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Changes in the German Urban System—A Financial-Sector Perspective

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Abstract Urban systems analysis and especially the seminal contributions of the Globalization and World Cities Research Network (GaWC) so far mainly rely on the analysis of national and international office geographies of advanced producer services firms. This paper shows how the geography of demand-supply relationships and associated knowledge flows adds important qualitative information to the office geographies of the Globalization and World Cities Research Network. It contributes to our understanding of intercity relations and networks—and thus of urban systems more generally. We illustrate our approach by looking at private equity firms and their knowledge management strategies in Germany. Empirically, we analyze private equity firms' business relations and networks with external partners as well as their geographical organization. While private equity firms' geographical organization in Germany is characterized by decentralized concentration with nodes in Frankfurt and regional financial centres, there is evidence that among the latter Munich plays a special role. Only in Munich has private equity—cross-fertilized by other local financial actors—initiated a self-supporting development which strengthens Munich as a financial centre. The paper illustrates how the dynamics of private equity and its knowledge management lead to Germany's financial system having a more tiered structure and how qualitative network analysis can help deepen our understanding of urban systems development.

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Veränderungen im deutschen Städtesystem – eine finanzgeographische Perspektive

Zusammenfassung Jüngere Untersuchungen von Städtesystemen, insbesondere die Beiträge des Globalization and World Cities Research Network (GaWC), beruhen bisher überwiegend auf der Analyse nationaler und internationaler Bürostandorte von unternehmensbezogenen Dienstleistungsunternehmen. Demgegenüber zeigt dieser Beitrag, wie die Geographie von Nachfrage- und Angebotsbeziehungen sowie von Wissensflüssen die Bürostandortforschung der GaWC-Forschergruppe um aussagekräftige Erklärungen zu Relationen zwischen Städten und damit zur Struktur und Entwicklung von Städtesystemen ergänzen kann. Wir erläutern unseren Ansatz anhand einer Untersuchung des Wissensmanagements von Private Equity- bzw. Kapitalbeteiligungsgesellschaften in Deutschland. Im Mittelpunkt der empirischen Analyse stehen die Beziehungen und Netzwerke zwischen Kapitalbeteiligungsgesellschaften und ihren externen Partnern sowie deren räumliche Muster. Die geographische Verteilung von Kapitalbeteiligungsgesellschaften in Deutschland ist durch eine dezentrale Konzentration in Frankfurt am Main und den regionalen Finanzzentren gekennzeichnet. Unsere Untersuchung zeigt jedoch, dass der Standort München unter den regionalen Finanzzentren eine besondere Entwicklung aufweist. Lediglich in München haben Private Equity-Aktivitäten – unterstützt durch andere lokale Finanzakteure – eine sich selbst verstärkende Entwicklung des Finanzzentrums eingeleitet. Damit tragen die Dynamik von Private Equity und das damit verbundene Wissensmanagement zu einer Differenzierung des deutschen Finanzsystems bei, in deren Folge München sich als sekundäres nationales Finanzzentrum mit einer Spezialisierung im Bereich Private Equity, insbesondere Frühphasenfinanzierung, etabliert. Insgesamt verdeutlicht die Untersuchung, wie qualitative Netzwerkanalysen unser Verständnis für die Entwicklung von Städtesystemen erweitern können.

Schlagwörter Städtesystem · Finanzzentrum · Finanzsektor · Private Equity · Wissensmanagement · Netzwerkanalyse · Deutschland

1 Introduction

Financial centres have always been important backbones of urban systems. This is due to the importance of finance for economic development and its tendency to cluster in larger cities in search of economies of scale and scope. With globalization and the far-reaching changes in finance since the 1970s, geographical organization of the financial sector and of financial activities has changed at both national and international level. In Germany specifically we have seen a shift from a regionalized financial system—corresponding with the decentralized urban system—to one in which Frankfurt has emerged as the dominant national and chief international financial centre (Schamp 1999: 89 ff.; Grote 2003: 209 ff.; Klagge/Zimmermann 2004: 61). Most recently this two-tiered financial system has undergone additional changes mainly due to the dynamic development of private equity, which is the empirical focus of this paper.

Conceptually, we situate our study in urban systems analysis and derive conclusions on changes in the German urban system as well as on the conceptualization and methodology of urban systems research. While with its seminal contributions the Globalization and World Cities Research Network (GaWC) studies advanced producer services and their national and international office geographies (e.g. Beaverstock/Smith/Taylor 2000: 126 ff.; Derudder/Taylor/Witlox et al. 2003: 877 ff.), we take a closer look at financial services and employ an alternative methodology. Rather than exploring office locations and determining their location patterns, our analysis focuses on supply and demand relationships, networks with external partners and their geographical organization.

The focus on concrete business relations and the associated knowledge flows between cities provides useful insights into the advantages of (geographical) proximity and the opportunities of distance (Glückler 2008). Our approach is based on the assumption that the geography of business relations adds a hitherto neglected qualitative dimension to our understanding of intercity relations and networks—and thus of urban systems. So far there are very few studies of the Globalization and World Cities Research Network that employ a qualitative methodology. Their number, however, is growing—thus indicating a widening of the Research Network's conceptual and methodological focus (see e.g. Beaverstock/Hoyler/Pain et al. 2001; Faulconbridge/Taylor/Nativel et al. 2010).[1] Our study adds to this new literature by providing a qualitative case study of knowledge management in private equity in Germany which complements analyses of location patterns and helps explain their uneven geography.

2 Urban Systems and the Financial Sector: Conceptual Framework and the Case of Germany

World and global city research has highlighted the role played by decision-making capacities and advanced producer services (including e.g. accountancy, advertising, insurance, commercial law, finance) in understanding urban systems at both the national and international level (Friedmann 1986: 70, 73 ff.; Sassen 1991: 127 ff.; Beaverstock/Smith/Taylor 2000: 125 ff.; Derudder/Taylor/Witlox et al. 2003: 876 ff.; Taylor 2004: 175 ff.; Robinson 2005: 757 ff.; Hanssens/Derudder/Taylor et al. 2010: 2 ff.; Lüthi/Thierstein/Goebel 2010: 115 ff.). Financial services are particularly relevant in this respect as they are important players in corporate governance structures and thus have come to be seen as synonymous with increasing international interconnectedness and globalization of economies (Sassen 1991: 65 ff.). Owing to economies of scale and scope, a strong clustering of financial services and their knowledge-intensive activities has developed; this applies particularly to bank or other headquarter functions and stock exchanges in financial centres (Porteous 1999: 3 ff.; Lo/Schamp 2001: 27; Schmidt/Grote 2005: 1 ff.; Schamp 2009: 89 ff.).

2.1 The Prominent Role of Financial Centres in Urban Systems

On account of their close connections with one another, with the various financial services or with other agents of business, financial centres can be considered the backbone of the urban system (Parr/Budd 2000: 605 ff.; Taylor 2004: 110 ff.). They exist at different levels with global financial centres such as London, New York and Tokyo at one end of the hierarchy and regional financial centres with a mainly subnational focus at the other. There are various categories in-between these two types. These include international financial centres with a continent-wide, but not global reach (Frankfurt, Paris, Hong Kong, Singapore), internatio-

[1] See also Lüthi/Thierstein/Bentlage in this issue.

nal financial centres with a specific focus (Zurich, Geneva, Luxemburg, the Channel Islands) and national financial centres with no significant international business (in many cases capital cities) (Harrschar-Ehrnborg 2002; Poon/Eldredge/Yeung 2004; Merki 2005; Cassis 2006).

There are often close business relationships between financial centres both horizontally within the same category and vertically between different types such as regional, national and global centres. The regional financial centres in Germany (see Fig. 1), for instance, are interrelated with one another, yet their business relations with Frankfurt, where Germany's largest stock exchanges are located, are even closer. Moreover, the majority of specialized service providers, national and international banks are headquartered in Frankfurt as well (Grote 2003: 208 ff.; Grote 2008: 246 ff.). Germany is hence a good example on which to analyze the significance of regional financial centres for the development of a national urban system.

2.2 Regional Financial Centres and the Urban System in Germany

The German urban system is characterized by strong decentralization and functional specialization. This can mainly be attributed to historical causes, to the conserving function of federalism and to competition between strong regional states (Blotevogel/Möller 1992: 244 ff.; Blotevogel/Schmitt 2006: 61 ff.). This decentralization has long been reflected by the geographical organization of the financial sector and was reinforced by the existence of regional financial centres with important financing functions for their respective regions (Klagge 1995: 298 ff.; Bördlein 1999: 75 ff.; Klagge 2010: 295 ff.). Although Frankfurt, location of the Bundesbank and the Deutsche Börse, has always been the most important financial centre in Germany, it has long been regarded as primus inter pares.

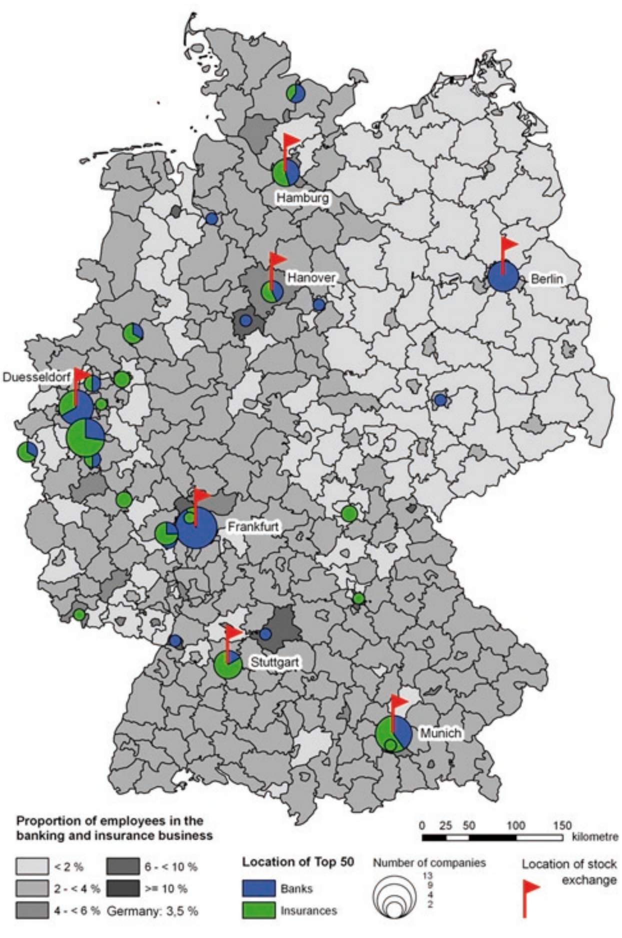

Fig. 1 Location of the top 50 banks (2008) and insurance companies (2007) in Germany. (Sources: Authors' illustration, based on data provided by BaFin (2008a-f); Bundesagentur für Arbeit (2009); Heuser (2010); Karsch (2008))

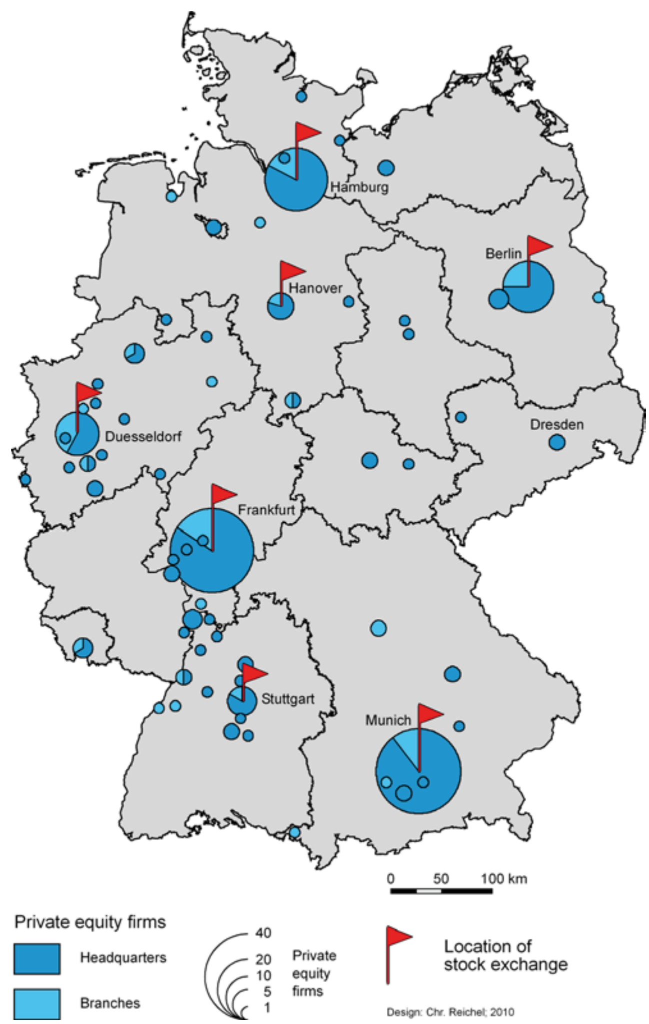

Fig. 2 Location of private equity firms in Germany (2008). (Sources: Authors' illustration, based on data provided by BVK (2008) and Heuser (2010))

In parallel with Frankfurt's rise as an international financial centre since the 1990s, however, regional financial centres have lost in importance (Bördlein 1999: 81; Schamp 1999: 89 ff.; Bördlein 2003: 161; Grote 2003: 209 ff.; Klagge/Martin 2005: 397 ff.). Growing international competition in formerly protected banking and other financial markets and the increase of new types of financial services have led to a shift of financial decision-making from the regions and regional financial centres to Frankfurt. With the increasing importance of networks, face-to-face contacts and the growing integration of EU financial markets, Frankfurt now provides the best opportunities for realizing economies of scale and scope for most types of financial businesses (Lo/Schamp 2001: 27). While regional financial centres have lost both banking and stock exchange functions to Frankfurt, the recent increase in private equity business seems to follow a different geographical pattern. In private equity most firms do not have branches and are headquartered in regional financial centres rather than in Frankfurt (see Fig. 2). This pattern corresponds with the decentralized German urban system, but stands in conspicuous contrast to the geographical organization of other financial services.

2.3 Private Equity Firms in the German Urban System

Private equity is a temporary investment in non-quoted companies. Private equity firms are specialized in this type of finance and invest capital provided by institutional or private investors in equity or ownership stakes in so-called portfolio companies. Private equity investments can be categorized as either early- or later-stage depending on the portfolio company. Early-stage investments (also called venture capital) focus on start-ups and dynamically growing young firms, whereas later-stage investment includes buy-outs and buy-ins as well as turnaround situations (Gompers/Lerner 2001: 145 ff.). Private equity firms are very selective in their investment decisions and aim at high growth rates and outstanding profit when selling their stakes after 5 to 10 years. In contrast to credit finance, which is collateralized, invested private equity capital is lost if the portfolio firm is declared insolvent. Due to this high risk private equity firms tend to monitor and support their portfolio actively ("hands-on").

In Germany private equity is a relatively young form of corporate finance that developed very dynamically in the 1990s. After the dot.com bubble burst in 2000/2001 a consolidation of private equity occurred, and private equity investments then increased again during the first years of the millennium through to the outbreak of the global financial crisis. When private equity investments will rise again remains an open question.

Private equity firms in Germany exhibit a rather decentralized geographical pattern with significant concentrations in Frankfurt and in regional financial centres (see Table 1).

Table 1 Most important locations of private equity firms in Germany (2008). (Source: Authors' illustration, based on BVK (2008))

	Private equity firms		Headquarters by ownership structure		
	Headquarters	Branches	Independent	Corporate*	(Quasi-) Public or cooperative
Frankfurt	35	3	27	5	3
Munich	37	1	30	4	3
Hamburg	22	1	14	4	4
Berlin	12	4	10	1	1
Düsseldorf	9	2	5	2	2
Stuttgart	5	1	1		4
Hanover	4	1		1	3

*including private equity firms owned by private banks

The most important locations are Munich, Frankfurt and Hamburg where the majority of independent and corporate private equity firms are headquartered. There are more than 60 other locations, but most of them host only private equity firms which are subsidiaries of (quasi-) public or cooperative institutions.

2.4 Research Question and Methodology

The decentralized organization of private equity in Germany raises the question whether private equity might strengthen regional financial centres by supporting a re-regionalization of financial expertise. To analyze the impact of private equity on regional financial centres we examined how private equity firms gain access to relevant knowledge along the various stages of the private equity value chain (see Klagge/Peter 2009: 76 ff.; for details on the private equity value chain also see Schefczyk 2000: 21 and Achleitner 2001: 515 ff.). One important result is that private equity firms' knowledge management is mainly based on business relations and other types of interaction with external partners; these partners include their portfolio firms as well as various service providers and experts. In the following we will focus on the geographical organization of these relations, interactions and associated networks and explore the connectivity between different (regional) financial centres.

In our qualitative research we conducted expert interviews with different types of private equity experts in Germany from 2006 to 2009.[2] These included 28 professionals in private equity firms in Munich, Hamburg, Frankfurt and Hanover, most of them partners or senior investment managers in independent or corporate private equity firms (see Fig. 3). These respondents represent private equity firms of different sizes with regards to assets under investment and of different investment stage foci (early-stage and/or later-

[2] We used one quote from an interview conducted for an earlier research project in 2002, which is not included in Fig. 3.

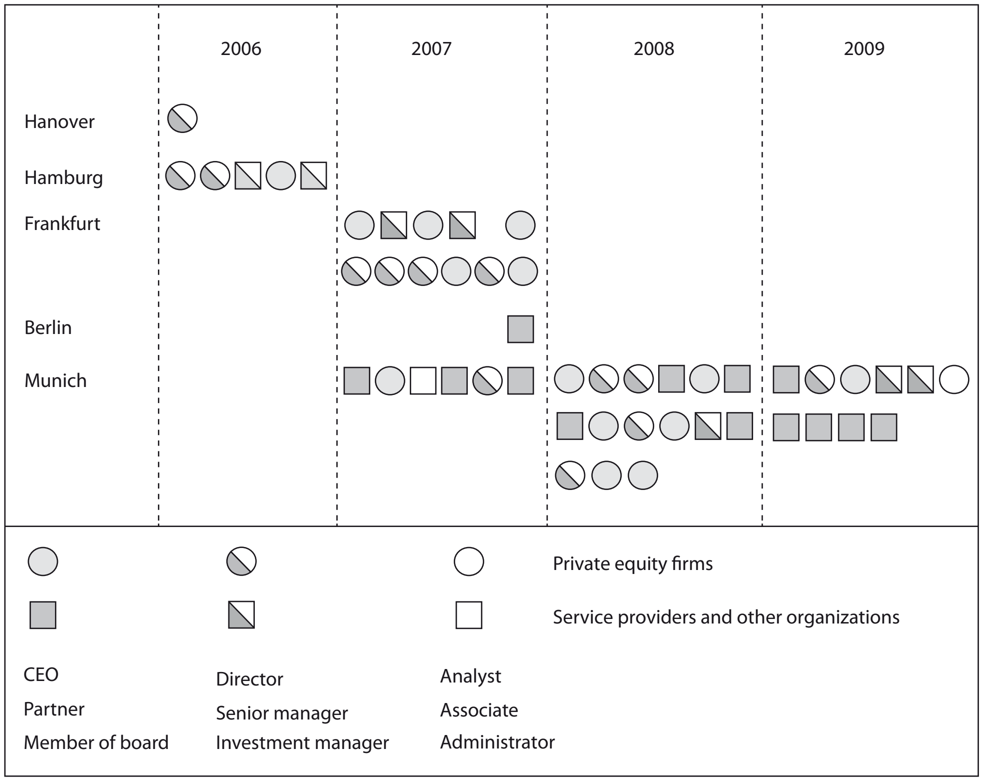

Fig. 3 Position and background of the interviewed experts

stage). In addition we conducted interviews with 21 leading representatives of service providers and other organizations related to private equity in Munich, Hamburg, Frankfurt and Berlin such as banks, law and accountancy firms, business associations and incubators.

Our interviewees were identified by using business directories, yearbooks and websites, and through recommendations from business associations and formerly interviewed experts. The major issues covered in these interviews were private equity firms' knowledge management and network strategies with a special focus on their geographical organization and the associated knowledge flows.

3 Geography of Knowledge Management in Private Equity: Empirical Results

The geography of knowledge management reflects the complexity of the private equity process. During this process private equity firms develop relationships with their portfolio companies and external partners in order to deal with knowledge asymmetries and the associated risk. Whereas interactions with portfolio companies are mostly governed by close relationships and in many cases are characterized by geographical proximity (3.1), relationships with service providers and experts follow a network logic (3.2) which is geographically more complex (3.3).

3.1 Private Equity Firms and their Portfolio Companies: Knowledge Management in Close Relationships

Private equity firms are in close contact with their portfolio companies before and during their investment in order to gain access to and exchange various types of knowledge. During the so-called due diligence[3] private equity firms prepare a deal and check out the companies in collaboration with external partners in order to assess risks and opportunities (Schefczyk 2000: 21). After the investment decision most private equity firms monitor their portfolio companies closely in powerful relationships (Jones/Search 2009: 813 ff.). Furthermore they support the development of these companies by providing various types of knowledge inputs and often also by actively participating in senior management or by being represented on the supervisory board (Gompers/Lerner 2001: 154 ff.). The chief executive officer (CEO) of a Munich-based private equity firm emphasizes the importance of frequent interaction and regular face-to-face contacts. These close relationships allow private equity firms to exchange and develop knowledge with portfolio companies and minimize risk.

[3] Private equity firms' due diligence covers the process of investigation and evaluation of the risk and return profile of potential portfolio companies or projects.

We get regular reports and are often on-site [in the portfolio-company]. We see ourselves as strategic sparring partners, like last night, for instance, when we got together with the executives to discuss how to modify management structures and what profiles we need (24.01.2008).[4]

Geographical as well as other types of proximity between private equity firms and their portfolio companies facilitate such close relationships and interaction (Jones/Search 2009: 813 ff.). Therefore private equity firms and their portfolio companies tend to be located rather close to one another, often in the same region or within two to three hours travel time (Zook 2004: 632 ff.; Martin/Berndt/Klagge et al. 2005: 1213). This corresponds with the rather decentralized organizational and geographical patterns of private equity firms (see 2.3). The chief executive officer of a private equity firm based in Hamburg justifies the good accessibility of portfolio companies:

Because we cooperate very closely [with the portfolio companies] it is important to us to reach them in a one to one and a half hour drive (15.02.2006).

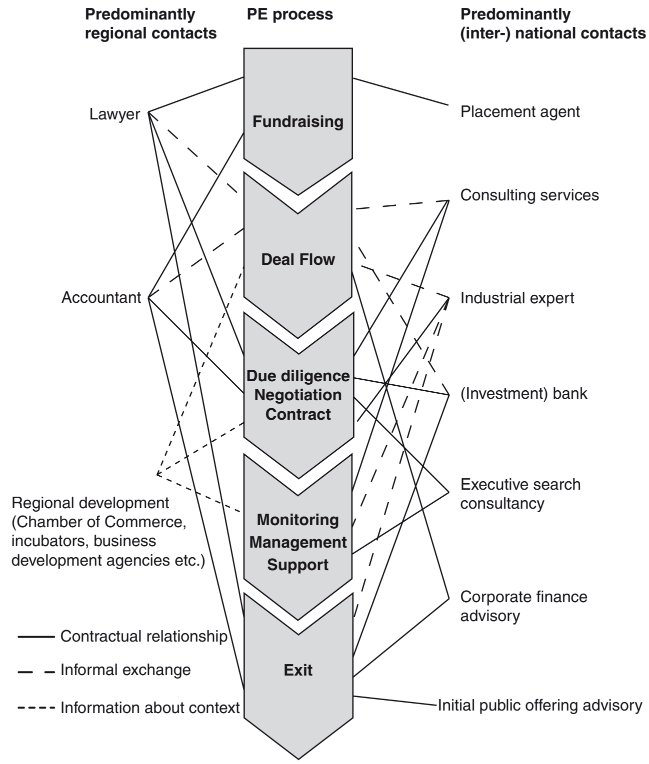

Fig. 4 External partners and their relationships with private equity firms along the value chain. (Source: Authors' illustration, based on interviews)

3.2 Private Equity Firms and their External Partners: Knowledge Management in Networks of Varying Geographical Scales

Our value chain analysis of the private equity process illustrates how different types of external partners are involved in and provide information and expertise for various stages of the private equity process (see Fig. 4). These partners include various types of service firms as well as public and quasi-public institutions.[5]

Private equity firms' knowledge management strategies rely on the production and exchange of various types of knowledge with these different partners (see Klagge/Peter 2009: 76 ff.). The relationships with them constitute networks of varying geographical scales. Some partners are regional, i.e. they are located in the same city or sometimes even in the same street and are often involved in the same regional networks. Other partners are national or international and sometimes linked by common professional or private networks. The character of relationships between private equity firms and their partners (e.g. formal-informal, frequency of contact) varies according to the stage and the types of knowledge inputs (see Fig. 4). Especially the more informal interaction is often based on mutual recognition and trust, facilitated by prior joint business activities, by a shared professional background or also by private contact. The chief executive officer of a private equity firm based in Munich describes the notable number of business contacts and their origin:

We have many contacts. I think there are something between 6000 and 7000 contacts in our database. I personally have a few thousand, and quite a mixed bag. Some of them originate from my earlier entrepreneurial activities (28.01.2008).

3.2.1 Regional Partners of Private Equity Firms

Regional partners of private equity firms mainly include lawyers, accountants and various types of regional development agencies as well as other private equity firms. The relationships with lawyers and accountants are of special importance and can be described as reciprocal. Private equity firms regularly work with the same lawyer or accountant in different stages of the same deal as well as in different deals. Their relationships are close and involve frequent contact, often face-to-face, since the partners discuss sensitive issues and exchange ideas trustfully. As the chief executive officer of a private equity firm in Hamburg explains, spatial proximity supports the production and exchange of confidential knowledge:

[4] All interviews were conducted in German; the interview quotes were translated by the authors.

[5] Partners not depicted in Fig. 4 are investors, portfolio companies or other private equity firms.

Even within walking distance, that's important. When you're working together on a project and are monitoring, you may end up sitting together for five days in one company room. You need short distances then. It wouldn't work with somebody in Munich (15.02.2006).

Apart from their formal relationships based on mandates and contracts, private equity firms also maintain informal contact with their lawyers and accountants. The continuous exchange of knowledge on companies and the regional economy in these informal settings helps improve the private equity firms' deal flows. The chief executive officer of a private equity firm in Frankfurt summarizes:

It's an interplay of giving and taking. We're looking for targets, they're looking for mandates (30.03.2007).

Other regional actors are not or are only marginally involved in the private equity process itself, but they are seen as partners who help generate deal flow by providing knowledge on the regional economy and potential portfolio companies. Private equity firms actively develop networks with, and personal ties to, representatives of chambers of commerce, incubators, business development agencies, business associations, research institutes, and also to interesting companies and other private equity firms in the region. As a senior manager of the Hamburg branch of an international private equity firm highlights, membership in regional organizations and participation in regional events is a major strategy used to develop regional networks.

Yes, they [the chamber of commerce (COC) in Hamburg] are helpful insofar as one can become a member of a COC committee … the COC is a network of important people, of important people especially in Hamburg. Honorary activity is highly rated. … sometimes I sit in a committee and meet all the CEOs of the banks, insurance companies and private equity firms in Hamburg—an illustrious club, a network that yields more cases to work on (30.08.2002).

3.2.2 National and International Partners of Private Equity Firms

In addition to regional partnerships and networks, private equity firms strategically build up contacts with national or even international experts to attain specific knowledge inputs and other resources (e.g. capital). The relationships with these partners are based on contracts that specify their contributions to specific cases; in addition they frequently provide informal inputs at other stages (see Fig. 4). For (case-) specific input, private equity firms always look for the best available expert or partner. To find them, they use their existing contacts and networks that are constantly being extended through participation in conferences, fairs and other events. Thus, the selection of experts is first and foremost dependent on the input in question rather than on accessibility via spatial proximity, as an investment manager in Munich details:

As to market due diligence, we work with two advisors. One in Munich, the other in Frankfurt. Spatial proximity is not really necessary here … We opt for someone we consider suitable to advise us regardless of where he or she is based (17.09.2007).

While consultants and other advisors are mostly located in larger cities—such as Frankfurt, Munich, Düsseldorf or Hamburg—industrial experts can be found across the country and even abroad. Most of them are located close to their primary or former place of occupation as chief executive officers, managers, entrepreneurs or scientists. The chief executive officer of a private equity firm in Munich reports:

They [industrial experts] can be anywhere once you've established contact … Like when we were dealing with the laser biz, we were in touch with Aachen (13.09.2007).

A further category of private equity firms' partners are financial experts. They include placement agents, corporate finance and initial public offering advisors as well as (investment) banks, and are mostly based in international financial centres such as Frankfurt or London. However, there are also quite a number of corporate finance advisors and banks with regional branches or even head offices in Munich. These offices mainly serve local and regional clients including private equity firms, and hence reinforce Munich's position as the largest location of private equity firms in Germany (see Fig. 2).

Other private equity firms also play a prominent role in a private equity firm's knowledge and risk management. The relationships among private equity firms range from pure competition over informal mutual consultation to syndication, i.e. the co-investment in a portfolio company. Syndication is used as a mechanism to share the risk especially inherent in start-up funding and also to overcome geographical distance (Lerner 1994: 17 ff.; Fritsch/Schilder 2006: 4). Co-investments support private equity firms in diversifying their portfolio and in learning from each other. In particular, they engage in syndication in order to gain access to their partners' network and knowledge resources (Sorensen/Stuart 2001: 1550 ff.). Overall, managing the relationships with other private equity firms is an issue of balancing cooperation and competition, as explained by the chief executive officer of a private equity firm in Hamburg:

The famous concept of networking where people know one another. The [private equity] sector is in fact characterized by the pleasant word co-opetition. Either you cooperate or you fight your opponents until you can cooperate. [...]. Just now, for instance, we're engaged in one company and working closely together with various private equity firms, and in another deal we fight precisely the same firms. That's absolutely normal (15.02.2006).

3.3 Knowledge Management in Private Equity—A Multiplex Geography

Our empirical research shows that private equity firms identify and strategically select various external partners in very different locations ranging from world cities over national and regional financial centres to smaller cities. They actively develop networks and personal ties by membership in regional, professional and industry-specific associations and committees (of associations, chambers of commerce (local) state committees). Furthermore they participate in conferences, fairs, events, e.g. on private equity, technology (transfer) and small and medium enterprise finance, and in meetings of associations or committees. Private equity firms also do business with banks, service suppliers and other private equity firms in the form of syndication.

Using such strategies, private equity firms consciously acknowledge the role of networks of partners with either the same or a different geographical background. Private equity firms regard the variety and diversity of these networks of different geographical scales as vital for successful business. Their networks are based on various types of relationships and provide indispensable knowledge inputs at all stages of the private equity process, thus helping to manage risk and avoid lock-ins.

4 Private Equity and its Impact on Regional Financial Centres

Integration into both regional and interregional networks is an actively pursued strategy of private equity firms in Germany and is at the core of their approach to coping with risk and uncertainty. Regional financial centres play a special role in these strategies (4.1) with Munich as a particularly interesting case (4.2).

4.1 Regional Financial Centres as Nodes in Private Equity Knowledge Networks

Regional financial centres are not only the locational base for private equity firms (see Fig. 2), but also constitute nodes in their knowledge management strategies and networks. The overall role of regional networks in these centres, however, is somewhat restricted. First and foremost, regional networks provide private equity firms with knowledge on the regional economy. Hence, they are significant for generating deal flow, for selecting, monitoring and supporting portfolio companies. Trust-building in these regional networks is supported by face-to-face contact, by common regional context and by business transactions.

In addition to knowledge inputs on the regional economy, regional financial centres exhibit some, but not necessarily all types of service providers important in the private equity process. Lawyers and accountants who provide very sensitive, yet rather standardized inputs are generally local partners of private equity firms. In contrast, specialized knowledge inputs on technologies, industries and markets as well as financial services related to fundraising and exit are nationally or even internationally sourced. Hence, private equity firms and their regional networks do strengthen business activities in regional financial centres. However, they do not automatically support a re-regionalization of financial expertise and thus a re-vitalization of regional financial centres. Overall, private equity therefore only offers limited potential to compensate for the loss of financial expertise arising out of the centralization of banking and stock exchange activities. Munich is an exception in this regard, as there is evidence here for a new concentration of financial expertise.

4.2 Munich—An Old Financial Centre with New Dynamics

Traditionally one of the chief locations for the insurance and asset management industry in Germany (with global companies like Allianz and Munich Re), Munich has also developed into the largest and most dynamic location for private equity firms and especially for start-up funding in Germany. In total, 38 private equity firms have an office in Munich, which equals the number in Frankfurt (see Fig. 2).[6] The offices of private equity firms in Munich (see Fig. 5) are highly concentrated in the city centre in the rather small area defined by Promenadeplatz, Maximiliansplatz, Brienner Straße and Ludwigstraße. This corresponds to the central business district of Munich, where the important offices of banks and other financial institutions are located.

The Munich private equity scene is very active and has a much stronger local bias than is the case for other regional financial centres. It is supported not only by specialized lawyers and accountants, but also by other financial, manage-

[6] In contrast to Munich, Frankfurt is the most important location for private equity firms specialized in buy-outs, i.e. later-stage funding; many of them are part of large banking conglomerates.

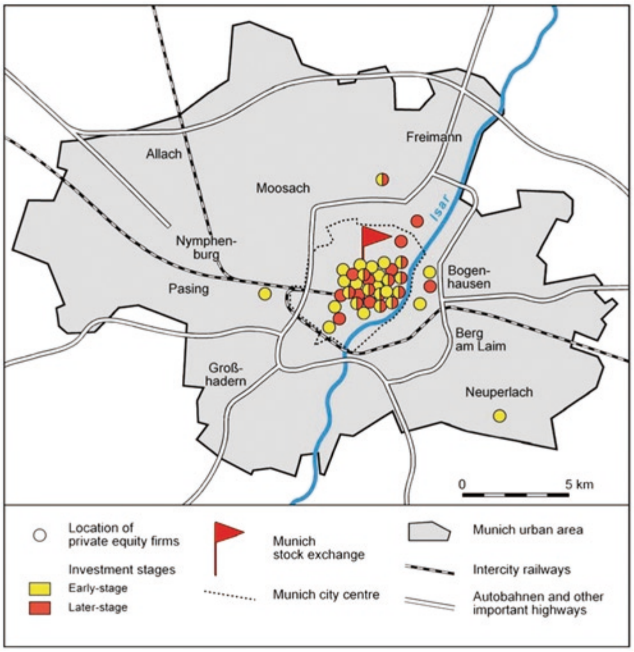

Fig. 5 Private equity firms in Munich. (Source: Authors' illustration, based on data provided by BVK (2008))

ment or technological service providers in the region, also specialized in private equity. The primary reasons for this development include the economic dynamics in and around Munich. The Munich region is very dynamic in terms of start-up activities, particularly in boom sectors like biotech, software or the media (Oßenbrügge/Zeller 2002; Sternberg 2005; Zademach 2009). In addition, Munich has excellent transport infrastructure with a major international airport and convenient high-speed train and motorway connections to Southern Germany, Switzerland, Austria and Eastern Europe. Finally, the high quality of life in Munich attracts highly skilled professionals (Popp 2006: 15).

It is against this background that in Munich private equity—cross-fertilized by other local financial actors and more generally by urbanization economies—has initiated a self-supporting development. This development strengthens Munich as a financial centre of more than regional scope. The expertise of Munich-based service providers and experts is in demand across the country and sometimes even beyond its borders. This is illustrated by the following quote in which the director of a big accounting firm in Munich describes the locational structure of his private equity clients:

> *These [private equity-firms] are certainly located here like […], but we also have clients like […] in Frankfurt, London […] We have relationships to firms in London or Frankfurt, and then we are working for them [as service providers] (02.04.2009).*

5 Implications for the German Urban System and for World City Research: Final Discussion

Knowledge management in private equity in Germany exhibits rather complex organizational and geographical structures. These structures link both regional and interregional networks and have nodes in regional financial centres. Although regional financial centres benefit economically from private equity activities, chances for a private equity based re-regionalization of financial expertise are nonetheless limited. Munich, however, is an exception to this trend and has developed into a major, not only regional, centre for private equity activities.

For the future of the German financial system this development indicates a more tiered structure that includes elements of functional specialization: Frankfurt is the major international financial centre that dominates the national market in banking and stock exchange activities, and is likely to remain so. Munich plays a secondary role with a particular, internationally recognized strength in private equity, and especially in start-up funding. Other (regional) financial centres mainly serve regional markets and have not been significantly (re-) vitalized by private equity, although private equity business and its regional knowledge networks support and stimulate economic development in their regions. These results correspond with the latest findings of the Globalization and World Cities Research Network in which Germany's larger regional financial centres, Düsseldorf, Hamburg and Berlin, but not Frankfurt or Munich, show a severe decline in their relative connectivity in financial services (Hanssens/Derudder/Taylor et al. 2010: 11). Interestingly, a recent analysis of international banking centres shows that Munich's position has declined significantly as a result of the financial crisis (Derudder/Hoyler/Taylor 2010: 4), which begs the question as to whether and how this might impact on its private equity scene.

At a conceptual and methodological level our research has shown that focusing on demand and supply relationships and associated knowledge flows adds important information to the "office geographies" of the Globalization and World Cities Research Network. Our qualitative network analysis discloses the intricate logics governing relationship management with a variety of different partners. Specifically, the results regarding the significance of face-to-face contacts and geographical proximity versus other types of proximity or fit help in better understanding the complexity of business networks and their geographies. By providing additional and explanatory information on local and regional dynamics, intercity linkages and network relations, qualitative research focusing on the geography and governance of business relations offers a useful complement to quantitative approaches studying urban systems and their dynamics.

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References

Achleitner, A.-K. (2001): Venture Capital. In: Breuer, R.-E. (ed.): Handbuch Finanzierung. Wiesbaden, 513-529.

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008a): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzahlen der Krankenversicherungsunternehmen. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_kv,templateId=raw,property=publicationFile.pdf/st_07_erstvu_kv.pdf (last access 16.08.2010).

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008b): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzahlen der Lebensversicherungsunternehmen. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_lv,templateId=raw,property=publicationFile.pdf/st_07_erstvu_lv.pdf (last access 16.08.2010).

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008c): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzeichen der Pensionsfonds. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_pf,templateId=raw,property=publicationFile.pdf/st_07_erstvu_pf.pdf (last access 16.08.2010).

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008d): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzahlen der Pensionskassen. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_pk,templateId=raw,property=publicationFile.pdf/st_07_erstvu_pk.pdf (last access 16.08.2010).

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008e): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzahlen der Schadens- und Unfallversicherungsunternehmen. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_suv,templateId=raw,property=publicationFile.pdf/st_07_erstvu_suv.pdf (last access 16.08.2010).

BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht) (2008f): Statistik der Bafin. Erstversicherungsunternehmen 07 – Ausgewählte Kennzahlen der Sterbekassen. Online: http://www.bafin.de/cln_161/nn_721290/SharedDocs/Downloads/DE/Service/Statistiken/Statistiken2007/Erstversicherungsunternehmen/st_07_erstvu_sk,templateId=raw,property=publicationFile.pdf/st_07_erstvu_sk.pdf (last access 16.08.2010).

Beaverstock, J. V.; Hoyler, M.; Pain, K.; Taylor, P. J. (2001): Comparing London and Frankfurt as World Cities: A Relational Study of Contemporary Urban Change. London.

Beaverstock, J. V.; Smith, R. G.; Taylor, P. J. (2000): World-City Network: A New Metageography? In: Annals of the Association of American Geographers 90, 1, 123-134.

Blotevogel, H. H.; Möller, H. (1992): Struktur und Entwicklung des Städtesystems der Bundesrepublik Deutschland. In: Köck, H. (ed.): Handbuch des Geographieunterrichts, Vol. 4: Städte und Städtesysteme. Köln, 244-250.

Blotevogel, H. H.; Schmitt, P. (2006): "European Metropolitan Regions" as New Discursive Frame in Strategic Planning and Policies in Germany. In: Die Erde 17, 1-2, 55-74.

Bördlein, R. (1999): Finanzdienstleistungen in Frankfurt am Main – ein europäisches Finanzzentrum zwischen Kontinuität und Umbruch. In: Berichte zur deutschen Landeskunde 73, 1, 67-93.

Bördlein, R. (2003): Die Reorganisation der deutschen „Regionalbörsen" zwischen ökonomischen und politischen Interessen. In: Geographische Zeitschrift 91, 3-4, 156-174.

Bundesagentur für Arbeit (2009): Statistik der Bundesagentur für Arbeit: Beschäftigung auf Kreisebene. Online: http://statistik.arbeitsagentur.de/nn_217696/Statischer-Content/Statistik-nach-Themen/Beschaeftigung/Sozialversicherungspflichtig-Beschaeftigte/Sozialversicherungspflichtig-Beschaeftigte (last access: 16.08.2010).

BVK (Bundesverband deutscher Kapitalbeteiligungsgesellschaften) (2008): BVK members' directory (Mitgliederverzeichnis – ordentliche Mitglieder). Online: http://www.bvkap.de/privateequity.php/cat/4/title/Mitglieder (last access 05.11.2008).

Cassis, Y. (2006): Capitals of capital – a history of international financial centres, 1780-2005. Cambridge.

Derudder, B.; Hoyler, M.; Taylor, P. J. (2010): Goodbye Reykjavik: international banking centres and the global financial crisis. In: Area. doi: 10.1111/j.1475-4762.2010.00968.x.

Derudder, B.; Taylor, P. J.; Witlox, F.; Catalano, G. (2003): Hierarchical Tendencies and Regional Patterns in the World City Network: A Global Urban Analysis of 234 Cities. In: Regional Studies 37, 9, 875-886.

Faulconbridge, J. R.; Taylor, P. J.; Nativel, C.; Beaverstock, J. V. (2010): The Globalization of Advertising Agencies, Cities and Spaces of Creativity. New York, London.

Friedmann, J. (1986): The World City Hypothesis. In: Development and Change 17, 1, 69-83.

Fritsch, M.; Schilder, D. (2006): Is Venture Capital a Regional Business? The Role of Syndication. Freiberg: = Freiberg Working Papers 9-2006.

Glückler, J. (2008): Die Chancen der Standortspaltung: Wissensnetze im globalen Unternehmen. In: Geographische Zeitschrift 96, 3, 125-139.

Gompers, P. A.; Lerner, J. (2001): The Venture Capital Revolution. In: Journal of Economic Perspectives 15, 2, 145-168.

Grote, M. H. (2003): Die Evolution des Finanzplatzes Frankfurt. In: Geographische Zeitschrift 91, 3-4, 200-217.

Grote, M. H. (2008): Foreign banks' attraction to the financial centre Frankfurt – an inverted 'U'-shaped relationship. In: Journal of Economic Geography 8, 2, 239-258.

Hanssens, H.; Derudder, B.; Taylor, P. J.; Hoyler, M.; Ni, P.; Huang, J.; Yang, X.; Witlox, F. (2010): The changing geography of globalized service provision, 2000-2008. In: The Service Industries Journal. doi:10.1080/02642069.2010.503887.

Harrschar-Ehrnborg, S. (2002): Finanzplatzstrukturen in Europa: Die Entstehung und Entwicklung von Finanzzentren. Frankfurt am Main, Berlin, Bern, Bruxelles, New York, Oxford, Wien.

Heuser, G. (2010): Der Finanzstandort Deutschland im internationalen Wettbewerb. Online: http://www.geldmuseum.de/download/museumsabend_20090422.pdf (last access 16.08.2010).

Jones, A.; Search, P. (2009): Proximity and power within investment relationships: The case of the UK private equity industry. In: Geoforum 40, 5, 809-819.

Karsch, W. (2008): Bewegung in der Bankenwelt – Die 100 größten deutschen Kreditinstitute. In: Die Bank 8, 34-37.

Klagge, B. (1995): Strukturwandel im Bankenwesen und regionalwirtschaftliche Implikationen. Konzeptionelle Ansätze und empirische Befunde. In: Erdkunde 49, 4, 285-304.

Klagge, B. (2010): Das deutsche Banken- und Finanzsystem im Spannungsfeld von internationalen Finanzmärkten und regionaler Orientierung. In: Kulke, E. (ed.): Wirtschaftsgeographie Deutschlands. Heidelberg, 287-302.

Klagge, B.; Martin, R. (2005): Decentralized versus centralized financial systems: Is there a case for local capital markets? In: Journal of Economic Geography 5, 4, 387-421.

Klagge, B.; Peter, C. (2009): Wissensmanagement in Netzwerken unterschiedlicher Reichweite. Das Beispiel des Private equity-Sektors in Deutschland. In: Zeitschrift für Wirtschaftsgeographie 53, 1-2, 69-88.

Klagge, B.; Zimmermann, N. (2004): Finanzstandort Deutschland: Banken und Versicherungen. In: Institut für Länderkunde (ed.): Nationalatlas Bundesrepublik Deutschland, Vol. 8: Unternehmen und Märkte. Heidelberg/Berlin, 60-61.

Lerner, J. (1994): The Syndication of Venture Capital Investments. In: Financial Management 23, 3, 16-27.

Lo, V.; Schamp, E. W. (2001): Finanzplätze auf globalen Märkten – Beispiel Frankfurt/Main. In: Geographische Rundschau 53, 7/8, 26-31.

Lüthi, S.; Thierstein, A.; Goebel, D. (2010): Intra-firm and extra-firm linkages in the knowledge economy: the case of the emerging mega-city region of Munich. In: Global Networks 10, 1, 114-137.

Martin, R.; Berndt, C.; Klagge, B.; Sunley, P. (2005): Spatial proximity effects and regional equity gaps in the venture capital market: evidence from Germany and the United Kingdom. In: Environment and Planning A 37, 7, 1207-1231.

Merki, C. M. (ed.) (2005): Europas Finanzzentren. Geschichte und Bedeutung im 20. Jahrhundert. Frankfurt am Main.

Oßenbrügge, J.; Zeller, C. (2002): The Biotech Region of Munich and the Spatial Organisation of its Innovation Networks. In: Schätzl, L.; Revilla Diez, J. (eds.): Technological Change and Regional Development in Europe. Heidelberg, New York, 233-249.

Parr, J. B.; Budd, L. (2000): Financial Services and the Urban System: An Exploration. In: Urban Studies 37, 3, 593-610.

Poon, J. P. H.; Eldredge, B.; Yeung, D. (2004): Rank Size Distribution of International Financial Centers. In: International Regional Science Review 27, 4, 411-430.

Popp, M. (2006): München – boomende Stadtregion mit „Schönheitsfehlern“. In: Geographische Rundschau 58, 6, 14-21.

Porteous, D. J. (1999): The Development of Financial Centres: Location, Information Externalities and Path Dependence. In: Martin, R. (ed.): Money and the space economy. Chichester, 95-114.

Robinson, J. (2005): Urban geography: world cities, or a world of cities. In: Progress in Human Geography 29, 6, 757-765.

Sassen, S. (1991): The global city: New York, London, Tokyo. Princeton.

Schamp, E. W. (1999): The system of German financial places at the crossroads: From national to the European scale. In: Wever, E. (ed.): Cities in Perspective 1: Economy, Planning and the Environment. Assen, 83-98.

Schamp, E. W. (2009): Das Finanzzentrum – ein Cluster? Ein multiskalarer Ansatz und seine Evidenz am Beispiel von Frankfurt/Rhein-Main. In: Zeitschrift für Wirtschaftsgeographie 53, 1-2, 89-105.

Schefczyk, M. (2000): Finanzieren mit Venture Capital – Grundlagen für Investoren, Finanzintermediäre, Unternehmer und Wissenschaftler. Stuttgart.

Schmidt, R. S.; Grote, M. (2005): Was ist und was braucht ein bedeutender Finanzplatz? Frankfurt am Main. = Working Paper Series Finance and Accounting 150, Department of Economics, Johann Wolfgang Goethe-University Frankfurt.

Sorensen, O.; Stuart, T. E. (2001): Syndication Networks and the Spatial Distribution of Venture Capital Investments. In: American Journal of Sociology 106, 6, 1546-1588.

Sternberg, R. (2005): Business Start-ups: Hope for Future Regional Development in Germany? In: German Journal of Urban Studies. Issue 1/2005. Online: www.difu.de/sites/difu.de/files/archiv/publikationen/dfk/05_1_sternberg.pdf (last access 29.04.2011; German version in: Zeitschrift für Kommunalwissenschaften 44, 1, 109-129).

Taylor, P. (2004): World City Network: A global urban analysis. London, New York.

Zademach, H.-M. (2009): Global finance and the development of regional clusters: tracing paths in Munich’s film & TV industry. In: Journal of Economic Geography 9, 5, 697-722.

Zook, M. A. (2004): The Knowledge Brokers: Venture Capitalists, Tacit Knowledge and Regional Development. In: International Journal of Urban and Regional Research 28, 3, 621-641.