

**The Janus-faced Economy: Hong Kong firms as intermediaries between
global customers and local producers in the electronics industry**

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ABSTRACT

The influence of the institutional framework on governance modes is well covered in economic literature but lacks empirical evidence. The main focus of this work is to explain the governance of customer and producer relations of Hong Kong based electronics firms by institutional factors. Hong Kong firms are able to deal simultaneously with both the Chinese transitional setting and global markets, thus leading them to be described as Janus-faced. Producer relations with the Pearl River Delta (PRD) are mainly organised in hierarchical ways, whereas globally spread customers govern their relations with Hong Kong firms via the market. Despite the differences of the institutional setting, the advantages of spatial concentration of producers in proximity to Hong Kong have been proven.

Key words: Institutions, governance, customer-producer relations, proximity, Hong Kong, electronics industry

Acknowledgement

The authors thank two anonymous referees for their helpful comments and the German Research Foundation (DFG) for funding the field research under grant RE 1720/8-1 within the priority programme “Megacities-Megachallenge – the informal dynamics of global change”.

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ABSTRACT

The influence of the institutional framework on governance modes is well covered in economic literature, but lacks empirical evidence. The main focus of this work is to explain the governance of customer and producer relations of Hong Kong based electronics firms by institutional factors. Hong Kong firms are able to deal simultaneously with both the Chinese transitional setting and global market, thus leading them to be described as Janus-faced. Producer relations with the Pearl River Delta (PRD) are mainly organised in hierarchical ways, whereas globally spread customers govern their relations to Hong Kong firms via the market. Despite the differences of the institutional setting, the advantages of spatial concentration of producers in proximity to Hong Kong have been proven.

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INTRODUCTION

The influence of spatial proximity of firms on economic growth is well covered in economic geography literature. However, details about intraregional relationships between firms in agglomerations are often missing. The governance modes adopted by firms to organise their relations

depend heavily on the institutional framework conditions in which these firms operate. Taking this into consideration helps to contribute to an understanding of why geography matters.

The main focus of this paper is to explain the governance of customer and producer relations of Hong Kong based electronics firms by institutional factors and the relevance of spatial proximity in an agglomeration with two distinct institutional settings. The case study region is the Greater Pearl River Delta (GPRD), comprising Hong Kong and adjacent parts of the Chinese province Guangdong.

With the beginning of the opening policy in China in 1978, Hong Kong firms started to move their production plants to the Chinese mainland. At the same time, the demand for consumer electronics grew and leading western firms decided to outsource production activities to lower-cost economies. Electronics firms in Hong Kong benefited by providing a good deal: legal security for contract conclusion and enforcement in Hong Kong and cost saving production in China. Janus, the Roman god of doorways and gateways, is an apt metaphor to illustrate how Hong Kong firms act as intermediaries between global customers and local Chinese producers in the electronics industry. Nowadays, the agglomeration of firms in the GPRD is well known as the 'world factory' for cost- and time-sensitive electronics products.

The new institutional economics provide a theoretical background for our analysis. The availability of and the willingness to capitalise on formal and informal institutions in order to save transaction costs is an important determinant for the organisation of a firm's network (North 1990). The

relation between firms varies from highly integrated hierarchies through cooperation to pure market links (Williamson 1998). This paper aims to provide empirical evidence for the impact of the institutional setting on the governance structure of customer and producers relations of Hong Kong electronics firms. Since the institutional frameworks differ markedly between Hong Kong and the Chinese mainland, it is discussed whether spatial and cultural proximity (Boschma 2005) ensures efficient cross-border transactions. The empirical findings of the paper are based on a survey of 104 electronics firms in Hong Kong, which have been asked about their relations to producers and customers and additional qualitative interviews

The results presented here comprise the first evidence from a research project on firm organisation in Hong Kong and the PRD started in 2007. The outline of the research project acknowledges Yeung's (2007) and Yeung's & Lin's (2003) call for a research agenda on Asian business that integrates micro-level analysis of intra-firm governance and macro-level influences of institutional settings and global production networks. It also contributes to the earlier institutional approaches in economic geography in general (Martin 2000).

The paper will first highlight the new institutional economics as a theory explaining the organisation of a firm's network and the relevance of different kinds of proximity for its optimal working. Special attention is paid to institutional informality due to the evolution of institutions in the course of China's transition process. Hypotheses for the empirical analysis will be derived from that section. After a short description of the

methodological background, the paper will concentrate on the empirical evidence from the GPRD region. The conclusion will focus on the relationship between the institutional framework, proximity, and governance modes.

INFORMAL INSTITUTIONS AND NETWORKED GOVERNANCE

Institutional informality has been discussed in the wake of the emerging New Institutional Economics (North 1990). A much more accurate distinction between the earlier formal and more current informal models is viable within this framework; economic interaction can be analysed as a continuum of informal and formal institutions and governance forms (Li 2007, Sindzingre 2006, Cheng & Gereffi 1994). Table 1 shows the application of informal and formal dimensions to selected attributes of contractual relationships.

The institutional environment defines the rules of the game. Transaction cost economics predicts which governance mode – market, hierarchy, or hybrid and networked – fits best with these rules (Williamson 1998, p. 29). The interrelation of the two is illustrated by the variables ‘uncertainty’ and ‘complexity’.

Uncertainty: If uncertainties in using the market channel are low, for example due to efficient ownership rights, regulations for capital transfer and enforceability of contracts, it is expected that firms more frequently organise their transactional relationships via markets. However, in

hierarchies within an incomplete institutional setting with high political, market and legal uncertainties, transaction costs are lower.

In reality, governance modes are not dichotomous, but markets and hierarchies are just the extremes of a continuum and manifold forms spread out in between (Powell 1990). Most governance modes do not consist solely of one of the pure forms, but are blended with characteristics of the other form (Makadok & Coff 2006). Such hybrid or networked enforcement mechanisms are based on cooperation and informality. Firms can benefit from them at medium levels of uncertainty and asset specificity (Powell 1990). In transition economies, hybrid governance modes are a way to increase flexibility in incomplete but steadily improving institutional settings. Monitoring and screening of partners remains possible, while the flexibility to alter the relationship is sustained. Negotiations and hybrid governance modes are conceived as informal practices in this paper since they lead to an increased need for ex-post cooperation.

Complexity: The influence of complexity on governance modes can be explained by the incomplete contract approach (Coase 1937, Hart & Moore 1999). The more complex the transaction, the higher are the total costs to specify all contingencies. A typical incomplete contract is open-ended, as two parties may ex-ante agree on a list of potential outcomes which is specified by bargaining in due course. The ex-post specification increases flexibility, since the contractual parties can adapt to changing conditions over time, but adversely affects the ex-ante incentive structure when the allocation of property rights is still in limbo (Hart & Moore 2004). It is very likely that formal and informal agreements exist as complements rather than

being substitutes. While they might nevertheless exist, they may have to be safeguarded by additional informal contracts (Poppo & Zenger 2002).

There is evidence in economic literature that incomplete contracts are positively related to cooperation and trust-building (Malhorta & Murnighan 2002). In addition to their transactional efficiency, they might thus create synergies when operating in China, since the access to Chinese business networks depends on long-term relationships through repeat transactions and on close working relationships with government offices and financial institutions (Wu & Choi 2004, p. 340). However, these personal relationships are deemed to be more important when Chinese firms cooperate with local firms. Relationships with foreign firms are more often based on pure contract governance (Luo 2002, p. 144). But even for these firms, flexibility gains might be an incentive to conclude open-ended contracts. Aulakh & Gençtürk (2007) have shown that complete and formal contracts are less enforceable in markets with high volatility such as the electronics industry. This study has also proven that contract formalisation has a negative impact on performance under high economic or legal uncertainty.

TRANSITION OF INSTITUTIONS AND GOVERNANCE MODES IN CHINA

The institutional perspective fits particularly well with the conditions in developing countries and transition economies. A complex and effective set of market institutions is just emerging. China has adopted a gradualist

approach towards transition from a planned to a market economy. This approach has created a mixed or hybrid economy with a wide variety of organisational forms and a plurality of property rights (Nee 1992) which gives leeway to informal dynamics. A consistent set of formal institutions for a market economy does not yet exist.

Li *et al.* (2003) predict that firms in economies that play a mediating role, such as Hong Kong, will rely on a variety of relation-based and rule-based governance modes, even though they recognise a general trend towards rule-based governance during the processes of transition and economic development. Under Hong Kong's "one country, two systems" framework, the city is perfectly equipped to deal effectively with companies both from established market economies and from China (Li *et al.* 2003, p. 71). Informal contracts, i.e. contracts that require intensive social interaction after signing, are especially relevant for private firms in China that cannot rely on strong formal links (Zhou *et al.* 2003, p. 97). This long-term task of active trust development has been achieved by Hong Kong managers in China over the past decades (Child & Möllering 2003). As a consequence the city was able to sustain its position as a gateway to China based on this resource.

The literature on Chinese business networks regularly draws on the role of personal relationships and reciprocity commonly known as *guanxi* (Yang 1994). The majority of the literature today accepts the prevalence of *guanxi* as a Chinese norm for personalised social capital (Li 2007). Recently, functional or utilitarian aspects of *guanxi* are becoming more important than emotional aspects for firms in selecting their partners (Park & Luo 2001, p.

457). But even if the institutional environment in China comes close to a complete market economy in the future, the entry to its business networks will, to a certain degree, remain dependent on a trusted *guanxi* base which is difficult for outsiders to penetrate. This finding goes beyond the usual expectation of institutional economics, which maintains that informality in China is a transitional phenomenon to substitute for formal institutional support (Xin & Pearce 1996).

PROXIMITY WITHIN GLOBAL PRODUCTION NETWORKS OF THE ELECTRONICS INDUSTRY IN DEVELOPING COUNTRIES

Geographical proximity between economic agents can foster their interaction. However the concept is not limited to spatial proximity alone. Revilla Diez & Kiese (2006) emphasised the impact of institutional and temporal space. Institutional proximity provides a space for a soft architecture of interaction. Temporal space captures the notion that partners engaging in collaborative projects need to have a roughly similar time horizon. Moreover, Boschma (2005) introduced a taxonomy of different proximities. A lack of institutional proximity, for example, could be substituted by spatial or cultural proximity. Regular contacts and a similar mindset might help to ease the agency problem by providing more efficient mechanisms to detect opportunistic behaviour, increase contract enforceability, and nurture trust building and networking. Enright (1995) found evidence that spatial proximity could serve as a substitute for hierarchical structures within firms, while McCann (1995) identified the reduction of transaction costs within agglomeration as a result of improved

information exchange via face-to-face contacts. The concept of transactional distance, i.e. a hedonic measure of physical and informational distance, explains the interrelation between institutional and geographic homogeneity (Wood & Parr 2005 p. 4-5).

Global production networks (GPN) are a major form of managing global manufacturing especially in the electronics industry (Ernst 2002). Over time, leading contract manufacturers have grown to integrators within global value chains (GVC) and are now developing their own global production networks while organising the supply chains for the brand leaders that are moving towards production without owning companies, i.e. fables production. This production model has been described as a modular value chain, e.g. by Gereffi et al. (2005). Companies from developing countries are more likely to enter such GPN/GVC as low-tier suppliers, used by the network flagships as price breakers or capacity buffers. These companies are highly exposed to abrupt changes in demand due to a lack of proprietary and financial assets (Ernst & Kim 2002, p. 1422). Their exposure to high volatility in global markets is expected to be hedged by the use of informal agreements.

A crucial advantage of GPN in the electronics industry is the efficient processing of orders with quick responses to customers orders and requests (Mason *et al.* 2002, p. 616). The location of parts of the production network in developing countries thus does not only depend on cost-efficiency as a necessary condition, but has to be met by a sufficiently efficient institutional setting, or at least appropriate governance modes, to ensure reliable transactions within the global production network. This explains the

growing but still limited number of manufacturing locations in developing countries. The PRD became the world's largest location for electronics manufacturing services (Lüthje 2004). It profited from relocation of Hong Kong firms and outsourcing of global firms. In this paper the focus is on these direct linkages of Hong Kong firms to their customers and producers. Thus, the findings are not reflecting the governance of the whole value chain or the even wider electronics industry cluster.

Four *hypotheses* are derived from the discussion above and will be tested by empirical data on electronics companies in Hong Kong.

H1: *Customers of Hong Kong firms are globally spread, whereas their producers are spatially concentrated in the PRD.* This hypothesis is derived from the development path of the region, whereby production was originally located in Hong Kong and was later outsourced or relocated into the PRD. It will be tested as to whether this pattern is evident in the data set.

H2: *Hong Kong firms govern their relations with customers via the market and their relations with producers in a hierarchical way.* An incomplete institutional framework is a source of uncertainty and makes it necessary to govern transactions within hierarchies. Hong Kong firms apply hybrid modes to hedge against uncertainties when entering the Chinese market (Wang & Nicholas 2007), for example equity cooperation via joint ventures and non-equity cooperation via framework contracts and additional informal agreements. Incomplete contracts are the efficient governance mode for complex transactions and are a pre-condition for trusted long-term relationships.

H3: *Differences in governance of customer and producer relations can be explained by the transitional institutional environment in the Pearl River Delta.* Despite improving formal institutions for a market economy, informal institutions will remain relevant though accommodated to new contexts. Informality is, therefore, not only a temporary necessity during the transition process, but an opportunity to gain flexibility in complex competitive markets. However, it is expected that in many cases both formal and informal governance modes exist as complements.

H4: *Agglomeration of electronics producers within the PRD has a positive impact on company performance and transaction efficiency.* Spatial and cultural proximity could be substitutes for the hierarchical organisation of production networks. While hierarchies may have a negative influence on the flexibility to change producers, networked relationships within an agglomeration are expected to be a more efficient way to organise transactions.

DATA AND METHODS

A survey of small and medium sized enterprises (SMEs) within the electronics industry was conducted in the second half of 2007 to provide evidence of the Janus-faced character of Hong Kong firms. The electronics sector was selected because the output of electronics products in the Guangdong province grew by 30% from 2001 to 2005 and half of Hong Kong's exports are produced by this sector (HKTDC n.d.; FHKI 2007). From 4,903 registered Hong Kong SMEs in the electronics industry, a

random sample of 2,000 firms was taken. 104 CEOs or senior managers were interviewed face-to-face using a standardised questionnaire. The average duration of the interviews was one hour. Since the collection of empirical data on the influence of institutions on governance modes is still at an explorative stage, an attempt has not been made to produce representative information. The interviews instead concentrated on the strategic behaviour of Hong Kong headquarters, the firms' international activities and their linkages to the PRD. However, many dimensions were measurable not on a metric scale but on a Likert-scale. The distribution of employment size between sample and population – sampling criteria for SMEs is not more than 100 employees according to the Hong Kong statistics definition of SMEs – shows no significant differences ($\chi^2=3.76$, $p=0.58$). This test suggests that there is no non-response bias in the sample.

The quantitative methodology, chosen for SMEs, was complemented by ten in-depth interviews with large Hong Kong players in the electronics industry. A qualitative approach seemed to be more appropriate to study large firms, as strategies, governance modes, and linkages to PRD firms are manifold.

EMPIRICAL EVIDENCE OF GOVERNANCE MODES DEPENDING ON INSTITUTIONAL FACTORS

Location of Customers and Producers - To illustrate network activities in the GPRD, Hong Kong firms were asked to provide information about the location of their most important producer in the PRD and their major

customer. The importance of producers is measured by the share of products bought in terms of value, whereas the most important customer is the one with the highest volume of sales. 39% of the producers were located in Shenzhen and the same amount in Dongguan. 13% of the producers could be found in later developed first ring cities (Guangzhou, Foshan, Zhongshan, Zhuhai) and 8% within the second ring (Huizhou, Zhaoqing, Jiangmen) (see Table 2). This finding is supported by Fan & Scott (2003) who studied the electronics industry in China and find firms in the PRD in close proximity. The clustering of the Hong Kong electronics industry in the core cities Shenzhen and Dongguan is caused by large Hong Kong firms which established their first PRD link in those cities immediately after the first Chinese opening. Interviews conducted showed that Shenzhen's and Dongguan's proximity to Hong Kong was pivotal, because personnel (CEO, managers, engineers) go between firms on a regular basis of two to three days a week. Other criteria named were the infrastructural development, the proximity to other firms and personal relationships within those cities.

Contrary to the spatial concentration of producers in the core cities, the major customers are equally distributed throughout North America, Europe and Hong Kong (about 20%). The proportion of Japanese customers is 9%. Only 10% of the Hong Kong firms' most important customers come from China (see Table 2). Lall, Albaladejo & Zhang (2004) studied the fragmentation of the electronics products. They also identified Hong Kong and China as most relevant in terms of electronics products trade, which shows the global integration of the GPRD.

Returning to the hypotheses formulated at the beginning of this study, Hypothesis 1 cannot be rejected. The results above show a significant difference in the location pattern of producers and customers. Whereas producers are concentrated in proximity to the Hong Kong firms' headquarters in the PRD, customers are globally spread. The proximity to producers suggests a strong division of labour between Hong Kong and PRD firms. Despite its competitiveness nowadays, it has to be proved whether this pattern can be hold in terms of future upgrading processes implying a shift from production to design and innovation tasks. Moreover, the location pattern is not anymore unique. Other regions in Asia, even in China (e. g. Shanghai) are catching up. They also provide a cost and time efficient production base in their hinterland combined with professional services.

Governance modes applied in Customer and Producer relations – Hong Kong firms are expected to organise their relations to PRD producers in a hierarchical way because of the incomplete institutional setting. Firms in Hong Kong were explicitly asked to indicate which governance mode they use to organise their relations to their most important customer and producer, respectively. Indeed, the most important producer of 55% of the Hong Kong electronics firms is a wholly-owned affiliate in the PRD (see Table 3). In the 1980s and 1990s, when most Hong Kong firms shifted their production into the PRD, firms feared high legal uncertainty. In case of conflicts with suppliers, the production process could be negatively affected. Even though the situation has gradually improved over time, e. g. after the WTO accession in 2001, firms usually stay with their own production plants. A further 16% of Hong Kong firms hold shares in their PRD producers. That

way Hong Kong firms still have the power to influence and direct their PRD producers. The high share results from the central government's policy from 1978 to 1986. It was forbidden to register a completely foreign-owned firm. Foreign entrepreneurs were forced to take on a Chinese partner. Even if this is related to an earlier period, the dependency on this path is still recognisable in remaining joint ventures of Hong Kong and Chinese entrepreneurs. In addition, some Hong Kong firms are targeting a long-term relationship with their producers indicated by framework agreements. It is a way to connect more closely to producers and to share business targets as well as information without equity relations. Non-equity cooperation between Hong Kong and PRD producers could be observed in 16% of cases. In comparison, only 13% of Hong Kong electronics firms work on a pure market relation (buying and selling agreements) with their most important supplier. This study presents a mostly hierarchically organised network of firms in the GPRD agglomeration (cf. Wei, Liu & Liu (2004) and Wang & Nicholas (2007)). The unusual dense linkages between firms in Hong Kong and the PRD are caused by the incomplete institutional framework in the PRD.

A look at the governance modes of customer relations of Hong Kong firms provides a completely different picture. 66% of the Hong Kong firms indicated having only buying and selling agreements with their most important customer (see Table 3). Another 28% work on a non-equity cooperation basis with their most important customer and only 6% have any equity relations at all. Hong Kong foreign trade is protected by a complete set of institutions concerning the conclusion and enforceability of trading

contracts and the exchange of financial capital. This decreases transaction costs on markets.

The second hypothesis regarding the different governance modes of relationships to customers and producers must be hold. Customer relations tend to be organised via the market, whereas producer relations are governed by equity relationships. But the future need for upgrading and innovation may challenge this business model. In knowledge based economies knowledge sharing, the ability to learn and a certain freedom of creativity are required.. In consequence, cooperative modes of governance might take over advantage of hierarchical modes in terms of producer relationships.

It is expected that the location of partners influences the transactional form due to the different institutional framework. To give evidence for that, other determinants must be taken into consideration and their influence excluded.

Institutional environment as a determinant of governance mode – China's economic transformation and growth was driven by the a renewal and revision of formal institutions, e. g. competition law, enterprise law, labour protection law, intellectual property rights, regulations for foreign investments (World Bank 1994, OECD 2005). Moreover China entered the WTO in 2001. Since then it has profited from its increased attractiveness for foreign direct investments due to an improved planning reliability for foreign firms and a better protection of intellectual property rights (Schüller 2002, Yeung 2002, HKTDC 2000). For further improvement for Hong Kong based firms, the Hong Kong government is deepening its economic interaction with the PRD through the Closer Economic Partnership

Arrangement (CEPA - came into force in 2004). By then international regulations for cross border trade with China have become more liberalised. Hong Kong firms especially enjoying preferential treatment in Guangdong. But even then, the ongoing major political changes in China show the high unpredictability and instability of political regulations Hong Kong firms face. In order to survive in a transforming economic environment, firms need to find a governance mode which mitigates the political hazards, copes with procedural risk while remaining competitive internationally (Krug & Hendrischke 2006). When Hong Kong firms adapt to the difficult institutional setting in the PRD (Yang 2005), it seems to be more appropriate and safer to maintain control of the PRD operations and set up self-owned production plants, instead of dealing with suppliers and taking the risk of not knowing whether the supplier is able to master the situation. But with the improvement of the institutional environment cooperation and networks forms can be expected (Williamson 1998, Krug & Hendrischke 2006). In contrast, Hong Kong firms' trade with customers in developed countries is already protected by international trade security regulations. It can be assumed that decisions on governance modes are highly consequential for Hong Kong firms as they cannot be revised or changed easily. Therefore, it is expected that formal rules are predominately taken into account for decision making. As the formal institutional framework depends on the location, it is expected that the location of partners has a high influence on the choice of governance modes (cf. Wei, Liu & Liu 2004). The impact of locations must be compared to other factors to exclude their influence. This finally confirms the assumption that institutional factors are most responsible for the selected governance mode.

In Table 4, different potential determinants for governance modes are tested: firm size (employees, sales), age (year of foundation in Hong Kong, establishment of relations to the PRD), ownership structure, customer and producer variables (location, dependency, working experience), rate of upgrading (position in the value chain, degree of innovativeness). As some variables could only be measured on a nominal scale (for example location or ownership structure) the contingency coefficient Cramer's V was chosen to measure the strength of association. Values range from 0 (no association) to 1 (the theoretical maximum possible association). Not surprising is the highly significant association (Cramer's $V = 0.63$) of the location of customers and producers (China or abroad) and the selected governance modes. Hong Kong firms prefer market based relations to partners in western oriented countries and set up hierarchical based relations to partners in China. Therefore, location of customers and producers has a significant influence on governance modes.

Comparatively much less important, but nevertheless significant, is the degree to which Hong Kong firms depend on their major customers or producers (Cramer's $V = 0.39$). The higher the profits made with one partner, the more likely the relationship is to be organised in a hierarchical way. This means that if Hong Kong firms have set up their own subsidiary, then most of the production is run by that subsidiary. Using the market place means choosing the best partner and spreading risk, which usually results in a more diverse pool of customers and suppliers. Moreover, the work experience with customers and producers is significantly associated with the choice of governance modes (Cramer's $V = 0.20$). The longer the work

experience lasts, the more often transactions are embedded in hierarchies. As markets ease the switch of partners, those relations are naturally shorter, but in the PRD the location-specific institutions act cumulatively on that pattern. Relationships set up before China entered the WTO and CEPA were difficult to manage on a market basis. Firms which established contracts after 2001 could enjoy a much more stable situation in China, which encourages more firms to work within cooperation or sometimes even in market-like relations. Wang & Nicholas (2007) also emphasised the recent trend to cooperation in their PRD study. Firms seem to screen the institutional environment constantly to choose the appropriate governance mode. There is an association between the degree of dependency on partners, the work experience and certain governance modes, but while both variables describe specifications of governance modes, they are not decision-making criteria for a mode. Only the location of customers and producers is previously known and can influence the decision. Other determinants, such as the size and age of Hong Kong firms, ownership structure, position in the value chain and innovativeness have only a low contingency coefficient, which is insignificant. The exclusion of the influence of other variables leads to the conclusion that differences in governance of customer and producer relations can be explained by institutional factors differing between locations. The third hypothesis must be hold and cannot be rejected.

Agglomeration and Business Performance - The proximity of firms in the PRD agglomeration has a positive impact on the time firms need to negotiate their contracts. As firms in the GPRD do simultaneously capitalise

on cost-efficient and on time-conscious production processes, the time taken to agree on contracts is very important (the time from the quotation of orders until they are confirmed). A differentiation between customers and producers shown in Table 3 points out that negotiation with customers takes 168 hours on average; the negotiation with producers is completed within 51 hours. But for producers it is favourable that negotiation in equity relations is on average quicker than negotiations between partners linked in market-like relations (hierarchy 22 hours, equity cooperation 98 hours, non-equity cooperation 93 hours, market 124 hours). It is assumed that negotiation time with customers work in a similar pattern, but too little cases for customers in hierarchies and equity cooperation restricted to calculate the average negotiation time. However, in equity cooperation with customers HK firms' negotiation time takes 156 hours and in market relations 166 hours. This study, therefore, quantitative confirms which has already been theoretically outlined: The spatial and social proximity to China stimulates face-to-face contacts, develops trust in relations and supports a quicker and more detailed exchange of information, which positively influences the transaction efficiency. However, Hypothesis 4 cannot be rejected. It holds that firms in agglomeration profit from their network in proximity.

CONCLUSION

The GPRD is an extraordinary example for analysing the effects of spatial concentration and the effect of different institutional framework conditions within one region on firms' behaviour in organising their customer and producer networks. The coexistence of a well established global hub such as

Hong Kong and a low-cost production region in close proximity with an evolving institutional setting in the course of the transition process enables firms to make use of two different business environments. The dynamic development process of the two intertwined regions demonstrates that firms working in both regions have the potential to gain a competitive advantage. However, firms respond in very different ways to these circumstances. Even at this early stage of the project it is already evident that Hong Kong firms concentrate their production in close proximity and often govern them in equity relations, which confirms the “front office, back factory” production model. As the customers are located at great distances on the global scale, Hong Kong really serves as an intermediary between global customers and local producers in the electronics value chain.

The incomplete, unstable, and sometimes unpredictable institutional framework conditions on the Chinese mainland force Hong Kong firms to reduce uncertainty - for example with respect to legal services, cross border trade and business law - through hierarchical organisational structures. It seems to be more appropriate to maintain control over the production operations in the PRD instead of market based customer supplier relations. Additionally, the proximity has a positive effect on the transactional efficiency. The commuting distance between Hong Kong based firms and their producers in the PRD facilitates face-to-face contacts which help to establish trust relations, a faster exchange of information, and quicker negotiations. As a result, the firms maintain a high degree of flexibility. Besides the cost advantage (which will diminish in importance due to higher living standards and rising salaries as a consequence of the growth dynamics and a shortage of labour supply in the PRD), the gain in flexibility becomes

the key competitive edge. The more flexible the firms can operate, the better they can meet the demands of global markets and react to shorter product life cycles.

As previously mentioned, the results presented so far are initial indications of company behaviour in response to different institutional settings. A more comprehensive analytical approach will be possible after completing a company survey in the PRD. In order to analyse the impact of different institutional framework conditions, for example on company performance, multivariate techniques need to be applied to check for a wide range of influencing factors. Additionally, the research has to be expanded to investigate organisation and governance modes in other business areas such as innovation, finance, and production. In the long run, a crucial question for the competitiveness of the GPRD is whether the detected business model, which has its roots in low-cost, high-volume production, will be appropriate when firms are upgrading by improving either their innovation capabilities or their position in the value chain.

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