JÖNKÖPING INTERNATIONAL
BUSINESS SCHOOL
JÖNKÖPING UNIVERSITY

Cultural Centers in the Knowledge Age

The Impact of Digital Presence on the Success of Cultural Centers in Germany

Master's thesis within Economics and Management of Arts and Entertainment.

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Jönköping   June, 2010

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Date:	2010-06-11
Subject terms:	Cultural centers, technological innovations, knowledge age, synergy, cultural infrastructure, web 2,0

Abstract

This study investigates the digital presence of cultural centers in three regions of Germany taking into account the theoretical framework of the knowledge age. In order to find out if the adaption of online tools has a positive influence on visitor reach, i.e. on the success of the centers, the thesis attempts to gather information on online tool usage of individual institutions via questionnaires. Taking into consideration the overall context three factors referring to traditional economic concepts namely industry size, institution size and program diversity are proposed as additional success factors. The research results indicate that digital presence, together with the other measured factors, have a positive impact on the success of the centers. Moreover, the cultural infrastructure appears to have a direct positive impact on industry size and, consequently, an indirect impact on the success of cultural centers.

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1   Introduction

"A digital footprint for cultural organizations is as important as its physical footprint and is vital for its continued presence and growth" (Ailsa Barry, Natural History Museum in Ar, p.12)

The statement that internet has revolutionized the world is so well known that it became a cliché. Web services opened a spectrum of possibilities for virtually every industry, including arts and entertainment. The Net, by enabling information flow without constraints, has brought new rules to the business world. Vogel (2007) writes that *"The internet is not only a major new medium for the transmission of information and entertainment-a network of all networks, …, but also by now an integral part of every modern business operation."(146)*
There is an existing body of literature concerning the impact of internet on arts and entertainment institutions (Byrnes, 2004 ;Anderson, 2007). However, the literature is mostly on media companies, museums and the performing arts. Little research has been done on cultural centers which are an important part of the cultural infrastructure. Therefore, this thesis attempts to investigate how cultural centers are affected by internet and, by doing so, it aims to provide background for further research. According to the Enquet commission on cultural infrastructure in Germany, cultural centers offer diverse cultural programs in order to enhance the regional creative activity. The centers are often nonprofit organizations which, as many other institutions in the cultural sector, struggle with budgetary constraints and insufficient demand. In the Knowledge Age the consumer behavior and expectations have changed. Such factors as location, creativity and knowledge dissemination and technology are crucial to mention while discussing the cultural centers in the context of the 'new era'. Taking into consideration the concepts referring to knowledge age and cultural centers, two hypotheses were posed and a model was constructed by the researchers. In order to test the model the data was collected from e-mail generated questionnaires sent to 230 cultural centers in Germany. In addition, the stars from Michelin Guide 2010 were gathered for the cities that cultural centers are located in order to measure the attractiveness and density of the cultural infrastructure. The main focus of this thesis, however, is on the adaption of online tools by the cultural centers and how it impacts their success.

1.1   Purpose

The purpose of this study

- Provide the base for research on cultural centers in the knowledge age
- Examine the impact of online tools on the success of the cultural ters

This study was conducted in order to examine the usage of online tools as an indicator for *Digital Presence* of the cultural centers in Germany and to investigate the impact of this presence on their success.

1.2 Disposition

The paper is divided into a six chapters. The first chapter shortly introduces the reader to the topic. The following chapter refers to the background of the research subject; cultural centers in Germany, and it lists the possibilities that online tools present to them. The topic of the digitalization of cultural centers is relatively new and has not been yet explored in previous studies. Therefore, this part of the thesis aims to provide the reader with the elementary facts concerning the centers and the usage of web services. In the next chapter, relevant theories and concepts are discussed. Knowledge age is introduced as an overall concept capturing the specific characteristics of contemporary engines and catalysts of today's general economy . Aspects relevant to the concept of Knowledge Age, such as Globalization, Location, Creativity and Synergies, are described with the reference to cultural centers to provide a broad understanding of the forces impacting the cultural centers as an industry today. Moreover, the term contemporary web is introduced and discussed with the reference to its impact on cultural industry. In the next chapter a hypothesis is formulated and research questions are stated. The Empirical study begins with the description of the method chosen for the study. Next, the hypotheses are formulated and the model is proposed. Further Descriptive statistics and Analyses is performed. The chapter's aim is to present the empirical findings of the study, to analyze them and to interpret them with the reference to the previously discussed theories. The last chapter is devoted to the conclusion of the findings of the thesis. Moreover, it discusses the shortcomings of the study and proposes what could be researched in the future

2   Background on Cultural Centers

Cultural centers can be defined as cultural institutions and meeting spaces that offer a mixture of cultural education programs, cultural events and contemporary art projects (Ziller & Krimmer, 2007 ; Briese & Spieckermann, 2003). Their work is mostly linked to the local city scene and relates to a broad variety of artistic and cultural genres (Deutscher Bundestag, 2007). Further, working spaces for artists and those engaged in cultural projects are often provided within these institutions (Ebert, 2009).

Due to their nature, cultural centers are linked to a tangible building or space (Deutscher Bundestag, 2007), making them inseparable from their location. In general, they are private non-profit organizations receiving direct and indirect state support (Arbeitsgemeinschaft Kulturwirtschaft NRW, 1998). Moreover, cultural centers aim to support the creative activity of individuals and to build cultural competencies by being an intermediary between professional artistic productions and the work of non-professionals (Arbeitsgemeinschaft Kulturwirtschaft NRW, 1998).

In Germany, 450 cultural centers are registered as members of the umbrella organization Soziokulturelle Zentren e.V. (Ziller & Krimmer, 2007). In general, these institutions originated from cultural movements from ''*the bottom*'' (Briese & Spieckermann, 2003), which refers to non conventional artistic groups or subcultures. Many of today's established centers were founded during the student movement of the 70ies and 80ies (Briese & Spieckermann, 2003). The distribution of the members of Soziokulturelle Zentren e.V. shows a concentration in the ex-industrial areas (Soziokulturelle Zentren.e.V., 2009).

It is to note that the different cultural houses are highly incongruous in respect to size, type and range of programs they offer as well as in respect to their visitors and, to a certain extent, to their financial sources (Ziller & Krimmer, 2007). Thus, two cultural centers that are identical hardly exist in Germany. The disparity between the houses, in addition to the generally loose organizational structure adds difficulties to analyzing this industry.

2.1   The role and function of cultural centers

According to a survey conducted in 2006 the cultural centers view themselves as''*cultural service institutions that help to create a cosmopolitan atmosphere,''* (Ziller & Krimmer, 2007, p. 11).[1]
This self-perception is supported by the *´Enquet Kommission for the analysis of Germany´s cultural infrastructure´*[2], stating that the centers foster intercultural work and the linking of generations (Deutscher Bundestag, 2007).

Referring to different literature from the social perspective, the most prominent functions of cultural centers are related to fostering inclusion and integration, displaying contemporary art, engaging in cultural-education, functioning as start-up helper for young artists and fostering the cities vitality and urban development (Briese & Spieckermann, 2003) (Ziller & Krimmer, 2007); (Ebert, 2009). Within the next section these functions will be illustrated.

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[1] Translated from the German text'Die Kulturellen Zentren verstehen sich als kuturelle Dienstleister fuer ein

[2] Translated from the German term: "Enquet Komission zur kulturellen Infrastruktur."

Inclusiveness and integration: In Ebert's (2009) report on city development the centers were described as pillar organizations having low entry barriers with reference to visitors, participants and artists. The attempt to be inclusive and integrative is as well stated in the general mission of the institutions (Ziller & Krimmer, 2007). This separates them according to Briese and Spiekermann (2003) from other high-end cultural institutions e.g. the opera.

Displayer of contemporary art: Through their accessibility for unknown artists and their agenda of inclusivity they aim to contribute to the diversity of the cultural program and enhance the development of new trends (Ebert, 2009). By providing rehearsal space and opportunities for first stage experience, the centers perform the role of a start-up helper for young artist. Their contribution in this respect is e.g. reflected in the number of successful German comedians who started their stage carrier in different cultural houses[3]. Further, cultural centers are indentified by Ebert (2009) as an important additional location for the event market, especially for middle sized projects. In the year 2006, 90.000 cultural events were hosted or organized by different centers and around 118.500 artists of different genres presented their work or engaged themselves with projects in the different centers (Ziller & Krimmer, 2007, p. 15). The centers aim to be close to people and to vitalize the city scene which indicates that knowing what is going on around them should be of primary importance to them.

Education: In addition to their function as a displayer of art and culture they also focus on cultural education, thus enhancing the demand for art and culture products and services. The accumulated weekly program of all cultural centers in Germany consisted of 440.000 different courses and events, 2006 (Ziller & Krimmer, 2007).

2.2   The financial and organizational structure

As mentioned above, most of the cultural centers are non-profit organizations, struggling with obtaining sufficient funds, as many other cultural Institutions. Depending on a volunteer workforce, their hierarchical structure is usually weak and not clearly defined.

However, their broad mix of financial sources is unique in the Federal Republic of Germany and deserves a closer look in order to understand the nature of these organizations. The following paragraph on the financial structure is based on the statistical report by Krimmer and Ziller from the year 2007.

On average, the monetary sources of the centers are divided into 42% private sources and 58% public founding. When other cultural institutions are concerned, the percentage of private income sources is significantly higher: theatres and museums e.g. relay on approximately 80% of public subsidies. Referring back to the cultural centers, it should be added that both private and public proceeds are derived from multiple sources. The public subsidies are split into municipality, the federal state and central federal government support as well as EU funding. With the input of 33% the municipalities are the main financiers. The private sources can be categorized into sponsors and self generated income earned with ticket sales or course inscription fees, room rental to third parties and the gastronomy within the centers and advertisement space. The subsidies are mostly drawn from the cultural

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[3] Helge Schneider, Uwe Kyko, Frank Goosen, Dr. Stratmann, Jochen Malmsheimer, Ingo Appelt, Atze Schröder are examples of today famous comedianse, who started their carriers in cultural centres.

budget but are added up with money from the education sector as well as from the money meant for regional development. Moreover, Ziller and Krimmer (2007) point out that drawing capital from such a wide range of sources increases and at the same time demands flexibility in the financial planning process.

The budget is another important factor for the houses. It indicates their financial success as well as their size.

2.3 Visitors to the cultural centers

Economically, the amount and type of visitors within the fiscal year is an important number for the centers, as it is the most tangible success factor for the subsidizers and donors (Caves, 2000). Moreover, visitors can be understood as consumers of experiences offered by the houses. According to Pine and Gilmore (1999) different types of experience can be indentified in terms of how active or passive consumers are engaged. The authors categorize e.g. education experience as based on ´active participation, ´ while a pure aesthetic experience is categorized by them as ´passive experience´.

Due to the combination of education, entertainment, and aesthetic experience offered by the cultural centers, their visitors become at the same time participants who are usually more active engaged than passive. Active participation e.g. is required in the consumption of projects, workshops, and weekly classes. Referring to onetime events this is partly true as well. Frequent visitors who are engaged within the centers are often involved in the organization and sometimes in the planning of the events. In certain situations, they even become the performers, (Ziller & Krimmer, 2007)….

The total yearly number of visitors was approximately 21.4 million in Germany in 2006 (Ziller & Krimmer, 2007, p. 8). The highest overall number of visitors was attracted by the single events (Ziller & Krimmer, 2007, p. 8). Compared to the overall visitor reach of other cultural institutions, e.g. the opera, the cultural centers can be stated as relatively more successful.

Despite the highly diverse program Krimmer and Ziller (2007) report, that around 86% of the centers do target certain groups explicitly. The most stated target group was the youth. Statistically, half of the visitors are under 27 (Ziller & Krimmer, 2007, p. 7). According to a statistical evaluation on internet usage in European countries 80% out of the same age group use the Internet daily in Germany (Eurostat, 2010).

2.4 Major problems of the centers

The financial sources as well as the numbers of visitors are declining. In this context the report of Ziller and Krimmer (2007) names the biggest concern of the responsible as the future monetary sources and consequently losing a sufficient and qualified workforce. A long term comparison of data on number of visitors indicates a slight decline since 2002.[4]

This might be due to the `productivity lag´ which is thought to affect the service industry in general, including, to a great extent, the cultural sector and especially, live performing arts (Heilbrun & Gray, 2001) (Baumol & Bowen, 1966). Baumol and Bowen (1966) suggest that the rise in productivity or increase in output per work hour caused by the industrialization of certain production processes and ever new technological machinery leaves the mentioned industries behind. As labor in services cannot be substituted that easily by machinery

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[4] The accumulated stated Numbers of visitor of 250 cultural centers in 2006 were 15% lower than in 2004 while the statistic of 2004 shows a decline of 10% towards 2002). A decline was as well found for the monetary sources (Krimmer and Ziller, 2007, p.7).

the productivity increase due to technology becomes insignificant in comparison to other sectors. Moreover, there is a strong connection between the stagnant productivity and the rising unit costs as the wages in e.g. performing arts and service industries keep up with wages in general economy although the productivity growth remains very slow. This gap between expenditures and earned income is defined by Baumol and Bowen (1966) as a `cost disease`. The authors claim that this condition can cause divergence between prices in the art sector and other sectors and, therefore, it can have a negative effect on demand for live performing arts. As a result, these rising unit costs and prices of performing arts require more subsidies and private donations (Baumol and Bowen, 1966 ; Heilbrun & Gray, 2001).

As live performing arts constitute a significant part in the program of cultural centers, their unit costs remain enormous. Their role is, by rule, educative and their goal is to reach broad audience, as in case of many nonprofit organizations (Heilbrun, 2001).

Heilbrun and Gray(2001) point out that five possible sources of growth in physical output per work-hour in any economy; increased capital per worker, improved technology, increased labor skills, better management and economies of scale. The next paragraph shows the ways in which web applications and services might be utilized in order to help the cultural centers to improve all of these five sources.

2.5   Usage possibilities of web applications for cultural centers

In the next paragraph, Anderson's (2007) categorization of online tools will be introduced in order to explain the possibilities which web 2.0 can offer to cultural centers.

In his paper, he divides web 2.0 tools into seven categories according to their function:

a) Social and Professional Networking:
Social Networking comprises all networking sites that make it easier to keep contact irrespective of distance or to establish contact with new people (Anderson, 2007 ; Middelton, 2007). This web platforms can be based on the idea of social networking as Facebook (Facebook/Platform, 2010), *Myspace* (Myspace, 2010 ; Anderson, 2007). The social networking sites are useful for organizations to engage and learn about the thoughts of their target groups as they additionally survey to develop and express common interests (Middleton, 2007 ; Scale, 2008). The other group is *professional networking platform*. Examples for the Cultural Sector are Labforculture or Rhizeu (Labforculture, 2010 ; Rhizeu, 2010). Both examples are open to a broad range of institutions, projects and individuals. A more specific network is the web page of ´The Trans Europe Halls', which presents itself as a network for independent cultural centers in Europe (Trans Europe Halls, 2010)These digital meeting notes are suggested to carry the opportunity of easing collaboration and matching the right workforce with for projects (Polése, 2009 ; Middleton, 2007). The report by the Leisure, Sport, and Arts Department of England (2010) stated an increase in projects "that would not have seen the light without those connection notes". An example for a collaboration that is featured by labforculture.com is *"room exchange"* projects between cultural centers throughout Europe (Labforculture, 2010).

b) Aggregation services

Aggregation services can work in two directions (Anderson, 2007). They congregate content from different places and services throughout the net and deliver it too one place. Their role is similar to the postman who delivers all newspapers and magazines once or twice a day to your house or office. *News* as well as *RSS* feed aggregators fall in this category (Anderson, 2007). A useful example for professionals would be the service of Blog bridge (Blogbridge, 2010 ; Anderson, 2007). The use of such services is suggested to be of interest for cultural institutions, if they are following different blogs and news in a range of fields. Further, aggregation services collect data on the *"user's attention"* and *"intention"*, providing a picture what most people click, think or rate (Anderson, 2007). *Digg* is an example of such a *"platform where people collectively determine the value of content."* (Anderson, 2007, p. 10)

All in all, these services can help the cultural centers to keep up with what is going on and what their target groups are interested in, without spending time on searching the web. This is especially helpful when the number of employees and volunteers in a center is very small.

c) Data ´mash-ups`.
Data Mash-ups´ are described as web applications that allow to create new services by mixing existing data content from at least two different sources. (Anderson, 2007)

d)   Tracking and filtering content:
Under this headline Anderson (2005) summarizes applications that aim to provide the most valuable content for an explicit user who is following a topic or a field of interest in the Web by "keeping track, analyzing and allowing access to web tools from blogs, and multimedia sharing services" (Anderson, 2007). After setting up a profile on topics you are interested in, those applications will search the web for articles etc. The user will rate the suggestions and ´teach´ the service based on what type of content he values. This, in turn, will direct the proposals of articles more and more towards what the user is exactly looking for. This category of services is related to the aggregation services and some services are a combination of the two categories. Their emergence is related to the problem solving of *data overflow*. Topicality is the name of a tool in this category provided by Blogpuls (Blogpuls, 2010). For cultural centers, tracking and filtering tools can be utilized to discover and follow new cultural developments as well as to keep up to date on ´who and what is out there´.

d) Collaboration:
Here, Anderson (2005) refers to two types of applications for online collaboration. One type the author labels *"Collaborative, web-based project and work group productivity tools"* as e.g. 37signals (37Signals, 2010) or Google wave (Google, 2010) which simplify collaborative work over distance this could e.g. be helpful in projects in-between cultural centers as the *"room exchange."*The other Anderson (2005) he refers to are "collaborative reference work" based on the usage of wiki tools. The Wiki Loves Art project falls in this category. For the cultural centers engaging in such projects either as participant or as initiator means using their expertise on a public platform thus making their resources more accessible to the public, which is proposed to increase the their public value.

f) Replicate office style in the browser:
These are "*web based document*" tools as *Google docs* or *backpack* which allow for accessing your work from any computer anywhere with the restriction of internet access. These are suggested to be youthful within projects that are geographically scattered.

g) Source idea or work from the crowd:
The term is ´crowd sourcing´ is related to the term ´outsourcing`.
This category is similar to collaboration and it comprises of all web based project and sites reaching out to a broad mass in order to source their ideas and creativity for fulfilling a task or solving a problem. A good example is the web presence of Incentive (Innocentive, 2010), a platform were "seekers" can post a problem call to be solved. Registered *"finders"* work on a solution, the best proposal *"wins"* and gets paid by the seekers (Anderson, 2007). A nice example in between collaboration and crowd sourcing on how creative work can be done in digital cooperation is the online detective project by one of the cultural centers in Germany. A collaborative Blog was opened on the webpage of the house for a group of people in the center who were co-writing a detective story on the aforementioned webpage (Trans Europe Halls, 2010).

To sum up, the literature and examples indicate that through contemporary web tools
- Social and professional networking and collaboration can be enhanced
- Content from diverse sources can be reached and (re-)used "in a personalized way."
- Constructive intercommunication between institutions, umbrella organizations and the public can be fostered, *"so that services may be contributed to and improved by their own user communities;"* (Middleton, 2007, p. 3).
Thus, the Web applications carry the possibility of being used by the cultural centers to increase "access" to their recourses as well as to help to engage the centers more in the content of the web in order to stay in touch with the contemporary culture (Facebook/Platform, 2010) (Middleton, 2007).The main aims of the centers seem to be related to what the new web applications conserve for, the researchers refer here e.g. to the participatory approach. Thus, web applications are expected to be useful for the centers.
 Further, these services are expected to increase in importance with the transformation of culture towards growing digital demand and supply.

3 Theoretical Framework

3.1 Knowledge Age

The term Knowledge Age is used to describe contemporary times, in which the individuals' work is conditioned by their intellectual skills rather than their physical efforts (Neff D. et al., 1998, p. 3)*." Today and in the future, it is 'brain' and not 'brawn' that is the key to economic growth"* (Neff D. et al., 1998, p. 3). It is widely assumed that knowledge has never had such a value as it has today (Neff D. et al., 1998); (Andersson & Andersson, 2006). Moreover, as it is stressed by Andersson and Andersson (2006), it is not the theoretical knowledge alone which is desired most but it needs to be combined with a practical knowledge in order to constitute a real value.

The emergence of the term 'knowledge age' is considered to be due to the change in the industry structure, which has shifted from a manufacturing based industry to a knowledge based industry (Mellander, 2008). In this knowledge based industry, communication technology is responsible for controlling markets, innovation is the key to survival, and investment has the power and authority to acquire or devise new concepts (Johansson et al., 2006).

Knowledge Age is as well referred to as *´Information Economy, Digital Economy´ or ´Knowledge Economy´* (Johansson et al., 2006, p. 2). All these are related concepts attempting to capture that the developed countries have arrived at a state where the society and industry structure is based primarily on knowledge. What the emergence of all these terms implies is that advanced communication technology has revolutionized the business world (Cohen, 2004). Globalization has created new opportunities for economic development, place is considered to be more important than ever. Moreover, individual skills and creativity are the important tools for people in order to compete in the new economy (Andersson & Andersson, 2006); (Florida, 2002).

3.2 Globalization

Much has been written on globalization as it has an impact on almost every sphere of our lives. There is a plethora of definitions on this term, each depending on the field it refers to and the author's attitude towards it. Sociology defines globalization as 'the intensification of worldwide social relations…[linking] distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa" (Giddens, 1990, s. 361) Another sociologist Cairncross (1997), refers to as "the global diffusion of knowledge" (Cairncross, 1997, p. 368) while in cultural studies, the uneven interchange of cultures is often a matter of heated debate (Hesmondalgh, 2007).

For the purpose of this study, the economic aspect of globalization appears to be most relevant. Dunning (1993), defines globalization as the "growth of international production… [reflecting] the way that changes in the structure and organization of the world's resources and capabilities impinge on the cross-border production and transaction strategies of companies" (Dunning J. H., 1993). While Rodrik (1997) refers to globalization as "a process involving the international integration of markets for goods, services, and capital, which pressures society to alter their traditional practices" (Rodrik, 1997, s. 368).

According to Andersson and Andersson (2006) three milestones can be indentified that led to globalization, namely, the international trade laws abolition, the air transport deregulation and last but not least, the introduction of internet communication.

Internet opened possibilities for the arts and entertainment industry in a way that it decreased its distribution costs significantly. Andersson and Andersson (2006) write that internet–distributed arts and entertainment constitute "the prime examples of a globalizing culture." (Andersson & Andersson, 2006, p. 214) Internet, however, can pose certain danger to traditional arts institutions which are unwilling to adapt to it. Neff et.al (1998) write that the globalization of economy is one of the main trends within the knowledge age, "putting terrific pressure on firms for increased adaptability, innovation, and process speed;" (Neff D. et al. , 1998, p.3). The skill of adaptability to this change is necessary in all types of businesses, also in cultural institutions (Byrnes, 2004). Thus, this paper argues that cultural centers need to adapt to the changes brought by internet.

3.3   Location: place matters more

One of the paradoxes of the knowledge age, and related to that globalization and the technological revolution, is that place is considered to matter more (Polése, 2009). On the one hand, this can be explained by the growing importance of knowledge and creativity (Andersson & Andersson, 2006), on the other hand, transportation and communication costs are often still significantly lower in dense urban areas (Fujita & Krugman, 2003). Not all the agglomerations are considered to be successful when the new age criteria are taken into consideration (Fujita & Krugman, 2003). Therefore, urban planning plays an important role in fostering 'creative cities' (Jacobs, 1991).

3.4   Accessibility

The concept of accessibility in the context of agglomeration has to be introduced from two different angles. On the one hand, accessibility in terms of transportation time defines the borders of agglomeration. Anderson states that spatial transaction costs such as transport and communication costs can be identified as the reason for agglomerations. The author writes "accessibility within new transportation and communication networks has been the major factor that has determined the relative role of a city in the process of economic and cultural change" (Andersson & Andersson, 2008, p.194).

Accessibility can be also perceived as the availability of different types of skilled labor force and easy access for the industry to professionals and for professional to the workplace (Andersson & Andersson, 2008). This is especially relevant in cultural industries where the 'accessibility of services needed at short notice and law transaction costs" are very important. This industry is characterized by short time contracts and employees moving constantly from one company to another. A good example of that is a film industry which is always localized in one area, such as Los Angeles in US. Production companies and specialized workers, such as actors and directors are all occupying the same region. This makes the accessibility more efficient but it also fosters the spread of knowledge (Andersson & Andersson, 2008).

Accessibility is also linked to the economies of scale as the improved transport system leads to the increase of the scale of demand, audience. Andersson and Andersson (2006) claim that the average distribution and transaction costs increase with the scale of operations which is measured by the size of audience as 'a larger audience implies a greater average

distance between the consumers homes and the place of performance;" (Andersson & Andersson, 2006, p. 70).

The exploiting of economies of scale requires high demand and, therefore, it rises with the size of the region (Andersson & Andersson, 2006). However, cultural centers can be also found in small towns and it is rather their broad program and the utilization of the buildings, economies of scope, which makes their survival in such small areas possible. Economies of scope and scale are important part of creative industry and cannot be omitted while discussing cultural centers.

3.5   Economies of scale and scope

Heilbrun and Gray (2001) acknowledge that what the economists mean by scale is "the size of the producing enterprise, with size measured by physical output when plant and equipment are operated at designed capacity" (Heilbrun & Gray, 2001, p. 144). The economies of scale are involved when unit cost falls as the scale of output increases. As creative industry is characterized by the high fixed costs, economies of scale are often used in order to maximize the profit or reduce the loss. In performing arts it is primarily the length of seasons which are the indicators of scale. The greater number of the same performance implies less rehearsals and lower administrative costs (Andersson & Andersson, 2006). Economies of scale, however, can be exploited only in large metropolitan regions as they require high demand for a specialized product (Andersson & Andersson, 2006). This is why operas and theatres are mainly located in large urban areas. Cultural centers, however, are often distinguished by having a very versatile program. Therefore, they employ economies of scope more than economies of scale.

The term economics of scope refers to production processes that can generate more than one product. Andersson and Andersson (2006) write that "Economies of scope are likely to be exploited, if the production of only one good might be inefficient" (Andersson & Andersson, 2006, p. 69).Within a fixed scale of demand, the incentive to produce multiple products is proposed to be related with the marginal production costs. The multi-product will be the preferable option if the marginal costs for each specialist good would be relatively higher than the marginal production cost within the multiple product tion. This is e.g. the case if the demand for a good or service is too little in reference to the high cost of production which cannot be covered. Including another product that can be generated with the same production process, "would than reduce excess capacity and the average production cost of both products;" (Andersson & Andersson, 2006, p. 70) In general, a necessary condition is that an already existing input or source is not fully utilized (Goldstein & Gronberg, 1984). In the case of the cultural center this ´not fully utilized input´ is the building. The "excess capacity" is mainly linked to the high rent for the buildings that does not justify the usage of the facility e.g. for only theatre performances. Neither the demand for such performances is high enough, nor is the budget of the institutions sufficient to supply a performance every day. However, the high rent does demand a frequent use of the facilities. In order to minimize the losses and still be able to provide supply for the existing demand for e.g. theatre, a broader range of artistic and cultural related services is offered in "multi-facility" houses. This leads to the conclusion that economies of scope are an important factor for the efflorescence of cultural centers. Further, this indicated that cultural centers with a broad program and a lot of visitors are more likely   to be found in the medium size cities rather than metropolis (Andersson & Andersson, 2006); (Vogel, 2007).

3.6   Cultural infrastructure

Andersson and Andersson (2006) define infrastructure as 'any object, rule, activity or other phenomenon which is both collective (shared among a group of people) and durable;"[5] (Andersson & Andersson, 2006) p.). Infrastructure can be both material and non-material and it also varies in durability and collectiveness (Andersson & Andersson, 2008). Factories and highways are the most common examples of material infrastructure, but there is also cultural infrastructure which is as durable, physical and collective as any other material infrastructure (Andersson & Andersson, 2008). Churches and temples to mention only a few belong to this group as they "comprise the aesthetic attributes of the general material infrastructure;" (Andersson & Andersson, 2008). Some examples of durable cultural infrastructures are at the same time places of production of perishable cultural services. The examples are plenty i.e. the British Museum in London or the Opera La Scala in Milan. Cultural infrastructure is 'consumable' to both residents and visitors, it constitutes the infrastructural 'neighborhood attribute' and it influences the price of the land (Andersson & Andersson, 2008).

3.7   The role of creativity

The "creative buzz" which is defined by Knox (2010) as "the exchange of the complex form of knowledge ", and which can result from communication between humans on a face to face basis, takes place mostly in large urban areas (Venables & Storper, 2004). These face to face interactions are essential for creativity and the more creative input is demanded the greater is the role of interaction (Andersson & Andersson, 2006). The cities' cultural infrastructure is thought to play a significant role (Andersson & Andersson, 2006). Florida (2002) and Andersson and Andersson (2006) write that cultural facilities are extremely important in cities as they attract creative people. Richard Florida claims that a 'new class' of people has emerged in the recent times. This class is not particularly homogenous but what their members have in common is that their professional lives involve a ´great deal´ of creativity (Florida, 2002). The author writes "If you are a scientist or engineer, an architect or designer, a writer , artist or musician, or if you use your creativity as a key factor in your work in business, education, health care, law or some other professions , you are a member;" (Florida, 2002, p. Xxvii). The emergence of this class was mainly conditioned by the change in the industry structure and, what follows, the transition within society from "an industrial society into a society based on the exploitation of knowledge and creativity in the arts, design and entertainment" (Florida, 2002). Therefore, educating creativity becomes crucial in the knowledge age.

The cultural sector in general "discovers and provides alternative ways for people to relate to old and new information's and ideas", which are communicated to the public and are claimed to be open to discussion (Arnoldus, 2010, p.).

This leads to three different aspects to mention when referring to the relationship of the cultural centers and creativity. First, the houses enable their visitors or participants to use their creativity and to practice to apply it within workshops, courses, and performances (Ziller & Krimmer, 2007). Second, newly generated ideas are the core input factors of their events, providing a channel for their communication and making them accessible to the public (Arnoldus, 2010). Third, in a broader sense, the training to create unexpected links

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[5] It is more durable than one or more short term activities against which the infrastructure is contrasted

between concepts as provided in institutions like the cultural centers, is likely to enable human capital to use this capability in other contexts, too (Deutscher Bundestag, 2007). Further, by fostering the diversity of the cultural infrastructure, the houses can be expected to provide a base for the region's growing attractiveness towards the "creative class" (Florida, 2002).

3.8   **Synergetics**

As it was mentioned above, ´place´ is now more important than ever before mostly because of its function as a center of the production and exchange of ideas. It might be assumed that ´ cultural creativity `relays on "interaction within complex social networks;" (Knox & Pinch, 2010, p. 108), and that clustering of the ´creative class´ is often the source of various innovations (Andersson & Andersson, 2006). Knox writes that interactions which take place within a cluster are beneficial to the firms belonging to this cluster. These interactions are referred to, by Andersson and Karlsson (2006, pp. 63-64), as ´knowledge spillovers´ which is "a kind of informal diffusion of knowledge which takes place most effectively when firms are close to each other," (Andersson & Karlsson, 2006, pp. 63-64): (Venables & Storper, 2004).

Andersson and Andersson (2006) explain this phenomenon of networking and the effect it can bring by the example of synergetics. Synergetics is "a theory containing possibilities of bifurcations (i.e. phase transitions);" (Andersson & Andersson, 2006, p.9). Andersson and Andersson (2006) write that " although revolutionary equilibrium may not be typical outcomes, every synergetic system contains the potential for revolutionary changes to the structure; " (Andersson & Andersson, 2006, p.9). This means that in every synergetic system there is a possibility of the occurrence of 'the critical idea' which interconnects formerly unconnected networks of ideas and significantly contributes to the development of the field it refers to (Andersson & Andersson, 2006).The model below presents how a small but critical idea can cause a change in the whole structure of ideas.

○   Central Priniples
•   Peripheral Principles
c   Critical Link Potentially connect-
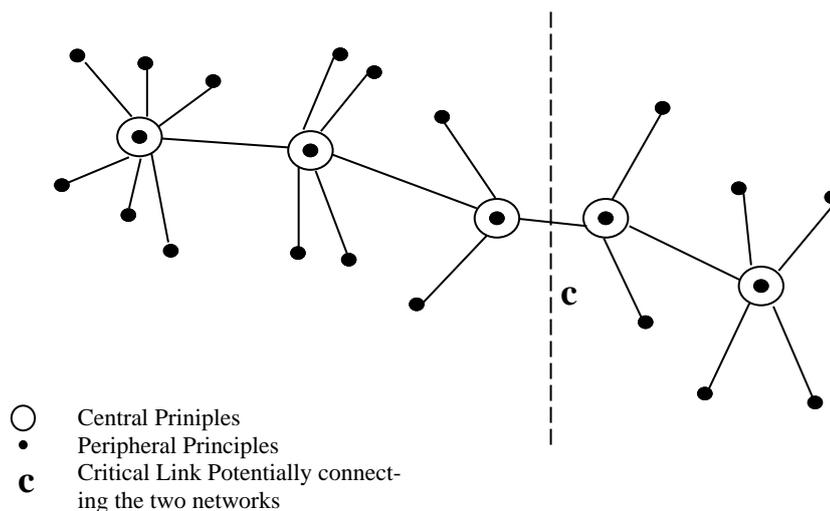   ing the two networks

Fig. 1-1 Networks of connected ideas (Source: Andersson and Andersson, 2006)

Andersson and Andersson (2006) acknowledge that synergetic reasoning can be perfectly applied "in the context of modeling the development of artistic ideas" (Andersson and Andersson, 2006 , p.). What can trigger the creation of such an idea is an intense interaction between people. Byrnes (2003) writes about the ´unquestionable´ benefits of the synergy of ideas when different art institutions are cooperating. It might be argued that communication and cooperation becomes even more efficient with the usage of web services. According to Andersson and Andersson (2006) internet has a limited capacity when the knowledge dissemination is concerned. The author claims that computers are great source of information, but when the knowledge acquisition or creativity is concerned, face to face interaction becomes more valued.

However, web services become more and more interactive. Online tutorials as well as forums are helpful in learning processes and, nowadays, many universities offer online courses or programs (Jennings & Collins, 2007). Video conferences via internet enable more intense interaction between people. Moreover, Creativity is enhanced through internet as well. The examples are countless i.e. social networking or bookmarking sites where people exchange their experiences and opinions and get inspiration for creative work. The characteristics of new communication technology and its impact on creativity will be further discussed in the following chapter as they are important for the purpose of this study.

3.9   Technology

"The digital society offers a new scope for everyone as well as new opportunities for the further democratic development of our society, for economic activities and for the knowledge society."
(Bundestag, 2010)

In the knowledge-based economy, the production of ideas is the source of economic growth more than the production of goods (Neff D. et al., 1998). The fact that the new computing and telecommunications technologies have revolutionized the economy is due to the fact that they are allowing ideas, in such forms as diagrams, research results , protocols , and marketing patterns etc." to be distributed instantaneously and in a coherent way to anyone, anywhere around the world" (Neff D. et al., 1998, p. 10).
ICTs are the abbreviation for information and communication technologies. Johansson et.al (2009) writes that these technologies have caused revolutionary changes" in the way economies and societies are organized, in how production is performed and which product is produced". (Johansson, et al., 2006, p. 331). The author claims that ICTs have an impact on " not only the superstructure but as well the infrastructures of existing economies. They reshape the macro economic conditions of economies, the conditions for R&D and innovation and the structures of markets by changing conditions for production and entrepreneurship including the introduction of new economies"(Johansson et al., 2006, p.332). Thus, technology was the engine for the whole process of entering the new, knowledge age.

3.10   The contemporary web and the concept of web 2.0 tools

With the expression contemporary internet tools, this paper refers to all web applications and services available today, thus it also includes older services as newsletters, online ticket

services but also the more recent, interactive encounters often referred to as *web 2.0*[6] (Anderson, 2007). Within this paper it is important to distinguish between the early web services and web 2.0 services. This is because the more recent applications have caused again a change within the manner of how information can be communicated (O´Reilly, 2005); (Anderson, 2007); (Arnoldus, 2010).[7]

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Anderson, (2007) outlines the web 2.0 concept as:
"Web 2.0 encompasses a variety of different meanings that include an increased emphasis on user-generated content, data and content sharing and collaborative effort, together with the use of various kinds of social software, new ways of interacting with web-based applications, and the use of the web as a platform for generating, re-purposing and consuming content." (Anderson, 2007, p.7)

The term web 2.0 was introduced by O´Reily (2005) [8]who intended to point out an evolution in the usage possibilities of the web and a change of what the user expects, which consequently leads to changing consumer behavior (O´Reily, 2005). A table explaining his "Six Big Ideas" behind the concept of web 2.0 is attached in the appendix.

 The main characteristic differentiating web 2.0 from older services is that the consumer is enabled to actively engage in the content (O´Reily, 2005); (Anderson, 2007). Within the ´web 1.0´concept e.g. website content is only inserted and edited by the administrator(s) of the domain and read by the visitor or user of the page (Middleton, 2007). The web 2.0 applications on the other hand turn information delivery into a ´*conversation*´ (Middleton, 2007); (Anderson, 2008). Thus the *web 2.0* strengthened what Arnoldus (2010) describes as ´*enabling aspect*´, which was already initiated with the evolving of *web 1.0*.

Arnoldus (2010) introduces the enabling aspect as a concept to describe the key causes of contemporary cultural changes related to the web. According to the author the enabling aspect is rooted in the ease or democratization of access and the ease of producing and reproducing digitally which enabled the user to engage in the content (Arnoldus, 2010). As the causes of the increased accessibility of information, three new conditions are to be mentioned (Anderson, 2007); (Anderson, 2008); (Arnoldus, 2010). First, the Internet does not have closing hours (Anderson, 2007); (Hori & Kato, 2008); (Arnoldus, 2010). Second, due to portable devices as the mobile, the I-Pad or the laptop, accessing the web becomes less and less restricted to locations (Hori & Kato, 2008); (Arnoldus, 2010). Third, the information reachable itself is less restricted to space as growing percentage of people and locations in the world are ´getting connected´ [2] (Anderson, 2007); (Arnoldus, 2010). What is more, reproducing content is done by "a simple mouse click within seconds" and with marginal costs close to zero (Anderson, 2007). Further, the limitation of storage space linked to tangible shelf space does not have to be considered within the web (the long tail model) (Anderson, 2007). In addition, the web lacks a ´filter´, theoretically allowing everyone to publish any digitalized item (Anderson, 2007); (Arnoldus, 2010). Thus, the literature concludes that the population has access to a continuously growing ´sea´ of content, in

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[6] A table displaying the categorization proposed by Anderson (2007) is attached to the Appendix

[7] It is to mention that the ease of accessibility is not including every one. The concept of the digital divide describes boundaries to enter the net, including special as well as intersociety

[8] The term was first used on the MediaLive International &O´Reilly Media, 2004

whose creation everyone with access can participate (O´Reilly, 2005); (Anderson, 2005; Anderson 2008, Arnoldus, 2010). The "enabling aspect" is growing with the evolution of the web tools, which changed the traditional one way stream of information that was easily traceable in terms of origin and authority, into the multi- direction dialog of today (Anderson, 2005).

3.11 **Web 2.0 tools: changing demand and supply in cultural sector**

The development within the web can affect the cultural centers in two directions. On the one hand the new ways of communication can be exploited by the centers to fulfill some of their functions more efficiently (Middleton, 2007); (Kelly, 2009). On the other hand, the character of the demand towards the cultural institutions is transforming, causing a shift in the nature of some of the key functions of the institutions itself. In addition, a transformation on the supply side of cultural and artistic items has to be recognized (Anderson, 2007); (Arnoldus, 2010).
The changing of the demand is linked to the *"Enabling Aspect"* which was introduced earlier in this paper (Arnoldus, 2010).

The internet is transforming into the main source of information with a growing importance of peer-to-peer word of mouth (Eurostat, 2009). People got used to read and search for information online, turning more and more to what others individuals have written rather than to institutional text.

The changes caused by the knowledge age have a further impact on *"the relationship"* between the receiver of the content and the content itself. In other words, the way people think about and treat content is transforming. They want to comment, publish and co-curate on different forms of text which includes art design and cultural material; (Benkler, 2006 ; Anderson, 2007 ; Arnoldus, 2010).

Thus, demand towards institutions that supply aesthetic experiences are changing. It is suspected that during physical visits to an institution, what Pine and Gilmore (1999) called *´active engagement experience´,* is growing even more in importance. In practice, this aspect is e.g. reflected in a growing discussion on the term *´visitor´* and the considerations of changing it into *´participants´* or even *´co-producers´* (Arnoldus, 2010). The proposed term *´co-producers´* indicates the willingness of the *´visitor´* to be involved only temporarily during the actual visit, but to take part in the election of what is displayed as well as the interpretation of the same.
The engagement and empowering of the visitors can be fostered by using the web 2.0 tools. Traditionally based on involvement, the cultural centers are no longer alone with this attempt. The praxis shows that other cultural institutions successfully integrate the visitors through different web applications and in different contexts.

One example is the *´Wiki Loves Art´* project, which was first launched by the Brooklyn Museum in NYC and later adopted by a collaboration of 5o Museums in the Netherlands. The participating institutions *´called out´* to the public to visit there exhibitions, and to take as many pictures of the displayed objects as possible. The pictures were asked to be uploaded on the Flickr page of the organization. After the *´call´* was closed, the best photos of the artifacts were uploaded to Wikipedia articles referring to the photographed objects (Wikilovesart, 2010); (Arnoldus, 2010).

The Foam Lab of the Foam Photography Museum in Amsterdam is an attempted to engage the public on a large scale into projects on regular bases. One example is their ´Safari´, which is a public contest on digital photography on the theme Amsterdam. Everybody interested in photography was invited to upload their five best pictures to the forum webpage of foam Lab: The winners were chosen based on the ratings of other participants, where the winning photos gained the right to be displayed in the museum (Foam, 2010).

As the following quotation indicates, changes not only on the demand side but as well on the supply side can be observed;

"The Digital world is almost my ´first world´ and the ´real world´ become my second world. I work mostly digital and spend some of my free time there, too"(Anonym artist, (Labforculture, 2010).

This statement which comes from a fine arts student in Riga indicates that the production in the creative sector is heading towards complete digitization: more and more content is created digital and it is not entering the tangible world at all (Arnolds, 2010).

Apart from the impact of the digital shift and perception of information how information is perceived, this shift has also a direct impact on forms of art and culture itself. Environmental changes are influenced by culture and they also influence the culture themselves (Gilmore & Pine, 1999). Digital art e.g. has become an accepted genre within the fine arts. Galleries as Mediamatic in Amsterdam are engaged mainly in connecting the digital art pieces to the real world (Mediametic.nl, 2010). That once more implies that it is expected to see the usage of digital tools in the production of fine arts more in the future.

Thus, following the social networks, subject specific blogs, or micro- blogs as e.g. tweets, friend feed, foursquare can ease the search of new talents and new trends in arts and entertainment.

Due to changes in *supply* and *demand* resulting from the enabling process it is expected that online tools will grow in importance for cultural institutions in the nearest future.

3.12   Conclusion to the Theoretical Framework

Knowledge Age and, related to it globalization, have posed both challenges and possibilities to cultural centers. Many researchers claim that adaption to the change is necessary. Location and technological communication are two of the most important factors to consider while determining the reasons for success of the cultural centers in the knowledge age. Location appears to be important because it is a place where knowledge is shared and new ideas can be born and because economies of scope and scale depend on location. Internet, on the other hand, enhances communication and as a result, knowledge dissemination between its users and it creates new possibilities for cultural centers. This thesis aims to examine the factors which influence the success of cultural centers measured by the number of visitor reach. It focuses, first of all, on the impact of web services on the suc-

cess of the centers. However, it also takes into consideration factors connected with place; such as economies of scope and scale and cultural infrastructure, in order to obtain a broader understanding of what determines the cultural centers' success in the Knowledge Age.

4   Method

Saunders et al (2007) propose a 'Research onion' model(Fig.3-1) as an illustration of how many different steps a researcher needs to take into consideration in order to choose the right research method. This section aims to peel away certain layers of this research onion in order to illustrate the research methodology and process applied in this study.
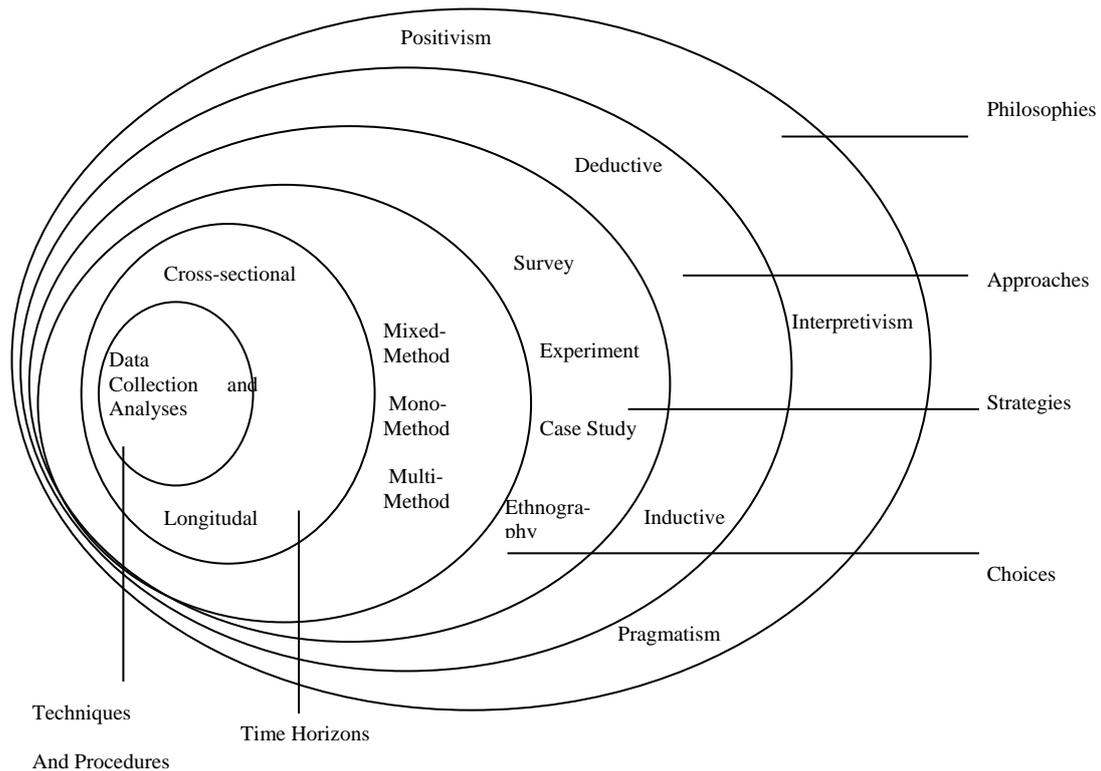

Fig 3-1. Methodology approach of the study (Source: Saunders et. al. 2007)

4.1   Research philosophy

Research philosophy is an important element to be considered before conducting a research as it influences the research strategy, the data collection and analysis of the study (Saunders et al., 2007). The research philosophy adapted in this study is a positivism approach as the statistical techniques were used to gather facts and then it was interpreted and generalized. Positivism strategy is rooted in social science research philosophy developed by natural scientists (Saunders et. al., 2007). In this approach the researcher is trying to develop 'law sand rules' frequently using statistical analysis as the main tool (Saunders et al., 2007).

4.2   Research Approach

This study employs the deductive approach, which is often used in positivism philosophy (Saunders et al., 2007). This kind of approach allows for gathering knowledge referring to the chosen study field in order to construct hypothesis. Next, hypotheses are being tested, analyzed and contrasted with the theory.

4.3   Research Strategies

Saunders et al. (2007) claim that the research strategy determines the source of data collection while taking into consideration different constraints referring to time, budget or location. For the collection of our primary Data, this study applies a quantitative strategy due to the aforementioned constraints. The research was conducted in three different regions in Germany and it aims to cover a considerable quantity of cultural centers. Therefore, conducting a survey is considered to be the most efficient strategy for the purpose of this paper. Saunders et al. (2007) writes that using a survey is a good method to answer research questions for many reasons. It allows gathering a large amount of data about a population in an economical way, its standardized answers allow for easier analyses. Additionally, it is less time consuming for the researcher and gives him or her more control over the research process (Saunders et al., 2007).

Moreover, the Michelin stars were collected for the purpose of testing the impact of the cultural infrastructure on the success of the selected cultural centers.

A French tire manufacturer Michelin publishes tourist guides to Europe's cities every year. The guides are considered a source of advice concerning restaurants and hotels but also serve to distinguish most attractive cities. Selected architecture and museums constitute criteria for the granting of one, two or three stars to selected cities. Stars are as well given to individual sides and attractions. Andersson and Andersson (2006) propose the total aggregated number of stars per city as a measurement for cultural infrastructure in order to measure the influence of cultural infrastructure on the hotel room prices within cities. Based on this study this paper retrieved the total number of stars for cultural attractions for all the location of the cultural center from the online Michelin Green guide Germany (2010).

5   Empirical Study

5.1   Survey design and procedure

The idea behind the survey was to obtain answers from cultural centers concerning factors that could have an influence on their success with an emphasize on the mapping of the online tool usage. The questionnaire comprised of questions concerning the budget, number of visitors, program specification, online tools usage and their attitude towards online tools. First, the questionnaires were designed, and then sent electronically to 200 different cultural centers in two regions of Germany, together with the letter explaining the researchers' study purpose and ensuring anonymity of the respondents. Due to the low response rate, the regions were extended to three regions; phone calls were performed to ask directly the questions from the earlier designed questionnaire. Next, when a sufficient number of answers were gathered, the questionnaires are analyzed.

5.2   Sample selection

According to Saunders et al. (2007) a sample of the complete population gives an estimation of the reality with a possible measurement error.
The researchers' general research subject is the cultural centers in Germany that are registered at the umbrella organization Soziokulturelle Zentren e.V. However, the population of this research is further delimitated to 230 Cultural Centers within the three Regions Baden-Württemberg, Nordrhein Westphalia and Lower Saxony. In this study the cities Hamburg and Bremen are included in the region of Lower Saxony as they are geographically embedded in the region, even though they hold governmental independency. Other non-member cultural centers exist, but are excluded from this research. This is due to the fact that previous statistics exist on the registered members but information on non members is not accessible, further through their membership it becomes easy to classify them as cultural centers. The researched area is narrowed down to first, two and later three regions of Germany in order to keep policy or cultural differences between the locations of the centers as low as possible. More than one region is chosen in order to have a big enough sample for the analysis.
All these three regions are located in the western part of Germany to exclude a possible impact of the differences in the east according to policy, attitude and different realities. Further, the wage rates in these regions as well as the level of education of the citizens are similar (Statistikportal, 2010). Moreover, the highest density of cultural centers can be found here (Soziokultur, 2009).

5.3   Non-response

According to (Buchanan, 1999) there are four common reasons for non-response to be identified while collecting data; two of them depending on the researcher and two on the respondent. The first one is when the researcher is unable to locate the respondents, second when the researcher is unable to make contact with the respondent .The next reason is when the respondent refuses to respond and last but not least, when he or she is ineligible to respond (Buchanan, 1999).
Over 150 of 230 cultural centers contacted by the researchers did not respond. Some cultural centers sent emails reflecting their concern about the purpose of the study although it was clearly defined and explained in the emails. The assumption is that online tools are a

new phenomenon to most of the cultural institutions and they were uncomfortable with this unfamiliarity. The topic was new to cultural centers. The research analyses show that those institutions which responded eagerly were familiar with online tools while those which required more encouragement on the researchers' side were pretty new in the field.

5.4 Hypotheses

Online tools can create possibilities for cooperation and for exchanging knowledge with other institutions. They can make the contact with arts in cultural centers more interactive and, therefore, more comprehensible. Moreover, digitization allows for the cultural centers to market themselves more easily and effectively. Thus, it is expected that the usage of online applications increases their success in terms of visitor reach.

5.5 Research Questions

Main Research Questions:

-
  Does *Digital Presence* help the cultural centers to reach more visitors and consequently enhances their *Success*?

- Do the variables *Industry Size, Institutional Size* as well as *Program Diversity* explain the visitor reach of cultural centers sufficiently?

- Does *Cultural Infrastructure* have an impact on *Industry Size* (cultural centers) and therefore an indirect impact on the *Success* of the cultural centers?

5.6 Model and variables

The framework of concepts discussed in this chapter suggests a variety of factors that can be expected to have an impact on the success of the cultural centers.
Based on these theories, the hypothetical Model (figure 6-1) is proposed. It will serve to analyze if *Digital Presence* has an impact on the success of cultural centers. Moreover, it takes environmental and organizational forces into account that are likely to have an impact on the success within the framework of the knowledge age. As place is considered to matter in the times of the knowledge age, the *Size of Industry* is expected to be a significant success factors. While, *Cultural Infrastructure* is assumed to have an impact on *Industry Size* and, at the same time, an indirect influence on *Success*.

The researchers suggest a positive relationship between *Institutional Size* and *Success* in both directions. Further, *Program Diversity* is likely to have a positive effect on *Success*.
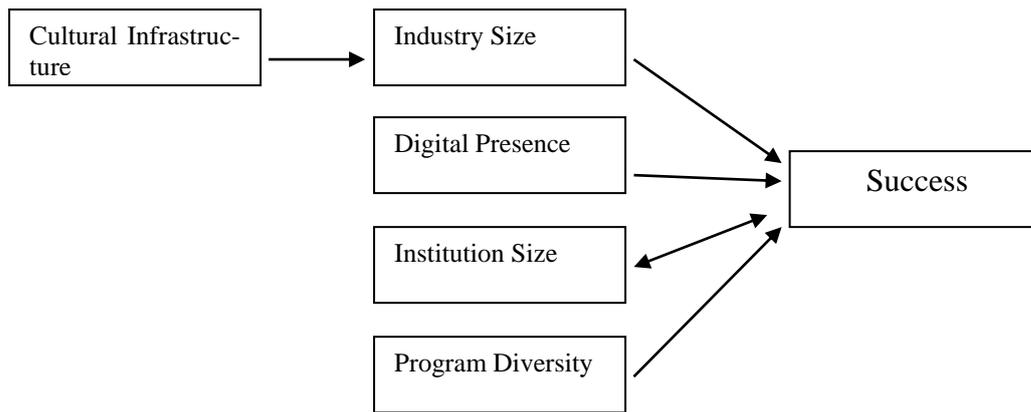
Fig 6-1: Modeling the causes of success within the knowledge age (Source: the authors of this thesis)

Variable description:

Dependent variable;
- Success (SucCC) as the dependent variable is measured as visitor reach. The number of visitors in 2009 is taken as the success indicator and is gathered from the survey results.

Independent variables;
- Program Diversity (ProgDiv) refers to the scope of the output produced by the houses and is indicated by the aggregated number of Program categories offered by the individual centers. It is predicted by the authors that the Program Diversity has a positive impact on the success

- Industry Size (ISi): is indicated by the total number of cultural centers located in the same area (Industry Cluster). The information was retrieved by counting the stated centers in the areas of the respondents as displayed by the Soziokulturelle Zentren e.V map (Soziokultur, 2009). Only members of the Soziokultural Zenters e.V. were accounted for. Independent centers were excluded due to inaccessible or incomplete information on their existence.

- Institutional Size (InS): is representing the size of the centers in this study and is measured as budget of 2009.

- Digital Presence (DigPr) is indicated by the online tool usage, measured by aggregated number of online tools used in the cultural centers. However, this study does not measure the level of adaption on each variable individually.

- Cultural Infrastructure: is measured by the Michelin Guide's stars.[9] The aggregated stars can be understood as proxy for the density as well as quality of the cultural infrastructure surrounding the cultural centers. In this study they are taken as a measure for density.

The model can be summed up as:

Success is dependent on *Institutional Size, Organizational Size, Program Diversity and Digital presence*

Industry Size is dependent on *Cultural Infrastructure*, thus *Cultural Infrastructure* has is assumed to have an indirect impact on *Success.*

5.7   **Descriptive statistics**

The descriptive part is divided into two sections. The first part concerns the findings that result from the survey, while the second part refers to data aggregated through other means (Michelin guide and Sociokulturelle Zentren e.V.) that is used for the testing of the proposed model. The table below summarizes the basic descriptive statistics values for the factors included in the model.

Chart 6-1 Descriptive statistics table.

	Range	Mini-mum	Maxi-mum	Mean	Std. Devia-tion	Skew-ness	Kur-tosis
Industry Size	8	1	19	5,89	6,148	1,394	,577
Cultural Infra-structure.	20	0	20	6,85	7,841	,732	-1,087
Suc-cess(visitors)	504200	1300	505500	44349,57	77331,166	4,864	28,270
Success(logvis)	5,96	7,17	13,13	9,8661	1,41091	-,271	-,498
Size	1685000	15000	1700000	381826,30	417503,702	1,676	2,111
DigitalPresence	8	0	8	3,15	2,053	,562	-,624

5.7.1   Findings of the survey

The survey is used for two purposes. On the one hand, it is used to collect data for the further analysis and on the other hand to map the online tool adaption within the sample.

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[9] Andersson and Andersson (2006)

Out of 230 contacted houses, 47 valid responses are collected. All questions are obligatory; however some answers were not clear and therefore have been verified via follow up phone calls.

The following section provides a descriptive analysis of the responses to the questionnaire. The translation of the original question the researchers refer to are stated before the results are discussed.

1. Visitors incl. subscribers to courses. Please state the total number of visitors at your Institution for the year 2009.

As mentioned above, this thesis adapts the number of visitors as an indicator of success. The reported number of visitors in the cultural centers ranges from 1300 to 505500, which gives a mean of 44349,57.

The wide range as well as the uneven results confirms a differentiation within cultural centers that was reported by Krimmer and Ziller (2007). Further the findings suggest a difference in the success of the houses.
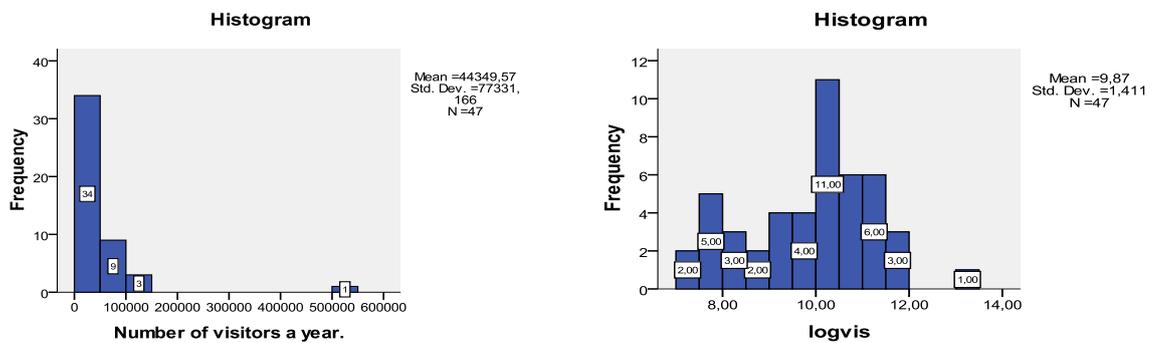

Fig.6-2 Number of visitors (Source: survey on cultural centers)

The histogram (figure 6-2) indicates asymmetric and skewed distribution for the non transformed variable visitor which is confirmed by the high standard deviation reported in table. The Kurtosis reported in table 6-1, which is above 28 reflects the sharp peak and a reported skeweness of + 4.9 a wide right tail. The stated number of visitors is log transformed in order to find a variable that is closer to being normally distributed and therefore fulfills the requirement for being used in a regression model. The observed skeweness after the log transformation with a value of -0.271 is significantly lower which is as well indicated by the histogram (figure 6-2).Therefore, the log variable of visitors will be used in the later regression analysis to obtain more adequate results.

2. Budget 2009(Costs). Please state the Institution's costs for the year 2009.

As mentioned in the model description, budget will be used as a size indicator in our study. The stated budget of the centers ranges from 15000 to 1700000 with a mean of 381826,30. Standard deviation is high and it equals 417503,702 as reported in table 6-1. When the broad range is concerned, it can be observed that the budget and therefore the *Size* of the cultural centers differ significantly.

Figure 6-3 below visualizes the distribution of the budget. A certain tendency might be observed as the majority of the cultural centers (36 out of 47) have a budget below 500000. Thus, only a few big cultural centers compete with relatively small houses. The reported minimum budget is fairly low. The result is confirming previous predictions that the distribution of the monetary sources is broad and uneven.
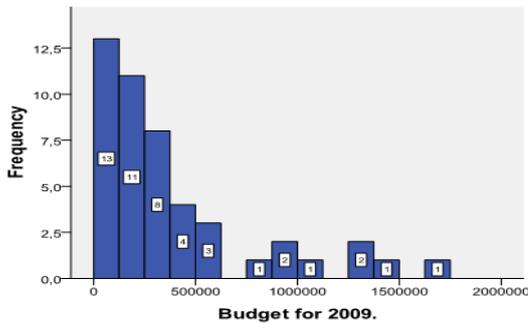

Fig.6-3 Budget for 2009 (Source:survey on cultural centers)

The reported sleekness of 1.76 underlies a certain asymmetry within the values of this variable but as the outcome after the log transformation does not change the values significantly the non transformed budget will be used for further analysis.

4. Program. Please mark the program categories offered by your institution. Mark the relevant categories: *Music, Film, Theatre, Dance, Fine Arts, Literature, Stand-up Comedy, Discussions, Multimedia, Other.*

The question concerning the program offered, referred to the measurement of diversity within the program of each respondent. The question is multiple choice providing eleven different program categories preselected by the researchers. This pre-selection is based on information collected via visiting of around 50 randomly selected websites of cultural centers in Germany, as well as on the report of Kimmer and Ziller (2007). The results show that the number of activity types offered, ranges between one to ten different program categories. The mean 5, 62 and a reported mode of 6 indicate that most of the respondents offer a relatively broad range of program categories. The relative closeness Mode and Medium, indicate a roughly normal distribution. The low negative skeweness of -0.076 is underlying this assumption. Therefore the researchers use the variable without the log transformation in the further analysis.

 5. Web services. Please answer by clicking yes or no which of the web services listed below are used by your Institution.

a. Does your Institution offer online ticket sale service?
b. Does your Institution participate in Blogs and Forums?
d. Is your Institution a member of MySpace?
e. Does your Institution use bookmarking services such as Delicious, Furl, Net W?
f. Does your Institution use RSS or similar applications?
g. Is your Institution a member of any cultural online networks, such as www. labforculture.org or www.culture.info?
h. Does your Institution use vlogs(video blogs)?

i. Does your Institution use Google tools(such as Google Waves, Google Doc.)?

The results visualized in Figure 6-4, show that the percentage of adaption of the separate online tools differs significantly. While 76,6% of the sample offer newsletter , only 4,3 % claim to use bookmarking services. Roughly one quarter is involved in blogs and close to 60 percent are members of a professional networking site.
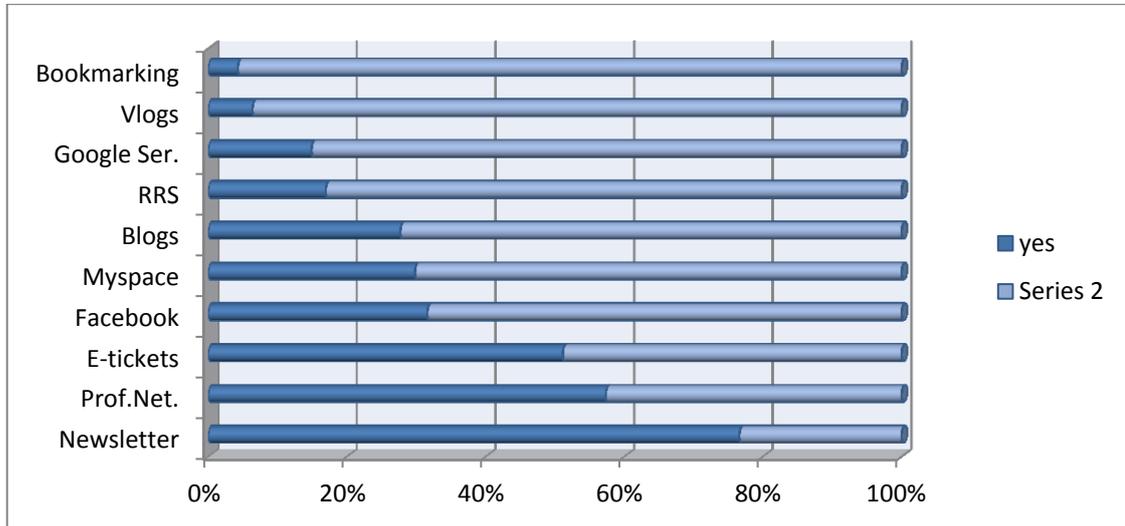

Fig.6-4 Online Tools Usage (Source: survey on cultural centers)

This indicates that some online tools adaption is more successful than other. The adaption level of Newsletter close to 80% might be due to the fact that newsletter is a web 1.0 tool introduced much earlier than such web services as RSS or Vlogs. RSS. As discussed in the theory part, serve similar purpose as newsletter but it belongs to the more interactive web 2.0 tools. Further, the results might reflect a difference in usefulness of the individual application from the perspective of the centers.

5.7.2 Data collected or categorized by the researchers

Second part describes data gathered by the researchers. It is organized into four separate variables based on the answers from the questionnaires but also on the stars for cultural infrastructure obtained from the Michelin guide and Sociokulturelle Zentren e.V.
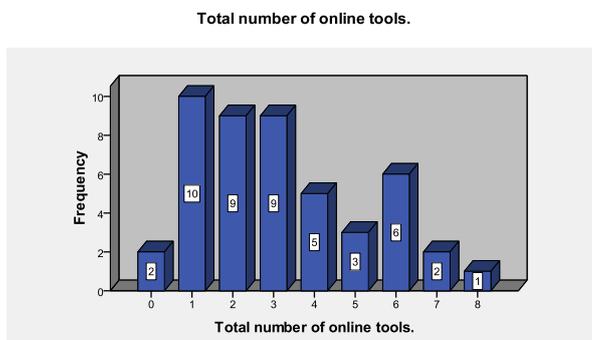
1. Total Number of Online Tools

Fig.6-5 Total Number of Online Tools (Source: survey on cultural centers)

In order to measure the digital presence by an overall level of online tools the answers from the questionnaire concerning web services were gathered and summed up.

The aggregated number of online tools used by each respondent ranges from 0 to 8(out of 0 to 10 online tools) .The mean equals 3.15 and the standard deviation is 2.053.This variable is used as an indicator for digital presence and it is assumed to have a positive impact on the success of the cultural centers.

The result shows that the adaption to the online tools is not fully reached. Two of 47 cultural centers do not use any web services and none stated to use all the online tools in question. This explains to some extent the lack of research on this topic when the cultural centers are concerned. Online tools appear to be a relatively new phenomenon in this industry.

2. Number of Cultural Centers

The Number of cultural centers measures the density of cultural centers within the same area. In this study this variable was employed as an indicator for the *Industry Size.* According to the obtained results, the number of cultural centers ranges from 1 to 19, with the mean 5,89. The distribution is normal, so there was no need for employing log transformation.

Number of cultural centers is supposed to have a positive effect on the success of the cultural centers. According to the theories applied in this study, density has a positive effect on the knowledge dissemination and creativity of the region and organizations and institutions should benefit from it. Further, in this study cultural centers might stand for the external economies of scope

3. Number of Stars for the Cultural Infrastructure.

The number of cultural stars was obtained from the Michelin Guide 2009 (Michelin, 2009) and it serves as an indicator for the attractiveness of the area where the cultural center is located. In this study the aggregated number of stars is taken as a measurement for the density of the general cultural infrastructure. The infrastructure is expected to have a direct impact on the Industry size and, accordingly, an indirect impact on the success of the cultural centers.
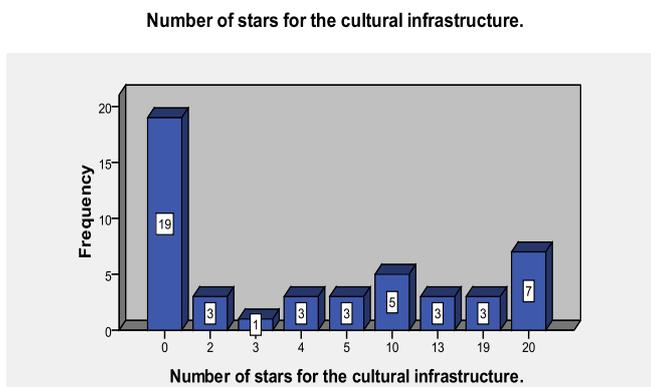

Fig. 6-6 Number of Stars for the Cultural Infrastructure (Source: Michelin Guide 2010)

The results show that the number of stars varies from 0 to 20 in different areas with a mean of 6.85. Over 19 which equals 40,4 % of the locations, were not granted any stars by the Michelin Guide. Reviewing the data, it can be observed that this is partly caused by the size of the locations and partly by other forces. Further this observation underlines the prediction that cultural centers are likely to be located where the demand is insufficient for more specialist Institutions.

Even though a certain asymmetry can be observed the distribution is assumed to be roughly normal as the stated skeweness is 0.732.

5.8   **Deductive Statistics**

The tools for analysis;

In order to test the proposed model this study uses first a correlation matrix to examine if it is indicated that variables influence each other, and how strong the relationship between the variables is. Next, multiple regressions analysis is performed, in order to examine to what extent the variance in the dependent variable can be explained by the independent variables and further to see the individual contribution of the explanatory variables to the model. The multi regression analysis is chosen as the variables or their log transformed version is roughly normally distributed and a linear relationship between the explanatory and independent variables is expected by the researchers.

Correlations

Table 6-2 Pearson's Correlation matrix (Source: SPSS)

	Success(log)	DigitalPres.	Diversity	Inst. Size	Cultur-al Infrastr.	Industry Size
Success(log)	1					
Digital Presence	,490**	1				
Diversity	,460**	,142	1			
Institutional Size	,645**	,399**	,342*	1		
Cultural Infrastructure	,017	-, 104	,159	-,172	1	
Industry Size	,245	,31	,160	,27	,729**	1

*correlation is significant at the 0,05 level
**correlation is significant at the 0,01 level
Log transformed variable; success

The correlation matrix (Table 6-2) suggests a positive correlation of the dependent variable *Success* with the independent variables *Digital Presence, Diversity, Institutional Size* at a signifi-

cance level of 1 percent which supports the previously stated hypothesis (Model 1). No significant correlation is reported between *Industry Size* and *Success*, neither at a (0,01) nor at a (0,05) significance level. The matrix shows that there might be a risk for a co linearity problem as the *Institutional Size* is correlated with the *Digital Presence* and as well *Diversity*. For further investigation the model is checked for multi co linearity by the Durban Watson test and the multi co linearity diagnostics within the regression analysis. As it was expected in model two, the *Industry Size* is correlated with the *Cultural Infrastructure* at a one percent significance level. The strongest correlation occurs between *Industry Size* and *Cultural Infrastructure* at the significance level of one percent. Next, there is also a strong correlation observed between *Institution Size* and *Success*. The correlation between *Digital Presence* and *Success* is also considered to be strong, with the significance level of 1percent. The regression analyses will be performed in next section in order to further verify the proposed models.

Multi Regression models;

To analyze the proposed model;

Success(log.vis) $=\beta 0 + \beta 1$Indutry Size$+ \beta 2$Size$+ \beta 3$ProDiv$+ \beta 4$Digital Presence $+$ e

Results of the multiple regression analysis testing the proposed model are presented in the table below (Tab.6-3). *Digital Presence* is expected to have a significant impact on the *Success* of the cultural centers. The following table displays the results.

Chart 6-3 Regression analyses for 'Success'
   Dependent Variable: Success(logvisitors), only this variable is log transformed.

Model		B	Std. Error	Beta	t	Sig.	Vif
1	(Constant)	7.648	.413		18.518	,000	
	Digital Presence	,186	,075	,271	2.480	,017	1,190
	Industry Size	,0,4	,02:	,187	1.839	,073	1,028
	Inst. Size	1.522E-6	,000	,450	3.910	,000	1,322
	Prog. Diversity	,142	,064	,238	2.206	,033	1,162
	N	47					
	R	0.761a					
	R-square	0,579					
	F-value	37,714					
	Durbin-Watson	2.337					

The multiple regression analysis does not reject the proposed hypothesis that digital presence has a positive impact on the success of cultural centers. The significance of the whole model is close to zero, thus the proposed results are with a 99.99 percent confidence not due to chance. Further, the multiple correlation coefficient R of 0.761 is rather high and suggests that a relatively strong linear relationship exists within the model. Further, the R^2 above 0.5 indicates that the proposed model explains around half of the forces causing success of cultural centers regarding the visitor reach. Thus, the model appears to be valid and explanatory.

All four predictors have significant contributions to the model. The size represented by budget at one percent level and the *Program Diversity* as well as the *Digital Presence* at a five percent level and, last but not least, the *Industry Size* within a ten percent level of significance.

Further, the Beta values, which show the individual contribution of each explanatory variable, indicate that the *Institution Size* seems to have the biggest positive impact on *Success*, followed by *Digital Presence* and *Program Diversity*. *Industry size* has the smallest Beta value, indicating the weakest relationship with *Success*. The positive sign of all the Beta indicate that all independent factors have a positive impact on *Success*.

Moreover, no critical multi colinearity problem is detected. The inter-correlation analysis of the independent variables have a variation inflation factor (Vif) below 2, which indicates that most of the impact reported for the variables seems to be caused by the variables themselves and not indirectly through other variables within the model. This is further supported by the Durbin Watson test statistic, which is used to detect whether auto-correlation between the residuals exists. As the value is close to 2 no problematic autocorrelation concerning the error term is observed.

The first hypothesis, which was tested above, predicts that *Digital Presence, Industry size, Institution Size* and *Program Diversity* have a positive impact on the *Success* of the cultural centers. As it can be seen from the regression analysis, this hypothesis is not to be rejected. It can be interpreted that the most successful cultural centers use online tools, offer a differentiated program, have a rather high capital and are located in dense areas (industry wise). The most important finding for the purpose of this thesis is, however, that the usage of online tools seems significant for achieving a higher number of visitors by the cultural centers. This can be explained by the popularity of the web services in other industries and the fast growing number of internet users around the world. Internet is an important medium in today's world and as it was previously discussed in the theoretical part, it creates a multitude of possibilities for many industries, including the cultural sector.

The diversity in the program reflects the advantages that can be exploited via economies of scope. The regression analyses indicate its positive effect on the success of cultural centers. It illustrates that the more differentiated the program offered the more visitors reach the institution has. Size which is represented in this study by *Budget* has a strong impact on the success of the centers. This might be explained by the fact that the more resources the cultural center has the more attractive it is for the visitors. High monetary founds allow for more attractive program. *Industry size*, represented by the number of the cultural centers in the given area, can be interpreted also as the indicator of the external scope economies. It is assumed that if the region has many cultural centers it should also be characterized by a broad audience. This variable, however, has the lowest significance of all other variables. It

might be interpreted that, as it was stated in the theoretical part of this thesis, economies of scope are more effective strategy in cultural centers than economies of scale.

Hypothesis 2

The second hypothesis predicts that the cultural infrastructure has a positive impact on *Industry Size*. As a correlation between the factors reported the relationship between the two factors is further examined by a simple linear regression.

Industry Size $= \beta 0 + \beta 1$ CultInfr + e

Chart 6-4 Simple linear regression analysis for the impact of cultural infrastructure on the industry size

		B	Std. Error	Beta	T	Sig.
1	(Constant)	1, 978	,8828		2,389	,021
	Cultural Infra.	,572	,080	,729	7,143	,000
	N	47				
	F-value	51,020				

The simple linear regression analysis with *Industry Size* as a dependent variable and *Cultural Infrastructure* as an independent variable indicates a positive linear relationship between these two variables at a 5% significance level. The Beta value is relative high (0,729) which shows a strong positive impact of *Cultural Infrastructure* on *Industry Size*.

Hypothesis two is not rejected by the regression analysis performed above, which leads the researchers to the conclusion that a dense cultural infrastructure is likely to have a positive impact on the emergence of cultural centers. It can be attributed to the influence of the cultural infrastructure on the cultural industry. This result is interesting as it seems to be contradictory to the idea that cultural centers are built where specialist e.g. theaters would not survive because of insufficient demand.
The denser and, accordingly, the more attractive the *Cultural Infrastructure* is the more visitors it attracts. Moreover, it is considered to make an area more intense in terms of knowledge dissemination and creativity. As cultural centers enhance and cultivate creativity they are expected to occur in the 'attractive' areas. Further, as the Industry Size has been indicated in the regression analyses 1 to be one of the factors of the success of the cultural centers, *Cultural Infrastructure* might be also considered significant in the indirect influence on the number of visitors of the cultural centers.

6   Conclusion

Within the broader context of knowledge age this study investigates online tool usage in the cultural industries on the example of cultural centers in Germany. The research attempts to answer three research questions, which are built on theoretical framework.

Based on the results of the hypothesis testing it appears that using online tools can increase the *Success* of the centers. Even though some online tools are only adopted by a low number of centers, the overall impact of *Digital Presence* on *Success* appears to be positive and significant. Considering the early stage of adoption and the growing importance of the digital world, the researchers suggest that the *Digital Presence* will grow in importance in the future.

Moreover, the empirical findings show that all three factors, *Industry Size, Institutional Size* and *Program Diversity* have a positive impact on the *Success* of the centers. However, *Institutional Size* appears to have the strongest relationship with *Success*. This is not surprising as a bigger *Budget* allows for a broader program as well as for events of a bigger scale and the employment of skilled personal. In turn, previous success is likely to have a positive effect on the budged. *Program Diversity* is found to be significant for the success which supports the theory that the exploitation of economies of scope is the leading strategy for cultural centers. *Industry Size* has the weakest relationship, but a positive impact is still indicated. This could lead to the conclusion that cultural centers exploit both external and internal economies of scope.

Last but not least, *Cultural Infrastructure* appears to have a significant positive impact on the Industry Size. It could indicate that the cultural centers cluster where a presence of cultural infrastructure will attract audience that is expected to have additional demand for art. Further, by having an impact on the *Industry Size, Cultural Infrastructure* also has an indirect influence on the Success of the cultural centers.

6.1   Limitations and recommendations for further study

Limitation of the sample size

The most apparent limitation of this paper is the very low percentage of respondents with around 47 valid answers out of the 230 contacted centers. Even though the sample chosen almost reflects the population of interest, a generalization of the findings has to be treated with care. Further, the low number of cases allow for only a limited number of independent variables to be included in the hypothesis testing.

Limitation of the method

Only quantitative method was applied due to time constraints and the location of the research subject. Questionnaires are often considered to be most efficient to collect a huge amount of structured data that can be easily analyzed by the researchers. However, employing qualitative method together with questionnaires would allow for more explanatory and more in-depth analyses.

<u>Limitation of the variables</u>

The question concerning online tool usage allowed for yes and no answers without further specification of the frequency of usage. As the online tools usage is a relatively new phenomenon, the question regarding the longevity, longitude of usage was deliberately omitted.

6.2   **Recommendations for Further Study**

The researchers recommend that the future studies should focus on the following issues;

- Impact of the individual online tools usage on the success
- Including other success measures as diversity, originality of program or budget
- Studies including the frequency of usage and the time of first adaption
- Covering other countries
- Horizontal research; conducting a certain number of questionnaires over an extended period of time

Facebook

''Facebook is a social utility that helps people communicate more efficiently with their friends, family and coworkers. The company develops technologies that facilitate the sharing of information through the social graph, the digital mapping of people's real-world social connections. ''

Facebook for Businesses; "Facebook Platform is a development platform that enables companies and engineers to deeply integrate with the Facebook website and gain (Facebook/Platform, 2010)

Twitter

"Twitter is a social networking and micro-blogging service that enables its users to send and read messages known as tweets. Tweets are text-based posts*

Twitter for Businesses; Twitter is a simple tool that helps connect businesses with the audience, customers and their partners. It enables companies to quickly share information with people interested what they do, gather feedback, build relationships with customers, partners."

(twitter, 2010)

Forum

''Forum is an online community where visitors may read and post topics of common interest. 'Forums might prove to be a useful for anyone doing business online; it allows for both reading the content and to actively participate in the discussions."

(Crucial Marketing , 2009)

RSS

''Rich Site Summary (RSS) is a lightweight XML vocabulary for describing metadata about Web sites, ideal for news syndication(….)RSS has taken on a life of its own and has become perhaps the most popular XML format today.(…)Thousands of Web sites today use RSS as a "what's new" mechanism to drive traffic their way. ''

(King, 2001)

Delicious

"Delicious is a Social bookmarking service. It enables its users to save all their bookmarks online, share them with other people, and see what other people are bookmarking."

(http://delicious.com/)

Flickr

"Flickr is an online photo management and sharing application , which aims to enable new ways or organizing photos and video and to , help people make their content available."

(www.flickr.com)

Newsletter

''An eNewsletter or e-Newsletter is an HTML email that allows companies to submit corporate announcements, press releases, product launches, coupons, and much more to their clients on a continual basis using an email or eNewsletter system. ''

(http://www.hudsonhorizons.com/Our-Company/Internet-Glossary/eNewsletter.htm)

MySpace

"MySpace is an online community that enables people to share photos, journals and interests with their networks"(www.myspace.com)

Glossary

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Appendix

1. Survey on the usage of online tools by the Cultural Centers in Germany.

---

* Required

Name of the Institution * ☐

Visitors incl. subscibers to courses * Please state the total number of visitors at your Institution for the year 2009 ☐

Employees * Please state the total number of employees at your Institution ☐

Budget 2009(Costs) *Please state the Institutions's costs for the year 2009 ☐

Program

Please mark the program categories offered by your institution

Program *

- ☐ Music
- ☐ Film
- ☐ Theatre
- ☐ Dance
- ☐ Fine Arts
- ☐ Literature
- ☐ Stand-up Comedy
- ☐ Discussions
- ☐ Multimedia
- ☐ Other

Web services

Please answer by clicking yes or no which of the web services listed below are used by your Institution.

Does your Institution offer online ticket sale service? *

- ○ YES
- ○ NO

Does your Institution release online newsletters? *

- ○ YES
- ○ NO

Does your Institution participate in Blogs and Forums *

- ○ YES
- ○ NO

Is your Institution a member of Twitter? *

- ○ YES
- ○ NO

Is your Institution a member of Facebook? *

- ○ YES
- ○ NO

Is your Institution a member of Myspace? *

- ○ YES
- ○ NO

Does your Institution use bookmarking services such as Delicious, Furl, Net W ? *

- ○ YES
- ○ NO

Does your Institution use RSS or similar applications? *

- ○ YES
- ○ NO

Is your Institution a member of any cultural online networks, such as www. Labforculture.org or www.culture.info? *

- ○ YES
- ○ NO

Does your Institution use vlogs(video blogs)? *

- ○ YES
- ○ NO

Does your Institution use Google tools(such as Google Waves, Google Doc.)? *

- ○ YES
- ○ NO

How do you feel about the new web applications?

I consider the new web applications to be (please choose one of the options given under each of the following numbers):

1 *

- ○ good
- ○ bad

2 *

- ○ terrific
- ○ terrible

3 *

- ○ useful
- ○ useless

4 *

- ○ valuable
- ○ worthless

2.Fragebogen zur Internetnutzung in Kulturellenzentren (German original)

Dieser Fragebogen ist Teil einer Masterarbeit im Bereich Wirtschaft und Management in Kunst und Kultur. Alle Angaben werden vertraulich behandelt und nur zu akademischen Zwecken benutzt. Vielen dank für Ihre Teilnahme.

* Required

Top of Form

Name der Institution *

Besucher inkl. Kursteilnehmer * Bitte geben Sie so genau wie möglich die Besucherzahlen inkl. eingeschriebener Kursteilnehmer des Jahres 2009 an.

Anzahl der Mitarbeiter * Bitte geben Sie die Anzahl Ihrer Mitarbeiter inkl. Zivildienstleistender und Freiwilliger an.

Budget (Kosten) * Bitte geben Sie das Budget oder die Kosten des Jahres 2009 an. Falls Ihnen die Zahlen nicht vorliegen, greifen Sie bitte auf die aktuellsten Zahlen zurück auf die Sie Zugriff haben.

Programm

Bitte geben Sie durch anklicken der Kästchen an, in welchen der aufgelisteten Bereiche Ihre Institution Kurse oder Veranstaltungen anbietet.

Programm *

☐ Musik

☐ Film

☐ Bildende Kust

☐ Theater

☐ Tanz

☐ Literatur

☐ Komedie und Kabarett

☐ Diskussionen

☐ Multimedia

☐ Andere

Internet

Bitte geben Sie an von welchen der folgenden "Web Service" Ihre Institution brauch
macht, in dem Sie die Box neben "Ja" oder "Nein" anklicken.

Bietet Ihr Haus "Online Ticket Service"an?

○ Ja

○ Nein

Versendet Ihr Haus "Newsletter" ?

○ Ja

○ Nein

Ist Ihre Institution in "Foren " oder "Bloggs" involviert?

○ Ja

○ Nein

Ist Ihr Haus registrierter "Twitter" Nutzer o.ä ?

○ Ja

○ Nein

Ist Ihr Haus bei "Facebook" o.ä. registriert?

○ Ja

○ Nein

Ist Ihr Haus Mitglied bei "Myspace"?

○ Ja

○ Nein

Benutzt Ihre Institution "Bookmarking Services", wie Delicious, Furl oder Net W?

○ Ja

○ Nein

Benutzt Ihr Institution "RSS" o.ä "Newsfeed Services" ?

○ Ja

○ Nein

Ist Ihre Institution Mitglied einer Kultur oder Künstler Netzwerkseite, wie z.B www.labforculture.org oder www.culture.info?

○ Ja

○ Nein

Benutzt Ihr Haus "Vlogs" (Videobloggs)?

○ Ja

○ Nein

Benutzt Ihr Haus "Google services"wie "Google waves, Google Docs?

○ Ja

○ Nein

Wie sehen Sie die neuen "Web tools"?

Meiner Meinung nach sind die neuen "Web tools"...(Bitte entscheiden sie sich jeweils pro Nummerierung für eines der Adjektive)

1 *

○ Gut

○ Schlecht

2 *

○ Fantastisch

◉ Grauenhaft

3 *

○ Nützlich

○ Nutzlos

4 *

○ Werthlos

○ Werthvoll

3.O´Reilly´s "Six Big Ideas" behind he concept of web 2.0 interpreted by later Literature

	Key Ideas
1	Individual production and user generated content: Publishing become accessible to the broad public and is used by a growing mass (Anderson, 2005; Middelton, 2007; Arnoldus M., 2010). This refers to publishing once own opinion on blogs or micro blog such as Twitter (H. Kwak, et al., 2010) , as well as Uploading videos e.g. on youtube (Arnoldus M., 2010) or commenting and tagging on existing content (Middelton, 2007). The easiness to upload self taken pictures on Flickr, or uploading own songs on pages as myspace, soundcloud, etc.
2	Harness the power of the crowd: Or "Crowd sourcing" is outsourcing on a broader scale, describing the possibility to source a huge population for certain task. iImakes use of "multimedia sharing sides" as Flickr or YouTube, where users generate content is available for re-usage. The multiple knowledge and creativity is filled in the same basket. The idea is based on the wisdom of the crowd concept, saying that the mass all together knows better than an individual (Surowiecki, J., 2004). Anderson brings here the example of the who wants to be a millionaire telephone joker (Anderson, C., 2007). "Personal free tagging" is another tool that contributes to this ideas, as "tag clouds" show the relative frequency of use and can serve as indicators for new trends (Middelton, 2007)
3	Data on epic scale: refers to the daily growing amount of data in the web. Many of the freely accessible databases and services such as Google contain a prodigious

Appendix

	amount of data increasing by terra-byte daily. In the case of services such as Google and Amazon this is contributed to by the user and aggregated by the consequence of the use of the service. The huge amount of content and the multiplicity of sources that becomes accessible through the web. That according.... to create an overflow of data for the individual. Making it difficult to be heard by the crowd (economics of attention). Social Networking sides and sides as you tube directly accumulate the content from the user
4	Architecture of participation: "Systems that are designed for user contribution, based on open sources provides architecture of participation. This fosters a development community that can take advantage of modular architecture to provide components. Therefore, though ongoing use of a service, the applications contributing to it are themselves improved. This mass-participation has for example led to the enhancement in the variety of search types provided by Google.
5	Network effects: refers to the economic concept of an increasing usefulness, with a growing number of users, exploited by the e.g. the social networking websites. In addition in the context of the web the term is linked to a new concept, what is called the long tail phenomena, referring to the fact that a large number of niche items in the web have a greater utility than a few big items. (Anderson C. 2004, 2007, 2009)
6	Openness: refers to the open source application that can be downloaded or used by any end user, free of charge. This "New Free" as Anderson (2009) calls it is based on a new philosophy. Many Google services fall in this categories as well as e.g. LibraryThing . (Anderson, 2009)

Source: (Anderson, 2007, pp. 20, O´Reily 2005, Middelton 2007,)