

Anna BIALK-WOLF, Harald PECHLANER, Christian NORDHORN\*  
Katholische Universität Eichstätt-Ingolstadt

# The role of culture in building regional innovation systems and its impact on business tourism – The case of the Nuremberg Metropolitan Region

*The Times They Are a-Changin'* [Bob Dylan 1964]

**Abstract:** In recent years increased attention has been paid to the role of culture and creativity as significant factors influencing economic development. Another crucial phenomenon shaping the economy is the great importance of regionalism. Culture, creativity and regionalism seem to facilitate coping with the troubles of our times in a better way.

This paper aims to contribute to a better understanding of the ways culture and creativity influence the building of a regional innovation system. A review of crucial literature considering the regional innovation system and the role of culture and creativity in the economic development is provided. The conclusion from qualitative research suggests that the significance of creativity in the Nuremberg Metropolitan Region is widely acknowledged and is an attempt to exploit this finding.

**Keywords:** regional innovation systems, metropolitan region, culture, creativity, Nuremberg.  
**JEL codes:** O31, P48, R11.

## Introduction

The development of national economies and societies has been strongly influenced by the process of globalization in recent years and will be for years to come – the impact on people is increasing across the world. On the one hand globalization led to productivity growth and to the improvement of living standards in broad sections of the population. On the other hand fears of market uncertainties are growing in an increasingly apparently smaller, faster moving and more communicative world.

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\* Corresponding author: christian.nordhorn@ku-eichstaett.de.

During the course of globalization something remarkable has happened to the region: it lost its importance through new forms of communication, global alignment, etc. and at the same time became of enormous significance. Regionalization and localization are a response to the rise in uncertainty due to the transformation processes of globalization. There is an increasing need to be regionally rooted and to consume regionally produced products. This form of regionalization creates reliability and a form of stability for the inhabitants.

Continuous product and process innovations are prerequisites for the stability of regions. Prolonged collaboration and interaction between firms and the actors around them lead to innovations and thus also to stability. Regional Innovation Systems (RIS) are a concomitant phenomenon of the globalization and regionalisation processes. However, in order to remain innovative, instability and disorder are needed as Joseph Schumpeter mentioned in 1942. A significant contribution to uncertainty represents culture. Culture generates instability and leads therefore to uncertainty but exactly this uncertainty is important as an innovation factor.

This poses the central question for this paper: “To what extent do culture and creativity contribute to the building of regional innovation systems?” Because of the huge complexity of the examined problem a qualitative research approach was chosen. The case study research was conducted in the Nuremberg Metropolitan Region (NMR).

The paper is structured as follows: Having provided the introduction to the subject of the research problem, a literature review describing the significant issue of regional innovation systems as well as the interplay between culture and regional development is presented. This section concludes with a conceptual framework for further considerations. Thereafter, the NMR is introduced as an example of an area having features to be investigated in the context of innovation, culture and creativity. Following on a brief characteristic of applied methodological tools and findings from the empirical investigation is described. Finally, the paper closes with a conclusion, limitations and a proposal for further research.

## **1. Theoretical framework**

Derived from the concept of the national innovation system introduced by C. Freeman in 1987 and subsequently developed on the base of the regional science, industrial district, innovative milieu, cluster, and learning regions theory, the model of RIS can be regarded as a response to the currently observed and above mentioned transformations and the focus on regionalization. Because of the growing role of innovations as a source of competitive advantage and the need for new policies before consideration of regional inequalities and divergences [Asheim, Smith & Dughton 2011], the interest in

RIS rose. It should be noted that the increasing importance of place-specific and non-economic factors also influenced the regional development [Asheim & Isaksen 2002].

A growing amount of literature and research on RIS over the last decades can be observed. Albeit that this field still remains relatively new with an opportunity to research new issues.

The central assumption, which underscores the RIS approach, is the notion of interaction between related innovation organizations such as enterprises, universities, research institutions and the institutional environment. The basic idea behind the RIS approach is the “economic and social interactions between agents, spanning the public and private sectors to engender and diffuse innovation within regions embedded in wider national and global systems” [Asheim, Smith & Dughton 2011]. Innovation is seen as a process involving diversity factors that are external and internal to firms, whereas the interactions play the decisive role [Doloreux 2002]. The core of RIS consists of “interacting knowledge generation and exploitation sub-systems linked to global, national and other regional systems that may stretch across several sectors in the regional economy” [Asheim & Coenen 2005, p. 1174]

In general, there are four basic elements of RIS. The first element are the firms which provide the economic base and should be considered as learning organizations. The second element consists of institutions such as industrial research and development, universities or governments, which have an impact on creation, development, transfer and utilization of technologies. The third is knowledge infrastructure which identifies organizations playing a crucial role by means of producing, financing, coordinating, supervising and assessing the innovation efforts. The fourth element is called “policy-oriented regional innovation” and improves interactions between the three other core elements of RIS. Other important functions of the RIS concept are interactive learning, knowledge production, proximity and social embeddedness [Doloreux 2002].

The great advantage of the RIS approach as an analytical framework lies in the fact that networks play a central role that allows numerous actors and issues to be combined. Additional benefits are the potential of development and the dynamic and holistic character of the concept. These advantages can be confirmed by recently published research demonstrating the development of this issue [Cooke 2005] as the concept of Cross Border Innovation System [Weidenfeld 2013] or a discussion of regional open innovation [Tödling, Van Reine & Dörhöfer 2011]. Also important is the awareness that innovation is an interactive process in which both science-based and experienced-based learning take place and the final result cannot be predicted in advance with any certainty. Further advantages lie in the appreciation that innovation not only results from R&D activities and science but also from non-market relationships [Lundvall et al. 2002]. Another important aspect of RIS is, as the name suggests, the regional character and the significance of this for the economic development [Doloreux & Parto 2005] as well as from broadly discussed regional success

stories [Asheim & Coenen 2005]. Moreover, the RIS approach enables us to take into consideration differences between various regions by investigating the character of innovational behaviour taking place there [Tödling & Trippl 2005]. Cooke [1997] emphasizes that RIS is especially interesting because it can be characterised as systemic cooperative, trust-dependent and associational. The concept is particularly positive, because it recognises the importance of a learning and social milieu in social development and economic growth [Doloreux & Parto 2005, p. 138].

Although there are many types of RIS [Asheim & Isaksen 2002; Doloreux 2002; Asheim 2007; Pechlaner et al. 2012] the common ground is the central role of innovations. These are carried out by means of a network of diverse actors buttressed by an institutional framework [Asheim 2007]. Without dealing with the numerous facets of the innovation, only the most important topics for further consideration are highlighted at this point. It is generally conceded that innovations are the crucial factor in maintaining and achieving competitiveness in a globalizing economy. The fundamental question in this context is “What are the key factors influencing innovativeness?”. The research on this topic depicts the variety of aspects made up of external ones (related to the market, customer and incentives for innovativeness) and internal ones (connected with employees, knowledge, strategy and entrepreneur) [Zehrer, Pechlaner & Reuter 2013]. As a consequence of the fact that some places possess a greater ability to create innovations and are characterized by high innovativeness among the firms located there [Simmie 2002; Gabe & Abel 2011] it should be acknowledged that several location specific factors influencing innovation exist. Florida [2007] describes this phenomenon with the term “spiky world”, which underlines the concentration of innovation activity in a limited number of cities. On looking at the patent statistics and the residence of the most cited scientists in their relative field, we observe a huge focus on only a few places in the world.

Florida derives the concentration of innovation from the existence of the “creative class”, which is characterised by an engagement “in work whose function is to create meaningful new forms” [Florida 2003, p. 8]. This class consists of two groups. The first one is the “super-creative core”, which includes scientists and engineers, university professors, poets and novelists, artists, entertainers, actors, designers, and architects, as well as the “thought leadership” of modern society: non-fiction writers, editors, cultural figures, think-tank researchers, analysts, and other opinion-makers. The second group, which is called “creative professionals”, consists of people who work in a wide range of knowledge-based occupations in high-tech sectors, financial services, the legal and health-care professions and business management. These individuals are crucial to the innovativeness of companies, because they generate new knowledge and new ideas. Florida argues that economic growth occurs due to the presence of tolerance, diversity, and openness [Florida 2007, p. 38.]. Florida’s seminal investigations highlighted interest on creativity being the vital force of regional development [Lee, Florida & Zoltan 2004; McGranahan & Wojan 2007;

Donegan et. al 2008; Boschma & Fritsch 2009; Rutten & Gelissen 2008; Jureniene 2010; Mellander, Pettersson & Öner 2011; Drejerska 2012].

Besides creativity culture also belongs to the shaping elements of a region. Culture can be defined as a “value system, which is shared by members of a local or regional area” [Cooke, Uranga & Etxebarria 1997, p. 488] and can be measured by indicators of individual values and beliefs, such as trust and respect for others and confidence in the link between individual effort and economic success [Tabellini 2010, p. 679], whereas trust-building is especially important in regional innovation systems [Cooke, Uranga & Etxebarria 1997, p. 489]. Regional culture can be seen as a set of traditions, common values, understandings, conventions and a common language [Cooke & Rehfeld 2011].

Another approach underlines that culture can be seen “as a touristic resource [which] can be defined cumulatively as points of attraction being composed of artefacts and representations from the fields of history, folklore, religion and art, in the form of historical buildings, parks and gardens, museums, theatres, music, dance, festivals, pageants and other events that induce potential guests to visit a destination” [Saretzki & Furnell 2013, p. 64].

It is also worth emphasizing that the quality of the cultural offers belong to the “soft location factors”, which are hard to measure and quantify [Pechlaner, Innerhofer & Bachinger 2010].

From the company’s point of view, culture is seen “as the sets of social conventions, embracing behavioural norms, standards, customs and the ‘rules of the game’ that underlie social interactions within the firm. These conventions are in turn linked to a deeper set of underlying core values (also called philosophies or ideologies) that provide more general guidance in shaping behavior patterns within the firm” [James 2005, p. 1199]. Subsequently regional culture consists of “systems of collective beliefs, ideologies, understandings and conventions being imported into the cultural cores of firms, and hence shaping firms’ systems of organizational control, rule systems and decision making processes “ [James 2005, p. 1199].

Leaving the question of a definition of culture aside, it can be summarized that culture is a broad phenomenon which is directly connected with creativity. Both culture and creativity are recognized as “factors attracting population and as a dynamic part of the economy with strong growth” [Mellander, Pettersson & Öner 2011, p. 246]. The dual role of the culture is highlighted by Herrero et al. [2002] on one hand as a “collective remembrance and society identification” and on the other as a “source of richness” that “generates economic activities”.

One can consider culture and creativity as a “melting pot” including intangible elements such as values, beliefs and attitudes as well as the tangible part of it where the cultural offers plays an important role.

The contribution of culture to the economic growth through generating employment, income, production as well as inducing effects in related sectors [Herrero et al.

2002; Saayman & Saayman 2006] is well recognized. But on the other side culture can be also treated as a “kind of ‘dustbin category’ in regional studies for anything one cannot explain” [James 2005, p. 1199] or a “magic substitute for all the lost factories” [Hall 2000, p. 640]. Nevertheless, we observe a growing body of work that emphasizes the importance of culture as a factor influencing economic development, entrepreneurship or innovativeness [Santagata 2002; Beugelsdijk & Noorderhaven 2004; James 2005; Herrero et al. 2002; Aoyama 2009; Tabellini 2010; Heley, Gardner & Watkin 2011].

The regional cultural context shapes innovations [James 2005, p. 1198]. To the characteristics of regional culture belong trust, openness and risk-taking which in turn influences also the nature of networks [Tödling, Van Reine & Dörhöfer 2011]. Prior researches also demonstrated that progress in science and technology profits from the development of the cultural and artistic world [Oliveira & Silva 2011]. Peculiarity of the region, expressed in its culture and creativity set the context for innovativeness. The exploration of the relationship between innovation and creativity can be approached using numerous methods. The link between innovation and creativity on the national level has been demonstrated [Lorenz & Lundvall 2010]. Moreover in some research fields these terms are used interchangeably [Kahl et al. 2010]. Creativity is thought to be a necessary antecedent to innovation as well as a part of the innovation process [Williams & McGuire 2010]. Creativity can also be considered as the base for culture which plays a role of inspiration for creative people [Tretter, Pechlaner & Märk 2013]. Culture affects the way people consider risk, opportunities, rewards and therefore shapes the character of national innovation [Williams & McGuire 2010]. The impact of culture and cultural networks on innovation also has great importance [Lange, Pechlaner & Abfalter 2009].

The increasing complexity of the innovation process observed in recent years results from numerous sources of knowledge as well as from a growing interdependence among actors [Asheim 2007]. As to some extend the innovation process is uncontrollable [Tödling, Van Reine & Dörhöfer 2011] it can be assumed that several factors are responsible for this and that they also have an impact on the development of the innovation process. Culture is seen as uncontrollable also, possessing the potential of disruption. The common ground of innovations and culture also lies in their uncertainties. These can be considered in three dimensions: market/demand turbulence, technological turbulence and competitive intensity [Uzkurt et al. 2012]. It is demonstrated that the first two dimensions have a positive effect on innovativeness. Regarding the fact that culture can be seen as a factor leading to uncertainty it can also be hypothesized that culture can influence innovativeness.

While the innovation process is to a certain degree unpredictable, it can be reckoned that disruption, destruction, irritation, transgression, confusion and every form of “breakup” are responsible for this. These terms are in turn often associated with creativity and culture. One of these phenomena might possibly be the cause of both innovation and creativity.

Another possible way of dealing with the subject of innovation and culture is courage which is an inherent part of creativity in two areas. Courage is required to be creative and for the implementation of innovations [Glüher 2009, p. 56]. Courage, denoted as “overcoming of obstacles through hope” [Harris 2003, p. 375] is only rarely the main topic in innovation research but the need for more of it is recognised and often mentioned. [Harris 2003]. Subsequently courage can also be perceived as one of the important catalysts of innovation and creativity and part of culture.

As mentioned above, the access to innovation through culture and creativity can be diverse. Summarising, culture and creativity can be thought of as facilitator in the innovation process [Tödling, Van Reine & Dörhöfer 2011]. While the process of innovation involves many actors and depends on numerous factors, we investigated the role of culture with regard to building regional innovation systems.

Nevertheless, culture and creativity are important for the development of a region, which possesses three different functions [Scherere 2010, pp. 286–287; Bieger et al. 2006, p. 19]. First of all, regions are destinations which means that they are “target areas for potential guests, which perceive a geographic area for themselves in terms of content (product) and location (region), necessary to satisfy their needs and demands during the stay” [Bieger 2002, p. 56]. Secondly, they are spaces to live and therefore should provide good living conditions. Thirdly, they are locations for companies which requires the necessity of having special features. Several studies depict a strong interaction between these functions [Mellander, Florida & Stolarick 2011; Andereck & Nyaupane 2011]. A region as a company-location must attract skilled workers which can be achieved by good economic conditions and a positive social environment. Factors such as beauty, charm and image are also important, which in turn is linked to culture.

The importance of integrating tourism and culture is recognized and explored in a networking context [Arnaboldi & Spiller 2011]. It is also taken up in studies

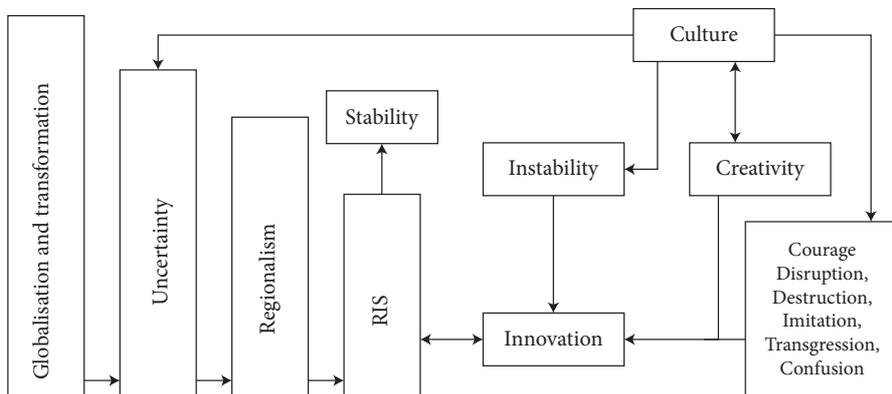


Figure 1. Conceptual framework

of RIS [Cooke & Rehfeld 2011]. But the involvement of tourism and culture in the RIS approach remains to be researched.

Accordingly, the aim of the further empirical considerations is to determine to what extent culture influences interactions amongst the diverse actors connected with tourism. We have to investigate the network and the cooperation in the region to ascertain the role of culture in building regional innovation systems. To limit our research we concentrated on business tourism.

The literature review shows that a large number of different aspects must be considered when analyzing the subject of this paper. The authors propose a conceptual framework [in Figure 1] to provide a basis for further considerations.

## **2. Empirical investigation**

### ***2.1. The Nuremberg Metropolitan Region***

The NMR is one of eleven metropolitan regions of Germany and was officially created in 2005. Its main cities are Nuremberg, Erlangen and Fuerth. The NMR covers, with the surrounding area, 21 349 square kilometers – approximately one third of Bavaria. It consists of 22 administrative districts and 11 self-governing towns.

In 2010 the NMR was estimated to have 3.45 million residents (a density of 161 persons/square kilometer), whereas 27 million people live within a radius of 200 km. Foreigners make up a large part of the population but the portion varies from 13–17% in cities to less than 5% in the rural areas [Europäische 2012, p. 17].

As far as the regional economy is concerned the NMR is characterised by a dominance of medium-size companies with numerous “hidden champions” and high spatial concentration. The region is also home to a number of global players such as Siemens, Schaeffler, Adidas and Puma. The 160,000 companies which are located in the NMR generated about 106 billion euros of gross domestic product in 2009. Over 60% of the employees within the NMR work in the service sector but simultaneously the NMR has the second highest percentage of employees in the industrial and manufacturing industries amongst all metropolitan regions in Germany. In June 2012 75,291 persons were unemployed and the unemployment rate decreased from 7,8 percent in June 2006 to 4 percent. This is still above the average rate for Bavaria.

Excellent educational facilities of 18 universities and colleges as well as 35 research institutes (such as Max-Planck or Fraunhofer) contribute to the innovative potential of the region. It has 72,000 students (2010/2011) which is an increase of 15 % during the last 5 years. The region is also considered highly innovative for a variety of reasons such as the presence of the Medical Valley which is an international leader in medical technology and medicine.

The NMR is also served by an extensive network of highways. Several important road connections pass through this area. The airport in Nuremberg is one of the 10 largest in Germany. The Rhine-Main-Danube Canal also contributes to accessibility.

Tourism in the region annually welcomes almost 6 million guests which results in more than thirteen million overnight stays. The most important highlights are Nuremberg, Bamberg and Bayreuth. There are several major annual festivals such as the “Richard Wagner” in Bayreuth or the “International Organ Week-Musica Sacra”. The region is the site of the Germanic National Museum which is the largest museum in Germany dedicated to the history of culture. Other characteristics are a broad variety of breweries, Franconian wine and the famous Nuremberg sausages.

The important elements of tourism in the NMR include business tourism which is strong not only due to the many companies but also because of the trade fairs. The Nuremberg Fair is one of the 15 largest exhibition companies in the world and amongst the top ten in Germany. In recent years the Nuremberg Fair has experienced a significant rise in revenue, profit, booked space and number of exhibitors. It is home to many internationally acclaimed exhibitions such as the International Toy Fair. Another essential segment of business tourism are conventions and meetings.

The slogan of the NMR is “A home for creative minds”, which highlights the significant and acknowledged role of creativity in the development of this region. Just during the past few years a rapidly increasing number of cooperation initiatives could be observed. “An alliance in support of qualified professionals” or “The most family-friendly economic region” exemplify two of these initiatives [Europäische 2012].

## ***2.2. Data collection and analysis***

To address the question of the extent to which culture and creativity contribute to the building of the RIS in the NMR seven interviews have been conducted in August 2013. The interview partners had been selected because of their leading position in different fields pivotal for the aim of this study. These sectors are: research institute (interview 1), culture (2), tourism companies (3 and 4), tourism association (5), local administration – marketing (6), local administration – creativity and cooperation (7). The approximately half-hour long interviews have been conducted in German and have been audio taped and transcribed. The interview questionnaires have been semi-structured and have covered the following topics: general characteristics of the NMR, type of existing cooperations, role of culture and creativity, problems of tourism development.

For the analysis of the qualitative interviews the method GABEK® (GAnzheitliche BEwältigung sprachlich erfasster Komplexität/Holistic cope of linguistically recognized complexity) is suitable, which was developed by Joseph Zelger at the Institute of Philosophy of the University of Innsbruck. The method is based on the conversation theory of Gordon Pask and the theory of perception shapes of Carl Stumpf [Raich 2008].

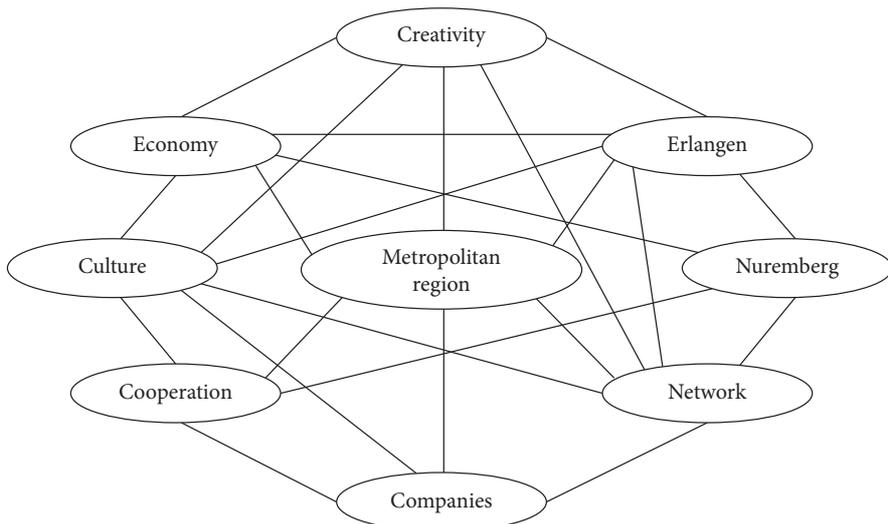
„The method enables the visualization of underlying feelings, values, attitudes, and their mutual relations in social organizations” [Abfalter 2010, p. 322, translated by authors].

The result of qualitative interviews are “unstructured normal, respectively colloquial language texts, in which the respondents reflect their thoughts and feelings in their own way” [Abfalter 2010, p. 322, translated by authors]. With the help of GABEK® the interviews can be structured and evaluated. Since the working and procedure of GABEK® is clearly defined, the method attains a high reliability. Although the subjective influence cannot be completely excluded in comparison to other qualitative methods it is greatly reduced.

### 2.3. Empirical findings

The empirical research has depicted some interesting characteristics, relationships and problems observed in the NMR. Figure 2 shows a net graph, which displays the perceived important issues appertaining to the subject of the Metropolitan Region.

The NMR is perceived as a diversified region with two main centres, Nuremberg and Erlangen. This variety emerges from the existence of both urban and rural elements in the region. We can also observe that culture is important for all these issues and is directly related to creativity. Other perceived characteristics of the region are an optimal size and a “spatial distribution”. One of the interviewees specified it in the following statement: “We have all the advantages of the metropolis without



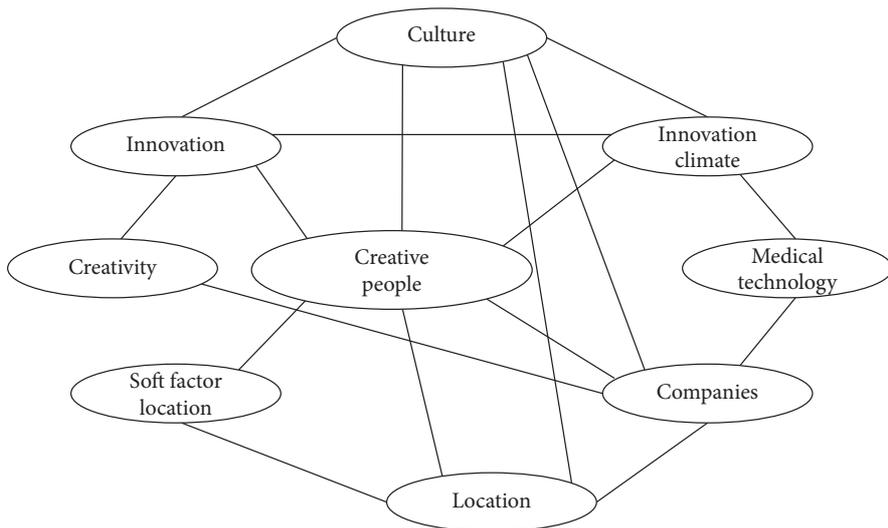
**Figure 2: Network Graphic „Metropolitan Region”**  
Source: own illustration, created with GABEK

having the specific disadvantages” [Interview 2, p. 1]. The central role of Nuremberg in the perception sometimes seems to be a problem because the character of this city is shaped by the neighbouring cities nearby. Further characteristics of the metropolis are its good price-quality ratio as well as a high quality of life. “You have a great mosaic, where everything is available. (...) You have a wonderful offer in all fields: culture, innovation, technology, skills. This is what constitutes the NMR: diversity” [Interview 5, p. 1] and furthermore: “It is the ‘perfect’ size of a city – you can go everywhere on foot, here it is just wonderful” [Interview 5, p. 1].

Cooperation is of essential importance in the NMR. It is acknowledged by all the interviewed persons, that cooperation is the only way to make progress. Good cooperation means to have a “win-win” situation, profitability for all, equality, cooperation on a level playing field. A good cooperation involves representatives of research, universities and companies. The following quotation from one of the interviews underlines this statement: “For cooperation the most important issues are: openness, clarity, common goal. If you have a common goal, you will work together” [Interview 5, p.1].

After demonstrating the illustrations of the NMR the question regarding the role of culture and creativity in this area arises. The following figure 3 shows the relationship between the key variables mentioned in the context of “creative people”.

The results confirm the crucial role of creativity for innovation which is clarified in the following quotation: “Creativity and industry support each other. Creativity brings industry forward” [Interview 7, p. 2]. Besides creativity culture also plays a vi-



**Figure 3. Network Graphic „creative people”**  
Source: own illustration, created with GABEK

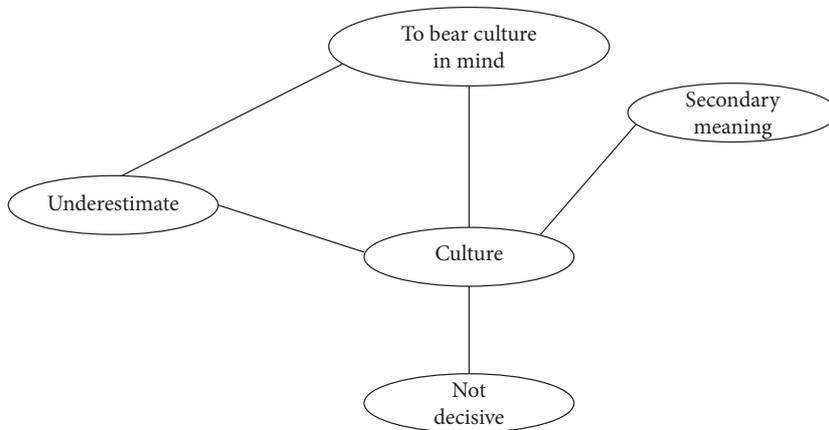
tal role in this interaction. While on the one hand “culture and creative economy” have often been mentioned, on the other hand it has also been stated, that “creativity is not the same as culture, but you cannot define creativity without defining culture“ [Interview 2, p. 1].

As far as the innovation character of the region is concerned one must point out that the innovation potential is mostly associated with the existence of the medical valley.

Figure 3 illustrates that creativity not only affects the innovation potential of a region but that it is also an essential location factor for companies. This is in line with Florida’s point of view [Florida 2007].

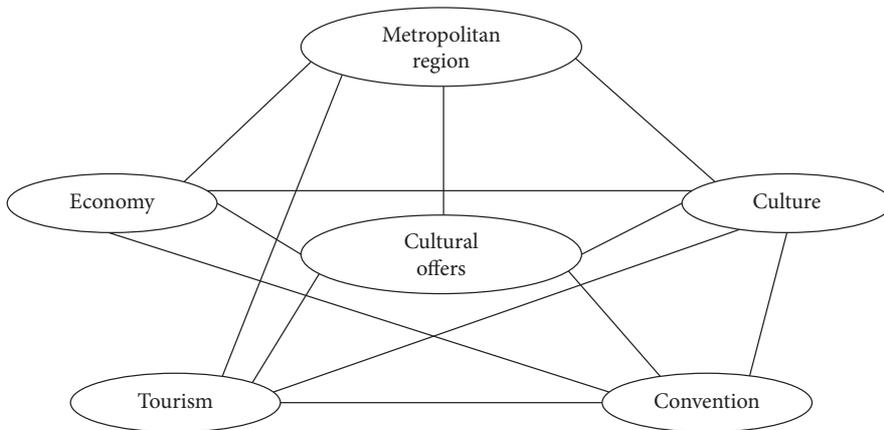
To summarise the findings derived from figure 3 it can be stated that culture and creativity influence the innovation potential of a region. The following statement strengthens this thought: “I think that culture has an impact on the people in the region, they live, work, (...). People are affected by the region in the way how they think, work, talk (...)” [Interview 4, p. 2].

The following figure 4 depicts associations with culture.



**Figure 4. Network Graphic „culture“**  
Source: own illustration, created with GABEK

The figure above reveals that the role of culture is ambivalent. On the one hand it is recognised that culture is not the decisive factor for development, but simultaneously it is appreciated that the role of culture is greater than commonly perceived. This can be clarified with the following statement: “For a destination the cultural image is very important. Without culture it does not work, but it is not the decisive factor. The competency of the region is crucial. You cannot underestimate culture” [Interview 5, p. 3].



**Figure 5. Network Graphic „cultural offers”**

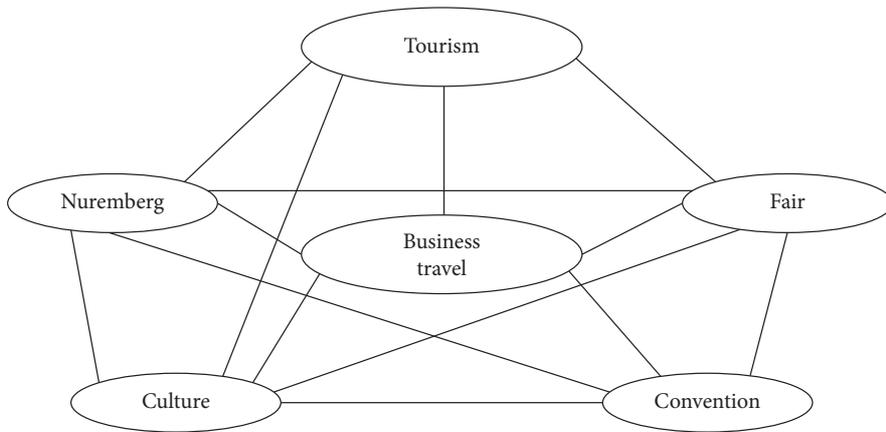
Source: own illustration, created with GABEK

One of the visible parts of culture is the cultural offer. In the following figure 5 we can see the important topics associated with this.

As predicted the “cultural offers” are an important factor not only for culture: There are also obvious connections with the economy and tourism. The next significant topic is conventions which is strongly associated with culture, economy and tourism. It must be underlined that cultural offers are relatively easy to describe in their relation to other elements of regional culture. It is important for the convention industry.

The central question in our research concerns the problem of business tourism and its impact on innovation. The following figure 6 illustrates the causal relationships based on the key-term “business travel”.

The network graphic indicates the importance of culture with regard to business travel. Both congress and trade fair tourism can profit from a rich regional culture. It is also important to point out that business tourism can also have an immense impact on leisure tourism. Since the city “convinces just at second glance” [Interview 5, p. 1], business tourism can be seen as a development facilitator in the NMR. Before coming to the NMR business people can discover how many possibilities this location has to offer. This induces investment in the region, spending a holiday with the family or even creating an impulse to move here. So the positive perception of this place experienced during the trip can spread and hereby indirectly amplify the innovation potential of the NMR. This can be seen in the following statements: „When we get [private] tourists to Nuremberg then they can see that we have a trade fair, a convention centre, a lot of industry – so they might want to do business here. If on the other hand a business tourist experiences a wonderful



**Figure 6. Network Graphic “business travel”**

Source: own illustration, created with GABEK

cultural highlight there is a good chance that he will return later as a private tourist” [Interview 3, p. 4].

Based upon these thoughts we can state that business tourism can contribute positively to the innovativeness of a region and influence the awareness of the importance of culture which in turn has also an impact on innovativeness. But culture has only a moderating role.

This finding is in line with previous research showing that culture is an important factor influencing the image of a destination [Joppe, Martin & Waalen 2001; Chen & Phou 2013]. But simultaneously it is not the decisive criterion influencing the choice of a convention location, whereas the image is essential [Chen 2006]. At first glance one cannot recognise the real value of culture. The following quotation illustrates this thought: „The economy and the well paid people influence culture positively (...) it also works in the opposite way” [Interview 4, p. 3].

Proximity is of crucial importance for the NMR which has been mentioned by many interview partners. Many researchers also underlined that proximity has a pivotal influence on the existence of the RIS and that it refers to the shared regional culture [f.e. Doloreux 2002, p. 250].

Concluding the empirical research several problems in the NMR should be highlighted. The first one is connected with its image. The discrepancy between the perception of “what we have” and “what is known about what we have” is broadly acknowledged. The following quotation illustrates this notion: “Self-image and public-image are different. We are strong in several areas, we have innovations. In other sectors certain regions are better or they are said to be better. Perhaps we do not have enough self-confidence to present our topics to the outside world. (...) I think that most people do not value Nuremberg. A lot is going on here (...). But nobody knows about it”

[Interview 5, p. 2]. The problem of the missing openness when talking about success is explained by another interview partner: “It is a mentality problem” [Interview 6, p. 2]. One needs time to discover the advantages of this place. “The place does not attract at first glance, only at a second” [Interview 5, p. 1]. The next statement indicates another problem: “What is missing is the courage to be open and to put aside one’s own perception. (...) I miss courage in the NMR” [Interview 4, p. 4].

## **Conclusions, limitation and proposal for further research**

This study has aimed to shed light on the ways in which culture affects the building of regional innovation systems. Certain elements of our theoretical findings were confirmed by empirical research.

The results outlined above lead to the following conclusion. The role of culture in building the regional innovation system lies in moderating. The NMR possesses great potential but this could and should be better communicated by all actors in the region. Changes in the NMR are positive due to the intensified work on cooperation and network building. The factors influencing the further development of the NMR can be found in culture and creativity. There is a need for better cooperation between different sectors. The NMR should aim to improve its image for inhabitants and to engender a feeling of living in a unique place. Medical technology is of particular interest in the NMR. Culture should be taken into account when trying to understand regional development. The obvious challenge lies in creating conditions conducive to innovation.

Our research has been limited by the small number of samples. The investigation was conducted only in one region. However this location turned out to be a very good example of a place where the potential of culture and creativity has not yet been properly exploited, although there are increasingly efforts to change this, which is underlined in the following statement: “Our goal is to integrate culture and creativity in the companies from other branches” [Interview 7, p. 3]. Image problems and a lack of openness have a common ground in regional culture. We should point out that most of our interview partners have appreciated the positive changes in recent years. This can be explained by an expanding support from the institutional environment and a growing number of network initiatives.

The problem of an exact definition of the term “culture” leads to a further limitation of this study. Culture remains inadequately conceptualized, theorized and empirically verified [James 2005, p. 1213], which in turn influences the validity of the findings and prevents the comparison of the research evidence.

The NMR is an excellent example of a place where the potential of culture and creativity as well as the importance of cooperation are acknowledged. Due to the

fact that most initiatives are relatively new it will be interesting to study future progress in this field.

The idea of looking for “something intangible that permits innovation to proceed in some places but not in others” [James 2005, p. 1198] should be examined in further research.

The aim of this paper is not to determine whether the NMR is an example of RIS. It should be emphasised that it is difficult to recognize an existence of RIS, because there is not only one typical RIS. Moreover it is difficult to ascertain whether there is a sufficient mass of innovation and range of interaction already available to constitute a RIS [Doloreux 2004, p. 492]. But our research indicates, that – without having the image of it – the NMR can be a very good example of a place where RIS is just in the building process because the crucial elements of RIS – cooperation, interaction, network – underpinned by the institutional environment are certainly available. Further research should take this point into consideration.

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