departments - the Department of Labour and Economic Development focuses on the promotion of the creative sectors and especially the media and the Department of Culture and Arts focuses on the support of culture and the arts – a collaborative support of the heterogeneous sector of the creative industries has not yet taken place.

However, this might change in the near future as the Department of Culture and Arts and its new head has formulated the aim to create a "Creative Quarter" in collaboration with the Department of Labour and Economic Development where artists and creative start ups would find affordable studio and office space (see 6.1).

# 5 TYPES OF INTERACTIONS BETWEEN STAKEHOLDERS

In the following chapter, the types of interactions between relevant stakeholders will be discussed. In general, the numerous networks which are made up by different actors are one of the important assets of the region. To illustrate this fact, the chapter starts with a short draft of the so-called institutional thickness in the Munich region. Due to this high number of relevant networks this chapter concentrates on the interactions between state and city institutions and on two examples of networks made up by state, parastatal, non-state and private actors which have a regional scope: the association European Metropolitan Region Munich (EMM) and the cluster audiovisual media which is part of the Bavarian cluster campaign.

## 5.1 Institutional thickness in the Region of Munich

According to the literature a broad-based local "institutional thickness" that includes enterprise support systems like a high number of public and semi-public research institutions, universities, technology transfer points, start up consultation, venture capital firms and parastatal agencies like chambers of industry can result in networks of different actors which enhance 'untraded interdependencies'. The networks constitute part of the learning environment for firms and provide daily access to relevant resources (information, knowledge, training, skills, technology, ideas; Amin, 1999). The existence of such networks are claimed to have a direct impact on a region's competitive and innovative potential.
Studies have identified numerous "naturally grown" clusters classified under high-tech and knowledge intensive industries (including automotive, ICT, biotechnology, aerospace), the knowledge intensive service sector (including finance and insurance) and the creative sector (including media and new media, software, internet publishing). They consist of an agglomeration of firms in the respective sectors and comprise networks between SMEs and large enterprises, the numerous research and educational institutions in the Munich area, as well commercialisation protagonists (for the example of microelectronics see Stenke 2002, 2008; for the media sector see Biehler et al. 2003 or Mossig, 2004; for biotechnology see Ossenbrügge and Zeller, 2002). However, to what extent theses functioning networks can be attributed to direct political support cannot be decided and if such networks or - seen from a spatial perspective - clusters can be fostered or even created by policy measures remains a contested question.
Concerning the cultural scene, there are also several important none-state actors and private initiatives, e.g. the "Urbanauten", a group of young activists who organise events in public space or offer temporary use -workspaces for artists (see http://www.die-urbanauten.de/cms) or the Kunstverein Munich (art association) which is a privately sponsored association with nearly 1.000 members. It operates relatively independently in terms of its immediate economical as well as (cultural) political interests and wants to offer a space for artistic

experimentation, where innovative curatorial work can be accomplished without spurious consideration for political duties or mercantile calculations (see http://www.kunstverein-muenchen.de).

## 5.2 Interaction between state actors

As has been shown the Free State of Bavaria together with the city of Munich deploy a massive variety of policies that are directed at improving entrepreneurship, creating networks of innovation and supporting creative and knowledge intensive sectors in the region of Munich. The federal government only plays a minor role in this respect. Thus, the following part concentrates on the distribution of power between the Free State and the city of Munich, on their modes of interaction (cooperation or not) as well as on the cooperation partners of each actor (private, state, parastatal actors).

Concerning economic policy measures in the region of Munich the Free State is more influential than the city of Munich for two reasons. Firstly, the State of Bavaria is and can be much more active than the city with regard to financial means and secondly, the state is responsible for R&D and education policy and can also launch initiatives in the whole of Bavaria, whereas the influence of the city of Munich ends at the city border (see chapter 4.1) and the city has no possibilities to employ means in the region of Munich.

Concerning the nature of interactions between these two actors there is virtually no cooperation in the process of designing and implementing the relevant programmes. This applies to both actors. Once the measures are implemented the city of Munich might become a cooperation partner in a project with the same status as parastatal actors like chambers of commerce or research institutions. For example the city of Munich is represented in several of the cluster platforms which have their base in the Munich region. This means that there is collaboration in certain projects on the working level between the administrators up to the executive officers but there is no cooperation between the leading positions of the ministries or city departments in any institutionalised form (Interview). Consequently, there is no cooperative planning and course of action of the two most important players in the region of Munich in respect to economic development policy. This has several reasons. Most importantly, the two actors have different aims and interests. The policy measures of the state of Bavaria aim at the whole of Bavaria and the other regions of Bavaria watch all programmes and funding closely if they do privilege the Munich region – which is for the above named reasons very often the case. Secondly, there is no need for the state to coordinate its policies with the city and finally, the state and the city are governed by different political parties.

However, concerning Munich as a cultural city there exists one important collaboration between the city and the Free state of Bavaria at the moment: a team with representatives from the Bavarian ministry of culture, the city administration, the universities and museums will work out a plan how the "Kunstareal" (cultural area) around the Königsplatz can be better developed and how the numerous cultural institutions in the area can be better linked (interview).

Concerning the collaboration of the two state actors with other actors in the region it must be stated that there is a close cooperation in many different forms. This applies especially for the city of Munich. Thus, the Department of Labour and Economic Development is represented in numerous sector specific networks in the region of Munich and it works together with the Chambers of Commerce in many areas, e.g. programmes for start ups and sector specific studies.

## 5.3 The European Metropolitan Region Munich (EMM) as an example of a voluntary regional network

The increasing outplacement and relocation even of higher-value functions of the creative knowledge economy into the region has led to a patchwork-like location system with a dispersed structure which is faced with individualistic political decision-making structures in local government. To avoid further detrimental effects of this process (urban sprawl, financial issues, traffic, etc.) a co-operation in and coordination of the development of the region seems to be vital. The European Metropolitan Region Munich (EMM) could become a regional actor who could lead such processes as this regional association unifies all important state, parastatal, non-state and private actors in the region of Munich (city of Munich, the counties and bigger cities in the greater Munich region, the chambers of commerce, the Freestate of Bavaria, as well as universities and business companies in the greater Munich area). As mentioned before the aim of the association is to enhance the attractiveness of the greater Munich area as a business location by pooling the resources of the different actors (EMM 2010). To date, it is still too early for an evaluation of the EMM since it was founded in 2009. However, according to experts the association until now functions merely as a marketing device for the Munich region in which particularist interests of the different members and local egoism prevail.

## 5.4 The cluster Audiovisual Media as an example of a state supported network

In contrast to the networks and clusters in chapter 6.1 the Bavarian “Cluster Audiovisual Media” (CAM) is an example for an institutionalised and with state support ‘created’ network, albeit the members of these ‘planned’ and ‘un-planned’ networks may well be the same.

The CAM – founded in 2006 within the framework of the Bavarian cluster campaign (see chapter 5.2) – is a subdivision of the FilmFernsehFonds Bayern (Film fund Bavaria). Its over-arching aim is to bring about a long-term improvement and strengthening of Bavaria’s position as a media location through strategically directed networking activities. Through the cluster initiative, the aim is to maintain the attractiveness of the location, and to support its economic strength in the media sector.

In general the network is open to state, parastatal and private actors: Members of the cluster are currently approximately 300 companies. The members cover most parts of the value chain in the audiovisual media sector: from film-making companies, film and television producers, post-production and animation producers, through to the computer games industry and games

developers, media consulting and lawyers. Contacts also exist to partner-clusters (like finances or ICT) and associations like the American Chamber of Commerce in Germany e.V. or the International Trade Fair for Cine Equipment and Technology.
The state of Bavaria supports this network with 1.1 million Euros for five years but further financial involvement is expected from the players in the cluster, since the financial provision is intended only for covering the costs of the cluster management.

Cluster management takes place through a number of measures. Through the establishment of an online database for the media sector, cross-sector access to technical expertise at universities and research institutions, to highly qualified personnel, to innovative creative workers and to capital investors is facilitated. This is intended to improve the network of Bavarian media entrepreneurs. CAM also offers non-monetary support in the sense of assistance, individual advice in the areas of start up firms or available support, ideas, making contacts, or events for particular sub-sectors (expert interview FFF and CAM). The cluster for audiovisual media offers its services above all to small and medium-sized enterprises in the Munich region. In contrast to the support provided by FFF (FilmFernsehFonds) which financially supports businesses and projects in the field of movies and television the support offered by CAM consists of non-monetary services like support for communication processes and dialogue approaches. For example, conferences are organised where different actors like smaller firms and university researchers can meet or "round tables" are organised to discuss more specific problems. Also, firms can make use of mentoring services offered by the cluster management – for example when they are looking for project partners. Many smaller businesses are thankful for this service, as they often do not know whom to approach (expert interview FFF and CAM).
Nevertheless, organised networks like the CAM may have the problem of attracting the most important network members in the region as those who are already well connected do not have the necessity to use such a service unless they can expect any surplus value. This is for example the case with universities and research institutions that are unwilling to participate in networks unless they can expect a concrete project or research contract (expert interview).

The cluster initiative is criticised at several points:

One argument addresses the design of the policy measure: the support for large-scale projects such as the start up centre "Film Zentrum Bayern" has now been replaced by modest support for project ideas. However, for the first time, Bavaria is now also supporting communication processes and dialogue approaches on a large scale.
Besides the top-down-approach for initiating network structures also the concept of communication policy itself is criticised: up to now, the events and circles of co-operation have been aimed mainly at the management elites from enterprises, business associations and research institutions. The interests and the potential of the employees, and the representation of their interests as well as other socially relevant groupings, have hitherto not been taken into account in the cluster campaign (BStMWIVT 2006). Since the quality of the labour market, working conditions, the supply of labour but also the cultural environment and regional quality of life are significant features of the success of clusters, important areas have been ignored up to now.

# 6 CRITICAL ANALYSIS AND DEBATE

The following chapter aims at evaluating the strategies and policies concerning the creative knowledge economy of the different actors in the regions of Munich. This cannot be done from a general point of view, e.g. due to the research design it cannot be decided if the cluster campaign is a successful instrument or not. Thus, this chapter will relate the results of the previous work packages to the existing strategies and policies and analyse if they are consistent in this respect.

## 6.1 Debates and controversies surrounding current strategies described by the media and by the interviewed experts

An analysis of the "Süddeutsche Zeitung" from January 1999 to February 2010 shows that there were only eleven articles referring to Richard Florida and even less with terms like 'creative city' or 'creative economy' in them. And there has only been one highly debated study by the consultancy Roland Berger and the Frankfurter Allgemeine Zeitung which provided a ranking of German cities according to the three factors (the three T's) of Florida in 2008. The city of Munich was on the first place in this ranking.

Recurrent and more widely discussed topics in the "Süddeutsche Zeitung" are the self-concept of Munich as a cultural city (architecture, film and media, modern art, design in Munich) especially in comparison to Berlin which includes the controversially led debate of numerous clichés like that Munich is too rich, too down-to-earth and too saturated to be interesting for artists and creative people. Other subjects are the disproportionate promotion of high culture (theatres, orchestras and museums) and the independent cultural scene as well as the difficult situation of artists and start ups due to the lack of affordable office and studio space.

The lack of affordable space as well as high living costs are also regarded as the biggest challenges by the interviewed experts. To provide more adequate studio and office space for artists and creative start ups is seen as one of the most important tasks by the Department of Culture for the years to come (interview). In the view of the interviewed experts the lack of affordable space is a much more important reason why creative and cultural organisations might leave the city than the image of Munich as a cultural city.

Particularly inner-city districts are preferred by both established creative companies and creative organisations with lower financial means (von Streit et al., 2009). Due to gentrification processes, the high real estate development pressure, and as there are almost no industrial wastelands from former periods to be found within the city limits it is extremely difficult for the Department of Culture to implement projects like the envisaged cultural quarter. Another obstacle for the Department of Culture to implement measures like designated areas for the cultural industries and artists is that housing has a much higher priority than cultural institutions on new development areas in the view of the city council and the administration (interview). Thus, an important task for the Department of Culture is to create the consciousness in the city administration and population that culture, artists and creative workers are important for the city – not only in cultural but also in social and economic respects. The interviewed experts see also need for action concerning the image of Munich: they argue that the image of Munich rests too much on traditional features whereas the potentials of the city in the area of design, modern art and music are not emphasised enough in marketing campaigns.

## 6.2 Confrontation with the results of previous work packages

Three previous reports have examined the attractiveness of the Munich region for three groups: (1) employees in both creative and knowledge industries; (2) creative knowledge companies; (3) transnational migrant workers. The studies were conducted between summer 2007 until the end of 2008. The previous reports aimed at answering above all the following questions: Which factors were decisive behind the decisions of creative knowledge workers, managers and highly skilled migrants to settle and find a job or start a business in the Munich region? What was their main motivation to come to work and live in Munich?

### *6.2.1 Hard factors and related policy measures*

The most important regional conditions in Munich, both positive and negative, to emerge from the research previously undertaken largely concern traditional hard location factors. Hard factors are related to classic location conditions such as transport infrastructure, cost of living, employment availability and the presence of a skilled and educated labour pool amongst many others. For the discussion below the most important conditions from the perspective of the creative knowledge sector have been identified. Due to their different perspectives, the target groups have placed varying emphasis on the different conditions.

***Universities, employment opportunities, the availability of labour and infrastructure***

In the case of the creative knowledge workers in Munich, the place of work plays the most important role in the decision to live in Munich for over two thirds of those surveyed. In case of those workers who came to Munich from outside the Munich region, it can thus be concluded that the job or the good employment opportunities are the most important factor for their decision to settle in the Munich region (Hafner et al., 2008).

For the highly qualified migrants also the job plays - in combination with personal trajectories - the most important role in attracting them to the Munich region (von Streit et al., 2009).
From the perspective of the creative knowledge firms the availability of highly qualified labour is the key regional asset. Together with other hard factors like transport and a good business environment, such conditions served as a core motivation for creative knowledge firms to locate and even more relevant, to stay in the Munich region regardless of company origin or size. Creative knowledge firms also regard the proximity to universities and

educational institutions as an important asset: firstly, because these institutions secure a constant supply of skilled workers and secondly, because the spatial proximity to research and educational institutions enables co-operation and the transfer of knowledge. Also transport issues turned out to be of major importance for the creative knowledge sectors (von Streit et al., 2008). Munich's central location and good links to the national transport infrastructure, with well-developed rail, road and air networks, were stressed by the respondents. The insistence on accessibility proves that despite of the internet and modern communication means, creative knowledge work still relies heavily on physical hardware and infrastructure. High taxation and high costs of labour are of medium or even weak importance for the creative knowledge sector as the positive conditions by far outweigh the negative ones (von Streit et al., 2008). This shows that tax incentives might be less efficient than investment in infrastructure to become an attractive location for creative knowledge firms.

Given the fact that especially those hard factors remain of core importance in the decision making process of firms and workers in their initial decision to locate in the Munich region policies which focus on such hard factors should be given special attention. Many of the policy measures of the Free State of Bavaria as well as the city of Munich follow this direction. Firstly, both actors tried to foster economic development through infrastructure provision: this concerns roads, traffic management, public transport, the relocation of the airport in the 1990s as well as housing projects and start up centres. Secondly, especially the technology policy and university support, as well as policy on education and science especially provided by the Free State of Bavaria follows this direction. Furthermore it can be argued that any policy aimed at fostering the establishment and nurturing of firms in the knowledge-intensive and creative sectors is always simultaneously a policy for highly qualified people.

The insistence of the target groups on hard location factors like transport infrastructure shows that the support of project ideas, communication processes and dialogue between relevant actors alone is not sufficient. Larger scale projects cannot be completely replaced by support for networks. Nevertheless, due to Munich's intensive integration into global markets and thus high levels of competitive pressure, active cluster management is certainly one of the central tasks in order to strengthen the competitiveness of the metropolitan region in the future.

The knowledge sectors were in general very satisfied with the targeted support for cluster formation and sectors with a promising future as they expect this policy to strengthen the economic development of the whole region.

Concerning the city's policies for highly skilled migrants it must be stated that the migration policy of Munich focuses on migrants from lower social classes and their problems on the labour and housing market. Until now, there have been no special programmes or contact persons at the city council for highly skilled migrants.

***Costs of living, housing market***

High levels of dissatisfaction were expressed by virtually all target groups with regard to the tight and expensive housing market as well as the high costs of living in the region of Munich. 98 per cent of the creative knowledge workers think that rents and mortgages in Munich are expensive or very expensive (Hafner et al., 2008). Less privileged migrants mainly have the problem of getting access to the housing market. The same holds true for foreign researchers as their salaries are quite low in Germany (especially for doctoral candidates) in comparison to other countries (von Streit et al., 2009).

In fact, Munich is one of the cities with the highest costs of living and the highest rents in Germany. Amongst the highly qualified employees in the growth sectors, there is a willingness to pay high rents. The wages in the Munich region are in general higher than in other regions of Germany. This is also reflected in the high purchasing power per capita which is over 30 per cent higher than the German average and well ahead of other German cities (LH München, 2009). Nevertheless, the high costs of living pose serious problems for those who gain only an average or low income. As previous research has shown (Hafner et al., 2007) the earnings achieved by the majority of creative knowledge workers can in relation to the high costs of living in Munich at best be described as average. Furthermore, studies have shown that the income situation of the creative workers has a broad spread, ranging from very high to frequently precarious levels of income (Hafner & von Streit, 2007). Freelancers above all achieve only below-average income in many areas of the creative industries in Germany (Betzelt, 2006). Thus, media officials see the high costs of living as a major reason that creative freelancers who depend on instable incomes might leave the region for locations with less high cost of living like Berlin (interview).

The availability of affordable housing remains a core challenge for the further development of the region. The relocation of the airport as well as the fairgrounds to the outlying boroughs and the closing of military bases as well as the relocation of the central rail facilities offered new opportunities for the tight inner-city real estate market to expand. The city was able to develop new industrial estates and several new neighbourhoods. Nevertheless, the housing situation is still difficult: a real housing shortage does not exist but housing is very expensive and cheap housing is difficult to find. Although the city deploys a variety of measures, until now they have not been successful in terms of alleviation of the strained housing market.

### *6.2.2 Soft factors and related policy measures*

Another important result of the previous work packages is, that Munich's soft conditions like the high quality of life, the cultural and recreational offers as well as the surrounding country side were generally perceived as being regional strengths and proved to be above all retaining factors for all target groups. Typical Florida factors like tolerance or cultural diversity turned out to be quite unimportant for virtually all target groups.

In the case of managers, soft location factors like the high quality of life as well as the positive image of Munich are an important factor to attract highly qualified personnel from all over Germany to their Munich location (von Streit et al., 2008).

Nevertheless, soft conditions like semi public spaces where people can meet, including bars and cafes and which make frequent random or planned face-to-face encounters possible or vibrant and distinctive neighbourhoods played an increased importance for the location strategies of the creative industries (von Streit et al., 2008). Those prefer first of all inner city areas. In this context it must be mentioned that the city has not managed to avoid the detrimental effects of the gentrification process of the inner city areas which concern mostly the squeezing out of less affluent groups including artists and smaller business of the creative industries.

Policies that are directed towards the relatively well developed soft consumption orientated conditions of the region comprise the high public expenditure (both by the Free State of Bavaria as well as the city of Munich) on the cultural sectors which might, however, be reduced when tax revenues fall due to the ongoing crises.

### *6.2.3 Personal trajectories and related policy measures*

The third important finding of the previous work packages is the importance of personal trajectories. Personal trajectories turned out to be a core attracting and retaining factor in the decision making of the various target groups analysed. Personal trajectories comprise a wide range of personal factors like being born here, family lives here, proximity to friends, partner moved here etc. After the job, the second most important aspect why creative knowledge workers have come to the city or stay in Munich is that of personal factors. As more than half of the creative knowledge workers surveyed can be described as much tied to the Munich location, they can – with regard to their mobility behaviour and in their sense of connection to a place – neither be assigned to belong to a transnational class nor the creative class of Richard Florida. In the case of creative knowledge firms all small and medium sized younger companies (it does not apply to the big firms and so-called global players) reported that personal and family reasons drove their initial decision to locate in Munich. This result highlights the high importance of being rooted in a city, of private reasons and of existing networks for business location strategies. This is especially the case for the creative sectors. Although personal trajectories are by no means Munich-specific, the business environment as well as the versatile and absorbing labour market provides the conditions to retain graduates and business founders in the region. Consequently, personal trajectories are also linked to other hard factors like the presence of numerous universities and educational institutions in the Munich region as they attract students to the region in the first place.

The importance of personal trajectories highlights the importance of a broad based urban development policy – a policy which makes people stay in the city

Influencing personal trajectories directly is not within the realm of planning policies. Nevertheless, attracting students who might stay in the region after graduation proved to be an important point. Above that it seems to be most important in this context to retain creative workers in the region by making the city an attractive place to work and live. A broad based urban development policy is a pro-talent- initiative in this respect, too.

# 7 CONCLUSIONS

## 7.1 Summary of results

This study explored and investigated the policy concerning the creative knowledge economy strategies in the Munich region On the basis of statistical data regarding the state of the creative knowledge economy in the Munich region as well as on the results of the surveys undertaken among three target groups (highly skilled employees, highly skilled migrants, managers in the creative knowledge economy) existing policies and strategies of different stakeholders were confronted with results of previous ACRE studies as well as with actual dynamics in the region.

As it has been shown policies aiming at fostering R&D, innovation as well as sectors of the creative knowledge economy have been established at all government levels. On the whole the implemented policy measures and strategies have certainly supported Munich's development into one of the leading European centres of the creative knowledge economy.

The Bavarian state is the most influential actor concerning creative knowledge policies in the Munich region: it provides the bulk of funding in policy areas such as education, research, economic development as well as culture, media and arts.

Political support of especially the high tech industry has a long tradition in Bavaria and the region of Munich has profited by important location decisions relating to technology policy since the 1950s. Although the efforts of the Bavarian economic development policy are always directed at the entire territory of Bavaria, many of these investments again benefit the city and the Munich region due to the "institutional thickness" of the region as well as the concentration of several knowledge intensive and creative sectors.

The Bavarian innovation and technology policy gained new impetus in the 1990s when numerous initiatives were launched to make Bavaria an even more attractive location for the high-tech industry. The initiatives were primarily financed by the selling of public shares. Measures like the construction of new university buildings and of start up centres (biotechnology, media, ICT), the promotion of innovative networks in high tech sectors as well as start up programmes received the highest funding.

Introduced in 2006, the cluster campaign which aims at building state-wide networks interlinking business and scientific potential in 19 defined clusters of industry and competence marks a turning point in the technology policy of the state of Bavaria: Compared to previous programmes, the funds provided are much smaller as the funds obtained from privatisation revenues have been used up. Thus, the cluster campaign now aims at firstly mobilising private means and the support of large-scale projects has now been replaced by modest support of project ideas. But Bavaria is now also supporting on a large scale communication processes and dialogue approaches, which in the past had tended to be rejected in favour of subsidising investments and projects.

Concerning the creative industries, the Bavarian government does not perceive the creative industries as a sector in its own right. Furthermore, the catchword "creativity" and any ideas how creative knowledge workers can be attracted are largely absent from policy documents. Nevertheless, several sub-sectors of the creative industries like e.g. the media, games as well as software as being part of ICT have been promoted in various initiatives in the region of Munich. Furthermore, being the capital of the Free State of Bavaria, Munich profits highly from the high investments into culture and the arts as the varied cultural scene in Munich is financed to a large extent by the state of Bavaria or by state-run institutions and foundations.

The absence of the catchword "creativity" applies also to the policy documents of the city of Munich. Like in Bavaria, the economic policy of the city of Munich is more knowledge and innovation oriented than culture oriented which means that the implementation of economic approaches in culture-oriented policy approaches as well as cultural approaches in economic-oriented policy approaches hardly exist. Although the most important aims are to extend the position of Munich as an international centre of knowledge, innovation and creativity and future oriented sectors as well as to develop further Munich's diversified economic structure, the plan to develop Munich into a city of knowledge has not been developed further in the last years. The reason why the topic "knowledge" has lost its priority status in the Department of Labour and Economic development could be that the head of the Department has changed.

Up to the present, there has been a clear distribution of tasks between municipal departments – the Department of Labour and Economic Development focuses on the promotion of the creative sectors and especially the media and the Department of Culture and Arts focuses on the support of culture and the arts. Only very recently, there are tentative moves to a closer collaboration like the plan for a "creative quarter" proves.

In contrast to many other European cities the creative industries as a concept are not being used (or 'instrumentalised') neither for achieving economic ends nor for other reasons like to attract firms or creative workers, to improve the image of Munich or for redeveloping marginalised areas of the city. One could argue that the potential of these industries has not been realised yet by many actors in the city. The new head of the Department of Culture (he is in charge for two and a half years now) wants to promote these industries more strongly than in the past and especially focus on providing artists and creative start ups with affordable office and studio space. Thus, the example of Munich shows that policy measures can be closely connected to personalities.

The federal government only plays a minor role in respect to creative knowledge policies in the Munich region. However, due to the financial crisis the federal government has launched several programmes aiming at fostering innovation and future oriented sectors. The strategies focus very much on high tech sectors namely on so called lead markets like health, security, mobility, climate protection, energy and key technologies like ICT, biotechnology, nanotechnology etc. In contrast to these innovation based policies, creativity based policies only play a minor role. Due to the federal system, the Länder (states) are largely responsible for policies concerning culture, art, film and the media. Therefore, culture as a distinct field of national policy has only been discovered and developed in the last years: the position of a state secretary has been established in 1998 and from this time on, not only culture but also topics such as cultural economy and creative industries appeared on the agenda of the Bundestag (German parliament). So far the creative industries have been the target of only one initiative on the federal level: in 2007 the federal government has initiated the Culture and Creative Industry Initiative which has published a report on the culture and creative industries in German (employment, firms, and turnover) and has presented a harmonised basic model for the definition and classification of these industries for Germany.

Confronting the existing policy measures with the results of previous work several conclusions can be drawn: In contrast to the claims of Richard Florida, the most important regional conditions in Munich, both positive and negative, to emerge from the research previously undertaken largely concern traditional hard location factors such as transport infrastructure, cost of living and housing, employment availability and the presence of a skilled and educated labour pool. Many of the policy measures of the Free State of Bavaria as well as the city of Munich follow this direction. Firstly, both actors try to foster economic development through infrastructure provision: this concerns roads, traffic management, public transport, the relocation of the airport in the 1990s as well as housing projects and start up centres. Secondly, the technology policy and university support, as well as policy on education and science especially provided by the Free State of Bavaria follows this direction. The policies therefore match with our findings. Furthermore it can be argued that any policy aimed at fostering the establishment and nurturing of firms in the knowledge-intensive and creative sectors is always simultaneously a policy for highly qualified people.

Another important finding of previous work pages is that highly qualified knowledge workers and highly qualified migrants are not so different from those of the rest of the population. Therefore, a broad-based urban development policy with certain focus points on the policy area of housing, the policy areas of education and social infrastructure in particular is simultaneously a policy for highly qualified people. In the case of Munich, most problems exist in the area of housing – in this policy area the city has to become more active in the next years. Concerning the governance for the smaller unites of the creative industries and finding adequate measures to support the creative sectors, Munich has certainly a lot of catching up to do.

## 7.2 Conclusions: Important fields of action

Given the pertinence of hard factors, a policy mainly orientated towards the sphere of consumption cannot ensure sustained growth and a robust creative knowledge sector. One main factor which contributes highly to the competitiveness of the Munich region is the high number of creative knowledge firms in the respective clusters which give new impetus to other firms to settle in the region and create the thick, opportunity rich labour market creative knowledge workers are looking for. This policy must be complemented by policies which focus on networks and relations but cluster policy should not substitute policy measures supporting hard location factors. Thus, further investment in hard location factors like transport, university buildings, start up centres, education, research etc. is necessary

As the results of this study show, the availability of highly qualified workers is one of the main assets of the region. Combined with the result that personal trajectories play an important role the strategy to attract students to the city which might stay in the region after their graduation seems to be an adequate measure to secure a broad knowledge base and secure Munich's competitiveness. Therefore, Munich should promote itself more actively as a student city and a region of knowledge and science

Given the fact that the surrounding countryside is one of the most important soft condition of the Munich region, the increasing traffic associated with work and leisure that is being produced on account of the increasingly dispersed settlement structures have become a burden. To tackle these problems more efficiently a closer co-operation of regional actors (city and municipalities of the region) is necessary.

Furthermore, the increasing outplacement and relocation even of higher-value functions of the knowledge-based economy into the region leads to a patchwork-like location system with a dispersed structure which is faced with individualistic political decision-making structures in local government. Through the structural change towards the regional location network with significant commercial settlements that are scattered over the surrounding area, the city of Munich is gradually losing opportunities for shaping economic policy. In numerous local authorities, isolated development strategies are implemented. Instead of co-operating, the city and the municipalities compete for knowledge intensive institutions. The sum total of individual decisions driven by instances of local egoism is very likely not to automatically increase the overall benefit to the region.

The overall benefit of the region in respect to the creative knowledge economy could also be increased by a closer collaboration of the city of Munich and the Free State of Bavaria. A stronger coordination of strategies and measures would lead to synergetic effects.

Apart from small scale projects Munich has not developed policy strategies for the smaller units of the creative industries. Several issues should be taken into account in this respect: The extremely heterogeneous structure of the creative companies and individual actors is reflected in their differing demands and requirements for their physical environment. Large companies and global players in the media industry have different location requirements than small design offices or professional philharmonic musicians. For Munich this poses the challenges to deal with creative and cultural organisations leaving the city for a lack of opportunity and support as well as high leasing prices. Particularly in inner-city districts, which are preferred by both established companies and creative organisations with lower financial means, it is a major challenge for Munich to precisely differentiate the spatial requirements and needs of the companies and actors in order to implement regulatory instruments and incentives. Up to now the city of Munich has not found (and not looked for) such regulatory instruments. A preliminary measure would be to make use of vacant office space for temporary use for artists and small creative businesses.

One important precondition for better promoting the creative industries would be a closer collaboration of the Departments of Labour and Economic Development, the Department of Culture and Arts as well as the Department of Department of Urban Planning and Building Regulation. There are movements to a closer collaboration which should be intensified.

Furthermore, it should be taken into account that the creative industries need different forms of support than other more traditional sectors.

And finally, the cross disciplinary character and the characteristic features of the various submarkets of the creative cultural industries provide only little justification for the application of existing, traditional forms of planning instruments or measures from other industries but call for the development of specific forms of governance that are more adjusted to an economy of smaller units and production niches as well as less stable organisations.

Also for a better promotion of all sectors of the creative knowledge industries a closer collaboration of city departments seems to be vital as creative knowledge policy is always a cross-sectoral policy which has economic, spatial, educational, cultural and social aspects.

Munich does not have the image of being a very ‘diverse’ city from a cultural point of view. Nor does Munich have an image of being an especially creative or thriving city for sub-cultures and of being a city where new trends are set. The image of Munich is that of a very wealthy, relaxed city almost like a big village. However, this picture was not confirmed neither by the interviewed experts who regard this image as a mere cliché nor by the creative firms surveyed: they regard Munich not less creative than for example Berlin, although there were also some respondents who described Munich as over-regulated, clean and saturated. This means that the potentials of the city for young people as well as in the area of design, modern art and music should be emphasised more in marketing campaigns which still stress very much the traditional features of Munich.

# References


Ache, P., H.T. Andersen, Th. Maloutas, M. Raco and T. Tasan-Kok (eds) (2008) *Cities between competitiveness and cohesion: Discourses, realities and implementation*. Series: GeoJournal Library, vol. 93, 299 pp.

Amin, A. (1999) An institutional perspective on regional development. *International Journal of Urban and Regional Development*, 23: 365-378.

Atkinson, R. (1999) Discourses of partnership and empowerment in contemporary British urban regeneration. *Urban Studies*, 36 (1): 59-72.

Bayern Innovativ GmbH (2010) Homepage. URL: http://www.bayern-innovativ.de (Accessed 9 February 2010).

Bavarian State Chancellery (2006) High-Tech-Offensive Bayern – Bilanz und Perspektiven. Munich.

Bavarian State Government (2008) *BayernFIT – Forschung, Innovation*. München. URL: http://www.bayern.de/Anlage3296324/BayernFIT%E2%80%93Forschung,Innovation,Technologie.pdf (Accessed 9 February 2010).

BBR (2001) *Spatial development and spatial planning in Germany*. Federal Office for Building and Regional Planning. Bonn: Bundesamt für Bauwesen und Raumordnung.

Betzelt, S. (2006) *Flexible Wissensarbeit: AlleindienstleisterInnen zwischen Privileg und Prekarität*. ZeS-Arbeitspapier 3/2006. Bremen: Zentrum für Sozialpädagogik der Universität Bremen.

Biehler, H., J. Genosko, M. Sargl and D. Sträter (2003) *Standort München. Medienwirtschaft und Fahrzeugbau. Regionale Netzwerke und regionaler Arbeitsmarkt als Erfolgsfaktoren*. Marburg: Schüren-Verlag.

Bilton, C. and R. Leary (2002) What can managers do for creativity? Brokering creativity in the creative industries. *International Journal of Cultural Policy*, 8: 49-64.

BioM AG (2007) *Homepage*. URL: www.bio-m.de (Accessed 26. February 2007).

BMBF (Federal Ministry of Education and Research, 2006a) *Wir setzten die Hightech-Strategie um*. URL: http://www.bmbf.de/de/6618.php (Accessed 5 January 2007).

BMBF (Federal Ministry of Education and Research, 2006b) Bundesministerium für Bildung und Forschung. *Exzellenzinitiative*. URL: http://www.bmbf.de/de/655.php (Accessed 5 January 2007).

BMBF (Federal Ministry of Education and Research, 2009) *Research and innovation for Germany – Results and outlook*. Bonn.

BMBF (Federal Ministry of Education and Research, 2010) *Objectives and tasks*. Homepage. URL: http://www.bmbf.de/en/90.php (Accessed 9 February 2010).

BStMF (Bavarian State Ministry of Finances, 2009) *Haushaltsplan 2009/10*. Munich. URL: http://www.stmf.bayern.de/haushalt/staatshaushalt_2009/haushaltsplan/ (Accessed 9 February 2010).

BStMWFK (Bavarian State Ministry of Sciences, Research and the Arts, 2010) Homepage. URL: http:// www.stmwfk.bayern.de/Ministry/Ministry_en.aspx (Accessed 9 February 2010).

BMWi (Federal Ministry of Economic Affairs, 2010) *Structure and tasks of the Ministry of Economics and Technology*. URL: http://www.bmwi.de/English/Navigation/ Ministry/structure-and-tasks.html (Accessed 9 February 2010).

BStMWIVT (Bavarian State Ministry of Economic Affairs, Infrastructure, Transport and Technology, 2006) *Bayerische Clusterpolitik*, February 2006. Munich.

BStMWIVT (Bavarian State Ministry of Economic Affairs, Infrastructure, Transport and Technology, 2010) Innovationsgutscheine. Homepage. URL: http://www.innova tionsgutschein-bayern.de/ (Accessed 9 February 2010).

Bortz, J. and N. Döring (2006) *Forschungsmethoden und Evaluation für Human- und Sozialwissenschaftler*. Heidelberg: Springer Medizin Verlag.

BVA (Federal Office of Administration, 2005) *Administration of the Municipalities*. URL: www.bund.de (Accessed 15 January 2007).

BVA (Federal Office of Administration, 2007) Administration of the Federal States. www.bund.de (Accessed 6. March 2007).

Davies, J.S. (2002) The governance of urban regeneration: A critique of the 'governing without government' thesis. *Public Administration, 80* (2): 301-322.

DCMS (1998) *A new cultural framework*. London: Department for Culture, Media and Sports.

EMM (2010) *Der Verein*. URL: http://www.metropolregion-muenchen.eu/de/der-verein/ emm-ev.html (Accessed 9 February 2010).

Florida, R. (2002) *The rise of the creative class*. New York: Basis Books.

Florida, R. (2005) *The flight of the creative class - the new global competition for talent*. New York: Harper Business.

Fox Gotham, K. (2000) Growth machine up-links: Urban renewal and the rise and fall of a pro-growth coalition in a US city. *Critical Sociology,* 26 (3): 268-300.

Gissendanner, S. (2003) Methodology problems in urban governance studies. Draft (later published in *Environment and Planning C: Government and Policy,* 21 (5): 663-685).

Gutachtergruppe 'Zukunft Bayern 2020' (2007) *'Zukunft Bayern 2020' Nachhaltige Politik für Kinder, Bildung und Arbeit – Megatrends und ihre bessere Nutzung durch Wirtschaft und Wissenschaft*. München. URL: http://www.bayern.de/Anlage296836 /ZukunftBayern2020-Inhaltsverzeichnis.pdf (Accessed 9 February 2010).

Hall, P. (2004) Creativity, culture, knowledge and the city. *Built Environment*, 30 (3): 256-258.

Haas, H.-D. and M. Wallisch (2008) Der Wandel des Münchener Flughafens zur Airport-City: Entwicklungsdeterminanten und raumwirtschaftliche Ausstrahlungseffekte. *Geographische Rundschau*, 60: 32-38.

Hafner, S. and M. Miosga (2001) *INTERACT Munich´s Case Study, Messestadt Riem*, *Trade Fair City*. Munich: Department of Geography, Technical University of Munich.

Hafner, S., M. Schier and A. von Streit (2005) *München – Stadt des Wissens*. Issue number 186, LH München (eds.). München.

Hafner, S. and A. von Streit (2007) *München - Standortfaktor Kreativität*. Veröffentlichungen des Referats für Arbeit und Wirtschaft, 217. München: Referat für Arbeit und Wirtschaft.

Hafner, S., M. Miosga, K. Siekermann amd A. von Streit (2007) *Knowledge and creativity at work in the Munich region. Pathways to creative and knowledge-based regions*. ACRE report 2.7. Amsterdam: Amsterdam institute for Metropolitan and International Development Studies (AMIDSt).

Hafner, S., G. Heinritz, M. Miosga and A. von Streit (2008) *Requirements and demands of Munich's creative knowledge workers. Understanding the attractiveness of the metropolitan region for creative knowledge workers*. ACRE report 5.7. Amsterdam: Amsterdam institute for Metropolitan and International Development Studies (AMIDSt).

Imbroscio, D.L. (1998) Reformulating urban regime theory: The division of labor between state and market reconsidered. *Journal of Urban Affairs,* 20 (3): 233-248.

INSM (2009) *Großstadtvergleich - Deutsche Großstädte im Vergleich*. Studie der IW Consult GmbH im Auftrag der Initiative Neue Soziale Marktwirtschaft (INSM) und der Wirtschaftswoche. Köln: DIW.

Invest in Bavaria (2007) *Invest in Bayern*. URL: http://www.invest-in-bavaria.de (Accessed 14. February 2007).

Kovács, Z., A. Murie, S. Musterd, O. Gritsai and H. Pethe (2007) *Comparing paths of creative knowledge regions*. ACRE report 3. Amsterdam: Amsterdam institute for Metropolitan and International Development Studies (AMIDSt).

Krätke, S. (2007) Metropolisation of the European economic territory as a consequence of increasing specialisation of urban agglomerations in the knowledge economy. *European Planning Studies*, 15 (1): 1-27.

Krätke, S. and P. Taylor (2004) A world geography of global media cities. *European Planning Studies*, 12 (4): 459-478.

Kriesi, H., S. Adam and M. Jochum (2006) Comparative analysis of policy networks in Western Europe. *Journal of European Public Policy*, 13 (3): 341-361.

Lange, B. (2007) *Die Räume der Kreativszenen. Culturepreneurs und ihre Orte in Berlin*. Bielefeld: Transcript Verlag.

Landry, C. (2000) *The creative city: A toolkit for urban innovators*. London: Earthscan.

Laufer, H. and U. Münch (1997) *Das föderative System der Bundesrepublik Deutschland.* München: Bayerische Landeszentrale für politische Bildungsarbeit.

LH München (2002) *München - Stadt des Wissens*. Referat für Arbeit und Wirtschaft. München.

LH München (2003) *Der Medienstandort München.* Landeshauptstadt München, Referat für Arbeit und Wirtschaft. München.

LH München (2006) *Assessment of Messestadt Riem. Sustainable urban development in Munich*. Department of Urban Planning. München.

LH München (2007) *Unser Leitbild*. Referat für Arbeit und Wirtschaft. Landeshauptstadt München. München.

LH München (2009) *Münchner Jahreswirtschaftsbericht 2009. Landeshauptstadt München, Referat für Arbeit und Wirtschaft*. München.

LH München Stadtkämmerei (2010) Haushaltsplan 2009 - Schlussabgleich nach Referaten sortiert http://www.muenchen.de/Rathaus/ska/veroeffentlich/hh_gesamt/ 335051/hh_ referate.html

LH München, Department of Culture and Arts (2010) *Kulturreferat*. http://www.muenchen .de/Rathaus/kult/37585/index.html (Accessed 9 February 2010).

Malanga, S. (2004) The curse of the creative class. *City Journal Winter*, 36-45.

Martin-Brelot, H., M. Grossetti, D. Eckert, O. Gritsai and Z. Kovacs (2010) The spatial mobility of the ‘creative class’: A European perspective *International Journal of Urban and Regional Reasearch* (In Press).

Mayring, P. (2003) *Qualitative Inhaltsanalyse. Grundlagen und Techniken*. Basel: Beltz Verlag.

Metzler, D. and H.-M. Zademach (2003) Münchner Bodenpreise in steilen Höhen. In: G. Heinritz, C.-C. Wiegandt and D. Wiktorin (eds), *Der München Atlas*, pp.48-49. Italien: Emons.

Mikkelsen, M. (2006) Policy networks analysis as a strategic tool for the voluntary sector. *Policy Studies*, 27 (1): 17-26.

Mossig, I. (2004) *Standortstruktur und Produktionssystem in den Medienclustern München und Köln. Das Beispiel der Produktionen von TV-Sendungen*. Gießen: Institut für Geographie (=Studien zur Wirtschaftsgeographie).

Muench, U. (2008) Bundesstaatliche Verfassungsprinzipien seit 1949. In: *Informationen zur politischen Bildung*, no. 298. URL: http://www.bpb.de/publikationen/5ZYRNW,0, Bundesstaatliche_Verfassungsprinzipien_seit_1949.html. Accessed 08 February 2010.

Musterd, S., M. Bontje, C. Chapain, Z. Kovács and A. Murie (2007) *Accommodating creative knowledge. A literature review from a European perspective*. ACRE report 1. Amsterdam: AMIDSt, University of Amsterdam.

OECD (2009) *Demography and population. Migration statistics*. http://stats.oecd.org/ WBOS/index.aspx. Accessed 27. March 2009.

Ossenbrügge, J. and C. Zeller (2002) The biotech region Munich and the spatial organization of its networks. In: L. Schätzl and J. Diez Revilla (eds), *Technological Change and Regional Development in Europe*, pp. 233-249. Berlin: Physica-Verlag.

Peck, J. (2005) Struggling with the creative class. *International Journal of Urban and Regional Research*, 29 (4): 740-770.

Peterson, J. (2003) *Policy networks*. Political Science Series. Vienna: Institute for Advanced Studies. URL: http://www.ihs.ac.at/publications/pol/pw_90.pdf (Accessed 9 February 2010).

Peterson, J. and E. Bomberg (1999) *Decision-making in the European Union*. Basingstoke and New York: Palgrave.

Regionaler Planungsverband München (2006) *Die Region München*. URL: http://www.region-muenchen.com/region/region.htm (Accessed 15. December 2006).

Rhodes, R.A.W. (1990) Policy networks: A British perspective. *Journal of Theoretical Politics*, 2 (2): 293-317.

Rhodes, R.A.W. (1997) *Understanding governance*. Buckingham: Open University Press.

Scott, A. (2006) Creative cities: Conceptual issues and policy questions. *Urban Affairs*, 28 (1): 1-17.

Software Forum Bayern (2003) *Software Standort Bayern.* Software Forum Bayern e.V. - Ein Bericht des Wissenschaftlich-Technischen Beirats der Bayerischen Staatsregierung. München.

Software Initiative Bayern (2006) *Focus of Bavaria's Software Initiative*. München.

Stenke, G. (2002) *Großunternehmen und innovative Milieus – Das Beispiel Siemens/München*. Köln: Selbstverlag im Wirtschafts- und Sozialgeographischen Institut der Universität zu Köln.

Stenke, G. (2008) Innovationsregion München. Das Geheimnis ihres Erfolges. *Geographische Rundschau*, 60 (10): 24-30.

Stoker, G. (1995) Regime theory and urban politics. In: D. Judge, G. Stoker and H. Wolman (eds), *Theories of urban politics*. Thousand Oaks, CA, Sage.

Stone, C.N. (1989) *Regime politics: Governing Atlanta, 1946-1988*. Lawrence: University Press of Kansas.

Stone, C.N. (1993) Urban regimes and the capacity to govern. *Journal of Urban Affairs*, 15 (1): 1-28.

Storper, M. and A.J. Scott (2009) Rethinking human capital, creativity and urban growth. *Journal of Economic Geography*, 9: 147-167.

Streit, A. von, M. Axtner, S. Buchwieser, S. Hafner, G. Heinritz and M. Miosga (2008) *Requirements and demands of Munich's creative knowledge enterprises. The managers' view*. ACRE report WP6.7. Amsterdam: Amsterdam institute for Metropolitan and International Development Studies (AMIDSt).

Streit, A. von, M. Popp, S. Hafner, G. Heinritz and M. Miosga (2009) *Munich: An attractive place to live and work? The view of transnational migrants.* ACRE report WP7.7. Amsterdam: Amsterdam institute for Metropolitan and International Development Studies (AMIDSt).

Streit, A. von (2010) *Entgrenzter Alltag – Arbeiten ohne Grenzen? Das Internet und die raum-zeitlichen Organisationsstrategien von Wissensarbeitern.* Reihe Sozialtheorie. Bielefeld: transcript.

Streit, A. von, M. Bontje and E. del'Agnese (2010) Stable trajectories towards the creative knowledge city? Amsterdam, Munich and Milan. In: S. Musterd and A. Murie (eds), *Making Competitive Cities.* (forthcoming)

Thanki, A. and S. Jefferys (2007) Who are the fairest? Ethnic segmentation in London's media production. *Work organisation, labour & globalisation*, 1 (1): 108-118.

Wilson, D. and R. Keil (2008) Commentary: The real creative class. *Social and Cultural Geography*, 9 (8): 842-847.

# APPENDIX

## Classification of economic activities

**Table 1 - Creative knowledge sectors – NACE classification**

| Sector | NACE codes |
|---|---|
| 1. Creative industries | |
| Advertising | 744 Advertising |
| Architecture | 742 Architectural and engineering activities and related technical consultancy |
| Arts/antiques trade | Portions of the following sectors:<br>524 Other retail sale of new goods in specialised stores<br>525 Retail sales of second-hand goods in store |
| Crafts | No codes |
| Design | No codes |
| Designer fashion | Portion of the following sectors:<br>17 Manufacture of textiles<br>171 Preparation and spinning of textile fibres<br>172 Textile weaving<br>173 Finishing of textiles<br>174 Manufacture of made-up textile articles, except apparel<br>175 Manufacture of other textiles<br>176 Manufacture of knitted and crocheted fabrics<br>177 Manufacture of knitted and crocheted articles<br>18 Manufacture of wearing apparel; dressing and dyeing of fur<br>181 Manufacture of leather clothes<br>182 Manufacture of other wearing apparel and accessories<br>183 Dressing and dyeing of fur; manufacture of articles of fur<br>19 Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear<br>191 Tanning and dressing of leather<br>192 Manufacture of luggage, handbags and the like, saddlery and harness<br>193 Manufacture of footwear |
| Video, film, music and photography | 223 Reproduction of recorded media<br>921 Motion pictures and video activities<br>748 Miscellaneous business activities (*part of it) |
| Music and the visual and performing arts | Portions of the following sectors:<br>923 Other entertainment activities<br>927 Other recreational activities |
| Publishing | 221 Publishing<br>924 News agency activities |
| Computer games, software, electronic publishing | 722 Software consultancy and supply |
| Radio and TV | 922 Radio and television activities |

| | |
|---|---|
| 2. Information Communication Technology (adapted from OECD definition) | ICT manufacturing:<br>300 Manufacture of office machinery and computers<br>313 Manufacture of insulated wire and cable<br>321 Manufacture of electronic valves and tubes and other electronic components<br>322 Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy<br>323 Manufacture of television and radio receivers, sound or video recording or reproducing apparatus and associated goods<br>332 Manufacture of instruments and appliances for measuring, checking, testing, navigating and other purposes except industrial process control equipment<br>333 Manufacture of industrial process equipment<br><br>ICT services<br>642 Telecommunications<br>72 Computer related activities (minus 722 Software)<br>72.1: hardware consultancy;<br>72.3: data processing;<br>72.4: database activities;<br>72.5: maintenance and repair of office, accounting and computing machinery;<br>72.6: other computer related activities; |
| 3. Finances | J. Financial intermediation<br>65 Financial intermediation, except insurance and pension funding<br>66 Insurance and pension funding except compulsory social security<br>67 Activities auxiliary to financial intermediation |
| 4. Law and other business services | 741 Legal, accounting, book-keeping and auditing activities; tax consultancy, market research and public opinion polling, business and management consultancy.<br>743 Technical testing and analysis<br>745 Labour recruitment and provision of personnel<br>746 Investigation and security activities |
| 5. R&D and higher education | 73 Research and development<br>731 Research and experimental development on natural sciences and engineering<br>732 Research and experimental development on social sciences and humanities<br>803 Higher education |