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Between Luminaires and Meat Grinders: International Trade Fairs as Temporary Clusters

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Abstract. In this paper, we claim that international trade fairs, viewed as temporary clusters, are important events which support economic processes of interactive learning and knowledge creation. In such settings, geographical proximity and face-to-face contact enable actors from different countries to exchange information about markets, products and innovations. The variety of planned and unplanned meetings and the rich ecology of information flows and different forms of interaction create ‘global buzz’. Firms use such events to consciously establish ‘pipelines’ with new business partners worldwide. The paper will present empirical evidence from two flagship fairs held in Frankfurt/Main, Germany to support these claims.

Keywords. Temporary clusters, international trade fairs, global buzz, pipeline formation, knowledge creation, face-to-face contact

JEL Classifications. D83, L22, M21, O18

Zwischen Designerleuchten und Fleischwölfen: Internationale

Messeveranstaltungen als temporäre Cluster

Abstract. Der Beitrag betrachtet internationale Messeveranstaltungen als temporäre Cluster und argumentiert, dass diese Veranstaltungen in substantieller Weise Prozesse des interaktiven Lernens und der Wissensgenerierung von Unternehmen unterstützen. Die vorhandene räumliche Nähe und Vielzahl der Face-to-Face-Kontakte zwischen Ausstellern, Besuchern und Multiplikatoren aus vielen Teilen der Welt ermöglichen auf Messen in konzentrierter Form den Austausch von Informationen über Märkte, Produkte und Innovationen. Die Vielschichtigkeit geplanter und ungeplanter Treffen mit unterschiedlichen Akteuren, die dichte Informationsökologie und verschiedene Formen der Interaktion generieren den sog. ‘Global Buzz’. Unternehmen nutzen die Veranstaltungen, um gezielt ‘Pipelines’ zu neuen Geschäftspartnern aufzubauen. Der Beitrag liefert empirische Belege über die Struktur der Informationsflüsse und Interaktionsprozesse basierend auf Unternehmensbefragungen bei zwei internationalen Leitmessens in Frankfurt/Main.

Keywords. Temporäre Cluster, internationale Messeveranstaltungen, Global Buzz, Pipelines, Wissensgenerierung, Face-to-Face-Kontakte

JEL Classifications. D83, L22, M21, O18

1. Introduction: Proximity in Global Networks

Globalization processes exert increasingly new challenges to the global political economy. While the cross-national penetration patterns of markets and transnational organization of production have entered a new stage in terms of scale and intensity, questions regarding the establishment, maintenance and governance of these new social and spatial divisions of labor have not been fully explored. With these new structures, firms can no longer rely on traditional forms of geographical (or spatial) and socio-institutional proximity with transaction partners to ensure an efficient integration and division of labor and remain competitive. The French Proximity School has emphasized that production can be organized in alternative ways if institutional, social and cultural characteristics are shared between transaction partners and cognitive affinity is sufficiently large (Rallet and Torre 1999; Nootboom 2000; Boschma 2005). As the complexities associated with globalization increase, it becomes more difficult to identify the degree to which affinities exist with potential partners and whether these are sufficient to establish reliable transnational supplier-producer-user relations. In contrast to a region or a nation-state, geographical proximity, which would allow agents to collect information about potential transaction partners and their strengths or weaknesses, does not necessarily exist as a rule. The new global economy is characterized by high information asymmetries and a lack of knowledge about potential transaction partners from other parts of the world. In particular, it is uncertain whether existing socio-cultural and institutional affinities are strong enough to enable efficient communication and adjustments in international production arrangements.

Another line of argument emphasizes that global economic success still seems to depend on the utilization of local and/or regional resources and capabilities, a situation which appears inherently paradoxically. Research has shown that a considerable part of global economic

production is still located in regional industrial clusters. These closely intertwined regional concentrations of firms from a particular sector, together with their support infrastructure and institutions, continue to attract further firms to that sector. Most of the work on these industrial clusters concentrates on regional linkages and knowledge spillovers and neglects the global connectivities with other parts of the value chain. Although recent knowledge-based conceptions of industrial clusters have argued that clusters cannot exist without strong external linkages to provide access to new technologies and markets outside the cluster (Maskell 2001; Malmberg and Maskell 2002; Bathelt, Malmberg and Maskell 2004; Bathelt 2005b), the process of how such 'global pipelines' are being created and controlled over distance is still poorly understood.

Arguing from a different perspective, another strand of research has focused on global commodity chains or production networks which arise from the use of new information, communication and transportation technologies in organizing production at an international scale (Gereffi 1999; Dicken, Kelly, Olds and Yeung 2001; Humphrey and Schmitz 2002). This literature implies that it is no longer feasible to analyze parts of the production process in isolation from other related parts of the value chain located in different parts of the world. Related approaches emphasize how dynamic changes in economic production are associated with global interdependencies in the development of markets and technologies. Research has particularly focused on the way how these value chains are governed, how actor-networks operate through these chains over space, which social divisions of labor arise and how shifts in these chains are related to wider technological, institutional and political settings.

This research has provided rich evidence of both the importance and difficulty to establish transnational linkages or 'pipelines' between firms and to access new knowledge pools located in other countries to remain competitive at a global scale. The growing importance of widespread networks in innovation, production and marketing shows that new forms of organization no

longer require that the firms involved be physically co-located. In fact, it has become clear that the need for geographical proximity in economic interaction, which is still a powerful catalyst to solve complex problems and develop trust, does not necessarily require permanent co-location (Torre and Rallet 2005). New forms of professional mobility produce what has been referred to as 'temporal geographical proximity'. Such organized proximity establishes regular interaction between different spatial entities (see, also, Gertler 1993; 2001) and enables information and ideas to be efficiently communicated back and forth. In other words, new geographies of circulation have developed which have become the glue of the global political economy (Thrift 2000; Allen 2003; Amin and Cohendet 2004). Practices which enable transnational arrangements in economic production include global business traveling, Internet thinking studios, transnational epistemic communities and international professional gatherings such as international trade fairs. These arrangements, which have not been studied in great detail in this context, support the establishment of global business linkages and enable the dissemination and creation of knowledge at a distance.

Leading international trade fairs which are the focus of this paper bring together agents from all over the world and create temporary spaces of presentation and interaction. These events combine different knowledge pools from a variety of sources, such as firm representatives, scientists, media experts and other practitioners, and provide a temporary microcosm of an industry (Rosson and Seringhaus 1995). They enable face-to-face contact and geographical proximity in professional interaction for a limited time period. Recent work on international trade fairs has shown that these events do not merely serve as marketing instruments for firms to present and sell products to their customers. They are also important in the dissemination and generation of knowledge about the structure and trends of global value chains (Borghini, Golfetto and Rinallo 2004; Maskell, Bathelt and Malmberg 2004; 2006; Schuldt 2006; Bathelt and

Zakrzewski 2007). As will be argued in this paper, these international gatherings have become central nodes which connect the global political economy and provide participating firms with access to new technologies, market trends and potential partners.

In this paper, we aim to present empirical evidence for processes of knowledge dissemination and generation during international flagship fairs. This paper is organized as follows. The next section presents some conceptual foundations of international trade fairs as temporary nodes which connect the global political economy and create ‘global buzz’. We develop a model which explores how international trade fairs enable firms to establish and maintain trans-local networks with agents in other parts of the world. In section 3, the methodology used and data collected in our study are discussed. The empirical evidence presented is based on more than 140 interviews from two major international trade fairs which took place in Frankfurt/Main, Germany in 2004; i.e. Light and Building – International Trade Fair for Architecture and Technology (L+B) and International Trade Fair for the Meat Industry (IFFA). Section 4 then systematically explores why and how exhibitors communicate with their customers, suppliers, partners and competitors in these events and which information flows result from this. In section 5, we conclude with some comments regarding the importance of ‘global buzz’ and face-to-face contact regarding issues of pipeline generation during international trade fairs.

2. International Trade Fairs as Temporary Nodes in the Global Political Economy

Since the 1990s, there has been intensive debate within the social sciences about the conditions underlying the rise of the global political economy. The question of how global networks are established and maintained over time and how they are constantly expanding has

not been fully addressed though. The model presented here suggests looking at the processes of how international trade fairs enable firms to develop systematic linkages with other firms and markets in the global political economy. Building upon a knowledge-based conception of permanent clusters, we argue that international trade fairs can be viewed as temporary clusters which support processes of interactive learning, knowledge creation and the formation of international networks . In recent work, Maskell, Bathelt and Malmberg (2004; 2006) suggest that international flagship fairs, which bundle together agents from all over the world, define temporary spaces of presentation and interaction between suppliers, producers and customers of a particular technology or value chain. While trade fairs are often viewed as marketing events in the business literature (Ziegler 1992; Meffert 1993; Backhaus and Zydorek 1997; Fuchslocher and Hochheimer 2000; Troll 2003; Rodekamp 2003), the arguments presented here are based on a different interpretation.

Similar to permanent clusters, trade fairs can be viewed as temporary clusters along multiple dimensions (Malmberg and Maskell 2002; Bathelt 2005a).¹ They are characterized by distinct vertical and horizontal interaction although real transactions need not take place. Vertical interaction with suppliers and customers draws upon information exchange about recent market trends, experience and requirements for future products. Such meetings are a vital source of information for adjustments in strategies and innovations, as well as for the establishment of new and the maintenance of existing pipelines. Trade fairs also bring together firms which normally

¹ Our intention is not to introduce a slippery concept when using the term ‘temporary clusters’. We are aware that real transactions are not characteristic of these events and refer to this term strictly because the structure of information and knowledge flows during international trade fairs and other temporary, periodic events of the social economy (e.g. Norcliffe and Rendace 2003) resembles those flows characteristic for permanent clusters (Maskell, Bathelt and Malmberg 2004).

do not interact but actively compete against one another. This horizontal dimension provides multiple opportunities for firms to observe and compare their products and strategies with those of their competitors (see, also, Porter 1990; 1998; Dahl and Pedersen 2003; Maskell and Lorenzen 2004). It helps them to make decisions about future investments and the direction of innovation and serves to stimulate reflexive practices within the firms.

In sum, these events serve as a rich arena for interfirm learning processes. They are crucially important for whole industries because of the rich ecology of information and knowledge flows which are produced during these events in localized settings. Participants are surrounded by a thick web of specialized information flows that is difficult to ignore (see, also, Grabher 2002; Storper and Venables 2004). This ‘global buzz’ (Maskell, Bathelt and Malmberg 2004) helps to identify potential future partners, acquire information about them and make initial contact. It refers to the constant flows and updates of information about competitors, suppliers and customers and their respective technological and strategic choices. New ideas and projects in the industry or technology field can be identified through observation and monitoring (Borghini, Golfetto and Rinallo 2004). On different occasions and through different routes, information and knowledge exchange occur in scheduled meetings with business partners and in accidental meetings with former colleagues, as well as in systematic scouting for trends. Related information flows are, in part, planned and intended but also spontaneous and unplanned in nature.²

² Of course, this does not imply that information flows and knowledge dissemination are arbitrary in character. They are, of course, like any sort of social interaction structured and differentiated according to social and cognitive affinities (Giuliani and Bell 2005) and pre-existing relations. At the same time, these information flows are highly fluid, spontaneous and unpredictable and are shaped by unplanned encounters and observations.

Exhibitors and visitors of these trade fairs benefit from a shared set of institutions regarding technological and/or design-related characteristics and similar views and convictions regarding the industry. The fact that these events bring together people from particular epistemic communities and/or communities of practice helps stimulate interaction and exchange. These provide grounds for common interpretations and mutual understandings (Duguid and Brown 1991; Wenger 1998; Knorr Cetina 1999). Overall, shared technological and organizational institutions support the reduction of uncertainties and help firms to distinguish important from less important trends and information. Maskell, Bathelt and Malmberg (2004; 2006) have argued that international trade fairs not only help maintain and intensify networks with international customers and suppliers (Prüser 1997; 2003) but enable firms to identify and select suitable partners from other regional and national settings and develop new ‘trans-local pipelines’ (see, also, Borghini, Golfetto and Rinallo 2004; Owen-Smith and Powell 2004; Bathelt, Malmberg and Maskell 2004; Bathelt 2005b).

Figure 1 summarizes the hypothesized processes and effects of international trade fairs through which cluster firms find external partners and establish new trans-local pipelines. On the one hand, firms from permanent clusters meet with existing pipeline partners during trade fairs to intensify, maintain or extend these contacts.³ On the other hand, firms use the ‘global buzz’ which develops during trade fairs and the knowledge acquired at earlier such events to identify suitable partners and make initial contact with them. Following a selection process which

³ Of course, trade fairs do not just benefit cluster firms. They are equally or even more important to those firms which are not part of a cluster and which lack the constant day-to-day information flows which can be so beneficial in this context. For these firms, the communication and interaction processes analyzed below also apply. They might be the single most important contact to their global business community and have a tremendous impact on decisions regarding the production program and innovation process.

depends, in part, on the goals of the agents and the cognitive dimension between them, pipelines can be established to allow firms to get access to new knowledge pools and markets in the future. Further, these pipelines likely have positive effects for other firms in the original cluster which benefit from additional local buzz and transactions. In sum, this suggests that trade fairs are an important means to help stabilize permanent clusters. They enable firms to expand the external dimension of the cluster and play an important role in securing innovativeness and competitiveness for the respective firms. This model opens up a new perspective to analyze connectivities in the global political economy and understand some of the mechanisms which enable processes of knowledge creation at a distance.

3. Data Used and Methodology

In order to investigate the effects of leading international trade fairs, this study was designed to analyze the structure of information and interaction patterns between exhibiting firms and their suppliers, customers, competitors and complementary firms during such events (Schuldt 2006). Frankfurt/Main in central Germany was chosen as the location to conduct this study because it is one of the leading centers of international trade fairs.⁴ We selected two international flagship fairs for closer analysis, L+B and IFFA, which took place in April and May 2004. Both are among the leading trade fairs in their respective industries and are characterized by a high degree of internationalization in terms of exhibitor and visitor participation (Table 1). They can

⁴ In 2003, Frankfurt/Main hosted 24 international trade fairs, among those the World Forum of the Process Industry (ACHEMA), International Motor Show for Passenger Cars (IAA) and the Frankfurt Book Fair. A total of 40,295 exhibitors presented their products at these fairs and more than 2.4 million visitors came to examine and evaluate these exhibits (Messe Frankfurt GmbH 2003; Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft 2004).

be characterized as business-to-business fairs where firms present their exhibits to other firms and not to primarily end customers.

Due to the business focus of L+B and IFFA, we were able to conduct interviews with owners, leading marketing managers, product developers and engineers of the exhibitors, instead of just sales personnel. The former were the target group in our interviews because they were most suited to answer questions regarding knowledge creation and network and pipeline formation during international trade fairs. Although L+B and IFFA cannot be regarded as being representative of all trade fairs, they are two major international flagship fairs which mirror the breadth and dynamics of a whole industry. Our paper aims primarily to provide insights into the communication and interaction patterns which exist during international flagship fairs and which drive the dynamics of industries at a global scale. Of course, other types of fairs and industry contexts also exist (i.e. regional marketing and trade shows) which are different in character (Funke 1987; Strothmann and Rohloff 1993; Meffert 1997; Bathelt and Zakrzewski 2007). However, we expect that similar patterns can be found in other related industry contexts.

Light and Building – International Trade Fair for Architecture and Technology (L+B)

L+B, which spun off from the Hanover industrial fair in 2000, takes place every two years. It brings together suppliers, producers, customers and their respective competitors in the areas of lighting (technical and decorative lighting and accessories, lamps), electrical engineering (cables and leads, electrical installation equipment, network technology, industrial controls and safety systems) and house and building automation. Although L+B is still a fairly young trade fair, it is one of the leading international events in the lighting industry. In 2004, 1920 firms exhibited

their products at L+B, 57% of which were from foreign countries, including China and Taiwan⁵ (Table 1). A total of 116,000 people visited the exhibits at L+B. The fact that more than 70% of the visitors were foreigners exemplifies the international character of L+B (Messe Frankfurt GmbH 2004a; 2004b; 2004c). A large part of the products shown at the exhibits can be characterized as consumer goods with a high degree of design intensity, produced to satisfy particular aesthetic needs or lifestyle images.⁶

International Trade Fair for the Meat Industry (IFFA)

IFFA was established as an international trade fair in 1949 and, since then, takes place every three years. Even though it is somewhat smaller than L+B, IFFA is one of the world's leading trade fairs for firms in the area of meat production and processing. It includes exhibits in all stages of the value chain, such as slaughtering and carving machines, processing equipment, boiling and smoking systems, packaging and transport technologies, as well as meat processing utilities. IFFA focuses on capital goods in which Germany belongs to the leading producers and exporters (e.g. specialized equipment and machinery). Naturally, design-related aspects of these

⁵ The latter group of exhibitors was not included in this study because we did not intend to analyze the effects of low cost competition. During the trade fair, we made some interesting observations, however, regarding the action of these firms and the way how others responded to this. We even witnessed cases where Chinese firms had to abandon their exhibits due to accusations regarding plagiarism and the illegal imitation of innovations. Further, it was apparent that numerous people, often of Asian origin, systematically took photographs of creative, trendy and innovative products, although this was strictly forbidden. Other firms were quite upset about this behavior and, as several interviewees emphasized, avoided direct contact with their Asian counterparts. Several firms pointed out that it was virtually impossible to stop people from taking photographs since there were simply too many who did this.

⁶ These were the products we focussed on in our survey. L+B, however, also includes product groups in which technological aspects dominate, such as in the area of house and building automation.

products are less important than technological features and aspects of practicability in handling them. In 2004, 852 firms exhibited their products at this trade fair, almost half of which originated from other countries (Table 1). Further, more than 60% of the 57,000 visitors originated from outside Germany (Messe Frankfurt GmbH 2004d; 2004e; 2004f).

The sampling strategy was to focus on exhibiting firms, approach them at their exhibits and ask them about the patterns of interaction and information exchange during the trade fair. At L+B and IFFA, 54 of 70 firms and 56 of 64 firms which were approached participated in the study, respectively. This resulted in high response rates of 68% at L+B and 88% at IFFA. The firms were selected through a mixed random- and purposive-sampling procedure. From the lists of exhibitors (Messe Frankfurt GmbH 2004a; 2004c; 2004d; 2004f), firms were classified according to product segments, exhibition halls and countries of origin and then chosen randomly. In addition, key firms in each product segment were identified beforehand and purposely included in the sample. In addition to participating in a partially-structured interview about trade fair interaction, respondents were asked to fill out a two-page standardized questionnaire. Through this, it was possible to compare basic variables between all respondents. This also helped to cross-check some of the answers given in the interviews. Interviews in which we received 'text-book' answers regarding marketing aspects were treated with particular care. Overall, we can assume that the results presented in this paper are representative of the interaction and communication patterns at L+B and IFFA.

In order to reduce the amount of time to answer the questions, three types of interview guidelines were designed, i.e. focusing on interaction either with customers, competitors or suppliers. Each firm was asked to answer the questions of one of the three guidelines. Sometimes, people voluntarily offered to also answer questions regarding other types of interaction. The

questions asked focused on the ways in which existing and potential partners and competitors were contacted, when and where scheduled and accidental meetings took place, what kinds of interaction occurred and which purposes interaction served. After a pre-test consisting of six firms, 142 interviews were conducted during L+B and IFFA, 63 of which focused on customer-, 20 on supplier- and 59 on competitor-interaction (Table 2). Each interview took on average 15 minutes, although there were some which took more than one hour. If possible, the interviews were digitally recorded and transcribed afterwards.

The interviews conducted clearly show that trade fairs bring together a large variety of firms of different size and age groups. Although half of the exhibitors interviewed were small firms with less than 100 employees, both trade fairs also included a substantial number of large firms (Table 3). About 27% of the survey firms at L+B and 17% of those at IFFA had more than 500 employees. In this size group, we identified most of the market leaders. Further, it is remarkable that a majority of exhibitors were relatively old and experienced in their area of expertise. Roughly three quarters of the firms were older than 20 years (Table 4). About 50% and 40% of the exhibitors interviewed at L+B and IFFA, respectively, were even founded before the 1950s. This indicates that these trade fairs focus on traditional industries which have been established over a long time period, with market leaders being among the largest and oldest firms.

4. Information Flows and Communication During International Trade Fairs

When analyzing the information flows and communication patterns at L+B and IFFA, it becomes clear that there is a particular hierarchy of interaction patterns between firms according to their contact status (Table 5). Interaction with existing and potential customers was seemingly the most important incentive for firms to participate in trade fairs. About 60% of the firms interviewed mentioned that the most important goals for their participation at L+B and IFFA

were (i) to inform the customers of their presence, (ii) make new customer contact and/or (iii) maintain and intensify contact with existing customers (Table 6). Another important reason to participate in the trade fairs was to present innovations (see, also, *Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft* 1996; 1999). In contrast, the traditional sales function of trade fairs had seemingly become less important although this might be different in other fairs.

Customer interaction was, however, not the only type of interaction firms had during these trade fairs. Direct and indirect contact with competitors was also ranked high, while contact with suppliers was ranked as being less important (Table 5). It would be wrong to interpret these results to mean that supplier and competitor interaction is of little or no value. Despite the dominance of customer contact in communication patterns, we will show in the following subsections that systematic interaction with competitors, suppliers and complementary firms is also quite important. It enables firms to get an overview of the competition, compare themselves with others and get access to new markets and material supplies.

4.1 Interaction with Customers

To get together and interact with customers was clearly the most important incentive behind the firms' decisions to participate in L+B and IFFA. Almost all respondents mentioned that they systematically contact their existing and potential new customers before the trade fair to inform them about their presence and invite them to visit their exhibits. These initial contacts are usually fairly standardized and not customer-specific. In order to remain flexible with respect to their time schedule, most firms at L+B do not make appointments *a priori* unless a customer specifically asks for it. There is a difference between fairs, however, in the way how customer contact is being made. Much of the customer interaction at IFFA involves technical conversations

and consultations and, thus, requires that specialists are available during the trade fair. In this case, it is often necessary to make appointments in advance.

Interaction with Potential Future Customers

Two types of meetings can be identified which differ in terms of the communication which takes place with potential future customers. In the first case, customers simply pass by the producers' exhibits to acquire general information about the production program and its characteristics. At L+B, for instance, information about price and delivery conditions is typically exchanged during such encounters. The second type involves customers which make specific inquiries about solutions for particular problems which exist or will occur in the foreseeable future due to changes in production. While the former interaction is often not very specific, it still helps to identify potentially interesting customers and their needs. This is used to establish data bases of possible customers which are contacted at a later date. The latter contacts are less frequent but they are the most interesting because they are the basis of intensive future interaction and transactions. This is especially important in trade fairs which focus on technical aspects, such as IFFA. The head of the sales department of a machinery producer at IFFA emphasized that "the customer does not want to buy a machine; he wants a solution. If the machine has a good quality this is good. It has to be that way. But what is decisive is not the machine; it is the solution behind the machine. And then it has to be cost efficient on top. ... Yesterday, an Asian visitor wanted to have our machine cut leek at an angle of 45 degrees. We do not need this here but such things are done in other places. In principle, every customer comes with a different idea or specific request (*translated from German*)."

As suggested by Maskell, Bathelt and Malmberg (2004), such interaction serves as a pre-condition for the development of trans-local pipelines with transaction partners in other parts of the world and fosters the knowledge-creation process.

Interaction with Existing Customers

Meetings with existing customers can also be classified into two groups. They are either meant to discuss particular circumstances of the business relation or to exchange general information to intensify the relation. In the first case, the communication between firms has the character of negotiations and takes place in a separate facility. Despite the fact that the importance of capital goods fairs as places where orders are made and contracts signed is seemingly decreasing (Backhaus 1992; Meffert 1997), especially large firms and market leaders at L+B and IFFA reported that they had received a substantial number of orders.

In the second case, general information about markets and technological innovations within the industry is exchanged. Although individual conversations might not release much new information, such interaction enables exhibitors to accumulate substantial knowledge about customer needs and enable them to detect market and technology trends throughout the course of a trade fair. Often people have been in contact with one another for many years and also exchange private information with their partners. As some sort of trust has developed over time, the information flows in these interactions are quite detailed and multiplex by nature (Uzzi 1997).

In terms of product and strategy development, the acquisition of information about customer experience is of central importance. About 80% and 50% of the respondents at IFFA and L+B, respectively, mentioned that information exchanges about the experience with their products, comparisons with the products of competitors and ideas of how to develop products further are particularly intensive. Customer-specific adjustments are occasionally also discussed during trade fairs. Such adjustments would, however, typically take place in a different setting before or after the fair.

Circumstances of Getting Together

Usually producer-user interaction takes place during the official fair hours. Contact is made or meetings are scheduled at the producers' exhibits. In few cases, where firms introduced complex new machines and equipment to the market, customers were invited to register for a day trip to the producer's development center to see how the machines operate under regular working conditions and to learn about the particularities of these machines. At IFFA, one firm organized helicopter flights for its customers which took them to a different location where they could inspect the machines. This did not only seem to be cheaper than to set up the machinery in the exhibition hall; it also provided this producer with the opportunity to develop a more intensive initial customer contact with some commitment from the very beginning.

About 70% of the respondents mentioned that they also aim to meet customers for dinners and other informal events in the evenings to discuss design variations and technological aspects in a more relaxed atmosphere. Such meetings are, of course, often scheduled to simply get together with customers and have fun, and not to merely conduct business.⁷ This inevitably happens though as it is hardly possible that peers would get together and not talk about their professional experience. At L+B, the head of the sales department of a German firm pointed out that they particularly try to meet their foreign customers with whom contact is not as intensive throughout the year: "Their accommodation is usually in a hotel close-by. So we meet in the evenings, go out for dinner and have a bit of fun. That is how you exchange information with one

⁷ Not all exhibitors interviewed, however, said that they would want to meet customers after trade fair hours. Some were glad to have some time off after a hard work day. Newcomers seemingly did not know enough about customers to recognize the potential for such meetings. Our impression was that those who did not see much value in

another (*translated from German*).” Such meetings help them to get to know one another on a personal basis. The multiplex nature of these meetings enables firms to develop expectations about the way how their partners conduct business. In the end, this reduces the risks of future transactions. Some interviewees indicated that they test out how they fit with their business partners and with whom they share the same ‘chemistry’. They also develop a ‘culture of communicating’.

There are substantial differences, however, in how such informal meetings with customers are structured. On the one hand, large exhibitors at L+B and IFFA typically organized evenings with customers, sometimes including a comedy or artistic program. During these events, the commitment involved and type of information exchanged is not very specific. Small and medium-sized firms (especially those at L+B) were, on the other hand, more spontaneous in meeting with their customers and were more interested in getting to know them on a personal basis. Large internationally organized firms also used trade fairs as a forum to bring together personnel from different regions and countries to exchange their experience from different market contexts, support the formation of stronger bonds between the subunits and enable the development of solidarity (see, also, Backhaus and Zydorek 1997; Kirchgeorg 2003). Some interviewees pointed out that such intra-firm gathering was also important in spreading important new information about markets and customer needs throughout the firms’ worldwide operations. Employees would thus be able to build up intra-firm networks of experts who they can contact later if particular questions or problems arise.

informal meetings with their customers did not realize this to be an opportunity to intensify existing contacts and develop stronger ties for joint future endeavors.

About half of the respondents emphasized that they also coincidentally meet customers during important trade fairs. One executive said that “I met a customer this morning in the bus on my way to the fair. It happens all the time when you walk through the facilities. ... When you leave [your exhibit] to use a toilet, go for a smoke or grab something to eat and the like, you always bump into someone you know. Some would say that such conversations are the best because you are not interrupted by others (*translated from German*).” The opportunity for unplanned meetings, of course, also depends on how often firms participate in important trade fairs and how well they are established. Such meetings provide additional important information.

The firms at L+B and IFFA indicated that 50% to 80% of all customer contacts were with existing customers, the remaining being with potential future customers. These results indicate how important trade fairs are in maintaining and intensifying existing customer networks (see, also, Prüser 1997; Zundler and Tesche 2003).

Customer Information Through Third Parties

Exhibitors also acquire information about potentially new or important customers through interaction with other customers or partners. About 90% and 50% of the firms interviewed at IFFA and L+B, respectively, emphasized that information flows through third parties occur regularly, although this information may be biased. As one manager pointed out, one must be experienced in evaluating this information properly or to know the people in advance to be able to interpret the content of such conversations.

Further, important information about customers is acquired through systematically scanning their respective exhibits in the event that they also present products at the fair. As described later, this enables firms to get ideas about trends in designs and the need for innovative efforts (see, also, Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft 1999). Personal

inspection of customers' exhibits also enables firms to gather experience which could not be acquired through conversation alone (Backhaus and Zydorek 1997; Goehrmann 2003a). Overall, the enormous amount of information, reports, opinions and gossip during L+B and IFFA establishes a particular 'global buzz' (Maskell, Bathelt and Malmberg 2004) through which information about customer needs and market trends can readily be acquired and customer contact be maintained (Kirchgeorg 2003; Prüser 2003).

Prüser (1997) suggested that customer contact during trade fairs has long-term advantages for the exhibitors. Although our results certainly confirm this conclusion, many firms do not openly acknowledge the importance of this effect. Only a quarter of the firms interviewed at IFFA agreed that trade fair contact with customers had clear advantages in the long term. They said that they had known most information already before the fair. However, one representative pointed out that "information which we had already beforehand or which we suspected gets confirmed. We get this information along with additional new information. And these ways [of information acquisition] are also quite decisive for our own products – for our production, for improvements. Otherwise you could easily produce over the heads of others, couldn't you? (*translated from German*)."

Almost all firms at L+B emphasized that customer contact was extremely important because "such dense information is only available during trade fairs (*translated from German*)", as one project manager pointed out. Further, "during a trade fair, you get to know whether it is worthwhile developing an idea further which you had on your mind (*translated from German*)." According to some respondents, another advantage of trade fairs is that they meet further customer groups with whom direct contact is rare in day-to-day operations (see, also, Backhaus 1992; Prüser 2004). During L+B, for instance, producers of luminaires regularly exchange ideas

with architects. Others try to get media coverage by making contact with representatives of national and international media.

The differences we observed in the evaluation of trade fairs seem to be related to the character of customer communication in various industries. While exhibitors at IFFA have frequent personal contact with their customers to guarantee smooth production, L+B exhibitors have fewer regular contacts and therefore particularly need this forum for interaction.

4.2 Interaction with Competitors

Most respondents emphasized the importance of opportunities to exchange information with or acquire knowledge about competitors during a trade fair. Although participation in trade fairs is the most direct and fastest way to get an overview of the market and competitive environment, not all firms acquire information in the same systematic way. On the one hand, small firms often did not have enough personnel at their exhibits to thoroughly scan and observe their competitors' exhibits. On the other hand, some important market leaders seemed quite self-confident and, for this reason, did not spend much time observing their competitors.⁸ Our impression was that these firms could easily overlook less visible but significant trends in the market by having such an attitude.

⁸ There seemed to be a tendency, particularly among leading firms, to question the importance of trade fairs as they had become very expensive. A manager at IFFA said that his firm would not miss much if they did not participate in the trade fair. They would be market leaders anyway. There is a danger, of course, that trade fairs could lose their importance if these firms decided not to show up.

Direct Contact

Direct contact with competitors usually takes place during official fair hours and occurs mostly when representatives visit the exhibits of other firms. Typically, such meetings involve short conversations about the general business conditions and developments in the industry and remain at a very general level (e.g. Dahl and Pedersen 2003; Maskell, Bathelt and Malmberg 2004). As the marketing head of one firm mentioned, “you just talk. Everybody has to see what he thinks. These are news about the industry, about markets, about projects. This is, of course, also a big game. ... It is all about policy and strategy (*translated from German*).”

During IFFA, direct meetings with competitors are quite rare and information exchange extremely limited because of fierce competitive conditions. Firms often compete by publicly stating that their products are superior to those of their competitors, which creates rivalry between firms. We could almost feel the tension ‘which was in the air’ when we walked through some of the exhibition halls, talked to people and watched their performance. In contrast to this, information exchange with competitors seemed more open at L+B. People were fairly relaxed and did not hesitate to talk to some of their competitors. This openness is in part related to the fact that the lighting industry is highly segmented and differentiated. Through this, firms usually focus on particular market segments and have only partial market overlap. In such design-intensive industries, producer flexibility is greater than, for instance, in the area of producing meat processing machines, which cannot be redesigned within a short time period.

Competitor Information Through Third Parties

More than half of the exhibitors mentioned that they received further important information about the actions and strategies of their competitors by talking to customers and other firms (see, also, Kirchgeorg 2003). These information flows do not necessarily have the character of passing

on secrets. They are fairly general and mostly serve to round up the picture that firms already have of their competitors. Some comments about the products compared to those of a competitor, for instance, help to draw further conclusions about that firm's strengths and weaknesses.

Learning Through Observation and Comparison

The best way to obtain information about competitors is simply by observing and comparing their exhibits. Through this, firms get to know about their competitors' products, modifications, input materials and visions (e.g. Strothmann 1992; Prüser 1997; Fuchslocher and Hochheimer 2000; Grabher 2002; Meffert 2003). This information enables the firms to evaluate their own products and technological progress in relation to what is going on in other parts of the world. One executive of a firm at IFFA said that "this [trade fair] is the ideal platform. Here, you can examine everything. The whole market is in one place. You get to know something about product variations, about materials, about designs – not much about the internal structure but that you can see later on at your customer's site ... (*translated from German*).” An engineer at L+B added that “the trade fair is very up-to-date. You get an overview, can acquire a lot of information in a concentrated form. Only here can you get a complete impression of your competitors, their exhibits and their philosophy.” This is an important advantage of trade fairs compared to other marketing instruments (see, also, Backhaus and Zydorek 1997; Kirchgeorg 1997; Meffert 2003).

One product manager pointed out that two thirds of his personnel were just at the trade fair to watch their competitors.⁹ Although this statement should be viewed as an extreme, the

⁹ Of course, firms have the option to remain anonymous when they approach their competitors' exhibits to 'spy out' additional information (Maskell, Bathelt and Malmberg 2004). Although the business literature makes

systematic scanning and analysis of other exhibits is generally an important task because it enables a firm to evaluate its own products better.¹⁰ From this, important conclusions for strategic decisions regarding future investments and product policies can be derived or supported.

Most interviewees also said that they had not been surprised by technical innovations shown at the trade fair which were new to them. Although product and machinery changes are typically designed in such a way that they can be introduced to the customers during the trade show,¹¹ other firms would normally know about these developments beforehand. Some managers mentioned that they would nonetheless be excited to see how the details of new designs were and how customers responded to this. In the literature, it has been suggested that practices to keep new information secret prior to the fair can help flagship fairs to maintain their importance (Goehrmann 2003b; Dahl and Pedersen 2003). Although some of the details of innovations might not be known in advance, firms are usually well informed about the actions of their competitors and have some prior knowledge. Even if firms do not identify many novelties during the fair, it is important to note that they have not missed important new developments. Further, novel products

suggestions of how to deal with supposed colleagues from other firms who have not identified themselves as such (e.g. Clausen and Schreiber 2000), it remains unclear to what extent such behavior occurs and how important it is. While some firms said that this was common practice, others insisted that they would never conduct such business practices. Especially among well-established small and medium-sized firms, it seemed to be part of the code of conduct to treat competitors in a fair manner. Some interviewees mentioned that this had become much stronger over the past decade. Of course, our observations of people illegally taking photos of other exhibits are another matter.

¹⁰ Unlike the exhibitors at IFFA, who have more regular contact with competitors and their products during day-to-day operations, respondents at L+B mentioned that the trade fair would be the only opportunity for them to get an overview about their competition.

¹¹ In contrast, other leading firms seemed to prefer introducing innovations during their own special events at some other time to receive full attention by the customers and relevant media.

and solutions are seemingly an issue of debate during a trade fair which helps firms to evaluate the importance of these innovations.

4.3 Interaction with Complementary Firms

Many of the firms interviewed at L+B and IFFA explicitly mentioned that they also acquire information about complementary firms which operate in different countries or sell their products in related market segments. To make contact with these firms is, for instance, useful when partners for joint marketing campaigns or sales are needed. This is especially important when it is aimed to enter new markets in different countries. In this case, firms scan the other exhibitors to identify potential partners and begin some initial discussions. Particularly when their experience in foreign markets is limited, firms use trade fairs as an opportunity to develop trans-local 'pipelines' with other firms, in the way described by Bathelt, Malmberg and Maskell (2004) and Bathelt (2005b).

The firms interviewed at L+B and IFFA often develop such contacts over several consecutive trade fairs and get to know their potential partners over a longer time period before a closer contact is established. One owner of a company at L+B mentioned that "occasionally new cooperations are established during trade fairs. In principle, however, you stay in loose contact for a while, sometimes over years. And then, when a particular project is undertaken, you get back to that firm (*translated from German*)."

Through regular attendance at international trade fairs, latent networks develop which can be activated and used when needed (Grabher 2002; Maskell, Bathelt and Malmberg 2004). Especially, small firms seem to prefer this route when they establish international networks.

4.4 Supplier Interaction

As opposed to customer and competitor interaction, contact with suppliers is less important for the exhibitors at L+B and IFFA (Table 5). Consequently, they spend less time and effort in dealing with existing and potential suppliers. This occurred despite the fact that both trade fairs included firms in virtually all stages of the value chain. They would offer plenty of opportunities for interaction with suppliers. The reason for the limited significance of supplier interaction is that the focus of the firms is primarily downstream-oriented towards their customers. Due to the high costs of participation, they tend to minimize the amount of personnel at their exhibits and do not have enough people to systematically scan the supplier sector. One sales manager at IFFA insisted: “We do not have time for this. Do you have any idea at all how expensive our exhibit is? (*translated from German*).”

While exhibitors are often not overly interested in upstream-oriented communication, suppliers aim to systematically visit the exhibits of existing and potential customers. Usually, this does not, however, lead to in-depth discussions or problem-solving activities. Most exhibitors did not have supply-side managers at hand which could lead such conversations. Nonetheless, all interviewees at L+B and half of the respondents at IFFA said that it was advantageous to have personal contact with suppliers during the fair. In particular, small creative producers in the lighting industry had an interest to meet with their suppliers. International trade fairs are often the only opportunity to make direct contact with innovative suppliers from different countries. The executive of an L+B firm said that “you can see the products of your suppliers. You get all information about new developments. You can see it, hear it – you can see the materials and their effects on people. This is something you cannot get from a catalogue (*translated from German*).” Such experiences seem to stimulate processes of creative thinking about new product designs in the lighting industry. A number of interviewees mentioned that the high density of suppliers

during the fair would provide a multitude of opportunities to make new contact. From this, they would be able to pre-select those suppliers that seem compatible and leave a good impression. Further thorough scanning would then occur after the trade fair. Especially, for small and medium-sized firms, trade fairs seem important in order to identify future transaction partners without much additional cost and effort.

Many interviewees pointed out, however, that they would much prefer a separate trade fair specialized in materials and supplies over a full-coverage fair. In this case, they would have more time to communicate with existing and potential new suppliers. Our impression was that many firms did not fully exploit the potential to acquire supplier information during trade fairs due to their practice of selective communication.

5. Conclusions: ‘Global Buzz’ and Pipeline Formation in Temporary Clusters

This paper suggests that it is crucial to analyze the role of international trade fairs in the global political economy. We need to understand the information and interaction processes during these events in order to explore issues which have been raised by the proximity school, commodity chain and cluster literature regarding future economic growth in a global context. It has been argued here that international trade fairs can be decisive to understand how, where and when trans-local linkages are established between firms from different parts of the world and how knowledge is exchanged and created at a global scale, both inside and outside of clusters. Following the suggestions of Maskell, Bathelt and Malmberg (2004; 2006), this paper argues that international trade fairs can be conceptualized as temporary clusters and characterized along several dimensions.

These events are of key importance because they serve many different purposes, combining traded and untraded interdependencies. Traditionally, trade fairs are viewed as important events

because they are occasions to conduct business and negotiate contracts with many customers and suppliers. As a temporary microcosm of an entire industry (Rosson and Seringhaus 1995), they also enable firms to systematically acquire information about trends in the world market and the state-of-the art in production and innovation. International trade fairs are events where firms present their new products, designs and ideas and receive feedback for further improvements. Communication with specialists from the same or related technology fields helps to develop new ideas and strategies for production and innovation. Further, these events offer ideal opportunities to identify specialists for the solution of particular problems and find partners for the expansion of market reach to other world regions. As such, international trade fairs provide opportunities to establish new and deepen existing networks (Goehrmann 1992; Prüser 2003; Storper and Venables 2004; Schuldt 2006). Intensive interaction and observation enable interactive learning processes which stimulate knowledge exchange and generation. Finally, these events become catalysts for spotting and/or setting important trends. The multitude of planned and unplanned meetings which take place between specialized agents serves to strengthen and reproduce the institutional basis of an industry.

The most important reason why international trade fairs have become central nodes in the global political economy (Bathelt and Zakrzewski 2007) is related to the fact that they compress an industry's entire world market into a single place, albeit in a rather complex way for a limited time period. Although it would be almost impossible to absorb and understand all processes which occur during international trade fairs, agents learn to capture the core trends relevant to their business. Unlike in a day-to-day situation, multiple ways exist as to how to interact with different specialists from all over the world on a face-to-face basis. Agents who are used to interacting at a distance get to know one another and become part of communities. This helps to

establish ongoing communication processes. They can meet with many potential suppliers or customers within a short time period and select the most promising for future cooperation.

Firms use these occasions to present new products to customers and structure their innovation processes in such a way that novelties are readily introduced to the market. As such, these events function as predefined deadlines for the creation of new products, machines or designs driving the time-lines of intra-firm innovation projects. For several reasons, it is important for novelties to become part of the 'global buzz' in these fairs. First, potential customers from all over the world become aware of new developments. Second, the concentration of important media at these trade fairs is also crucial. The involvement of media has a large impact on how the 'global buzz' diffuses after the trade fair. This buzz, which may have positive or negative effects, quickly spreads to a large number of customers, suppliers and competitors worldwide, even to those which have not been directly involved in the trade fair. Third, the market success (or failure) of a firm is strongly influenced by its involvement in this buzz.

Overall, the unique gathering of specialized agents during international trade fairs generates a dynamic information ecology which is highly conducive for processes of pipeline formation and knowledge creation. The participants of these events are surrounded by a densely knit web of specialized information and knowledge flows which cannot be ignored. The multidimensional structure of this 'global buzz' enables firms to get an overview of what is going on and scrutinize the trends visible in the exhibits of competitors and complementary firms. Firms can evaluate their own activities and achievements by comparing themselves to others and make decisions about future strategies and products. 'Global buzz' generates openness and swift access to external knowledge pools, embedded in a variety of different industry settings and/or world regions. Firms simply benefit from the large variety of relevant ideas which circulate during such

events. This includes both explicit knowledge exchanged in presentations, discussion forums and special exhibits and tacit knowledge as mediated through the design of products and exhibits. The information and knowledge flows are, at the same time, diffuse and goal-oriented in character.

Furthermore, the large number and intensity of meetings between firms with a similar technology focus is related to geographical proximity during the trade fair. Firms do not need to make specific commitments or additional investments to initiate contact with others. The scouting and establishment of new pipelines is relatively easy, involves no risk and no extra cost (Bathelt, Malmberg and Maskell 2004; 2006). Through regular attendance at such events, firms are able to find suitable partners to complement their needs, establish trust with distant partners and undertake first steps in the development of durable interfirm pipelines in research, production and/or marketing. Face-to-face communication provides important opportunities for economic agents to generate new knowledge and stimulate learning. Storper and Venables (2004, pp. 354-355) have pointed out the importance of face-to-face interaction in transferring complex messages, getting immediate feedback and responding further. Even though all firms interviewed were aware of this, not all made equally strong efforts to benefit from such interaction.

In sum, face-to-face communication during international trade fairs is extremely important because it helps to establish new network relations and trans-local pipelines, maintain and intensify existing networks and support the development of joint attitudes, language and understandings. Initial promising contact during trade fairs can be intensified by follow-up visits between potential partners and eventually lead to new trans-local business relations. All of this suggests that much contemporary research has overlooked the importance of international trade fairs. The evidence presented in this paper suggests that these events can be viewed as temporary clusters. They have become central nodes in the global political economy. Their significance has

increased as globalization processes have moved on, suggesting that a lot more empirical and conceptual research about the functioning and the effects of these events is needed in the future.

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References

- Allen, J. (2003): *Lost Geographies of Power*. Malden, MA, Oxford: Blackwell.
- Amin, A. and Cohendet, P. (2004): *Architectures of Knowledge: Firms, Capabilities, and Communities*. Oxford, New York: Oxford University Press.
- Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft (1996): *Ziele und Nutzen von Messebeteiligungen (Goals and Uses of Trade Fair Participation)*. AUMA edition No. 4. Berlin: AUMA.
- Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft (1999): *Messefunktions- und Potentialanalyse (Goals and Potentials of Trade Fair Participation)*. AUMA edition No. 9. Berlin: AUMA.
- Ausstellungs- und Messe-Ausschuss der Deutschen Wirtschaft (2004): *AUMA Messe Guide Deutschland (AUMA Trade Fair Guide for Germany)*. Berlin: AUMA.
- Backhaus, H. (1992): *Investitionsgütermarketing (Investment Goods Marketing)*. München: Vahlen.
- Backhaus, H. and Zydorek, C. (1997): Von der Mustermesse zur ubiquitären Messe (From sample fairs to ubiquitous trade fairs). In: Meffert, H., Necker, T. and Sihler, H. (Eds.):

- Märkte im Dialog: Die Messen der dritten Generation (Markets in Dialogue: Trade Fairs of the Third Generation)*. pp. 134-158. Wiesbaden: Gabler.
- Bathelt, H. (2005a): Geographies of production: growth regimes in spatial perspective 2 – knowledge creation and growth in clusters. *Progress in Human Geography* **29**: 204-216.
- Bathelt, H. (2005b): Cluster relations in the media industry: exploring the ‘distanced neighbour’ paradox in Leipzig. *Regional Studies* **39**: 105-127.
- Bathelt, H., Malmberg, A. and Maskell, P. (2004): Clusters and knowledge: local buzz, global pipelines and the process of knowledge creation. *Progress in Human Geography* **28**: 31-56.
- Bathelt, H. and Zakrzewski, G. (2007): Messeveranstaltungen als fokale Schnittstellen der globalen Ökonomie (Trade fairs as focal intersections in the global economy). *Zeitschrift für Wirtschaftsgeographie* **51**: forthcoming.
- Borghini, S., Golfetto, F. and Rinallo, D. (2004): *Using Anthropological Methods to Study Industrial Marketing and Purchasing: An Exploration of Professional Trade Shows*. Paper presented at the Industrial Marketing Purchasing Conference, Copenhagen (URL: http://www.europa.eu.int/comm/enterprise/enterprise_policy/spec/documents/fondazione_fiera_milano.pdf, date accessed February 14, 2006).
- Boschma, R. A. (2005): Proximity and innovation: a critical assessment. *Regional Studies* **39**: 61-74.
- Brown, J. S. and Duguid, P. (1991): Organizational learning and communities of practice: toward a unified view of working, learning, and innovation. *Organization Science* **2**: 40-57.
- Clausen, E. and Schreiber, P. (2000): *Messen optimal nutzen: Ziele definieren und Erfolge programmieren (How to Optimise the Use of Trade Fairs: Defining Goals and Planning Success)*. Würzburg: Schimmel.
- Dahl, M. S. and Pedersen, C. O. R. (2003): *Knowledge Flows Through Informal Contacts in Industrial Clusters: Myths or Realities?* DRUID Working Paper 03-01. Copenhagen (URL: <http://www.druid.dk/wp/wp.html>, date accessed April 2, 2005).
- Dicken, P., Kelly, P. F., Olds, K. and Yeung, H. W.-c. (2001): Chains and networks, territories and scales: towards a relational framework for analysing the global economy. *Global Networks* **1**: 89-112.
- Fischer, W. (1992): Zur Geschichte der Messen in Europa (On the history of trade fairs in Europe). In: Strothmann, K.-H. and Busche, M. (Eds.): *Handbuch Messemarketing (Handbook of Trade Fair Marketing)*. pp. 3-13. Wiesbaden: Gabler.

- Fuchslocher, H. and Hochheimer, H. (2000): *Messen im Wandel: Messemarketing im 21. Jahrhundert (Trade Fair Marketing in the 21st Century)*. Wiesbaden: Gabler.
- Funke, K. (1987): *Messeentscheidungen: Handlungsalternativen und Informationsbedarf (Trade Fair Decisions)*. Frankfurt/Main: Lang.
- Gereffi, G. (1999): International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics* **48**: 37-70.
- Gertler, M. S. (1993): Implementing advanced manufacturing technologies in mature industrial regions: towards a social model of technology production. *Regional Studies* **27**: 665-680.
- Gertler, M. S. (2001): Best practice? Geography, learning and the institutional limits to strong convergence. *Journal of Economic Geography* **1**: 5-26.
- Giuliani, E. and Bell, M. (2005): The micro-determinants of meso-level learning and innovation: evidence from a Chilean wine cluster. *Research Policy* **34**: 47-68.
- Goehrmann, K. E. (1992): Messen im technischen Entwicklungsprozess (Trade fairs in the technical development process). In: Strothmann, K.-H. and Busche, M. (Eds.): *Handbuch Messemarketing (Handbook of Trade Fair Marketing)*. pp. 51-66. Wiesbaden: Gabler.
- Goehrmann, K. E. (2003a): Die Nutzung der IT auf der Messe steht erst am Anfang (The Application of IT During Trade Fairs is Only Just Beginning). In: *WirtschaftsKurier*, November, p. 24.
- Goehrmann, K. E. (2003b): Messen als Instrument des Regionen- und Politmarketings (Trade Fairs as an Instrument of Regional and Political Marketing). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 87-96. Wiesbaden: Gabler.
- Grabher, G. (2002): Cool projects, boring institutions: temporary collaboration in social context. *Regional Studies* **36**: 205-214.
- Humphrey, J. and Schmitz, H. (2002): How does insertion in global value chains affect upgrading in industrial clusters? *Regional Studies* **36**: 1017-1027.
- Kirchgeorg, M. (2003): Funktionen und Erscheinungsformen von Messen (Functions and types of trade fairs). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen*,

Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events). pp. 51-72. Wiesbaden: Gabler.

Knorr Cetina, K. (1999): *Epistemic Cultures: How the Sciences Make Sense*. Chicago: Chicago University Press.

Malmberg, A. and Maskell, P. (2002): The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering: *Environment and Planning A* **34**: 429-449.

Maskell, P. (2001): Towards a knowledge-based theory of the geographical cluster. *Industrial and Corporate Change* **10**: 921-943.

Maskell, P., Bathelt, H. and Malmberg, A. (2004): *Temporary Clusters and Knowledge Creation: The Effects of International Trade Fairs, Conventions and Other Professional Gatherings*. SPACES 2004-04. Marburg: Fachbereich Geographie, Philipps-Universität Marburg (URL: <http://www.uni-marburg.de/geographie/spaces>, date accessed April 2, 2005).

Maskell, P., Bathelt, H. and Malmberg, A. (2006): Building global knowledge pipelines: the role of temporary clusters. *European Planning Studies* **14**: 997-1013.

Maskell, P. and Lorenzen, M. (2004): The cluster as market organisation. *Urban Studies* **41**: 991-1009.

Meffert, H. (1993): Messen und Ausstellungen als Marketinginstrument (Trade fairs and exhibitions as a marketing tool). In: Goehrmann, K. E. (Ed.): *Polit-Marketing auf Messen (Marketing Policy on Trade Fairs)*. pp. 74-96. Düsseldorf: Wirtschaft und Finanzen.

Meffert, H. (1997): Neuere Entwicklungen in Kommunikation und Vertrieb (New developments in communication and distribution). In: Meffert, H., Necker, T. and Sihler, H. (Eds.): *Märkte im Dialog: Die Messen der dritten Generation (Markets in Dialogue: Trade Fairs of the Third Generation)*. pp. 134-158. Wiesbaden: Gabler.

Meffert, H. (2003): Ziel und Nutzen der Messebeteiligung von ausstellenden Unternehmen und Besuchern (Goals and Effects of Trade Fair Participation). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 1145-1163. Wiesbaden: Gabler.

Messe Frankfurt GmbH (2003): *Geschäftsbericht 2003 (Annual Report 2003)*. Frankfurt/Main: Messe Frankfurt GmbH.

- Messe Frankfurt GmbH (2004a): *Light + Building, Internationale Fachmesse für Architektur und Technik, vom 18. bis 22. April 2004 in Frankfurt am Main: Aussteller in Zahlen (Data Report of Exhibitors at the Light + Building From April 18 Through 22, 2004)*. Frankfurt/Main, Press Release, April 15.
- Messe Frankfurt GmbH (2004b): *Light + Building, Internationale Fachmesse für Architektur und Technik, vom 18. bis 22. April 2004 in Frankfurt am Main: Schlussbericht (Final Report of Light + Building From April 18 Through 22, 2004)*. Frankfurt/Main, Press Release, April 22.
- Messe Frankfurt GmbH (2004c): *Light + Building. Internationale Fachmesse für Architektur und Technik: Offizieller Katalog (Official L+B Catalogue)*. Frankfurt/Main: Messe Frankfurt GmbH.
- Messe Frankfurt GmbH (2004d): *IFFA/IFFA-Delicat, Internationaler Treffpunkt für die Fleischwirtschaft vom 15. bis 20. Mai 2004 in Frankfurt am Main: Aussteller nach Ländern (Data Report of Exhibitors by Origin at IFFA From May 15 Through 20, 2004)*. Frankfurt/Main, Press Release, May 10.
- Messe Frankfurt GmbH (2004e): *IFFA/IFFA-Delicat, Internationaler Treffpunkt für die Fleischwirtschaft vom 15. bis 20. Mai 2004 in Frankfurt am Main: IFFA/IFFA-Delicat 2004 fest im Sattel (General Report of Exhibitors and Visitors by Origin at IFFA From May 15 Through 20, 2004)*. Frankfurt/Main, Press Release, May 12.
- Messe Frankfurt GmbH (2004f): *IFFA: The Meeting-Point. Offizieller Katalog (Official IFFA Catalogue)*. Frankfurt/Main: Messe Frankfurt GmbH.
- Nooteboom, B. (2000): *Learning and Innovation in Organizations and Economies*. Oxford: Oxford University Press.
- Norcliffe, G. and Rendace, O. (2003): New geographies of comic book production in North America: the new artisans, distancing, and the periodic social economy. *Economic Geography* **79**: 241-263.
- Owen-Smith, J. and Powell, W. W. (2004): Knowledge networks as channels and conduits: the effects of spillovers in the Boston biotechnology community. *Organization Science* **15**: 2-21.
- Porter, M. E. (1990): *The Competitive Advantage of Nations*. New York: Free Press.
- Porter, M. E. (1998): Clusters and the new economics of competition. *Harvard Business Review* **76** (November-December): 77-90.

- Prüser, S. (1997): *Messemarketing: Ein netzwerkorientierter Ansatz (Trade Fair Marketing: A Network Approach)*. Wiesbaden: Deutscher Universitäts-Verlag.
- Prüser, S. M. (2003): Die Messe als Networking-Plattform (Trade fairs as a platform for networking). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 1181-1195. Wiesbaden: Gabler.
- Rallet, A. and Torre, A. (1999): Is geographical proximity necessary in the innovation networks in the era of the global economy? *GeoJournal* **49**: 373-380.
- Rodekamp, V. (2003): Zur Geschichte der Messen in Deutschland und Europa (On the history of trade fairs in Germany and Europe). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 5-13. Wiesbaden: Gabler.
- Rosson, P. J. and Seringhaus, F. H. R. (1995): Visitor and exhibitor interaction at industrial trade fairs. *Journal of Business Research* **32**: 81-90.
- Schuldt, N. A. (2006): *Internationale Messen als temporäre Cluster: Globales Wissen im lokalen Fluss (International Trade Fairs as Temporary Clusters: Global Knowledge in Local Flows)*. München: Trurnit.
- Storper, M. and Venables, A. J. (2004): Buzz: face-to-face contact and the urban economy. *Journal of Economic Geography* **4**: 351-370.
- Strothmann, K.-H. (1992): Segmentorientierte Messepolitik (Segmented trade fair policy). In: Strothmann, K.-H. and Busche, M. (Eds.): *Handbuch Messemarketing (Handbook of Trade Fair Marketing)*. pp. 99-115. Wiesbaden: Gabler.
- Strothmann, K.-H. and Rohloff, E. (1992): Charakterisierung und Arten von Messen (Characteristics and types of trade fairs). In: Berndt, R. and Hermanns, A. (Eds.): *Handbuch Marketing-Kommunikation: Strategien, Instrumente, Perspektiven (Handbook of Marketing-Communication: Strategies, Instruments, Perspectives)*. pp. 709-723. Wiesbaden: Gabler.
- Thrift, N. (2000): Performing cultures in the new economy. *Annals of the Association of American Geographers* **90**: 674-692.

- Torre, A. and Rallet, A. (2005): Proximity and localization. *Regional Studies* **39**: 47-59.
- Troll, K. F. (2003): Messekonzepte im Wandel der Zeit – Von der „Leidmesse“ zur „Leitmesse“ (Changes in Trade Fair Concepts Over Time). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 31-50. Wiesbaden: Gabler.
- Uzzi, B. (1997): Social structure and competition in interfirm networks: the paradox of embeddedness. *Administrative Science Quarterly* **42**: 35-67.
- Wenger, E. (1998): *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.
- Ziegler, R. (1992): Messen – ein makroökonomisches Subsystem (Trade fairs as a macroeconomic subsystem). In: Strothmann, K.-H. and Busche, M. (Eds.): *Handbuch Messemarketing (Handbook of Trade Fair Marketing)*. pp. 115-126. Wiesbaden: Gabler.
- Zundler, A. W. and Tesche, M. (2003): Maßnahmen zur effizienten Vor- und Nachbereitung von Messeauftritten (Efficient ways to prepare and analyze trade fair participation). In: Kirchgeorg, M., Dornscheidt, W. M., Giese, W. and Stoeck, N. (Eds.): *Handbuch Messemanagement: Planung, Durchführung und Kontrolle von Messen, Kongressen und Events (Handbook of Trade Fair Management: Planning, Execution and Control of Trade Fairs, Conventions and Events)*. pp. 1163-1180. Wiesbaden: Gabler.

Table 1. Number of Exhibitors and Visitors by Origin and Rented Exhibition Space at L+B and IFFA, 2004 (Sources: Messe Frankfurt GmbH 2004a; 2004b; 2004d; 2004e)

Indicator	L+B ¹⁾	IFFA ²⁾
Number of exhibitors	1920 (100.0%)	852 (100.0%)
- German exhibitors	827 (43.1%)	433 (50.8%)
- Foreign exhibitors	1093 (56.9%)	419 (49.2%)
- Important countries of origin of foreign exhibitors	Italy, Spain, France, Netherlands, Austria, as well as China, Taiwan	Italy, France, Netherlands, Spain, USA
Number of visitors	116,000 (100.0%)	57,000 (100.0%)
- German visitors	32,500 (28.0%)	22,000 (38.5%)
- Foreign visitors	83,500 (72.0%)	35,000 (61.5%)
- Important countries of origin of foreign visitors	Benelux, Italy, Great Britain, Austria, France, Spain	Spain, Italy, Netherlands

Notes: ¹⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ²⁾ IFFA = International Trade Fair for the Meat Industry

Table 2. Number of Interviews Conducted at L+B and IFFA by Interaction Type and Nationality of Exhibitors, 2004 (Source: Survey Results)

Interview focus	Number of interviews conducted at L+B ¹⁾		Number of interviews conducted at IFFA ²⁾		Total
	with German firms	with foreign firms	with German firms	with foreign firms	
Customer interaction	21	4	22	16	63
Supplier interaction	5	3	6	6	20
Competitor interaction	25	8	21	5	59
Total	51	15	49	27	142

Notes: ¹⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ²⁾ IFFA = International Trade Fair for the Meat Industry

Table 3. Firms Interviewed at L+B and IFFA by Size, 2004 (Source: Survey Results)

Number of employees	Firms interviewed at L+B ¹⁾		Firms interviewed at IFFA ²⁾	
	Number	Share (%)	Number	Share (%)
1 - 20	12	23.5	8	14.8
21 - 50	5	9.8	8	14.8
51 - 100	6	11.8	12	22.2
101 - 250	10	19.6	9	16.7
251 - 500	4	7.9	8	14.8
501 – 1000	7	13.7	4	7.4
> 1000	7	13.7	5	9.3
Total	51	100.0	54	100.0

Notes: ¹⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ²⁾ IFFA = International Trade Fair for the Meat Industry

Table 4. Firms Interviewed at L+B and IFFA by Age, 2004 (Source: Survey Results)

Age group (years)	Firms interviewed at L+B ¹⁾		Firms interviewed at IFFA ²⁾	
	Number	Share (%)	Number	Share (%)
< 10	5	9.8	6	11.8
10 - < 20	11	21.6	5	9.8
20 - < 50	10	19.6	24	47.0
50 - < 100	19	37.2	10	19.6
≥ 100	6	11.8	6	11.8
Total	51	100.0	51	100.0

Notes: ¹⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ²⁾ IFFA = International Trade Fair for the Meat Industry

Table 5. Importance of Contact with Customers, Competitors and Suppliers at L+B and IFFA, 2004 (Source: Survey Results)

Firm type	Median importance of contacts with other firms ¹⁾	
	at L+B ²⁾	at IFFA ³⁾
Existing customer	1	1
Potential customer	1	1
Competitor	2	3
Existing supplier	3	5
Potential supplier	4	5

Notes: ¹⁾ Measured at an ordinal scale from 1 (very important) to 6 (unimportant); ²⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ³⁾ IFFA = International Trade Fair for the Meat Industry

Table 6. Goals of Trade Fair Participation at L+B and IFFA, 2004 (Source: Survey Results)

Goal of trade fair participation	Firm responses at L+B ¹⁾		Firm responses at IFFA ²⁾	
	Number (n=51)	Share (%)	Number (n=51)	Share (%)
Being there	33	64.7	34	66.7
Making new customer contact	31	60.8	32	62.7
Dealing with existing customers	31	60.8	25	49.0
Presentation of innovations	21	41.2	16	31.4
Sales and orders	4	7.8	1	2.0
Accessing new markets	-	-	4	7.8

Notes: ¹⁾ L+B = Light and Building – International Trade Fair for Architecture and Technology; ²⁾ IFFA = International Trade Fair for the Meat Industry

Figure 1. Pipeline Creation and the Complementary Relation between Temporary and Permanent Clusters



