

Susanne Meyer

Informal Modes of Governance in Customer Producer Relations

The Electronic Industry
in the Greater Pearl River Delta (China)

Geographie

Franz Steiner Verlag

Megacities and Global Change
Megastädte und globaler Wandel
Band 1



Susanne Meyer
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MEGACITIES AND GLOBAL CHANGE
MEGASTÄDTE UND GLOBALER WANDEL

herausgegeben von

Frauke Kraas, Jost Heintzenberg, Peter Herrle und Volker Kreibich

Band 1

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Umschlagabbildung: Hongkong

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Bibliografische Information der Deutschen Nationalbibliothek:

Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über <http://dnb.d-nb.de> abrufbar.

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Druck: AZ Druck und Datentechnik, Kempten

Gedruckt auf säurefreiem, alterungsbeständigem Papier.

Printed in Germany.

ISBN 978-3-515-09849-6

CONTENTS

1.	Introduction	13
1.1.	Background Information and Necessity of Research	13
1.2.	Research Objectives and Questions	15
1.3.	Structure	17
2.	Developing a Conceptual Framework: Organisation of Customer and Producer Relations in Emerging Markets	19
2.1.	Coevolution of Firms' Behaviour, Industrial Dynamics and Institutions	19
2.2.	The Need for Flexibility in Emerging Economies: A Global Value Chain Perspective.....	22
2.2.1.	Global Production in Modular Value Chains.....	22
2.2.2.	Flexibility of Firms as a Competitive Advantage in Emerging Economies	31
2.2.3.	Interim Conclusion and Hypotheses Derived from Section 2.2	33
2.3.	Institutions, Transition and Informality: A Regional Perspective.....	35
2.3.1.	Playing the Game: Institutions and Institutional Change	35
2.3.2.	Regions in Transition	39
2.3.3.	Benefiting from Informality in Interactions	41
2.3.4.	Informality reaching Flexibility	43
2.3.5.	Interplay of Formal and Informal Institutions in Transitional Economies	45
2.3.6.	Interim Conclusion and Hypotheses Derived from Section 2.3	46
2.4.	Governance Modes in Customer Producer Relations: A Firm's Perspective	48
2.4.1.	Idea and Concept of Transaction Cost Economics	48
2.4.2.	Traits of Markets, Hierarchies and Hybrids	50
2.4.3.	Transactional Specification and Governance Modes	54
2.4.4.	Institutional Environment and Governance Modes	58
2.4.5.	Interim Conclusion and Hypotheses Derived from Section 2.4	59
2.5.	Formal and Informal Interactions within Customer Producer Relations: A Firm's Perspective.....	61
2.5.1.	Contacting and Selecting Customers and Producers	62
2.5.2.	Concluding Contractual Arrangements	68
2.5.3.	Enforcing Contracts	74
2.5.4.	Interim Conclusion and Hypotheses Derived from Section 2.5	78
2.6.	Developing a Framework for the Empirical Analysis	80

3.	Operationalisation, Methods and Data	83
3.1.	Selecting Research Region and Sector	83
3.2.	Operationalising Informality and Flexibility in the Electronics Industry	86
3.2.1.	Recording Data on the Need for Flexibility	86
3.2.2.	Identifying Indicators for Governance Modes	87
3.2.3.	Identifying Indicators for Informality and Flexibility	89
3.3.	Measuring Informality and Flexibility in the Electronics Industry	91
3.4.	Assessing Data Validity: Comparison between Sample and Population	98
3.5.	Summary and Discussion of Findings in Section 3	99
4.	Firm Conditions in the GPRD: Institutional Change and Development of the Electronics Industry	101
4.1.	Transformation and Institutional Change in the GPRD	102
4.1.1.	Reform Policies in China and Challenges for the GPRD	102
4.1.2.	Shaping of the Business Environment by Informal Institutions.....	110
4.1.3.	Putting China's Institutional Environment into a Global Perspective	112
4.1.4.	The GPRD in Figures	115
4.2.	Global Development of the Electronics Industry	119
4.3.	The Electronics Industry in the GPRD and Modular Value Chains	121
4.3.1.	Development of the Electronics Industry in HK and the PRD	122
4.3.2.	Integrating Hong Kong Firms into Modular Value Chains	124
4.3.3.	Unique Locational Setting of the GPRD Region	126
4.4.	Spatial Distribution of Customers and Producers	133
4.5.	Summary and Discussion of Findings in Section 4	139
5.	Governance Modes and Characteristics in Customer Producer Relations	142
5.1.	Applied Governance Modes in Customer Producer Relations in Hong Kong and the PRD	142
5.2.	Characterising Governance Modes	144
5.2.1.	Governance Modes and Institutional Differences: Logit Model	145
5.2.2.	Governance Modes, Firm-Specific Characteristics and Institutional Change: Logit Model	154
5.3.	Summary and Discussion of Findings in Section 5	165

6.	Analysing Informality and Flexibility in Business Relations in the GPRD	168
6.1.	Impact of Governance Modes on the Flexibility of Firms	168
6.2.	Contacting and Selecting Customers and Producers in the GPRD	172
6.2.1.	Contacting Processes	172
6.2.2.	Selection Processes	176
6.3.	Contractual Arrangements of Hong Kong Firms	179
6.4.	Enforcement Mechanisms of Contracts in the GPRD	187
6.5.	Summary and Discussion of Findings in Section 6	193
7.	Conclusion	197
7.1.	Summarising Empirical Findings	197
7.2.	Need for Further Research and Implications for Politicians and Managers	200
	References	205
	Appendix A. Definition of Electronics Industry according to Statistical Standards	215
	Appendix B. Test of Multicollinearity for Generalised Ordered Logit Models	218
	Appendix C. Test of the Parallel Regression Assumption	221

LIST OF FIGURES

2.1. Model of organisational adaptation	20
2.2. The modular production network pattern	24
2.3. The modular value chain pattern	27
2.4. Types of flexibility	32
2.5. Institutions and decision making in a regional aspect	37
2.6. Determinants of transaction costs and governance modes	55
2.7. Trade-off between markets, non-equity cooperation, equity cooperation and hierarchies	56
2.8. Shift of governance modes according to changes in the institutional environment	60
2.9. Principle agent relations	69
2.10. Static and dynamic contracting model	71
2.11. Framework of analysis of customer producer relations	81
3.1. Industrial split of the gross industrial output value in the PRD 2005 .	85
4.1. Development of the institutional environment in China	113
4.2. Location of final markets and sales channels of firms in the GPRD .	134
5.1. Predicted probabilities for an increase in working experience	160

LIST OF TABLES

2.1.	Formal informal dimensions in business interactions	42
2.2.	Informality reaching Flexibility	44
2.3.	Attributes of governance modes	52
2.4.	The traits of guanxi	64
2.5.	Safeguard and enforcement mechanisms of contracts with customers and producers	75
2.6.	Advantages and disadvantages of arbitration	77
3.1.	Relation of governance modes and contracts	88
3.2.	Formal to informal contact channels	90
3.3.	Comparison sample to population according to the number of employees in electronic firms in HK (2006)	99
4.1.	Time series analysis of economic indicators in the PRD 1980–2005 .	116
4.2.	Shift-Share analysis of the gross industrial output in the PRD	119
4.3.	Exports in billion USD and growth rates of electronics products to the world	125
4.4.	Impact of HK based CMs for the global electronics industry 2003– 2007	126
4.5.	Manufacturing position of HK and PRD firms in the value chain . .	127
4.6.	Trade flow of selected electronics products in million USD in 2006 .	128
4.7.	Revealed comparative advantage (RCA) value for selected product categories in China and Guangdong 2006	129
4.8.	Division of business activities between HK and the PRD	131
4.9.	Firm’s ability to predict changes of industry conditions related to customers and producers 2002–2007	133
4.10.	Geographical proximity of firms in the PRD and their most important producers	137
4.11.	Type of HK connection of firms in the PRD	138
5.1.	Governance modes applied in customer and producer relations of firms in HK and the PRD	144
5.2.	Definition and descriptive statistics of variables used in the generalised ordered logit (GOL) model (1)	148

5.3.	Definition and descriptive statistics of variables used in GOL (1) according to their governance modes	149
5.4.	GOL (1) for governance modes in customer producer relations of firms in HK	151
5.5.	Predicted probabilities using GOL (1) for different firm types	154
5.6.	Definition and descriptive statistics of variables used in the GOL (2)	155
5.7.	Definition and descriptive statistics of variables used in GOL (2) according to their governance mode	156
5.8.	GOL (2) for governance modes in producer relations of HK firms . . .	158
5.9.	Predicted probabilities using GOL (2) for different firm types	162
5.10.	Average marginal effects in the GOL (2)	164
6.1.	Actions taken when orders exceed production capacity according to governance modes to producers	170
6.2.	Actions taken when orders are reduced according to governance modes with HK customers	171
6.3.	Correlation analysis of formal and informal contacting channels of HK firms to customers	174
6.4.	Importance and frequency of contacting channels to customers comparing HK and PRD firms	175
6.5.	Correlation analysis of formal and informal selection criteria of HK firms for producers in EC and NEC	178
6.6.	Negotiation time of HK firms according to governance modes	181
6.7.	Preciseness and form of framework agreements of HK firms	183
6.8.	Effects of formal and informal framework agreements on the negotiation time	186
6.9.	Enforcement mechanisms of contracts in HK and the PRD	188
6.10.	Enforcement mechanisms and its correlation with structural firm characteristics	192
A.1.	Definition of product classification in the electronics industry according to statistical standards	216
A.2.	Definition of activity classification in the electronics industry according to statistical standards	217
B.1.	Pearson correlation coefficient of variables used in GOL (1)	219
B.2.	Pearson correlation coefficient of variables used in GOL (2)	220
C.1.	Brant-Test for ordered logit models	222

ABBREVIATION

ASEAN	Association of Southeast Asian Nations
CAGR	Compound annual growth rate
CEPA	Closer Economic Partnership Arrangement
CM	Contract Manufacturer
CN	China
CS	Component Suppliers
DC	Direct Contracting
DFG	German Research Foundation
DG	Dongguan
EC	Equity cooperation
FA	Framework Agreement
FDI	Foreign Direct Investment
FIE	Foreign Invested Enterprise
GDP	Gross Domestic Product
GIO	Gross Industrial Output Value
GOL	Generalised Ordered Logit
GPRD	Greater Pearl River Delta
GR	Growth rate
GZ	Guangzhou
HK	Hong Kong
IPR	Intellectual Property Right
JV	Joint Venture
LRM	Linear Regression Model
ML	Maximum Likelihood
NDS	Net Differential Shift
NEC	Non-equity cooperation
NIE	New Institutional Economics
NPS	Net Proportionality Shift
OBM	Original Brand Manufacturer
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer

OLM	Ordered Logit Model
OLS	Ordinary Least Square
pp	Percentage points
PRA	Parallel regression assumption
PRD	Pearl River Delta Economic Zone
R&D	Research and Development
RMB	Renminbi
RN	Renegotiation
RVA	Revealed Comparative Advantage
S.D.	Standard Deviation
S.E.	Standard Error
SEZ	Special Economic Zone
SME	Small and Medium-sized Enterprise
SOE	State owned enterprise
SPP	Priority Programme
SSRC	Social Science Research Centre
SZ	Shenzhen
TDC	Hong Kong Trade Development Council
TNS	Total Net Shift
US	United States
USD	United States Dollar
VC	Value Chain
VAT	Value Added Tax
WTO	World Trade Organisation

1. INTRODUCTION

1.1. BACKGROUND INFORMATION AND NECESSITY OF RESEARCH

The global impact of China as one of the world's leading production engines is growing. An increasing number of goods on the world market are produced in China. The Greater Pearl River Delta (GPRD), consisting of Hong Kong (HK) and the Pearl River Delta Economic Zone (PRD), part of the southern Chinese province of Guangdong, is to a large extent responsible for the economic growth and increasing prosperity of China. Since the implementation of the Chinese opening policy in 1979, the country has attracted foreign investments from HK and, more recently, from Taiwanese and Western firms. Due to its proximity to HK, the PRD served as an experimental zone for Chinese policy makers to coordinate foreign interests. Low production costs were the initial motivation for foreign firms to invest in or source from the GPRD. Today, the PRD is one of China's most important economic centres. The economic power of the GPRD results from the intensive interaction between HK and the PRD. Meanwhile, the GPRD is exposed to intense competition from other countries and regions which also offer attractive production conditions for global firms. Moreover, production costs in the GPRD are rising due to higher wages, higher land prices, higher electricity costs, etc. Although some firms have relocated operations to other countries, the majority of firms continue to source or set up production facilities in the GPRD. The trend has decelerated as a result of the economic crisis in 2008, but is still obvious. Firms in the GPRD seem to be able to maintain their competitiveness on the world market despite severe competition and higher production costs (FEDERATION OF HONG KONG INDUSTRIES (FHKI) 2007; FEDERATION OF HONG KONG INDUSTRIES (FHKI) 2003; ENRIGHT et al. 2005).

The new challenge of serving leading global firms provides explanations. In times of made-to-order production, shorter product life cycles, smaller batch sizes, high market volatility and especially mass production, a flexible firm and network organisation is required in order to provide speed in the production process and the necessary ability to rearrange the production process (VOLBERDA 1996). Besides cost cutting and upgrading pressure, the *flexibility of firms* is crucial for their integration into global value chains. The model of flexible specialisation and the just-in-time concept addressed this new global challenge for the first time. Although some research exists about the means of achieving flexibility (for example small-batch production, economies of scope, flexible machines, specialisation), the contribution of informal modes in interactions with business partners to smooth relations is still

underrepresented in the economic geography literature. This work aims to explain how firms in the GPRD have adapted their business organisation, especially their customer and producer relations, in order to build a flexible production network which is capable of ensuring their competitive advantage.

The concept of this work acknowledges the call of YEUNG (2007) and YEUNG and LIN (2003) for a research agenda on Asian business that integrates micro-level analysis of intra-firm governance and macro-level influences of institutional settings as well as global production networks. Existing literature studies the growth and success of firms in China and especially of the firms in the PRD (ENRIGHT et al. 2005; BERGER and LESTER 1997). Moreover, Asia-specific literature provides insights into the peculiarities of Asian businesses, such as informal institutions in guanxi networks (GIPOULOUX 2000; XIN and PEARCE 1996; ZHANG and ZHANG 2006).

The informal ties which ease and smooth relations between business partners seem to play a significant role in firm organisation. The concept of informalisation does not refer to illegality or the informal sector. It goes beyond that and touches on the personal elements of interactions which allow the avoidance of time-consuming official business procedures. This shortens firms' time to market and provides an additional opportunity for quick response which increases firms' flexibility. Until now there has been no comprehensive study of the informal way Asian firms do business and the effects of these methods on the flexibility of firms and their success. The aim of this work is to shed light on that issue, thereby filling an important gap in research.

Informal modes of interactions seem to characterise both the external and the internal organisation of firms. The competitive advantage of the GPRD is expected to result not only from a single firm's capability to organise and react flexibly to the needs of global customers, but also from the way a flexible network of firms is built. This work concentrates, therefore, on the organisation of customer producer relations along the value chain in the GPRD. Emphasis is put on the unique institutional setting in the GPRD. HK provides a legal system adapted to fit international standards, whereas firms in the PRD operate in a transitional setting.

This work could potentially be developed further within the Priority Programme 1233 "Megacity—Megachallenge: Informal Dynamics of Global Change", funded by the German Research Foundation (DFG). This would provide an opportunity to study the relevance and significance of informal modes in customer and producer relations of firms in the GPRD in order to enhance the flexibility of firms. Informal modes of governance in customer and producer relations cannot be seen as the only factor influencing flexible firm organisation, but rather as one of several possibilities. The GPRD was selected as a research region because its economic structure requires continuous adaptation to changes in global markets and to the institutional setting.

A sectoral study of the electronics industry was conducted. The novelty of the research topic suggested a concentration on a specific sector in order to exclude the influences of industry specifications. The electronics industry is the most relevant and dynamic in the GPRD. It serves as a good example of the interplay between informality and flexibility. Two company surveys were conducted in HK and the PRD, complemented by qualitative interviews with regional stakeholders.

1.2. RESEARCH OBJECTIVES AND QUESTIONS

The research objectives of this work are to discover:

1. how electronics firms in the GPRD are spatially organised and integrated into global value chains and what pressures for flexibility driven by global markets and institutional changes they have to respond to
2. which governance modes HK and PRD firms apply in customer and producer relations along the value chain and how they can be explained
3. how relevant informal modes of interactions between customers and producers are in achieving a high level of flexibility under special consideration of:
 - contact and selection processes for customers and producers
 - contractual arrangements
 - enforcement mechanisms of contracts

The main research questions addressed in this work are:

Theory-guided

- A** Which critical factors pushed the global spread of production locations, especially in the electronics industry? How does this affect the organisation of value chains? Which new challenges and risks do electronics firms in emerging economies face if they want to enter the global production network?
- B** How does the institutional environment in a region determine the behaviour of firms under special consideration of institutional change in transitional economies?
- C** How does the institutional environment and the transactional specificity affect the choice of governance modes? What governance modes can be expected in HK and the PRD?

D Under what circumstances do firms prefer informal practices over formal ones to organise their customer producer relations? How do informal interactions enhance the flexibility of firms? In answering these questions, the focus will be on:

- contact and selection procedures for customer and producers
- contractual arrangements
- enforcement mechanisms

Methods

E How can informality and flexibility be operationalised in customer and producer relations?

F Which methods are suitable for measuring informality and flexibility in customer producer relations?

Empirically-guided

G How are electronics firms in HK and the PRD integrated into global value chains? How is the division of work spatially organised between HK and the PRD?

H How well is the formal institutional environment in HK and the PRD developed? What informal institutions guide the way of doing business in HK and the PRD?

I Do HK firms organise their business relations to customers and producers in the PRD differently from their relations to customers and producers abroad? Is this a consequence of the different development stages of the institutional environment? Is there a trend toward hybrid forms of governance in China resulting from the transitional change?

J How high is the degree of informality in customer producer relations of HK-based and Chinese-based firms? Are there any differences in the behaviour of firms between the two locations? Does informal behaviour result in greater flexibility? In answering these questions, the focus will be on:

- contact and selection procedures for customer and producers
- contractual arrangements
- enforcement mechanisms

Policy-guided

- K** What implications do the research results have for policy makers and firm managers in the GPRD and what further research is needed in order to consolidate the new business concept?

1.3. STRUCTURE

The main body of this work has been divided into four parts. The first part deals with the conceptual framework (Chapter 2), the second part with operationalisation, methods and data (Chapter 3), the third part (Chapter 4, 5 and 6) addresses the empirical findings of the work, and finally, a conclusion is drawn which includes policy recommendations and further research implications (Chapter 7).

The conceptual Chapter 2 discusses how firms in emerging markets can successfully integrate themselves into global value chains under special consideration of leading Western firms' requirements for flexibility. In doing so, the focus is placed on how firms organise their customer producer relations in order to build a flexibly organised network of firms along the value chain. To answer the theoretically guided questions **A—D**, an eclectic concept is applied. The behaviour of firms is discussed against the background and interplay of the industrial dynamics and market conditions, the location of specific formal and informal institutions and firms' capabilities to deal with them. Firstly, the industrial and market dynamics implying the need for firms' flexibility are analysed using the global value chain concept of GEREFFI et al. Secondly, a discussion about the changing institutional environment in transitional economies and the interplay of formal and informal institutions guiding firms' behaviour is outlined. Thirdly, the consequences for the selection of governance modes to organise customer and producer relations will be examined. Finally, the discussion goes beyond governance modes and deals with the expected informal modes of behaviour applied in contacting and selecting customers and producers as well as in concluding and enforcing contracts. All four conceptual discussions are based on literature reviews and conclude by producing hypotheses which will be proven in the empirical part of this work.

Before analysing the empirical data, Chapter 3 describes how informal modes of interaction between customers and producers and increasing firm flexibility can be operationalised and measured using primary and secondary data and literature in order to answer research questions **E—F**. Because of the novelty of the topic (informality achieving flexibility), emphasis is placed on the collection of primary data. A standardised survey of electronics firms was conducted in HK and another in the PRD. Additionally, interviews with major players in the electronics industry in HK were organised. The collection of empirical data was supplemented by expert interviews in order to gain a deeper understanding of the processes in the

research region. This chapter also covers the assessment of research methods and a discussion about data quality and validity.

The first empirical Chapter 4 analyses the framework conditions influencing the behaviour of electronics firms in the GPRD. Firstly, the industrial dynamics of the electronics value chain are analysed through the use of primary and secondary data. Secondly, the changes to the formal and informal institutional environments in China are studied. The second empirical Chapter 5 investigates the applied governance modes of HK and PRD firms for their customers and producers as a consequence of the industrial dynamics of the electronics industry and the institutional environment in HK and China. Some governance modes are assumed to be more informal and flexible than others. Two logit models are built to identify the determinants of governance modes in order to prove or disprove respectively what has been discussed in the conceptual part of the work. The third empirical Chapter 6 goes beyond the governance modes and addresses in more detail how relevant informal modes of interactions with customers and producers are in terms of contacting and selecting, contractual arrangement and enforcement of contracts. Attention will be paid to differences in the organisation of firms in HK and the PRD in consideration of the distinct institutional environments in which they operate. After every empirical chapter, a *summary and discussion section* is included to refer to the theoretically guided hypotheses which provide the background for answering research questions **G—J**. Mirroring the empirical data with the conceptual discussion seems to be valuable in terms of providing new inputs for the refinement of theoretical concepts. Those concepts are mainly derived from experience with Western firms and tend to underemphasise the specific way in which Asian firms organise their business.

Finally, in Chapter 7 a conclusion is drawn for policy implications (research question **K**). As this work is based on fundamental research of an explorative nature, further research topics are recommended in order to improve the academic understanding of the interplay between informality and flexibility.

2. DEVELOPING A CONCEPTUAL FRAMEWORK: ORGANISATION OF CUSTOMER AND PRODUCER RELATIONS IN EMERGING MARKETS

This chapter aims to give a theoretically supported background to how firms are expected to organise their customer producer relations. In the Section 2.1, a model developed by LEWIN et al. (1999) will provide a framework illustrating that external determinants such as institutional and industrial dynamics coevolve with a firm's organisation of its customer producer relations. The structure of this chapter is developed according to this model. The use of informal interactions as a contribution towards enhancing the flexibility and success of firms is critically assessed. HERRIGEL (2007:2) summarised as follows:

“It was clear that in order to understand the success of the alternative more flexible forms of organization [. . .], one had to look past the boundaries of the firm and see how producers were embedded in regionally specific institutions and networks.”

2.1. COEVOLUTION OF FIRMS' BEHAVIOUR, INDUSTRIAL DYNAMICS AND INSTITUTIONS

In this section, emphasis is placed on how the behaviour of firms can be analysed according to recent management literature. A coevolutionary perspective suggests concentrating not only on how firms organise their business activities, especially their customer and producer relations, but also on environmental factors influencing the organisational form. The theoretical model of organisational adaptation by LEWIN et al. (1999) considers the interaction of the firm, its industrial dynamics and its institutional environment. The basic thesis of this model is that a firm's adaptation processes and its organisational form coevolve with changes in the institutional environment and the industry. Industrial changes caused by the introduction of new technology, for example, require greater institutional protection, which leads to new organisational forms of firms and the weakening of existing ones. If the formal institutional environment is incomplete, firms attempt to adjust by expanding the firm's network, intensifying relationships to customers and producers or diversifying their range of partners to maintain their competitiveness. The model of LEWIN et al. (1999:235) attempts to integrate the interplay between “adaptation of individual firms, their competitive dynamics and the dynamics of the institutional systems within which firms and industries are embedded”. PAJUNEN and MAUNULA (2008) extended the model by emphasising its importance

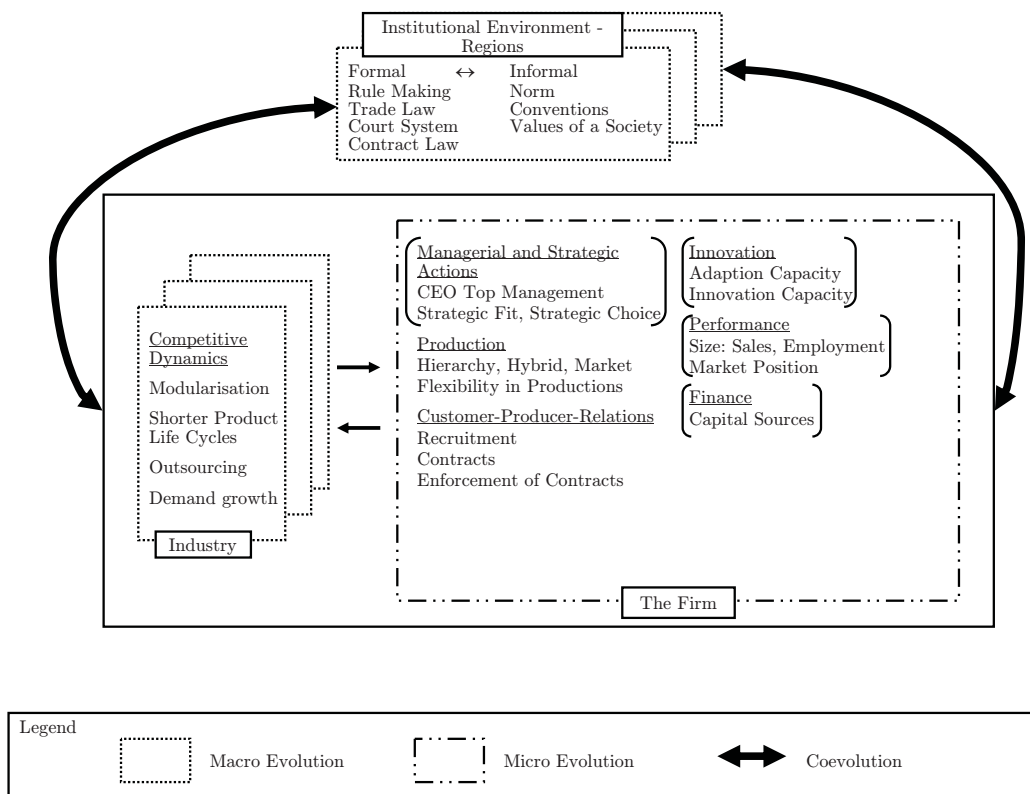


Figure 2.1.: Model of organisational adaptation

Source: Adaptation to LEWIN et al. (1999:537)

for internationalisation processes. They strengthened the influence of firms' own organisational resources and capabilities and their ability to analyse the existing and emerging industry constraints, especially in an international environment. Moreover, KRUG and HENDRISCHKE (2008) proposed a new institutional perspective to explain the local differences in business systems in China. They suggested studying institutions on a regional rather than a national level, as done by LEWIN et al. (1999). With respect to the three papers, this work focuses on the coevolution of the global industrial dynamics, the regional institutional environment and the firms' adaptation processes to successfully deal with them. Figure 2.1 provides a framework for this study to analyse how firms organise their business activities and why they do it in a particular way. The increasing turbulence of firms' environments usually results from *dynamics of industries*. Firms have to adapt and develop their skills to encounter industrial changes. Especially in a globalised world, firms in developing countries and emerging markets are greatly affected by global changes in their industry. The industrial dynamics can be observed on the macro level, e. g. the global level. The institutional environment influencing the behaviour of firms

can be divided into *formal and informal institutions* on the regional level (meso level). Formal institutions are developed on a regional level, such as the rules of law, capital markets, the rule-making system, the education system etc. Informal institutions exist in a region's society, for example culture, norms, conventions and values rooted in its history. Institutions are created to buffer economic entities, groups and individuals from the effects of environmental uncertainty (LEWIN et al. 1999:541). An institutional system can increase or decrease the attractiveness of regions for business, because it is an essential factor for the decision-making process and behaviour of firms. The specific institutional system enables and restricts the adaptation and development of the governance modes of firms. Institutions and industrial dynamics influence *the organisation of firms* on the micro level. Managerial and strategic actions, financial sources, production and innovation organisation and customer and producer relations are determined by the industrial dynamics and the institutional environment. But it is not a one-way determination. The organisation of firms also influences the institutional environment and the industrial dynamics. It is a mutual interaction. Moreover, industrial dynamics coevolve with the regional institutional environment.

Research into a firm's organisational pattern for customer and producer relations should not be limited to a firm's level analysis, but should be extended to the study of the interrelation of industrial dynamics and the institutional environment, as recommended by LEWIN et al. (1999). Therefore, Section 2.2 focuses on the *development of industries* at a global level. Emphasis is placed on the challenges firms in emerging economies encounter while attempting to integrate themselves into global value chains. It will become clear that achieving flexibility is the major challenge for firms involved in the manufacturing process. In Section 2.3, the *formal and informal institutions* determining a firm's decision-making on customer and producer relations will be analysed. Additionally, the subject of institutional transformation will be outlined in the context of China's transformation from a planned to a market economy. In HK, however, a market-institutional environment exists. The influence of industrial dynamics and the institutional environment on *firms' governance mode of customer producer relations* will be studied in Section 2.4. Section 2.5 will investigate under which conditions informal or formal aspects of behaviour contribute to the financial success of firms. Here, emphasis is placed on recruitment methods, contractual arrangements and enforcement mechanisms of contracts. The need for informality in business relationships is discussed against the background of the existing industrial and institutional environment.

2.2. THE NEED FOR FLEXIBILITY IN EMERGING ECONOMIES: GLOBAL VALUE CHAIN PERSPECTIVE

This sections aim to explain how the electronics industry develops globally and how this influences the behaviour and adaptation processes of firms in emerging economies (see model LEWIN et al. (1999)). Focussing on the global development of industries, the empirically-based concept of modular value chains provides a framework to analyse the competitive dynamics of the electronics industry. The approach sheds light on new challenges encountered by firms at the upper end of the value chain. It will become obvious that the cost-effectiveness of firms in emerging economies is not the only competitive advantage, but also the flexibility to adapt to changing customer requirements, which has increased in importance recently (see Section 2.2.1). The many facets of flexibility will be discussed in Section 2.2.2.

2.2.1. Global Production in Modular Value Chains

The globalisation of production and markets has led to the integration of firms in developing countries and newly industrialising countries into the global economy (ERNST 2004). The electronics industry is characterised by a rapid fragmentation (LALL et al. 2004; JONES et al. 2005) and an increasing trade in components across the globe (WHITFORD and POTTER 2007). However, for the analysis of the shape and trajectory of global economic integration, a tool is needed which not only focuses on the macro-level statistics, such as trade and investment, but also identifies the players, links and locations in order to make detailed contours of the world economy visible (STURGEON 2000:1–6). STURGEON (2002, 2003a, 2006) and GEREFFI (2005) developed the concept of modularity in value chains to conceptually describe the empirically observed restructuring of production organisation in the electronics industry. The concept stresses the spatial scale and the productive players. GEREFFI et al. (2005:97) states that “the modular form [of the value chain] appears to be playing an increasingly central role in the global economy”, as standards, information technology and the competencies of producers improve. The modular value chain concept provides a suitable framework to answer the first theoretical question. It explains:

- which critical factors pushed the global spread of production locations, especially in the electronics industry
- how this affects the organisation of value chains
- which new challenges and risks firms of emerging economies face if they want to integrate themselves into the global production network.