SPACES aims to present conceptual frameworks and empirical studies on economic action in spatial perspective to a wider audience. The interest is to provide a forum for discussion and debate in relational economic geography.

Editors
Harald Bathelt
Simone Strambach

Managing Editors
Heiner Depner
Katrin Kappes
Caroline Jentsch

ISSN
1612-0205 (Print edition)
1612-8974 (Internet edition)

© Copyright
Economic Geography, Faculty of Geography,
Philipps-University of Marburg, Germany

Harald Bathelt and Armin Gräf

Internal and External Dynamics of the Munich Film and TV Industry Cluster and the International Entertainment Sector

SPACES 2006-01
Acknowledgements. Many thanks are due to numerous individuals who have commented on the ideas put forward in this paper. Parts of this paper were written during a visit to the Department of Political Science at the University of Toronto in February 2005. We would like to thank Allison Bramwell, John Britton, Meric Gertler, Antoinette Handley, Tad Homer-Dixon, Jeff Kopstein, Rob Vipond and David Wolfe for their thoughts during this visit. A first draft was presented at the Symposium of German Economic Geographers in Rauischholzhausen in April 2005. Here, we received helpful comments by Christian Berndt, Peter Gräf, Britta Klagge, Anke Matuschewski, Ulrike Sailer, Ludwig Schätzl and Rolf Sternberg. Further, we would like to thank Wolfram Bonnet, Sylvia Heling, Andreas Kewes, Marc Sandmüller and Christina Weiß for contributing greatly to the discussions in this project and conducting interviews with us, as well as Clare Wiseman for her valuable comments throughout the course of the research process. We also owe Frank Oliver Schultz (Bavaria Filmstudios) and Stefan Vaupel many thanks for their support and enthusiasm. Last but not least, thanks are due to all interviewees for generously providing us with detailed information about the processes and structures in and behind the scenes of the Munich film and TV industry cluster.

Author's Information

Harald Bathelt, Faculty of Geography, Philipps-University of Marburg, Deutschhausstraße 10, D-35032 Marburg, Germany, E-mail: bathelt@staff.uni-marburg.de, URL: http://www.harald-bathelt.com

Armin Gräf, Faculty of Geography, Philipps-University of Marburg, Deutschhausstraße 10, D-35032 Marburg, Germany, E-mail: armin.graef@gmx.net
Internal and External Dynamics of the Munich Film and TV Industry Cluster and the International Entertainment Sector

Abstract. The aim of this paper is to analyze the impact of the advertising and Kirch crises on the Munich film and TV industry. We investigate which strategies firms have chosen to overcome these crises and how successful this has been. Of particular interest is the question how firms have benefited from the existing film and TV industry cluster and its internal networking potential. The study is based on a conception which emphasizes that local interaction or ‘buzz’ in clusters and interaction with external firms and markets through trans-local or global ‘pipelines’ create a dynamic which is key to understanding a cluster’s continued innovation and economic growth.

This study is based on participatory observation and semi-structured interviews with 65 Munich firms, as well as additional interviews with planners and media experts from the region. The results indicate that the regional, national and occasional international project networks have had a smaller impact on the Munich film and TV industry cluster than expected. On the one hand, local information flows and networks are quite segmented and do not have much overlap. On the other hand, linkages with international markets, access to financial sources and developments toward an integrated entertainment complex are in an infant stage. This paper concludes that the growth potential of the Munich film and TV industry cluster appears limited due to the structural problems observed.

Keywords. Film and TV production, Munich, entertainment sector, cluster, local buzz, global pipelines

JEL codes: L14, L82, R11, O31
1. Introduction

Based on the competencies of numerous local firms engaged in the development of fine mechanical and optical products (Biehler, Genosko, Sargl and Sträter 2003), several small film companies were founded in Munich in the early 20th century. Some of these firms, such as the former Münchener Lichtspielkunst AG (today: Bavaria Film), developed into major players of the German film industry during the ’Roaring Twenties’. While Berlin was the undisputed center of film making until the end of World War II, Munich established itself as an important production site for high-quality feature films (Horak 1996).

After the collapse of Hitler’s Nazi regime and the appropriation of Berlin’s Ufa Studios by the Soviet Union, Munich became the most favorable location for film producers in West Germany. This was due, in part, to the existing infrastructure for film production. Furthermore, the establishment of the Bayerische Rundfunk (BR), a broadcaster under public law, and institutions such as the Institut für Rundfunktechnik (IRT), were important milestones in Munich’s development into the dominant center of the German film and TV industry in the post-World War II period.

Another growth impulse resulted from the establishment of the so-called dual broadcasting system in 1984. Prior to that, only public broadcasters were allowed to operate in Germany. Since then both private and public broadcasting companies have been operating side by side, albeit not necessarily in a cooperative manner. Several private broadcasters and a large variety of production firms have emerged in Munich (van den Berg, Braun and van Winden 2001).

Today, Munich is the largest center of the film and TV industry in Germany, challenged only by Cologne, Berlin and Hamburg (Gräf and Matuszis 2001, Gräf, Hallati and Seiwert 2001). According to the sales tax statistics, the film and TV industry in the city and county of Munich consisted of a total of ca. 2,850 establishments (Table 1) and had sales of 6.47 billion Euro in 2004 (Table 2). According to a survey of the Indus trie- und Handelskammer für München und Oberbayern and Landeshauptstadt München (2003), the region’s multimedia and electronic media sector was even larger, consisting of approximately 8,300 firms which employed 55,000 people on a full-time or part-time basis and 66,800 freelancers. These firms had an estimated overall turnover of 16.6 billion Euros.¹

¹/. Both data sources should be interpreted with care. The latter numbers are based on a broader sectoral definition and even include small firms and those which are only partially involved in film and TV production. Their inclusion is based on a self-classification scheme and is likely less rigorous.
the ten largest German production companies are headquartered in Munich (Hachmeister and Anschlag 2003).

With the economic recession in 2001, a long period of steady growth in the film and TV industry in Munich ended abruptly. Shrinking advertising budgets of industrial companies not only hit the advertising industry (Jentsch 2004) but also had a severe impact on the private broadcasting stations. The latter introduced major cost-cutting strategies and put new film production projects on hold. In addition, the bankruptcy of the Kirch Group, a fully integrated Media Group headquartered in Munich, caused disarray in the film and TV industry. This is clearly reflected in the development of sales figures. From 2000 through 2004, sales in the Munich's film and TV industry decreased by 19.3%, from 8.01 billion Euro to 6.47 billion Euro (Table 2).

Using this as a point of departure, this paper analyzes local and non-local communication patterns and market linkages in the Munich film and TV industry cluster. The aim of the paper is to draw some conclusions about the growth prospects of this cluster and its potential to produce self-sufficient growth. This is based on a conception which emphasizes that clusters cannot be fully understood by simply analyzing the internal divisions of labor. It acknowledges that local interaction and learning are much stronger and durable if they are constantly enriched by feedback and new impulses from outside. The point is that local interaction or ‘buzz’ and interaction through trans-local or global ‘pipelines’ create a dynamic which is key to understanding a cluster’s continued economic success (Bathelt, Malmberg and Maskell 2004, Bathelt 2004, 2005).

In section 2, this conceptualization will be interpreted as a knowledge-based version and socially constructed extension of traditional regional multiplier models. Section 3 presents the empirical basis of this paper. In section 4, the consequences of the crises resulting from drastic cutbacks in advertising expenditures and the dissolution of the Kirch Group are discussed. Section 5 will unravel empirical evidence about the fragmentation and the limits of internal communication patterns before barriers of access to international markets and global finance will be discussed in sections 6 and 7. It will be shown that Munich’s media industry, unlike that in Los Angeles (Scott 2002), is not in the process of developing into

\[2\] A central part of the Kirch Group and an important basis of the Munich TV industry was the ProSiebenSat.1 Media AG, a conglomerate of several TV stations with total sales of 2.16 billion Euros and about 3,200 employees in 2000 (Kurp 2005a). After the dissolution of the Kirch Group, the ProSiebenSat.1 Media AG was acquired by the US media billionaire Haim Saban and subsequently restructured (Frankfurter Allgemeine Zeitung 2003b).
an integrated entertainment sector. Finally, conclusions about the barriers and structural limits of growth in the Munich film and TV production cluster will be presented in section 8.

2. Local Buzz and Global Pipelines: Towards a Knowledge-Based Conceptualization of Clusters

Despite globalization tendencies in economic production and trade, research has shown that closely intertwined regional concentrations of firms from a particular value chain, together with their supporting suppliers and service providers, continue to attract other firms of that chain (Porter 1990). A considerable part of economic production appears to be located in such clusters. As demonstrated in previous analyses, clusters are characterized by multiple dimensions, i.e. their horizontal, vertical, institutional, power and external dimensions (Malmberg and Maskell 2002, Bathelt 2002, 2005). This distinction helps to analyze clusters and identify strengths and weaknesses in their structure of social relations. However, it is misleading to assume that the advantages of clustering generally result in strong localized transaction networks. In fact, many studies have not been able to provide much evidence for the existence of clusters characterized by intensive local networks of material linkages and input-output relations. The necessity to apply a knowledge-based conceptualization of clusters to explain their continued growth and ability to innovate is, thus, a core argument of this paper (Maskell 2001, Pinch, Henry, Jenkins and Tallman 2003, Bathelt, Malmberg and Maskell 2004, Bathelt 2005).

This conceptualization argues that local interaction or ‘buzz’ and interaction through trans-local or global ‘pipelines’ create a dynamic process of learning, knowledge production and innovation which is key to understanding a cluster’s success (Figure 1). Co-location and face-to-face contacts within a cluster give rise to a particular information and communication ecology or local buzz (Storper and Venables 2004, Bathelt, Malmberg and Maskell 2004). This buzz consists of specific information flows which are continuously updated, intended and unintended learning processes and the application of the same interpretative schemes and mutual understanding of new knowledge and technologies. Messages and information are automatically received by those who are located in the cluster and who participate in its various social and economic spheres. Information, news, rumors, gossip and trade folklore about other cluster firms and their actions flows freely within such an environment (Uzzi 1997, Grabher 2002a, 2002b). Being located in the same region also enables firms to understand the local buzz in a meaningful way because co-location stimulates the development of a particular institutional structure shared by those who participate.
Recent work has questioned the dominance of local over non-local network relations and identified problems which can occur due to local over-embeddedness (Uzzi 1997, Oinas 1999, Amin and Cohendet 2004). In response, it has been contended that global interactions or pipelines are often at the core of individual and collective competitiveness of cluster firms (Owen-Smith and Powell 2004, Bathelt, Malmberg and Maskell 2004). In contrast to the type of communication and interaction occurring inside clusters, the knowledge flows in trans-local pipelines have a substantially different structure. They are targeted towards a pre-defined goal aimed at extending a firm’s knowledge base. They are also quite risky and require particular investments into new linkages with firms outside the cluster. The resulting interaction is greatly impacted by the degree of trust that exists between the pipeline partners. New trust has to be built which is a timely and costly process.

In this line of thought, the particular combination of local buzz and trans-local pipelines is believed to generate a reflexive process of knowledge creation within a cluster which provides the potential for enhanced learning capabilities and future economic growth (Figure 1). The local buzz benefits from trans-local pipelines through which additional subcontracts and new knowledge are pumped into the cluster. Pipelines which are open or ‘leaky’ function as sprinklers which support the diffusion of information within the cluster (Owen-Smith and Powell 2004). This stimulates additional buzz and serves as a basis for further product innovation and differentiation. Intensive local buzz helps firms to distinguish important from less important developments and enables them to recognize the significance of trans-local pipelines and acquire knowledge about the establishment of new pipelines.

This model of local buzz and global pipelines can be interpreted as a knowledge-based extension of conventional regional multiplier or export-base models (see Bathelt 2006). The latter models argue that the growth process of a region can be triggered if export activities to other regions and nations are expanded (e.g. Lloyd and Dicken 1972, Schätzl 1978). Following a simple multiplier logic, it is assumed that growing exports to other regions will create additional income in the region. This additional income will be partially spent for the consumption of other locally produced goods and, thus, produce growth even in those regional sectors which are not engaged in exports. This will result in further growth through consecutive rounds of consumption in the future. Over time, a regional multiplier effect will occur, the magnitude of which depends particularly on marginal consumption and import rates. In short, the regional multiplier approach views export activities as being the key factor influencing the growth of a regional economy. A policy initiative based on this approach would focus on the support and strengthening of the regional export base.
A problem of regional multiplier models is, however, that they confuse regional and national boundaries and neglect the importance of institutions and agents. Like other neoclassical models, they do not capture the real intentions and strategies of actors, the effects of their interactions and the social processes behind learning and innovation. Overall, their ability to understand regional growth processes is rather limited (Bathelt and Glückler 2003).

The buzz-and-pipeline cluster approach can be viewed as being a substantial improvement of such models. In this approach, external resources enter the cluster and stimulate rounds of recombination through which innovation and growth impulses result. In turn, they have an impact on other regions. This approach conceptualizes a reflexive process by including feedback loops of knowledge creation which result in increased innovation and competitiveness. As opposed to the neoclassical multiplier approach, it applies an actor perspective and builds upon the social processes at the core of economic processes. Through this, this conceptualization overcomes weaknesses of the multiplier approach.

In the subsequent sections of this paper, we will use this conceptualization to analyze the structure of local and extra-local linkages and knowledge flows in the Munich film and TV industry cluster. Thus we attempt to draw some conclusions about the prospects of the cluster to overcome the Kirch and advertising crises and produce self-sustained growth.

### 3. Methodology

This paper is based on extensive fieldwork, including explorative interviews, discussions with experts, field observations and semi-structured interviews which were conducted from July 2002 through August 2004 during three research trips to Munich. One of the authors stayed for three months with a major company of the Munich film and TV industry, which operates several facilities spread out through the city, to gain practical experience in this business. This involved active and passive participation in film shootings, as well as in the stages of studio preparation, planning and contract negotiation. In this phase, open, unstructured observations were made and recorded. This served as an important basis for the identification and analysis of value chains in the industry. In particular, existing value chains were found to differ substantially between different TV and film genres, generating a fragmented labor market (Gräf 2005). Since work in a particular TV format or film genre requires specific competencies, the corresponding value chains hardly overlap. As a result, a camera team specialized in TV shows would, for instance, not be hired for a film project.

Overall, 65 semi-structured interviews were conducted with actors from different value chains in the film and TV industry and different parts thereof (Table 3). In addition,
information was acquired through interviews with media experts and planners in the region. While the size of the companies interviewed varied significantly, most interviews were conducted with small and medium-sized firms (Table 4). This is representative of the structure of the film and TV industry cluster in Munich, which is largely dominated by the latter type of firms (Biehler, Genosko, Sargl and Sträter 2003). On average, interviews took about 60 minutes. They were recorded on tape, transcribed and condensed into a structured data matrix for further analysis. Although the firms interviewed were not selected randomly, the results from this research can still be viewed as being representative of the important structures and trends in the Munich film and TV industry cluster, due to the large number of interviews conducted.

Our paper primarily draws on 48 of these interviews which were conducted with core actors of the different film and TV production value chains, e. g. producers and postproduction executives. These individuals have extensive knowledge of and exercise control over substantial parts of the production process. They also make decisions about internationalization processes and international cooperation. The questions asked were split up into five section to acquire information about the processes and structures of social relations in the Munich film and TV industry cluster: (i) firm structure and history, (ii) interaction with local partners and institutions, and advantages of local networking, (iii) contacts with creatives and technical specialists from other regions and nation-states, and access to international markets and finance, (iv) linkages with related industries, and the development towards an integrated entertainment sector, (v) growth perspectives in the future.

4. Effects of the Advertising and Kirch Crises

Since 2001, the reductions in advertising expenditures, together with the crisis of the Kirch Group, have had a tremendous impact on the Munich media sector. The Kirch Group was originally established and led by one person, i.e. Leo Kirch. In 1956, Leo Kirch earned a large profit from buying and subsequently trading the rights of Frederico Fellini’s “La strada”. During the 1960s, he was able to acquire a mayor film library in the USA, the rights of which were then traded through his first company Sirius. After the introduction of the

\[3/\] It should be emphasized that interviews during studio productions are difficult to conduct because breaks are often not long enough to go through all prepared questions. Periods of hectic activity constantly alternate with long waiting times (DeFillippi and Arthur 1998). Therefore, interviews had to be condensed or questions split up into sections which were then asked at different times.
dual broadcasting system in 1984, Kirch started up, acquired or integrated several broadcasters, such as Sat.1, ProSieben, the pay TV channel Premiere, Kabel1, the sport channel DSF and the news channel N24, as well as production firms (e.g. ndF - neues deutsches Fernsehen) and other related activities of the film and TV industry (Frankfurter Rundschau 2002a, 2002b). The vertically and horizontally integrated Kirch Group, headquartered in Munich, developed into one of the dominant actors of the German film and TV industry. At the turn of the millennium, the Kirch Group ran into severe financial difficulties due to a number of structural problems and failures. These included false expectations in pay TV, financial losses of private broadcasting channels, the acquisition of overpriced film rights for sports events, i.e. soccer and Formula One (Müller and Hellmann 2005), overly hierarchical decision-making structures centered around Leo Kirch and a tendency towards closed, over-integrated group networks.

As a consequence, many people lost their jobs and numerous bankruptcies, restructuring activities and management buy-outs occurred when the Kirch Group ran into financial problems and eventually was dissolved (Frankfurter Allgemeine Zeitung 2002, 2003a). Firms which were previously part of the Kirch Group had difficulties acquiring new contracts. As one interviewee said: “Nobody believed us that we do not belong to Kirch anymore. We had to travel with pockets full of money because we had to pay everything in advance. To save money we had to cut back our staff like all other big production companies. We then acquired a lucrative deal with a broadcasting company in Cologne. The old practices and routines don’t work anymore.” The effects and problems that arose from this varied, however, between the main segments of the film and TV industry.

**Private Broadcasting Services**

The advertising crisis severely impacted the activities of private broadcasting companies. They had to suffer from a drastic reduction in advertising expenditures of private and public organizations and industries (Frankfurter Allgemeine Zeitung 2003b). This caused many employees to be laid off and restructuring activities to be undertaken within the broadcasters. Risky experiments of new TV formats were stopped and contracts for the production of new TV films cut to a minimum. Instead of new TV films and programs with an innovative content, low budget TV series and shows were extended (e.g. ‘Big Brother’, quiz and talk shows). As one interviewee put it: "... how many people are employed in a scenic

---

4/ From the very beginning, the media activities of Leo Kirch were strongly attached and committed to the Munich region due to personal bonds (van den Berg, Braun and van Winden 2001).
production such as ‘Tatort’ as opposed to a recording in the ... studio for a quiz show? And this has changed a lot and can be felt in all areas. In addition, the programs have become a lot worse in quality, there are many more repetitions, even on Saturday evening during Prime Time. It wasn't like this before and can be explained by the so-called financial austerity regime of TV production companies.” As part of this, formerly self-produced and licensed TV films were repeated in relatively short cycles.⁵

The above quote indicates that the impact of this crisis became even more dramatic with the Kirch crisis. Financial problems and the subsequent bankruptcy of the Kirch Group had direct consequences on employment as many employees and freelancers lost their jobs or businesses. In addition, the Group was split up and some new independent production and service firms were started. This, however, also had a positive effect on the structure of the cluster as it forced formerly closed networks to open up. Nonetheless, remnants of these networks still exist today; i.e. firms are often involved in joint projects with the same partners as before. There are signs, however, that over-embedded, rigid networks are beginning to break up.

Public Broadcasting Services

In the public broadcasting sector, the negative effects of these crises were less visible. In contrast, the dissolution of the Kirch Group even opened up new opportunities. Licensing prices for sports events and production services, as well as for the utilization of the former Kirch film library, dropped. In addition, it became easier for public broadcasters to hire specialized personnel. While these broadcasters were previously viewed to be somewhat outdated and hierarchical, specialists were now pleased with the relative employment stability in this segment.

⁵/ The effects of this crisis were quite persistent. It took until the end of 2004 before advertising expenditures reached the same magnitude as prior to the crisis. The broadcasters' turnover were, however, still somewhat unstable and the advertising business had not yet fully recovered (Frankfurter Rundschau 2005a, 2005c). In 2005, for instance, the pay TV channel Premiere produced gains for the first time ever (Frankfurter Rundschau 2006c). Its growth prospects were still viewed as being limited though because it was not able to maintain its broadcasting rights to cover live soccer games from the German Bundesliga (Frankfurter Rundschau 2005d). To become more independent from this source of finance, the ProSiebenSat.1 Media AG increased its ownership share in the quiz and shopping channels Neun Live and Sonnenklar TV to 100% (Frankfurter Rundschau 2005b). Although this media group did fairly well after a period of substantial restructuring, its future prospects were still unclear in 2006 since the German Office of Supervision of Cartels prohibited a merger with the German Springer Group, which is particularly dominant in print media and has large market shares in the newspaper market (Gangloff 2005, Frankfurter Rundschau 2006a, 2006b).
Producers
Production firms which were closely associated with the private broadcasters suffered most from the crises. They were under heavy cost pressure, as the number of film and TV productions decreased and the broadcasters reduced prices for external production contracts. Bankruptcies and restructuring activities to cut costs were the result. Through this situation, many producers were caught in a vicious circle. They focused on cost efficiency and high productivity instead of trying to come up with new, creative ideas which could have supported them in getting access to new markets outside the Munich film and TV industry cluster.

The dissolution of the Kirch Group also caused a growing number of production companies to be spun out into the market of independent film production (e.g. management buy-outs), thus creating more competition in this segment. As a result, markets became tighter and production firms began giving up their specialization in particular segments. Instead, they began to diversify. Producers of movies also started to subcontract work to Eastern Europe to take advantage of low-cost production in these countries (i.e. Czech Republic, Baltic States).

In addition, it became more difficult for independent producers and film distributors to obtain finance for new projects from banks. This was a result of the so-called Basel II agreement in which banks demanded stricter requirements and greater security from the firms in granting bank loans (Nörr, Stiefenhofer and Lutz 2004). As one respondent stated: “All the small producers are moaning right now because they cannot perform overlapping projects. Because they would have to give double security but already had problems in finding a bank which says: ‘Fine, we issue a security of 100,000 [Euro].’ This is one of the biggest problems. It is a catastrophe!”

Suppliers, Service Firms and Freelancers
Of course, the whole supplier sector of the film and TV industry was affected by the crises. As the number of film-related projects declined, many firms reduced the number of permanent positions and, instead, asked their former employees to work for them as freelancers. Even highly qualified personnel had difficulties acquiring new contracts. The owner of a postproduction firm said: “Everyone resists employing people on a permanent basis because nobody wants fixed costs. To hire freelancers is okay, but the market is of course saturated. The fact that Kirch is broke and other companies have also gone downhill means that the market is swamped, by cutters in our specific case, many of which are quite good.”
Those jobs that were available were often not very advanced (particularly in postproduction). Therefore, people were forced to accept almost every offer, even in less sophisticated areas. In addition, existing technologies in the studio and postproduction segment were not replaced or updated as quickly as before, creating an investment gap and negative feedback loops in the industry.

5. Local Communication and Information Flows

Networks of communication and information flows in Munich are seemingly much stronger and diversified than in many other German media centers (e.g. Bathelt 2005, Krätke 2002). This is due to the broadly diversified vertical and horizontal dimensions of the Munich cluster and the long value chains which exist. In each stage of the value chain in film and TV production, a substantial number of firms, suppliers and service providers can be found in Munich (Moßig 2004). However, the local buzz is not as rich as one would expect due to a number of structural problems which are explored in the subsequent subsections.

Segmented Value Chains

The relatively low density of local communication and information flows is related to the fact that the existing value chains are extremely segmented (Gräf 2005). This segmentation occurs along three dividing lines, i.e. by media branch, TV format and broadcasting group.

(a) By media branch (advertising, filming, TV production)

Despite similar technologies and tasks, different contexts of TV and film production exist which are, for instance, associated with different problem-solving activities and routines. Over time, this has encouraged individuals to become overly specialized, causing the labor market to be extremely fragmented.

(b) By TV format (film, documentary, series, show)

Different TV formats require specific technical skills and differ in terms of creativity, organization and sequence.
(c) By broadcasting group (private vs. public broadcasting service)

There are two broadcasting groups in the Munich film and TV industry cluster which have developed their own producer and supplier networks, i.e. the Kirch Group (including ProSieben, Sat.1, Kabel1, Premiere) and the public broadcasting services (Bayerischer Rundfunk, regional ZDF-Studio), including the Bavaria Film network. These networks are mutually exclusive and could be classified as quasi-integrated, similar to the configurations of economic networks described by Leborgne and Lipietz (1991). One respondent described this as follows: “We have only found networks in conjunction with these big conglomerates. I would say the old Kirch Media. Yes, with all the associated companies when Leo Kirch invited 250 managers to his house up on the hill ..., sealed off from the outside world for three days. Other external producers were not invited. They didn’t find out much about these meetings because everything was kept quiet, while the people inside, of course, only thought about maximizing profits. The same can be said for Bavaria Film and its relation with public broadcasters. Many of the activities behind the scenes are about wheeling and dealing. It’s a network of its own. As a publicly-owned firm, it is understandable that I would primarily go to my own subsidiaries because this is where my money is. And this is the way it is. There are networks out there which we can’t really get into."

There are exceptions of firms, however, which do not clearly belong to any particular broadcasting group (e.g. MET, TV60). They basically also form a kind of network, as one interviewee mentioned: “There are producer networks which do not belong to these closed circles but they know quite well what’s going on because of the networking which takes place between different levels. ... You always work with the same people and exchange your ideas with these same people. And you just get to know everyone. Contacts are generally maintained over time. ... Through this, information flows are kept alive.”

As mentioned before, however, the exclusive character of the networks of the broadcasting groups has begun to dissolve, since production companies, such as ndF, try to conduct business with all broadcasters and cover the whole market. Core actors, such as the Bavaria Filmstudios, could play an important role in the process of creating more diversified, variegated project networks because they already have contracts with each of the groups. Thus far, however, they do not mediate between the groups.

---

64. The RTL-Bertelsmann Group centered in Cologne is a third group which has developed its own network of project partners (Moßig 2004). There is clearly strong competition and rivalry between these three networks at all levels of the production chain. This also results in competition between the media locations Cologne and Munich. As suggested by Scott (1999), a close association exists between the localized structure of economic activity and the image of the respective place (see, also, Krätke 2002).
**TV Production**

Many production and postproduction firms (e.g. MET, TV Werk) have located their facilities to Munich to be close to the broadcasting services which are their main customers. Consequently, they have close contacts with the local broadcasters. Overall, Munich’s TV production basis is fairly strong and has not been undermined through the Kirch crisis. As Gräf (2005) has shown, local suppliers and service firms play a decisive role for the Munich broadcasters. To be able to make quick adjustments, coordinate production and remain flexible, they largely rely on regional partners in their projects. The people who participate in these projects and networks, however, have not always been based in Munich. They have their own histories and backgrounds which influenced the decision to leave their former locations (e.g. Frankfurt/Main, Cologne, Hamburg) and move to Munich.

Relocation tendencies to Berlin which were supposedly a threat at some point after the German Reunification were not very strong at the time of our investigations. In contrast, we identified hints that more small niche broadcasters will be established in Munich in the future. Previous trends to move from Munich to Berlin have not continued. While some artists are still likely to move to Berlin (i.e. actors, writers, content producers), others have already returned to Munich after spending only a few years in Berlin.

The cases of Plazamedia and the Bavaria Filmstudios, which increasingly rent out studio space to low-budget TV shows and series (such as daily soaps, TV advertising channels), show that the TV production networks in Munich are beginning to face a ‘creativity’ dilemma, similar to that encountered in the Leipzig advertising industry (Jentsch and Bathelt 2005). On the one hand, they need to be more creative and innovative to tap into new markets and win new customers. On the other hand, they introduced cost-cutting measures which have left few resources for innovative thinking.\(^7\)

**Film Production**

Besides Berlin, Munich is traditionally the most important location of motion picture production in Germany which dates back to the early 20th century. This is related to the successes of early start-ups, such as the producer of camera equipment Arnold & Richter

\(^7\) One production firm in Unterföhring exemplifies this dilemma. They produce exclusively for local broadcasters and usually cooperate with a relatively fixed network of local partners. Due to their past successes, they have never had to actively acquire new contracts in making systematic contact with potential customers and still do not operate that way. They are a producer in a niche segment and, as one of the owners admitted, were lucky that they were hardly hit by the Kirch crisis.
Cine Technik in 1917 (today: ARRI) and the movie theater and production firm Münchener Lichtspielkunst AG in 1919 (later: EMELKA; today: Bavaria Film). These firms were among the innovative ventures in the early stages of the development of the motion picture industry and established a tradition of film production in Munich (Biehler, Genosko, Sargl and Sträter 2003). Today, film production is still important in Munich, although it seems that TV production has become increasingly dominant. Problems in film production exist despite the fact that Munich has a large concentration of investment companies and financial institutions providing financial support for motion picture production. This includes subsidiaries of the Hollywood Majors, German distributors, such as Constantin, and one of the most important public film funds in Germany, i.e. the FilmFernsehFonds Bayern.

International recognition of Munich’s motion picture industry has remained limited, however. Major successes, such as ‘Das Boot’ have been the exception. Most motion pictures produced in recent years were primarily directed towards the German market and did not receive international attention. An ‘identity’ dilemma has developed whereby the pre-World War II tradition of film production, which is still being used to promote the city as an international media location, disappears. This is because TV production becomes the core business in Munich which is clearly visible in the way the Bavaria Filmstudios rent out their studios. Berlin-Babelsberg seems to go another route and tries to promote itself as the coming center of motion picture production. This strategy has had some success, as indicated by the production of ‘Mission Impossible 3’ in the Babelsberg studios.

**Fragmented Communication Patterns in Different Localities**

Overall, cluster firms seemingly benefit less from local buzz than expected. Many interviewees mentioned that they had relatively little contact with others in their industry and rarely go to trendy bars and cafes which are well-known as meeting places for the media business. Many of the people interviewed mentioned that they primarily depend upon personal networks which they themselves or their close colleagues have established to get new information about the industry and customers. Information exchange with these colleagues is quite regular and takes place on a daily basis in the office. This exchange is, however, neither fully systematic nor ubiquitous. It seems exceptionally strong within particular ‘communication islands’ described below and is usually limited to the respective office spaces. It does not easily spread to other localities and circles. This is because unintended, less organized meetings and interactions, where diverse information flows between different organizations can occur, are less important according to our interviewees. In the areas of animation and postproduction, cost-based competition causes past interfirm communication and exchange to be reduced to a minimum. One interviewee explained this
using a good example: “We did a tape and that was passed on to a competitor, and they trashed it because there was a minor mistake somewhere in it. Nothing really drastic. Still, there was no opportunity for consensus. In England, it’s different. … [Often people] are both colleagues and competitors at the same time. But at the end of the day, they work together. One does the sampling, somebody else does the effects, and another person does the title and the sound. They work together and not against each other. Over here in the past, people have tried to get everything, making sure that others get nothing at all.” Overall, this creates fragmented communication patterns.

Similar to observations by Grabher (2002b), personal address lists and private cellular phone numbers (i.e. the ‘know-who’) have become decisive anchor points in the processes of exchanging, distributing and acquiring information. Of course, these networks are not purely local. They have developed over time and are based on the actors’ personal experiences and backgrounds. The networks have a particular face-to-face history which has helped establish joint interpretative schemes over time (see Bathelt, Malmberg and Maskell 2004).

(a) Media Park Unterföhring

Along a stretch of several hundred meters close to the S-Bahn station Unterföhring, there is a large concentration of media firms, including ProSiebenSat.1 Media AG, Bayerischer Rundfunk and the Bavaria Filmstudios (Figure 2). Despite their close proximity, there is practically no interaction between the employees of these organizations. The firms’ policy is to fully concentrate on themselves and ignore their neighbors. Employees from other firms are not even allowed to show up for a coffee or lunch break in their dining halls and cafes. In-depth information exchange in the Media Park Unterföhring is thus non-existent. The only strong local linkages which exist are those between the broadcasters and some of the production firms which produce for them on a virtually exclusive basis (e.g. between Bayerischer Rundfunk and Megahertz and between ProSieben and SZM). The Media Park Unterföhring is characterized by a high degree of anonymity and lacks public meeting places, such as street cafes or restaurants, where individuals can interact.\(^8\)

Institutions, like the Bayerische Akademie für Fernsehen (BAF), which is located around the corner, could act as a place for information exchange but have so far failed to mediate

\(^{8}\) This structure has some similarities with the ‘distanced neighbor’ paradox identified in Leipzig (Bathelt 2005).
between the different broadcasters and production firms or to encourage more intensive interactions.

(b) Geiselgasteig

The Bavaria Filmstadt in Geiselgasteig is also characterized by a large concentration of TV and film-related firms, including smaller broadcasters (i.e. RTL II, Tele 5), numerous studios for film and TV production and shows (i.e. Bavaria Filmstudios), Bavaria Filmproduktion, which is closely related with the public broadcasters, and other independent film producers (Figure 2). At first glance, Geiselgasteig appears to be more open than Unterföhring. There are meetings places, such as cafes and places where people from different firms can sit together and have lunch. Further, people meet on the streets and chat, as one interviewee mentioned. The people interviewed in Geiselgasteig also confirmed that this location was more conducive for communication and interaction between individuals than Unterföhring. However, they also pointed out limitations similar to those in the Media Park Unterföhring. Firms, such as RTL II and Tele 5, are often insular in their activities, ignoring the existence of other firms.

(c) Communication Islands

There are, however, small communication islands in different parts of Munich, such as TV Werk, parts of Schwabing (Figure 2) and, at an earlier stage, the former Stetten barracks and the Lodenfrey area, a fashionable district of Munich where intensive, open communication patterns have developed (Gräf 2005). Such areas appear trendy and ‘hip’ to media people. These are places where established ideas are constantly combined with new ones, existing routines challenged by new combinations and creative ventures tested. It almost seemed as if these communication islands were like homes to the employees, and not their workplaces. At the same time, our interviews indicated that these locations are fairly closed and do not interact as intensively with other areas in the Munich film and TV industry cluster.

6. International Linkages and Market Access

Although local networks of communication and knowledge are important, the economic success of clusters often depends on the development and maintenance of trans-local pipelines which provide access to international markets and finance (Bathelt, Maskell and Malmberg 2004, Bathelt 2005). Of course, project networks of Munich firms are not
restricted to regional actors because Munich is the leading cluster of film and TV production in Germany. Depending on the particular type of film or TV project and the financial support required, projects can involve firms from other German and international media centers. As will be discussed below, however, international linkages and market access are surprisingly weak, limiting the prospects of future economic growth.

**TV Production**

In the area of TV production, there are only few linkages with foreign markets, such as those of the public broadcasters with their Austrian, Swiss and French counterparts. The joint French-German TV channel ARTE, located in Strasbourg and Baden-Baden, is an exception. Most linkages are related to joint shows or the exchange of TV formats, such as criminal series. The successful licensing of TV programs, such as ‘Derrick’, a successful criminal series which has been dubbed and sold to many countries worldwide, is rare. The TV market is primarily viewed as a national market with many ‘cultural particularities’. One interviewee emphasized that it is very difficult to sell German formats to other countries.

It seemed that the public broadcasters have stopped their efforts to establish international linkages. A leading representative of one broadcaster mentioned that such attempts were made a while ago. However, as he phrased it: “The Brits are too egoistic, the Eastern block has no money, Italy is too chaotic...” Only few co-productions exist which mainly focus on the joint financing of TV formats. The Munich media sector is often not involved in the actual production of joint documentaries and TV films, an activity which is done elsewhere. The representative of one public broadcaster described such co-productions as being difficult because they often involve conflicts due to divergent interests.

We were also surprised to find a lack of strong initiatives to provide better access to the Eastern European markets through the organization of co-productions or licensing. Such access could be important in the future as the Eastern European media markets have only recently opened up and are likely to grow. Interaction is strongest in the area of studio production and decoration, due to low labor costs in Eastern Europe. In contrast, attempts to attract US and other foreign movie productions to Munich have been less successful despite the long history of such endeavors (e.g. productions of Alfred Hitchcock and Luchino Visconti).
Joint international activities in the area of movie production have primarily focused on co-financing. German distributors, for instance, carry a substantial portion of the costs of Hollywood Majors which produce ‘blockbuster movies’ for global markets (Scott 2002). This tradition of co-financing dates back to the pre-World War II period. As opposed to co-financing, co-productions are rare. They sometimes occur when international involvement enables German producers to access additional funds or tax preemptions as in the case of Canada. A small producer mentioned in this context: “The most important things I get at the moment are the so-called international tax incentives. I have already done a few films in Vancouver and I was quite pleased to film there.” Since the 1980s, German movies have occasionally been successful in international markets (e.g. ‘Die Blechtrommel’, ‘Das Boot’, ‘Lola rennt’). Low-budget, high-profile German movies (so-called Autorenfilm) associated with independent directors, such as Rainer Werner Fassbinder, have also received much attention by international critics but did not sell to a large audience.

Despite these successes, there have been no real efforts to engage in co-productions with Hollywood producers. The Hollywood Majors are seemingly not very interested in such cooperation as they do not require external support. Contacts with German producers are typically accomplished through subsidiaries and not the Majors themselves. Such contacts develop, for instance, when US producers intend to produce at European sites.

There are some producers within the Munich media industry cluster which have a very strong focus on international co-productions and try to implement international co-financing arrangements. As one film producer mentioned, networks are primarily established during international festivals and fairs. Co-financing networks encompass partners in the US, Canada, England and Australia, while co-productions primarily take place in Eastern Europe and Canada, due to cost advantages and tax incentives. Because of the difficulties of accessing financial resources in Germany, international productions rarely take place in Munich. One interviewee regretted this because it would block off opportunities for internationalization: “I would have liked to have this big international project here in Bavaria but it failed because the public film fund said that they wouldn’t do it. ... The problem was the financing. And regardless of what the conditions are [such as] nice weather and great cafes or other things this is totally irrelevant for me as a producer.”

---

9/ This supports observations about the importance of leading international trade fairs in other industries (Bathelt and Schuldt 2005).
This leads to a ‘global-local paradox’. Although there are some independent producers which establish creative, technical and financial pipelines with markets in other countries, the Munich cluster hardly benefits from these linkages because it is not possible to establish a local platform for production activities.

**Postproduction**

Similar to the trend in studio production and decoration, postproduction activities are increasingly subcontracted to Eastern European low-cost locations. Often, there is no direct connection, however, between the Munich producers and foreign postproduction firms. One major German producer, for instance, typically hires Munich firms for postproduction activities. At the same time, this producer creates strong cost-cutting pressure which, in turn, stimulates the postproduction firms to look out for partners in Eastern Europe. Due to these practices, they strengthen the networks of competitors in Eastern European which may become a threat in the future.

The former Werk Group, which had established a large international production network with subsidiaries in many cities and countries (e.g. Frankfurt/Main, London, New York, Los Angeles) including strong linkages to Hollywood, is an interesting exception (e.g. Krätke 2002). Due to these linkages, the Werk Group was able to acquire many international contracts, some of which were fulfilled in Munich. Such linkages brought contracts, expertise and growth to the Munich film and TV industry cluster. Meanwhile, the Group dissolved and split up as a consequence of financial problems related to the media crisis. Parts of the former Werk Group still exist as independent postproduction firms but are hardly able to establish new international linkages because they are too small. As one owner mentioned, they benefit from trans-local pipelines which were established by the former Werk Group and have existed over a longer time period.

Overall, most postproduction firms we interviewed were surprisingly passive with respect to the acquisition of contracts and had few external contacts with customers in other regions or countries.


In addition to the lack of trans-local pipelines in the Munich film and TV industry cluster, inter-sectoral linkages between different segments of the cluster were also identified as being weak in our study. Such linkages are an important factor in the growth trajectory of the Hollywood media industry cluster, encouraging the establishment of an integrated
entertainment complex (Scott 2002). Munich does not, however, display similar tendencies as will be shown in the next subsections. The tendency of building new linkages between different sectors, such as that between information technology and media (e.g. digitalization of activities, introduction of new digital products and services) which was observed in Munich in the mid 1990s (van den Berg, Braun and van Winden 2001), has seemingly not developed further.

TV Production

Most TV productions are financed by German broadcasters, even though different models exist as to how this is done: (a) fully financed productions, (b) combined financing including public film funds or financial resources of production firms, (c) international co-productions (which might have the character of co-financing but are rare), (d) joint financing by several production firms and subsequent sales to broadcasters. The latter option is unlikely to work out in periods of crisis when the number of new productions is being reduced.

Public broadcasters have suffered from stagnation in their financial budgets. Due to this, some people have suggested that the TV fees paid by viewers should be increased to stimulate additional productions. The effects of this would be unclear though. In the end, it would be a political decision of the broadcasters as to how this money should be spent. As opposed to the public segment, private broadcasting services have experienced a drastic cutback in their budgets due to the reduction in advertising expenditures. As described above, this has led to a decline in external production contracts and had strong effects throughout the whole production chain (Table 1 and Table 2).

Other sources of additional finance are not well developed in the Munich region. With the exception of the Bavaria Filmstadt in Geiselgasteig, merchandising activities are underdeveloped. Even successful production firms have a low variety of merchandising products and sell only small quantities of videos or DVDs to individual customers. A problem is, of course, that the merchandising rights are often not in the hands of the production firms. But even the broadcasters do not systematically expand and advertise such products. It seems that the development of merchandising is in an infant stage and the potential benefits are widely underestimated. As one interviewee confirmed: “Yes, 

---

10. As one interviewee mentioned, it takes 12 years before the licensing rights of contract work shift from the customer to the production firm. In the case of mixed financing, including money from public film funds, licensing rights are transferred back to the production firm after six or seven years.
merchandising has always been one of our biggest weaknesses which I have attempted to address in my discussions with the Association of Producers. The TV companies and contract producers never grant us any rights. We have to give everything away. ... As in the case of the [particular] comedy ... we produce, the ... public broadcaster treats merchandising in a rather unprofessional way. There are some ideas in our house to get things going but the best you can hope for is to find coffee cups with a small logo... glued to it. Together with our co-producer we attempted to at least retain our internet rights in that we said: ‘Okay, we will cut part of our production costs and secure our internet rights by creating a website.’ These discussions lasted about four months and did not succeed anyway. And again, we had nothing to go with."

Further, the establishment of licensing agreements with foreign broadcasters is often not planned in advance. Exceptions, such as ‘Derrick’ and ‘Tatort’ where this has worked, have occurred arbitrarily. If such agreements were to be expanded in the future, more TV productions would have to be done in English because there is no demand for German or dubbed TV formats. Larger networks which combine the TV industry with music production are also not very strong due to the crisis experienced in the music sector. Overall, expansion in the entertainment sector has been limited in Munich. In addition, firms seemingly do not try to broaden their products and services to other segments of the media industry. 11

Film Production

As opposed to TV production, film funds and co-financing arrangements with foreign partners are more important in the segment of movie production. Budgets are also much higher than those for TV productions. There is also great potential for substantial growth in the area of merchandising. At present, however, this potential is not well. Earnings from product placements are another area which has a large potential to expand in the future.

Co-financing arrangements of German productions with US partners which could help increase access to international markets are virtually non-existent. Contacts with US production firms usually take place with their subsidiaries. The Hollywood Majors are mostly

11/ This is illustrated by a firm which produces 3D animations in the area of architecture (e.g. animations of trains and cellular phones). The founder of this company mentioned that they do not intend to enter the advertising, film and TV markets, even though these have contracts which require similar competencies. According to the interviewee, individual market segments are characterized by fairly closed networks and it would be difficult to enter other genres. It seemed that the firm did not actively acquire new contracts. Instead, they relied on a small number of core customers.
interested in finding partners for co-financing rather than co-production. Due to their market power, they are able to play foreign movies at unfavorable times when they are shown in the movie theaters. It is, therefore, hardly possible for a foreign movie to be successful in the US market without the support of the Majors.

Although there are numerous private film funds located in Munich, it is hardly possible for local independent filmmakers to access these financial resources. As one producer complained, these funds invest mostly in big Hollywood productions because the rate of return is much higher and more secure than that expected from German films. In 2003, private German media funds amounted to a total of 1.7 billion Euro and 2.5 billion Euro of equity and bonded capital, respectively (Kurp 2005a). In Hollywood, this source of financing is also referred to as ‘stupid German money’ (Kurp 2005b). Related to the ‘global-local paradox’ mentioned above, this creates a kind of vicious circle: while independent producers in Munich are not able to mobilize enough money for internationally competitive movie productions, local private media funds even strengthen the US counterparts from Hollywood, contributing to a growing gap in the availability of financial resources.

Overall, the success of some German movies in foreign markets has not had much of an effect on the budgetary situation of the production firms. Neither has it become easier to acquire financial funds, nor has the amount of available funds grown.

8. Conclusions: Barriers to Growth in the Munich Film and TV Industry Cluster

Our paper argues that a cluster’s economic success is not only based on internal networks of supplier and customer relations but also on a strong external dimension, involving market and technology linkages with actors in other regions and countries. It proposes that local interaction and learning are much stronger and durable if they are constantly enriched through feedback and new developments from outside. The particular combination of local buzz and trans-local or global pipelines is believed to generate a reflexive process of knowledge creation within a cluster. From these reflexive processes, enhanced learning capabilities and future economic growth are likely to result. In this respect, the buzz-and-pipeline model can be interpreted as a knowledge-based extension of export-base models (Bathelt 2006). In this paper, we have analyzed the structural effects of the recent economic crises in order to draw some conclusions about the growth prospects of the Munich film and TV industry cluster and its potential to produce self-sufficient growth.
Our investigations have shown that the Munich film and TV industry cluster has been severely impacted by the advertising and Kirch crises. Many companies went out of business causing massive job losses. The subsequent orientation towards low-cost TV productions has not contributed positively to the knowledge base of the cluster, limiting the prospects of getting access to new markets outside of Munich. As of today, the effects of these crises are still visible and have not yet been overcome. The evaluation of the Munich media sector by van den Berg, Braun and van Winden (2001) as being very strong, well developed, diversified and modern, therefore, seems much too positive given the structural problems identified in this paper.

Cluster firms obviously benefit less from local buzz than expected, due to the existence of highly segmented value chains. Although we were able to identify what we refer to as communication islands in different parts of the city, these do not interact intensively with one another and are unable to function as hubs for dedicated information transfers. In this respect, the dissolution of the Kirch Group can be viewed as an opportunity to establish a new localized communication ecology. Our research provides evidence that over-embedded, rigid networks in Munich’s film and TV industry cluster are beginning to break up.

Further, evidence has been presented which shows that linkages with external markets and access to international finance are surprisingly weak, thus limiting the prospects for future economic growth. Actors of all stages of film and TV production appear quite passive in acquiring new partners abroad. The existing lack of financial resources seemingly serves to aggravate this situation. Although there are some producers who establish trans-local pipelines in creative, technical and financial fields, the Munich film and TV industry cluster does not benefit much from these linkages. Additional sources of finance, apart from broadcasting services and public film funds, are not well-developed. The use of merchandising strategies and the development towards an integrated entertainment complex are also in an infant stage.

Given these structural weaknesses, the growth prospects of the Munich film and TV industry seem limited if we take the implications of the buzz-and-pipeline model used in this paper seriously. There are, however, chances for institutional renewal related to the dissolution of the rigid networks of the former Kirch Group. Through this, more intensive information and communications flows could occur in the future. This could also become a focus of policy initiatives. Finally, the effects of stronger internal networks might not be that strong if the actors continue to neglect external business relations in other regions and nation-states.
References


Frankfurter Rundschau (2002b): Aufstieg und Fall im Zeitraffer (Rise and decline at fast motion). 9 April, p. 10.

Frankfurter Rundschau (2005a): ProSieben-Sat.1 verfehlt Ziel (ProSieben-Sat.1 doesn’t meet its goals). 28 January, p. 11.


### Table 1. Number of Establishments in the Munich Film/TV and Advertising Industry Cluster, 2000 – 2004 (Source: Computed from Bayerisches Landesamt für Statistik und Datenverarbeitung 2006)

<table>
<thead>
<tr>
<th>Industry Branch</th>
<th>Establishments 2000</th>
<th>2001</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcasting</td>
<td>43</td>
<td>48</td>
<td>54</td>
<td>51</td>
</tr>
<tr>
<td>Film &amp; TV production and</td>
<td>953</td>
<td>987</td>
<td>1,020</td>
<td>1,043</td>
</tr>
<tr>
<td>Film distribution and other services</td>
<td>116</td>
<td>105</td>
<td>110</td>
<td>104</td>
</tr>
<tr>
<td>Advertising</td>
<td>1,980</td>
<td>1,979</td>
<td>1,973</td>
<td>2,084</td>
</tr>
<tr>
<td>News agencies/ journalists</td>
<td>1,391</td>
<td>1,409</td>
<td>1,494</td>
<td>1,647</td>
</tr>
<tr>
<td>Total</td>
<td>4,483</td>
<td>4,528</td>
<td>4,651</td>
<td>4,929</td>
</tr>
</tbody>
</table>

### Table 2. Sales in the Munich Film/TV and Advertising Industry Cluster, 2000 – 2004 (Source: Computed from Bayerisches Landesamt für Statistik und Datenverarbeitung 2006)

<table>
<thead>
<tr>
<th>Industry Branch</th>
<th>Sales in 1,000 EURO 2000</th>
<th>2001</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broadcasting(1)</td>
<td>2,687,337</td>
<td>3,475,000(2)</td>
<td>3,352,000</td>
<td>3,457,924</td>
</tr>
<tr>
<td>Film &amp; TV production and</td>
<td>2,663,976</td>
<td>2,213,868</td>
<td>2,194,874</td>
<td>2,105,908</td>
</tr>
<tr>
<td>Film distribution and other services</td>
<td>2,536,655</td>
<td>2,626,075</td>
<td>847,298</td>
<td>776,819</td>
</tr>
<tr>
<td>Advertising</td>
<td>2,118,914</td>
<td>1,710,000</td>
<td>1,244,000</td>
<td>1,404,026</td>
</tr>
<tr>
<td>News agencies/ journalists</td>
<td>123,730</td>
<td>134,775</td>
<td>128,559</td>
<td>130,995</td>
</tr>
<tr>
<td>Total</td>
<td>10,130,612</td>
<td>10,159,718</td>
<td>7,766,731</td>
<td>7,875,672</td>
</tr>
</tbody>
</table>

Note:

(1) Public broadcasters are not included.

(2) Due to the merger of the private broadcasters ProSieben and Sat.1 into the ProSiebenSat.1 Media AG, sales in Munich’s broadcasting sector increased by ca. 850 million Euro in 2001. Prior to 2001, Sat.1 used to be headquartered in Berlin.
Table 3. Number of Firms and Institutions Interviewed in the Munich Film and TV Industry Cluster by Media Branch, 2002 – 2004 (Source: Survey Results)

<table>
<thead>
<tr>
<th>Media Branch</th>
<th>Number</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TV-Station</td>
<td>5</td>
<td>7.7</td>
</tr>
<tr>
<td>Production firm</td>
<td>24</td>
<td>36.9</td>
</tr>
<tr>
<td>Postproduction &amp; service firm</td>
<td>16</td>
<td>24.6</td>
</tr>
<tr>
<td>Freelancer</td>
<td>16</td>
<td>24.6</td>
</tr>
<tr>
<td>Media institution</td>
<td>4</td>
<td>6.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65</strong></td>
<td><strong>99.9</strong></td>
</tr>
</tbody>
</table>

Table 4. Number of Firms Interviewed in the Munich Film and TV Industry Cluster by Size, 2002 – 2004 (Source: Survey Results)

<table>
<thead>
<tr>
<th>Number of employees</th>
<th>Number</th>
<th>Share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 10</td>
<td>40</td>
<td>61.5</td>
</tr>
<tr>
<td>11 – 50</td>
<td>11</td>
<td>16.9</td>
</tr>
<tr>
<td>50 – 100</td>
<td>6</td>
<td>9.2</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>8</td>
<td>12.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>65</strong></td>
<td><strong>99.9</strong></td>
</tr>
</tbody>
</table>
Figure 1. The Dynamics of Local Buzz and Global Pipelines (Source: Bathelt, Malmberg and Maskell 2004, p. 46)
Figure 2. Location of Important Firms and Institutions in the Munich Film and TV Industry Cluster, 2004 (Source: Based on Survey Results)