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Reinventing the wheel

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Labour, development and global car production in post-1970s China and Mexico

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Thesis submitted for the degree of PhD

2016

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Declaration for SOAS PhD thesis

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Abstract

This thesis investigates under which conditions, how and why the agency of workers – in its relation to that of other social agents – shapes the development and operations of global automotive manufacturers in different locales of the Global South. It zooms in on the Mexican and Chinese subsidiaries of a German – and one of the largest – global car producers. Theoretically, it challenges the dominance of explanations of industrial development as products of government-business interactions on the one hand, and the substitution of comparative statics for the tracing of historical changes on the other. Instead, it argues that worker agency becomes a constitutive factor by deflecting the strategic agency of managers and policy makers into unintended consequences. The comparative case study provides empirical evidence for the institutional and structural conditions of worker agency; how they interpret and act upon these conditions; and how through processes of relational agency workers induce institutional and structural change. This endeavour allows for a reassessment of the hypothesis that there will be converging developments of strong automotive labour movements in China and Mexico. And it provides new empirical evidence to address the puzzle of convergence and divergence between the “productive model” of the mother company and the operations of its subsidiaries in the Global South.

Then the supervisor moved us to a new aisle. We had been there 10 hours.

“Before you begin,” the soup said, “I want to tell you something. Each tray of this type of mail must be stuck in 23 minutes. That’s the production schedule. Now, just for fun, let’s see if each of us can meet the production schedule! Now, one, two, three...GO!”

What the hell is this? I thought. I’m tired.

Each tray was two feet long. But each tray held different amounts of letters. Some trays had two or three times as much mail in them as others, depending upon the size of the letters.

Arms started flying. Fear of failure.

I took my time.

“When you finish your first tray, grab another!”

They really worked at it. Then they jumped up and grabbed another tray.

The supervisor walked up behind me. “Now,” he said, pointing at me, “*this* man is making production. He’s halfway through his second tray!”

It was my first tray. I didn’t know if he were trying to con me or not, but since I was that far ahead of them I slowed down a little more.

– Charles Bukowski, *Post Office*

Table of Content

Abstract.....	3
List of Tables	8
List of Figures	9
List of Acronyms	10
Glossary.....	13
Acknowledgments.....	14
Chapter 1: Introduction.....	17
1. Problématique and Research Question	17
2. Sub-questions and Relevant Literature	21
3. The Case.....	26
4. Methods.....	28
5. Key Findings.....	31
6. Structure of the Argument.....	32
Chapter 2: Workingman’s Dead? – Worker agency and the Convergence/Divergence Debate.....	36
1. Varieties of Convergence – Varieties of Divergence	37
2. Agency, Process and Change	57
3. Conclusion	63
Chapter 3: Setting the Scene – Social Conditions for Agency.....	65
1. The Company	66
2. The Political Economy of the Automotive Industry in China and Mexico.....	75
3. Class Composition and Conditions for Relational Agency.....	88
4. Concluding Remarks.....	110
Chapter 4: 1992 – Rage Against <i>The Machine that Changed the World</i>	114
1. A Note on Path Dependency	116
2. Power Relations at Company X in Mexico Towards the End of the 1980s.....	118
3. The 1992 Conflict.....	123
4. Transforming Conditions for Worker Agency after 1992	130
5. Absence of Comparative Movements at Company X in China	143
6. Concluding Remarks.....	145

Chapter 5: Organisation of Production – Conditions for and Results of Relational Agency.....	147
1. Complaining, Ranting, Socialising.....	150
2. Contracts, Wages and Incomes.....	155
3. Work Organisation and Control – A Case of “Lean Production”?	168
4. Resilience and “Exit” Strategies, Hiring and Training	180
5. Concluding Remarks	194
Chapter 6: Living in a Robot Age – Technology, Time and Relational Agency.....	198
1. Modular Production.....	201
2. Technological Composition by Department.....	203
3. Time Regimes: Shifts, Overtime and Cycle Time	215
4. Conclusion	234
Chapter 7: Outsourced Trouble – Worker agency in the Supply Chain and Institutional Change.....	237
1. Relations between Company X and Suppliers in Mexico	240
2. Relations between Company X and Suppliers in China.....	242
3. Working Conditions in the Supply Chain.....	245
4. Coping Strategies and Labour Conflicts in the Supply Chain.....	250
5. Institutional Changes in South China after the 2010 Strike Wave	263
6. Conclusions	274
Chapter 8: Geographies of Power – Capital Relocation and Enterprise Expansion.....	277
1. Power Relations and the Spatial Organisation of Production at Company X in China	278
2. Power Relations and the Spatial Organisation of Production at Company X in Mexico.....	287
3. Concluding Remarks.....	300
Chapter 9: Conclusion	303
1. Key Findings.....	304
2. Theoretical implications	318
3. Policy implications and possible future scenarios	321
4. Limitations and avenues for future research	323

Bibliography	325
Appendices 359	
Appendix I: Trade Relations in the Automotive Industry of China and Mexico...	359
Appendix II: A Brief Note on Corporate Social Responsibility	365
Appendix III: List of interviews	367

List of Tables

Table 1: Composition of workforces at Company X in Mexico and China	92
Table 2: Workers' grievances	152
Table 3: Monthly wages/income at Company X in Mexico and China	161
Table 4: Shift system at Company X/JV1's main plant.....	217
Table 5: Time regimes at Company X's main plants in Mexico and China	219
Table 6: Working conditions in the supply chain, China and Mexico.....	246
Table 7: Collective contracts at Mexican plants of Company X Group.....	298
Table 8: China and Mexico's top ten export markets for passenger cars 2013.....	361
Table 9: Mexico, foreign trade in autoparts 2013.....	361

List of Figures

Figure 1: Strikes in Mexico, 1994-2013	25
Figure 2: Labour disputes in China, 1996-2012	25
Figure 3: Company X corporate structure in China and Mexico, 2015	27
Figure 4: FDI, economic growth and capital formation	80
Figure 5: Automotive sector balance of trade, China and Mexico	81
Figure 6: Inflation-adjusted annual compensation per employee in China and Mexico.....	84
Figure 7: Growth of national economy and employable population, China and Mexico.....	96
Figure 8: Profit rate of Company X Group.....	98
Figure 9: Company X Group operating profit and share of Chinese ventures	99
Figure 10: The "exclusion clause"	102
Figure 11: Passenger car based on Modular Transversal Toolkit (MQB).....	202
Figure 12: Time accounts	223
Figure 13: Tax revenue Shishan town (the location of Honda and other autoparts suppliers)	264
Figure 14: Exports as percentage of GDP, China and Mexico	360
Figure 15: China and Mexico automotive exports to the US.....	362
Figure 16: Composition of automobile exports from Mexico to China	362
Figure 17: Value of Mexican automobile exports to China.....	363

List of Acronyms

\$	Mexican peso
¥	Chinese Yuan/Renminbi
ACFTU	All-China Federation of Trade Unions
Chinaparts 1	Chinese tier two supplier of break pedals, handles and door locks in East China
Chinaparts 2	Japanese-Taiwanese tier two supplier of springs in South China
Chinaparts 3	Japanese-Chinese tier one supplier of electronic components in South China
CEO	Chief executive officer
Company X	The main brand of the Company X Group; oriented at lower and middle market segments
Company X Group	Group of thirteen brands of motor vehicle producers, eight of which produce passenger cars
Company X's upscale brand	The main producer of motor vehicles for upscale market segments within the Company X Group
Company X/JV1	50/50 joint venture between the Company X Group and a Chinese SOE; present in East and far Western China
Company X/JV2	40/60 joint venture between the Company X Group and a Chinese SOE; present in North, South and Western China
COS	Confederación de Organizaciones Sindicales
CROC	Confederación Revolucionaria de Obreros y Campesinos
CROM	Confederación Regional Obrera Mexicana
CSR	Corporate Social Responsibility
CTM	Confederación de Trabajadores de Mexico
DAL	Dispute Arbitration and Settlement Law
EU	European Union
FESEBES	Federación de Sindicatos de Empresas de Bienes y Servicios
FROC	Federación Revolucionaria de Obreros y Campesinos
GATT	General Agreement on Tariffs and Trade

GERPISA	Groupe d'Etude et de Recherche Permanent sur l'Industrie et les Salariés de l'Automobile
GM	General Motors
GPRCC	Guangdong Province Regulations of Collective Contracts for Enterprises
HR	Human Resources
IG Metall	Industriegewerkschaft Metall
IPE	International Political Economy
ISI	Import Substitution Industrialization
FDI	Foreign Direct Investment
LCL	Labour Contract Law
Mexparts 1	German logistics provider
Mexparts 2	German tier one supplier of carpets and metal engine components
Mexparts 3	US-American tier one supplier of seats and other autoparts
Mexparts 4	US-American tier one supplier of break pedals, hinges and other metal parts
MIT	Massachusetts Institute of Technology
MLB	Modular Longitudinal Toolkit
MORENA	Movimiento Regeneración Nacional
MPT	Modular Production Toolkit
MQB	Modular Transversal Toolkit
MTM	Methods-Time Measurement
NAFTA	North American Free Trade Agreement
NIE	New Institutional Economics
NGO	Non-Governmental Organization
OEM	Original Equipment Manufacturer
OHS	Occupational Safety and Health
PAN	Partido Acción Nacional
PRD	Partido de la Revolución Democrática
PRI	Partido Revolucionario Institucional
SNTMMSSRM	Sindicato Nacional de Trabajadores Mineros, Metalúrgicos, Siderúrgicos y Similares de la República Mexicana

SOAS	School of Oriental and African Studies
SOE	State-owned enterprise
SSP	Social Systems of Production
TNC	Transnational Corporation
TUL	Trade Union Law
UNT	Union Nacional de Trabajadores
UAW	American United Automobile Workers
UOI	Unidad Obrera Independiente
USD	US dollar
US(A)	United States (of America)
VoC	Varieties of Capitalism
WST	World System Theory
WTO	World Trade Organization

Glossary

<i>4 por 3</i>	A system of short-time work applied at Company X in Mexico
<i>Asesor</i>	A legal advisor
<i>Banco de horas</i>	Working time accounts in Mexico
<i>Cabrón</i>	Bastard
<i>Charros</i>	Corrupt leaders
<i>Compañero</i>	Colleague, comrade
<i>Consejo</i>	An international gathering of automotive workers organized by workers in Germany
<i>Coordinador</i>	Coordinator; lowest managerial level at Company X in Mexico
<i>Empleado de confianza</i>	“Trusted personnel”; non-unionised personnel at Company X in Mexico
<i>Eventual</i>	A temporary worker at Company X in Mexico
<i>Hukou</i>	The household registration system in China
<i>Licenciado</i>	“University graduate”, a formal way of addressing those with a university degree (such as managers and officials) in Mexico
<i>Maquiladora</i>	Export processing manufacturing in Mexico
<i>Paro técnico</i>	“Technical work stoppage”; The possibility for management to temporarily reduce production, restructure labour relations and/or lay off workers
<i>Planta</i>	“Plant”; denoting permanent employment status in Mexico
<i>QQ</i>	Instant messenger in China
<i>Sobrecargas de trabajo</i>	“Overwork”
<i>Tabulador</i>	The wage grades in a collective agreement
<i>Titularidad</i>	“Ownership”; the recognition of a single union in an enterprise
<i>Weibo</i>	Microblog in China

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Looking back at the painful process of the production of this PhD and forward at the bleak job perspectives, I cannot help but wonder how my life would have turned out had I followed my mother's advice and become a teacher. My guess is that it would have spared me many moments of self-doubt, frustration and resentment – but also cut me out of invaluable experiences and encounters with old and new friends. Most importantly though, I probably would have never my partner Regina – and therefore missed out on what has by far been the best aspect of the PhD experience. Considering that we have both been going through the same stressful period in parallel, we have managed the last months of our PhDs pretty well. Kudos to us.

Chapter 1: Introduction

1. Problématique and Research Question

In her 2003 seminal study *Forces of Labor*, Beverly Silver famously argued that “where capital goes, conflict goes” (Silver 2003, p.41). Hardly any sector illustrated this dynamic better than the leading industry of the 20th century: automotive manufacturing. To evade profit squeezes and problems of labour control in the Global North, the big players in the industry began to relocate production to the South. Transplanting their industry-specific technological and organisational practices to new locales, they caused social transformations reminiscent of the problems haunting them in their home countries. Over time, automotive manufacturing in the Global South created similar working classes, with similar “structural power” in the workplace and marketplace, with similar dynamics of struggle. Silver hypothesised that this pattern of cyclical recurrence would concentrate in two nations in the decade of the 2010s: Mexico and China.

“Mass production in the automobile industry has tended to recreate similar social contradictions wherever it has grown. [...] If past dynamics are a guide to future trends, then we have good reasons to expect the emergence of strong, independent autoworkers' movements in Mexico and China during the coming decade.” (Silver 2003, pp.41, 65)

In short, Silver puts forward two bold hypotheses. First, she argues that there is a strong tendency towards convergence of industry-wide characteristics across automotive production in different locales. Second, this convergence conditions the emergence and power of labour movements in Mexico and China in similar ways. It is an engagement of these hypotheses in the context of the wider literature on global developments of the automotive industry that has informed a revisiting of the relationship between car manufacturing and labour in China and Mexico. I will briefly engage with these issues one by one.

Pace Silver, it has been argued that rather than a converging trend towards one, namely “lean”, techno-organisational paradigm – as famously claimed in the

seminal study *The Machine that Changed the World* (Womack et al. 1990) – the global automotive industry is characterised by a multiplicity of company-specific “profit strategies” and “productive models” (Boyer & Freyssenet 2002; Freyssenet 2009b). This argument has emerged in parallel to (or as a sub-debate of) comparative institutionalist concerns with the “varieties of capitalism” (VoC) (Hall & Soskice 2001; Hancké 2009a). Company-specific divergence is said to be the result of automotive manufacturers developing their internal rules and organisational principles in accordance with the national institutional incentive structure, or “matrix”, of their respective home country (apart from Boyer & Freyssenet 2002; and Freyssenet 2009b; particularly Streeck 1992; Streeck & Kenworthy 2005). The question that arises then is: What occurs when a transnational company with institutions and production processes modelled after the image of home country A opens a subsidiary in the different structural and institutional setting of destination country B? This tension between opposing tendencies towards convergence and divergence is aggravated by another recognition by both Silver and the institutionalists: transnational car manufacturers do not open foreign subsidiaries in order to operate in the same fashion as they did in their home countries, but “the strategic function of each plant is to maximize the exploitation of all local idiosyncrasies” (Pries 2003, p.56). What then, accounts for convergence and divergence in a car manufacturer’s global operations, and in industrial development of automotive production in different geographic locales?

Two approaches are suggested in the literature. On the one hand, comparative modelling of institutional ideal types with converging and diverging characteristics is substituted for causal explanations of processes of becoming and change (Hollingsworth & Boyer 1997a; Hall & Soskice 2001; Hancké 2009a). On the other, the degree of convergence and divergence is explained as the result of interactions between policy makers and (transnational) enterprises (Johnson 1982; Evans et al. 1985; Wade 1990; Amsden 1989; Amsden & Chu 2003; Cimoli et al. 2009). It is in these answers that a striking research gap persists – labour either plays a negligible role (Hall & Soskice 2001; Hancké 2009a; Cimoli et al. 2009); is understood as a passive recipient of decisions made elsewhere (Amsden 1989;

Amsden & Chu 2003; Wade 1990); or at best, is factored in through the institutional parameters governing industrial relations (Jürgens et al. 1989; Streeck 1992). What has been said for the discipline of International Political Economy more generally is hence also true for the convergence/divergence debate more specifically; namely that it “retains a serious blind spot because it ignores the agency of non-elite groupings of people” (O’Brien 2000, p.89).

This leads us back to Silver’s second hypothesis, which locates her work within a small group of outliers who have made labour issues an integral part of their analyses of the global political economy (apart from Silver 2003; e.g. Armstrong et al. 1991; Gavroglou 1998; Herod 2001; Dunn 2004; Paczyńska 2009; Chang 2008; 2013; Selwyn 2012; 2014; Gray 2015). Elements of Silver’s work have been read as a recast *operaist* argument of “seeing capital as a function of the working class, or more precisely, the capitalist economic system as a moment of the political development of the working class” (Tronti 1974, p.189). However, actual processes of agency between labour and other social agents are subsumed under a pattern of systemic cyclical recurrences – and thereby reduced to mere executioners of an underlying logic. Silver’s work suffers from an underestimation of the impact of local conditions on worker agency (Schmalz et al. 2010) and more importantly, the lack of an open investigation of effects of processes of relational agency. The role of labour in the relocation of capital to *certain* locales or the adoption of one institutional setting or techno-organisational strategy over another remains unclear.

This study derives its central research question from these considerations, namely under which conditions, how, and why the agency of workers – in its relation to other social agents – becomes a constitutive factor in the convergence and divergence of automotive development between different geographic locales.

I will address this question through a comparative case study of the Chinese and Mexican subsidiaries of one of the largest global car manufacturers – German Company X. Silver’s expectation of the emergence of strong automotive labour movements in China and Mexico has inspired the choice of industrial sector and

countries – while the focus on a single transnational corporation (TNC) allows for an analysis of the role of labour in (not) shaping the intra-company tension between convergence and divergence.

I argue that the role of labour in shaping the convergence or divergence in the operations and strategic development of TNCs stems from the ability of workers to deflect the strategies of managers and policy makers into unintended consequences in processes of relational agency.

Convergence and divergence are broadly understood as development of similar or different qualities between the two cases. In this study, this pertains particularly to the institutions governing the production process; the technological composition of the production process; the organisation of the supply chain; and strategies of spatial expansion. Relational agency denotes that the respective actions of (factions of) collective social agents – in this study primarily workers, managers, union leaders and policy makers – occur not as isolated acts, but in relation to the actions of other agents. In the most immediate case, relational agency will take the form of inter-action, but I heuristically suggest the inclusion of a mediated alteration of the conditions for the agency of another party as an aspect of relational agency as well.

This study “bings labour back in” not only from the receptive end, reduced in its agency to an adaptive response to changes induced elsewhere by other agents or by predetermined developmental patters, but also as a constitutive factor, a change-maker in the particular ways corporate strategies and industrial development unfold in certain locales of the Global South. Empirically, it challenges the wide neglect of labour and worker agency in our understanding of industrial change in the automotive sector. Theoretically, it engages with institutionalist and Silver’s World System Theory (WST) explanations of convergence and divergence of industrial development in search for a more inclusive research agenda. Socially, this study provides material for a strategic debate on labour politics in the automotive industry and beyond.

2. Sub-questions and Relevant Literature

This study involves a range of sub-questions. First, it needs to identify significant forms of worker agency, wherein significant should be understood in functional terms as “resulting in intended and unintended consequences and reactions by the company, other capitalists and/or policy makers – that is, having socio-economic and political effects”. These should explicitly include both cataclysmic moments of visible significance, for example strikes followed by managerial restructuring, and day-to-day processes of less visible significance, such as workers’ strategies of resilience, exit, evasion etc.

The starting point for this study is an already existing body of literature on labour relations in the car industry in China and Mexico, some of which make direct reference to the case of Company X (for China: Huang et al. 2008; Nichols & Zhao 2010; Lüthje et al. 2013; Jürgens & Krzywdzinski 2015; Lüthje 2014; for Mexico: Montiel 1993; 2001; 2007; Juárez Núñez et al. 2005; Middlebrook 1996; Tuman 2003). Certain studies also provide deeper insights into worker agency proper, in particular in case of Company X’s operations in Mexico (for China: L. Zhang 2014a; for Mexico: Montiel 1991; Montiel 2010; Fraile García 1999; Espinal Betanzo 2015; Healy 2008; Juárez Núñez 2006). Beyond a focus on the car industry, there is a growing body of micro-sociological and ethnographic studies on workers’ grievances and agency in China (e.g. Meisner 1999; Sheehan 1998; Chan 2001; Perry 2002; Lee 1998; 2007; Pun 2005; Pun et al. 2010; C. K.-C. Chan 2010; Pringle 2011; Friedman 2014c). For the cases of Mexico and China there is hence no academic “farewell to the working class” (Gorz 1982), and the existing literature will be revised, enriched and expanded by primary data collected through observations and interviews (discussed below in section 4.).

As a side effect, this endeavour will allow for a revision of the hypothesis of strong automotive labour movements emerging in China and Mexico. While this prediction has been positively reconfirmed for the Chinese case by Silver’s student Zhang Lu (L. Zhang 2014a) – which, I will argue, requires qualification – it begs the question if the same holds true in the Mexican case. In fact, the development of strikes and labour protests in China and Mexico – though not disaggregated by

industry – has so far shown rather opposing trends (Figure 1 and 2). An analysis of the grievances and actions of automotive workers therefore not only provides empirical detail, but also allows for comparative evaluation and a reassessment of the likeliness of convergence of company strategy and worker agency in the two cases.

Second, this study has to specify how, why and under which circumstances worker agency is significant (or why it is not); as well as the structures and institutions that have been mobilised by the involved agents, or could potentially be drawn on in processes of relational agency.

This question pertains, on the one hand, to the institutionalist core assumption that behaviour is governed by, and therefore best understood through a specification of, formal and informal institutions (with different emphases North 1990; Hall & Soskice 2001; Streeck 1992; Streeck & K. A. Thelen 2005). On the other hand it engages Silver's approach to refrain from a closer analysis of agency proper and to instead relate the *potential* for worker agency in the form of sources of "structural power" to the statistical quantity of labour unrest (Silver 2003; also: Katznelson & Zolberg 1986; Wright 1985). I will engage these approaches through an empirical investigation of the actual institutional and structural conditions affecting the relational agency of workers and other agents, in juxtaposition to what these agents "actually do." Where the empirical material allows for it, I will test how much institutionalist and structuralist approaches can contribute to an explanation of processes of agency.

This involves, on the one hand, an initial specification of institutional and structural conditions for the agency of workers and other agents in the form of laws, formal organisations, demographic and economic conditions in Mexico and China. On the other hand, it requires a more detailed analysis of how Company X organises its production process, relation to suppliers, and processes of geographic expansion. Although the literature on the Mexican case covers the period since the 1970s and therefore allows for historical tracing (Montiel 1991; 1993; 2001; 2007; 2010; Juárez Núñez 2006; Juárez Núñez et al. 2005; Middlebrook 1996; Tuman

2003; Healy 2008; Espinal Betanzo 2015), the material available for the Chinese case is scanty and much more recent (L. Zhang 2014a; Lüthje et al. 2013; Lüthje 2014). Given that my fieldwork dates from 2012/13, these questions will be addressed in genealogical form where primary and secondary empirical material allow for it, and in the form of comparative statics where my own observations are the sole reference point. An empirical desideratum in its own right will be a better understanding of how Company X operates in both cases.

This is inseparable from the third question of how exemplary processes of relational agency have panned out; and what changes of structures and institutions they have triggered as intended or unintended consequences.

Theoretically, this question pertains to the elaboration on elements for a more agency-centric research agenda, for which I draw on action theoretical (Mead 1967; Horn & Löhrer 2010; Miebach 2014) and Marxist approaches from the traditions of Italian *operaismo*, Open Marxism and Political Marxism (Aston & Philpin 1985; Wood 1995; Bonefeld et al. 1992b; Tronti 1974; Alquati 1974; Wright 2002; and in particular Knafo 2010; and Konings 2010). From this perspective I will engage three issues in the literature.

First of all, I will raise methodological concerns over the limits of comparative institutionalism to conceptualise processes of institutional change more generally (for recent self-criticisms see Streeck 2009; Crouch 2009). Secondly, I will discuss the usefulness of ideas of historical change as a “punctuated equilibrium”, in which periods of stable institutional matrices are intersected by historically open moments of agency that trigger path dependent trajectories (Mahoney 2000; Streeck & K. A. Thelen 2005). In the context of the idea of the automotive industry being characterised by certain “productive models”, this would imply the question of how these models are transformed. Thirdly, I will engage with Silver’s notion of capital adopting certain spatiotemporal “fixes”, such as geographical relocation or techno-organisational restructuring, to overcome profit squeezes or problems of insufficient control over the production process (Silver 2003). Here I will put particular emphasis on intrinsic limits on capital to flexibly mobilise “technological

fixes” in its favour; and on “spatial fixes” not only as unilaterally determined choices of capital, but as being shaped by the agency of workers.

On the basis of the data collected during my fieldwork, I will then reconstruct significant processes and particular constellations between the agency of workers and other social agents, in order to evaluate how these have induced, shaped or forestalled institutional and structural changes. This involves reference to the existing state-centric explanations of automotive industry development in Mexico and China as outcomes of government-business negotiations (Bennett & Sharpe 1985; Harwit 1994; Thun 2006; Chin 2010); the comparative statics provided by institutionalists (Boyer & Freyssenet 2002; Freyssenet 2009b); and industrial sociological studies on Company X (Jürgens et al. 1989; Jürgens 1998; Jürgens 2009; Haipeter 2000; Pries 1993; 2000; 2003). Arguing that the most significant recent institutional changes caused by automotive workers have been those in the aftermath of the 2010 Southern Chinese strike wave in the autoparts industry, I will engage in a dialogue with the existing literature on labour unrest and union reforms in South China more generally (e.g. Friedman 2014a; Pringle 2011; Lyddon et al. 2015; Gray & Jang 2014; Lüthje 2014). I will generate empirical insights on how implementation processes of institutional change have panned out in the automotive industry in China and Mexico. This will allow for certain conclusions on how the agency of different stakeholders, particularly labour, has shaped their respective final results.

Engaging with these questions as a crosscutting theme throughout all chapters should finally allow for an assessment of the degrees of convergence and divergence in the operations of Company X’s Mexican and Chinese subsidiaries. It will serve to demonstrate how, why, and in which context these have been conditioned by workers’ relational agency. In unfolding these issues I will finally argue for the virtues of an agency-centric research agenda, and how it could improve on existing theory.

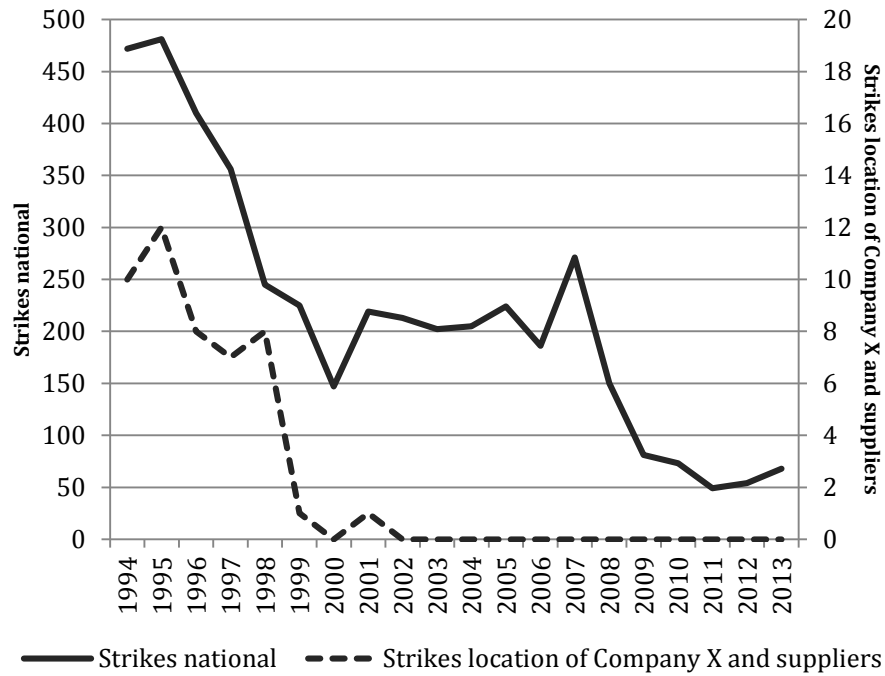


Figure 1: Strikes in Mexico, 1994-2013
Source: INEGI



Figure 2: Labour disputes in China, 1996-2012
Source: China Labour Statistical Yearbook

3. The Case

Founded in 1938 under a direct decree of Adolf Hitler, Company X developed into one of the largest global producers of low and medium-priced passenger cars after World War II. With sales of 5.04 million units in the first half of 2015 it was briefly the world's largest car manufacturer (Cremer & Funakoshi 2015), uniting twelve independent motor vehicle brands under one company group and running production facilities in 21 countries. In the institutionalism-inspired literature on the automotive industry, Company X has been said to pursue a "volume and diversity" profit strategy, characterised by the mass production of a large range of models. This in turn rests on a "productive model" of polyvalently skilled workers, quickly adaptable machinery and a high degree of outsourcing (Boyer & Freyssenet 2002, chap.6). Company X has also been heralded as an archetype of German "neo-corporatism", due to its public-private ownership structure and cooperative industrial relations (Streeck 1992; Jürgens 2009). The significance of these notions for the operations of the Mexican and Chinese subsidiaries will be a recurring question in this study.

Company X opened its first Mexican and Chinese plants in 1964 and 1984 respectively, mainly with the aim of accessing the shielded domestic markets of the two countries (Bennett & Sharpe 1985; Thun 2006; Chin 2010). Today, the company group operates three manufacturing plants in Mexico and fifteen in China, most of which were opened within the last three years (Figure 3). Shifts in Company X's strategy in both cases occurred during the late 1980s and early 1990s, linked to the decision of closing the only US manufacturing facility in 1987. The machinery from the US plant was sold to China, where it was installed with the foundation of Company X's second joint venture in 1991 (Posth 2006, p.26ff.). The productive capacity of the Mexican plant, on the other hand, was supposed to cover the demand of the entire North American market. This decision to restructure the production process was forestalled by the Company X enterprise union, leading up to a cataclysmic conflict in 1992 that radically altered internal techno-organisational practices, industrial relations and the organisation of the supply chain. The long-term effects of this conflict even shaped the recent

foundation of new production sites in Mexico. While the Mexican main plant has a rich tradition of institutionalised union activity and clandestine and open grassroots activism, this has not extended to Company X’s Chinese subsidiaries. However, the 2010 strike wave in the auto parts industry in Southern China was the most significant case of labour unrest in the automotive sector worldwide in recent times (L. Zhang 2014b; Silver 2014; Lüthje 2014; Gray & Jang 2014) – not only in its quality and scope, but also in its implications for institutional change. These have indirectly also affected Company X.

Company X’s operations in China and Mexico therefore provide a well-suited case for a comparative elaboration on how, why and in which aspects processes of workers’ relational agency have (not) shaped the development of global car manufacturing. Reviewing the developmental trajectories and operations of the Mexican and Chinese plants will then make it possible to assess if they lean more towards convergence or divergence amongst each other, and towards a company-specific “profit strategy” and “productive model”.

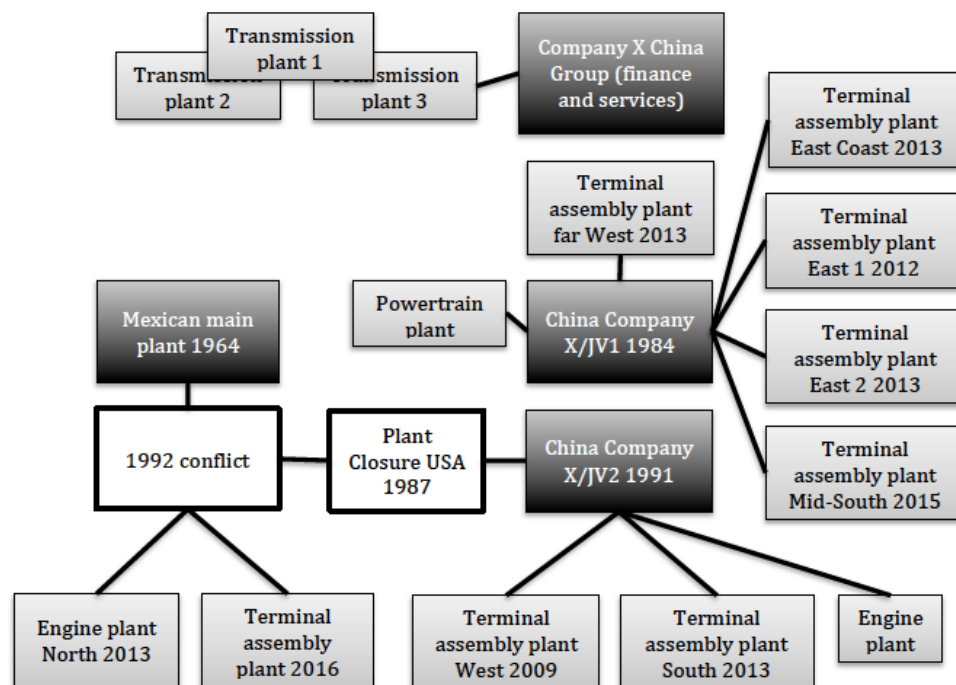


Figure 3: Company X corporate structure in China and Mexico, 2015

4. Methods

The historical-empirical investigation of Company X's operations in China and Mexico in this study serves as a case anomalous to theory, with the aim of providing ground for a critique of existing theory and the claim that a more inclusive research agenda needs to be developed. This mirrors the aim of what Michael Burawoy has formulated for his *extended case* method:

“Instead of discovering grounded theory we elaborate existing theory. We do not worry about the uniqueness of our case since we are not as interested in ‘representativeness’ as its contribution to ‘reconstructing’ theory.” (Burawoy 1998, p.16)

Though there will be new empirical insights generated in the actual case, they are not “directed at establishing a definitive ‘truth’ about an external world but at the continual improvement of existing theory.” (ibid. p.28) That is, while there will be empirical instances that suggest a causal relation between worker agency and company behaviour for individual spatiotemporal settings, this will be insufficient for a representative and positive generalisation holding true for other circumstances. However, they will be sufficient to point out the need for inclusive theorising given the insufficiency of existing theory under these specific circumstances. The argument will thus develop along the following lines: “this is where, when, why and how worker agency mattered *in the specific case of Company X in China and/or Mexico*, which allows us to draw certain theoretical and methodological conclusions as to *where and why existing theory is: 1. not exhaustively explanatory in these cases, 2. thus of limited representativeness, 3. in the least significant case in need of theoretical supplementation for the empirical findings not explicable, 4 in the most significant case, in need of axiomatic theoretical reconstruction or refutation.*”

Such an elaboration necessitates both diachronic, within-case causal tracing, treating each single case study separately (the different plants of Company X in China and Mexico across time) (Gerring 2007, p.172ff.); as well as a comparative historical perspective for the Chinese and Mexican cases, involving elements of

“macro-causal analysis” (Skocpol & Somers 1994, p.78). A comparative-historical perspective is however confronted with certain problems:

“The problem is that perfectly controlled comparisons are never really feasible. Societies cannot be broken apart at will into analytically manipulable variables; and history rarely, if ever, provides exactly the cases needed for controlled comparisons.” (Skocpol & Somers 1994, p.88)

This implies that even though various factors in the comparison of the development of Company X in China and Mexico could artificially be held equal, it would be difficult to retrace the occurrence of certain events monocausally to worker agency without a context-specific analysis of other variables. When we deal with dynamic, (wo)manmade phenomena, the proposed causality between variables might change direction over time. For example, workers repeatedly disrupting the production process might cause techno-organisational change (A→B) – but once implemented, it will alter the capacity of workers to influence the production process in the future (B→A). It is therefore helpful to “move back and forth between alternative explanatory hypotheses and comparisons of relevant aspects of the histories of two or more cases” (Skocpol & Somers 1994, p.79). However, the problem of causality remains unsolvable within a positivist research design and thus necessitates both a *historical* and a *relational* understanding of causation itself, particularly where human agency is the research object. This will be of importance when analysing the relationship between institutional change and the agency of different social actors.

Because this study deals with contemporary history that is still in the making, challenges arise not only from the problem of comparative case selection itself, but also from the asymmetry of available secondary data. This pertains in particular to the occurrence and detailed documentation of large-scale strikes at Company X in Mexico, compared to the generally limited information of Company X’s operations in China, especially regarding labour issues. In order to generate the findings for this study I therefore undertook fieldwork between August 2012 and September 2013, divided into two approximately six-months periods in China and Mexico

respectively. I conducted 83 interviews, whose participants were chosen through “purposive sampling” (Merkens 2005): permanent and temporary workers, managers, and trade union personnel were identified as the main relevant stakeholders. Due to the closed nature of the automotive sector, interviewees were mainly contacted through snowballing techniques (Flick 2009, p.109).¹

Apart from twelve expert interviews with academics and NGO personnel, I conducted “problem-centred” interviews that aim at gathering subjective viewpoints on a problem posited by the researcher as central to the particular research focus. The interview is based on a set of questions on the interviewee’s perception of particular problems, facts or events (which might have to be reconstructed as part of the interview process). During the interview these questions function as orientation marks in a dialogical conversation, which should allow the necessary space for longer narrative (e.g. biographical) passages (Flick 2009, p.160ff.; Witzel & Reiter 2012). The posited problem was the interviewee’s perception of his or her active role in the operations of Company X and their historical changes over time. This technique played out differently in various contexts. While I managed to apply it with near text-book procedure with workers in Mexico (including the triangulation of individual interpretative patterns through focus-group interviews), interviews with Chinese workers often relapsed into a question-and-answer schematic of a semi-standardised format, oriented along the prepared questions. On the other hand, problem-centred interviews with management, particularly those that had an engineering background, often involved passages on complex technological issues, whose detail made the conversation appear more like an expert interview. I conducted as many interviews as possible up to a point of saturation (Bauer & Gaskell 2000, p.43), when common themes appeared and information began to overlap significantly. Interviews were thematically evaluated through “concept-driven” codes taken from the existing literature, e.g. the role of technological change, wages, working hours etc., and “data-driven” codes (Gibbs 2007, p.44) where the information

¹ All interviews were carried out in accordance with SOAS policy on research ethics; and all participants were informed of the content of this project and have given their consent to the anonymised use of interview data for this study. To the best of my knowledge I have respected explicit requests by some of my interviewees not to quote them on particular topics.

gathered through interviewees did not fit existing concepts or occurred only in one of the cases, e.g. the role of housing in China, or intra-union strife in Mexico.

In addition, I undertook observations on the shop floor at Company X's Mexican plant, one plant of Company X/JV1 and three plants of Company X/JV2 in China. White-collar workers or senior managers, who explained the operations on the shop floor in detail, were present during all these observations. These observations were documented in field notes and similarly reached a "point of saturation". For purposes of triangulation, I reviewed secondary sources and interviewed academic experts in the field; evaluated annual reports and company records, where available; and drew on statistics compiled by national authorities and international databanks for the analysis of quantitative trends.

In combination with a theoretically informed revision of the existing literature, these methodological considerations and the empirical material generated allow me to address the sub-questions posited above; and to answer under which conditions, how and why processes of relational agency between capital and labour have shaped the convergence and divergence of Company X's operations in China and Mexico.

5. Key Findings

Being located at the intersection of Development Studies, International Political Economy and Labour Studies, this study makes three interrelated scholarly contributions. Empirically, it firstly provides insights into the labour process of Company X and its changes in developmental strategy and local adaptation over time and space. Specifically, it demonstrates that the question of convergence or divergence between the Mexican and Chinese ventures, and between these two and an ideal-typical "productive model" associated with the German parent company – of techno-organisational processes, sales strategies, employment relations and conditions etc. – hinges on the influence worker agency. Concretely, I argue that those areas, in which management has been able to establish a unilateral prerogative over the decision making process – in particular the

technological composition of the production process – show a high degree of convergence. Areas in which workers have been able to practically exert their influence on the other hand show a higher degree of divergence and variation over time, such as remuneration systems, time regimes, training processes, and other organisational aspects of production. In short, convergence and divergence hinge on how relational agency between management, workers and policy makers pans out in reality. Secondly, this insight serves as an entry point to challenge structuralist and institutionalist explanations of company performance and convergence/ divergence, which due to their lacuna of processes of relational agency ultimately remain unable to *explain* the phenomena they observe. In particular, these accounts cannot account for dynamic change – and its explanation – in a consistent fashion. Thirdly and finally, this makes room for the development of elements for an agency-centric theory of institutional change; and its methodological mirror image in the form of a labour-inclusive research agenda.

6. Structure of the Argument

I engage with the research question mainly through a reconstruction of the role of worker agency in the developmental trajectories and operations of Company X's Mexican and Chinese subsidiaries. Apart from two initial theoretical and historical background chapters, the bulk of this study will be structured in the form of thematic comparisons derived from themes central to the existing literature, which coincide with the concept-driven coding of my fieldwork material.

Chapter two will discuss the theoretical underpinnings of this study in more detail. I will revisit how the question of convergence and divergence has been addressed in mainstream economics, certain strands of Marxism, comparative institutionalism and Silver's variant of World Systems Theory (WST). I will subject each grand approach – in particular the leitmotifs of institutionalism and WST: ideal-types and long cycles – to a revision of its explanatory capacity for convergence and divergence. Arguing that these approaches suffer from theoretical and methodological problems to conceive historical change as dynamic, open and (wo)manmade, I suggest a more consciously agency-centred approach as

a heuristic alternative. Emphasising the notion of relationality I will give a brief elaboration on the role of workers and class relations in this approach.

Chapter three will provide necessary background information on the case study in focus. The history of Company X and its internationalisation process will be briefly discussed, with a more detailed elaboration on the particularities of its productive model and industrial relations. The emergence and specifics of automotive manufacturing in China and Mexico will be presented from the dominant vantage point of government-business interactions. This will provide a template for the analysis carried out in the following chapters – when, where and how processes of agency between capital and labour have shaped, altered and moved beyond developments attributed solely to government-business interactions. Finally, questions of structural power and institutions supposed to govern the behaviour of capital and labour will be reviewed for both cases, in order to outline in broad terms what political and economic resources the respective agents could mobilise for their respective strategies.

Chapter four will analyse the 1992 conflict at Company X in Mexico as a cataclysmic event of relational agency. It puts forward the argument that the event created a certain path dependency for the strategic development, institution building and geographic expansion of Company X in Mexico by reshaping the conditions for managerial and worker agency. I will demonstrate how a particular side effect of this conflict was the emergence of clandestine groups of worker dissidents, who consciously defied the newly installed system of industrial relations. This resulted in persistent, albeit latent, inconformity within the plant. As nothing of the kind has occurred at Company X's Chinese plants, I will present this moment of relational agency as the first and most visible instance that sets the two cases apart.

Chapter five is the first chapter analysing in detail how processes of relational agency between managers and workers have shaped the day-to-day operations at Company X in Mexico and China. I will begin by outlining workers' grievances to understand how worker agency has shaped and been shaped by three institutions governing the organisation of the production process. I will show how similarly

designed remuneration systems in China and Mexico function differently due to the persistent union influence over collective wage setting in Mexico. For the case of teamwork and lean production principles, I will elaborate how an impasse between managerial authoritarianism and workers' evasive coping strategies has rendered these institutions defunct in both cases. Finally, I will argue that the exit strategies of a particular section of the workforce in China have caused an alteration in Company X's hiring strategies and training schemes to a degree that runs counter to assumptions about the necessity of high-skilled labour for Company X's profit strategy.

Chapter six will address the technological and temporal side of Company X's production process. Broken down into an analysis of a car factory's main manufacturing departments, I argue that – although an unchallenged prerogative of management – particular machine operations not only constrain the agency of workers, but also impose certain limits on management to flexibly alter the technological composition of the production process. In the second half of the chapter, I will elaborate how Company X employed different time regimes to organise production in China and Mexico. For both themes, I will analyse how workers' and managers make strategic use of the existing conditions, and how and why certain alterations have taken place.

Chapter seven demonstrates how increased outsourcing has shifted cost pressure into the supply chain, causing inferior working conditions and pay than at terminal assemblers. I will demonstrate that more recently, visible moments of worker agency in the form of wildcat strikes have occurred in the supply chain in both cases. Reconstructing the events, and analysing in more detail the responses by policy makers, management and trade unions, I will demonstrate how new institutional arrangements have emerged as an unintended consequence of worker agency. This will be discussed in particular for the Chinese case, where these changes have occurred on a more significant scale after the 2010 strike wave.

Chapter seven will analyse the spatial organisation of Company X's operations in Mexico and China. I will demonstrate how worker agency has deflected and *ex*

negativo determined Company X's decisions about the geographical location of new projects in Mexico. In the Chinese case, on the other hand, labour considerations, even in the sense of lower wage costs, have not played a significant role. Instead, driven by the search for new markets, Company X/JV2 opened a new plant right in the hotbed of the 2010 strike wave – which in turn indicated a reconsideration of its internal managerial practices for this plant.

I will conclude in chapter eight by summarising the empirical findings and taking them back to the question of convergence and divergence and institutional change. The wider theoretical repercussions of this study will be assessed and an outlook on policy implications and scenarios given. Finally I will address limitations of the analysis presented to outline possible avenues for future research.

Chapter 2: Workingman's Dead? – Worker agency and the Convergence/Divergence Debate

What accounts for the different performance of national economies and transnational companies? Are those that perform “better” the future of the “worse” performing latecomers? Is the emergence of new leading global players, industries and companies only a recurring shift in the centre of gravity within an otherwise systemically unequal global political economy? Or is the global political economy bound together by market exchange but fundamentally fragmented by local political and cultural idiosyncrasies? This chapter will review the answers given to these questions by mainstream economics, various strands of Marxism, institutionalism and World Systems Theory, before arguing that although they present invaluable insights that can be productively drawn upon, in the majority they theoretically miss and/or methodologically underrate the importance of historical change and process as a product of human agency, due to a pre-occupation with abstract laws of development, long-term cycles or ideal-typical modelling. I argue that a shift towards an agency-centred mode of inquiry is necessary, which recognises the existence of behaviour-affecting constraints and enabling mechanisms, but does not stop at charting and comparing these factors at the expense of an analysis of agency proper. I argue that structural and institutional factors by themselves might provide a helpful starting point to map the playing field for human action, but can by themselves not explain dynamism and change, because their relevance only becomes a historical force when acted upon by human beings. An explanation of the dynamics of economic convergence and divergence can therefore be satisfactorily developed neither through the comparison (and potential incommensurability) of static ideal types, nor through a reduction to expressions of a systemic logic – but should rather proceed through a careful historical analysis of processes of relational agency that might have causal motivations, purposeful orientations and unintended results, going beyond the structural and institutional factors that are presumably conditioning them.

In the following I will give a brief overview of arguments about global (political) economic convergence – or the lack thereof – present in neo-classical economics

and certain structuralist or logicistic readings of Marx, before contrasting them with the more relevant arguments for this study: that of inter-national and intra-industry institutional divergence put forward by scholars of the institutional and Régulation School traditions; and that of patterns of cyclical recurrence of capitalist expansion and labour unrest in WST, which entails arguments for both convergence and divergence. I will briefly point out the benefits and shortcomings of the latter two approaches and argue that it is necessary to move beyond comparative statics and patterns of cyclical recurrence towards a conscious methodological prioritisation of relational agency over structural imperatives. I will therefore draw out certain heuristic elements of an agency-centred mode of inquiry, before clarifying in more detail the category of the “worker”.

1. Varieties of Convergence – Varieties of Divergence

1.1. Mainstream Economics

It is fair to say that the issue of convergence continues to inspire debate within, and constitutes a *leitmotiv* of, development economics. In its neoclassical and Keynesian versions it is mainly framed in terms of a long-term levelling of income between different economies – i.e. in terms of global inequality. The linchpin of this *topos* is the so-called ‘catch-up effect’. Due to higher marginal productivity of capital (or: less diminishing returns to unit of employed capital) less developed economies have a higher growth potential and should therefore grow faster, thus closing the gap towards the more developed economies (see e.g. Krugman & Wells 2006, p.603ff.; Barro & Sala-i-Martin 1992). In light of contradicting empirical evidence, various aspects of the catch-up assumption have revised, considering for example the lower capacity of developing countries to generate capital through savings and investment (Harrod 1952; Domar 1957); the limits of technology transfer and industrial change (Rodrik 2011); or all kinds of methodological problems pertaining to the adequacy of chosen variables, measurements and algebraic models (Sutcliffe 2005).

Both strength and weakness of this approach to convergence stem from its grounding in the extremely restricted axioms of neoclassical economics – which

are also widely shared amongst (Post-)Keynesians (a notable exception being the hybrid approach of mainstream economics and Marxist political economy provided by Michał Kalecki 1939).² Besides its intra-paradigmatic refinement, mainstream debates of convergence are therefore subject to general critiques of neoclassical economics abstracting from any form of historical concreteness, social power relations, political structures, property-relations etc. that might condition human behaviour. Instead, agency is reduced to individual, instrumental – that is, utility maximising – behaviour, from which higher-level phenomena are supposed to be extrapolated as aggregations of individual acts. This renders neoclassical modelling ahistorical, unspecific and static. Developmental differences are explained only as short-term divergences – “late” development – from an abstractly deduced economic *modus operandi*, which are caused by market-interfering ‘external’ factors (such as factor endowment or institutions) and should level out in the long run. In order to explain real-historical change, neoclassical economics therefore constantly has to turn to theory-external factors – usually in the form of “exogenous shocks” or institutions (to be discussed in section 1.3.), which are recast in terms of methodological individualism and algebraic modelling, in order to fit the neoclassical edifice (a process that Fine and Milonakis term “economics imperialism”; Fine & Milonakis 2009b). At best, these approaches offer a rigorously constructed theoretical template – and usually large datasets – from which to develop a more socially grounded, explanatory and causal critique. However, for an explanatory approach, a broader political economic framework is required, which, as I shall argue, is sensitive to processes of relational agency and social power relations.

² Larger economic phenomena are conceived as aggregations of rational, utility maximising acts of individual behaviour. Value derives not from production costs – especially not from living labour – but from scarcity; and price is a judgement of value in exchange: an effect of individual choices. Under assumptions of perfect competition, symmetric information, no increasing returns to scale, and no barriers to market entry, the sum-total of these choices will lead to an equilibrium between demand and supply. Combined, partial equilibria for separate markets are supposed to add up to a general equilibrium describing national economic dynamics and allowing for mathematical modelling. This equilibrium is as a rule Pareto-optimal, respectively allocatively efficient (Teschke & Wenten 2016). Neoclassical economics not only postulates universal applicability, but that economic phenomena not only can, but must be explained as deductions of these basic principles.

1.2. Convergence/Divergence and the Problem of Agency in Various Strands of Marxism

Ironically, a notion of convergence similar to that of the economics mainstream is reflected in certain writings of Marx and Engels and particular strands of Marxism. In Marx' writings we essentially find two grand narratives of national developmental pathways with the emergence and spread of capitalist social relations. One, formulated in earlier writings and canonised in the Communist Manifesto, predicted a global convergence of disparate social relations. Driven by an intrinsic need for expanding markets the bourgeoisie "compels all nations, on pain of extinction, to adopt the bourgeois mode of production" (Marx' earlier term for the capitalist mode of production) and would eventually span the entire globe (Marx & Engels 1976, p.489f.). In contrast, a notion of divergence and diversity emerged after the failed 1848 revolution and the different national developmental pathways amidst a reshuffled European geopolitics. Now, Marx and Engels believed, responses to the unfolding contradictions of capitalism would primarily be determined by the socio-economic, political and cultural particularities within individual nation states – translating capitalist imperatives not into global convergence, but disparate "unevenly" developing social formations (Soell 1972; Teschke 2010).

At the danger of oversimplification, the majority of the Marxist literature on international political economy today – with important exceptions (e.g. van der Pijl 1998; Teschke 2009; Lacher 2006) – still draws heavily on either one or the other of these narratives. This is manifest in, on the one hand, accounts that extract a uniform "logic of capital" from Marx's mature writings in order to explain historical-empirical phenomena as expressions of this underlying logic (Harvey 2001; 2006) and see, similar to neoclassical economics, a uniform drive towards capitalist "globalisation" at work (e.g. with different emphases: Hardt & Negri 2000; Robinson 2004; for an overview see Rosenberg 2000). On the other hand, there is an emphasis on the developmental logic of capital not leading towards convergence but reproducing "uneven and combined development" (e.g. Rosenberg 2010; Anievas 2009; 2014). Though these narratives are powerful, in

particular against anthropological and culturalist particularism, both accounts run danger of delivering historical findings as a variation on a theme, binding the openness of historical processes, agency and politics back into an overarching pre-determined logic of capitalism (see also Teschke & Wenten 2017).

This is connected to a tendency in the Marxist literature to emphasise the second half over the first in Marx famous dictum that “men make their own history, but they do not make it as they please; they do not make it under self-selected circumstances, but under circumstances existing already, given and transmitted from the past not under conditions of their own choosing” (Marx & Engels 1979, p.103). The fundamental problem of structure and agency has in the Marxist tradition often been sought to be resolved through unravelling its “dialectic” on deeper theoretical and ontological levels (e.g. Bhaskar 2008; Jessop 2007; Wight 2006). For the tradition of “Critical Realism” this has come at the conscious expense of methodological questions. While acknowledging that it was impossible to distinguish the determining relevance of agency as the change making force *versus* that of explanatory structural determinants *for individual empirical cases*, these approaches maintained an “illusory assumption that one can distinguish agency from structural determination” on an *ontological level* (Knafo 2010, p.500). Structural determinants and agency could in principle still be mapped as separate factors – although this separation would have to be determined for each case through historical analysis. Agency, in these cases, would *ex negativo* become that moment which escapes structural determination. In other words, agency is the explanatory residual after, and only if, structural explanations have been exhausted. However, to paraphrase Althusser, “the lonely hour of agency never comes”, because it is possible to extend the reach of structural explanations ever deeper, down to neurological processes within the human brain (see e.g. the debates in Horn & Löhrer 2010).

Three further Marxist attempts to address the structure-agency question should be briefly mentioned, as they provide a productive template for the account proposed in section 2. “Open Marxists” have emphasized that “structure should be seen as a mode of existence of class antagonism and hence as result and premise of class

struggle” (Bonefeld 1992, p.93). Here, the task of the researcher is to “dwell upon critique and the movement of contradiction as making clear, for its own part, the ‘forms’ that class struggle may take” (Bonefeld et al. 1992a, p.xvi). Although this approach seems to shift emphasis to the side of agency, it limits itself through the insistence on structures being clearly identified as *capitalist*, and agency as *class struggle*. This insistence on capitalist social forms has not led to an explanation of their emergence, reproduction and transformation through a detailed empirical and historical analysis of class agency in its complexity and contradictions, but instead produced the pretext to approach agency primarily through a conceptual matrix derived from Marx’ mature writings. In confrontation with their critics, Open Marxists have thus slipped back into logical-deductive, rather than historical arguments (Bieler et al. 2006).

A similar tendency has been visible within what has become known as “Political Marxism”. Here, an explicitly historicist approach to capitalist development was put forward *in praxi* through an explanation of the emergence of capitalist property relations as an unintended consequence of human agency. Relational processes between politically constituted class agents transformed feudal social property relations and thereby individual rules for reproduction (Brenner 1985; Wood 2002; Teschke 2009; drawing implicitly or explicitly on Thompson 1968; 1978). This productive endeavour has more recently been thwarted by some Political Marxists emphasising (not unlike Open Marxists) that once the new – capitalist – set of social property relations was in place, social dynamism was best explained by structural imperatives ascribed to capitalism (Brenner 1997; 2005; 2006; Wood 2005). Agency becomes of historical relevance only in cataclysmic events and large-scale shifts of social property relations and developmental patterns (we will revisit this mode of perceiving change as a “punctuated equilibrium” in section 1.3.1.). This structuralist relapse therefore equally limits the explanatory power of “Political Marxism” for intra-capitalist variety and change as a result of processes of human agency.

Finally, the works of Italian *operaists* are a useful reference point in this study – not so much for their particular theoretical interventions (Tronti 1974), but for their

historical research on worker agency, struggles and labour movements beyond official trade unions and parties. In particular their gearing of sociological methods towards the aim of improving workers' leverage in the given struggles has provided a tool that moves research on labour under capitalism away from logical deductivism towards actual historical-empirical enquiry. I will take these issues up in more detail in section 2.

To sum up these very rough sketches, the Marxist tradition offers fruitful theoretical and methodological tools to engage the question of capitalist convergence and divergence as a result of human agency driving a "structured process" (Thompson 1978, p.148). But caution must be applied to ensure that historical-empirical inquiry does not get subsumed under structural-logical deductivism. The methodological issues involved in such an endeavour will be engaged in more detail again in section 2.

1.3. Institutionalism

One of the strongest claims of a global developmental divergence not only as an effect of an underlying contradictory logic – as in the uneven development theme – but of a *sui generis* multiplicity of different entities making up the global political economy has come from the institutionalist tradition. It rests on the argument that economic performance of national economies or individual companies depends on the agency-guiding incentive structure provided by formal and informal institutions and their social sanctions. Two broader strands of inquiry exists – that of national political economic performance and "Varieties of Capitalism" (North 1990; 2005; North et al. 2009; Hall & Soskice 2001; Hancké 2009a; Streeck 1992; 2009; Hollingsworth & Boyer 1997a; Boyer & Yamada 2000), and that of company (or sector) performance (Streeck 1987; Freyssenet et al. 1998; Boyer & Freyssenet 2002; Freyssenet et al. 2003; Freyssenet 2009b; de la Garza Toledo & García 1993; de la Garza Toledo 2006). For reasons of clarity and the particular company focus of this study, I will recapture institutionalist arguments for the divergence of national economic performance only briefly, and then pay particular attention to

intra-industry divergence between different companies or subsidiaries. These ideas offer a productive starting point for the empirical enquiry laid out in the following chapters – although, as will be argued below, there are distinct theoretical and methodological limits to this approach, due to its reliance on comparative statics, an insufficient disaggregation of the empirical evidence, and a certain self-validating circularity.

What all institutionalist approaches share is an emphasis on the behaviour-structuring impact of formal and informal rules, norms and customs – in short, a focus on institutions. Most approaches also differentiate institutions from organisations, that is, social entities made up of individuals with shared purposes and that are usually characterised by certain membership-defining procedures. Beyond that point institutionalism mainly splits into two large camps (leaving aside its International Relations offspring for the time being): one firmly based in methodological individualism and rational choice, in which institutions are seen as more or less functional responses to obstacles in the individual pursuit of utility maximisation, such as transaction costs, uncertainty or coordination (Coase 1960; Williamson 1987; North 1990; 2005; North et al. 2009; Hall & Soskice 2001); and one based in broader, reflexive social scientific methods, mainly concerned with comparative studies. The latter camp can be roughly divided into a “historical institutionalism” focusing on large macro-phenomena and changes across space and time (classically Polanyi 2001; but e.g. also Tilly 1990; Skocpol 1994; Evans 1995; or Schmitter 1974; Esping-Andersen 1990); and a “sociological institutionalism” investigating how certain (organisational) practices emerge not from rational choices, but from actors interpreting and acting upon meanings emanating from historically grown cultural and political traditions, customs, rules and norms (e.g. Powell & DiMaggio 1991; Scott et al. 1994; with more sensitivity to power relations Streeck 1992; Streeck & K. A. Thelen 2005). All these approaches find their limits in the conceptualisation and/or investigation of change and social agency, as will be discussed in the following.

1.3.1. Problems of “Typologism”

Ideal types and comparative statics

Institutionalism is fundamentally based on the construction of institutional “matrices” in the form of ideal types – and its strengths and weaknesses are to a large degree the result of this methodological choice. An ideal type “is generated by the one-sided augmentation of one or some aspects; and by an amalgamation of a plethora of diffusely and discretely present – here more, there less, sometimes not at all – singular appearances, which conform to these one-sidedly emphasised aspects in the creation of one uniform construct of thought.” (Weber 1988, p.191) The concepts of institutionalism are, in other words, subjectively posited extrapolations of certain empirical phenomena to type-characterising abstractions around which other phenomena are logically and coherently arranged. An ideal-type then becomes a tool that gives meaning to a complex reality by providing a template against which historical analogies and deviance can be “comparatively measured” (ibid. p.199). The limits of this method were clear to Weber (ibid. p.204), and have also been pointed out in self-criticisms within the institutionalist tradition:

“There is confusion between ideal types and cases, with the latter being seen as exemplifiers of the former, rather than the former being seen as constituents of the latter.” (Crouch 2009, p.94)

In other words, the method of ideal-type construction bears the danger of “telescoping theory and history” (Weber 1988, p.204), that is, of tailoring history to the properties of the ideal type. Weber’s solution to this problem was to emphasise that logical conceptualisation and empirical reality were two radically different and incommensurable domains. This notion seems to be shared by at least some proponents of the institutionalist tradition. Hollingsworth and Boyer for example argue that ideal types “are not meant to be descriptive statements about specific firms, industrial sectors, or individual firms at specific periods of time. Rather, they are heuristic devices to sensitize us to possible

interrelationships that might exist among a broad set of variables or social categories.” (Hollingsworth & Boyer 1997b, p.20)

On this basis Weber suggested a methodology shared by the institutionalist tradition that I shall call *typologism*: “comparative measuring” will have to result in the construction of new ideal-types, or at least sub-types, in each case of historical deviation.³ Reality is ordered through an ever-increasing number of types, models and regimes, which combine common elements in different ways. Discussions tend to shift away from questions of causality and explanation to comparative statics and a certain intra-paradigmatic esotericism in the form of questions as to *how many* types there actually are (compare for example Soskice 1999; to Jackson & Deeg 2006; and to Streeck 2010; Crouch 2009).

The fundamental problem of this method is the incommensurability of static ideal types and historical process. As Adorno has pointed out:

“it is impossible for an ideal type to possess anything like a tendency to change from one into another, because it is something entirely monadological and invented *ad hoc*, in order to subsume certain phenomena.” (Adorno 2003, p.207)

Weber therefore had to leave his own method behind, when explaining processes of transformation (ibid. p.207ff.). The solutions that institutionalists have proposed are twofold: either dynamism has to become an intrinsic property of the ideal-type itself; or the observation of change requires a methodological shift towards an inquiry of human agency and power relations. The first solution will be discussed in more detail in the following section. The second seems to be suggested by scholars such as Jackson and Deeg (Jackson 2005; 2009; Deeg 2005; Deeg & Jackson 2007; 2008); and is particularly present in the later works of Streeck (Streeck 2009, p.4ff.). These approaches arguably present the most promising attempts to devise an agency-sensitive framework that could be

³ In another self-criticism, Hancké has pointed out: “One of the problems with such expanding typologies is that ultimately one could claim that every capitalist country has produced its own ‘variety’, in which at least one institution or combination of institutions is historically specific, and therefore different from other related types.” (Hancké 2009b, p.15)

reflected in empirical research, but there is only so much room to expand the notion of agency and power before leaving the institutionalist paradigm behind altogether (and arguably before becoming a Political Marxist). I will discuss the question of agency in more detail in section 2.

Change and agency

What dominates within institutionalism are approaches that map out the static elements and reconstruct change not as practical-political processes, but as a sequence of comparative cross-sections. As Streeck and Thelen have self-diagnosed, there has been a “prevailing emphasis on institutional stability even in the face of indisputable and important change” (Streeck & K. Thelen 2005, p.6) in the institutionalist tradition.⁴ This problem has given rise to two intra-paradigmatic attempts of theorising historical change.

One proposed solution has been that of a “punctuated equilibrium” (Weingast 2002), respectively of “path dependency” (Mahoney 2000), which accentuates that periods of relatively stable, self-reinforcing institutional matrices are interrupted by exogenous shocks (North & Weingast 1989; North et al. 2009), or “contingent” events (Mahoney 2000), that trigger the emergence of a new institutional matrix. While in the punctuated equilibrium model there is no necessary connection between an exogenous shock itself and the properties of the new institutional matrix, in order to speak of path dependence, Mahoney argues that a “relatively determined” developmental pathway must be retraceable to the triggering, contingent event. Here, the problem remains that the explaining causes of change and process remain theory-external, and have to be integrated ever again on an *ad-hoc* basis (also pointed out by Streeck 2009, p.18).⁵

⁴ An indicator for this problem is the following example from an edited volume by Hollingsworth and Boyer (Hollingsworth & Boyer 1997a). Instead of addressing the question of the causalities and means of explaining change, the introductory chapter called “How and why do social systems of production change?” simply states that there is a variety of types of these systems (Hollingsworth & Boyer 1997c).

⁵ A more comprehensive critique of Mahoney’s idea of “path dependency” will be provided in chapter 4.

These approaches have been criticised for their rigid dichotomy between moments of critical junctures and periods of stable institutional reproduction (Streeck & K. Thelen 2005). Streeck and Thelen stress that a “grounded, ‘realistic’ concept of social institutions [...] emphasizes their being continuously created and recreated by a great number of actors with divergent interests, varying normative commitments, different powers, and limited cognitions.” (Streeck & K. Thelen 2005, p.16) However, even Streeck and Thelen cannot resist the temptation to formulate their ‘realistic’ approach in ideal-typical terms, binding the open and process-oriented emphasis on an inquiry of institutional change, “which may be fully understood only with hindsight” (ibid.), back into five types of gradual, formative change born out of the endogenous properties of institutions themselves (ibid. p.19ff.). Change might therefore be the result of (1) institutions being in conflict with each other, leading to a displacement of one institution by another; (2) becoming more resilient to change over time with more agents utilising it, thereby making other institutions with similar functions obsolete; (3) drifting towards new purposes as an effect of failed institutional “maintenance”; (4) being consciously redirected towards new purposes; or (5) incentivising behaviour that over time undermines the rules it was based on (ibid. 19ff.). These attempts succeed in making dynamism an effect of the internal properties of institutions, and present a huge intellectual advancement over “punctuated equilibrium” or “exogenous shock” models.

Institutionalist explanations of historical change however remain limited due to at least two problems of conceiving the relationship between institutions and agency. The first problem resides in the focus on institutions itself. What sounds like a plea for an inquiry of processes of agency that change institutions in the account proposed by Streeck and Thelen (2005), instead becomes a quest for properties intrinsic to an institution, or a contradictory or mutually enforcing web of institutions, that could explain the direction of change. Institutions are supposed to evolve through processes of behavioural adaptation and institutional remodelling, but agency is essentially reduced to an executor of developmental trajectories programmed into the institutional matrix. This notion is further aggravated by the fact that in rejecting a universally applying logic of agency as individual utility

maximisation, historical and sociological strands of institutionalism have usually stressed constraining over enabling institutional effects, for example when they argued that “economic coordinating mechanisms place severe constraints on the definition of needs, preferences, and choices of economic actors” (Hollingsworth & Boyer 1997b, p.3). Agency did therefore not only disappear behind a preoccupation with the specification of an institutional incentive structure, but more particularly behind its agency-constraining effects.

The other problem is an extra-paradigmatic limitation of the perceive- and thinkable, which is arguably an effect of the shadow that mainstream economics has cast over the social sciences (for a good elaboration: Fine & Milonakis 2009b; 2009a). Agency, if explicitly addressed at all, is ascribed to certain sets of actors only, which is particularly pronounced in rational choice approaches such as New Institutional Economics (NIE) and VoC: the agents of change are entrepreneurs and policy makers. This is in most cases simply assumed without further discussion (North 1990; 2005; Hall & Soskice 2001),⁶ meaning that “the core theoretical claims of the VoC approach seem oblivious to or, indeed, downplay the significance of the distribution of power among socio-economic groups” (Pontusson 2005, p.164). In other cases the focus on elite agents is justified by the argument that an understanding of institutional (and more broadly political-economic) change requires a focus on those actors that possess the highest degrees of social, economic and political power – as this is equated with the highest potential to induce change (North et al. 2009). The impact of the agency of non-elite groupings of people is axiomatically excluded and has, if recognised, to be re-integrated *ad hoc*. These strands of institutionalism have bereft themselves of exploring the implications and explanatory capacities of asymmetrical power *relations* for historical change.

The focus on institutions is therefore a double-edged sword. On the one hand, ideal-typical patterns of social order allow for more complex entry points to perceive and order the convoluted mass of empirical facts the researcher is

⁶ “The agent of change is the individual entrepreneur responding to the incentives embodied in the institutional framework.” (North 1990, p.83)

confronted with, thus avoiding the one-fits-all approach of convergence-oriented neoclassical economics or capital-logic Marxism. On the other hand, starting from an analysis of the institutional playing field tends to fall short of seeing the multiplicity and contradictory agency involved in its creation, because it tends to order reality according to a limited range of pre-defined ideal-types. The latter is not an automatism, and could arguably be avoided by a deliberate focus on deviant behaviour or those historical routes not taken (Streeck & K. Thelen 2005, pp.15, 20), but this is rarely the case in the actual research carried out. What dominates is the expectation of a validation of ideal typical models through historical evidence – very much like in structuralist Marxist accounts.

1.3.2. Institutionalism-inspired Industrial Sociology

For this study it is particularly institutionalism's company focus that is of interest. Here, it is arguably the VoC approach that is most prominent, which develops two ideal types of national economic institutional matrices – coordinated and liberal market economies – whose particular features should explain the constraints, potentials and means for firms to pursue their interests (Hall & Soskice 2009). This approach builds on the Régulation School-inspired concept of “social systems of production” (SSP) and is in its components nearly identical – the major difference however being VoC's more rigid foundation in rational choice, which allows for game-theoretical modelling. In the following I will focus mainly on the SSP-approach, not only because it offers a more productive point of entry for the theoretical-methodological approach developed below, but also because, in contrast to VoC, its main proponents are industrial sociologists specialising in research on the automotive industry.

An influential way of framing and comparing the performance of global automotive manufacturers have been the twin-concepts of “profit strategies” and “productive models” popularised by an international group of industrial sociologists formed in the 1990s – the *GERPISA*. Similar to the emphases of NIE and VoC, profit strategies and productive models are firm-level responses to uncertainty problems arising under capitalist relations of production: market and labour uncertainty. Market

uncertainty forces companies to devise strategies to either correctly estimate demand and create a competitive advantage or niche; or to rely on a stabilisation of demand in a coordinated national “growth mode”. Labour uncertainty, i.e. the risk of not obtaining “from their employees the output that they desire (on time, with good quality and at a low cost)” (Boyer & Freyssenet 2002, p.5), confronts capitalists with essentially two choices: to separate execution and design and establish strict hierarchies; or to establish “a contract of lasting trust with wage earners” (ibid. p.6), receiving access to their know-how and co-operation in exchange for a higher monetary compensation. These elements are reflected in the dichotomy of “liberal” and “coordinated market economies” in the VoC approach.

The concept of the “profit strategy” is a remodelled version of Porter’s “competitive strategy” (Porter 1985, p.11ff.) – it denotes the deliberate plan and projected development of a company to deploy its resources and organise its activities towards the generation of a surplus (or in Porter’s words: towards a competitive advantage). Profit strategies are a response to the uncertainty problems described above, and are perceived as a result of managerial decision-making. Following Porter, Boyer and Freyssenet argue that there is only a limited range of possible strategies stemming from a combination of decisions on scale, quality, product diversification, innovation, flexibility and cost reduction (Boyer & Freyssenet 2002, p.14). A “productive model” – with slightly different emphases sometimes also called “productive regime”, “industrial” or “work” model (Soskice 1999; Freyssenet et al. 1998; Jürgens & Krzywdzinski 2009) – on the other hand denotes how broader institutional conditions, power relations, resources, machinery, personnel, knowledge and other means are to be utilised, structured and developed in the pursuit of a particular “profit strategy”. Productive models are “company governance compromises” (Boyer & Freyssenet 2002, p.20), i.e. their coherence hinges on the involved stakeholders agreeing on, or at least not obstructing, decisions on the deployment of the means to realise a particular profit strategy. Where profit strategy and productive model are compatible, sustainable profitability is likely; where they are not, crises may occur. Moreover, a productive model is supposed to be “sticky”, i.e. not easily transformable, even if a different profit strategy is deemed more viable. Productive models often receive company

or country specific labels – for example the “Japanese model” associated with lean production; or the “German model” associated with neo-corporatism. That is, to a certain extent the concept of a “productive model” blends over into, or can be said to be a subdivision of, comparative institutionalist inquiries into “varieties of capitalism” (e.g. Streeck 1992; 2009; Soskice 1999; Hancké 2009a).

As Boyer and Freyssenet are keen to emphasise, the identified productive models are the result of decades of inductive research and should be taken as “a largely unintentional process for creating an external relevancy and internal coherency for [...] technical, organisational, managerial and social changes” (Boyer & Freyssenet 2002, p.23) arising from the transformation of a preceding productive model. Although the particular logic behind the “profit strategy”-“productive model” combinatory arguably owes more to the Althusserian heritage imported through the employed Régulation School framework than to institutionalism alone, the same benefits and limitations of ideal typical modelling apply, i.e. a downplaying of agency and difficulties to explain change without turning to the *ad hoc* inclusion of theory-external factors.

However, despite these limitations, scholarship from this tradition has produced some of the most compelling studies on the automotive industry (Boyer et al. 1998; Freyssenet et al. 1998; Freyssenet 2009b; Jürgens et al. 1989). It has also left its particular mark on the convergence-divergence debate by refuting one of the most influential arguments of industrial convergence in the autosector. In 1990 a team of MIT researchers published their seminal study on the Japanese car industry, entitled *The Machine that Changed the World*, which not only coined the term ‘lean production’, but also proclaimed “that the fundamental ideas of lean production are universal” (Womack et al. 1990, p.9). Lean production was understood as combining the virtues of mass and crafts production through a philosophy of waste-, and thus of cost-reduction. To Womack et al. a ‘lean’ production process was ideal-typically characterised by outsourced component production; just-in-time supplies and delivery, reducing storage costs; production in teams that were also responsible for detection of defects and constant quality improvement; and increasing automation. The study famously argued that there

would be “a necessary transition from mass production to lean” (ibid. p.12), in order for those automotive manufacturers lagging behind in productivity and cost effectiveness to improve their performance. Similar to the original proponents of the VoC approach, the MIT study was primarily interested in providing scientific findings for the purpose of improving company performance – i.e. explicitly oriented towards managerial circles (Womack et al. 1990, p.3ff.), where it gained substantial influence.

Carried out in conjunction with the MIT study, however, was a project led by a team of German researchers, which rather pointed to a diversity of techno-organisational responses to the Japanese competitors (Jürgens et al. 1989). By the late 1990s the *GERPISA* network (including Jürgens et al.) had solidly established that the predictions by Womack et al. of a convergence towards lean production were untenable. Instead, from the multiplicity of company-specific case studies, they concluded that individual companies rather transferred the “productive model” developed in their home-countries to their foreign subsidiaries:

“Companies’ profit strategies and conceivably their productive models will have been constructed in a framework enabling the growth strategy and model typifying their country or region of origin. The only chance they have for lasting profitability is if these strategies and productive models are compatible with the growth strategies and models found in the countries where they move.” (Freysenet 2009a, p.4)

In sum, institutionalism, and in particular industrial sociology on the automotive industry, provides a useful framework for static and logical mapping of conditions on and beyond the shop-floor that shape the conditions under which the social agents engaged in production operate. Despite their methodological limitations these studies will in the following chapter provide the background information for a more detailed discussion of automotive manufacturing at Company X in Mexico and China throughout the entire study. The expectation of Company X transferring its “productive model” to its subsidiaries renders a productive template to

critically engage with the question of intra-industry, respectively intra-company, convergence across space and time.

1.4. From Convergence to Cyclical Recurrence of Unevenness: World Systems Theory and the Works of Beverly Silver

As outlined in the introduction, a major reference point for this study are the works of Beverly Silver. Silver's arguments are founded on a WST framework based on the works of Wallerstein and in particular Arrighi, whose major narrative on the development of the global political economy needs to be quickly restated.

As an effect of geo-commercial transformations between the 14th to 16th century the global political economy has taken the shape of an organically integrated system, characterised by an international division of labour between sovereign but interdependent nation states. The relationship between these states is not one of mutually beneficial comparative advantage, but of inherent inequality: Areas concentrating high value activities – the *core* – use their economic advantage to maintain and strengthen their international position by contracting out lower value activities to politically weaker and economically less developed areas – the *semi-periphery* and *periphery*. Regions within the latter two categories are thus “exploited” through resource transfers to the core, reinforcing their subordinate position in the hierarchy of states (Wallerstein 1974; 2004). Recurring cycles of successive hegemonic states (Genoa/Venice, Holland, Britain, and the United States) – invariably characterised as capitalist – periodically alter intra-core hierarchies, rearranging and realigning geo-commercial core–(semi-)periphery relations (Arrighi 1994). Hegemony is here grounded in innovations in capital-intensive “labour regimes” (which spill over into commercial and then financial superiority), allowing hegemonic states to position themselves at the summit of the international division of labour. Hegemonic transitions are decided by intra-core wars between rising challengers and declining status quo powers (further elaborated in Teschke & Wenten 2016).⁷

⁷ Arrighi has elaborated his argument with a focus on US-American development (Arrighi 1994) and later extended it to East Asia (Arrighi et al. 2003; Arrighi 2008).

Within this framework “Beverly [Silver] took over the work on labour” (Arrighi 2009, p.74). Arrighi and Silver argue that cycles of inter-state confrontation/hegemonic stability coincide with intensified social conflict/ periods of productive social cohesion. A hegemonic cycle is thus characterised not only by particular inter-state relations, but also by a specific “historical compromise” on the pacification of social tensions. The commercially and financially driven concentration of wealth during the ascend of a new hegemon produces and recomposes “excluded” social groups and classes – here Arrighi and Silver pay tribute to *operaist* Marxism – whose conflictive potential is first latent, but becomes acute when the historical compromise becomes economically and politically exhausted, culminating in internal and external crises manifest in revolutions and wars. The transition from one hegemonic power to the next occurs when a new hegemon is able to (re-) establish a new social compromise – on the basis of a more extensive, and finally global, scale (Arrighi & Silver 1999; Silver 2003, chap.4).

This pattern of cyclical recurrences is linked in the works of Silver to a theory of industrial development, drawing on Vernon’s product cycle argument: with the maturation of a product profit margins within the respective industrial sector begin to shrink, as an effect of increasing competition (Vernon 1971). This limits the economic and political space for compromise between labour and capital, and the likeliness of social conflict increases. Borrowing from Harvey, Silver theorises that capital reacts to these pressures by adopting certain “fixes”, i.e. spatiotemporally limited solutions to lower costs and/or increase managerial control. These fixes can take the form of spatial fixes – geographical relocation of production to regions with lower costs for resources and/or labour; technological fixes – changes in the organization of production; product-fixes – a shift of capital from one line of production to another or a dissection of a formerly integrated line of production; and financial fixes – a transfer of industrial capital into finance (Silver 2003, p.38ff.). Capital shifting sectors or relocating from the core to the periphery has an impact on workers’ power at the old and new locales. Following Wright (1985) Silver argues that workers have mainly two sources of power:

structural power that stems from the strategic position workers employ in the “marketplace” (higher in case of a labour shortage) and “workplace” (higher in case of processes that are disruption-sensitive or rely on a particular group of workers); and *organisational power* based on associational cohesion and a collective potential to act. The decline of structural and organisational power – and with it a re-composition of the working class – in the old sectors/locations coincides with the emergence of a new working class and power potentials at new industrial sites, correlating with respective defensive and offensive labour struggles. Such crises of profitability and control are then linked back to the hegemonic cycle, by interpreting them as symptoms of a political-economic decline of one hegemon and the beginning of a transition period towards a new leading industry and a new leading global power emerging from the semi-periphery. The cycles Silver describes concern textiles and Great Britain for the 19th century, automobiles and the US for the 20th century, and arguably semiconductors and China for the 21st century (Silver 2003).

Silver is mainly interested in the diffusion and alteration of the structural and organisational power of the working class with spatial, technological, product and financial fixes, as well as with geopolitics and war. Similar to Harvey, Silver’s – and Arrighi’s – theories of global political-economic development locate the prime mover in an intrinsically expansive dynamic of capital, respectively the necessity to constantly re-invent solutions to profitability constraints. Even though Silver’s works are crucial in bringing in a labour perspective, this is essentially addressed through a stimulus-response pattern in which the agency of capital is conceived in the ideal-typical form of certain “fixes” and that of labour essentially reduced to unrest. Silver’s work thus transcends WST in certain regards, but suffers from an underestimation of the relational constitution of power between capital and labour; and of how local material, political, institutional and subjective idiosyncrasies are mobilised by these actors in the pursuit of their respective strategies. Why *certain* locales become a destination for capital relocations; why a *certain* intra-sectoral restructuring of relations between terminal assembly plants and suppliers emerges; or why one techno-organisational fix is chosen over another thus remains outside the explanatory scope of her theory. The problem

with the WST framework is essentially that of a systemic logic predetermining the possibilities of social change in such a way that historical transformations do not appear as potentially open processes with altering effects on the systemic logic itself, but rather as functional responses to the internal contradictions of the system (for a detailed elaboration of this critique see Brenner 1977). In the worst case, such arguments are highly functionalist and teleological: certain historical developments prevail over others, because they suit the functionality of the world-system as a whole – even if this functionality should only realise itself in the future.

1.5. Interim Conclusion

To sum up, the approaches discussed above suffer from two main shortcomings. Despite sophisticated attempts to reconcile structure and agency on a theoretical level – through institutional evolution or dialectics – most accounts, with the exception of certain agency-centred strands of Marxism, give priority to structure over agency when approaching history and empirical reality. This has given rise to mechanistic understandings of historical change, tending towards interpretations of history as expressions of an underlying logic, static comparisons or cyclically recurring variations on a theme.

Nevertheless, some of the theoretical tools developed in these traditions offer a productive starting point for a historicist and agency-centred inquiry, because they allow for a mapping of structural and institutional factors that might be relevant to the “agentic capacities” (Konings 2010) of the actors in focus. Three concepts will therefore be heuristically drawn upon in the following analysis. First, the concept of a “productive model” will be used for a static depiction of how Company X ideally combines elements relevant to the profitable running of an automotive factory. This will provide a starting point for an agency-centred analysis, as it draws a roadmap towards potentially significant areas of relational agency in the historical development and day-to-day operations of the company. Secondly, the question of workers’ “structural” and “organisational” power will be used not as explanatory factors in their own right, but as a descriptive tool for an

understanding of certain power *potentials* that agents might draw upon in their particular spatiotemporal context. Third and finally, the idea of capitalist “fixes” will be used as orientation marks to analytically structure the processes of relational agency shaping the development of Company X in China and Mexico.

2. Agency, Process and Change

The relationship between structure (institutional, political and economic) and agency constitutes a longstanding sociological puzzle. As we have seen in the discussion of institutionalism – and much of that is true for a large part of the Marxist tradition – attempts to reconcile the two poles have tended to emphasise (the constraining effects of) structure over agency, reducing the latter either to an executor of pre-determined logics, or to that which escapes the structure, i.e. a theory-external, exogenous factor that breaks with and changes the structural logic in cataclysmic events and ruptures. If attempts to solve this puzzle on an ontological level – for example through “dialectics” or “structuration”⁸ – have repeatedly lapsed back empirically into an advocacy of structure over agency, then it might be more productive, though also not ideal, to shift the emphasis away from an ontological to a methodological level and make a conscious choice for prioritizing relational agency. In proposing the latter, I am drawing on Knafo’s argument that:

“The agency/structure debate is thus ill defined because it examines the issue in terms of a dual relation between structure and agent, when in fact we are dealing with a social relation between agents which is only mediated by structures. [...] There is simply no way around this incompatibility of structural power and agency. One can seek to make this relationship as dialectical as possible, but there

⁸ The ambiguity between structure and agency is exemplified by Giddens’s theory of structuration and the critiques it received. Giddens argues that “the constitution of agents and structures are not to independently given sets of phenomena, a dualism, but represent a duality. According to the notion of the duality of structure, the structural properties of social systems are both medium and outcome of the practices they recursively organize. Structure is not ‘external’ to individuals: as memory traces, and as instantiated in social practices, it is in a certain sense more ‘internal’ than exterior to the activities in a Durkheimian sense.” (Giddens 1984, p.25) This notion of internalised structures has been criticised as both voluntarism (e.g. Archer 1982; Callinicos 1985; Layder 2006) and determinism (Bauman 1989) – and finally, in light of this ambivalence, unable to inform empirical research in a meaningful way (Gregson 1989).

will always be a choice to be made even if it is a reluctant one” (Knafo 2010, pp.504, 506).

A choice for agency is however not without problems – as it remains highly obscure what “agency” as a sociological category should denote. Philosophically, agency has mainly been discussed under the dichotomy of causality and teleology – i.e. the question whether an action is explained by its causes or by its purpose. Leaving the more complex debates aside I propose to interpret teleological agency as a form of causal agency for the time being (for details see Horn & Löhrer 2010). In other words, I heuristically suggest that an agent fulfils an action in order to realise an intention, because there are reasons why he or she would do so (see also Mele 2010). This does not say anything about the action leading to the intended result; nor should it preclude *a priori* cases of actions being unintentional and therefore only open to causal explanations.

More important for this study than these questions – which are geared towards the problem of single, individual actions – is however how agency unfolds in a process involving multiple agents, in which the actions of some agents affect those of other agents, either immediately through these actions, or mediated through an alteration of certain circumstances these agents share. That is, beyond the abstract philosophical considerations on explanations of agency we enter the realm of complex sociological debates on questions of social agency. However, the dichotomy of teleological and causal explanations of agency still pertains to sociological action theory, in the form of a spectrum from structural-determinist explanations resting on causal explanations to rational-choice explanations retracing aggregate structures or institutions to the intentional agency of utility maximising individuals (for a good overview see Miebach 2014).

For the practical purpose of this study, I again follow Knafo in his suggestion that:

“Structural constraints do not materialize as imperatives for one agent if there is no other agent who threatens to act upon these constraints. [...] What appears to be a product of structural constraints should thus be analysed as a product of agency. The reason for this is that one gets a richer picture of social dynamics

when taking into account the people who exploit structures, rather than simply those who are constrained by them. The focus is then set on what is being achieved through these structures, rather than simply on the product that results from these actions. In other words, we examine the process of social construction, rather than limiting ourselves to its outcome.” (Knafo 2010, p.504f.)

In a sense this notion takes up the Open Marxist idea of structures as a social form, or “mode of existence” of relational agency again, but avoids an *a priori* definition of these structures as “capitalist” and the agency as “class struggle”. This makes room for an investigation of relational agency in historical and empirical terms without assuming that it corresponds to an ideal typical *capitalist* form – but also without precluding that it might. It is, so to speak, a methodological stratagem to ensure that the knowledge of “the internal organization of the capitalist mode of production, its ideal average, as it were” (Marx 1991, p.970) is taken in the historical analysis as nothing but a guiding heuristic, whose concrete existence needs to be proven and in its specificity explained in each instance and ever again. The research focus is on social processes, in which structures (and institutions) are treated as the historical products of relational agency, whose social function and significance is not explained by defining its particular constraining or enabling effects, but by analysing how social agents act through mobilising these structures as mediators and thereby reinforce, defy, destroy, reinterpret, or transform them. This includes an investigation of the question “enabling for whom through constraining whose agency?”

Crucial to this agency is the act itself, which does not have to correspond to the properties of the institution/structure that is mobilised, as any such act might always involve conscious or unconscious re- or mis-interpretation. That is, agency involves, as theories of symbolic interaction prominent in institutionalist reasoning emphasise, an interpretative element. Actors “make sense” of their surroundings and the agency of others on the basis of past experiences, knowledge, available interpretative patterns (stemming, at least in part, from institutions) and as effects of the interaction process itself (developed into a proper theory of action by Mead 1967; but present also in, for example, Giddens

1984). However, the potential to act and realise those actions, the formation of collective actors, as well as the final results of interactive processes cannot be sufficiently explained by symbolic or discursive interaction alone (for an unconvincing attempt at the latter see for example Laclau & Mouffe 1985). Material aspects, such as the ownership of or access to economic and political resources, are critical – and the most prominent example of this is the relationship between the ownership of the means of production and the formation of social classes (Marx 1983). This implies that agents will have different levels of ‘agentic capacity’ – or power:

“some actors can avail themselves of capacities that give them access to a much wider menu of opportunities. [...] Such inequality of capacities is never fully expressed in the abstractness of social forms themselves.” (Konings 2010, p.70)

Differential power relations between agents do not *per se* emanate from the properties of the institutional matrix itself – although some institutions or structures constrain the agency of one group of agents *versus* that of another already by design – but from the process of agents (trans-) forming the relations between them in their acting upon and within such institutions or structures. As should be clear from this perspective, this is not a voluntaristic argument, negating the social relevance of structures and institutions. The point is rather that a focus on structures, recurrent patterns or institutional matrices – as valid as it might be as a heuristic tool to chart the social playing field – is unable to offer causal explanations to questions of social process and change. The direction of agency is therefore not explicable by the institutional or structural matrix, and even less so is the result of the actions taken. Instead the process of relational agency, in which agents draw on – and in that process might reshape the social implications of – structural and institutional factors is something to be understood in its own right, something that reveals its explanatory power only through detailed historical and empirical inquiry.

2.1. Who are the Workers?

As the main focus of this study is the inquiry of processes of worker agency in their interrelation with those of capital, a brief reflection on the sociological category “working class” is in order. I follow Ellen Wood in her argument that “there are really only two ways of thinking theoretically about class: either as a structural *location* or as a social *relation*.” (Wood 1995, p.76) In light of the focus on relational agency elaborated above, I embrace the latter notion of class, to which an emphasis on its internal “composition” is added, in order to account for intra-class dynamism and differentiation.

The writings of Marx have not left us with an unambiguous concept of class. In *The Poverty of Philosophy* Marx emphasizes that class formation takes place through the practical creation of structural conditions in which direct producers find themselves as a *mass* of wage labourers – it only exists as a class *versus* capital in their shared existence as workers. The formation as a “class for itself” takes place over the course of struggle, through which their multifaceted interests gain a collective form of class interest (Marx & Engels 1976, p.213). Here we can find “almost all elements essential for an analytical concept of social practice (in the sense of the *Theses on Feuerbach*), in which the working class is created by certain external conditions in as much as it creates itself” (Vester 2008, p.739f.). Class thus designates a social relation between producers and appropriators of the social product – and class formation and practice can only be observed as historical process.

However, in *Capital* Marx claims that “the characters who appear on the economic stage are but the personifications of the economic relations that exist between them” (Marx & Engels 1996, p.94) and could be “discerned” from the economic structure, respectively be identified through their economic location (Marx & Engels 1998, p.750). This has given rise to a rather large body of neo-Marxist literature attempting to define class in terms of abstract criteria such as that of the ownership of means of production, waged work, control over production and other factors (to name only the two most prominent accounts: Poulantzas 1978; Wright 1985). The procedure is thereby similar to Weber’s construction of ideal types:

class is a group of individuals that shares certain interests in the market place due to their shared social “location” defined by the ownership or non-ownership of goods, the latter being empirically identifiable by the researcher as the class-defining feature (Weber 2002, pp.177, 532). Though a static picture of class structure enables us to unravel and quantify certain aspects of class (such as: which sectoral occupation, which income, which degree of control over production etc.), it does not allow for any *causal* explanations, because the essential aspect of historical genealogy as an effect of human practice is lost. The question at stake here is however how class processes themselves affect and influence history.

In order to understand the agency of the working class in the force field of imperatives imposed by capital and “autonomous” working class behaviour, the Italian *operiasts* employed the useful concept of *class composition*:

“What is essential is [...] the dialectical relation between the structure of the whole of labour as it is determined by capital; and processes of the advancing autonomy and endemic subordination of the working class – or [...] between the technical (taking place fully within capitalist determination) and political (being located fully outside of capital) composition of the working class.” (Bock 1973, p.4; see also Wright 2002)

Theoretically, a focus on class composition does not transform the “classic” Marxian idea of class as mentioned above. It rather serves as a more nuanced lens through which to analyse class processes, so that internal differentiations and concrete historical determinants of class will not be missed: relations of gender, nationality, ethnicity etc. At the same time, the focus on class composition brings in the agency of workers not as mere reflection or response to economic necessities but as a more complex social expression of subjective experience and desire, and practical processing of external circumstances. It should thus be clear that even though this study is empirically concerned with the archetype of the 20th century worker – men doing manual labour in a car factory – the workers being the objects (and to a certain degree subjects) of this study should be understood as only a

particular segment of much more diverse working class.⁹ Finally, it should be added that the same holds true for the composition of the capitalist and managerial class, which does not present itself as a monolithic bloc, but is in its class-agency also determined by its particular internal composition, which might change in the process of horizontal and vertical class agency.

3. Conclusion

I have argued that the convergence-divergence debate suffers from a theoretical and methodological underestimation of constitutive agency more generally, but of that of non-elite social groups, in particular workers, more specifically. This is due to an overwhelming preoccupation with abstract assumptions on human behaviour or economic laws in the cases of neoclassical economics and structural Marxism; historical macro patterns of cyclical recurrence in World Systems approaches; and the properties of institutional matrices conceived as static ideal types within institutionalism. Notwithstanding awareness and development of creative theoretical remedies for these problems within each theoretical paradigm, a bias towards an empirical analysis of structures, governing laws and institutions instead of processes of agency remains.

As a heuristic measure I have therefore proposed that the historical significance and social effects of structures – and institutions – are best understood not through a specification of their behaviour-structuring properties *alone*, but through an analysis of processes of agency in which these properties are “mobilised”, that is, interpreted, used, acted upon and potentially changed. I propose that, as a rule, these processes imply that the agency of one set of agents co-constitutes – constrains or empowers – the agency of other agents. That is, this study undertakes the practical attempt to base the analysis of historical and empirical evidence more firmly in a notion of relational agency.

⁹To capture this diversity, Marcel van der Linden suggests the – arguably somewhat bulky – definition: “the ensemble of carriers of labour power whose labour power is sold or hired out to another person under economic or non-economic compulsions, regardless of whether the carrier of labour power is himself or herself selling or hiring it out and, regardless of whether the carrier himself or herself owns any means of production.” (van der Linden 2014, p.80)

The extra-individual existence of structures and institutions is therefore not denied, ignored or reduced to “spontaneous orders” as an aggregate result of individual acts. The argument is simply that the existence of structures and institutions by themselves tells us nothing yet about how people act within them – and that therefore a focus on structures and institutions alone can chart the conditions for human agency, but not explain historical change (including change of the structures and institutions it uses to describe the conditions of agency). Though more theoretical work needs to be done to develop a more precise notion of these rough propositions, caution is demanded when trying to solve these questions within the realm of theory alone. Ultimately, the historical significance of human agency can only be assessed in concrete spatio-temporally situated contexts – and arguably for reasons of practicality, a necessarily limited number of cases – through historical-empirical investigation.

Chapter 3: Setting the Scene – Social Conditions for Agency

The purpose of this chapter is to provide the necessary background information on the particular case study. It will describe certain macroeconomic, demographic and institutional factors relevant for an understanding of the developmental dynamics of Company X in both China and Mexico. In doing so, it also addresses in more detail how certain theoretical assumptions presented in the preceding chapter, translate into the defining features of Company X's "productive model". It also approaches attempts to decipher workers' "structural and organisational power" (Wright 1985; Silver 2003) through a brief overview on labour markets, labour laws and union culture in China and Mexico. That is, this chapter outlines the structural and institutional conditions for worker agency before putting their explanatory value for the concrete developmental strategy of Company X in China and Mexico to the test through a more detailed analysis of how they have been mobilised – and some of them altered – in processes of relational agency between capital and labour.

I will first discuss how the operations of Company X are understood in the relevant literature as a particular "Company X model", which is a necessary precondition for an analysis of convergent and divergent dynamics at its Mexican and Chinese subsidiaries. A historical overview of the development of automotive production in both countries should then provide the necessary context for my case studies and exemplify explanations based on government-business interactions, which dominate in the literature. Before I discuss formal institutional and organisational conditions to worker agency in the form of labour laws and trade unions in both countries, I will give an overview of the composition of the workforce at Company X in China and Mexico, and, more particularly, of management at Company X in China. The chapter concludes with a brief summary of the issues most relevant for the further analysis.

1. The Company

Any theoretical paradigm creates – in a somewhat self-referential manner – problems of its internal consistency and coherence that are born from, pertain to and are intelligible only within its own particular theoretical-methodological edifice (that is, problems that are likely to be resolved through theoretical refinement rather than paradigmatic abandonment of the established core axiomatic: see the still relevant debate in Lakatos & Musgrave 1970). An approach resting on the construction of typologies is confronted with two essential issues: the choice of type-characteristic criteria; and, as a substitute for a theory of historical change, the sequencing of individual types in time and space. In the literature on Company X the former issue has resulted in the ideal-types of a “volume and diversity” strategy (Boyer & Freyssenet 2002, chap.6), and “neo-corporatist” industrial relations (Streeck 1989; 1992). The latter issue has led to some debate over how and on what grounds to divide the (international) development of Company X into characteristic periods (Wellhöner 1996; Haipeter 2000; Jürgens 1998; 2009), with interim results being concisely summarised by Pries (2003). In the following I will briefly outline the main parameters of the two aforementioned ideal types. I will then give a short overview of historical changes in Company X’s engagement with the world market, before providing the necessary background information on its operations in China and Mexico.

1.1. “Profit Strategy” and Industrial Relations at Company X

1.1.1. The “Volume and Diversity” Strategy

The origins of the “volume and diversity” strategy go back to General Motor’s strategic positioning in the US automotive market of the 1920s, when Ford produced a single model at high volume (“volume” strategy) and other car manufacturers specialised in customised models, oriented at small upper market segments (“diversity” strategy). After extending its model range through mergers and acquisitions, GM began to combine the extended variety of available designs with the assembly of standardised, mass-produced, non-visible components across different models. Essentially, this was the birth of the “platform” strategy that most

global car producers adopted sooner or – in case of Company X – later (in the mid-1970s). Different bodies (or “hats”) with different visible designs and technical features could be attached to a shared “platform”, that is, a substructure with standardised length and width for the placement of axes, motor, powertrain and other core parts. This allowed for variation across models, while at the same time reducing costs through the utilisation of standardised parts.

According to Boyer and Freyssenet, this “volume and diversity” strategy finds its limit in two main factors: the company-internal “productive model”, and the structure of its target markets. To produce a wide product range at high volume, polyvalent machinery and workers are required on the shop floor; innovations by competitors need to be copied and integrated quickly; and the pool of supply firms has to be diverse or flexible enough to adapt to the changing mix of required parts. A large, non-polarised but finely stratified market is required, accepting different price levels for models that share components and only differ in design and accessories. Growing working class consumption after World War II made this model viable in the US. But by the late 1960s it ran into crisis when the market was saturated and the model range did not seem attractive to consumers anymore; productivity growth slowed, limiting the redistributive capacities of the firm; and workers’ resistance to the monotonous form of work soared (Boyer & Freyssenet 2002, chap.6).

Amongst a range of European, US American and Japanese car makers, Company X has been said to be the only one “that was apt to implement this strategy durably in a profitable way” (Freyssenet & Lung 2004, p.88). The assumption is that it will attempt to implement this strategy in its foreign subsidiaries.

1.1.2. “Neo-Corporatism” at Company X

Until their unilateral dissolution by the social democratic-green governing coalition in the 1990s (Streeck 2009, chap.4), Germany’s national social policy and industrial relations have often been characterised as “neo-corporatist” – a term that in the 1970s and 80s attracted much attention by sociologists researching the

institutional matrices of Western European states (and by extension their comparative performance with other advanced capitalist countries) (for the German context e.g. Schmitter 1974; Lehmbruch 1977; Streeck 1992). The core feature of neo-corporatism was the governmental orchestration of relations between social interest groups – in particular capital and labour – through the provision of institutional rules and regulations within which these respective groups had relative autonomy in conducting their affairs (Streeck & Kenworthy 2005).¹⁰ In the German case, the “social partnership” characterising industrial relations in the automotive sector was the flagship example of this arrangement:

“Nowhere else has the German industrial relations system performed better than in the automotive industry, and no industry has in the past contributed more to the evolution of the system.” (Streeck 1992, p.176)

In the broadest terms, this model was characterised by national employers’ federations and industrial unions agreeing to confine direct economic action – strikes and lockouts – to the realm of collective bargaining over remuneration and working conditions. Politics were left to lobbying and donations; parity representation in certain legislative bodies on social policy; and to *ad hoc* consultations by the government. Unions recognised private property, were closely aligned to the social-democratic party, and based their largely cooperative behaviour on governmental concessions on inclusive welfare policy. Depending on size and sector, works councils, as the representative bodies of the workforce on the shop floor, were granted the right to information, consultation or to co-determination of managerial decisions (regulated by the *Betriebsverfassungsgesetz* of 1952, amended 1972).

¹⁰ See also the seminal definition of corporatism given by Schmitter: “Corporatism can be defined as a system of interest representation in which the constituent units are organised into a limited number of singular, compulsory, noncompetitive, hierarchically ordered and functionally differentiated categories, recognized or licensed (if not created) by the state and granted a deliberate representational monopoly within their respective categories in exchange for observing certain controls on their selection of leaders and articulation of demands and supports.” (Schmitter 1974, p.93f.)

Company X has always employed a particular position in this system, due to its combined public-private ownership structure; and its exemption from national collective agreements, which resulted in a more extensive system of “co-determination”, involving the company’s works council in critical decision making. The latter, in turn, has strengthened the role of the IG Metall trade union in Company X’s internal and external affairs, as members of the works council are *de facto* bound to also be union members (on the latter see Speidel 2005). Effectively, relocation of production or the founding of subsidiaries requires the support of the employee representation; and an external acquisition of Company X or strategic changes in capital procurement require the support of the Northern German federal state, whose holdings provide it with a blocking minority (for recent legal disputes around this issue see Ritter 2011; Der Spiegel 2013).

Despite the post-1990s changes in German industrial relations on a national level – declining union membership and ever fewer industry-wide collective agreements – works council and union have retained a strong position within Company X’s corporate governance structure. Streeck for example has famously argued that the high degree of works council/union involvement in company decisions entailed “beneficial constraints”: the prevention of short-term cost-cutting through mass lay-offs and wage reduction compelled management to embrace strategies of quality-improvement and product diversification to position itself in global markets (Streeck 1989); led to training beyond immediate production necessities; involved workers in decisions on corporate strategy; and caused a “humanization of work” (Streeck 1992, p.32f.). More recently, Haipeter, Speidel and Jürgens have discussed how these particular industrial relations affect and are transformed by Company X’s answers to increasing competitive pressure (Haipeter 2000; Speidel 2005; Jürgens 2009). A determining relation between labour-capital relations and company behaviour is thus acknowledged, although this is usually bound back into a focus on the rules and regulations governing industrial relations, rather than on the processes of agency in which these institutions are mobilised and changed.

1.1.3. The Emergence of a Global “Volume and Diversity” Strategy at Company X

As suggested in the institutionalist literature discussed above, and widely replicated in company-specific industrial sociological accounts, the particular “Company X model” is arguably best characterised by high volume production, high wages, public-private ownership and in particular the strong co-determination of company strategy through the formalised influence of workers’ representations (Jürgens 2009). In the following I will briefly recapture the historical development of the “Company X model” and the implications for its global operations.

Large-scale passenger car production at Company X only took off in the mid-1950s. Until the mid-1970s Company X mainly followed what Boyer and Freyssenet characterise as a “volume” strategy (Boyer & Freyssenet 2002, chap.5) – it sought to reduce unit costs through standardised mass production of a limited product line (until the late 1970s just one sedan car model) and continuous productivity increases based on technology intensive production with a deep vertical range of manufacture. It mirrored the US “Fordist” experience, although, differing from US auto firms, Company X was always more dependent on foreign than on domestic demand. Already in 1955 Company X exported more than 50% of its overall production – compared to merely 5% of US auto firms (Wellhöner 1996, pp.181, 193).

During this period the employee representation at Company X developed a cooperative stance towards management, based on increasing rationalization and automation – the substitution of machinery for living labour – at stable labour intensity and rising wages (Haipeter 2000; Jürgens 1998). Industrial relations at Company X were put to the test after the 1974 oil crisis and the preceding end of the Bretton Woods system. Generally sluggish demand for its single model, and the appreciation of the German mark strongly contracted Company X’s exports. Similar to GM in the 1920s Company X acquired another German car manufacturer – which today has become the Company Group’s upscale brand – in order to exit from the crisis *via* a diversification of its product range. This strategy, however,

came too late to match the entry of Japanese cars into the same lower segments in US and European markets. Company X entered a serious crisis and responded by announcing mass layoffs – and by setting up a production site in the US, in order to become more independent of exchange rate fluctuations in the future. In response to management’s changing preference towards cost-cutting and the growth of foreign manufacturing sites, works council and union at the German headquarters intensified their pro-active cooperative stance, making employment security in Germany and equal risk allocation between different production-sites their primary aim:

“Job security for increased performance and innovation was the exchange formula of the collective agreements. [...] Business policies of employment, cost reduction, organisation and internationalisation all became matters of industrial relations. Thereby, industrial relations gained a direct influence on the company’s strategic decisions.” (Haipeter 1999, pp.163, 157)

The layoffs could finally be avoided through compromise agreements. Such capital-labour accords, in particular on a combined reduction of working hours and salaries (*Kurzarbeit*), would later be heralded as Germany’s “miracle” solution to prevent job losses in times of economic crises (Economist 2010). They were essential to the gradual shift of Company X’s corporate strategy towards the ideal type of a “volume and diversity model” strategy in the 1980s and early 1990s: Technologically, the introduction of robotics aimed at a flexibilisation of production in terms of volume and product variety; and the use of microelectronics at improved logistics. Company X began to develop shared components and platforms for various models, which would allow for increasing returns to scale with an extended model range. Because cost reduction of fixed capital was extremely limited due to the introduction of new technology, savings were instead to be achieved through lower operating cost. The number of employees in administration and logistics was reduced, as was the vertical range of manufacture by way of outsourcing. Finally, cost reduction began to gain more importance relative to market access as a driving factor behind internationalisation (Haipeter 2000, p.177ff.; Pries 2003).

The employee representation played an ambivalent role in these processes, particularly in the growing global operations of the company. Manufacturing in the Global South was increasingly undertaken not to circumvent import barriers – as for example in the establishment of its subsidiaries in Mexico in the 1960s – but for reasons of export-oriented component production to supply other Company X locations. From the 1980s onwards Company X expanded internationally through the acquisition of foreign car manufacturers (e.g. in Spain and the Czech Republic), which led for the first time to competition between different locations producing one and the same model for the same markets. The employee representation at the Germany headquarters pushed for the formation of a European works council, which set out to pressure the company not to engage in a competitive downward spiral of cost reduction between different locations. However, even though the German works council reached out to foreign subsidiaries, at crucial points in time its strategy remained nationalist, respectively Eurocentric. The closure of the US-American subsidiary that reshaped the operations of Company X in China and Mexico, for example, was not an immediate economic necessity, but rather an effect of Company X's works council pushing for employment guarantees in Germany. Instead of reducing production in Germany and increasing it in the US – which would have been the more cost-effective strategy – management instead agreed to close the US plant (Haipeter 1999, p.156).

While Company X was expanding between the 1970s and early 1990s, “problems had been piling up since the late 1980s: poor productivity, negative returns to sales, and a break-even point exceeding 105% of normal production capacity at some stage pointed to serious weaknesses in the organisation of production.” (Jürgens 2009, p.229) At the peak of the apparent crisis, in 1993, Company X hired a new CEO, who negotiated a deal with the works council to reduce overstaffing through *Kurzarbeit*. He also embraced a radical cost-cutting strategy that effectively tilted the structural power between works council and management further to the latter. Under the influence of Womack et al.'s MIT study the new management pushed for a reduction of the vertical range of manufacture through further outsourcing – which in a second step entailed the re-integration of independent suppliers under the same roof as assembly operations (obviously at

lower cost). This process would eventually peak in 2001, with Company X founding a separate subsidiary under its own roof. This subsidiary undercut existing collective agreements in terms of working hours, pay, unpaid training obligations and other regards. Employee representatives and the Northern federal state gave their approval to the deal, as it created 5000 new jobs in Germany. This replicated on German soil a strategy surfacing in the 1990s of Company X benchmarking all its production sites – nationally and internationally – against the one with the lowest cost. Pries succinctly summarised these developments:

“The strategic function of each plant is to maximize the exploitation of all local idiosyncrasies and to optimize intra-consortium competition and learning processes.” (Pries 2003, p.56)

Corporate governance increasingly took the form of multi-centred intra-company group competition, with semi-autonomous brands operating under the concentrated decision-making power of the main brand’s German headquarters. Product and market strategies became increasingly integrated with the cross-brand extension of shared platforms throughout the 1990s. This, in turn, implied a trans- rather than multi-nationalisation of production and a certain homogenisation of techno-organisational processes, so that economies of scale could be exploited to a sufficient extent, and models produced more flexibly at different locations (Jürgens 2009, Pries 2003).

The aforementioned processes accelerated in the new millennium. Company X began to acquire shares of other car and truck manufacturers that it deemed to have strategic value; and it extended its platform strategy to these brands. By 2004, 95% of Company X’s cars were produced on the basis of shared platforms (Jürgens 2009, p.231). One year later, this was taken a step further by the “modularisation” of production: different platforms were broken down into smaller standardised components that could be combined across models to allow for more differentiation while maintaining standardised mass production (discussed in detail in chapter 6). As Jürgens emphasizes, the “savings that could be achieved through this strategy were far greater than those that even the most

stringent rationalisation measures could have brought” (ibid. p.232). Modularisation gave Company X a competitive edge over other global car manufacturers after the mid 2000s, but it could not prevent the impact of the 2008 crisis. The slump in its European and US export markets caused it to lay off all of its 16,500 temporary workers in Germany (Der Spiegel 2009; Kuntz 2010) – although it recovered more quickly than its rivals, which was mainly attributable to its lucrative China business (discussed in more detail in section 3.2.2.).

To sum up, Company X has been said to pursue a particular profit strategy of combining high volume production with flexible design. This gains plausibility with its more recent push towards a “modularisation” of production. The “Company X model” was however not solely technical in nature, but rather fostered by a particular capital-labour accord at the German headquarters: the works council cooperated in technological changes and co-managing the internationalisation of the company in exchange for employment security and job creation in Germany (the quality of these new jobs being ambivalent at best).

In light of the initially discussed assumption that transnational companies seek to replicate their profit strategies and productive models in their subsidiaries gains leverage from the fact that platform strategies and modularisation tend to delocalise the assembly of specific models, due to the large number of shared components. On the other hand, if technological processes become standardised between locations, the aim of “exploiting all local idiosyncrasies” has to stem from other factors. This dilemma prefigures what will be discussed in detail in the following chapters, namely the role that industrial relations and worker agency play in processes of convergence and divergence between headquarters and subsidiaries. Before we turn to these issues, I will briefly review emergence of automotive production in China and Mexico, and that of Company X’s subsidiaries more specifically.

2. The Political Economy of the Automotive Industry in China and Mexico

Transnational corporations do not encounter a blank slate when they open foreign subsidiaries, but rather a system of local institutions, power relations and interests. This has most prominently been discussed under the question of the declining political and economic relevance of the nation state *versus* the rise of TNCs or 'globalised capital' (e.g. on the rise of global private actors/or an impersonal, deterritorialised capitalist "empire" at the expense of sovereign nation states: Hardt & Negri 2000; Robinson 2004; for a retained dominance of the national, e.g. Weiss 1998 and the comparative institutionalist literature). Here, however, I will limit the focus more specifically to the historical emergence of automotive production in China and Mexico, which has mainly been understood as a negotiated result between the interests of global car producers, domestic policy makers at local and central levels, and (in some cases) local capital (for Mexico see: Bennett & Sharpe 1985; Micheli 1994; Tuman 2003; Arteaga 2003; for China see: Harwit 1994; Thun 2006; Chin 2010; L. Zhang 2014a; the idea was formalised in the concept of a "triple alliance" by Evans 1979).

To oversimplify the existing narrative somewhat, policy makers were primarily interested in steering industrial policy towards the development of an internationally competitive national automotive sector; and TNCs in first gaining market access and, at a later stage (e.g. in the Mexican case), favourable conditions for export-oriented production. That the actual development of the automotive sector in Mexico and China panned out rather differently could then be explained as the result of institutional matrices shaping the interests of policy makers and TNCs (Thun 2006), respectively the power relations and actual bargaining processes between them (Bennett & Sharpe 1985; Chin 2010). These accounts are compelling and empirically rigorous, yet, they suffer to a greater or lesser degree from an underestimation of the social force-field in which these strategies unfolded, i.e. the relationship between industrial policy and broader class processes in the respective countries, and labour more particularly.

I will discuss the emergence of automotive production separately for the Chinese and Mexican cases, following for the time being the argument that they were the result of state-TNC bargaining processes. I will then give a brief overview of Company X's corporate structure in China and Mexico as of 2015, before exploring the commercial interrelation between the two locations and the reality of competitive pressure stemming from China.

2.1. China

Maoist China produced only a single model and a limited number of passenger cars, designed for the higher political echelons. The small motor-vehicle industry focused on the production of commercial vehicles, i.e. trucks (Zhongguo Gongchengyuan & National Research Council (U.S.) 2003, p.38f.). At the onset of political-economic reforms in 1978 production was dispersed to 56 small and medium sized assembly plants, which produced 2,640 sedan cars annually (Thun 2006, p.54). In the same year the Chinese government began to engage global auto manufacturers on the basis of two objectives. It planned to mould existing domestic productive capacity into large-scale conglomerates and a domestic pool of suppliers in order to increase efficiency and economies of scale – and ultimately export capacity. And it sought to do this by promoting joint ventures between domestic SOEs and foreign car manufacturers, with the aim of modernising technology and upgrading managerial skills and research and development.

Timing proved to be crucial. By the late 1970s it became obvious that technological and organizational advantages would allow Toyota to out-compete any other car manufacturer in the medium term. While Toyota – though approached first by the Chinese government – was itself unwilling to share this advantage with any other Asian country, focusing instead on expanding in US and European markets, the leading manufacturers in the latter regions, especially in the US, were pre-occupied with finding adequate responses to increasing competition in their home markets (Chin 2010, p.60ff.). GM and Ford mainly embraced strategies of cost-cutting, which also involved (threats of) capital relocation – however, not to new markets,

but rather to regions with established supply networks and qualified (non-unionised) labour (the South of the US and North of Mexico). This left European carmakers as the more eager addressees – arguably, because they felt less pressure than GM and Ford to secure their (anyway smaller) home markets. Of the three first joint venture agreements in the auto sector two were formed with European brands, of which only one survived: Company X (ibid.).

In the 1980s and early 1990s the power of central policy makers was constrained due to the high degree of *de facto* autonomy of local governments in industrial policy making and the means to direct shrinking finances towards strategic sectors.¹¹ Instead, central policy makers used their control over what should ultimately become four large and four medium SOEs to steer mergers and acquisitions and, more importantly, foreign investment into the desired direction (Thun 2006, chap.2). FDI took off in the mid-1980s and leaped after an extension of special economic zones in 1992. It played a major role in the Chinese economy of the 1990s, although its relative contribution to the formation of new physical capital, such as plants or machinery, declined steadily (Figure 4). In the initial stages nearly all FDI entered China in the form of joint venture agreements, the terms of which were determined by local states in cases of smaller and medium ventures, but under central control for designated “pillar industries” such as the auto sector (Naughton 2007, p.410ff.; Thun 2006, p.64ff.). From the 1990s onwards global car manufacturers realised China’s growing market potential and were eager to set up production facilities (while exports to China were strictly limited by an ISI-like tariff policy, Naughton 2007: 384f.). Chinese policy makers steered this renewed interest into two channels that have shaped the structure of the auto sector today: on the one hand they increased competition amongst foreign car makers by limiting the number of joint ventures approved at a time; on the other hand they sought to partner each of the four largest, consolidated automotive SOEs with at least two foreign partners, to foster internal competition,

¹¹ In the 1980s the Chinese state was not short on finance in absolute terms – China had (and has) one of the highest saving rates in the world – but it allocated these funds to SOEs irrespective of their economic performance, in order to maintain social stability. Other obstacles were that the gradual move towards decentralised market mechanisms contradicted the continuity of planned resource allocation; and that up to major fiscal reforms in 1995 budgetary revenue steadily declined with the softening of central control over the public sector (Naughton 2007, p.96f., 100ff.).

technology transfer and learning capacity towards the end of building up efficient and competitive domestic-brands (Thun 2006, p.63ff.; Chin 2010). As Thun has argued, beyond these measures the actual shape of the car industry today has been determined by local institutions and policy in their differential capacity to develop the deep and broad supply chain requirements of terminal car assemblers. Emerging coordination problems were resolved with more success in the institutional setting of Shanghai's "local developmental state" than in "laissez-faire" approaches in Beijing and Guangzhou or "firm-dominated" coordination in Wuhan and Changchun (Thun 2006, chaps.4–6). These differences were significant in the initial stages of auto sector development and have created certain path-dependencies in the organisation of the supply chain (ibid.) – but local idiosyncrasies notwithstanding, all areas have dynamic auto clusters today.

Up until the mid-1990s the automotive industry operated under conditions of soft budget constraints, a protected market and low competition – and therefore little market-induced pressure on productivity and efficiency. This changed with China's preparation for WTO accession. Profitability in the state-owned sector reached an all-time low in 1996 – near zero – and new regulations had been enacted in 1994/95 to address this issue. From 1996 onwards SOEs were transformed into corporations (i.e. state ownership into shareholdings) with the central government retaining control over, restructuring and further enlarging a few conglomerates – including the "big four" of the car industry – and leaving it to local governments to privatise, merge or close smaller public enterprises under their control. The remaining SOEs were subjected to stricter profitability criteria; and the banking system was reformed in order to address the growing volume of nonperforming loans (if they were not simply written off and compensated for by the government) (Naughton 2007, p.301ff.). This had grave social consequences as the number of SOE employees was drastically reduced – also in the automotive sector where employment dropped by 25% between 1997 and 2001 (L. Zhang 2014a, p.36).

While initially Chinese policy makers urged joint ventures to generate foreign exchange through the export of engines, this need became less important with expanding exports from light industrial sectors that could offset a growing balance

of trade deficit of the auto sector¹² – which began to increase due to the import of finished cars when a dramatic reduction of tariff and non-tariff import barriers came into effect in 2006 as part of China’s 2001 WTO accession.¹³ At the same time, competition increased with ever more car producers expanding in China. The effect is well-illustrated by the example of Company X. While newer models with shared platforms were gradually introduced in China (and Mexico) Company X continued to produce models whose technology was long out-dated. In the 1990s Company X sold a 1980s model at prices well above world-market level (166% in 1996, Zhang 2014a, p.33) – and continued production of that model until 2013. With increasing competition, however, the entire automotive industry in China experienced a drop in profit margins (from 11-12% in 2000 to 4-5% in 2005);¹⁴ and Company X/JV1’s market share fell from 54% in 1996 to less than 18% in 2005 (ibid. p.37f.).

As will be discussed in more detail in section 3.2.2. the world economic crisis of 2008/09 did not hit the automotive sector in China as hard as in other countries, mainly because repercussions on the Chinese economy were cushioned by a governmental stimulus package. Asked if Company X experienced a slump in demand in 2009, German senior manager Pongrac of Company X/JV 2 explained:

“Not at all. Everyone said: ‘It won’t be felt so strongly in China, but it will be felt at some point.’ So from January to March we produced a smaller number of cars, because we expected lower sales later. Hence, we reduced storage a little bit, because it was expected to fill up later again anyway when we would sell fewer cars. And what happened? People continued to buy anyway. So in April we did not have enough cars! The reverse effect! Already in November the diagnosis was that we could have sold around 80,000 additional cars, had we produced at full capacity

¹² That is to say, the central government invested heavily into the auto industry (RMB 235 billion under the tenth Five-Year Plan 2001-2005, (Anderson 2012, p.62) – and it could do so, because of the foreign exchange generated by non-auto exports.

¹³ The majority of these imports are SUVs and other luxury cars not produced domestically (Sun 2012).

¹⁴ Profits climbed up to nearly nine percent in 2011, with a small slump during the 2008 crisis (L. Zhang 2014a, p.37).

earlier that year. So and so much profit slipped through our fingers. No one expected that, but it happened.”¹⁵

In recent years the Chinese government has released new guidelines for the expansion of global car manufacturers in China, pertaining mainly to the further consolidation of automotive firms in China, the promotion of new-energy vehicles and the increase of the market share of domestic brands, all of which aggravates the competitive pressure on foreign car makers in China (Tang 2012). The implications for Company X’s recent expansionary drive will be discussed in chapter 8.

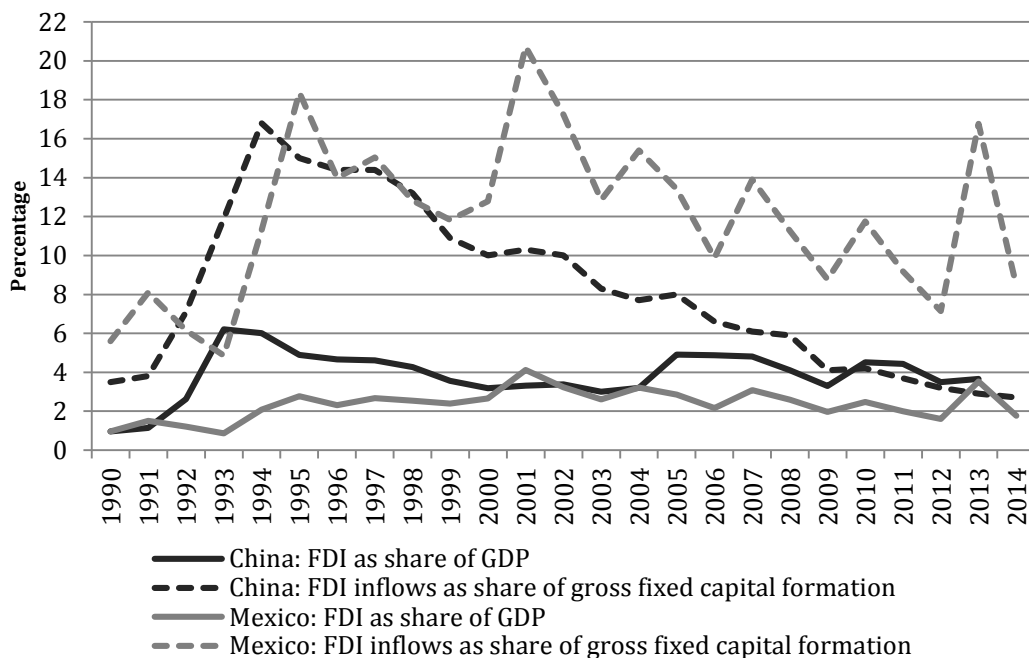


Figure 4: FDI, economic growth and capital formation¹⁶

Source: World Development Indicators; UNCTAD 2015.

¹⁵ Interview (2) senior manager Pongrac

¹⁶ The contribution of FDI to gross fixed capital formation presents slightly overstated results, due to the inclusion of investment into non-physical assets in the FDI figure.

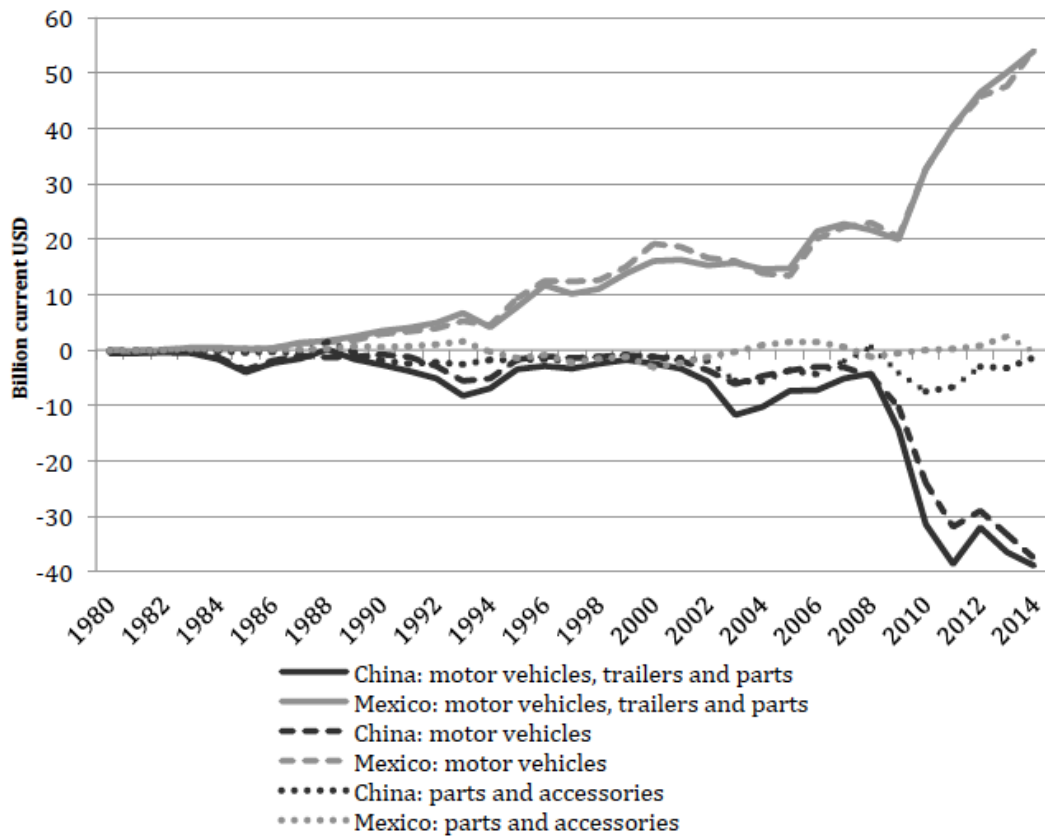


Figure 5: Automotive sector balance of trade, China and Mexico
Source: World Industry Service.

2.2. Mexico

Company X entered the Mexican market in 1964 (relocating to its current main production site in 1967) – at a point in time when the government had carved out a compromise with global auto companies to manufacture, rather than to import, cars in Mexico. Aiming at the protection of an domestic infant car industry, the sector was subject to a range of tariffs, import quota, subsidies and special decrees (Bennett & Sharpe 1985; Jenkins 1977; 1987). However, as the Mexican market was rather small, competition between different auto producers was fierce. Ultimately, Mexican industrial policy was unable to level the playing field between domestic producers and large global auto manufacturers, which were simply too far ahead in their supplier and sales networks, access to capital, technology and

managerial skills. Of the six fully and one partially Mexican-owned companies in 1962 only three remained in 1970 (Tuman 2003, p.25f.; Bennett & Sharpe 1985).¹⁷

However, the Mexican government succeeded in keeping local procurement at a quota of 60%. This led to the emergence of a large network of Mexican suppliers that were either fully Mexican-owned or joint ventures with Mexican majority holdings. Yet, global auto producers continued to enjoy enough leverage to pressure the government to allow imports of the most capital and technology intensive parts. Although between 1958 and 1969 imports of intermediate and capital goods dropped by 45%, the automotive sector ran a growing trade deficit (Bennett & Sharpe 1985, p.189f.). Two governmental decrees (in 1972 and 1977) that aimed at making the imports of foreign automotive producers contingent on the fulfilment of certain export quota failed to render the desired results. In the first case this was mostly attributable to global car producers' domestic market orientation. The second decree was met with less resistance, but failed not only because after the oil crisis global demand was comparably sluggish, but also because the domestic supplier industry proved unable to respond flexibly to the changing demand for parts with the introduction and shorter life-cycle of new models. The macroeconomic implication was that towards the end of the ISI period the share of the automotive sector in Mexico's ever growing trade deficit increased from 26.3% in 1978 to nearly 58% in 1981 (Arteaga 2003, p.119).

The automotive sector was however not the only worry of the Mexican government. Throughout the 1970s domestic credit expansion and foreign borrowing led to increasing inflation and a growing current account deficit. Apart from increased social spending, one important factor was that the discovery of large oil reserves in 1976 – that promised a counterbalance to the trade deficit in the manufacturing sector – required an expansion of extractive and oil-processing industries, which was financed by foreign borrowing (Cockcroft 1983, chap.7;

¹⁷ These were Diesel Nacional (DINA), with 100% government ownership; Vehiculos Automotores Mexicanos, with 60% government ownership and 40% equity owned by American Motors; and privately owned Fabricas Auto-Mex, with Chrysler having increased its equity to 45% (Bennett & Sharpe 1985, p.119). Chrysler increased its share in Auto-Mex to 100 percent in 1971; and DINA was privatised in the 1990s.

Morton 2011). In 1982 Mexico's debt reached USD 80 billion, while inflation stood at over 100%. When the country defaulted on its 10 billion USD short-term debt in the same year, the preceding decade of macroeconomic imbalances indicated that the problem "was not a solvency or liquidity crisis, but instead manifested the unsustainability of ISI" (Dussel Peters 2000, p.48).

Although the failure of ISI policies in Mexico is a more complex issue than can be debated here (see e.g. Cockcroft 1998; Dussel Peters 2000; Haber et al. 2008; Morton 2011), by the 1980s it became obvious that the trade deficit of the automotive industry had posed an ever-increasing risk to ISI as a whole. In the neoliberal period that followed, global automotive producers began to paradigmatically shift their domestic market orientation towards making Mexico a cheap-labour export hub for the North American market (Zapata 1990; García Gutiérrez 1993; Micheli 1994; Middlebrook 1996; de la O 1998; Morris 1998; Tuman 1998; 2003). This had a structural basis in the crisis-induced austerity measures first embraced by the de la Madrid government (1982-1988) , which came to fruition under Carlos de Salinas (1988-1994).

In a first response to the debt crisis the government cut public spending; privatised SOEs; devalued the peso (twice, in 1982 and 1983); and capped wages that severely lagged behind inflation. In fact, the consistent real decline of working class incomes between 1982 and 1987 had such a long-lasting impact that they did not reach their 1981 level again until 2013 – while in comparison they were growing almost every year in China, albeit on a much lower level (Figure 6).¹⁸ The de la Madrid government also took an unusual gamble: instead of tightening import controls, it began to liberalise trade and applied for entry to the General Agreement on Tariffs and Trade (GATT). These strategies proved largely ineffective and failed to stimulate exports or economic growth, mainly because the expected foreign investments did not materialise. Faced with a growing fiscal deficit, an inflation rate of 159% and international pressure on debt servicing,

¹⁸ Under the de la Madrid government cumulative growth of GDP was -12.1%, but of real manufacturing wages -37.8%, indicating that "wage earners in the formal economy were disproportionately suffering the cost of the initial adjustment to the debt crisis." (Samstad & Collier 1995, p.14).

“december 1987 marked the culmination of the crisis of ISI and the beginning of a new socioeconomic development strategy: liberalization strategy.” (Dussel Peters 2000, p.48f.)

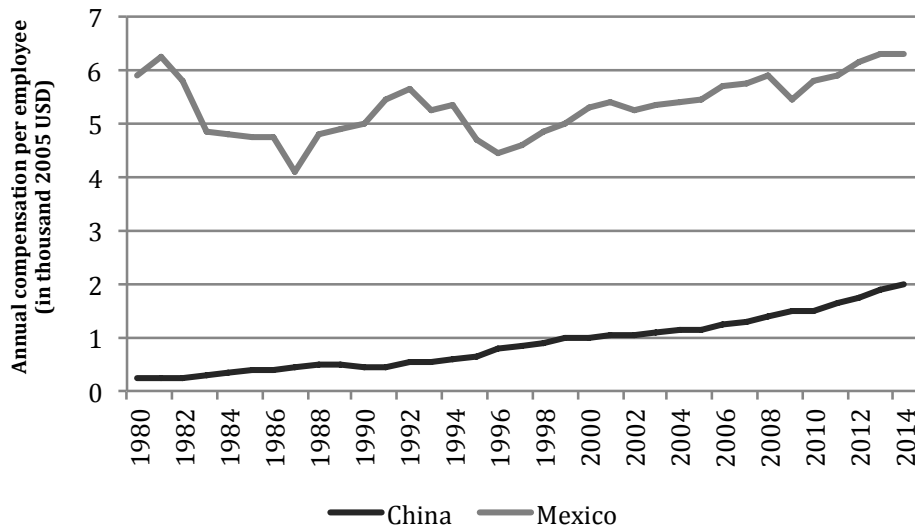


Figure 6: Inflation-adjusted annual compensation per employee in China and Mexico

Source: IHS Global Insight, own calculations

The implications for the automotive sector during this period were ambivalent. Domestic sales dropped by 44% between 1981 and 83 (Tuman 2003, p.2). The government issued a new decree raising local content requirements, but offered subsidies to exporting companies and sanctioned wage arrears and restructuring programmes. Firms with low export potential were forced into bankruptcy, but larger producers – including Company X in the late 1980s – raised investments in order to prepare for exports, which did indeed increase from the mid-1980s onwards (ibid. p.29ff.). While many industrial sectors went into dramatic decline, the automotive industry was amongst the few exceptions that benefited from the new policies (Haber et al. 2008, p.68ff.).

The neoliberal turn culminated in the North American Free Trade Agreement (NAFTA) of 1994 – which is usually cited as the turning point for the large-scale restructuring of the automotive sector (e.g. de la O 1998; Weintraub & Sands 1998). However, as Haber et al. (2008) have argued, NAFTA was primarily a political manoeuvre by the Salinas government to move neoliberal reforms a scale

upwards, from the domestic to the international level, in order to prevent their future revocation. The crucial tariff reductions had already been agreed in the 1980s and early 1990s – so that despite a short-term spike in FDI inflows and its significant contribution to fixed capital formation, including automotive terminal assembly (Figure 4), NAFTA had only a limited effect on further liberalisation and “no discernible marginal effect on Mexican growth rates.” (Haber et al. 2008, p.79)

This assessment is confirmed for the auto sector. In 1989 the Salinas government had offered tax breaks to car manufacturers in exchange for reduced prices on small and medium cars, while directing banks to issue private loans for car ownership, which had stimulated domestic demand. But at the same time, exports took off – mainly due to the strategic reorientation of automotive producers, rather than as a result of further policy measures, which were in nature very similar to the preceding decrees (Haber et al. 2008; Dussel Peters 2000). Exports of finished vehicles increased more than 17.5 times between pre-NAFTA 1986 and 1993, as compared to 4.3 times between post-NAFTA 1994 and the year 2000, after which it increased again by 2.7 times until 2014 (INEGI various years).

That is to say, NAFTA essentially catalysed and formalised developments that were already underway in the Mexican automotive sector prior to 1992. However, the substitution of NAFTA-regional for domestic procurement quota; the lowering of import restrictions and export requirements; and the elimination of tariffs on autoparts meant that competitive pressure in Mexico increased significantly. Smaller and medium-sized non-*maquila* autoparts producers closed or downsized – indicated by a 6% drop in employment between 1993 and 1996 – while larger terminal assemblers, as well as first tier suppliers and the export-oriented *maquila* production of autoparts received FDI of USD 4 billion, respectively USD 3.3 billion (Tuman 2003, p.34f.). Finally, NAFTA led to the creation of a regional trade block, with rising US and Canadian imports from Mexico implying a reduction of imports from other regions. These changes, as well as the devaluation of the peso in yet another financial crisis in 1994, drove up automotive exports from Mexico, which – in sharp contrast to the ISI-period – emerged as a stable net-exporter of finished vehicles with roughly balanced trade in autoparts (Figure 5).

Throughout the post-NAFTA period the surviving global auto-producers extended their investment; restructured their production processes through new work rules and outsourcing; fostered the emergence of regional supply clusters; and adjusted their product range to US demand (Juárez Núñez 2005a). In drastic contrast to the problems of ISI, increasing dependence on exports and transnational production networks backfired for the Mexican automotive sector in the crisis of 2008. When automotive production in the US and Canada dropped by 19.2, respectively 19.5 % in 2008 (Juárez Núñez 2011, p.128f.), Mexican autoparts exports registered a dramatic decline (responsible for the decline in net-exports, Figure 5). Juárez Núñez estimates that in 2008 alone about 27% of the 270 thousand workers in the autoparts *maquiladoras* lost their jobs (Juárez Núñez 2011, p.134f.). Terminal assembly firms, such as Company X, began to impose *paros técnicos* in 2009 (Reuters 2009; El Economista 2009a) – temporal uncompensated leave for parts of the workforce (discussed in more detail in chapter 6, section 3.2.). Yet, however severe the impact of the crisis appeared in the short run, the bleak prediction by Sturgeon et al. did not materialise:

“With the current severe recession in the United States, the Big 3 at the brink of declaring bankruptcy, and many Japanese plants temporarily shut down to forestall the build-up of additional excess inventory [...] investing further in Mexico may be a political impossibility for some time.” (2010, p.18)

Quite the contrary, the majority of global automotive producers invested heavily in Mexico in the immediate aftermath of the crisis (Covarrubias 2012).¹⁹ Company X also announced new projects in Mexico at that time – and their development will be addressed in detail in chapter 8. Overall, throughout the ups and downs of automotive sector development in Mexico, Company X – alongside US-American and Japanese enterprises – has remained one of the strongest global players. The original governmental aim of developing an internationally competitive domestic auto industry, however, never materialised.

¹⁹ This included investment of US manufacturers, arguably to the further detriment of their operations (and related employment) in their home market.

2.3. Interim Conclusion

There is good reason to believe that the particular form of global automotive production in China and Mexico owes a lot to how the particular interaction of state and transnational car manufacturers panned out in each case. Measured against the aim of protecting and developing an infant domestic car industry, “success” depends on the potential of policy makers to “discipline” global automotive manufacturers and “steer” sector-wide development.

Once Mexican policy makers had allowed fully or majority foreign owned enterprises to operate in the domestic market early on, they had a hard time making them comply with industrial policy. The result was a growing trade deficit and domestic industries exposed to unsustainable competition. The more “successful” Chinese strategy of carefully selecting foreign car manufacturers and pairing them with state-owned enterprises allowed for a higher level of state control and transfers of skills and technology. In this context, timing was crucial. When transnational companies began their engagement with China, the international climate was very different from when they first moved to Mexico. The world economy was in transition towards a more neoliberal outlook, marked by the end of the Bretton Woods system, the relative decline of the US economy, and the exhaustion not only of ISI and Maoist developmental strategies, but also of “Fordism” in the global North. In the auto sector more specifically, the rise of Toyota and other Japanese (and later South Korean) car producers exerted increasing pressure on the traditional players and diminished their overall bargaining position. The advantage of Chinese over Mexican policy makers in the late 1970s and 1980s resides to a large degree in the fact that at a moment of internationally increasing competition and declining demand none of the global car manufacturers were present in China yet. This increased the leverage of Chinese policy makers to make selective decisions. Another important issue is of course that the larger Chinese market provided a bigger incentive to automotive TNCs and arguably increased their willingness to compromise. In this context, as we will see in chapter 8, Company X pursues two distinct developmental strategies: using Mexico as an export hub for North American markets; and tapping the huge domestic market potential in China through rapid expansion.

3. Class Composition and Conditions for Relational Agency

This section outlines “objective” conditions for the agency of the social agents in focus: workers and managers. The conceptual instruments drawn upon by Beverly Silver have determined the choice of factors under scrutiny, namely class composition, and forms of structural and organizational power. I will first discuss the composition of the workforce in terms of employment status, gender, age – and in the Chinese case household registration (*hukou*)²⁰ – on the basis of data gathered during my fieldwork. Accounts of “structural” and “organisational” power will be subdivided into implications of demographic change and profitability, respectively organisational and institutional conditions in the form of unions and labour laws. Although, as I have emphasised, these aspects alone are no substitute for an analysis of processes of agency proper, it is important to outline them, in order to understand constraints and resources different agents face and mobilise.

3.1. Class Composition at Company X in China and Mexico

Given that the particular composition of the workforce has been said to have a strong impact on the character of workers’ grievances and agency – in particular the segmentation into permanent and temporary workers (a central argument in L. Zhang 2014a) – a review of the data on Company X’s labour force seems in order. In both cases, China and Mexico, the number of workers at the main production

²⁰ The system of household registration (*hukou*) was introduced in China in 1958 as a response to grain shortages, which were blamed on rural to urban migration. It made residential rights and access to public welfare conditional on the place of origin: rural residents were provided land for subsistence farming, respectively a place in the people’s communes, while the urban *hukou* guaranteed lifelong employment, fixed wages determined by regional price levels and social welfare provision. Changing a *hukou* was exceptional, for example in cases of military service or higher education. This system has undergone various reforms since the 1980s. More recently, in 2001 small towns began to abolish settlement limits for rural dwellers having employment and accommodation; and medium and large cities changed immigration criteria and widened their quotas (Huang & Zhan 2005, p.72f.). This was extended to national policy in 2014 (Xinhua 2014). As Chan and Buckingham (2008) have argued, the major aspect in these reforms concerned administrative responsibility for a change of the *hukou*: The central decision about a change from a rural maintenance claim to an urban one – which was the decisive factor up to the late-1990s – has been abolished and replaced by locally set immigration criteria. With the latest reforms, the institutional divide between the rural and urban population remains of relevance in large cities, but is losing its meaning for small and medium towns. However, this has not led to the anticipated urbanization push in the latter two, because rural migrants are increasingly unwilling to relinquish their land titles (Li & Liu 2014).

sites was quite high by contemporary standards, with the automotive industry's typical male-dominated gender composition and segmentation of the workforce into permanent and temporary workers. Relevant differences resided mainly in the average age of the workforce and the use of interns in the Chinese case. This paragraph provides a quantitative overview, with more detailed discussions of its implications on worker agency and the organisation of production following in the coming chapters.

Company X's two largest factories in China were the headquarters with JV1 (East China) and JV2 (North China), employing 13,431, respectively 14,997 "direct", i.e. production workers, and 6,180, respectively 5,670 "indirect", i.e. specialised white collar, administration and service workers. The workforce at Company X/JV2 was divided into 10,854 formal and 4,143 dispatch workers (72.4/27.6%). The younger plants were "leaner" and – with the exception of the smallest far-Western plant – had projected workforces of around 6,000 to 8,000 workers. None of these plants had reached full capacity at the time of my visit, the furthest being the Western plant of Company X/JV2 with slightly over 7,000 workers. The average age of production workers throughout all plants of Company X/JV1 was 31 years, respectively 29 at Company X/JV2.²¹ Four, respectively two percent of the workforce were women. This rate was about twenty percent higher for administration and service workers, who were on average also five years older than production workers (Table 1).²² The ratio of female workers was thus far below the 10% to 20% average for terminal assembly plants that Zhang observed (L. Zhang 2014a, p.61). The majority of workers at Company X in China were permanent workers with a local *hukou*. According to a trade union official, at Company X/JV2's main plant about 90% of the production workers were local

²¹ The low age of workers is a consequence of the continuous new recruitment with each round of Company X's rapid expansion. In the newer Western plant, for example, 93% of the workers were younger than 25 years. That workers at Company X/JV1 were generally slightly older than at Company X/JV2 is similarly a historical result of the former having commenced operations in China seven years earlier (1985) than the latter (1992).

²² Official company data, email of September 10th 2013. The higher ratio of indirect female workers was a consequence of gendered hiring practices: women were employed in a higher proportion for office jobs and services, cleaning, catering etc.; and only in low numbers for production work. In fact, that there were any women employed in manufacturing at all seems to be the result of certain externally imposed quota. Author's field notes, interview worker Lun.

residents.²³ Not included in the figures are student interns, who worked on the production line for periods of six to twelve months as a degree requirement of their technical colleges and were employed by the thousands (Zhang estimates interns at Company X/JV2 to make up 30% of workers on the production line (2014, p.70); more details in chapter 5, section 4.1.).

In the winter of 2012, Company X had about 18,750 employees in Mexico. At its main plant 13,173 were “direct” workers, divided into 9,906 permanent workers, or *trabajadores de planta*, and 3,267 temporary workers, or *trabajadores eventuales* (75.2/24.8%). About 5,400 were “indirect workers”. Company X’s Mexican main plant is therefore the largest outside of Germany. At its newly opening engine plant in the North of Mexico – which was just beginning to launch production at the time of my fieldwork – Company X employed 234 workers, half direct, half indirect (Table 1).²⁴ The average age of the workforce at the main plant was 47 years in 2012 (García León & Pintle 2012) and the ratio of female workers in production was slightly higher than in China, but for indirect workers it was only half the Chinese level.²⁵ Nearly all direct workers of the main plant came either from the nearby 1.4 million inhabitants strong city or its surrounding areas; and in rare cases from neighbouring states.²⁶

In sum, in both cases and in all plants, the workforce was clearly segmented into core and peripheral groups of workers. In the Mexican case this divide ran between permanent and temporary workers, who were all direct employees of

²³ Interview Chairman Peng; I was unable to verify the numerical composition of Company X’s Chinese workforce by *hukou* through official data. However, all formal workers I met at the Eastern main plant had a local *hukou*, while at the newly opened subsidiaries I was told by managerial staff that cohorts of experienced workers had been (or would be) relocated from other locations of Company X in China. Interviews dispatch worker Ping, worker Lun, worker Lu, German white-collar worker Hensch, German senior manager Wendler.

²⁴ Numbers are based on a presentation by HR personnel during a factory visit, November 19th 2012; and on statistics on union membership of December 2012 provided by the enterprise union, January 19th 2013.

²⁵ Montiel states the share of women amongst the direct workforce as being 3.86% for the year 2004; and the average age as 28 years (2010, p.266). In the absence of access to any more up to date official statistics on the average age of the workforce, but in light of recent news reports on deliberate attempts of Company X to reduce the average age through early retirement schemes (Rodriguez 2015), as well as my observations on the shop floor, the 47 year figure seems to be closer to reality than the 28 years.

²⁶ Interview Huberto Juárez-Núñez; Author’s field notes.

Company X, whereas the workforce in the Chinese case was divided threefold between directly employed or “formal” workers; agency or “dispatch” workers; and interns. The ratio of temporary/formal to temporary/dispatch workers was slightly, but insignificantly, higher in China than in Mexico – indicating that “labour force dualism” (L. Zhang 2014b, p.12) is not a particularity of the Chinese car industry.²⁷ We can therefore assume that (if) differences in employment status are relevant to workers’ grievances and agency (they will be so) in both cases.

The age-composition of the workforce was however significantly different. The much older Mexican plant employed a core workforce that was to a large part hired in the late 1970s, withstanding waves of layoffs in the 1980s and 1990s and 2000s – and it was therefore comparably old. In China, on the other hand, due to Company X’s near-continuous expansion (a short contraction occurred in 2004/05, Zhang 2014a, p.33), there has been a constant inflow of new workers. Though not as pronounced as in the Mexican case, these new entrants, particularly dispatch workers, were as a rule younger than the average core worker. Student interns, in the Chinese case, were even younger than dispatch workers, usually between 18 and 21 years of age. Here, possible implications for worker agency follow from different generational life experiences. Many Mexican workers at Company X were hired during or shortly after the Mexican boom period of offensive labour militancy and leftist rhetoric, which, as we shall see in the next chapter, shaped the experiences, desires and demands of certain groups of workers. In the Chinese case, the younger age of the workforce suggests less experience at work and with labour conflicts, the implications of which will have to be evaluated in the particular cases, given that historically young inexperienced (rural to urban migrant) workers have been at the forefront of working class struggles (e.g. in the West European automotive industry of the 1970s, e.g. Alquati 1974; also Silver 2003, p.51ff.).

²⁷ Zhang actually estimates the figures for temporary workers at Company X/JV1 and -/JV2 to be much higher than indicated by official statistics – namely 48% and 60% respectively (L. Zhang 2014a, p.43).

	Mexico main	Mexico engine	China JV1 main	China JV 1 East 1	China JV 1 East 2	China JV1 East Coast	China JV1 Far West	China JV2 main	China JV2 West	China JV2 South
Permanent/ formal workers	9,906	117	13,431	3,941	2,156	808	223	10,854	6,758	1,685
Temporary/ dispatch workers	3,267 (24.8%)	0	0	0	0	0	0	4,143 (27.6%)	0	0
Indirect workers	5400	117	6,180	539	486	351	137	5,670	412	229
Average age	47	-	31 (prod.)* 36 (ind.)	*	*	*	*	29 (prod.)* 34 (ind.)	*	*
Share female workers	5% (prod.) 12% (ind.)	-	4% (prod.)* 24% (ind.)	*	*	*	*	2% (prod.)* 21% (ind.)	*	*

Table 1: Composition of workforces at Company X in Mexico and China

*Numbers are for all plants in total; excluding temporary/dispatch workers

Data for Mexico as of December 2012; data for China as of September 2013

Source: Company data, interviews.

Management

In most cases, the notion of class composition has been applied to analyses of the working class, but there have been important studies pointing to the relevance of the composition of management or capital for international relations (e.g. van der Pijl 1998; Harris 2009), and the particularities of shop-floor relations (e.g. Lee 1998; Kim 2013; also: Chua 2008). Although due to a lack of data on the Mexican case no comparison can be drawn here, access to management in the Chinese case allows me to present heuristic hypotheses for how managerial class composition shaped capital-labour relations at Company X in China.

There was a particular German-Chinese division of labour amongst managerial staff. In the relatively new Western plant 8 of a total of 28 managers were German; of the twenty Chinese managers about two thirds were from the local municipality.²⁸ The leading positions of plant manager and department heads were equipped with a parallel structure of Chinese and German managers. Human resources, sales and the enterprise trade union had no German personnel. With the exception of Chinese-Japanese joint ventures, where foreign managerial personnel is represented in all departments, including human resources (L. Zhang 2014a, p.103; Lüthje et al. 2013, p.95) this division of labour reflects a general trend in the industry. This leads to the ambivalent situation that the German side has no direct control over hiring practices and wage setting – but also no formal responsibility.

Company X in China also functioned as a training ground for management of its joint venture partners. In order to acquire broader personal networks and technical and managerial know-how to increase the competitiveness of its own brand, Company X/JV2's managerial personnel rotated positions within the joint venture and between Company X and other global car manufacturers that JV2 had joint ventures with – e.g. one year prior to my visit at the Northern main plant, the former union chairman had become the head of one of the assembly departments.²⁹ German managers have complained about this, because the lack of experience and period of settling in at the new positions leads to interruptions and

²⁸ Interview Chairman Peng.

²⁹ Interview German senior manager Vogt.

sometimes the termination of on-going processes.³⁰ In the example mentioned, an informal division of labour emerged, in which the German side took care of technical decisions, while the Chinese side dealt with issues of work organisation and personnel questions.³¹ I.e. the Chinese-German division of labour on the plant level was informally replicated on the department level as a spontaneous coping strategy.

Though this cannot be elaborated here at the scope it deserves, its actual composition is important for how managerial personnel perceives and interprets shop-floor relations – and how it seeks to cope with, adapt and restructure them. The majority of German managers I interviewed in China were engineers and/or had first hand work experience on the production line – the exception being supply chain and logistics managers, who were economists by training. Often they had worked their ways up to their current positions over decades of employment within the Company X group (only one manager I encountered had recently transferred from another German car manufacturer).³² Though it is not a requirement to have an engineering degree for managing a manufacturing department, all department heads I encountered had a profound understanding not only of the technological and technical issues involved in car production, but also of its organisational and social factors. However, there was a dominant notion to interpret the latter as effects of the former, that is, to understand the production process as being driven by technological requirements, to which social and organisational factors had to adapt. *Vice versa*, if problems occurred that were primarily of social or organisational nature, a solution would usually be sought in a technological or technical response. As will become clearer in the following chapters, German managers were not shy to point out problems in working conditions and work organisation – and did occasionally display sympathy for ordinary workers – but they would explain them as requirements of the technologically determined organisation of production, which, consequentially, also required a technological “fix”. This was connected to a primary managerial motivation not of profitability (as one might have expected), but of quality,

³⁰ Interview German senior manager Vogt.

³¹ *Ibid.*

³² Interview German senior manager Bohnert.

respectively of perfecting the final product. Techno-organisational issues were primarily understood in terms of efficiency, and measured against an ideal standard, which was derived either from experiences of the German main plant or theoretically and technologically feasible, but under the current social or financial constraints impossible, standards.³³

These statements should be taken as nothing but a heuristic guideline for the reader, in order to evaluate quotes by managers throughout this study. A more systematic analysis of managerial interpretative patterns would be required, which is however beyond the focus and scope of this project.

3.2. Economic Room for Manoeuvre

3.2.1. The Power of Demographics: Labour Surplus and Shortage

A popular way to assess the potential for worker agency to induce change is through an analysis of their “structural power”. One of the two criteria offered by Erik Olin Wright and taken up by Silver is “marketplace bargaining power”, accruing to workers through their strategic position in the labour market (the other source of structural power being “workplace bargaining power”, discussed in chapter 5). The argument is straightforward: in times of labour surplus, workers’ structural power is low, because individual workers can be easily replaced; in case of a labour shortage, workers’ structural power is higher, because either employers cannot find enough workers on the labour market and need to increase incentives through higher wages; or because employers are open to concessions to the workers they have already employed, in order to keep them from quitting.

A look at demographic and macroeconomic data for the Mexican and Chinese cases reveals the following: In the Chinese case, growth of the employable population (year over year change) in China begins to slow down continuously after a 1.36% tipping point in 2003 until it falls below zero for the first time in 2011, sustaining its downward sloping trend to the present. In other words, the size of the

³³ For example: interviews German senior manager Pongrac, Wendler, Rordorf.

workforce in China has been shrinking in absolute terms since 2011. This contrasts with the case of Mexico, where, though decreasing since the late 1980s, growth of the employable population has remained at a stable 0.5% since the late 1990s – the peak tellingly being the year of the second debt crisis in 1987. That is, the workforce in Mexico has been growing continuously over the last 30 years, albeit at a slower pace (Figure 7). More importantly though, China has shown positive economic growth since 1988, while Mexico has suffered multiple crises and negative GDP growth rates in 1982/83, 86, 95, 2001 and 2009. This also means that there has been a substantial gap between high economic and low employable population growth in China, whereas this ratio has been lower, and at times negative, in Mexico. It is thus likely, and has in fact been observed since 2004 (Holland 2004), that structural labour shortages occur at least in certain economically dynamic regions or sectors in China, but less so in Mexico – implying that workers’ “marketplace bargaining power” in China is higher than in Mexico. What this assessment tells us for individual cases – such as the autoparts sector or Company X – will be discussed in chapter 7 and 8.

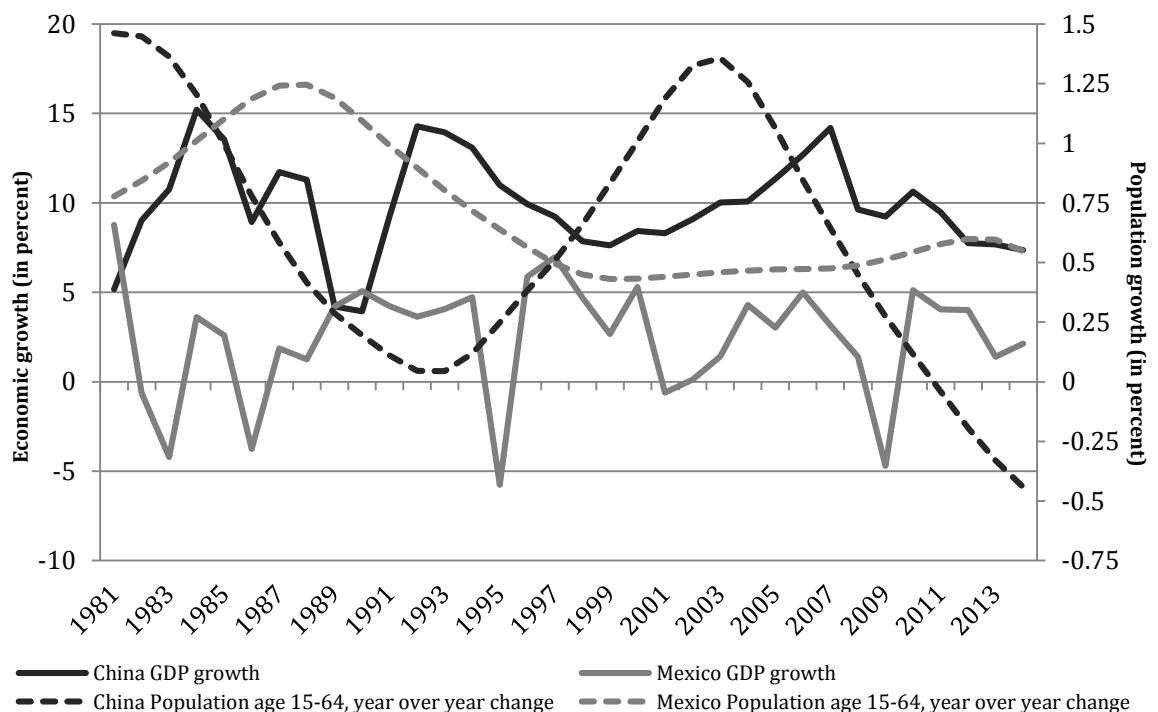


Figure 7: Growth of national economy and employable population, China and Mexico
 Source: World Development Indicators

3.2.2. Profits

Another factor Silver stresses is the linkage between profitability and capital's room for material concessions to the workforce (SILVER 2003). In the following I therefore briefly discuss the development of Company X's profits, with particular attention to the Chinese case, where data on the individual joint-ventures is available.

Profits of the Company X Group have been positive for the post-2000 era, though low for the period of 2003 to 2006, as well as severely affected by the world economic crisis, plummeting in 2009, but recovering in 2010 to pre-crisis levels (Figure 8). Though fluctuating – and in fact turning negative for the year 2005, mainly as an effect of increasing raw material prices and competition from an East Asian car producer entering China in Company X's main market segment (Earnshaw 2005, p.117) – the contribution of Company X's Chinese operations to its overall profits has ranged between 23% and 45% since 2009. It peaked in the crisis-ridden year of 2009, implying that profits from China offset the slump in other markets. Most recently it has remained significantly high, with 37, respectively 40% of overall profits being generated in China in 2013, respectively 2014 (Figure 9). Profit rates (before tax) for Company X/JV1 were 18% in 2013, respectively 19.5% in 2014; for Company X/JV2 they were 14.8%, respectively 14.9%.³⁴ It is also important to emphasise that, after all, Company X is a company group, meaning that the domestic retention of profits at its Chinese subsidiaries is only partly guaranteed by the share of profits that accrues to the Chinese joint venture partners. Potential concessions to the workforce in China would find their structural desideratum therefore not only in high profits retained by the Chinese joint venture partners, but also through the strategic importance of the China business to the Company X Group's overall profitability. This has, on the other hand, repercussions on labour-capital relations in Germany, where the potential "China threat" is counteracted with a material argument:

³⁴ Calculations based on Company X Annual Report 2014.

“The main and upscale brands each make around forty percent of their sales and profits in China. So of course that has to be seen as positive. One has to explain to the workers [in Germany] where half their wage comes from, that it does not only come from Germany.”³⁵

In sum, the profit margin of the Company X Group has been comparably tight at times (2003-06, 2009) and is increasingly dependent on the Chinese ventures, with potential implications for the maintenance of the German capital-labour accord. The Chinese joint ventures on the other hand display substantially higher profit rates and can therefore be assumed to have greater room to react to worker agency with material concessions.

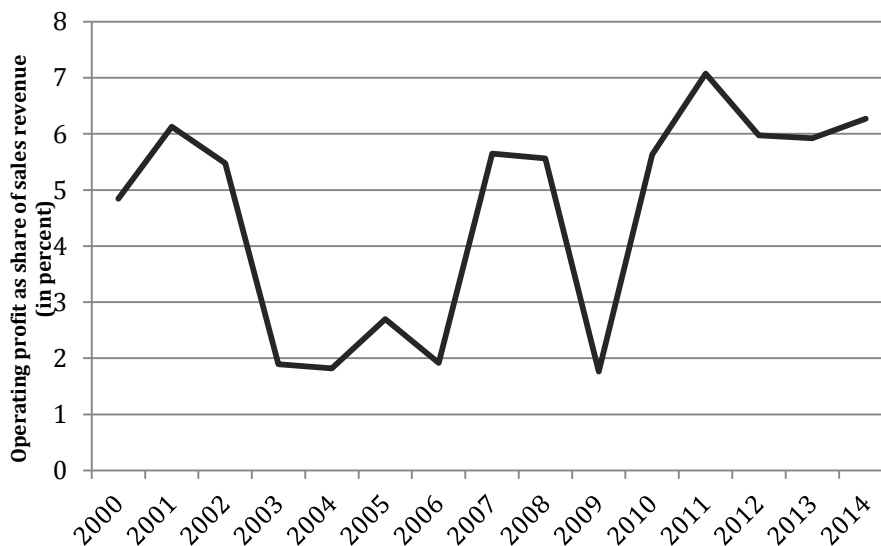


Figure 8: Profit rate of Company X Group

Source: Company X annual reports ((various years), own calculations)

³⁵ Interview senior manager Schütte.

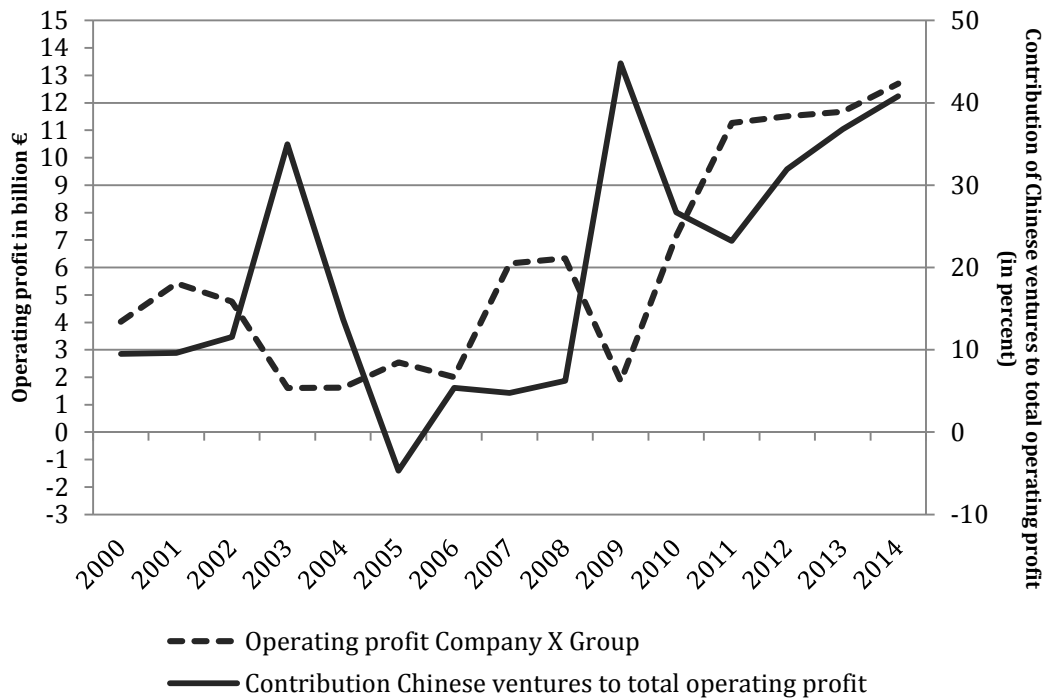


Figure 9: Company X Group operating profit and share of Chinese ventures

Source: Company X annual reports, own calculations

3.3. Political Room for Manoeuvre

There is no fundamental difference between Western and Chinese trade unions, but the Chinese union stands between the workers' and the enterprise's interest. It is not against the company as in the West.

– Union chairman at Company X/JV2's Western plant

Our line is about the balance of not tilting to one side, it is about the enterprise winning, and the worker winning – that there is an equilibrium.

– Member of the union's executive committee at Company X's main plant in Mexico

3.3.1. Unionism and Industrial Relations in China and Mexico

Company X operates as a closed shop in both countries: all “direct” workers – and in the Chinese case, all employees, including managers – automatically become union members upon signing their contracts. However, the degrees of “associational power” (Silver 2003, p.13; Wright 1985) that the institutional structure of formally recognised unions provided to workers at Company X differed between the two cases.

3.3.1.1. Mexico:

The history of the labour movement in Mexico is deeply shaped by the rift between large state-allied corporatist union federations – such as the *Confederación de Trabajadores de México* (CTM), *Confederación Regional Obrera Mexicana* (CROM) or *Confederación Revolucionaria de Obreros y Campesinos* (CROC), to name the three largest – and smaller independent enterprise unions and federations. The post-revolutionary authoritarian regime in Mexico depended to a large extent on the inclusion of the corporatist labour organisations into the ruling coalition, in particular during the ISI period. The state assured their allegiance by granting material benefits to the unions’ rank and file and political influence to its leadership, expecting in exchange that the latter constrained the wage demands and activism of the former. To this end, corporatist unions were included in tripartite commissions on social security, minimum wages and profit sharing – similarly to the German system (Bensusán & Middlebrook 2012; Middlebrook 1995, chaps.2, 3). Union members were thus expected to have an interest in the continuity of close ties between union leaders and government as long as the resulting material gains increased.

This arrangement faced two challenges: a political one from the 1970s onwards; and an aggravating economic one in the 1980/90s. The first one was driven by increasing rank and file protest against the authoritarianism of corporatist unions, which led to the emergence of rival ‘independent’ unions and the expulsion of corporatist unions in certain industries and enterprises. The second challenge resided in corporatist unions failing to oppose neoliberal reforms in the 1980s,

which not only cost them further political legitimacy, but implied less and less material gains to redistribute, due to privatisation and an overall reduction of social spending (Middlebrook 1995, chap.8; Bensusán & Middlebrook 2012, p.34; Roxborough 1984; Alvarez Béjar 1990).

Though under pressure, the corporatist union sector had become an integral part of the PRI-dominated state apparatus – and the political-economic changes of the 1980s and 1990s could not be implemented against, but only within, existing union structures. In the absence of a labour law reform, and due to the wide application of collective agreements, labour flexibilisation unfolded mainly through two interrelated measures: “ghost unions”, i.e. unions controlled by management or local political elites, mainly within the confines of one of Mexico’s corporatist trade union federations (CTM, FROC, CROC, CROM); and “protection contracts” (*contratos de protección patronal*), i.e. employer-friendly collective agreements, usually negotiated by one of the aforementioned unions (Bensusán & Middlebrook 2012, p.24). The aggravating rift between corporatist and independent unions and its implication for worker agency have been summarised by Tuman as follows:

“Where democratization movements succeeded, the level of worker’s political participation in union government rose sharply. As a result of their participation, many workers improved their political efficacy and became more interested in politics generally. In addition, union democracy allowed workers to articulate and channel their demands for higher wages and stronger work rules. At the same time, where democratization movements were defeated, the CTM re-established control over the workforce by resorting to repression and authoritarianism.” (Tuman 2003, p.45f.)

Although we will see throughout this study that these boundaries are not so clear cut, and that independent unions can display a profound paternalism as well, this statement serves as a helpful frame of reference in determining the character of the Company X union. This union has a rich history of engaging in conflicts with management, but also in internal factional strife over political affiliation,

orientation and practice. It has also been characterised by a constant tension between the leadership and the rank and file. The details of the manifold studies on its history cannot be reproduced here (Montiel 1991; 2001; 2007; 2010; Fraile García 1999; Tuman 2003; Juárez Núñez 2006; Healy 2008; Espinal Betanzo 2015), but these issues will be taken up continuously throughout this study, in particular in the following chapter. Here I will instead give a brief overview of the institutional structure of the Company X union at the time of my fieldwork.

In 2012, the Company X union was formerly governed by statutes implemented in 1992 after a watershed conflict, which is discussed in more detail in the following chapter. As an independent enterprise union it exclusively represented the workforce at Company X's main plant. The workforce was split between unionised workers (those listed as "direct personnel") and non-unionised *personal de confianza* ("trusted personnel", such as service and administration workers, but also high-skilled technicians). For ordinary workers, Company X was a closed shop, which was formally based on the "exclusion clause" (**Error! Reference source not found.**).

The "exclusion clause"

The *cláusula de exclusión* was a stipulation in the Federal Labour Law (§ 395), which was removed with the reform of November 2012 (see below for more detail). It limited employment to union members, making most enterprises in Mexico *de facto* closed shops. *Vice versa*, and arguably more importantly, it also allowed the leadership of an enterprise union to ask the employer for a termination of contract of workers who had been expelled from the union. In other words, it provided union leaders with a powerful weapon to get rid of undesired troublemakers. The Mexican National Supreme Court ruled against this clause as being unconstitutional in 2001. However, it continued to be present in many collective contracts, including that of Company X, in 2012.

Figure 10: The "exclusion clause"

A fifteen member strong central committee was elected every four years from a usually rather large number of electoral platforms by anonymous majority vote. Although re-elections were formally possible, they only occurred once in case of

the central committee of 2000-2004 and 2004-2008. As a rule, the new leadership invoked the exclusion clause against members of the old central committee, whose members would thereby be forced to terminate employment at Company X. This “tradition” is something unique amongst car manufacturers in Mexico (Miljanic 2010). With ambivalent effects, the implications are twofold: on the one hand, a continuity in leadership has always been unlikely, which provided a safeguard against the development of a small clique running the union; on the other hand, while enterprise managers could draw on years of experience in dealing with the union, with the dismissal of union leaders from the enterprise important experiences would not be passed on. As a member of the central committee of 2012-2016 explained:

“The advantage or disadvantage is that they are lawyers and we are workers, who have to prepare ourselves two months prior to the negotiations. They have all the experience in the world, having had their positions as labour lawyers for years – while the union is always changing; there is no continuity.”³⁶

On the intermediate level, the plant was divided into divisions of a minimum of 500 workers, who elected one divisional secretary and three divisional delegates every four years, the former being full-time union members, the latter receiving two paid hours for union work at the end of each working day. In addition, members of certain task-based commissions were elected, who convened at special occasions, most importantly the revisions of salaries (annual) and the collective agreement (biennial) (more detail on collective contracts will be given in chapter 5, section 2.).

The highest official bodies of the union were, in hierarchical order, the “general council” made up of the central committee and the eleven divisional delegates; the “general congress” made up the general council plus the 33 divisional delegates and members of the various commissions; individual divisional assemblies (of all workers in that division); and the central committee. Compared to other

³⁶ Interview Carlos and Oscar, members of the central committee, Company X union in Mexico (2012-2016).

automotive factories in Mexico, particularly the ones organised under the roof of the CTM, this structure was relatively democratic (Montiel 2001; 2010). However, when compared to the union statutes in effect until 1992, the union had suffered a tremendous weakening of rank and file control over internal affairs (Company X union (Mexico) 1972; 1992).

3.3.1.2. China

A lot has been written on the historical and current role of China's only legal trade union, the All-China Federation of Trade Unions (ACFTU) – and there is general scholarly agreement that workers' influence and room for manoeuvre within the organisation is extremely curtailed, to say the least. This is due to the ACFTU's Leninist heritage of functioning as a transmission belt for Party requirements; its leadership positions being staffed with civil servants; its top-down bureaucratic centralism; its staffing of enterprise unions with members of management; its obstruction of enterprise-level union elections; and the general focus of enterprise unions on increasing productivity, organising leisure activities, and – at best – mediating labour conflicts, in order to resume normal operations (for detailed accounts see Taylor et al. 2003; Pringle 2011; also Sheehan 1998; Li & Metcalf 2005; Wang 2008; Howell 2008; Lau 2012; Chan & Hui 2012; Friedman 2014c). This is not to say that the ACFTU is a monolithic and static block. On the contrary, in some regions – particularly Guangzhou/Shenzhen and in Zhejiang – it has been rather dynamic, keen to transform into a more inclusive organisational set-up, experimenting with enterprise level elections and collective bargaining procedures (Pringle 2011; Friedman 2014c; 2014b).

The unions at Company X/JV1 and X/JV2 were however no exception from the rule: due to the Chinese joint venture partners being SOEs, these unions operated under top-down policies dictated by multiple higher-level union entities. Decisions by the chairman of the enterprise union at Company X/JV2's Western plant, for example, had to take into account the demands of the leaderships of three separate ACFTU branches: the municipality; JV2's SOE group; and Company X/JV2 and its subsidiaries. At the same time, the union chairman at the Western plant held

multiple additional positions: he was also chairman of the enterprise's party branch, production manager, and – not without irony – head of the disciplinary commission.³⁷ The enterprise union was not only structurally constrained, but its leader also personally unwilling to open it to any meaningful influence from grassroots workers. As he was keen to emphasise, the union would neither initiate nor support strikes, nor would it vote against the enterprise's decision to increase overtime – the latter being a constant source of workers' disaffection.³⁸ The tasks of the union were instead identified as: 1) implementation of union structures within the enterprise: selection of group leaders and lower level officials; 2) regulation of social security and benefits; 3) implementing and monitoring occupational safety and health standards; 4) organisation of social and cultural activities for the workforce; 5) mobilising workers for improved participation in production, and work on improving labour productivity.³⁹

There was a collective contract for formal workers, based on the main parameters that were enacted under consultation of the German side when the enterprise commenced operations in 1992. However, there was no collective bargaining, because “wages are adapted according to the development of the company; and it develops steadily, so no such negotiations are necessary”⁴⁰ – or, more simply put: “wages are already higher than workers can hope for.”⁴¹

Overall, the union in both places was well aware of workers' common complaints: excessive overtime, bad canteen food, insufficient shuttle services, bad accommodation etc.⁴² The union at Company X/JV2 in the West engaged with workers through the online forum *baidu tieba*, and had a white board on the shop floor for workers to write down complaints. The union at the Northern main plant on the other hand used the company's intranet for these purposes. Indicated by comments in internet forums, workers sometimes utilised such official mechanisms to make their complaints heard, but usually with meagre results, as

³⁷ Interview Chairman Qiao.

³⁸ *Ibid.*

³⁹ *Ibid.*

⁴⁰ Interview Chairman Peng.

⁴¹ Interview Chairman Qiao.

⁴² *Ibid.*

even the union chairmen admitted.⁴³ Zhang also observed that workers filed official petitions (L. Zhang 2014a, p.139).

In short, the union at Company X/JV2 – and at -/JV1 (Zhang 2014a) – was a paradigmatic case of the hierarchical, party- and management-dominated legacy of the ACFTU and had little to offer to workers. As we shall see in chapter 8, this created a ‘turf war’ when Company X/JV2 opened a new subsidiary in the territory of the “reformist” ACFTU faction in South China. The Mexican Company X union was a comparatively more ambivalent case. While it had been restructured towards a more centralist bureaucratic apparatus after 1992 – and the leadership of 2012-16 displayed a clear tendency towards cooperation with management and elite politics – its 1970s-80s heritage of wide-spread rank and file militancy continued to be relevant for both union and enterprise strategy (to be discussed in the following chapter). Clearly, the different role of unions in Mexico and China is related to divergent institutional and legal frameworks – in particular the formal legality of independent unionism in Mexico and its illegality in China. It is therefore necessary to briefly recapture the development of labour laws in both cases.

3.3.2. Labour Laws

Both Mexico and China have undergone important labour law reforms in the past decade. In the following the most crucial changes will be briefly outlined in order to provide an indicator for the different developmental trajectories of labour regulation in the two countries, and a foundation for understanding the constraining and enabling capacities offered by the respective legal institutions.

Mexico

Mexico’s labour law was revised for the first time since 1970 in November 2012. This reform was preceded by decades of debate, kicked off by the Salinas government in 1988. The lengthy negotiation process in the Mexican parliamentary system has been summarised by de la Garza Toldeo as follows:

⁴³ Interviews Chairman Qiao, Chairman Peng.

“In this long history the specific content of the projects or demands has changed, but one single notion has remained the entrepreneurial line; and with increasing detail it has crystallised in the most important point: the flexibility of labour relations.” (de la Garza Toledo 2012, p.404)

The 2012 amendment to the labour law introduced hourly pay (the *banco de horas*, discussed in more detail in chapter 6); probation and training periods; a cap on compensation for dismissal;⁴⁴ rest days conditional to production requirements; an abolition of seniority wages; polyvalent work descriptions; and eased subcontracting. The two largest Mexican parties, PRI and PAN, were in agreement on most of these issues, but differed in one crucial respect. The PAN, with the aim of increasing employer control over labour relations, intended to raise the quorums for strike declaration and collective contract recognition; and to introduce mandatory arbitration after strikes of more than six months. However, it also sought to force unions to elect leaders in universal, direct and anonymous ballots; make these results as well as the content of collective agreements public to the membership; and to condemn the “exclusion clause”. The PRI on the other hand, due to its close linkage to the corporatist union sector, was explicitly opposed to stipulations that would have increased the transparency of union finances, leadership selection or collective contract recognition (de la Garza Toledo 2012, p.412f.).⁴⁵ After some parliamentary back and forth, the clauses regarding union reforms were stripped from the new draft.

Though not receiving the detail the issue deserves, the 2012 labour law reform boils down to an extremely employer-friendly amendment, which deregulates the formal sector of the economy, intensifies work, reduces employment security, eases hiring and firing and reduces overall labour costs. In addition, no regulations have been passed for atypical employment conditions and the informal sector –

⁴⁴ Mexico has no unemployment benefits. Instead, workers are supposed to be comparably generously compensated in cases of dismissal.

⁴⁵ The PRI conceding to the interests of the CTM does not mean that the latter would become an obstacle to the implementation of neoliberal labour market reforms. The CTM had for example opposed legal reforms of the Federal Labour Law in the 1980s and 90s, but at the same time signed agreements with the Mexican Employers Confederation on more flexible work rules (Bensusán & Middlebrook 2012, p.23f.).

which makes up an estimated sixty percent of employment in Mexico (Anon 2012c). No significant amendments to the role of the corporatist union sector have been made – instead, the right to strike has been further curtailed and the role of the state in intervening into labour conflicts strengthened (STPS 2012; de la Garza Toledo 2012).

China

With the gradual dissolution of state-led resource allocation and its replacement by market mechanisms, China enacted new labour laws under Jiang Zemin, such as the Trade Union Law of 1992 and the Labour Law of 1994/95. The Labour Law gave employers a lot of flexibility in terms of contractual content and termination of employment (see esp. §25, 26, 27 and 29); regulated contractual relations as individual matters; remained highly discriminatory against rural-urban domestic migrants; and lacked rules of enforcement (Geffken 2005). These issues were tackled with at least three significant laws enacted in the first decade of the new millennium: the Trade Union Law of 2001 (TUL), the Labour Contract Law of 2008 (LCL), and the Dispute and Arbitration Law, also of 2008 (DAL). In broad terms, these laws present a contrasting trend to the Mexican case, in the sense that they push towards the increasing formalisation of wage-labour relations. The LCL strengthened employment protection (§42, 46); regulated temporary employment and promoted collective labour contracts (§14, 97); stipulated adherence to local minimum wages (§55); sanctioned wage restraints and eased workers' legal proceedings against their employers through union mediation or lawsuits (§6, 41, 43, 56, 78). More generally, it extended the labour law beyond the urban workforce towards more generalised coverage, including for migrant workers. The TUL and DAL have reinforced the latter aspects by strengthening the role of the ACFTU as a supervisory organ, resting on an extension of its involvement in the regulation of labour relations on the shop floor and especially in mediating labour conflicts. The particular role of the ACFTU is on the other hand reinforced by the absence of freedom of association and the right to strike, which was removed from the constitution in 1982.

If we strictly confine the argument to an intra-legal discourse and compare the recent labour laws to both the Mexican case and Chinese *status ante*, they indicate certain concessions towards labour that point in the direction of increasing formalisation, rather than deregulation. Similar to the Mexican case, however, the LCL did not apply to all forms of labour relations – the crucial exemption in this case being subcontracting, or what in the Chinese context is called “dispatch labour” (Wang 2008) – which was however rectified by amendments in 2013. The bottom line of these legal changes is that procedures for dealing with workers’ grievances are now defined and conditioned by legal standards; and that certain loopholes that could have allowed for the formation of workers’ shop-floor association outside the control of the ACFTU have been closed (§ 33 of the 1995/95 Labour Law *versus* §51 of the LCL) – clearly demarcating workers’ legal room for manoeuvre and providing legal and organisational means for pre-emptive intervention through the ACFTU. The question however remains to what extent these legal changes have had a real impact. Recent studies indicate that the “rule of law” in China is still characterised by strategic (local) governmental non-enforcement or broad interpretation that prioritises informal agreements (Chen 2013; Chan & Nadvi 2014; Lee & Zhang 2013); and that in particular the DAL has had the effect of dispersing collective disputes into multiple individual cases (Chen & Xu 2012).⁴⁶ Labour laws are therefore an ambivalent issue for workers, offering protection of individual rights within a realm defined by the state, but discouraging or illegalising collective action.

To sum up, the most recent changes in labour legislation in Mexico and China point in different directions: a flexibilisation of labour relations in the Mexican case, and increasing formalisation and regulation in China. Although a detailed explanation of these differences is beyond the scope of this study, at least four aspects have to be considered. First of all, initial conditions were rather different. While Mexico had one of the most labour-friendly legislations when enacted in 1970 (La Botz & Alexander 2003), China’s 1994/95 Labour Law allowed capital huge flexibility,

⁴⁶ In a long-term perspective the spike in registered arbitration cases in 2008/2009 is therefore an outlier triggered by the enactment of the DAL, a related waving of fees for workers entering arbitration procedures and a governmental instruction for courts to open more cases (Enjuto-Martínez 2015).

provided workers with hardly any employment security, and had practically no sanctions. Secondly, while Mexico embarked on a journey towards liberalisation and deregulation of its economy – or more precisely: capital-friendly re-regulation – and has not strayed from this path since the 1980s, China by the mid-2000s announced a programmatic turn towards the increase of domestic demand and a “rebalancing” of the economy after a decade of market-liberalisation under Jiang Zemin. Legal change has to be understood as part of this shifting macroeconomic context. Thirdly, while Mexico’s economy has experienced multiple and severe crises since the 1980s, China’s continuous economic growth allowed capital and state more room for manoeuvre. And fourth and finally, while Mexico has witnessed a constant decline in labour militancy since the 1980s, China has experienced rising pressure from below, pushing policy makers to devising adaptive measures, of which a reformed legal system, arbitration procedures and extended union coverage are important aspects. All these measures were already in place in Mexico as a result of its particular revolutionary heritage.

4. Concluding Remarks

This chapter has provided essential background information in the three areas of Company X’s “profit strategy”, its industrial relations in Germany and its international development; the political economic development of the automotive sector and Company X in China and Mexico; and basic parameters for the structural and organisational power of workers in the two respective countries.

I have analysed the “volume and diversity” strategy and internationalisation process of Company X and discussed the “beneficial constraints” stemming from the role of its cooperative workers’ representation in managerial decision-making. This information provides a template for an assessment of the convergence and divergence of the operations of Company X’s Mexican and Chinese subsidiaries. As a by-product I have shown a first instance of labour shaping the strategic behaviour of Company X, when the focus on employment security in Germany led management to close the US manufacturing site, which in turn was crucial to the

restructuring of the Mexican subsidiary and the opening of Company X/JV2 in China.

As another necessary background condition I have reviewed the development of automotive manufacturing in China and Mexico from the dominant perspective in the literature, namely an analysis of government-TNC interactions. I have emphasised that although both geared towards the development of national terminal car assemblers, for reasons of timing, ownership structures, competition, and macro-economic instability, policy makers in Mexico were unable to discipline and steer the behaviour of global automakers and thereby protect a domestic infant industry. China's strategy of pairing up multiple foreign firms with state owned enterprises turned out to be more "successful", although this was clearly aided by the contingent factors of China's large domestic market potential, its closed economy until the late 1970s and broader global changes reshaping the strategies of global auto-makers at the time. Acknowledging these factors I will in the chapters to follow bring in a constitutive factor neglected in these accounts, namely how worker agency has shaped the development of Company X in both countries, in particular in Mexico, through a deflection of the agency of management and political authorities into unintended consequences.

In the third part of the chapter I analysed the class composition of the workforce at Company X in China and Mexico, and that of management for the Chinese case. I have shown that "labour force dualism" is a phenomenon in both cases, although the modalities in China are slightly different, which will be taken up again in the chapters to come. The major difference between the two cases is the average age of the workforce – and I will argue throughout this study that this has had an impact on the strategic agency of workers. I have furthermore hypothesised that the managerial division of labour in Company X's Chinese ventures, as well as the engineering background of most German managerial personnel, has an impact on how day-to-day operations are managed, which will be discussed in detail in chapters 5 and 6.

I also discussed arguments that in structuralist and institutionalist accounts provide substitutes for analyses of historical processes of agency. I have shown that due to declining, and since 2011 negative, growth rates of the employable population and continuously positive economic growth the “marketplace bargaining power” of labour in China is higher than in Mexico, where positive employable population growth combines with multiple economic crises. I have also demonstrated the high profitability and strategic importance of the Chinese ventures for the Company X Group’s overall economic performance, which suggests that both the willingness and the financial ability to concede to workers’ demands in China will be relatively high.

I then discussed the institutional matrix governing workers’ political room for manoeuvre, outlining two contrasting trends. In Mexico, labour laws have been comparably “labour friendly”, allowing for strikes and freedom of association, but worker agency has been constrained by the predominance of state-aligned corporatist unions and their capacity to set up “protection contracts”. However, Mexico also has a larger number of independent enterprise unions, such as the one at Company X, which operate under different internal rules and conduct enterprise-specific collective bargaining. A recent reform of the labour law has flexibilised work rules, hiring and firing procedures and wage levels, thus undermining the prerogative of collective bargaining agreements regulating these issues. As will be discussed throughout the following chapter, the union at Company X provides a contested terrain for worker agency.

In China on the other hand, the “associational power” of workers appears to be lower. There is no formal freedom of association or right to strike and union life is dominated by the ACFTU. The room for manoeuvre for workers within its confines is extremely curtailed, so that in most cases the union is either a straightforward constraint on or simply irrelevant to worker agency. There are exceptions to the rule, primarily in southern China, but the Company X union is an entirely state- and management-controlled organisation. On the other hand, labour laws in China have recently been reformed towards an increasing formalisation of labour relations. That is, as a first conclusion, Mexican policy makers have used legal

reforms to curtail union-influence at the workplace, while in China the same process has strengthened the role of the ACFTU as a state-aligned intermediate organisation between capital and labour.

So far I have presented certain historical events as culminating in a grid of abstracted parameters that allows for a static comparison between the two cases. As outlined in the preceding chapter, this procedure is helpful to build a heuristic map of similarities and differences between the cases – or of convergence and divergence – but it lacks explanatory capacity. I have argued that this critique can be extended to accounts that give primacy to the mapping of structural and institutional forms of power – e.g. market place, associational or workplace bargaining power – in order to explain social change (e.g. Wright 1985 and Silver 2003). The danger in these cases is that *a priori* abstracted laws of motion, patterns and categories are substituted for the reconstruction of open-ended historical processes from an analysis of processes of relational agency (including an analysis of those historical routes potentially available, but not taken). Structural power becomes a placeholder in the form of a ‘container’ that is ‘filled’ with isolated instances of agency that should demonstrate its historical relevance. Processes of agency thereby become merely illustrative examples in a historical process that is already preconceived as cyclical and recurrent – and in its driving forces and components (e.g. the different forms of structural power) unchanging. A genealogical form of inquiry would on the other imply that it is the category of structural power that has at best illustrative value, while it is open-ended processes of relational agency that provide the explanatory value.

In the following chapter a first step towards a closer inquiry of these processes will be the analysis of a cataclysmic labour-capital conflict central to the restructuring of Company X’s internal and external productive relations at the Mexican plant – setting the case apart from its Chinese counterpart. In the remainder of this study I will then analyse the day-to-day operations of the company as outcomes of more subtle forms of relational agency, the increasing relevance of worker agency in the supply chain to the operations of terminal car assemblers, and the impact of labour-capital relations on the geographical expansion of Company X.

Chapter 4: 1992 – Rage Against *The Machine that Changed the World*

When in the summer of 1992 – the release year of their debut album – *Rage Against The Machine* shouted “We’re gonna take the power back!” at agitated crowds, workers at Company X in Mexico were attempting just that. In an embittered struggle against management and union leaders they sought to fight off the application of ‘leaner’ work rules modelled after the image of Womack et al.’s *The Machine that Changed the World*. The 1992 conflict can hardly be overemphasised in its significance for both the subsequent – and somewhat traumatic – reorientation of the labour movement at Company X (and arguably in Mexico more generally), and the enterprise’s quantum leap in reorganising its internal industrial relations and production processes, as well as external commercial and supply networks. It has consequently been discussed intensely amongst (mostly Mexican and German) scholars, commentators and participants (Othón Quiroz & Méndez 1992; Montiel 1993; 2001; 2007; Juárez Núñez 1993; 2006; Pries 1993; Tuman 2003; Healy 2008; Millones Espinosa 2012; Espinal Betanzo 2015). There is hardly any disagreement on the actual course of events, but different emphases on particular circumstances and actions have led to varying interpretations and political-strategic evaluations.

Having laid out the theoretical foundations and necessary background information in the previous chapter, I will make two historically and empirically informed arguments in this chapter on how to think about the relationship between structure/institutions and agency from a perspective of relational processes of agency. In a first step I will argue that the 1992 conflict represents a cataclysmic event of relational agency – or “acute” class struggle – that resulted in institutional change. This should not be understood as a contingent time window open to agency between two otherwise stable periods of self-reproducing institutional matrices – that is, as a punctured equilibrium – nor as an outcome of particular properties of the pre-1992 institutional set-up, which necessitated its own displacement. Neither before nor after, nor during that event did management,

union leaders or rank and file workers show behaviour that could in any meaningful way be deducted from the incentives provided by the institutional matrix. Instead, all agents mobilised institutional and structural factors in creative and differential ways – which in their particularity, as I will argue, were driven by strategic aims, past experiences, and quintessentially the relation to the agency of the respective other parties. This, pertaining to the arguments elaborated in the following chapters, created a certain path dependency in Mexico, although not in the – in my view overly deterministic – sense that Mahoney and other institutionalists have in mind (Mahoney 2000; 2001; Mahoney & Rueschemeyer 2003).

A second argument that will be taken up time and again throughout the following chapters concerns the conflict's long-lasting effects on day-to-day shop floor relations, supply networks and even the geographic expansion of Company X in North America. In this chapter, I will argue more specifically that the conflict redefined relations between workers, union and managers; changed the institutions supposed to govern these relations; and thereby created new limits and potentials for agency on both sides. Because this transformation altered institutions very much in favour of capital at the expense of labour, the potentials for workers to mobilise existing formal institutions became increasingly limited. However, in the long run this did not, as institutionalist reasoning might predict, result in workers following these new rules, but rather in them drawing their agentic capacity from factors beyond that formal institutional matrix – respectively from 'self-instituting' (Castoriadis 1980) clandestine organisational forms under their immediate control.

This chapter demonstrates how the agentic capacities of workers at Company X in Mexico are deeply shaped not only by vertical relations between labour and capital (and the state), but in particular by the relation between union leaders and rank and file workers. This is arguably also the case in China, but as I have shown in the preceding chapter, this relationship is essentially defined by the limited relevance of trade unions as vehicles of rank and file agency (for the time being; "reform" efforts in certain areas of China will be addressed in chapter 7 again). For this

reason, and because so far no in-depth research has been undertaken on workers' clandestine organising at Company X in Mexico, this chapter will zoom in on and illuminate relations between union and rank and file workers in Mexico. Before developing the analysis of the lead-up to the events of 1992 and the strike itself, as well as its implications, it is necessary to briefly discuss how the idea of path dependency in institutions is more conventionally understood and draw out why such conceptions are ill-suited to support such an analysis or generate greater insight.

1. A Note on Path Dependency

The notion of path-dependency in institutionalist reasoning rests on the attempt to ground changes in institutions over time in hard criteria that move it from a loose notion of "earlier events influence later ones" to a clearly defined analytical tool that is capable of *explaining* the emergence of certain institutions. Mahoney suggests the following:

"Path dependence characterizes specifically those historical sequences in which contingent events set into motion institutional patterns or event chains that have deterministic properties. The identification of path dependence therefore involves both tracing a given outcome back to a particular set of historical events, and showing how these events are themselves contingent occurrences that cannot be explained on the basis of prior historical conditions." (Mahoney 2000, p.507f.)

First of all, path-dependency should describe a causal chain of events in the lead-up to the outcome under investigation, in which earlier events have a much greater influence than subsequent ones. In other words, the point in time of an event determines its explanatory value to the outcome in question. Second, the initial event is "contingent" – it cannot be traced back to other initial conditions. Third, once the initial "contingent" event has taken place, subsequent events should follow a "relatively deterministic causal pattern" (Mahoney 2000).

Despite the popularity and influence of Mahoney's article, the attempt to establish

hard analytical criteria for “path dependency” fails. The latter two of these three criteria turn out to be suggestive, incoherent and ill defined – and while the first one contains a useful idea, the allocation of explanatory value to individual events remains subject to interpretation.

On the question of contingency, in a “strong” version it would refer to contingency of the initial event proper: certain phenomena occur that cannot be explained through antecedent causes. Although Mahoney persistently treats his historical examples as “real” contingencies, he admits that logically this notion cannot be upheld.⁴⁷ He therefore turns to a weaker, theoretical-methodological, version:

“Contingency refers to the inability of theory to predict or explain, either deterministically or probabilistically, the occurrence of a specific outcome.” (ibid. p.513)

Thus refined, the notion of contingency simply denotes the incapacity of a certain theory to causally explain certain historical events. This is more consistent, but much less powerful. What appears contingent in one theoretical approach might appear as a determined outcome in another. Ironically, the bottom-line of this notion is that the less explanatory power a theory possesses, the more contingency and path dependency we see.⁴⁸ The notion of contingency is therefore fully inadequate to establish path dependency as a “hard” methodology.

The criterion of a relatively determined chain of events, however, is even more volatile. Apart from the semantic fact that the formulation “relatively deterministic” is a *contradictio in terminis*, it becomes clear quite quickly that by allowing for this determinism to take the shape of either an expansive

⁴⁷ “To argue that an event is contingent is not the same thing as arguing that the event is truly random and without antecedent causes.” (Mahoney 2000, p.513)

⁴⁸ In order to define an event as contingent, we could for example assume away (or ignore) the theoretical approaches that could explain and predict this event, start with one that cannot – and then bring in the theoretical explanations initially withheld as an ingenious solution to the problem. The knowledge would reside in a self-fulfilling prophecy – albeit one that most likely shatters the theoretical assumptions of the initial theory to which the event appeared as contingent. One could argue that this is what New Institutional Economics has done to neoclassical economics with the idea of institutions (assuming away centuries of classical and Marxist political-economic scholarship on essentially the same issues).

reproduction of the initial momentum or a *reactive* sequence of events and counter-events – that even allow for a reversal of path dependency – Mahoney is unable to specify wherein the actual determinism resides (ibid. p.508f.).

However, in a “soft” notion of path dependency, Mahoney’s first criterion of a stronger historical relevance of earlier events over later ones still serves as a productive research suggestion to look for counter-intuitive or surprising historical events as the starting point for an analysis of how established patterns of agency and institutions changed subsequently. Again, however, what is said to be an initial event depends on the theoretical angle taken and the theory-internal justification of the chosen point in time at the beginning of the analysis.

In the following I will treat a large-scale conflict between capital and labour at the Mexican plant of Company X as such an initial event. Although the event might appear as contingent from an institutionalist perspective, the notions of contingency and determinism appear too rigid (and, as I have argued, incoherent), while the much “softer” focus on human agency under particular historical conditions warrants a more promising approach, as it forces us to reconstruct history in open-ended terms. The impact of the initial event is in this context better understood as a rupture of the established rules of the game – conscious or unconscious – that reshuffles the balance of forces.

2. Power Relations at Company X in Mexico Towards the End of the 1980s

Before we turn to a detailed analysis of the watershed events of 1992, it is important to emphasise the preceding dynamics that led up to the particular power constellation between Company X, union leaders and rank and file workers – and, at a certain point, local and national authorities. Throughout its history, the labour movement at Company X in Mexico has been shaped by deep rifts between and within the union leadership and the rank and file – tellingly across periods of different union statutes and political constellations.

When the plant was first opened in 1967, the union was installed as a branch of the CTM. Already in the early 1970s small clandestine groups of workers began to push for the formation of an independent electoral platform, which finally defeated the CTM in regular union elections. Although encapsulated in formal procedures, this disaffiliation process was driven by heightened tensions between grassroots groups and PRI-affiliated union leaders. A worker of Company X remembered:

“I have an uncle who was part of the CTM at Company X. And after they had lost the *titularidad* [recognition as the only union representation in the enterprise], someone came to his house and shot him; they didn’t kill him, but shot him. We don’t know who it was, but we suspect it was some other workers. My cousins came to live with us, and my uncle moved to another city [...] because he was afraid of another attempt on his life.”⁴⁹

Although after 1972 the CTM would not gain a foothold at Company X again until the opening of the Northern engine plant in 2013 (discussed in chapter 8), tensions between leadership and rank and file resurfaced soon enough. The new executive committee decided to affiliate with the *Unidad Obrera Independiente (UOI)*, a union federation that became 200,000 members strong in 1983, was independent of any party affiliation (including the Communist Party of Mexico) and embraced an ideology and strategy that is probably best characterised as radical syndicalism (Fraile García 1999).⁵⁰ Under the UOI the union at Company X established important new internal structures that shaped union life until 1992: a large number of directly elected section stewards (214 in 1992); the installation of the (conjoint sectional and) general assembly as the highest authoritative organ; and the possibility of union bargaining over work-rules in individual departments (Montiel 1993, p.158ff.; Tuman 2003, p.55). The 1970s saw multiple union-led strikes, vibrant rank and file militancy and broad participation in union life. However, this activism continued to be curtailed by the power of the union’s general secretary and the influence of the national leader of the UOI in his function

⁴⁹ Interview worker David.

⁵⁰ There have been discussions on the actual political line of the UOI, which has also been characterised as “anarcho-syndicalist” (Tuman 2003, p.51) or “reformist-bourgeois, but not communist, as often claimed” (Lastra Lastra 2002, p.84).

as *asesor juridico* (juridical advisor).⁵¹ The *asesor* not only dominated union-enterprise negotiations, but also kept external relations with non-UOI unions or political organisations to a minimum, and established a paternalistic leadership style more generally. As a senior worker remembered:

“The union had always been run from above, but to conceal the situation there were these assemblies, where however nothing happened apart from an approval of whatever they wanted to see approved. They gave you only very vague information, but somehow they always managed to play a trick, so that people said: ‘Well, yes, that sounds convincing!’”⁵²

By the end of the 1970s, resentment with the authoritarian leadership was growing amongst ordinary workers. Tensions rose when in 1980 the general secretary re-negotiated the collective contract – allowing the “polyvalent”, i.e. flexible, disposition of workers to diverse positions and tasks, as well as new union bylaws that permitted his re-election – without convening, as had been required, either the revision commissions or a general assembly. In a tumultuous year of union infighting, the old leadership was expelled; and in a process of further rivalry between two dissident groups the union disaffiliated from the UOI. Although it thereby became an enterprise union without any larger affiliation, the Company X union left the statutes of 1972 intact and did not carry out any significant structural reform (Montiel 1991).

In sum, during the UOI period the Company X union established a new internal governance structure that formally empowered the grassroots and intermediate levels of the union. But neither did the leadership respect the formal decision-making power of the rank and file, nor did the grassroots show contempt for an authoritarian leadership style. As local and central authorities did not interfere with regular collective bargaining between union leaders and Company X management, the actual historical effect of these new institutions materialised

⁵¹ The *asesor juridico* is not a formally elected member of the union, but as the title denotes, an informal consultant to the union.

⁵² Interview worker Fernando.

through internal clashes between leadership and rank and file over the direction of union politics.

After the disaffiliation from the UOI, the Company X union experienced a ten-year period of stronger rank and file control over its internal affairs – but factional rifts persisted within the workforce, as well as amongst the leadership: the general secretary of the 1981-84 central committee sought communication with the CTM, while the second in the union hierarchy, the Secretary of Work, had ties to the Unified Socialist Party of Mexico (a fusion of Marxist-Leninist parties). The crises of the 1980s – not only of the Mexican economy and its automobile industry, but also of the Company X Group on a global scale – put the union on the defensive. It tried to fight off (and managed to ameliorate) large scale dismissals, achieved a reduction in weekly working hours (from 44 to 42.5) and maintained control over techno-organisational changes of the production process (Tuman 2003, p.83f.). It was particularly the latter that Company X sought to implement in order to deal with its competitiveness problems and to shift from production for the domestic market towards greater export orientation – coinciding with the start of governmental policies aiming at market liberalisation and export promotion, and the announced closure of the US manufacturing site, as outlined in the preceding chapter.

At the beginning of 1987 Company X began to prepare for a major confrontation, demanding overtime in order to build up a stock of vehicles and components, which it stored far away from the main plant. In May it declared an “economic conflict” to the Federal Conciliation and Arbitration Board, in which it projected losses of \$30 billion for 1987 (inflation standing at nearly 130% that year), justifying a 15% wage cut; the dismissal of 723 unionised workers; and further reductions of benefits, bonuses, vacation time etc. Company X sent its non-unionised personnel on vacation; tried to circumvent the union by making direct deals with its members; launched a nationwide media campaign; coordinated its efforts with other foreign automotive producers, who were engaging in similar strategies; and could rest reassured of governmental support under a national

policy of “industrial reconversion”, calling for the restructuring of organisational and industrial relations in the manufacturing sector (Montiel 1993, p.192ff.).

The union reacted with a 57-day strike, driven by broad rank and file coordination and involvement.⁵³ Seven general assemblies were held; three large marches carried out locally and two in the capital; the motorway and Company X vendors were temporarily blockaded. The union also managed to mobilise international support, with workers at the German plants refusing to substitute for parts normally produced in Mexico. Ultimately, the enterprise had to retreat from its “economic conflict” and grant workers a 78% wage increase. Montiel has summed up the result as follows:

“That is, workers’ resistance put a halt to the enterprise’s offensive of restructuring; and it allowed the union organisation to link up with its counterparts in other countries, particularly Germany, which translated into additional strength.” (Montiel 1991, p.199)

The 1980s ended with a sound defeat of Company X’s attempts to implement its desired changes on the shop floor – and with an activated rank and file, that had gained increasing influence over the union since its disaffiliation from the UOI. The lesson that management had to draw from the 1987 confrontation was that as long as the rank and file was able to force the union to refuse its consent to a restructuring of the production process – and could *de facto* prevent it through direct action – all such plans were either bound to fail or had to be implemented by force. Against the background of the deliberate preparation for the 1987 conflict, the writing was on the wall: the enterprise would use any means at its disposal to implement its plans on the shop floor.

⁵³ The strike was led by elected 70-, 121-, and 30-member committees for directive, strike, and external coordination.

3. The 1992 Conflict

The conflict erupted against the background of Company X's global productivity problems *vis-à-vis* its competitors; a foreseeable future increase of competitive pressure due to the on-going NAFTA negotiations; the formulation of a "National Accord on Productivity and Quality Increases" between the Mexican government and various national union federations (Pries 1993, p.14); and, of course, the preceding history of at least five years, of strike action preventing the enterprise from implementing the changes it desired (Tuman 2003, p.82ff.; see also chapter 4). A new union leadership took office in 1992 and was immediately put under pressure to agree to measures to increase productivity, quality and labour flexibility. It also faced a strong opposition within the workforce, having been voted into office by a mere 80-vote margin over its rival group. This constellation proved to be explosive enough to create a paradigm-shifting labour conflict at Company X.

In the regular biennial contract revisions of late June/early July 1992 the union negotiated a fifteen percent wage increase plus a five percent productivity bonus – at an inflation rate of 15.58% in 1992 (Junta Federal de Conciliación y Arbitraje, Secretariat Auxiliar de Huelgas Estalladas 1992). It briefly misrepresented these results to the workforce as a twenty percent direct increase in an unofficial convocation in the plant's parking lot – only mentioning in passing other amendments made to the contract. A few days later the union stated in a communiqué that it had signed a secret additional clause, permitting the enterprise to trial-run changes in the organisation of production: group work, work intensification, and changes of the seniority wage system (Watling & Nauman 1992; Juárez Núñez 1993, p.143).

When these changes were initiated about two weeks later, 175 of the 214 section stewards (*representantes seccionales*) called for a strike on July 20th (*ibid.*, numbers given as 170 of 204 in Healy 2008, p.121). Workers convened an assembly outside the factory (as the company prohibited it within the compound) and collected about 9,000 signatures to demand the dismissal of the union leadership. They

launched a formal complaint at the Federal Conciliation and Arbitration Board in Mexico City, arguing that the executive committee had violated union by-laws in signing the agreement without consulting the general assembly. As a reaction to the wildcat strike, the company locked out all 14,233 workers and sacked 14 leaders of the opposition movement with aid of the central committee, who invoked the exclusion clause. It also approached the Arbitration Board, arguing that the shut down of the plant was caused by intra-union turmoil, to be interpreted as a case of *force majeure* – and therefore justifying the full rescinding of the collective contract (Watling & Nauman 1992; Healy 2008, p.123f.).

The conflict lasted for nearly a month, in which workers formally convoked a general assembly on August 15th and collected 9,031 signatures to demand re-elections in accordance with legal procedures (Juárez Núñez 1993, p.143; number given as 9,301 in Healy 2008, p.125). Multiple appeals and hearings were held before the Arbitration Board, which finally ruled in favour of the enterprise: the contract was revoked on August 17th and the entire workforce fired.

The conflict officially ended the day after, when a new collective agreement was signed between the company, the union's *asesor juridico* and the leader of the *Federación de Sindicatos de Empresas de Bienes y Servicios* (FESEBES). During the conflict, the latter had supported – and now spoke on behalf of – the central committee, in his doing so being deliberately encouraged by the Company X management (Healy 2008, p.128f.; Othón Quiroz & Méndez 1992).⁵⁴ The union then asked workers to be rehired under the new conditions. In a desperate attempt, throughout the next three days the dissident faction tried to stop trucks with rehired workers from entering the factory, finally leading to violent confrontations with federal police forces on the motorway and in the city centre. For the participants, the events became a cornerstone of their collective political memory and identity as grassroots activists:

⁵⁴ The FESEBES was a union federation supported by (and supporting) the Salinas government to decrease the overall influence of the CTM. It later turned away from its neoliberal agenda and became a driving force behind the formation of the *Unión Nacional de Trabajadores* (UNT), a merger between independent unions into a national federation (La Botz 1997). From 1992 to 2001 the union of Company X was affiliated to the FESEBES and thereafter to the UNT.

“I was helping the dissidents. We were there until the last days – when they had already begun to bring in new people – trying to stop the trucks. [...] I remember that I was at the *Maria* [a motorway junction on the way to the plant], where we wanted to gather to build barricades or something, in order to stop the trucks from getting through. We arrived at five in the morning and I was very surprised to see the entire two lanes of the highway bridge being cramped with police. At that time the city did not have its own riot police, but they had dogs. [...] We were five in the car; and when we got out of the taxi, we saw some people gathering where the petrol station is today. Not many, I think we might have been an opposition of around 500 people, waiting for the trucks to arrive. And when they came [...] we stopped them, climbed up and tried to convince people to come down and not to enter the factory. The police assumed formation, put up fences and began to push us back. At that moment there wasn’t a big problem, they simply pushed us back to make way for the trucks. [...] When they had pushed us as far as to the outward road, the *compañeros* started to become desperate. There were some that had prepared for this: a station waggon arrived, loaded with bottles and rocks – they became our weapons. We saw that the police had us on the retreat, so the action we wanted to pull off was – actually I don’t really know what the plan was... We began to attack: someone threw the first bottle and then we all did. That was when they unleashed the dogs on us. I remember how everyone started running, everyone running! An image that I still have in my mind is that some *compañero*, I cannot remember well who it was, was struggling with a dog that had locked his jaws into his leg. I was running towards him; and what I did out of the dynamic of the moment was to grab a bottle, break it and shove it into the dog; and I killed it. Well, I suppose I killed it, at least it let go of him and then he ran, and the only thing I can remember then is running, running, running so they wouldn’t get you.”⁵⁵

Eleven workers were arrested in this clash, but released after a meeting between their lawyers and the local government, the latter agreeing to cover their medical bills. Company X continued with the re-hiring – not without blacklisting around 1,000 workers – while at the same time posting a newspaper advertisement with the title “Home sweet home” (Healy 2008, p.126). Even the most dedicated

⁵⁵ Focus group interview workers Miguel, Santiago, Fernando.

members of the opposition realised that they had been defeated on all fronts by a concerted effort of the company, the union leadership with its aides of the FESEBES, and the local and federal authorities in their juridical and repressive capacities. Some of them now tried to be rehired as well:

“When I already thought everything lost, they rehired me. [...] I never thought I would go [to one of the stalls that were all over the city] because I thought: ‘Me? No way they will rehire me.’ [...] And when I went, I went with fear. [...] I saw they had lists with marked names, but when I queued I realised: ‘Ah, there is the guy from upstairs!’ And he grabbed me and said: ‘All good, present yourself at the plant tomorrow.’ [...] And then it was me on the truck. [...] We stopped and some policemen climbed up, those that they call *policia ministerial* today but were the *policia judicial* back then [Federal Police Forces]. They cocked their guns and: ‘No one leaves the truck until we reach the plant!’ Fucking hell, what was going on!? [...] [At the plant] there were groups of workers being instructed. The bosses were giving the impression that we had entered a completely new factory, that we were freshly hired and that everything that we lived through before had never existed. ‘From today on things are different; and this is how we will work.’”⁵⁶

Things were rather different indeed. Rehired workers were forced to sign an agreement in which they renounced the execution of their constitutional and labour rights against any actions enterprise, state and union had taken (Montiel 2001, p.114). The new collective contract had been modified in 53 of its 72 clauses (Montiel 2007, p.35; numbers given as 40 of 100 in Healy 2008, p.125). Amongst other changes, group work and quality circles had been introduced; seniority wages abolished in favor of merit assessments; workers’ tasks range and mobility within the plant increased; and the use of third-party providers on the shop floor, as well as large scale outsourcing were permitted – the latter immediately taking effect for the assembly of wire harnesses (Juárez Núñez 2006).

Labour relations moreover changed dramatically with new union bylaws agreed on August 18th. The union’s Executive Committee was enlarged from 10 to 15

⁵⁶ Ibid.

members, its legislative period increased from 3 to 4 years, and the possibility of re-election introduced. The number of participants in the revision committee for the collective contract was reduced from 56 to 30; and the one for salaries from 30 to 20 – in both cases including the fifteen members of the executive committee. The most dramatic changes however concerned the dismantling of “the real source of friction” (Tuman 2003, p.84) by curtailing the grassroots representation. Juárez Núñez explains:

“In his function as worker representative in the production process, the section steward was the spinal column of the capacity to negotiate and dispute the power of the enterprise on the production line. The union leadership could have been docile, willing to negotiate or confrontational, but in the application of the contract, particularly the *Relative Work Norms*, it always had to consult, convince or corrupt the section stewards.” (Juárez Núñez 1993, p.145)

The pre-1992 number of 214 assistant secretaries and section delegates was now reduced to 8 divisional secretaries (Juárez Núñez 2006, p.13).⁵⁷ While drastically cutting down the structure of union delegates directly elected and removable by majority vote of the workers in the respective administrative section, a new layer of section and team-leaders (called *coordinadores* and *facilitadores*) accountable to the enterprise was introduced (Juárez Núñez 2006, p.13). The institution of the general assembly was entirely abolished. As one of the strike participants remarked:

“It was not merely about changes in the collective contract, but about the enterprise gaining control over the union, to have a union organisation that allowed the enterprise control over four, five important people and the rest being subordinate to them. So they cut the grassroots representation to a minimum.”⁵⁸

⁵⁷ There is some confusion about the actual number of intermediate-level representatives remaining after 1992. Montiel (2001, p.116) argues that already in 1992 there were 11 divisional secretaries with three assistants each, i.e. a total of 44 delegates, which make up the union structure today. Juárez-Núñez on the other hand points out that initially there were only eight divisions with one secretary each, which were later restructured to eleven, and only after a strike in 2000 enlarged by the three additional assistant representatives (Juárez Núñez 2006).

⁵⁸ Focus group interview Miguel, Santiago, Fernando.

Moreover, the 1992 conflict marked a watershed in multiple areas of Company X's internal and external relations, underlined not only by the restructuring of the union, but also by the replacement of the general and production manager after the conflict (Montiel 2001, p.115). These transformations were not only apparent to workers and managers, but also to external observers. The diverging interpretations on the rationale and effects of the conflict caused severe tensions amongst Mexican sociologists and economists at the time. In hindsight, three lines of reasoning can be identified.

One interpretation, shared by the enterprise and some academic observers, saw the root cause in a "conflict between two groups of the union" (Montiel 2001, p.111; also 1993; 2007; Schreiber 1998). However, even the official company history admits that "the Board of Directors of Company X in Mexico [...] took advantage of the opportunity offered by the strike to create a new and positive relationship between the union and the management" (Schreiber 1998, p.204). That the internal affairs of the union merely offered the pretext for the company to pursue its long-standing agenda of restructuring the production process is also reaffirmed by the fact that once the rival union factions had agreed to resolve their conflict through re-elections, the company still insisted in a full revocation of the collective contract (Watling & Nauman 1992).

A contrasting interpretation is that of a "conflict between worker and employer" (Juárez Núñez 1993, p.143), which emphasises the central committee's complicit role in the company's choice of strategy *versus* the majority decisions of the workforce. It gains plausibility against the background of a central committee which had not been mandated to agree to the changes (Watling & Nauman 1992) and the suspiciously short one-day period between the Arbitration Board's ruling of August 17th and the signing of the entirely new collective contract and work rules on August 18th. Variants of this line of reasoning point to the intervention of the FESEBES and governmental authorities on the side of the enterprise (Othón Quiroz & Méndez 1992); and the functional necessity for the latter to create an escalating conflict:

“In 1992 I was a member of the revision commission (*comision revisora*) and I have no doubt that the conflict was a creation of the enterprise, because at the end of the 1980s, beginning of the 1990s, it launched an export programme, letting the domestic market go. For that it had to modify its work system, which was negotiated in 1992: greater participation of workers, performance wages and a higher mobility in productive processes.”⁵⁹

Though nearly all observers condemn the drastic measures through which the company implemented the desired changes, a particularly academic position around the time of the conflict was to argue that the competitive problems of Company X necessitated a transformation of the Mexican plant’s productive model in one form or another. The chosen path was then interpreted as unfortunate, because “to obtain productivity and quality in a conjoined manner, it requires the consensus of the workforce. To achieve this aim the enterprise administration needs to cede a part of its authority in order to involve the worker in the organisation of production, and to stimulate him to bring in ideas of how to improve the quality of the product.” (Montiel 1993, p.138) In other words, the failure to resolve the conflict through a compromise could jeopardise the entire project of emulating systems of lean production (Pries 1993, p.20).

The most plausible explanation seems to be that the rank and file activism at Company X in Mexico throughout the 1980s did not allow the enterprise to implement its desired solutions to the ongoing crisis prevalent in the Company Group as a whole. As a response it sought to curtail worker agency through two measures, in which it was aided by the authorities: it blacklisted a large number of activists; and transformed the institutional setting governing its internal labour relations. To achieve these aims it embraced a multifaceted strategy during the summer of 1992. In a first phase it sought to co-opt the newly elected union leadership, whose consent was required under the given rules and routine practices, which had been in place since the early 1970s. When this provoked a conflict between the central committee and rank and file workers, in a second phase it seized the opportunity to escalate the tension towards a final stand off

⁵⁹ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

with the workforce, which it won by mobilising the local and federal judicial system and police force.

These events were therefore neither contingent nor predictable, but followed on from antecedent causes and conditions – institutional and structural – that provided the different agents with various forms of leverage and power, which they mobilised against each other, and adapted to, over the summer of 1992.⁶⁰ That the result reflected not a compromise but the unilateral imposition of the interests of the company has to be seen not as an instrumental effect, but as the result of the particular power constellation at the end of the conflict.

4. Transforming Conditions for Worker Agency after 1992

In the immediate post-1992 four-year term of the enterprise-installed central committee, grassroots activity within union confines was practically non-existent. This committee was not re-elected in 1996. The new committee put an enterprise proposal for new work schedules to a referendum in 1997 (it was soundly defeated), but rank and file activism in its pre-1992 form remained severely impaired – despite a spike in sabotaged cars in the immediate aftermath of the conflict (Montiel 2001, p.114). The first open confrontation between union and management did not occur until the year 2000. To a large extent this was due to the elimination of the intermediate union levels – the section stewards –, which polarised leadership and rank and file relations. In structural terms, the new union statutes dramatically increased the power of the central committee *versus* the grassroots. This had a paradoxical implication: on the one hand, it became even more relevant *who* controlled the central committee – and, as we shall see in the chapters to come, this could at times of ‘benevolent leadership’ open up a room for manoeuvre for the rank and file, as under the central committee of 2000-2008. For

⁶⁰ Of all contemporary observers, it was only Pries that had a similarly non-structuralist, non-functional and non-instrumentalist understanding of the conflict, when he argued that the conflict “cannot be understood in terms of static and singular strategies and interests, but from the dynamic perspective of the strategic collective actors in a game of intra- and inter-organisational negotiations.” (Pries 1993, p.21) However, *pace* Pries, I would argue that neither process nor result are adequately characterised as ‘negotiations’, but rather as acute and conflictive power struggles.

most of the time, however, rank and file participation within the confines of the union remained severely constrained, so that on the other hand, more radical sections of the workforce turned towards clandestine organising and agency. The reprogramming of the institutional matrix was only one factor in this equation. Arguably more important was the learning effect for workers that the enterprise had embarked on a zero-tolerance course towards ‘troublemakers’ and in doing so would be backed by the political, legal and repressive apparatuses of the government. As an academic expert on the history of the labour movement at Company X explained:

“Of the 1,100 or something *compañeros* that were fired in 1992 the majority were activists. The enterprise tried to cut all possible heads off. Those that did not have to leave could not stick their necks out, could not speak up. This lasted for four years. But finally they did again – they appeared yet another time, *compañeros* that were part of the committee of 2000-2008, of 2008-2012 and will be in the new one. [...] Of course, all those that make themselves visible, that speak up, that organise, will be fired – but some will remain. And they are there, many, thousands.

It is impossible for the enterprise’s intelligence to figure out exactly who the communists are – ‘How did the ‘Moscow Gold’ get here?’⁶¹ So, there is a tradition of struggle with socialist roots, leftist roots, anti-capitalist roots. I have been told that the new central committee [2012-2016] will be a pretty bad one again, but there are people inside who are waiting for the right moment. An answer from these *compañeros* seems possible at any time – it is difficult right now, but there are organising efforts.”⁶²

Although it is impossible to assess the validity of such, rather bold, statements, it seems plausible that the efficacy of union politics at Company X depends much

⁶¹ ‘Moscow Gold’ refers to the transfer of the major part of Spain’s gold reserves to the Soviet Union during the Spanish Civil War. The term was used as an anti-communist catchphrase during the Cold War era to discredit the Soviet Union’s financial support for communist movements in other parts of the world.

⁶² Interview Huberto Juárez-Núñez.

more on clandestine currents mobilising the rank and file, than is usually acknowledged – also in the existing historical accounts on the union at Company X (less so in Montiel 1991; Fraile García 1999; Juárez Núñez 2006; than in Montiel 2001; 2007; 2010; Tuman 2003; Healy 2008; Espinal Betanzo 2015). In the following section, I will therefore discuss the motivation, practices, and stance towards the union of a group of dissident workers. I will show how their agency extends beyond the realm of formal institutions and organisations. I will argue that worker agency is therefore neither subsumable nor replaceable by an analytical focus on union activity. On the contrary, it constitutes a relevant factor in the overall development of Company X in Mexico.

4.1. Clandestine organising in Mexico

Unionism has an objective, right? If we take the stipulations of the law seriously, it says that the union has the mission to educate, to defend and to improve the rights of workers. Well, there is no education, there is no defence – and the last thing the union will do is improve things.

– Fernando, Company X worker

While the 1970s and 80s were characterised by open political debate and factional struggle – at least on the level of ideological strife, if not always manifest in different practices – the 1992 restructuring drove the manifold leftist currents underground. The group of workers I met on a regular basis was a product of this change, formed by individuals of different political tendencies and ideologies, who however shared concerns about the dynamics inside Company X and its union. One worker summed up the group’s historical context, purpose and parameters of activism:

“What we wanted was to revive those small currents that existed in the 80s, when there were workers who apart from criticising also contributed; contributed ideas,

contributed opinions that in the best case were neither welcomed by the enterprise nor by the union, but tried to contribute something to the *compañeros*, so that we would no longer take the vantage point of the government or the enterprise, but always see another option: namely that the workers would provide an informed viewpoint themselves. But let me emphasise this: all this happens clandestinely. Why? Because you know that with all the [political] work we do, we can lose our jobs. So everything is done clandestinely, up to this date, and it continues to be like that.”⁶³

The group was formed in the mid-1990s on the initiative of one worker, who began to communicate with colleagues he thought would share his concerns. The group spread in the same manner to a size of about 15 to 20 workers, of whom however less than ten participated actively on a regular basis, and a wider network of sympathisers. These workers were between 42 and 53 years of age. Using the facilities of a local social centre, the group met every second weekend in the early morning.⁶⁴

Issues of concern

The concerns and debates of the group can be categorised threefold as concrete day-to-day tactical issues; intermediate strategic visions; and more abstract discussions about political worldviews. Concrete issues could be an exchange of work-experiences and the situation in different departments, such as workloads, line speed, technical problems at work, relationship to colleagues and union personnel, problems with superiors etc. At the time of my fieldwork, the group for example discussed how to organise a collective response in their work teams and departments to the parallel assignment of high workloads and mandatory vacation time that Company X used to flexibly react to fluctuations in orders.⁶⁵

Strategic debates mostly concerned the direction of the labour movement at Company X – particularly the question of the union, how to engage with and

⁶³ Interview worker Miguel.

⁶⁴ Author’s field notes.

⁶⁵ Author’s field notes.

potentially change it. The group studied the union statutes of the pre- and post-1992 eras in detail, in order to develop a collective stance and communicate it within the plant. Broader political developments of local and national scope in the autumn of 2012 were for example questions of how to participate in protests against the Labour Law reform; and whether to draft a statement on the issue.⁶⁶

Abstract political issues were of particular interest to at least some of the group's members. Mostly individually, they would study the history of revolutionary movements (particularly the Russian and Cuban revolution) and the political writings of Marx, Lenin and other socialist classics. This knowledge would inform debates within the group, but sometimes also carry them far beyond applicable politics, which some of the members criticised.⁶⁷

In short, the group deliberately sought to synthesize everyday experiences with purposeful strategy and a broader analytical, political and moral worldview. In this, it not only resembled the experiences of the Mexican labour movement of the 1970s and 80s, which they explicitly referenced, but also those of small worker-activist groups in other spatio-temporal contexts (e.g. Alquati 1974; Bock 1976; Roth 1976; Birke 2007).

Activities

In terms of practice, the group – as a collective entity – was mainly engaged in self-education, information-gathering and dissemination; and forging alliances with other grassroots activists and movements, locally and internationally. All members of the group were particularly active on the shop-floor and involved in day-to-day struggles with the enterprise or the union, either independently or as grassroots union delegates. For security reasons, they however did not act as a visible group in these contexts.

⁶⁶ Ibid.

⁶⁷ Interviews worker Daniel, Fernando.

Information gathering and dissemination

Individually and collectively, the group's members worked towards an improved understanding of their conditions of existence – both within and outside the factory. They gathered information on the development of Company X through publicly available material, data obtained by the union (accessible through personal contacts), as well as through meetings with academics of the local university.⁶⁸ Individually, they read books on history and political theory – and for a while the group ran an independent evening reading circle on the works of Paulo Freire.⁶⁹

Members of the group would disseminate their knowledge and political propaganda by word-of-mouth. Around the time of union elections, the group invited other workers for sessions to debate the programmes of the respective electoral platforms.⁷⁰ For a while it also published an irregularly appearing bulletin. During the period of the 2000-2008 executive committee, this paper could be distributed openly, even though it was critical of the union. But after 2008 “came an executive committee that was very sensitive to critique, and it began to have a lot of *compañeros* sacked – so we decided to put the issue on hold for the time being, because they were bothered by our newspaper and they knew we were behind it. [...] Now we have to do it clandestinely, for security reasons.”⁷¹

Although most members (but not all) identified with a socialist cause – i.e. derived the legitimacy of their broader moral and political viewpoints from parameters outside the belief system of the Mexican *status quo* – when dealing with concrete issues, they made regular reference to the existing rights, laws and formal (union) procedures. As one worker explained, framing company strategies as “unjust” and mobilising a narrative of legal entitlements was an important strategy in face-to-face interactions with colleagues:

⁶⁸ Author's field notes.

⁶⁹ Interview worker Miguel.

⁷⁰ Author's field notes.

⁷¹ Interview worker Daniel.

“I set myself the task to do research, reading a lot of newspapers, books, and trying to make the *compañeros* understand their rights, assisting them in conflicts with the bosses or the union.”⁷²

This should however not be confused with compliance with legal standards. When asked what to do in cases of legal procedures that he perceived as injustices, this worker said that he would resort to extra-legal moral standards to justify his standpoint.⁷³ Besides moral and political arguments, knowledge of legal and formal realities was merely one factor amongst others, fulfilling an instrumental purpose to draw colleagues into political debates and create additional leverage in conflicts with superiors.

To bring the issue back to the initial theoretical propositions, the group made deliberate attempts to interpret and appropriate their surrounding conditions in a meaningful and dialogical manner – and to communicate their results with other workers.

Networking

Depending on political conviction members of the group were individually engaged in political activism beyond the shop-floor, for example in the leftist party PRD,⁷⁴ the MORENA movement,⁷⁵ or other social movements. The group however remained independent, seeking instead informal networks with mutual help networks and support groups for other political movements and groups in Mexico:

“On the local level, in our solidarity group, we have also worked with people outside the automotive sector, with other social actors, who always need some kind of support, educational, logistical or moral support. [...] Hence, our group has

⁷² Ibid.

⁷³ Ibid.

⁷⁴ The *Partido de la Revolución Democrática* is a left-socialdemocratic party that lost the 2006 national elections by a 0.56% margin to the conservative PAN, raising allegations of electoral irregularities and fraud.

⁷⁵ The *Movimiento Regeneración Nacional* is a left-wing reformist party in the tradition of the social-corporatist policies of the Mexican Revolution under president Cardenas. It was founded by the ex-presidential candidate of the PRD, Andrés Manuel López Obrador, after his defeat in the 2006 elections.

branched out to other aspects and groups, such as [Worker Group A, Worker Group B] and other collectives in which we participate individually. One of those is the [Collective A], through which we have supported the *compañeros* in Atenco, in Oaxaca in 2006, and in other conflicts.”⁷⁶

The group had also established an international web of contacts, initiated by automotive labour activists in Germany:

“We are in touch with an automotive worker of [another German car manufacturer] who has contacts to a political group here. [...] She invited us to German City Y, where we got to know other workers in the car industry, and particularly of Company X, who are also restless and fighting from below. This is something very important for us, to get to know other workers from other car plants, who are also fighting to defend themselves and trying to understand all the arbitrary actions within the automotive industry, particularly within Company X. [...] It is very important, because one begins to consolidate links, links of work and communication, coordinated up to a certain point, by workers from below, who are doing something for the *compañeros*. The exception were the *compañeros* from Spain, who belonged to different levels of the CGT union leadership. [...] We know these *compañeros* from the grassroots, and with these workers we could launch various actions, at best simultaneously, like leafleting in all the plants, and these kinds of things.”⁷⁷

These networks lent important moral support and legitimacy to the group, although when asked about their practical implications for the activism at Company X in Mexico, answers remained vague and did not go beyond the aspect of information-exchange. Rather surprisingly, the group had not established any form of regular contact to workers of automotive manufacturers of different brands and in other areas of Mexico. Its activism was focussed on the Company X group – albeit on a global scale – and the local level, through contacts to Company

⁷⁶ Interview worker Miguel.

⁷⁷ Ibid.

X's suppliers and other social movements. Activism in other areas of Mexico rather developed as *ad hoc* expressions of mutual help and solidarity.

Working within and against the union

That the group developed its activities outside the realm of the union does not imply that it held anti-union attitudes. Unions were generally regarded as positive and legitimate tools for the advancement of working class interests – but the union at Company X, in particular its leadership and the post-1992 statutes, was harshly criticised.⁷⁸ As one worker explained:

“Sometimes we don't know if, when you enter the union leadership, you end up being one of the two: bought off and corrupted; or being threatened. There are no other explanations for this lack of social activism. The union of Company X has a great history in Mexico and locally, when in the 70s and 80s it played an important role in the labour movement, and in turn in a broader national social movement. The conflict of 92 is at the root of this problem, it practically erased this kind of union activism.”⁷⁹

This form of critique, combining personal accusations against the leadership and organisational issues stemming from the 1992 transformation, were typical for the members of the group. They moreover found their perceptions confirmed through the international exchange with grassroots activists from other countries, who shared their concerns. Another worker explained:

“Some of us went to Germany, to the *Consejo* [the meeting of grassroots unionists in the car industry, organised by a political group in Germany], and we realised that they have the same complaints in Germany. That means it is a structural issue, that is: union leaders assume that the people at the bottom will follow – but they won't, they will not do it. As for our union, it is not personal, it is not simply that some officials are suckers and bad for us – no, it is structural as well, because unfortunately we have unions in Mexico that are *charros*, that are not on the side of

⁷⁸ Focus group interview Miguel, Santiago, Fernando.

⁷⁹ Interview worker Miguel.

workers, which is an attitude that becomes infectious, like a rotting apple. [...] So we have the feeling that it is a structural issue, that union leaders are on the side of the enterprise and that on the bottom we do not have the means to undo that.”⁸⁰

In short, it is fair to say that against the background of their experiences, workers in the group shared a thorough scepticism towards the higher union levels and consciously chose not to partake in them. Group member Santiago explained how he had been asked to join an electoral platform for the central committee elections in the late 1990s. Observing the formal and informal hierarchies under which the platform operated, he chose to decline the offer:

“Some [of the union representatives] are idealists, but of those few... let’s say, there are no conditions in place that prevent this idealism from turning into opportunism. You realise that there are four or maybe five people who steer the whole group, whose opinions count – and I did not like that, which is why I did not participate.”⁸¹

In light of these shared feelings, members of the group preferred to work as directly elected and recallable sectional or divisional delegates within the union confines – that is, despite their pessimistic to cynical views of the union, they engaged it in an essentially pragmatic manner, utilising the formal lower ranks of the union:

“We are the first instance when it comes to supporting the *compañeros* in defending themselves. Defending themselves, educating themselves, providing them some culture, knowledge and training, all to the best of our abilities. This is part of my work now. It is contractually regulated.”⁸²

In fact, they would have liked to see an extension of (or reversion to) direct-democratic structures:

⁸⁰ Interview worker Rodrigo.

⁸¹ Interview worker Santiago.

⁸² Interview worker Miguel.

“My vision is to make changes in the union structure so that the people get back in control, able to say: ‘You are useless, you are corrupt – fuck off, let someone else come.’”⁸³

Considering that a return to the pre-1992 structure of grassroots delegates seemed unlikely, a large part of the group’s activism consisted in substituting for the perceived passivity of the union leadership – with a short exceptional period under the 2000-2004 central committee – by building informal networks based on friendship and personal loyalty amongst the colleagues:

“I think that usually after a period of around three months people begin to understand, and we identify with each other, identify as workers. [...] We have a saying, which is ‘You spend more time at work than at home’ – so you begin to see each other as family. And on that level it works well – but that does not mean that people get interested beyond that point, for example in the union. [...] Most people just do their job and fall into some kind of sickish apathy. So, if I manage to awake the consciousness of ten people that is more than enough.”⁸⁴

Some, however, were sceptical of successfully organising the grassroots – and felt a lack of appreciation by their colleagues:

“We are only a few workers who actually take up the fight, and often we achieve successes that benefit everyone; once the results and benefits are there, everyone is happy – but the 11,000 workers don’t even know the process and the fight it took, which makes me quite angry, because the *compañeros* don’t have the consciousness, nor the information, they don’t get active. That is a problem that we need to tackle with our group.”⁸⁵

In sum, the group had a profoundly instrumental view of the union. Working as grassroots delegates gave them paid time to organise their colleagues – activities that they however also pursued when they had no formal representative role.

⁸³ Interview worker Santiago.

⁸⁴ Interview worker Rodrigo.

⁸⁵ Interview worker Daniel.

Quite crucially, mobilisation unfolded through personal contacts, communication and practical problem-solving on the grassroots, rather than through electoral campaigns, support for certain union leaders or other channels for workers' participation in union life provided by formal institutions. However, most members of the group remembered the pre-1992 union structure and used it as a reference point for a critique of current trade union affairs.

Visions of the future

One can sum it up very simply; this sentence says it all:

Each day we are worse off.

– Worker Miguel, Company X in Mexico

Despite their activism – and the pride and satisfaction they took in it – most workers in the group were disillusioned about the future. Nevertheless, they were equally convinced that the only hope for improvement lay in their continuous activism. In the following I will give room to the some of these workers' rather poetic statements, not only because they arguably say most about the character and spirit of the group, but also because they allow for some – speculative, rather than representative – conclusions on the significance of groups like this to the development of worker politics within and beyond Company X in Mexico.

A common denominator when speaking of the present and future situation was the distant or not-so-distant past. This could take the form of invoking dark images of the past in a cyclical notion of “history repeats itself”:

“I can only sum this up as involution, because one cannot call this evolution anymore. For the company, yes – but for the workers it is involution, every day more pronounced. We are regressing to a period that we call the *porfiriato*.⁸⁶ The only thing missing is a supervisor that cracks the whip.”⁸⁷

⁸⁶ The period of the dictatorship under Porfirio Diaz that preceded the Mexican Revolution is generally referred to as the *Porfiriato*. It was characterised by political repression, capitalist modernisation through foreign investment and an extreme increase in social inequality and class antagonism, in particular in rural areas.

⁸⁷ Interview worker Miguel.

The past however also functioned as positive reference point for a negative evaluation of the present. Particularly the oldest worker in the group took near-masochistic joy in comparing the current situation to his experience of – and nostalgia for – the period of the 1970s and 80s:

“It is definitely worse today, wherever you look. As far as labour relations are concerned, as union members we are defenceless, we do not have the means to act in an organised manner. Things are simply imposed on us and applied. [...] Also, the economic situation was better; our wages were worth more. That is, there are external influences as well; it does not exclusively depend on us. We also had universities back then that addressed these issues, issues of exploitation. But the universities have prostituted themselves as well – and although they call this ‘excellence’, what it is in reality, is education after the image of big industry.”⁸⁸

Passing over in silence the statement on the contemporary role of higher education, the gloomy image that workers painted of the present and future was on the other hand countered by a strong sense of perseverance – very much in the Gramscian sense of “Pessimism of the intelligence, optimism of the will.” (Antonio Gramsci 1971, p.175) The following statements are indicative of individual and social motivations, as well as a messianic hope, at work within the group:

“The knowledge of what is going on is what allows you to keep going – that is, for sure, we are losing and in no way are the leadership levels going to organise us. Therefore the only alternative is that from the bottom we are beginning to get to know the reality. And I believe that ultimately it will be like this: if a movement should arise, it has to be from the conscious grassroots.”⁸⁹

“Today I have no idea who should lead a revolutionary movement. In a global perspective, the working class has led these movements – but the working class here is very oppressed and I don’t know if we are up to the job. We have to continue our political work; and maybe at some point the proper conditions will

⁸⁸ Interview worker Fernando.

⁸⁹ Ibid.

arise in which people are fed up and a movement can develop. And I don't know how it will be done, armed or as a social movement."⁹⁰

In short, workers in the group had comparatively realistic ideas about their surrounding conditions, power relations and limitations to their activism. Yet, they refused to accept these circumstances or to become discouraged by the rather slim chances of a short- or medium-term realisation of their aspirations.

Relevance and impact

Clearly, this group only represents a tiny minority amongst the large workforce of Company X. Overall, the practical impact of such groups can hardly be adequately determined, also because it is unknown how many similar currents and groups exist apart from the one discussed above. Moreover, as a group its collective activities basically narrow down to information gathering, communication, propaganda and networking. However, as individuals the group members have been on the forefront of smaller and larger struggles within the plant – which we will encounter throughout the following chapters – making the group a nodal point in the web of personal and political relations amongst Company X workers. The relevance of the group should be seen more in constituting a point of contact and coordination substituting for the limitation of an exchange of political ideas with the union.

5. Absence of Comparative Movements at Company X in China

In 1992 Company X/JV1 had just recently commenced serial mass production and was still struggling with the local supply industry, while at Company X/JV2 workers were just unpacking the last machines relocated from the United States (Posth 2006). It would take another 18 years until a comparable cataclysmic event would occur in the automotive sector – and it was located in the automotive supply chain, rather than in terminal assembly plants. The subtitle of Zhang Lu's seminal monograph on the automobile industry in China – *The Politics of Labor and Worker*

⁹⁰ Interview worker Daniel.

Resistance – is thus to a certain degree misleading: terminal car assemblers in China have been rather stable, compared to the Mexican case, the Chinese light industry, or even the automotive supply chain. From her fieldwork between 2004 and 2011 Zhang reports three incidents of strikes in two of the seven factories she researched – none of them at Company X.

The strikes reported by Zhang were short-lived – for one shift or only a few hours – and showed patterns known from strikes in other industries in China: secretly organised, seemingly spontaneous and quickly reacted to by management (L. Zhang 2014a, p.141ff, 153ff.). To this day only one larger-scale strike has been observed at a terminal assembly plant in China – in 2012 at a light truck assembly plant of a US-American TNC and JV2 (Qiao & Lin 2012). That there is little public knowledge of strikes (and clandestine groups) in terminal assembly plants might of course also be a result of these brand companies exercising a tighter media control over their internal affairs – including heavily and formally restricted access for journalists and researchers – than smaller enterprises in the supply chain. However, if large scale conflicts of the form witnessed in the electronics industry or the automotive supply chain should occur, it would hardly be possible, even for a very cautious enterprise like Company X, to contain information from spreading to the public – in particular, because as we will see in chapter 5, workers make extensive use of the internet to report from the plants. In short, it seems safe to assume that the degree of open conflict at Company X in China is comparably low.

The information on strikes at Company X in China that I could obtain narrows down to two incidents: my interviewees in the Eastern main plant of Company X/JV1 reported a strike by dispatch workers in 2011, which lasted for 2 hours and concerned unequal wage levels paid by a labour agency.⁹¹ In the Northern main plant of Company X/JV2 there were conflicts about working hours in 2009, with formal and dispatch workers protesting against excessive overtime.⁹² As an effect of the particular interview situation (including my obvious outsider position, accompanied by a translator, and a lack of follow up contacts to interviewees) it

⁹¹ Interview migrant dispatch workers Lie and Xun.

⁹² Interview workers Chengdu.

was generally difficult to gather more information on strikes. Most interviewees said they had never heard of strikes at Company X, while one worker, although voicing his discomfort with the topic, remarked that:

“There are only few, but of course there are strikes. It is inevitable.”⁹³

The relative absence of open conflict does however not mean that workers were docile. Zhang observed acts of pilferage, sabotage, refusal to partake in company rituals, petitioning, informal bargaining with team leaders etc. at multiple terminal assembly plants (Zhang 2014a, chap.5, 6). Though ultimately an academic issue of limited practical relevance, it begs the question if all these acts are rightly subsumed under the term “resistance”, as Zhang seems to suggest. Most of these acts – arguably apart from sabotage and pilferage – are clearly “acts of defiance” (a term also embraced by Zhang), but their confrontational nature, as well as the impact on the enterprise is indirect at best. These acts might be better understood as strategies to ease the pressure at work, respectively of refusal and evasion. It is these forms of “chronic class struggle” that will be the topic of the following chapters.

6. Concluding Remarks

Despite the fact that workers at Company X were not able to prevent the implementation of new work rules and a restructuring of the union, the 1992 conflict and its preceding history indicate, at minimum, that managerial strategy is not simply implemented, but has to overcome obstacles imposed by worker agency. In a more significant reading the concrete result of the implemented changes – which will be the object under scrutiny in the following chapters – is itself an outcome of the relational agency between capital, labour and the state in the concrete moment of the summer 1992. Although it is undeniable that these results manifested to the largest extent the interests of management – rather than a “negotiated” compromise – it is insufficient to explain these as an unfolding logic

⁹³ Interview dispatch worker Ping.

of capital. The particular changes of the union structure indicate that management was well aware of the danger stemming from a larger political room for manoeuvre for ordinary workers – and it therefore devised new institutional constraints. Giving the example of a clandestine group of worker activists formed in the aftermath of the 1992 conflict, I have argued that while these new institutions did indeed reshape the conditions for worker agency they did not do so in a way deducible from the institutional matrix itself. For even though the institutional matrix allowed management closer control over a smaller and more centralised union and eradicated the formal recognition of rank and file activism through shop floor representatives, they did not achieve a general pacification of grassroots activism – instead, those dissidents that were not fired formed underground currents within the company. The unintended medium- and long-term consequences were, as we shall see in the following chapters, more complex. Worker agency polarised between official union politics and increasing clandestine activism and more subtle forms of day-to-day defiance – what I term “chronic class struggle”.

In short, the 1992 conflict was a process of relational agency unpredictable by the institutional matrix in place prior to 1992, which caused institutional changes – and these institutional changes provided new conditions for worker agency, to which some of them reacted with defiance, that is, in ways equally unpredictable by the new institutional matrix. The crux is that the institutions governing industrial relations only tell us basic parameters for how capital-labour relations would ideal-typically function if all actors involved abided by the rules – but that in reality, this set up is constantly transcended by the agency of all parties involved, who draw their interests, power and strategies from other sources.

Chapter 5: Organisation of Production – Conditions for and Results of Relational Agency

In the preceding chapter I interpreted the 1992 conflict at Company X in Mexico as a cataclysmic event of relational agency. I showed how it marked a watershed in the internal and external relations and operations of Company X in Mexico, gearing them towards export production and a reorganisation of the production process. In this chapter I will shift the emphasis to the contemporary organisation of production and the less visible day-to-day processes of relational agency – not only in Mexico, but also in China.

Does Company X embrace the same institutions to govern the labour process in China and Mexico – or does it “exploit local idiosyncrasies” to diverging degrees? How do these institutions perform in the reality of the shop floor – and how do capital-labour relations shape the actual outcomes of this performance? I approach these questions through an analysis of three institutions central to the governance of shop floor relations: remuneration systems, the organisation of work, and hiring and training strategies. For each of these institutions I compare how processes of relational agency between managers and workers shape their actual operations. I will first reconstruct the institutional set up in order to infer how these institutions should ideal-typically function. I then analyse how workers and managers at Company interpreted and acted upon these institutions. This allows me to infer how and why processes of relational agency concur with or evade, undermine or in other ways change, the operative logic of workplace institutions. Where historical data is available I retrace processes of institutional change in their emergence and transformation; where my fieldwork observations from 2012-2013 are the sole reference point, I pursue arguments of static comparative nature.

I argue that on the level of intentional design the institutions governing shop floor relations in China and Mexico converge to a high degree. In practice, however, they perform differently, as the agents governed by them differently interpret and act upon the constraints or potentials they face. I therefore argue that processes of relational agency on the shop floor represent another instance in which human

behaviour does not necessarily follow the incentive structure provided by the institutional matrix. Herein lies one explanatory factor for institutional changes, whose cataclysmic form I have analysed in the preceding chapter, and whose more evolutionary and gradual form I will analyse in the following.⁹⁴

I hypothesise that against this background three different processes can be observed that have shaped the practical relation between institutions and agency. First, engaging the notion of (soft) path dependency I argue that institutional heritage matters. I explore how the introduction of meritocratic remuneration systems in China and Mexico has led to different outcomes, due to the maintenance of collective bargaining in the Mexican case after the 1992 conflict. I argue that even in situations of rather drastic institutional change, certain institutions of the *status quo ante* might remain in place, while others are remodelled but leave their traces in the new institutional matrix. While institutionalists seek to the reasons within the design of the transforming or replaced institutions, the crucial point carved out in the preceding chapter is that these changes are *not* an intrinsic effect of an institutionally inscribed path dependency, but result of power relations at the time of the implementation of new institutions. I therefore argue that the concrete ways in which remuneration systems at Company X in Mexico and China work are indeed affected by the institutional setting – in particular the functioning of the trade union – but only insofar as different stakeholders are making strategic use of it.

Secondly, I argue that the agents, whose behaviour is supposed to be governed in specific ways by the institutional matrix, might intentionally deviate from these

⁹⁴ In a sense, this notion of change is what institutionalists, particularly in the rational choice tradition, have in mind when they speak of “adaptation”. In these cases, individual utility maximisation is a given constant, and institutions developed as constraints that gear this behaviour to a greater or lesser extent into a desired direction. This implies that deviant behaviour can be expected from individuals whose utility is not maximised by the institutional matrix. This idea is behind NIE explanations of the existence of institutions that govern the labour process. They are set up to ameliorate the transformation problem of labour power into actual labour, or in the words of NIE, to compensate for the insufficiency of market relations to address “hidden action” problems (Bates 1995). The crucial difference in the route taken here is that rather than individual utility maximisation it is relational processes between collective actors with different potentials to mobilise institutions, structures and resources shaping their capacities for agency – or power – that determines how individuals behave towards institutions.

prescriptions and therefore obstruct the functionality of the institutional design. I demonstrate this through an analysis of the work organisation proper, in particular concepts of teamwork and “continuous improvement” (*kaizen*) applied in China and Mexico. Here the emphasis is placed on how in both cases persistent managerial authoritarianism has been detrimental to a functional application of lean production systems.

Third, I argue that how agents mobilise resources outside the institutions that govern the shop floor has repercussions on how these institutions are enforced. I discuss how within the particular class composition in China and Mexico one group of workers – migrant dispatch workers in China – stands out in its coping strategies with the factory system, grounded in mobilising the possibility of alternative strategies of reproduction/sources of income. This had particular repercussions on the training programmes in China.

Before I provide an in-depth empirical analysis of each of these instances, I briefly outline the grievances of workers at Company X in China and Mexico, in order to provide a background understanding of the motivations that might inform worker agency on the shop floor. This is based on the premise that that the immediate experience of discontent – causally or teleologically (Horn & Löhrer 2010) – informs worker agency.⁹⁵ I therefore first give an overview of the common complaints amongst workers at Company X in China and Mexico. I then go through the three identified institutional settings and processes of agency, before concluding with an empirically enriched evaluation of the hypotheses posited above. This allows me to draw inferences for the overarching question of the role of relational agency (between capital and labour) in processes of institutional change.

⁹⁵ Broadly speaking, the relationship between discontent and agency could be interpreted as causal: worker agency is (at least in part) a reaction to grievances; or teleological: workers’ actions are purposefully directed at overcoming or improving a situation of discontent. While the former leaves room for a more complex interpretation of particular acts – the agents might also act due to a particular routine, mental dispositions, prejudice, misinformation, peer pressure etc. – the latter establishes an immediate connection between felt discontent and action. Suffice it to say that we can assume a connection between grievance and agency, although a causal, multifaceted perspective seems more plausible when dealing with the specifics of certain individual and in particular collective acts.

1. Complaining, Ranting, Socialising

8-10 hours a day!?! The time account is totally cheating! Everyday someone quits and someone new is coming in! Only after 15 years can you become a formal worker! You truly are a German company, you Nazis! You are the scourge of the Chinese people! Petty wages! No benefits! No holidays and vacations! You are the Foxconn of the car industry! You modern Nazis!

– Company X/JV1 worker in an online forum, 2012⁹⁶

Concurring with findings on auto workers' grievances across space and time (Alquati 1974; Kamata 1983; Seidman 1994; Milkman 1997; Wildcat 2007) – including the seminal studies on my two cases (L. Zhang 2014a, chaps.5, 6; Montiel 1993; 2001; 2010; Juárez Núñez 2006) – the overwhelming majority of workers' complaints in China and Mexico concerned similar, if not exactly the same, issues (Table 2).⁹⁷ Only internal union affairs in the Mexican case; and housing, food and transportation in the Chinese case, were issue of concern that were not present in the respective other case.

Workers complained about salaries; working hours, shifts and rhythm; physical exhaustion and other health issues; the monotonous and unchallenging character of work; and “unfair” treatment by superiors. These complaints applied to all categories of workers irrespective of whether they were temporarily or permanently employed, migrants or local residents, young or old, male or female, in Mexico or in China. For example, a statement of Chinese worker Ping was representative:

“If I really had to complain about something it would be the long working hours and the humble wage. And also the workload. There is a general negative feeling

⁹⁶ (Baidu Tieba 2012)

⁹⁷ In the following, complaints are registered in a binary mode of present (+) or absent (-). No conclusions can be inferred as to the quantitative distribution of these findings amongst the workforces of Company X; nor to the implications for a general sense of contentment or discontentment. The results are therefore not mathematically, but analytically representative: workers of all employment categories have been interviewed to gather these results.

about the mismatch between the long work and low wages. [...] Also, the workshop is simply too hot to work there for long hours.”⁹⁸

However, the complaints varied by degree: some workers would deem the wage level to be low in absolute terms, but acceptable when compared to alternatives open to them;⁹⁹ others found it was not worth staying at Company X.¹⁰⁰ Not surprisingly, certain issues were particular to (or more pronounced by) female *versus* male, temporary *versus* permanent, and Mexican *versus* Chinese workers. For example, in China, formal workers with a certain seniority were unsatisfied with their inability to become promoted or receive substantial pay rises while temporary workers complained about the income gap with formal workers,¹⁰¹ and the time and luck it took to be made permanent (for those with a local *hukou*).¹⁰² These complaints were similar for permanent and temporary workers in Mexico. However, significant differences emerged in the form of country-specific complaints of Mexican workers about union affairs, and of Chinese workers about housing, food and transportation. This was due to the relative importance of the union to workers’ lives in Mexico, while Chinese workers regarded it mainly as negligible (discussed in more detail in section 2.2.). On the other hand, while transport and food were in both cases provided by the Company, housing in the Mexican case was regarded as a private issue, while in China access to apartments under the administration of the enterprise or housing in dormitories made it a work-related issue.¹⁰³

⁹⁸ Interview dispatch worker Ping.

⁹⁹ Interviews dispatch worker Ping, workers Santiago and Arturo.

¹⁰⁰ Interview migrant dispatch workers Liu and Xun.

¹⁰¹ Interviews migrant dispatch workers Liu and Xun, worker Bo.

¹⁰² Interview worker Ping, see also Zhang (2014a).

¹⁰³ More research needs to be done on the actual arrangement in this case. Formal workers at JV2’s main facility in North China received housing allowances and were in the late 1990s granted priority access to privatised company housing (Rithmire 2015, chap.6), while migrant dispatch workers at Company X/JV1 lived in company dormitories, and formal workers had a housing allowance and private accommodation; Interviews with migrant dispatch workers Liu and Xun, dispatch worker Ping; author’s field notes.

Grievances	Mexico		China	
	P	T	P	T
Wages	+	+	+	+
Working hours	+	+	+	+
Workload/-rhythm	+	+	+	+
Promotions	+	+	+	+
Nature of work	+ -	+ -	+	+
Superiors	+	+	+	+
Relation to colleagues	-	+	-	-
OHS	+ -	+ -	+ -	+ -
Housing	-	-	+	+
Food	-	-	+	+
Transportation	-	-	+	+
Union	+	+	-	-

Table 2: Workers' grievances

Source: Elaboration from author's field notes and interviews (P/T indicates permanent/temporary workers; +/- indicates present/absent)

Before analysing the nature of these complaints throughout this and the following chapters, as well as what workers chose or intended to do as a consequence, a brief note is required on the act of complaining itself. In both Mexico and China, I found that complaining fulfilled a social function of information exchange and the strengthening of collective cohesion if carried out amongst peers that share similar conditions of existence. Workers vented their anger verbally and in writing in both of my case studies, though the forms I could observe differed between Mexico and China.

In the Mexican case the typical place for workers to talk about their work experiences was over an evening beer in one of the many *cantinas* in the city. Conversations shifted from complaints about the workload, corrupt union bosses or issues of national politics to jokes, tales and anecdotes of family, friendship and love – the wild mix of political and casual topics forging bonds not only of shared political agendas but also of personal empathy and understanding. These conversations function as a safety valve to blow off steam and return back to business as usual – but they also add to collective cohesion.

My observations confirm the importance of extra-workplace relations for class formation (Thompson 1968; Cumbler 1979; Benson 1989), in particular

Hoffrogge's argument that the existence of working class pubs is a crucial element in the development of working class collectivity, political consciousness and agency (Hoffrogge 2011, p.106ff.). To be sure, a pub is not a gender-neutral place, and, as in the cases I observed, was almost exclusively frequented by men, whose partners stayed at home.

In the Chinese case, the physical terrain for extra-workplace interaction was small restaurants, shops, *majiang* gambling halls or simply public streets and squares (Lee 2007, p.133; C. K.-C. Chan 2010, chap.3) – and, in the case of migrant workers, the dormitory (Pun 2005; Pun & Smith 2006; 2007; C. K.-C. Chan 2010). Pun and Smith have shown for the dormitory – and Chan for (urban) migrant villages – how shared geographic space can aid in developing kinship-based mutual aid relations (C. K.-C. Chan 2010, chap.3); or in bringing workers together to devise collective strategies against managerial mistreatment (Pun & Smith 2006, p.1465ff.). Migrant workers I met at their dormitories in Eastern China – dispatch workers of Company X/JV1; and at a different dormitory migrant workers employed by a Company X/JV1 supplier – had formed smaller peer groups amongst which they discussed future decisions and carried them out together: primarily the question if and when to leave the factory and return home.¹⁰⁴

Although there are online forums in Mexico, in which workers exchange their experiences – mostly to provide potential new entrants to the plant with information on training possibilities, wage levels, working conditions etc. – it is ironic that, given tighter surveillance and censorship, Chinese workers made more extensive use of online message boards and other tools, such as the messenger service *QQ*, to express their anger. Though clearly not representative, online commentaries were a good indicator of the degree to which workers at Company X were infuriated. Milder versions concerned ironic swearing:

“Company X/JV1 = work + eat + shit + sleep + work until you die of exhaustion”¹⁰⁵

¹⁰⁴ Author's field notes; Interview migrant dispatch workers Xun and Liu, migrant workers Wang and Zhao.

¹⁰⁵ (Baidu Tieba 2009b).

However, there were also threats of physical violence,

“Everyday you are so exhausted, you feel like dying – but the pay is so low! I swear: next time the team leader is looking for trouble, I’ll give him a beating. Why are workers’ lives treated as being so worthless?”¹⁰⁶

and cynical joy over the death of a senior manager at Company X/JV1, who had a car accident on a business trip:

“But I am still glad to hear that Qiao Wang is dead. Haha, when the rich die, then I’m happy!”¹⁰⁷

Whatever one might think of these statements, it is obvious that although different in form, workers in both Mexico and China deliberately sought ways to communicate their experiences and grievances with their peers. Socialising and complaining did not necessarily follow a conscious rationale – for instance aiming to propagandise certain viewpoints or to mobilise support – but rather served as an end in itself. Important for the following analysis are two inferences. Firstly, workers in both cases formed small groups of friends with whom they shared and exchanged opinions and plans; or they spoke anonymously to a larger online community. In both cases, these contacts and networks provided increased social cohesion, a feeling of not being isolated and the occasional exchange of relevant information, all of which were intangible factors that could be mobilised when coping with situations of distress (individually or collectively). Secondly, in both cases there was a basic level of discontent that was not immediately visible but omnipresent. These issues should be kept in mind when evaluating the following sections.

¹⁰⁶ (Baidu Tieba 2009c).

¹⁰⁷ (Baidu Tieba 2010).

2. Contracts, Wages and Incomes

The existing literature has attributed a crucial role in affecting worker agency to two factors – employment security (mostly understood in terms of contract periods), and wage differentials (Silver 2003; L. Zhang 2014a). This section will outline contractual relations and remuneration systems at Company X in China and Mexico and show in more detail what constraints and limits they provide to the agency of managers and workers – and how the particular system itself has been shaped by this agency.

At Company X in China there are two types of contracts that apply to workers. One has the status of a universally applicable collective contract; the other is signed by the individual worker with the company or a labour agency and specifies rank, tasks and actual remuneration.¹⁰⁸ This was also common practice in China at other terminal car assemblers and in the supply chain (Lüthje 2014). Collective contracts of this sort formulate certain ground rules for management-union relations and proceedings. As they do not go into details on work rules, tasks or salaries, critical voices have argued that “the content of collective contracts largely remains worthless” (Luo 2011, p.55). According to a trade union representative at Company X/JV2 the collective contract for the joint venture had not been revised, not to speak of being subject to negotiation, since its implementation during the foundation of the enterprise.¹⁰⁹ The collective contract at Company X in China was of little practical value to workers. All questions of employment period, status, working hours, remuneration etc. were regulated through individual contracts. As outlined in chapter 3, in the Chinese case, a clear contractual divide ran between formal and dispatch workers. Formal contracts with Company/JV1 and -JV2 – apart from those for white collar workers or strategically important blue-collar workers – did not stipulate life-long employment, but were rather customarily renewed after one- or two-year periods (Author’s field notes, L. Zhang 2014a, p.63; Jürgens & Krzywdzinski 2015). The difference between the employment security for formal and dispatch workers was not a contractual effect, but one of the enterprise customarily prioritising the renewal of contracts of formal workers

¹⁰⁸ Interview Chairman Peng.

¹⁰⁹ Ibid.

over the re-hiring of dispatch workers (Jürgens & Krzywdzinski 2015). As a formal mechanism for permanency, both formal and dispatch workers could earn “stars” through good performance and/or seniority – one after three years; and then one for each two years – of which five were needed to apply for a permanent contract.¹¹⁰ In other words, the contractual design gave high leverage to management to tamper with hiring practices and individual salaries, providing workers relatively little “formal” employment security (further discussed in section 4.1.).

In Mexico, the collective agreement was a real benchmark for individual workers, as it stipulated working hours, work rules, wages, premiums and bonuses, benefits and allowances, and the responsibilities and influence of union representatives. Salaries and the entire agreement were subject to regular negotiations between enterprise and union (see also section 2.). Employment for core workers was indeed permanent, while temporary workers were covered by the collective agreement but had fixed-term contracts. There were no formal rules that obligated the enterprise to give permanency to temporary workers after repeated rehiring, but in cases of contracts not being renewed, it had to pay the dismissed worker a 50% bonus on top of the regular compensation.¹¹¹ Most permanent workers I interviewed had gained their “*planta*” after three to four years of working as an *eventual*. Generally speaking, ordinary and specialist workers were unionised personnel, whereas the majority of service and administration workers, certain white collar workers, as well as managers were referred to as “trusted” personnel (*empleados de confianza*), who had no union rights and whose employment relations and pay were regulated outside the collective agreement. The existence of a “real” collective contract provided the union an important role in wage setting and safeguarding work rules, although its role in the latter was reduced drastically after the 1992 conflict.

¹¹⁰ “Stars” could also be earned through good performance evaluations; interview dispatch worker Liao.

¹¹¹ §22, Company X Mexico Collective Contract 2010-2012.

2.1. Income Composition and Remuneration Systems

In both cases, Company X had implemented meritocratic wage systems that however worked differently, with more managerial discretion in the Chinese case, and a continuous relevance of the collective agreement as a reference point for union-led wage bargaining in Mexico. The 1992 conflict in Mexico was crucial to the emergence of this new system. In both cases, the real workings of meritocratic remuneration depended on their implementation in the particular force field of management-worker relations – and as these differed, so did the use and effects of broadly similar remuneration systems.

In the Chinese case, at both Company X/JV1 and -/JV2 wages were subdivided into three (respectively four) categories of base pay, benefits and allowances and the so-called “floating wage”, which referred mainly to efficiency wages and premiums (Ji 2013, p.136).¹¹² A large share of workers’ monthly income therefore stemmed from a combination of overtime payments; individual efficiency wages and premiums; benefits and allowances; and profit-shared monthly bonuses – sometimes in the form of “double wages”, which, as in the case of Company X/JV1, could be sustained for periods of over a year.¹¹³ The overall yearly income could increase significantly due to profit-shared half- or end of the year bonuses.¹¹⁴ That is, even though the “floating wage” was supposed to stand at 40% at Company X/JV1, and at 50% at -/JV2¹¹⁵, if efficiency wage *and bonuses* were compared to base wage, benefits and allowances, the stable elements of an average permanent workers’ wage bill at Company X/JV1 came down from 60 to 50%; and from 50 to 40/45% at -/JV2.¹¹⁶ In short, at least half of workers’ income depended on

¹¹² In some cases “floating wage” also includes aspects of a “functional wage”, i.e. premiums based on a worker’s rank (Lüthje et al. 2013, p.67). The term “floating wage” dates back to China’s economic reforms in the 1980s that allowed SOEs to retain a certain percentage of their profits for redistribution amongst the workforce. The percentage of the floating wage in the overall wage bill was supposed to be fixed – initially at no more than 5%, which by 1993 had already increased to 23.3% on average (Meng 2000, p.83f.).

¹¹³ In these cases formal workers can earn up to ¥8,000 to ¥10,000 per month, while the bonus for dispatch workers only amounts to 1/5 to 1/4 of what their formally employed colleagues receive; interviews migrant dispatch Xun and Liu, worker Lun.

¹¹⁴ Interview German white-collar worker Hensch.

¹¹⁵ Interviews Chinese managers Li, Wang, Zhang; Chinese managers Bo, Peng.

¹¹⁶ Calculations based on workers’ payslips; author’s field notes; interviews with Chinese workers; Chinese managers Li, Wang, Zhang; German senior manager Rordorf.

individual or company performance. Seniority played a certain role, but was more pronounced at Company X/JV1, where years spent at the factory increased the monthly base wage, than at X/JV2 (for further detail see L. Zhang 2014a, p.104ff.).¹¹⁷ The retained seniority element at Company X/JV1 is rather exceptional amongst automotive manufacturers in China, most of which employ fully meritocratic remuneration systems (ibid.), which in turn reflects a global trend in the automotive industry.

In monetary terms, in the summer of 2013, the base wage for ordinary workers at Company X/JV2 was ¥1,300 – which, though ¥200 above the minimum wage level in the Northern province, did not even reach the legal minimum wage at the Southern location of its new plant. The base wage was higher at Company X/JV1, at ¥2000, but in a similar range of ¥200 above the local minimum. Ordinary permanent/dispatch workers' (and interns') monthly net earnings at Company X/JV1 were about ¥4,000-5,000/3,000-4,000 and at Company X/JV2 in the area of ¥3,500-4,500/2,800-3,200 (Table 3). A dispatch worker of Company X/JV1 said that monthly wages for his employment category were capped at ¥4,000.¹¹⁸ Wages at Company X compared favourably to Asian (i.e. Japanese and Korean) joint ventures with workers' median annual cash income being ¥42,732, but were rather low if compared to other European and American companies (¥62,354) (Puxin Management Consulting Co., in L. Zhang 2014a, p.76).

Wages in Mexico were directly regulated by the company-specific collective agreement. In 2012 workers were grouped into 23 sub-levels of twelve pay grades (the *tabulador*), ranging from \$5,280 to \$18,156 per month, depending on work area, status (worker, specialist, team leader) and performance (Table 3).¹¹⁹ On average, including bonuses, premiums and allowances, production workers at

¹¹⁷ For dispatch workers this increase was a quite substantial ¥1000 per month after the first year, which was arguably an incentive to keep newly recruited workers on the job and labour turnover down (see also section 4.); interview dispatch worker Ping.

¹¹⁸ Interview dispatch worker Ping.

¹¹⁹ Ordinary workers can climb up a scale of sixteen levels; and their team leaders an additional four. Specialists have an entry salary equivalent to the tenth level for ordinary workers and can increase their salary along another eleven levels. Specialist team leaders are grouped into two levels at the top of the pay grade. The lowest level salary for an ordinary team leader is 2.3 times that of the lowest level salary for an ordinary worker; for specialists the ratio is 2:1.

Company X had a monthly net income of about \$18,000 (£915).¹²⁰ These wages were the second highest in the automotive industry in Mexico (Covarrubias 2014), and obviously well above the 2012 Mexican minimum wage of \$1,911 per month.¹²¹ Each year the wages stipulated in the *tabulador* would be revised in collective negotiations.

Performance evaluations at Company X in Mexico took place every month; and every nine months a comprehensive assessment of “knowledge, skill, experience, talent, efficiency and attitude”¹²² of each worker was undertaken for the preceding period. In order to climb up a sub-level of the *tabulador*, apart from having the necessary formal training and a minimum seniority, workers had to have performed all assigned tasks satisfactorily; followed designated job rotations; actively attempted to improve the productivity of their department; followed rules of discipline, safety, order and cleanliness; helped in the training of other workers; and been 99% punctual (which also gained workers additional premiums). As worker Ricardo explained:

“So, every year the union negotiates wage increases for all wage levels – but every nine months there are performance evaluations, in which certain people can rise within their *tabulador*. If you are already on the top but you receive a good evaluation, you get a lump sum of \$2,300, \$2,400.”¹²³

Although both Chinese and Mexican remuneration systems were strongly based on performance evaluations, their actual functioning compares quite differently. The Chinese system split the wage bill into a stable and a fluctuating income, partly depending on individual evaluations and partly on company performance. This split was important because certain extra-payments were calculated as proportions of the base wage – for example the payment of the one-and-a-half-, double- and triple rates for overtime, work on rest days or national holidays,

¹²⁰ Interview workers Ricardo, Miguel, Santiago.

¹²¹ Different from China, it is not difficult but sheer impossible to survive on the Mexican minimum wage as a single source of income.

¹²² §26, Company X Mexico Collective Contract 2010-2012.

¹²³ Interview worker Ricardo.

respectively. Only the seniority effect at Company X/JV1 made for an increasing base wage and therefore higher overtime pay, while at Company X/JV2 this element was less pronounced. In Mexico wages depended fully on individual performance evaluations but were stabilised through a wage scale predetermined by the collective agreement. Additional benefits and allowances, bonuses and premiums were calculated as ratios of the respective worker's daily salary, which increased with yearly wage negotiations. In this regard, temporary workers had formally the same entitlements as permanent workers – i.e. they were not exempted from full benefits and bonuses as was the case for dispatch workers in China – but these were naturally lower in monetary terms, as *eventuales* entered the factory on the lowest pay grade. In both cases, however, meritocratic remuneration systems did create income gaps between individual workers not only according to their status as formal/permanent and as dispatch/temporary workers, but also within these categories. In sum, wages at Company X in both China and Mexico were comparably high within the sector, and even more so in relation to minimum wage levels. As will be discussed in section 4. this played a crucial role in workers choices for resilience or exit.

On the other hand, the remuneration system enlarged the room for manoeuvre for management, mainly through relieving cost pressures. As a rule, meritocratic remuneration reduces the size of the overall wage bill, as wage increases have to be granted only to a smaller section of the workforce. In fact, the contribution of wages to overall costs at Company X was comparably low. Material costs alone made up about half the market price of an average Company X car in China, not including labour, administrative and distribution costs.¹²⁴ In Mexico, the 1992 transformations reduced the share of labour costs in total costs from an average of 8-12% to 4-5% – or 2%, if only direct workers are concerned (Juárez Núñez 2006, p.14) By 2010, it was estimated at 4.5%, or 3% respectively (Juárez Nuñez in: Juárez Galindo 2010). This is quite important, as it indicates that whatever the political stance on wages – to lower or to increase them – they are simply not that relevant an item in the overall costs of Company X, in particular in Mexico. Not only does this imply that Company X can actually afford to pay average or above

¹²⁴ Interview German senior manager Schütte.

average wages within the sector – which it does, though more so in Mexico than in China – but also that the cost pressure Company X exerts on other non-labour inputs is high. As will be discussed in more detail in chapter 7., the pressure to control costs is transmitted into the supply chain, through which Company X outsourced much of its labour intensive component production in the 1990s; and where, as a rule, labour costs make up a higher percentage of overall costs (a Mexican expert on the automotive industry estimated an average share of about 25%¹²⁵). In short, the scope that Company X had to adjust wages upwards (if necessary) rested on the fact that it passed cost pressures on to its suppliers.

	Mexico main plant	Company X/JV1	Company X/JV2
Permanent/ Formal workers	\$5,280-18,156; average net income: \$18,000	¥4,000-5,000 (£420-525)	¥3,500-4,500 (£365-470)
Temporary/ Dispatch workers	(£267-920, average net income: £915)	¥3,000-4,000 (£315-420)	¥2,800-3,200 (£290-335)
Minimum wage	\$1911 (£97)	¥1,620 (£170)	¥1,300 (£135)

Table 3: Monthly wages/income at Company X in Mexico and China

Source: Interview data, collective contract (Mexico)

Figures for Mexico are based on collective contract wage tabulators, excluding benefits and bonuses (net income includes all bonuses, premiums, benefits and allowances); figures for China are average net incomes for ordinary workers, including benefits and bonuses

2.2. Emergence and Gradual Change Through Management-Union Relations

In the Mexican case the implementation of the current remuneration system was the result of the union’s defeat in the 1992 conflict. While the union’s role in co-determining work rules was drastically reduced (discussed in section 3.1.), bargaining over annual wage increases and overall wage grades were retained, but overshadowed by the 1992 trauma: strikes for higher wages only resurfaced with the central committee of 2000-2008.

After two strikes in 2000 and 2001 – one successful (discussed in section 3.1.) and one ending inconclusively – in 2002 the enterprise laid off 1,250 temporary workers and threatened to relocate future projects to China as a response to a

¹²⁵ Interview Lourdes Alvarez.

slump in US demand (Juárez Núñez 2006, p.13). As a consequence, the union decided to agree to the introduction of five new wage grades at the bottom of the *tabulador*, allowing for new entrants to earn salaries fifty percent below the hitherto existing lowest entry salary. In exchange Company X promised to bring some workers from the suppliers back in house, and to build a new model in Mexico – none of which materialised in the agreed form. Alejandro, general secretary of the union at that time, summarised:

“Huge conflicts have not occurred since 1992, because with us the enterprise achieved a new agreement – the new wage levels that allowed it to lower labour costs. Why did we sign this agreement in 2002? Because we thought it was better to make a deal than to risk another conflict.”¹²⁶

Although the union struck again in 2004 and 2006, in a climate of declining sales wage increases just about compensated for inflation – a trend that continued with the new union leadership that was elected on the outbreak of the world financial crisis in 2008, meaning that by the time of my fieldwork, real wages for workers at Company X had hardly increased at all.¹²⁷ Between 2008 and 2012 the workforce at Company X was confronted with a tough managerial stance caused by the ripple effects of the world financial crisis on the global automotive market. During the first negotiations with the new committee, the enterprise proposed a *pacto de paz social* (pact of social peace), in which it sought to fix annual wage increases at one percent above inflation and suspend collective negotiations until 2011, as well as revoke the right to strike until 2010. It also pushed for the implementation of time accounts. While the former was put to a referendum resulting in a “no” vote, the latter was straight-out rejected by the union (Toledo 2008).¹²⁸ Similarly, the union managed to fend off a pay freeze in 2009 after a four day strike (Anon 2009).

¹²⁶ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

¹²⁷ Interview Huberto Juárez Núñez

¹²⁸ In retrospect, the monetary gains for the workforce between 2009 and 2011 would (in theory) have been higher with the *paz social* than were actually realised – which is a result of the impact of the financial crisis not yet anticipated in the summer of 2008.

In short, despite the drastic change from seniority to meritocratic remuneration, collective bargaining remained a significant institution in wage determination in Mexico, and began to be accompanied by strike action again with the central committee of 2000-2008. This contrasts quite sharply with the Chinese case.

In the absence of sufficient historical data, little can be said about the role of worker agency in the genealogy of the remuneration systems in Company X's Chinese plants. Zhang has shown that the switch from a seniority to a merit system at Company X/JV2 in 2006 caused older workers to write a petition to the enterprise's party secretary and union representative, resulting in the introduction of a compensatory stipulation that allowed them to retain their prior wage levels, in cases where the new system had implied a reduction (L. Zhang 2014a, pp.105, 139). However, given that HR is the responsibility of the Chinese joint venture partner – who, as shown in chapter 3, also exercises tight control over the trade union – no long-term institutionalisation of workers or union influence in wage setting occurred. The ambivalent effects of wage setting being a solely managerial responsibility will be discussed in the following section.

2.3. Worker agency and the Effects of Meritocratic Wage Systems

This section outlines the constraints and potentials of the particular remuneration systems at Company X in China and Mexico for the agency of managers and workers. The particular wage systems in both cases were designed to discipline the workforce and increase the leverage of management over the determination of workers income, in particular in relation to productivity and output. However, its real effects were more ambivalent, partly because of the institutional heritage of union involvement in the Mexican case, and partly because of a general frustration with how management applied performance evaluations in both cases.

“Floating wage” and performance evaluations should not be confused with an individualised version of a Fordist linkage between productivity and wage increases. Neither in China nor in Mexico did higher output automatically increase

workers' salaries – in fact, the usual implication was an uncompensated intensification of work or more overtime. One implication of these wage systems was therefore higher discretion of management over wage setting and flexible adjustment. While in the Mexican case “rewards” for work intensification would be a result of an *ad hoc* informal agreement between workers, the union and the enterprise (for details see chapter 6, section 3.3.), in the Chinese case they were at the sole discretion of the enterprise – e.g. in paying bonuses in the form of double wages, or half- and year-end lump sums.¹²⁹ The Chinese system produced two ambivalent results. The increasing importance of profit-shared bonuses was intended to foster workers' identification with the company and a wider logic of profitability: an interest in double wages meant an interest in higher sales. It also allowed managers flexibilisation in reducing labour costs in the event of economic downturns. However, with large sections of the workforce being significantly affected, German white-collar worker Hensch speculated about the social sustainability of this system in the long run:

“This is certainly what [Company X/JV2] does on purpose, that they say: ‘Well yes, your base level is low, but the bonus payment, aha!’ And that’s an issue that everyone works towards, that the bonus is lucrative. I’m just wondering what will happen when at some point they really say: ‘This year there won’t be a bonus.’ Then there’ll be blood and thunder!”¹³⁰

The other problem for management resided in an unintended response of workers to the (managerially intended) disciplinary effects of performance evaluations. The increasing importance of efficiency (and in particular overtime) bonuses implied that workers' incomes would only be sustainable by continuously hard work, compliance with and even pro-active improvement of managerial rules. This was aided by the fact that with each round of evaluations only a predetermined number of workers could receive the highest evaluation – Zhang speaking of ten

¹²⁹ Migrant dispatch workers Xun and Liu interpreted this practice as the enterprise creating the illusion that it benevolently redistributed money to the workforce: “They simply find any excuse to add some money to our income, because it looks better when our incomes are higher than last year, making us feel better.” Interview migrant dispatch workers Xun and Liu.

¹³⁰ Interview German white-collar worker Hensch.

percent for Company X/JV2 (L. Zhang 2014a, p.109), two of my interviewees speaking of five percent for Company X/JV1¹³¹ – with the intention to increase competition amongst individual workers. The power of such an effect was clearly visible in the opinion of local dispatch worker Ping of Company X/JV1:

“I think highly of the evaluation system, because it drives us to improve and creates benign competition. [...] I think it is good because with evaluations those who work more will gain more.”¹³²

The adequacy of the meritocratic logic of “higher pay for better work” appeared to be so self-evident (which, to borrow from Althusser, is the central characteristic of an ideological effect, Althusser 2001) that of all my interviewees in both China and Mexico, only worker Fernando – who was also the interviewee with the longest work experience in the factory – criticised meritocratic remuneration *per se*:

“In terms of solidarity the old system was better, that is, in some way we identified more with other *compañeros*. The system of group work broke this... well, this harmony. Putting us in a competitive dynamic – that is the idea, right? – to dissociate us from our *compañero*, to create the ambition of striving for personal gains.”¹³³

However, all workers I interviewed, including Ping, had a strong opinion on the prevalence of nepotism and absence of transparent evaluation criteria. In both Mexico and China workers complained about the difficulty of getting promoted and the feeling that it depended on personal favours and good relations to the team leader, rather than on performance.¹³⁴ A representative statement by a Mexican worker was the following:

¹³¹ Interview worker Lun.

¹³² Interview dispatch worker Liao.

¹³³ Interview worker Fernando.

¹³⁴ Interviews dispatch worker Ping; migrant dispatch workers Xun and Liu; workers Jesús, Fernando, Miguel.

“The evaluations are not really carried out as evaluations. They are very biased, because the one who evaluates is the *coordinador* [similar to a line manager], and the *coordinador* has his preferences and dislikes. He gives a good evaluation to those that suit him, and fails those that do the actual work.”¹³⁵

That implied that some workers would never get an income raise. Female worker Lun explained:

“It is the tenth year of my career; and I have my permanency.”

And how much has your wage increased in this period?

“Not the smallest bit. We only have an evaluation system here where five percent can get an income raise. So, I have not received one in ten years. I guess that because I am the only woman in the team, maybe the team leader thinks women do not contribute as much as men, so I never get an income raise.”¹³⁶

Apart from this being an obvious case of gender discrimination – linked to Lun being systematically allocated “easier” tasks within the team, which in turn meant that she could not excel in the evaluations – cases like this could have an unintended consequence for management: over time sections of the workforce would become disillusioned and reduce their efforts to the necessary minimum. As worker Jesús explained:

“We have a profile that stipulates what we have to do and how the work is to be distributed, what each of us has to do. Well, what I do then is to see that I do what is written in my profile, right? But the *coordinador* wants me to do more – but no! – but there are *compañeros* who do it, and that divides the whole situation. They enter into a conflict with me, who refuses to do more – and then you can guess whom the *coordinador* prefers, me or them?”¹³⁷

¹³⁵ Interview worker Daniel.

¹³⁶ Interview worker Lun.

¹³⁷ Interview worker Jesús.

This behaviour was amplified by the particular organisation of work – and in the following section I will discuss workers’ coping strategies in more detail in that context. Suffice it to say at this point that although overall wages in both Mexico and China compared favourably sector-wide and within the respective localities of the plant, meritocratic remuneration failed to produce sufficient material incentives for teasing out extra efforts from the workforce.

In sum, in Mexico the continuous relevance of the union in collective bargaining procedures created a co-determined mechanism for regular wage increases that ran parallel to an otherwise individualised meritocratic system. This created a certain buffer between managers and workers and channelled workers agency in more or less predictable and routinized forms. However, it still depended on the actual constellation between union leadership, rank and file workers and management to what effect these institutions were actually mobilised. As we shall see in the next section, the 2000 to 2008 union leadership surprised management by defying the post-1992 *status quo* by reviving certain grassroots-empowering institutions. In China, on the other hand, management retained full discretion over wage setting and rather chose to keep workers motivated by redistributing bonuses at will. This system seemed to have worked considerably well, given that Company X in China has – apart from 2004/05 – grown continuously, but rested on a fragile compromise, whose taxing in the event of an economic downturn would not be cushioned through intermediary channels.

In both cases, however, workers displayed strong grievances with the way performance evaluations were carried out. Though this is impossible to quantify, my observations on the shop floor suggest that the phenomenon of sloppy work and reduced effort was more pronounced in the Chinese case, which is arguably also linked to the organisation of work and the particular training arrangements discussed in the next to sections, which in turn is connected to the technological organisation and time regimes of the production process that are the topic of the following chapter.

3. Work Organisation and Control – A Case of “Lean Production”?

On the surface, work organisation in Mexico and China followed the Company X standard as designed in Germany, bearing a superficial resemblance to lean production philosophies of team work and *kaizen* (also known as Continuous or Continual Improvement Process, CIP).¹³⁸ However, in practice these rules were rarely applied by the book. This was attributable to at least three issues. Firstly, the technological composition of the production process was not particularly well suited to *kaizen* processes, at least in the Chinese case (discussed in the next chapter). In China, and to a lesser degree in Mexico, this was related to the largest sections of the workforce receiving comparably little “polyvalent” training. Thirdly, in both Mexico and China the enterprise thwarted workers’ proactive contribution to *kaizen* processes through insufficient monetary and career incentives and in particular through sustained authoritarian hierarchies. In the following I discuss the teamwork concepts at Company X in China and Mexico and compare them to the role of teams under lean production and in Company X’s system of industrial relations in Germany. I then discuss how workers – and in the Mexican case the union – attempted to (re-)gain control over production, respectively to evade managerial pressure. I argue that a particular stalemate emerged, in which management’s insistence on unilateral control over work rules jeopardised the functionality of lean production principles – on the other hand, for a brief period between 2000 to 2004, it also triggered a certain revival of rank and file activism within the union in Mexico.

Although within the global automotive industry teamwork has been applied in manifold forms (Babson 1995; Kochan et al. 1997; for a conceptual overview on team work see Schaper 2014), in ideal typical terms the team in a lean production paradigm should be the responsible unit not only for the fulfilment of immediate productive operations, but also for task assignment (including job rotation), quality control (including responsibility for mistakes), self-evaluation, and improvements of the production process. This is based on polyvalent task ranges

¹³⁸ It also followed the ISO 9000 norm on quality management. Interview German senior manager Schütte, Pongrac; Company X (Mexico) 1994.

and multi-skilled workers within each team; and a cooperative “client and supplier” ideology between individual workers, teams and managers. Briefly after the publication of *The Machine that Changed the World*, in which these principles were heralded as a win-win situation for both workers and managers (Womack et al. 1990, p.256), critical voices characterised team work under lean production as “management by stress” (Parker & Slaughter 1990). This critique unfolded on the ground that lean production essentially aimed at the reduction of buffers, both in time and personnel; self-management under continuous hierarchical decision making; the increase of peer pressure and competition; an elimination of seniority rights; workers’ proactive role in work intensification; and cooperative unionism (ibid.). All these points of critique apply to both the Mexican and Chinese case.

The implementation of teamwork at Company X’s German plants in the early 1990s unfolded against the backdrop of the IG Metall having developed concepts for teamwork in the mid 1970s that resurfaced in a recast managerial version in the wake of the success of the MIT study (Haipeter 2000, p.173ff.; Jürgens 1997; Roth 1997). Although workers representations in Germany objected to managerial interpretations of *kaizen* and teamwork as primarily a cost-cutting instrument, they took a pro-active stance in installing team concepts and managed to negotiate productivity linkages, team-based wages, and co-determination of personnel and task allocation (Haipeter 2000, p.425ff.). As Jürgens explains:

“In every case in which teamwork has been introduced, the works councils have been involved through plant or company-level agreements, and joint steering groups have been set up to monitor the process. Thus, implementation has been a fully codetermined process.” (Jürgens 1997, p.112)

This contrasts sharply with the Mexican and Chinese cases, where teamwork was introduced and organised in a top-down fashion, either against explicit union resistance as in Mexico in 1992 – or without worker involvement in the gradual enlargement of productive capacity during the 1990s, as in the case of Company

X/JV2.¹³⁹ In both Mexico and China workers were grouped into teams of variable sizes (usually 1:10 or 1:15), depending on the department and workstation. Each team had a skilled worker as a team leader (*facilitador* in Mexico, often also called *portavoz*, “spokesperson”), whose responsibilities were summed up by a Mexican *facilitador* as follows:

“I am essentially a mediator. Very often I have to steer through the demands of the boss and those of the workers without crashing. It is enough to distribute the tasks and ask them to do the job, offering help if they have doubts about how to do it. But there are bosses who are messing with people, yelling: ‘Ey *cabrón*, get to work, this is what you are paid for, you son of a bitch!’.”¹⁴⁰

Unlike in the German plants of Company X, the team leader was in both China and Mexico not elected by the team members. In Mexico, he – all team leaders I saw on the shop floor in Mexico and China were men – was the worker with the highest pay grade in his team, given that he fulfilled certain performance criteria and was approved by the enterprise (Company X (Mexico) 1994). In China advanced workers could enter a pool of potential team leaders if they fulfilled performance criteria and passed examinations, and would be selected by the shop manager if a vacancy opened up (L. Zhang 2014a, p.110). The team leader was accountable to a group leader (*coordinador* in Mexico), who supervised multiple work teams and represented the lowest level of management. In both cases quality circles were formally in place; and workers asked to submit monthly suggestions for process optimisations, which counted towards their regular performance evaluations.¹⁴¹ While this system seemed to work to a certain degree in Mexico – in particular because individual workers would receive extra premiums, such as vacations or conference trips¹⁴² – in the Chinese case, according to both workers and managers the relevance of quality circles was negligible (this was to a large extent the result of particular hiring and training strategies, discussed in section 4. and the

¹³⁹ Insufficient data is available on how this process unfolded at Company X/JV1.

¹⁴⁰ Interview worker Rodrigo.

¹⁴¹ Author’s field notes; see also L. Zhang 2014, p.138; Montiel 2001, p.175ff.

¹⁴² Interview worker David; see also Montiel 2001, p.175ff.

technological structure of the production process, discussed in the following chapter).¹⁴³

The team leader was responsible for supervision and instruction as well as the evaluation of the team members' individual performance – the latter having an immediate effect on wages and promotions. He also had the freedom to re-assign tasks within his group, while higher levels in the hierarchy could re-assign tasks across groups and overrule the decisions of team leaders. Neither in Mexico nor in China was job rotation scheduled by a transparent procedure. It occurred on an informal basis – in China for example in particularly strenuous jobs, such as the installation of the wiring harness¹⁴⁴ – at the discretion of the team leader after consultation with, or orders from, higher level managers. In addition, and against the principle of “waste reduction”, teams at Company X/JV2 were usually staffed with a higher number of workers than required for immediate productive operations, so that there was a certain flexibility for mutual help or substitution in the event of toilet breaks or the like. This was arguably a result of the larger amount of inexperienced workers on the production line (for more details see the section 4.). As German senior manager Pongrac explained:

“If one has a team of 15 workers, not all 15 are productively working on the car. It would rather be 13, 13.5 at max.”¹⁴⁵

Considering the very limited range of tasks ordinary workers were trained for in China – often one particular task for two or even one model only (see section 4.) – more than anything else the purpose of work teams was forming smaller units of control:

“Well, team-work as one knows it from Germany? Not really. There are group leaders, yes, but that there is job rotation, no. There are some consolidated divisions, but the background is not really the same as in Germany, that one says: more task changes to avoid one-sided physical stress. That is not so much the aim,

¹⁴³ Interview (1) German senior manager Pongrac, interview worker Zhang.

¹⁴⁴ Interview German senior manager Näher.

¹⁴⁵ Interview (2) German senior manager Pongrac.

but to have smaller units below the level of the foreman, obliged to report and headed by a group leader. [...] This here is a strict hierarchy.”¹⁴⁶

In the Chinese plants a sense of hierarchy was also facilitated through other measures, such as colour-coded overalls for different employment statuses, or the practice of snappily lining up workers at the beginning of each shift, making them respond in unison to the team leader as he gave out the orders of the day.¹⁴⁷

In sum, in both Mexico and China was teamwork embedded into a strict managerial hierarchy that severely curtailed autonomous decision-making within the teams. As we will see in the following, Pries’ (1993) concern that the unilateralism of the 1992 transformation could jeopardise lean production principles did indeed materialise – whereas teamwork in the Chinese case was distorted to such an extent that it becomes doubtful to speak of “lean” production at all.

3.1. Managerial Resilience Against Grassroots and Union Pressure

The hierarchical work organisation in both China and Mexico did not remain uncontested. Particularly in the Mexican case did workers and the union attempt to re-establish immediate, respectively institutionalised control over day-to-day work organisation. In China more subtle forms of evasion persisted amongst workers, while the union sided with management and focussed its activities on productivity increases and cultural events. In neither case did these forms of agency induce significant institutional change, indicating that unilateral command over labour formed the hard core of managerial strategies in both cases. This implied, on the other hand, that Company X in both cases chose to operate under conditions of persistent discontent and pressure from below and refrained from installing union- or other measures that could function as safety valves. In the following I will demonstrate how this constellation resulted in a stalemate

¹⁴⁶ Interview (1) German senior manager Pongrac.

¹⁴⁷ Author’s field notes.

between management and workers regarding the application and exercise of work rules on the shop floor – which made the institutions designed to govern these relations largely dysfunctional. To exemplify this, I will review a significant episode of union activity under the 2000-2008 central committee in Mexico, contrast it to the role of the Chinese union and then discuss workers' coping strategies with shop-floor authoritarianism.

In 2000 a new central committee was elected at Company X in Mexico that began to challenge managerial decision-making and reinstate some of the intra-union institutions lost in 1992. Though its vision was not particularly radical, the scant margin of the electoral result¹⁴⁸ – as well as the behaviour of the enterprise in the collective contract revisions of 2000 – induced the central committee to convoke general and divisional assemblies, consult the rank and file during negotiations with the enterprise, distribute information and follow an open-door policy. When the new committee took office, it recognised the discrepancy between the post-1992 unilateral institutionalisation of work rules, and the failed adaptation of workers' behaviour. What it proposed was a more inclusive co-determination, modelled after the experience of the German IG Metall, with which the new committee had regular exchanges.¹⁴⁹ Alejandro, the general secretary of the 2000-2008 central committees remembered:

“In 2000 and 2004 [the two times when he was elected general secretary] there was still strong resistance against this new system, because it was imposed; because everything followed the line of management, with very little union participation. We intended to do things differently in 2000, thinking that if the enterprise has embarked on this journey and cannot turn back, we might have to follow it – but we thought the results would be better if workers were more involved. And the measure to involve workers properly is to pay them for their efforts in a productivity-based remuneration system.¹⁵⁰ Company X never wanted

¹⁴⁸ The election was characterised by a large number of competing electoral platforms, which spread the votes, meaning that the new committee only won by a margin of about 200 votes.

¹⁴⁹ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

¹⁵⁰ The union proposed more autonomy and union control for work teams and the introduction of productivity bonuses in exchange for relaxed overtime regulations and compliance with production targets (Espinal Betanzo 2015, p.205).

to enter this debate, to develop a programme through the union, even if it meant that the enterprise retained its plans and the union simply improved it. The enterprise in Mexico has this idea of subordination, not of cooperation; it thinks that the worker has to obey, whatever the actual result. [...] If you allow me to repeat this, not in a single moment has Company X involved the union in these cases. It operates in a unilateral fashion – and that works, but what has always remained is a state of inconformity amongst the workers.”¹⁵¹

The union essentially signalled the enterprise a cooperative stance in work organisation, which might have provided management with more legitimacy amongst the workforce, an organisational buffer in times of intensified grassroots pressure, and more generally a vehicle to establish a more functional lean production system – but its advances were met with little managerial interest. This became immediately apparent in the collective contract negotiations of 2000, which unintentionally catalysed the revival of “grassroots-friendly” union politics. In the negotiations the union demanded more control over work rules and a substantial wage increase. When the enterprise responded with nothing but a monetary offer that only met inflation and was below achievements at other car manufacturers (Montiel 2010, p.287), the union called for a strike.¹⁵² Local authorities immediately declared the strike illegal on the grounds that it was announced one minute after the formal registration deadline. With the events of the 1992 lockout in mind, and still wary of the fact that its support amongst the lower union levels was not unified, the central committee convoked a general assembly:

“The enterprise was to blame, because actually, we had not really thought about returning to calling for all workers to gather in a general assembly – prior to 2000 the union committee simply signed the agreement with the approval of the

¹⁵¹ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

¹⁵² The confrontational course with management began earlier that year over the announcement that the company would share its profits with the workforce – a legal obligation under Mexican law that can however be circumvented by special accounting – but at a level that was far below a realistic reflection of the 48% growth in sales in 1999. In response the new union leadership filed a formal challenge to Company X’s tax returns with the Ministry of Treasury and Public Credit (Juárez Núñez 2006, p.17).

revision committee, ratified it with the authorities and informed the workers of the result. People have always been angry about this procedure and never accepted it. First we thought about doing it the same way. But when the enterprise played this joke on us [of declaring net losses and offering a 9% wage increase], it forced us to call for a strike. And control over the strike passed over to the workers, because we thought they have to participate actively for the strike to be effective. That year provided an important learning effect, because the government declared the strike inexistent [illegal], you remember. So the workers... well we didn't say it so directly... First we called off the strike and asked everyone to resume work; secondly, workers continued actions on the assembly lines – working slow, damaging the cars, and all that – which made the enterprise burst of internal pressure and forced them into renegotiations, driving up their offer to the 18% result. The learning effect was that we avoided the type of large conflict the enterprise is always waiting for.”¹⁵³

That is, the union leadership adjusted its tactics within a more hostile institutional setting, but not by adapting to, but by defying the new institutional parameters designed to govern its behaviour. From the events of 1992, it drew the conclusion that a frontal confrontation with management could backfire easily due to the compliance of the local labour administration with managerial interests. It therefore turned to the tactic of avoiding an officially recognised strike altogether, turning to slowdowns and sabotage, providing management a more fragmented and dispersed target. Rank and file workers were eager to comply, as there was widespread contention after 1992 and, as outlined in the preceding chapter, clandestine groups of workers willing to engage in direct action on the shop floor.¹⁵⁴ The strike ended with an 18% increase in wages and 3% in benefits, as well as the concession to re-enlarge the intermediate union levels by granting each divisional union representative three elected assistants (Juárez Núñez 2006). No substantial amendments to union control over work rules have been made thereafter.

¹⁵³ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

¹⁵⁴ Around the same time there were strikes at three of Company X's suppliers, creating a situation of revived grassroots activism more generally (Juárez Núñez 2006).

Hardly surprising, to workers at Company X's Chinese joint ventures the relevance of the management-controlled unions in the organisation of work – and, in fact, more generally – resided mainly in their absence. To the question of the role of the enterprise union, workers I interviewed either answered along the lines of: “Hm. No idea really”¹⁵⁵; or: “The union is not concerned with workers’ day-to-day work issues, but rather organises some work-external activities.”¹⁵⁶ That most workers either did not know about the existence of the union or perceived it as largely irrelevant confirms other studies on worker-union relations, particularly for automotive manufacturers with SOE involvement (Nichols & Zhao 2010; CLB 2014). Consequently, the union at Company X/JV1 and -/JV2 was of little practical value to workers when dealing with immediate problems on the shop floor:

Would it be an option for you to turn to the union if you have any problem at work?
“Of course not! To put it his way: we have no direct connection to the union.”¹⁵⁷

Workers would rather turn to their team leaders or line-managers if they wanted to see problems on the shop floor addressed – a strategy that was encouraged by the union.¹⁵⁸ That the union was irrelevant to workers does however not mean that it fulfilled no function in production. As indicated in chapter 3, the union saw itself as a co-manager; and to this end it not only organised social events (for example mass weddings for workers at Company X/JV2),¹⁵⁹ or handed out gifts on national holidays, but also held regular skill contests amongst workers with the aim to increase overall productivity. To fulfil its duty to “mobilise workers for an improved participation in production; and to improve labour productivity” for 2013 the union at the Western plant of Company X/JV2 had scheduled 88 of these contests.¹⁶⁰

Correlating with the union in China being dysfunctional and in Mexico – despite its brief moment of grassroots-revitalisation between 2000 and 2004 – unable to

¹⁵⁵ Interview worker Ping.

¹⁵⁶ Interview worker Zhang.

¹⁵⁷ Ibid.

¹⁵⁸ Interviews worker Zhang, Ping, Lun; interview chairman Peng.

¹⁵⁹ Interview (3) senior manager Pongrac.

¹⁶⁰ Interview chairman Qiao.

establish an institutional shift to increasing decision making power of union personnel over work rules, workers sought other ways to deal with the pressure.

A general tendency in the Chinese case was a reduction of effort. Judging by my observations on the shop floor, interviews with workers and evaluation of online chat rooms in China, workers hardly displayed any enthusiasm at work – the general tenor was that the work was strenuous and did not offer much of a career perspective.¹⁶¹ Instead of improving productivity and reducing buffers, I observed that workers used any possible second for a chat with their colleagues or even a quick glimpse at their smartphones, when their supervisor was not looking.¹⁶² This seems to be consistent with what Zhang observed in multiple automotive companies in China, namely that workers ridiculed the continuous improvement process by submitted nonsensical suggestions, refused work or other activities exceeding the contractual or customary minimum (L. Zhang 2014a, p.138ff.)

In Mexico, my interviewees criticised the particular work organisation for two basic reasons: a more general sense of increasing competition, and a more specific frustration with the responsibility for job rotation and alteration of work rules being at the sole discretion of the enterprise. Worker Arturo explained:

“Before 92 the organisation of labour was more of a Fordist kind: you put a screw in, and your boss would not tell you ‘But do it well, because your colleague is doing it much better’. At the root of these organisational changes within the plant is the ideological emphasis on entrepreneurial competitiveness.”¹⁶³

Competition between individual workers and teams had clearly increased after 1992, but a functional team required at least a minimal sense of collective cohesion. As worker Santiago explained, management therefore sought measures to strike a balance between functionality and control:

¹⁶¹ Interviews workers Lun, Ping, Zhang, Xun and Liu.

¹⁶² Author’s field notes.

¹⁶³ Interview worker Arturo.

“It creates a kind of brotherhood. [...] The competition amongst the groups becomes one where one protects each other. [...] They try to break your sentiment of belonging, by making you part of a group but preventing the formation of a proper team: ‘They forced this guy upon us; we don’t like this *cabrón*; I can’t stand this *cabrón’s* face’ etc. You know, they suddenly put you there, change your group, change your shift, change your tasks.”¹⁶⁴

Reassigning workers was used as a strategic weapon to punish workers or teams in Mexico. Worker’s complaints therefore not only concerned the actual issue of being reassigned, but also the unilateral and authoritarian form under which it occurred. My interviewees reported multiple incidents in which silent dissent turned into open refusal, when managers violated what workers perceived as fair treatment in the already fragile and tense situation. Essentially, these perceptions were grounded in workers’ spontaneous task allocation amongst themselves, which did not follow principles of polyvalent tasks and job rotation, but rather a mutually agreed division of labour. The following anecdote, told by the same worker, is worth quoting at length, also for its entertaining form of “informing qua storytelling”, which provides a bloomy but necessary context to the factual issues at stake; and which was very common amongst my interviewees in Mexico:

“Those specialists, those who adjust and repair the press, had a boss – he died – who, even though he had a bad temper and was a fucking despot, at the end of the day protected his people. Every time they wanted to reassign his people, he said – even to the director – ‘You know what? I know why I have this and this person here at that post, and if they fail in their service, let me know; but if not, do not touch them, they are my people, OK?’ He defended them against anyone; and he came over every weekend to hang out with those who worked overtime. That is, in a certain way his attitude was ‘Well, yes, I yell at them, I boss them around, but I give them the chance [to earn money]’. Because many of them make, or rather made, good money by working a lot of overtime. So this mate boasted that he drank two six-packs, 12 cans of beer, for lunch. He had a belly, I am telling you, it was huge; he had such an enormous belly – horrible! [laughing] We saw him and

¹⁶⁴ Interview worker Santiago.

thought: ‘This *cabrón* is prone to get all kinds of diseases!’ Infarct, diabetes, whatever, right? He was taking it too far with everything, right? He used to suddenly fall asleep – in fact, he crashed into the plant once, because he fell asleep behind the wheel – so you can imagine the severe condition of his health. The fact is that ultimately he had a respiratory arrest and kicked the bucket. So they brought in a Brazilian, who did not have the same attitude: ‘Whatever you want, we do it, we do it!’ He completely, radically changed what they were accustomed to in the work area, which is made up of 100, 110 people. So, they did not like this, particularly that he cut their overtime very drastically. He also began to remove people from their workstations, while they were used to a manner of ‘I dedicate myself to this, and someone else will do that.’ Suddenly one person was supposed to attend to two, three things, so finally they said: ‘You know what!?’ – and they organised themselves, without going to the union, and suddenly said: ‘We will not do anymore overtime.’ So they began to abstain from overtime, all of them. It developed to the point that the boss... they put down everything in writing and submitted it to the board of directors; they did a lot of things, actually. The bottom line is that they demanded the boss’s head and that they were on the brink of blowing it off. [...] But he was like: ‘No, wait *muchachos*, calm down, we will do it like this.’ And he doubled the number of workers – but that was only temporary and he began to fuck with them again, removing and relocating the people who were the ‘leaders’ of the group. Actually, just today the union has its monthly meeting in which they negotiate this and try to reach some accord.”¹⁶⁵

Multiple crucial issues can be pointed out in this anecdote – the violation of informal agreements triggering open conflict; the ambivalent role of bringing in an outside manager, who was less hesitant to induce changes, but also more likely to face dissent; the use of overtime as a strategic weapon; and the direct form of action outside the union – but the crucial point is that because management chose to sustain a primacy of hierarchy and authority, the institution of teamwork in Mexico aggravated workers’ tensions with management, rather than incentivising their self-management. In both Mexico and China there was a constant low-intensity confrontation between management and workers, in which the former

¹⁶⁵ Interview worker Santiago

tried to retain as much direct control over the production process as possible and the latter embraced evasive or confrontational tactics to alleviate control and pressure from above.

In sum, the recurring back and forth between managerial authoritarianism and workers' strategies of compliance, evasion, or resistance were the determining factor in how institutions of teamwork and *kaizen* actually materialised. In practice these interactions counteracted the ideal typical institutional effects and resulted in a blocking stalemate, in which neither side was able to implement their respective ideas in a new institutional matrix. This also implies that it is rather dubious if labour relations at Company X in Mexico and China – but particularly at the latter – can meaningfully be termed “lean”. They were, in effect, rather hierarchical, unilaterally top-down organised and offered little participation or autonomous work organisation to workers.

4. Resilience and “Exit” Strategies, Hiring and Training

Some workers like us may quit without a word's notice, but the formal workers at Company X/JV1 hardly do this. [...] More than half of us have left; and they usually leave after receiving their half-year bonus.

– Migrant dispatch worker Xun, Company X/JV1

This section explores the relationship between workers' choices to stay with or leave the factory when they are disaffected and Company X's hiring practices and training schemes. I argue that the higher likeliness of one particular segment of the workforce to opt for an exit strategy resulted in Company X in China developing a selective hiring and training policy. I first discuss workers' choices for resilience or exit in both Mexico and China, and then engage Company X's responses.

Across all employment statuses of my blue-collar interviewees in both Mexico and China, leaving the factory was a strategy thought feasible exclusively by Chinese

migrant dispatch workers. Although dispatch workers in China essentially shared the same working conditions and salaries – irrespective of their *hukou*¹⁶⁶ – different from local urban workers, rural-to-urban migrants still had access to a plot of land in their home region. In Mexico on the other hand, workers were almost exclusively locals, and even when they lived in the surrounding rural areas and had access to land, would not deem voluntarily leaving the factory a viable option. Temporary workers, however, developed yet another strategy to make the most of their precarious situation by utilising Company X's training schemes in their favour.

Generally speaking for the Chinese case, the socioeconomic gap between migrant and non-migrant workers – though still substantial – has decreased over the last decade or so (Li 2013). Compared to the beginning of the millennium, migrant workers today have, at least in theory (CLB 2013), increasingly better access to social infrastructure (Gransow & Zhou 2010; Schnack 2010) and insurance schemes – though with around 45 million workers being covered by basic pension, 50 million by basic healthcare, and 71 million by workplace injury insurance, numbers are still low if compared to the total migrant workforce of 269 million in 2013 (Li & Peng 2015, p.219; National Bureau of Statistics of China 2014). To be sure, migrant workers still agglomerate in low paid, low skilled and low status jobs (Li 2013); and despite a relaxation of *hukou*-regulations in small and medium cities, restrictions on residential rights in large Chinese cities remain strong (Z. Zhang 2014). But – running counter to central and local governmental plans to foster the development of agribusiness (Andreas & Zhan 2015) – with the benefits of an urban *hukou* declining relative to the safety net provided by persisting *usufruct* rights for rural residents, migrant workers seem increasingly unwilling to trade in their land titles for urban residency (ibid., Li & Liu 2014).

These developments put the rationale of local and migrant dispatch workers to stay with or leave Company X into a perspective quite different from narratives of

¹⁶⁶ Author's field notes.

an increased vulnerability of Chinese migrant workers in urban job markets:¹⁶⁷ migrant workers were not so much “pushed” out of the factory by discriminating working conditions, pay or career options, but “pulled” by the at least temporarily viable option of a return to the countryside – while locals had no alternative but to compete in the urban labour market (with most jobs available to them offering worse conditions than Company X). Most local workers I spoke to at Company X/JV1 therefore intended to do their job for a longer period of time. However, their aspirations differed according to their employment status. A high-skilled worker with a university degree working in quality control desired to ascend to the ranks of management;¹⁶⁸ a female worker with ten years of work experience in the press shop had just acquired her long-awaited transferral to an office job and could imagine continuing there;¹⁶⁹ a local dispatch worker’s aspiration was oriented at the medium term of gaining a permanent contract.¹⁷⁰ Indicative for local and migrant workers’ different stance towards leaving the factory are also their following responses to the question of how they would deal with work-related pressure and grievances:

Migrant dispatch worker Xun:

“If we could get promoted we would maybe work here for longer, but if there are no improvements in the near future, we will consider quitting. As this job does not develop our professional skills, quitting won’t do us any harm.”¹⁷¹

Local dispatch worker Ping:

“Self-adjustment.”¹⁷²

¹⁶⁷ Labour ethnographic studies since the late 1990s have emphasised the complexity of Chinese migrant workers’ coping strategies and everyday struggles to counter grand narratives of victimhood and passivity in light of discriminatory state policies and capitalist exploitation (Lee 1998; Pun 2005; C. K.-C. Chan 2010). However, the latter notions resurfaced in overtones of analyses on the post-2008 crisis, with migrant workers being laid-off on a large scale (e.g. K. W. Chan 2010).

¹⁶⁸ Interview worker Zhang.

¹⁶⁹ Interview worker Lun; Strategies like this also explain the higher age of indirect workers. Not only was the managerial preference for young, able-bodied workers not that pronounced when it came to administrative and service jobs (Interview German senior manager Bohnert), but older workers often sought in-house transferral into non-manual jobs after a few years on the assembly line.

¹⁷⁰ Interview dispatch worker Ping.

¹⁷¹ Interview migrant dispatch workers Lun and Liu

Contrasting with insufficient skill development as a reason to quit the factory, temporary workers in Mexico embraced the peculiar strategy of making use of Company X's training programmes, with the aim of acquiring as many skills as possible before an already anticipated dismissal. I met independent mechanics, workers in the supply chain and – probably the oddest encounter – a taxi driver who had been hired as a production worker for the sole purpose of playing for Company X's enterprise football team, all of whom had (in part successfully) attempted to enrol in special training courses offered by Company X during employment periods of one or more years as *eventuales*.¹⁷³

While temporary/dispatch workers in China and Mexico therefore devised alternative strategies of reproduction to deal with voluntary or involuntary quitting, permanent/formal workers and local dispatch workers chose – or had no better options than – to stay with Company X. Most of them were well aware that alternative employment in their area and line of trade meant worse conditions. This notion was particularly pronounced in Mexico, where higher age, mortgages/home ownership and family obligations limited mobility, so that quitting would most likely result in precarious self-employment or a job with one of Company X's many low-wage suppliers. Worker Santiago explained:

“Actually, for some reason people usually do not leave Company X. Not like at the suppliers, where they are more like: ‘Pah, fuck your mothers and off I go; better to that one that pays ten pesos more.’ [...] Generally, people stay – they suffer, protest and whatever, they throw a tantrum, but that’s about it. This is what happens to most of us, and we don’t really agree – but either way, it has become a way of life; that’s how it is.”¹⁷⁴

In sum, Chinese migrant dispatch workers mobilised resources outside the labour process – their access to alternative sources of income – to increase their agentic capacity and make “exit” a viable strategy. Two implications can be drawn from this. First, we can assume *ex negativo* that in the absence of viable exit options the

¹⁷² Interview dispatch worker Ping.

¹⁷³ Author's field notes.

¹⁷⁴ Interview worker Santiago.

agency of other groups of workers moved on a scale from passive endurance to open resistance, with manifold hybrid forms in between. Second, the existence of an aggregate labour shortage in China did not materialise at Company X. Instead Company X's continuously expanded the hiring of new workers, and even made a virtue of high turnover rates amongst sections of its workforce (discussed in chapter 8). That migrant dispatch workers were however prone to choose an exit strategy left its mark on Company X's hiring strategies and training schemes in China.

4.1. Hiring Practices

Workers' particular coping strategies in China and Mexico gave management different options to flexibilise hiring practices. In Mexico, Company X gradually raised the entry criteria for permanent workers and mainly used its pool of temporary workers as a buffer in times of low orders. In China on the other hand, Company X had more discretion and used short-term contracts, dispatch workers, and, in the case of Company X/JV2, student interns. I briefly discuss the hiring practices in Mexico and China, before moving to an analysis of training programmes in both places.

Historically it had never been easy to get hired by Company X in Mexico, due to low labour turnover amongst permanent workers and the high degree of employment security provided by the collective contract. Pre-1992 it required the recommendation of a worker within Company X – usually a relative – and several knowledge and skill tests, as well as a medical examination to enter the factory (Montiel 1991, p.83). An older worker remembered:

“It is very difficult to get hired by Company X. It took me four months, in which I practically slept in front of the union office [where the hiring takes place] – I arrived at seven in the morning and stayed until seven in the evening, with my bag of sandwiches, until they finally hired me.”¹⁷⁵

¹⁷⁵ Interview worker Rodrigo.

Though personal ties are still relevant today, formal barriers have increased through tougher entrance examinations (Espinal Betanzo 2015, p.93). Essentially, Company X adjusts the size of the workforce through its pool of *eventuales*, which is periodically drained in periods of low orders;¹⁷⁶ and since 1992 through the outsourcing of work that does not immediately concern “normal and ordinary production activities” (Clause 13, Collective Contract 2010-2012), which has caused a lot of discontent amongst unionised workers. However, in addition to hiring external personnel, according to a team leader, Company X had embraced yet a new strategy in 2012, in order to circumvent hiring workers under the Collective Contract:

“There is a new category of worker now, which you could call outsourced, but within the enterprise. These workers are outside the union and the collective contract, but directly hired by Company X. They are called ‘Personal Services’. [...] These are workers who are not directly involved in production. [...] It is a bit like money laundering, but ‘worker laundering’: Company X hires security personnel, having them work for two, three months at the gates. But then they decide they need more personnel in production, so they relocate security staff to the production line. [...] This is a totally new system, introduced this summer. The union closes its eyes and does not want to talk about the issue.”¹⁷⁷

That is, employment security and resilience of permanent workers induced Company X in Mexico to either make extensive use of existing institutions that allowed for flexibility (the *eventuales*), introduced new or extended existing institutions (outsourcing after 1992), or, as observations by worker Rodrigo point out, circumvent existing institutions (“worker laundering”).

In China, on the other hand Company X flexibilised its hiring practices through subjecting formal contracts to periodic renewal and by hiring new young entrants through labour agencies. Recalling the data presented in Table 1 (in chapter 3)

¹⁷⁶ For example, facing a slump in US demand in 2001/02, Company X in Mexico laid off 1,250 *eventuales* (Juárez Núñez 2006, p.13).

¹⁷⁷ Interview worker Rodrigo.

Company X/JV2's Northern plant was officially the only one that employed dispatch workers.¹⁷⁸ However, I interviewed various workers at Company X/JV1, who had contracts with a labour agency. They were both locals and migrants, the latter usually coming in regional cohorts – for example, most of my interviewees were from Gansu – which was a result of staff of the labour agency paying recruitment visits to the workers' technical colleges at their places of origin. Permanency was as a rule only offered to those who already held a local *hukou*.¹⁷⁹ The confusion and statistical omission in the company data is most likely the result of the labour agency being an in-house company owned by JV1 – on paper it thus appeared as if Company X/JV1 employed these workers directly.¹⁸⁰ Company X/JV2 not only hired dispatch workers, but also relied on large amounts of student interns. The higher likeliness of migrant dispatch workers to leave the factory, and the large amount of short-term student interns employed at Company X/JV2, resulted in particular training schemes, which will be the focus of the following section.

4.2. Training

Qualification measures should bring success to the organisation and realise the value of our employees. That means we are interested in our employees identifying with the enterprise, so that they really make their whole labour power available to the enterprise.

– German senior manager Vogt, Company X/JV2

¹⁷⁸ A German senior manager at Company X/JV1's Eastern plant for example claimed that he had never heard of the hiring of dispatch workers. Interview German senior manager Näher. His superior however admitted that dispatch workers were hired for particular assembly tasks, e.g. cockpit assembly. Interview German senior manager Rordorf.

¹⁷⁹ Interviews worker Lun, migrant dispatch workers Xun and Liu, dispatch worker Ping. An exception was made at Company X/JV2 after the Sichuan earthquake of 2008, when workers from affected areas in Sichuan and Shandong were hired on permanent contracts – indicating that the company was responsive to certain political demands passed on through the central state owned Chinese JV partner; Interview chairman Qiao.

¹⁸⁰ Interviews migrant dispatch workers Xun and Liu, dispatch worker Ping; author's field notes.

In both Mexico and China Company X was confronted with an incompatibility of the respective national education systems and demanded skills on the shop floor – and in both cases it adopted training schemes broadly modelled after the experience of its operations in Germany. In Mexico, training was formally regulated through the collective contract. As a result of its earlier construction date and the incommensurability between the Mexican (technical) education system and on-the-job requirements, the Mexican plant had established its own on-the-job training processes and a vocational school that offered an extensive range of advanced training, from technical skills to language programmes. In the latter Company X trained specialists, such as electricians or mechatronic technicians, in an 80% technical, 20% theoretical scheme adopted from the German dual education system. In 2012 Company X had extended its facilities by another large training centre for workers to be employed at newly opened production sites (for more detail see chapter 8).¹⁸¹ Students of the vocational school were partly trained for Company X's own demand in high-skilled workers, and partly for the supply chain or other car manufacturers in Mexico. However, while the gained skills would be transferrable at the upscale plant, manifest in accredited degrees, Company X's main plant issues certificates that were only recognised by Company X and certain suppliers.¹⁸²

There were essentially two options to become a specialist worker at Company X in Mexico. New entrants could be hired as specialists if they were graduates from a (preferably Company X's) vocational school – which meant they would have enrolled in a respective institution after completing their secondary education. To this end Company X offered scholarships to graduates of (the better) high schools in the area. Ordinary workers on the other hand were usually required to have a high school degree and received a basic training on the job, under rules stipulated in the Collective Contract. However, if they received good performance evaluations and qualified for a company-internal scholarship that enrolled them in the vocational school, they could train to become a specialist concurrent with their (reduced) participation in normal productive operations. Upon completion of their

¹⁸¹ Author's field notes.

¹⁸² I thank Judith Wiemann for clarifying this point.

training their employment status would change to *empleados de confianza*. Workers could also access non-comprehensive individual courses if they gained particular premiums through good work performance.¹⁸³

In China, Company X not established its own vocational schools, but hired graduates from Chinese polytechnic high schools and colleges and subjected them to in-house training processes. Research on these issues has been carried out only very recently, with the best available study being Jürgens and Krzywdzinski (2015), and certain aspects being re-constructible from Zhang (2014) and Lühje et al. (2013). Jürgens and Krzywdzinski start from the puzzle that industrial upgrading requires higher workers with higher skill levels, but that Chinese labour market institutions incentivise the hiring of temporary and dispatch workers, which in turn suggests low investments in training of ordinary workers. The finding that automakers in China have installed comprehensive training schemes should therefore be seen as rather surprising. Jürgens and Krzywdzinski's main argument is that the nature of a lean production system – which they see in place at Company X in China – requires polyvalently skilled ordinary workers due to their participation in *kaizen* processes: “Segmentation of training provision and career paths on the shop floor is dysfunctional in this situation.” (Jürgens & Krzywdzinski 2015, p.1222)

This argument is supplemented with further qualifications, some of which are confirmed by my findings. For example, German managers at Company X/JV2 underlined that the existence of training schemes was, as Jürgens and Krzywdzinski argue, a response to the general shortage of skilled personnel. In fact, at nearly every plant I visited it was lamented that workers were insufficiently trained and qualified before entering Company X:

“The lads here come either straight from the street or from university and have never held a wrench in their life.”¹⁸⁴

¹⁸³ Interview worker David.

¹⁸⁴ Interview German senior manager Vogt.

With the foundation of a new subsidiary in 2005, German managerial personnel were therefore dispatched to Company X/JV2 to design a training system based on in-house training stations. Separate rooms on the shop floor of the respective departments should allow for training in basic skills; and in advanced skills where a “professional training room” was available. Expert training was for example available in the paint shop of the Western plant;¹⁸⁵ and the training range offered in the Northern main plant covered product and automation technology, project management, lean training, design, management training and foreign languages.¹⁸⁶

However, apart from the fact that these training schemes were still under construction at the time of my fieldwork – i.e. about four years after Jürgens and Krzywdzinski’s factory visits – my findings contradict three central arguments by the aforementioned. Firstly, as suggested in sections 2. and 3. the aspects of a lean system that would require workers’ pro-active involvement in production improvements were either only partially applied at Company X in China and/or dysfunctional due to a lack of incentives for workers to participate. Active participation beyond following job instructions, as well as high skill levels, was demanded from a rather small section of the workforce only. Secondly and consequently, rather than across-the-board general training, which Jürgens and Krzywdzinski describe, my findings suggest that even where the respective facilities existed, training was in fact limited to a particular stratum of the workforce within a highly segmented internal labour market. Rather than by a lean production system, training requirements were driven by Company X’s rapid expansion in China, necessitating a constant intake of new workers, who required differentiated training and conditioning depending on their function in the segmented but integrated flow-production system (this will also be elaborated in chapter 8, where the geographic expansion process is in focus). Third and finally, echoing recent studies on the garment and electronics industry in China (Butollo 2014), there is no necessary connection between industrial upgrading or higher capital intensity and demands for a higher-skilled (and higher-paid) workforce –

¹⁸⁵ Interview (1) German senior manager Pietsch

¹⁸⁶ At Company X/JV1 certain training aspects have been concentrated at particular locations – one of the newer plants in the East, for example, is responsible for all aspects of lean training.

more than that, as I will argue in the following chapter, even the notion of industrial upgrading must be seen as controversial in the Chinese case.

As will be substantiated further with a discussion of the technological aspects of production in the next chapter, because the labour process is strongly Taylorised and the range of models limited, respectively in such high demand that workers might end up with having to fulfil a very limited task range, it is sufficient to train the majority of the workforce only very superficially. All new workers received a basic training in certain motoric functions; the operation of certain tools; techniques to avoid production mistakes; how to fill in operative sheets etc. But for dispatch workers and interns – the former making up about a quarter of the entire workforce, the latter up to a third in certain labour intensive departments¹⁸⁷ – it could be drastically reduced. Dispatch workers at Company X/JV2 were supposed to be trained for two to four weeks before they were successively integrated into regular work teams (which is already rather short), depending on models, particular tasks and learning capacity of the individual worker. In fact, however, their training was often cut short to a few days, before they were used in normal operations.¹⁸⁸ As soon as workers had commenced regular shift work, additional training was limited by team leaders being allocated only a number of workers that allowed them to man their stations for normal operations, but not to release workers for regular training sessions concurrent with production.¹⁸⁹

Basic training was even more reduced for interns, who are not mentioned by Jürgens and Krzywdzinski at all, probably because that hiring practices was not that prevalent in 2009. Ideally, internships should match the students' particular subject. This is however rarely the case. Though, for example, 98% of the graduates of Polytechnic College Y in South China – which, in anticipation of the

¹⁸⁷ The number relies on Zhang (2014a, p.70) and the statement of a German senior manager (Interview (1) German senior manager Pongrac). I could however not clarify how interns were recorded in the company statistics presented in chapter 3, section 1, i.e. if they were included in the figures of dispatch workers or simply not listed at all – and therefore to be added to the total number of employees.

¹⁸⁸ Interviews migrant dispatch workers Xun and Liu, German senior manager Pongrac (1)

¹⁸⁹ The status of the apprentice (*Auszubildende*) in the German dual training system, in contrast, denotes that workers in training should not count as full productive workers when allocated to regular work teams.

newly opening Southern plant sent its students on internships to the 3000km distant Northern main plant – would ultimately find a job, only about half of them would later work in their field of study. Similarly, the training they received during their internships was not specific to their degrees – at Company X/JV2 they were used wherever production demanded it.¹⁹⁰ As German senior manager Pongrac emphasised, the low practical skill level and work experience of these interns was reflected by assigning them easily learnable task on the assembly line:

“The interns are students, young people, who, let’s say, attach some parts in the body shop, requiring a training time of one hour or so. Or if some welding is required, that’s something I might be able to teach to someone easily too.”¹⁹¹

Team leaders and other supervisory personnel closely monitored the interns, to make out particularly talented workers, who might then be offered incentives to stay at Company X/JV2 for longer, i.e. to be hired after graduation from the vocational school. Incentives could for example be a scholarship for a higher education programme, if the worker agreed to return to Company X/JV2 after graduating from the respective, usually engineering, programme. A German manager estimated that between 30 to 35% of the Chinese engineers at Company X/JV2 had followed this career track.¹⁹²

That is, *pace* Jürgens and Krzywdzinski, basic training was only formally applied across the board, but in a comprehensive form reserved for formal workers.¹⁹³ Dispatch workers and interns only received training as required for immediate production. As a German senior manager simply put it: “it is learning by doing.”¹⁹⁴ The discrepancy interns experienced between their education and skills demanded on the job was replicated on higher levels as well. Formal worker Lun at Company X/JV1 explained:

¹⁹⁰ Interview teacher Qian.

¹⁹¹ Interview (2) German senior manager Pongrac.

¹⁹² Interview German senior manager Vogt.

¹⁹³ Jürgens and Krzywdzinski’s findings adequately describe the training and recruitment processes at Company X in their functions, but these are insufficiently contrasted to the realities on the shop floor.

¹⁹⁴ Interview (1) German senior manager Pongrac.

“What we do is a technical job that has nothing to do with our college degree. A senior worker might not have been to college, but his skill could be unparalleled in the team.”¹⁹⁵

Instead of following a career related to their degrees, workers undergoing training at Company X/JV2 could in theory earn certificates in accordance with official occupational certification schemes; and follow particular career paths resembling that of a German *Facharbeiter*, i.e. of a technical expert (described in detail in Jürgens and Krzywdzinski 2015, p.1210ff.; Zhang 2014, chap. 4). Naturally, advanced training was limited to smaller sections of the workforce, which Jürgens and Krzywdzinski note as well (2015, p.1214ff.). My interviews with managers and workers suggest that both permanent and dispatch workers with particular responsibilities were considered for advanced training – operating special machinery, quality control, team leaders etc. However, even these advanced training processes focussed on specific techniques and skills and did not qualify the worker beyond the particular responsibilities of his or her immediate function in the production process.¹⁹⁶ Team leaders for example received a lean training that included “5S” management systems and “3P” production techniques.¹⁹⁷ The main components of the lean training were however related to practical aspects: how to fill in a malfunction report, stock up parts, repair paint damages etc. That is, aspects of lean production existed on the surface, but contrasted with the realities of a Taylorist production system, which negated the necessity of polyvalent training. As German senior manager Bohnert argued:

¹⁹⁵ Interview worker Lun.

¹⁹⁶ In areas that demanded higher skills, Company X mainly relied on on-the-job work experience and reserved these areas for senior workers. German senior manager Pongrac explained: “Workers who work in final quality control are very experienced. [...] Usually the same kinds of errors occur; and the workers know exactly what they are looking for. Singular errors are very rare. That also demands that I cannot exchange these workers every day. Those who do the reworking have so much experience, so much skill. They are not exchanged that quickly, but those who are exchanged are the ones that work cycle times, the ones on the assembly line.” Interview (2) German senior manager Pongrac.

¹⁹⁷ 5S is usually translated as “Sort, Straighten, Shine, Standardise, Sustain”, summing up catchphrases to teach workers an orderly, clean, safe and time-efficient organisation and maintenance of their individual workplace and tools. 3P is a part of “lean” philosophy usually referred to as “Production, Preparation, Process” and based on the idea that employees from different departments/occupations (sometimes including clients/customers) convene to develop product improvements and innovations concurrent with the production process.

“Where a German worker could perform ten tasks in one cycle, a Chinese worker can maybe do two.”¹⁹⁸

It is therefore true, as Jürgens and Krzywdzinski argue, that in contrast to human capital theory, Company X in China did not solely rely on hiring workers who have acquired their general skills outside the company, but instead developed its internal training practices – both for specialists, and ordinary workers. However, in practice this general training was not applied across the board for new entrants to the factory, but strategically limited to sections of the workforce designated for longer-term employment, though interestingly, this did not clearly correspond to the formal/dispatch worker divide. Those receiving more limited training were *migrant* dispatch workers and interns. Moreover, and more generally, the content of basic training schemes was not comprehensive, but geared towards the demanded productive operations. This allowed for the reduction of training times for workers designated for simpler operations. In other words, Company X in both cases, but particularly in China, tried to keep training limited for those sections of the workforce that were most likely to leave voluntarily and/or functioned as a buffer in times of economic downswings.¹⁹⁹

In contrast to both the assumption that “industrial upgrading” leads to higher skill requirements and the contrasting argument of increasing automation and de-skilling (Braverman 1974; for a critical debate, see Wood 1982), the logically most likely implication of industrial upgrading remains a segmentation between skilled core workers and low-skilled peripheral (temporary) workers. As I have argued, in the Chinese case the latter is not simply a consequence of the techno-

¹⁹⁸ Interview German senior manager Bohnert.

¹⁹⁹ There was also another rationale behind selective training, although this was apparently more pronounced in the past: labour piracy. That qualified workers were lured away by other companies had been a prevalent problem in the automotive industry in China. Apart from a “gentlemen’s agreement” (Interview (1) German senior manager Pongrac) amongst German auto-producers to abandon this practice, limiting the training of migrant dispatch workers and interns to the immediate tasks fulfilled by each individual worker and reserving advanced training to a smaller section of the core workforce with better pay and working conditions helped to circumvent this problem.

organisational aspects of production, but (also) of those sections of the workforce that are the most likely to “exit” the factory receiving less training.

5. Concluding Remarks

Superficially the institutions governing the labour process in China and Mexico show a high degree of convergence. In both cases there are collective contracts, meritocratic remuneration systems, teamwork and comprehensive training schemes in place. Similarly, the complaints that workers have converge to the largest degree, exceptions being the role of the union in Mexico, and housing, food and transportation in China. In practice, however, the governing institutions performed differently, depending on the ability of managers and workers to mobilise these or other resources to their advantage – or, in other words, due to different power relations between capital and labour.

I have argued that in the case of contract relations and remuneration systems divergence between Mexico and China was attributable to certain path dependencies and conditions at the moment of the introduction of new institutions. In Mexico Company X sought to impose a unilateral strategy after 1992, but although it introduced meritocratic remuneration and polyvalent teamwork it could not entirely do away with the relevance of the union in wage setting and collective contract revisions. On the one hand it would have radically broken with overall Mexican labour law. On the other hand, the strong grassroots resistance against the introduction of a new collective contract and new work rules in the 1992 conflict indicated that an elimination of the union could have further jeopardised the compliance of the workforce to an unsustainable degree. A viable option for management under the given conditions was therefore to curtail union influence in certain areas – influence over work rules and overall rank and file militancy – but retain its influence on routine operations, such as collective bargaining and wage setting. That the enterprise left regular union elections in place backfired when the strike under the central committee elected in 2000 catalysed the resurgence of grassroots activism.

The real working of meritocratic wage systems in Mexico is retraceable to the power relations and process of relational agency resulting in the post-1992 accord. Workers in Mexico have more room for manoeuvre than in China, albeit within parameters strictly defined by union statutes and politics. How they mobilise these depends on union leadership and pressure from below. The decisions the 2000-2008 committee made on the revision of the wage grades, and its co-determinist stance towards management indicate the direction in which the union intended to channel this agency. In other words, in 2000 the union was not reborn as a neutral vehicle of grassroots activism, but it followed a particular agenda – for which it was arguably voted into office. The implication is that an organisation of the production process based on stronger involvement of a trade union is ultimately more beneficial to workers, as it might also lead to increasing compliance of the union with managerial concerns rather than with working class politics.

At Company X in China on the other hand, this union buffer did not exist – or was dysfunctional – and the institutions governing shop-floor relations were much more geared towards *ad hoc* interventions in cases of various forms of worker agency. Some of these *ad hoc* mechanisms, such as double wages and bonuses – arguably themselves institutions due to the regularity in their occurrence – depended on continuous economic expansion and could easily jeopardise workers' compliance with production targets and rules governing the shop floor in cases of economic downswings. The likeliness of conflict in these cases gains plausibility not only because of the absence of channel mechanisms for workers' grievances, but also due to the subcutaneous discontent amongst the workforce.

I have further demonstrated that institution of teamwork and lean principles diverged rather far from both their ideal-typical form and their application in Germany, due to retained top-down hierarchies and managerial authoritarianism. This managerial behaviour was intentional and jeopardised the functionality of teamwork. In Mexico the union under the 2000 to 2008 committee made a proactive attempt to establish a more functional framework for the application of teamwork, which was however rejected by management. In China, in the absence of such an influence, teams were hardly more than smaller administrative units in

a strict hierarchy – begging the question of why they were introduced at all. In effect work organisation in both cases converged in design and practice – but ironically, the same institutions were in both cases similarly dysfunctional. Similar forms of managerial agency triggered similar responses amongst the workforce – mainly a reduction of effort, although this was more pronounced in China than in Mexico – which again reinforced managerial authoritarianism and the overall dysfunctionality of teamwork. A crucial aspect in which teamwork diverged between Mexico and China was however that workers in Mexico were indeed assigned polyvalent tasks – for which they had the necessary skills and training, given the higher average age and work experience of the workforce. However, workers were rather critical of performing a broader variety of tasks, as these usually involved job rotation that was assigned from above – and which workers openly resisted. In China on the other hand workers fulfilled a smaller variety of tasks, linked to less comprehensive training, less work experience, and technological aspects of the production process (to be discussed in the next chapter).

In the case of Company X's hiring and training practices I have demonstrated that the Mexican and Chinese cases diverge, as in the latter training is strategically curtailed for those sections of the workforce, who are prone to exit from the factory – and that this choice depends on workers' mobilising alternative sources of income, respectively strategies for reproduction. In comparison to the Mexican case training in China is generally less comprehensive, which is related to the Taylorist organisation of production correlating with the technological composition of the production process that will be under scrutiny in the following chapter.

Overall, I have argued that processes of relational agency have a demonstrable impact where the implementation of certain institutions leads capital and labour to adopt practical responses that are unintended by the institutional design – i.e. deviant behaviour. Where processes of relational agency have induced institutional change or alteration, this notion can be extended to the argument that relational agency not only hampers or forestalls the functionality of institutions,

but also proactively creates new institutional responses. This notion applied particularly to cataclysmic ruptures, as the 1992 conflict, but could also be observed in, for example, the adaptation of training schemes at Company X/JV2 in China to the exit strategies of migrant dispatch workers. However, as we will see in the following chapter, there are also factors that clearly constrain the space for relational, in particular workers', agency by nature of their intrinsic properties, namely the technological aspects of the production process.

Chapter 6: Living in a Robot Age – Technology, Time and Relational Agency

We are neither animals nor tools – we are human beings!

– Worker Rodrigo of Company X in Mexico, 2012

Company X! We are human beings, not robots!

– Chinese worker of Company X/JV1 on tieba, 2012

So far we have analysed institutions of the production process that immediately appear as “social” – the question of remuneration, work organisation and training. We have seen how processes of relational agency between workers and managers shaped how these institutions panned out in reality; and that certain forms of agency caused divergence between the Chinese and Mexican cases, while others rendered rather similar results. In this chapter I will turn to a less immediately social aspect of production, namely the realm of technology and machinery. Though technological development itself has been convincingly deciphered as socially constructed – rather than self-evolving in the form of technological determinism (e.g. Noble 1986; Bijker & Law 1994; Hackett et al. 2008) – I will demonstrate in the following that the rigidities and constrains the use of certain machinery in a highly integrated, technology intensive production process imposes on all actors involved remain (intentionally) very strong. In order to understand how these constrains manifest themselves and are strategically mobilised in processes of relational agency between capital and labour Company X in China and Mexico, I will shed light on the particular technological composition of the production process; and, in a second step, on its implications for the time regimes governing the organisation of production.

In a recent article Beverly Silver has argued, like many others before her, that the literature on technological change overwhelmingly stresses its debilitating effects on workers’ power (Silver 2014, p.51). The rationale behind such arguments is twofold. On the one hand, the substitution of dead for living labour with increasing

technological progress (Marx & Engels 1996, chap.XV; recently reiterated in non-Marxist terms by Brynjolfsson & McAfee 2012; 2013) reduces workers' market place bargaining power with growing unemployment (Silver 2014, p.54). On the other hand, technological development is perceived as the attempt by capital to establish control over labour in production (Marcuse 1964; Bahr 1970; Braverman 1974; Panzieri 1976; 1980; Marglin 1982). Studies from the discipline of Science and Technology Studies have in fact substantiated their claim by showing that monopolising control in the hands of managements has dominated over efficiency and productivity when choices over competing machine designs had to be made (Marglin 1982; Noble 1986).

However, the works of the *operaists* have shown that even if technological development was believed to fully take place under the control of capital (Panzieri 1976; 1980), not only could it be interpreted as an adaptive response to workers' struggles (Tronti 1974), but it could also open up new, unintended avenues for workers' power on the shop floor (Alquati 1974; Panzieri 1976; 1980). Both notions were recast in Silver's idea of the "technological fix", and her argument that lean and just-in-time production increased workers power, as the reduction of buffers made the production process increasingly vulnerable to minor disruptions with severe knock-on effects (Silver 2014; Silver 2003, chap.3). We can therefore assume that there is no *a priori* unidirectional process of increasing technological development and tightened managerial control over labour, but rather an open, contradictory one of technologically mediated managerial strategies and adaptive responses or counter-strategies by workers and other stakeholders.

Moreover, there is a rift between the design processes of machinery and their application in production. In the case of Company X this is further complicated, as the initial set-up of new production processes is the responsibility of separate planning teams, while the day-to-day operations on the shop floor are directed by another segment of management.²⁰⁰ The implication is that we cannot assume those who exercise control on the shop floor do so under conditions of their own choosing. Gertler, for example, has convincingly argued that different

²⁰⁰ Interview (2) German senior manager Pongrac.

“manufacturing cultures”, i.e. institutional matrices associated with different managerial practices, have led to the same technology being utilised in very different ways, up to the point that it became nearly useless in cases where design processes and applications were too far apart (Gertler 2004). In short, the actual application of technology on the shop floor will depend on internal coherence in the composition of management – and its ability to implement and sustain its desired course of action.

In this chapter I will build on these discussions and make two interrelated arguments. In the first part of the chapter I will scrutinise where, how and why technology creates certain path dependencies that not only lead to greater convergence in the production processes between the Mexican and Chinese plants, but also in its effects on workers and conditions for their agency. For the largest part I will confirm that technology is indeed a tool in the hands of capital, and that in many regards, in particular in the substitution of machinery for living labour and in effects on occupational safety and health (OHS), workers have little choice but to adapt to the given conditions – unless they challenge the production system as a whole. However, while I will provide empirical evidence on how management deploys technology flexibly across its different plants, I will argue that particular machine designs and the nature of certain tasks are at least in the short run constraining to the agency of management as well, limiting its capacity to flexibly adjust the fixed capital-labour ratio as well as day-to-day operations. That is, rather than only constraining the agency of workers, I argue that the effects of technological change work themselves out through a reconfiguration of the relationship between capital and labour.

In the second part of the chapter I will turn to the question of time regimes at Company X – that is, working shifts, breaks, overtime and cycle time. I argue that even though technological processes between all plants converge to a high degree, and the most efficient utilisation of machinery demands its operation for as many hours as possible, actual time regimes could diverge within a technologically constricted space. I will show how this depended on particular managerial interests, workers’ coping strategies, and extraordinary events, such as accidents.

The main aims of this chapter are therefore to explore what capacities for agency the particular technological composition of the production actually offered to managers and workers in the cases of Company X in China and Mexico; how technology itself became a solution to social problems within and around the production process; and how technological requirements and social relations between labour and capital unfolded in certain time regimes.

1. Modular Production

While all global car producers embarked on the same journey sooner or later, in the mid-1990s “Company X led the field in platform strategy” (Jürgens 2009, p.231), which it constantly furthered until the latest development of “modular production”. These continuous advances in flexible mass production were achieved through breaking down the non-visible main components of the car into variable combinations of standardised parts. Platforms at Company X were further subdivided, or “modularised”, into a ‘Modular Transversal’, respectively ‘Modular Longitudinal Toolkit’, depending on the orientation of the powertrain in the car (from German abbreviated as MQB, respectively MLB). The crux of the MQB/MLB is the definition of a few standard measurements, such as the distance between pedal box and axes or the inclination angle of the motor, not only across platforms, but also across components (for example different engine types). This means that the remaining parts of the substructure, and therefore the platform itself, can be of variable length and width, whilst any engine can fit any platform, irrespective of its fuel input (Figure 11). To enable the fitting of standardised components, such as air-condition units or controls, into any platform, all metal sheets utilised in its construction are given the same fixation points, irrespective of their length and width. Moreover, this system is not only applicable to the main brand of Company X, but to all brands within the company group (Anon 2012a). In short, all invisible parts are ideally subject to cost-effective standardisation, while leaving sufficient flexibility to allow for an adaptation to brand-specific features of the body and installation of components.

CORE ARCHITECTURE OF A MQB VEHICLE

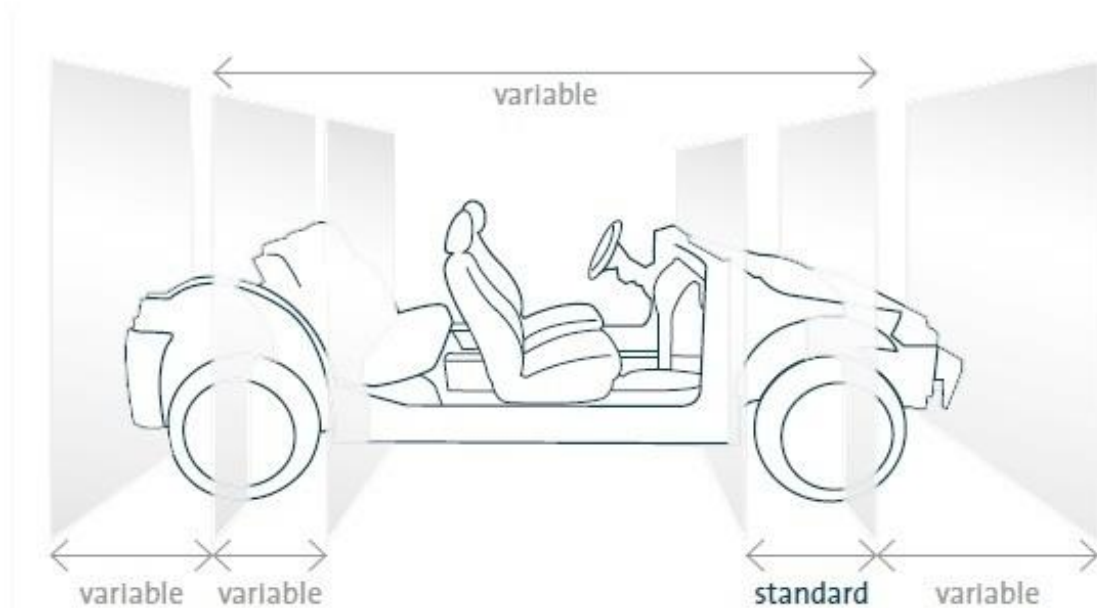


Figure 11: Passenger car based on Modular Transversal Toolkit (MQB)

Source: Company X n.d.

A 'Modular Production Toolkit' (MPB) reflects this flexible standardisation in production. Standardised fixation and welding points also mean that the respective tasks can be standardised even further across factories and suppliers (for details see chapter 7). This should allow for faster response time to market signals, because (ideally) any factory should be able to produce any model. In addition, the standardisation of parts further reduces costs and saves resources:

“Company X gains even more economies of scale with this. We are big already, but because of this we can push costs down even further.”²⁰¹

Modular production was an innovative technological fix to productivity and profitability problems haunting Company X at the beginning of the millennium. As we shall see, while in some respects the implications for the techno-organisational structure of the production system – in particular the convergence of processes across different locales – have been profound, in others it has allowed a flexible adaptation to and exploitation of variable local conditions, which apart from

²⁰¹ Interview (1) German senior manager Pongrac.

labour cost and regulations also includes different levels of mechanisation. Compared to the preceding two big techno-organisational advances in automotive production – flow and lean production – the implications of modular production for work organisation at the terminal assembler are far less immediate. While flow production has been associated with repetitive monotonous tasks, and lean production with “management by stress” (Parker & Slaughter 1990), modular production, although it is compatible with the aforementioned, does not require a comparable alteration of established work practices. If anything, it rather implies a return towards increasingly standardised labour processes. As will be discussed in more detail in chapter 7, the implications for the supply chain have however been profound, as the modular composition of the final product allows for increasing outsourcing of the production of such modules.

2. Technological Composition by Department

All modern car factories consist of essentially the same four manufacturing departments – press shop, body shop, paint shop and assembly – each characterised by a specific type of technology. In order to understand the limits and potentials for management to embrace strategies of further technological change or upgrading – and the implications for workers and their agency – it is necessary to take a closer look at the particular technological composition of each department. I will argue in the following that the possibility for “technological fixes” varies significantly between departments, for reasons of cost calculations, machine operations, demands on quality or the nature of tasks to be fulfilled.

2.1. Press Shop:

The press shop is the first manufacturing department in the flow production system of an automotive factory. Here, raw metal sheets are pressed into parts for the car’s substructure and body. Company X in both China and Mexico had limited its press shops to the production of large sheet metal parts and outsourced the production of smaller parts to suppliers.

Presses are heavy machinery that account for a huge share of the sunk cost in an automotive factory. They are therefore kept in operation for as many years as possible. Incremental upgrading is not only costly, but also technologically difficult; and its effects tend to be limited. In the case of the oldest press line still operating in the Northern plant in China it was for example possible to mechanise the process of passing sheets from one press to the next, saving time and personnel cost. The function and speed of the presses themselves however remained unaffected. These could be changed significantly only through their replacement by completely new machinery. Deconstruction of the first press line – the one relocated from the closed US manufacturing site in the late 1980s – had only recently begun and was still under way at the time of my fieldwork. Up to 2012 it had been used to make parts for a 1980s model, which continued to sell in China mainly due to large public orders for taxis and police cars. Senior manager Pongrac commented:

“This was not at all in keeping with the times. How they used to make cars here, it is unbelievable.”²⁰²

Press shops with older machinery would thus generally have a higher number of workers, as certain processes could not be automated (at reasonable cost) or required more personnel and time. Usually, however, the particular machine operations of modern press shops – in place in Company X’s newer facilities in China and Mexico – made production highly automated, at ratios of 95% and more. Manual labour in direct production was reduced to quality control and the calibration, repair and changing of toolsets (the dies used for stamping). A tool change at Company X/JV2’s main plant for example was a matter of about twenty minutes (which was still considerably long – it could be as low as eight minutes at the most modern press line of a new upscale brand factory of Company X in Mexico).²⁰³ The only really labour-intensive tasks in the press shop were logistics and cleaning, as the presses required a dust-free environment – a fact on which German senior manager Bohnert commented:

²⁰² Interview (1) German senior manager Pongrac.

²⁰³ Author’s fieldnotes.

“We have more cleaners than manufacturing staff here in the press shop.”²⁰⁴

Overall, technological upgrading in the press shop – i.e. the installation of new press lines – was rare and usually linked to the construction of an entirely new production hall, which in turn depended on an increase in productive capacity or the introduction of a new model. Managerial agency to alter the technological composition was therefore rather constrained by the particular machine operations and high cost.

2.2. Body Shop:

In Company X’s body shops in China and Mexico, where the sheet metal parts from the press shop were welded into substructures (‘platforms’) and bodies (‘hats’), automation was based on modern robotics. Welding robots were model-unspecific and could be flexibly programmed to fulfil a broad range of tasks, potentially allowing for very high automation rates.²⁰⁵ Unlike in the press shop these tasks could generally be fulfilled manually, though obviously at lower speed and precision. Management therefore sought to handle the substitution of machinery for manual labour flexibly, depending on considerations of productivity, quality, output and, first and foremost, cost. This was particularly relevant in the Chinese case:

“Normally, one can say: if high quality standards are not demanded, if welding can be done by hand, an employee should do it, because that is cheaper in China. Where quality is demanded [...] one always uses robots. But because labour costs – I only know this from hearsay – increase ten to fifteen percent each year, if one extrapolates that: for three shifts, if I put one robot there or pay three employees,

²⁰⁴ Interview German senior manager Bohnert.

²⁰⁵ By contrast, task-specific machinery was the norm in Western, “Fordist” car-production up to the 1980s.

who can also get sick, absenteeism, vacation etc. – though that is not as high as in Germany – I begin to calculate.”²⁰⁶

These calculations not only vary from model to model, but also depend on the number of units produced. Hence, the technological composition of the body shop at Company X/JV2 was reflective of broader socio-economic trends, such as wage levels and shifts in sales figures, respectively customer demand:

“At 200 units per day one does not mechanise that much. [...] Planners would have to calculate degressively at which number of units the cost for mechanised production decreases so much that it intersects with costs for manual assembly.”²⁰⁷

In China automation rates were therefore nowhere near the comparable 90% to 95% at Company X’s body shops in Germany.²⁰⁸ In the Northern joint venture they stood at 70% on average for established models with high output. In the Western plant they could be as low as 55% and 29% for older models with lower rates of output; and in Company X/JV1’s most recently constructed and modern plant in the East it stood at 42%. Hence the Chinese exceptionality that “the body shop is the department with the highest number of workers, about 4000 [in the North]. Normally the most labour intensive department is assembly. But that demonstrates the difference in automation rates here.”²⁰⁹

In Mexico, on the other hand, the body shop of the more modern section of the plant operated on the basis of over 250 robots, which added up to an automation rate of 85%.²¹⁰ This was mainly an effect of higher labour costs and higher quality demands, as the Mexican plant produced state of the art models for international markets.

²⁰⁶ Interview (1) German senior manager Pongrac.

²⁰⁷ Interview (3) German senior manager Pongrac.

²⁰⁸ Even in Germany there are still elements of assembly in the body shop that require individual fitting and cannot (yet) be fulfilled by a machine, such as the assembly of doors or tailgate.

²⁰⁹ Interview (3) German senior manager Pongrac.

²¹⁰ Author’s field notes.

With the increasing modularisation of production – already by 2005 the flagship model of the upscale brand was composed of 70% modular parts (Jürgens 2009, p.232) – there were, however, certain processes that required the uniform application of a particular technology across locations. Welding the seam for the roof of the car, for example, required laser welding. Such new machinery was usually introduced with new models and/or the construction of new production facilities. While laser welding was present in all factories I visited in both China and Mexico, an company-internally engineered “framer” – a huge device for the automatic and precise configuration and welding of the sides of the body to the substructure, adaptable to the production of four different models – was for example installed in the new Southern plant of Company X/JV2, but was still missing in older production halls in China, as well as in the Mexican main plant.²¹¹

The body shop was essentially the department with the highest managerial flexibility to adjust the technological composition to local conditions – lower degrees of automation in cases of cheap labour, lower output and/or lower quality demands; higher degrees where productivity and (labour) cost pressure were greater. As we shall see, the consequences for labour were in either case unfavourable: workers were forced to fulfil strenuous tasks in the first case, and had to contend with a reduction of personnel in the latter.

2.3. Paint Shop:

The finished but raw vehicle bodies are transferred into the paint shop, where anti-corrosive protection and the final paint is applied. Similar to the press shops, the paint shops in both Mexico and China were highly automated, due to the installation of cathodic dip coating²¹² and painting robots. Worker Jesús remembered the process of automation at the Mexican plant:

²¹¹ Interview (2) German white collar worker Hensch.

²¹² The term quite literally describes the actual process: high voltage is used to apply a 10µm thin layer of anticorrosive coating to a negatively charged car body (acting as a cathode), which is dipped into a positively charged bath of paint (the corresponding anode). This process is used in most modern car plants.

“Today we are only 20 people on the line, down from 120 to 150, due to the implementation of robots. Every robot replaces ten or eleven people, if seen for all three shifts together.”²¹³

The remaining manual tasks were primarily concentrated in rework.²¹⁴ Blue-collar workers who remained in the paint shop were either experienced senior workers, particularly in the Mexican case, or workers receiving special training, due to the difficult task of spray-painting by hand. Workers in quality control or the laboratory were either senior or white-collar workers, i.e. workers with experience and/or theoretical knowledge.²¹⁵ Because older machinery remained in place considerably longer in Mexico and China than in Germany (due to the sustained demand for older models), in the 2000s workers in both cases experienced technological changes reminiscent of those occurring in the global North in the late 1980s and 1990s. The gradual but accelerating mechanisation of production in certain areas (mainly body and paint shop) caused a “polarisation of demanded skills” (Jürgens et al. 1989, p.356) – i.e. parallel de- and upskilling for different sections of the workforce.

Workers in the paint shop, however, face another technologically induced problem specific to this department. Due to the particular machinery and operations, the paint shop is by far the hottest working environment in a car factory. The preparation (filtration, tempering and humidification) of the surrounding air, sprinkler systems and water recycling, drying cabinets, cataphoretic dip coating and other machinery have an energy consumption equivalent to that of 20,000 households²¹⁶ – and produce a substantial thermal discharge. In online forums paint shop workers of Company X/JV1’s Eastern main plant complained about the strain caused by the heat, with one of them stating:

²¹³ Interview worker Jesús.

²¹⁴ Rework refers to the correction of production errors.

²¹⁵ Interview (2) German white collar worker Hensch, worker Daniel.

²¹⁶ Interview (2) German white collar worker Hensch; In an average car plant, the paint shop accounts for 45% to 70% of total energy consumption (Holt 2012).

“Today someone almost died in the new paint workshop in plant three. It’s fucking hot! They put some ice in the workshop though, but the idiot bosses do not allow us to take anything to drink with us. They just want to murder us workers in yet another way.” (Baidu Tieba 2013)

Other workers reported that in order to get through the working day, they drank energy drinks or used traditional Chinese medicine and health care products (*baojianpin*) that Company X/JV1 handed out. Complaints about the heat were particularly pronounced where outside temperatures were already rather high – as in East or South China – and/or air conditioning systems insufficient.²¹⁷ Apparently, technological progress was insufficient to remedy the strenuous working conditions.

Together with the body shop, the paint shop was a department at Company X in both Mexico and China where management could potentially adjust the ratio of machines and living labour flexibly. However, for reasons of quality demands, particularly for the latest models, high-tech inputs such as dip coating and robotics dominated; and the share of manual labour was rather low.

2.4. Assembly:

Although the body shops at Company X/JV2 in China were a remarkable exception, it is usually the assembly department where the most labour-intensive operations are concentrated. Here, the car’s interior, engine, tires, electronics and other components are installed into the painted bodies delivered from the paint shop. Workers at Company X in China mainly assembled parts manufactured and delivered by external suppliers (which were however mostly joint ventures with Company X’s Chinese partner) – or, in the case of engines, produced by an external Company X factory. In Mexico the same was true for most components, but the assembled engines were still produced within the main factory compound.²¹⁸

²¹⁷ Interviews dispatch worker Ping, worker Lu. According to worker Lu, Company X/JV1 also offered special vacations to workers in particularly hazardous areas.

²¹⁸ Author’s field notes.

While the example of the body shop, particularly in the Chinese case, illustrated an adaptation of the technological composition to local conditions of demand and labour costs, a closer look at the assembly department illuminates how the continuity of classical conveyor technology in combination with highly flexible assembly tasks limits the scope for “technological fixes”. Apart from a shift to overhead transport systems, the major innovations in the Mexican and Chinese plants were buffers that cushion ruptures in the integrated flow production and prevent knock-on effects.²¹⁹ The main plant of Company X/JV2 for example had both old and new conveyor technology in operation, depending on the respective construction date of the assembly line. Senior manager Pongrac explained the implications:

“So, here you can see: These people stand about and have finished their tasks already, because somewhere else something is standing still. So that is the advantage of the other [newer] conveyor technology, where you could still work a few cycles now – while, if anything stops here, the entire line will stop immediately.”²²⁰

Older and newer models could and had to be assembled with the existing technology indiscriminately: “the vehicle has to adapt to the conditions here.”²²¹ However, in the Chinese case it was not uncommon that, due to its recent rapid expansion (discussed in more detail in chapter 8), the introduction of new models went hand in hand with the construction of new production facilities, leading to an assembly line being used for a single model only. This was rather exceptional, as the normal *modus operandi* for car assembly sees different models appear on the assembly line according to incoming orders, requiring workers to flexibly perform different tasks. At Company X/JV2’s main plant, the existence of a single-model assembly line, however, made it sufficient to train workers for a limited range of simple repetitive tasks – sometimes, in fact, for only one single operation²²² –

²¹⁹ Alternative assembly systems at Volvo, however, were an important exception up to their abandonment in 2002. Assembly was organised in docking stations with long cycle times and autonomous work teams without fixed task prescriptions (Sandberg 1995).

²²⁰ Interview (2) German senior manager Pongrac.

²²¹ Ibid.

²²² Ibid.

which further aggravated the dysfunctionality of a continuous improvement philosophy as discussed in the preceding chapter.

So far, technological solutions that could fully replace human labour in assembly have remained limited not by their high cost, but primarily by their insufficient flexibility. In the 1980s Company X constructed a new assembly hall in Germany, in which it mechanised about 25% of the assembly tasks. However, in the long run the technology proved to be too inflexible and failure-prone – and the experiment was ultimately abandoned.²²³ Automation rates are thus traditionally low in the assembly department – and against the historical trend in other departments they have been falling, rather than rising at Company X:

“Doing everything with machines would be unaffordable. And I would not be flexible anymore. Man is the most flexible being, I don’t need to stress that point. That is why Company X and other car manufacturers have partly reversed the trend. With regards to metal sheets mechanisation is very high, but in assembly the rate of mechanisation used to be higher and one is going down again now. It is not flexible enough.”²²⁴

As technological fixes were limited by the nature of operations, organisational rationalisation measures were the primary means used to increase productivity in the assembly department. Worker Lu, an assistant to a foreman, reported that Company X/JV1 was planning to reduce the team size from ten to eight or nine workers in 2013, under the slogan of “optimised resource allocation”.²²⁵ That is, increased productivity in the assembly department would be achieved via the intensification of work. On the other hand, the assembly line as the core technology of a flow production system also allowed workers to grind the entire production to a halt, if they pulled the emergency cord and stopped the line.

²²³ Mechanised assembly is currently deemed feasible for certain tasks, such as a robotised fitting of the windshield. This had however not yet been deployed in China at the time of my visit, though production managers suggested that it might be at a later stage.

²²⁴ Interview (2) German senior manager Pongrac

²²⁵ Interview worker Lu.

2.5. Mechanisation and Living Labour

The technological composition of production in China and Mexico largely converged where the more modern areas of the respective plants were concerned. The only department showing significant divergence was the body shop, where management in China kept automation at a lower level due to cheaper labour and lower pressure on productivity and quality. While automation had progressed to a higher degree in Mexico, the overall market situation of low wages and continuous demand for older models in China did not necessitate investments in robotics – neither for productivity nor for quality reasons. As long as older models sold well – and they did so much longer in the closed Chinese market than in the open European or North American markets – production techniques would not be upgraded. However, because profit margins have been shrinking with the entry of new competitors into the Chinese market, productivity increases will most likely become important in the future. But so far, new technology has been introduced primarily with the construction of new plants (the motivations being discussed in chapter 8): the newer the plant, the more advanced the production methods. Though arguably not imperative at the time of its introduction, deploying state of the art technology where high costs or technological limitations prohibited incremental upgrading, i.e. in the press shop, was an insurance against future cost pressure.

From a managerial point of view increasing automation killed two birds with one stone: it improved both labour productivity and, by relieving workers from performing hazardous tasks, occupational safety and health. German senior manager Pongrac elaborated on this point when we observed two workers doing overhead welding:

“Here, these workers have to weld all this by hand. [...] It is dusty, dirty, filthy. But things like that are done by hand in China. One simply states: ‘That is a manual job, period.’ In Germany one would mechanise this first of all due to the cycle time, but even more so because of the working conditions. The works council would say: ‘We won’t do this.’ In China no one cares. Some worker is positioned there and he

has to do it, period. [...] Luckily the hall is not so hot today. But where you have to do welding, can you work just like that? You have to wear heavy leather clothing, due to weld splatter. Now, these guys truly know what it means to do this for eight hours.”²²⁶

At a different work station, senior manager Pongrac – who had himself worked on the line for a few years and displayed genuine concern for health and safety issues – elaborated the difficulties in implementing incremental changes once the production process had been set up by the planning team:

“If I want to set welding points in the middle of the body, I need a very long welding gun. Who is supposed to move that thing for a duration of eight hours!? Even if it is balanced well, it is still very heavy. If one is then supposed to work at a fast pace, what will happen is that one worker holds the gun in the back and a second one leads the front to the desired welding spot. No works council in Germany would allow that. I have witnessed it a few times that the planners have said: ‘No, it [the production line] has been constructed that way, we cannot change that again.’ So at the end one has to inform the board of directors: ‘Here, look at this. Is one supposed to work like that? We need two robots.’ [...] These things happen, because the planners did not have any money left or the number of produced units was very small, so that one could say: ‘That should work. We have a longer cycle time here, so we will simply put two people here. We [only] have the money to cover the costs for two workers.’ But now look at how these people have to work! This is of course a rare and extreme example.”²²⁷

Both quotations not only illustrate well how managers at Company X viewed the production process through the lens of standards and industrial relations known from Germany, but also how they approached issues of occupational safety and health – namely as technological problems. But, as further automation was essentially limited to the body shop, the room for technological solutions was in fact rather small. Once a production process had been set up in a particular way –

²²⁶ Interview (3) German senior manager Pongrac.

²²⁷ Ibid.

in this case as a flow production system with highly divided labour – it created certain path-dependencies for future changes, if these were not to break with the principles of the original conception. In China, safer machinery and ergonomics could be found in Company X’s newer production facilities, simply because state of the art technology already came with improved OHS standards.²²⁸ But for the most part, Company X built on the fact that its young workforce was physically capable and mentally willing to withstand the harsher working conditions until they either left the factory or transferred in-house to a non-manual job. Asked why the German standard of ergonomics was not applied in China, manager Pongrac replied:

“Because the team is still young and people do not complain that quickly.”²²⁹

In Mexico, on the other hand, workers did indeed complain quite quickly – albeit with little effect on the implementation of new technology proper. As in the Chinese case, decisions on technological composition were at the sole discretion of the enterprise after 1992. However, for larger technological changes that involved the reorganisation of teams or the reduction of personnel, the union had to be informed – but only had the right to challenge managerial decisions on the basis that these measures were not economically necessary.²³⁰ Furthermore, this meant that although the union had no say in the changes actually being introduced if management desired them, it was often able to gain certain benefits for the affected workers, such as additional rest days or monetary premiums – something that will be discussed in more detail in section 3.3.

From the point of view of the enterprise the aim of particular methods of organising the production processes was to allow for high volumes of high-quality output at low unit costs. The technological composition of these processes – determined, as we have seen primarily by a mixture of technical feasibility and

²²⁸ By deploying the most modern technology, the new plant in the East for example had ergonomic equipment for assembly workers, such as chairs and conveyor technology adjustable to the worker’s height, improved air conditioning in the assembly hall, quieter assembly lines etc. Author’s field notes.

²²⁹ Interview (1) German senior manager Pongrac.

²³⁰ § 56, Company X (Mexico) Collective Contract 2010-2012.

cost considerations – is however only one aspect of achieving this goal. The other is of course control over time, both in the sense of the total time spent at work by each worker, and in the sense of cycle times in the production process itself. A fuller analysis of the scope for relational agency, as developed in the following chapters, requires us to first build an understanding of the labour process that integrates material and temporal aspects of control over production; and it is to the latter that we turn now.

3. Time Regimes: Shifts, Overtime and Cycle Time

Good, you invent a machine – what for? To make the work more pleasant, right? Or that it helps you with your tasks. But here, no, here they have a client-and-provider philosophy – and our providers are robots. Robots do not rest, and so don't we. They speed them up, faster, faster...

– Worker Jesús, Company X in Mexico, 2012

On average, while producing similar models, Company X manufactured 47.5/65.7 cars per employee/production worker in China and 32.4/45.7 in Mexico in 2012 – that is, about 46/44% more in China than in Mexico.²³¹ What accounts for this discrepancy given that automation rates were lower in China – suggestive of lower labour productivity²³² – and 2012 was a record year for output at Company X in Mexico (El Economista 2012)? As I will demonstrate in the following, one of the reasons is to be found in the longer working hours in China. Although working times and exhausting work rhythms were in both Mexico and China amongst the most pressing concerns that workers brought up in my interviews, there was rather little that they were able to do to improve their situation. In the sections

²³¹ The figures are based on Company X's annual reports, INEGI (various years), and personnel data obtained during fieldwork. The figure for Mexico is based on year-end production and employment 2012; due to the lack of year-end personnel statistics for China, the respective figure is an approximation based on the average year-end production of 2012 and 2013, divided by the total number of employees as of September 2013 (obtained during fieldwork). The respective figures per year would be 43.5 cars per worker for 2012 and 51.6 for 2013. That is, even with the more conservative figure based on the lower 2012 output and the higher number of employees in September 2013, Company X still produced about 34% more per worker in China than in Mexico.

²³² Because no reliable data on the number of hours worked was available for either of the cases, actual labour productivity could not be calculated.

that follow I will provide empirical evidence of the technological factors, managerial decisions and limited responses by workers that produced the particular time regimes at Company X in China and Mexico.

3.1. Shift Systems, Working Hours and Rest Time

Although in both China and Mexico the shift systems were designed to utilise technological inputs most efficiently by around-the-clock operations (apart from time used for maintenance), and even though in each case it was formally at the sole discretion of management to adjust the time regime, the particular way in which each shift system was organised differed.

Company X's joint ventures in China operated with two different shift systems. Company X/JV1's main plant primarily used a two-shift system with flexible working hours. Within one week workers followed a schedule of two dayshifts, two nightshifts and two days off (Table 4). Shifts could be of three different lengths and workers were given a day's notice to inform them of their actual working hours. Dayshifts could start at 5am, 6.30am or 8am, ending at 4.30pm; while nightshifts ran from 4.30pm to 1am, 3am or 4am, respectively. In short, workers followed regular 8-, 10-, or 11-hour schedules that varied with changing capacity utilisation. As there were three groups of workers, but only two active shifts per day, the respective third group functioned as a buffer that could be called upon spontaneously for excess orders or rework – or in case of a strike in one shift. The newer Eastern plant of Company X/JV1 operated on the basis of a similar system, but had regular ten-hour shifts and an additional seventh dayshift per week – i.e. a regular operation time of 6.5 days per week (6 days of 20h, 1 day of 10h).²³³

Company X/JV2 on the other hand followed a three-shift system with eight working hours and bi-weekly rotation. In areas where output was lower there could also be two-times-ten or two-times-eight hour shifts.²³⁴

²³³ Interview German senior manager Rordorf.

²³⁴ Interview German (2) senior manager Pongrac.

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Day	A	A	C	C	B	B	Maintenance
Night	B	B	A	A	C	C	Maintenance

Table 4: Shift system at Company X/JV1's main plant

At the Mexican main plant regular working hours were organised in three shifts spread over a five-day working week. Workers in the first shift (morning to afternoon) would have a regular total of 44 weekly working hours; those in the second shift (mid-day to night) a total of 42 hours; and those in the night shift a total of 40 hours. Saturday and Sunday were regular rest days. However, workers could also be temporarily or permanently allocated to discontinuous or special shifts, which respected the total number of working hours, but not the coinciding of rest days and weekends. Workers on the latter shifts received a bonus or 120% of a day's salary for each rest day not coinciding with a Saturday or Sunday. Special bonuses of 35% or more were paid for a sixth working day per week for workers of all shifts.²³⁵ Usually, shifts would rotate on a monthly basis.²³⁶ However, after the 1992 conflict, decisions on shift allocation became the sole responsibility of the enterprise, while under the *status ante* the union had to give its consent.

In both cases workers had a thirty-minute break per shift, though for the night shift it was added to the end of the shift in Mexico. If workers required a shorter break – for example to use the restrooms – the team leader had to give his OK and allocate another worker (sometimes himself) to cover at the vacated station. Formally, these interruptions, assuming they do not accumulate too much, should in neither of the two cases have negative effect on a worker's evaluation, nor were there any wage deductions, as might be the case in the supply chain or other industrial sectors, particularly in China (Pun 2005; Xue 2008; Choi & Peng 2015). Vacation time at Company X in China reflected the legal minimum,²³⁷ while it was more generous in Mexico (Table 5). Overall, however, vacation and in particular break times at Company X in both China and Mexico were rather short and rigid.

²³⁵ Company X Mexico Collective Contract 2010-2012.

²³⁶ Interview worker Miguel.

²³⁷ Regulations for Paid Annual Leave for Employees (State Council Decree No. 514)

However, welcomed breaks were often provided to workers – discussed in more detail in section 3.4. – by technologically induced production stoppages. During my observations on the shop floor, I saw workers sleeping, chatting with their colleagues or playing with their phones during the many occasions on which the assembly line had stopped.²³⁸ Others would simply not fulfil their tasks properly. One of these moments occurred when German senior manager Pongrac showed me around the shop-floor. We were observing parts of the final quality control process, where during a test-run of the car's electronic functions the battery is supposed to be connected to a charger. Seeing that workers simply omitted this step, he commented:

“So here, this would be a point for the head of the assembly department to intervene and tell them: ‘Guys, what are you doing here!? You have to connect this! That is part of your job!’ That wouldn’t happen in Germany. [...] In Germany you would appeal to the people and explain what they have to do – though they might say: ‘Why? The battery comes charged from the supplier.’ I would explain the reasons to them, that the customer might complain otherwise, and then they would say: ‘Hm, yes, alright I’ll do it.’ Here you can explain it three times and that’s the result.”²³⁹

This episode illustrates how the purposive reduction of effort was a strategy that workers in China embraced to deal with work-related pressure – something that also aggravated the counter-effect against meritocratic remuneration and continuous improvement processes discussed in the preceding chapter.

²³⁸ Author’s field notes.

²³⁹ Interview (2) German senior manager Pongrac.

	Mexico	Company X/JV1	Company X/JV2
Working hours	44, 42, or 40 per week + overtime	8, 10, or 11 daily + overtime	8 daily + overtime
Working days/week	5 or 6	6 (2 day, 2 night, 2 off)	6,5 (13 days work, 1 off)
Shifts	3-shift; monthly; special shifts	2-shift; 3-shift	3-shift, bi-weekly
Breaks	30 minutes; (none at night)	30 minutes	30 minutes
Vacation	1-8 years: 14 days; 9-13 years: 17 days; 14-18 years: 20 days; after that 3 days for each 5 years; plus premiums	1-10 years: 5 days; 10-20 years: 10 days; over 20 years: 15 days	
Lowest cycle time	60 sec	60 sec	58/60 sec

Table 5: Time regimes at Company X's main plants in Mexico and China

Source: Company X Mexico Collective Contract 2010-2012, author's field notes

3.2. Overtime and Fluctuating Capacity Utilisation

Overtime in both Mexico and China was a double-edged sword for workers. On the one hand, it made up a sizeable proportion of their income; and a reduction of overtime could cause protest – as in Santiago's story discussed in the preceding chapter. On the other hand, overtime in both China and Mexico could be so extensive that the more common response were complaints about long working hours and exhausting work rhythms (see also Table 2 in chapter 5). In the following I will analyse in more detail the mechanisms through which management in China and Mexico regulated overtime and what this implied for workers.

At the time of my fieldwork, production at Company X/JV2 ran 326 days a year, that is, thirteen working days in a row, followed by one day off for maintenance.²⁴⁰ In a two-times-ten/eight shift system overtime was usually added to the shift, either before or after the (next) regular working day. But in a three-times-eight system, overtime did not occur by prolonging shifts on the line, but either by making up for outstanding production targets on rest days; by re-working finished cars²⁴¹ – or simply by the regular prescription of overtime through scheduling shifts for a duration of 13 days:

²⁴⁰ That there is only one day every two weeks to carry out repairs and maintenance is a unique peculiarity of Company X's China business, in order to satisfy demand for the expanding market.

²⁴¹ The newer production halls at Company X/JV2's main plant have been designed with a considerably larger open space for rework than the older halls.

“Now we are building 1,5 million cars at two locations [North and West], and the assembly department operates 13 days in a row, only every second Sunday is a day off. [...] Office workers usually have a five-day working week; sometimes they work on a Saturday. But production workers: 13 days in a row.”²⁴²

Overtime was mandatory, could be regularly prescribed or announced with short notice at the discretion of the enterprise. The union chairman at Company X/JV2’s Western plant explicitly stated that the union would not interfere with the enterprise’s plans to allocate overtime.²⁴³ Senior manager Pongrac commented on this:

“That issue is handled rather flexibly here. In Germany one would first have to consult the works council, which has to give its OK, and then it only works on a voluntary basis anyway. Extra shifts can be announced in advance here, but then workers are obliged to do them. This would only work on a short-term notice and a voluntary basis in Germany.”²⁴⁴

Overtime in China is legally limited to 3 hours per day and 36 hours per month (Labour Law §41). The practice of regular eleven-hour days of overtime or 13 consecutive working days would impose huge costs, as it calculated by the legal 40-hour week or on an eight-hour day basis.²⁴⁵ In the mid-2000s various automotive producers therefore introduced comprehensive working hours systems that recorded every hour as contributing to the legal annual maximum of 2080 hours – irrespective of how this time was accumulated on a daily or weekly basis. Overtime rates would then be paid *en gros* for the hours above the legal maximum at the end of this period (Zhang 2010, p.134). This not only allowed companies to balance capacity fluctuations between high and low order periods

²⁴² Interview (1) German senior manager Pongrac.

²⁴³ Interview Chairman Qiao.

²⁴⁴ Interview (1) German senior manager Pongrac.

²⁴⁵ A normal working week in China has 44 hours, according to the Labour Law of 1994 (§36). This was however amended to 40 hours per week in the “State Council Regulations on Working Hours of Employees” of 1995 (§3). In addition, provincial or municipal rules might apply, so that most areas in China prescribe a 40-hour working week.

without paying full overtime benefits, but also to exceed the legal daily, weekly or monthly overtime limitations.

Company X/JV2 still operated on this basis²⁴⁶ – arguably the reason why it could sustain a 13-day working week without running into serious legal trouble – but Company X/JV1, which had operated on this basis in 2006 (ibid.), had resorted to a different system by the time of my fieldwork, which was related to health and safety issues. Long working hours of course increase the risk of accidents – and they were apparently linked to the tragic death of a worker in 2009. Under the thread title “Company X/JV1 is a fucking killer factory!” (Baidu Tieba 2009a) workers used an online forum to discuss rumours about the death of a fellow worker at the Eastern main plant: he had allegedly been crushed to death by the assembly line after working eleven to twelve hour shifts for a period of nearly two months. Company X/JV1 supposedly compensated the family, but managed to keep the event from becoming public.²⁴⁷ One worker wrote:

“The scene of the accident was really tragic and terrifying. But the company just said it was the worker’s carelessness that caused the accident. He was a 32-year old senior worker; it was working for 11 hours that killed him.” (Baidu Tieba 2009d)

Attributing the accident to exhaustion from overwork was a shared feeling among contributors to this and other online discussions. The problem was not new and some workers had called a legal advice-hotline that Company X/JV1’s trade union had installed in 2006 to complain:

“The world is very much the same everywhere: the officials just protect themselves, and you have no way to reclaim your rights. I have dialled 12345 many times to complain about the overtime situation. They said they had passed it on to the Labour Bureau – and that an investigation of the situation at Company X/JV1 showed no documentation or evidence at all. Now it is certain that a worker has

²⁴⁶ Interview German senior manager Vogt.

²⁴⁷ Workers Lun and Ping confirmed that they had heard of the events, but neither their information nor that of the online forums could be independently verified.

died, but we are still required to do 10- or 11-hour shifts. They call it 11 hours, but actually it takes a worker more than 12 hours if you include the commuting time. Company X/JV1 is hell! Company X/JV1 disregards workers' health and safety!" (BBS Tianya 2009)

Company X/JV1 addressed the problem in two different ways. First, it reorganised the shift system. In 2009 Company X/JV1 used to have only two groups to staff its two-shift system, meaning that workers could end up working eleven hour shifts for weeks or even months without rest days – especially since the refusal to work on Sundays would result in a wage deduction.²⁴⁸ The three-group-system brought workers some relief by officially having two rest days per week, which helped to avoid scenarios like that of 2009. However, it did not change the fact that workers were still forced to work eleven-hour shifts. The production workers I spoke to still complained about the exhausting nature of this work rhythm.²⁴⁹

The second measure was the introduction of time accounts. Working hours exceeding the legal eight-hour day were recorded and accumulated until they reached 84 hours. The respective worker would then be paid an according bonus and the account reset to zero.²⁵⁰ In effect, workers were relieved from the most dramatic imbalances, but management could still avoid paying overtime benefits by keeping workers from reaching the 84 hours through assigning them rest days or less working hours (Figure 12).

The introduction of a similar system, called *banco de horas* ("hours bank"), was a hotly debated issue during my fieldwork in Mexico. As this system would have involved a restructuring of the collective contract, union acceptance was required – and so far, every union leadership at the main plant has rejected this fiercely. However, as we shall see in chapter 8, the 2012-2016 leadership made

²⁴⁸ Interview worker Lun.

²⁴⁹ Interview with two migrant dispatch workers Xun and Liu, dispatch worker Ping. Emblematic for the exhaustion that workers felt was that during the 45 minute shuttle transport from the factory to the dormitories, for which I joined two of my interviewees, none of the approximately 80 migrant dispatch workers spoke a single word. A small minority was chatting on their smartphones, but the overwhelming majority fell asleep as soon as the bus got moving. Author's field notes.

²⁵⁰ Interview worker Zhang.

considerable concessions for new projects in Mexico. A member of the union's central committee stated:

"The enterprise has insisted for many years in the *banco de horas*, that is, individual working time accounts. Fortunately this is not stipulated in the labour law, so we are not obliged, the workers are not obliged, to accept this. It would affect the entire economy of all our workers, and our *compañeros* don't like it. [...] We have not accepted this here."²⁵¹

Time accounts

The basic idea of a time account is a watering down of restrictions on regular working time through individual workers registering each hour beyond a stipulated core time (usually per day) in a comprehensive "account". In times of low orders workers accumulate working time "debts" by being allocated fewer hours (usually without wage deductions), to be compensated by working more hours in times of high orders (usually with lower or no overtime benefits). If workers accumulate working time "credits", these are compensated by reduced hours at times compatible with production requirements; or, if exceeding a stipulated limit, as overtime benefits. This system, that is supposed to avoid layoffs,²⁵² reduces overtime compensation and substantially flexibilises working time – in other words it increases the employer's "time sovereignty", or command over the time of the employee.²⁵³ Company X/JV1's working time accounts and the idea of a *banco de horas* in Mexico were broadly based on this model.

Figure 12: Time accounts

In the absence of time accounts, management at Company X in Mexico embraced other measures to deal with fluctuating demands on capacity. As in China, the allocation of overtime was at the sole discretion of management and compulsory for workers, but it required written notice to the union. Explicitly allowed were

²⁵¹ Interview union representatives Carlos and Oscar.

²⁵² Though working time accounts are not unique to Germany, they are particularly wide-spread and were much-heralded as Germany's "miracle" solution to avoid mass layoffs in times of economic crisis (e.g. Zapf & Brehmer 2010; Jacobs 2012). Actually, the main mechanism was the application of short-time work and the dismissal of temporary workers, rather than the accumulation of "debts" in working time accounts (Balleer et al. 2015). The same measure had been applied to the Mexican main plant in the "4 por 3" programme in the downturn of the early 2000s.

²⁵³ Working time accounts could also work in favour of the employee, if he or she could freely decide on when to work more or less hours. However, the respective contracts hardly reflect this (Schulten 1998; Lindecke 2015).

also double shifts, which were compensated for by a following rest day.²⁵⁴ Though overtime could be excessive at times, in Mexico it was not a constant institution as in China. Workers rather struggled with the fluctuation between high and low order periods. During the latter the enterprise drained its pool of *eventuales*, and/or designated workers to stay at home for certain days. In 2012 workers complained about the fact that these “holidays” were announced from one day to the next, simply applied from above, subtracted from their vacation days – and combined with overtime on other working days.²⁵⁵ While the union committee of 2008-2012 did not have an answer to the issue, the 2000-2008 committee had intervened when the enterprise announced the layoffs of 2,000 workers in 2003, suggesting instead a programme of short-time work, called *4 por 3* (four days work, three days off). It mobilised governmental support in the form of stipends to compensate for the drastic reduction in workers’ income, aided in its efforts by communication with the IG Metall and its experience with the application of *Kurzarbeit* at the German headquarters.²⁵⁶ After this episode, which was well-received by my interviewees, mainly due to the compensation of income through the governmental stipends, management made *Kurzarbeit* a unilaterally determined institution that it reactivated in the wake of the financial crisis of 2009. Quite a few automotive enterprises made use of this tool – the *paros técnicos* mentioned in chapter 3 – to compensate for the collapse in sales: in January 2009 Company X fully suspended 95% of its 10,300 workers for a period of three days and cut the pay of the five percent that remained working by half (El Economista 2009b). Company X explicitly referred to the German experience, but remained silent on the point that in the German context short-time work required the support of the works council.²⁵⁷

In sum, workers in both Mexico and China had to work rather long hours of overtime, although in China it was more frequent and extensive – in fact, overwork could reach the point of fatal physical exhaustion. In both cases could overtime be announced at will by the enterprise, although in Mexico this was subject to stricter

²⁵⁴ §37 and 40; Company X Mexico Collective Contract 2010-2012.

²⁵⁵ Interviews worker Daniel and Jesús.

²⁵⁶ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

²⁵⁷ Interview worker Miguel.

regulations. In China Company X used time accounts to avoid paying full overtime benefits and balance periods of high and low orders, whereas in Mexico lay offs of temporary workers and programmes of short-time work fulfilled that function. This was mainly due to the union's refusal to accept the introduction of working time accounts. As will be discussed in section 4. – and was already indicated in Santiago's story in the preceding chapter – workers in Mexico however strategically utilised overtime refusals to informally bargain with the enterprise. Before we turn to such issues in the context of production mistakes and managerial monitoring strategies, I will analyse the rhythms that workers at Company X were working in – and complaining about.

3.3. Cycle Time

In day-to-day operations, the most important managerial mobilisation of technology to regulate the labour process is through the determination of the cycle time, i.e. the time required to perform a particular task from beginning to end. Cycle times are based on the classic Taylorist idea of breaking down the timing for the completion of a task into a comprehensive assessment of a worker's individual movements. In a technology-intensive production process, the relevance of cycle times stems not so much from a determination of how fast workers could fulfil certain tasks, but from the reverse process. In most cases, the cycle time is taken as given – for example by a certain machine operation – and an industrial engineer will determine the most time-efficient and sustainable bodily movements, as well as the number of workers required.

Cycle times varied according to models, the number of units produced and the technical difficulty of the tasks to be fulfilled. In China they could be as low as 60, or even 58 seconds, but at the Northern main plant of Company X/JV2 the lowest observed rates stood at 64 seconds in one assembly hall and 72 in another.²⁵⁸ In the past, planners at Company X in China set up processes on the basis of different cycle times – in the newly opened plants, however, they were always designed for

²⁵⁸ Author's field notes.

a cycle time of 60 seconds, in the anticipation of high volume production. Despite the 58 second cycle time at the Western plant, German managers at both Chinese joint ventures pointed out that Company X usually does not operate with cycle times of below one minute anymore, as experience has shown that it is “humanly impossible”²⁵⁹ and “does not make technical sense”²⁶⁰ to work faster. Although it seems common sense to equate a shorter cycle time with a faster work rhythm, this is not necessarily so. The immediate implications for an individual worker’s bodily movements stem from the ratio between cycle time and tasks to be performed – the following example from China illustrates the point:

How much time do you have to finish a task?

“90 seconds.”

And what is it that you do in this time?

“I put the cover on and fasten it in place. It was 27 covers per hour in the past, but now it is 50, because in the past I had to do two different operations, but now it is only one.”²⁶¹

The individual intensity of work also depended on the size of the overall workforce and the volume of output. In Mexico, for the two sedan models that were in high demand, the cycle time was one minute, whereas for the compact model that was exclusively produced in Mexico for all global markets, but that was generally in lower demand, it was two minutes.²⁶² This did however not imply that workers had twice the time to complete their tasks, but that instead the number of workers was reduced while the complexity or number of tasks performed per worker was increased. For workers, a longer cycle time with more complex tasks could therefore require a “faster” work pace than a short cycle time with a simpler task (although the latter would naturally be more repetitive). Worker Miguel described the situation as follows:

²⁵⁹ Interview German senior manager Näher.

²⁶⁰ Interview (2) German senior manager Pongrac.

²⁶¹ Interview dispatch worker Ping.

²⁶² Author’s field notes.

“Because they reduce the number of people, in two minutes you still have to do a lot of work. That is, at the end of the day there is no positive outcome for those *compañeros* [who work longer cycles]. There are a few stations where in the best case you may have ten, maybe fifteen seconds of breathing time. Within these two minutes you have fifteen seconds of ‘ahhhh...!’, you stop and return to arranging your tools and material. And then you get back to work. But in the worst case, there are those workers who work exactly on time, that is, they finish one task and immediately start with the next, because there is no formula or mechanism in place that allows them to have a rest.”²⁶³

The quote also pertains to another issue: differences in individual work pace under conditions of teamwork and individual evaluations were prone to create conflict amongst workers, when those that worked faster blamed their higher workload on those that failed to fulfil their targets. On the other hand, the work pace of the fastest workers was often taken as the new standard in a process of continuously intensifying the work rhythm. Worker Daniel complained that management systematically utilised the precarious employment status of temporary workers – and their aspirations to be made permanent – for this purpose:

“The *eventuales* are being pressured very hard to work at very fast rhythms – and that is then taken as an example to standardise their work pace across the board. So we have sometimes told the *eventuales*: ‘Don’t work like this – this is overwork. You cannot work running. Apart from that it is detrimental to the quality of your work.’ But they are under immense pressure from management.”²⁶⁴

Pre-1992, changes in cycle time and line speed, or other changes of work rules, required the consent of the union. Post-1992, as in China – where industrial

²⁶³ Interview worker Miguel. In some cases, the cycle time could be shortened to such a degree that it rendered the application of ergonomics unfeasible. For example, workers who assembled the tires at Company X/JV1 were supposed to be relieved from physical stress by using a mechanical manipulator that lifted the tire into position. However, worker Lu reported that the manipulator could not keep up with the high speed of the assembly line, so that workers returned to assembling the tires by hand. Interview worker Lu.

²⁶⁴ Interview worker Daniel.

engineering was moreover entirely the responsibility of the Chinese side²⁶⁵ – such changes would be implemented by the enterprise unilaterally. In China there was no compensation for an intensification of work other than double wages and bonuses. In Mexico, the strong discontent amongst ordinary workers over issues of “overwork” (*sobrecargas de trabajo*) – which some of my interviewees identified as the most pressing issue on the shop floor²⁶⁶ – together with the reduced but nonetheless continuous pressure from the shop floor representation resulted in an informal “convention” between enterprise and union. In areas where the line speed was increased, the union pushed for a wage raise along the regular pay grade of the respective workers:

“Normally, if there is a problem, for example an augmentation of the line speed – let’s say from a one minute cycle time to 40 seconds – and the *compañeros* have to work harder, we first go down to the shop floor, assess the situation and speak to the *coordinación*, the bosses. And if we cannot reach an agreement, we stop production and take the issue to HR and the *licenciados* responsible for the work area. We will negotiate, and if they insist on increasing the speed, we will try to find some benefit for the *compañeros*, which is normally a wage increase in the form of a personal promotion outside the annual raise. [...] That means that workers on this particular line are raised from one wage level to the next.”²⁶⁷

Nonetheless some workers also resisted the increasingly complete control over their body and movements at the workstation, highlighting the importance of even brief periods of rest. A member of the group of worker dissidents in Mexico complained:

“The battles we have to fight around ergonomics are precisely fought from the same trench in which I am currently engaged in my role as a shop floor representative. You look for means through which the *compañero* who is struggling with his work can find some relief. ‘No, no, he has enough time’ [imitating an industrial engineer] – no, this is actually not his time, but time for

²⁶⁵ Interview German senior manager Vogt.

²⁶⁶ Interviews workers Daniel, Miguel and Arturo.

²⁶⁷ Interview union representatives Carlos and Oscar.

you! This is the dilemma that we are facing with these ‘industrial engineers’, who are the ones that specify your time and movements. That is the battle. We on the bottom have to bear the brunt, in order to negotiate some form in which the pressure is not that high anymore.”²⁶⁸

Apart from complaining to union representatives, who were often in favour of the enterprise’s strategy, the group of worker dissidents however had no strategy to deal with these issues – not to speak of the absence of a particular union response to the problem, other than negotiating an *ad hoc* pay rise. As the union in Mexico was not informed in advance about these changes (anymore) – and the unions at Company X in China not involved in these issues anyway – line speed augmentations usually came as surprise decisions to workers. In practice, however, they required prior planning, because once a production process was set up to operate with a certain cycle time, it would be a major organisational and time-consuming challenge to change it again. German senior manager Pongrac explained:

“That requires long-term planning, because I also need the respective workers. Let’s assume we have a cycle time of two minutes that I want to reduce to one minute and a half: how many additional workers do I need, so that they can fulfil all the tasks? Do I have to re-clock certain parts, because one worker has little to do and another is unable to finish his work? So that concerns the human factor, but in addition I have to take account of the technology that is configured for a cycle time of two minutes. I cannot simply step on the gas and the bolt is screwed in with half the time. That demands a lot of smaller changes. But with early announcement such a change should be implemented within three to five months.”²⁶⁹

The issue was complicated by the fact that depending on how integrated a work area was into the overall flow production system, an increase of the line speed in that area alone could lead to serious imbalances between its output *vis-à-vis* that of the remaining production process. Singular increases of line speed usually

²⁶⁸ Interview worker Miguel.

²⁶⁹ Interview (2) German senior manager Pongrac.

occurred in areas that could be run somewhat independently or if an increase in stock of particular components was desired.

In sum, management could not arbitrarily intensify labour in the short run, but was constrained by the integrated complexity of a flow production system and particular machine operations. This however merely meant that the respective changes had to be planned in the medium run, which was something that remained intransparent to workers. In the Mexican case management strategically pressured temporary workers to work particularly hard, and then used their efforts as a benchmark for normal operations. In the Chinese case, a certain consensus had developed to not decrease cycle times below 60 seconds anymore – and all newly opened factories of Company X/JV1 set up their initial processes accordingly. At Company X/JV2 cycle times varied more significantly between older and newer models, and higher and lower output. The intensity of work therefore depended on a range of factors – which in both China and Mexico were however at the sole discretion of management to assess and implement, with little particular responses from workers.

3.4. Mistakes and Monitoring

Though all operations in Company X's plants were precisely timed, reaching the daily targets without any problems or interruptions was nearly impossible. The complexity and level of integration of the production process made smaller mistakes prone to creating knock-on-effects – even though technological buffers attempted to minimise them. During each of my visits to four different plants of Company X in China, as well as in the Mexican plant, the intrinsic limitations of the deployed technology became apparent as production had to be stopped for shorter or longer periods in nearly every department I saw.²⁷⁰ As senior manager Pongrac elaborated:

²⁷⁰ Author's field notes.

“I would say for larger body shops: half an hour to 45 minutes malfunction per shift, more must not happen. That is, not on-going, but many smaller malfunctions. Then every week, 10 days, two weeks we experience a malfunction – a robot is defunct – where one has to stand idle for two or three hours straight. That mustn’t happen, but it does. Because the machines run throughout three shifts, because we have to produce such a high number of units, there is way too little maintenance, cleaning and upkeep.”²⁷¹

The possibility of errors implies two techno-organisational challenges: How to detect such errors; and how to rectify them. Modern assembly departments are based on computerised monitoring technology that can retrace production mistakes to individual workstations – and individual workers. Company X/JV2 used these processes in its most recent production halls, as for example the ones created for the upscale brand in the North. Older assembly halls in China and Mexico, however, drew on personal supervision to control workers’ performance. Errors could be detected at certain checkpoints and traced back by using the shift plan to determine who had been responsible for the mistake. In addition, workers were supposed to report and note down production mistakes that they observed or had committed themselves – which was of course a rather impractical solution:

“Usually they are supposed to note that in their operation sheet, but which worker writes down his own mistake!?”²⁷²

Where error detection primarily relied on personal supervision, tensions between management and workforce were likely to arise. My interviewees in Mexico reported multiple instances of conflicts and confrontations with authoritarian managerial personnel over the quality of production.²⁷³ The following anecdote is a telling example, not only for personal hierarchies on the shop floor, but also for a deeply engrained *machismo*, as well as for workers’ use of overtime-refusals as a strategic weapon:

²⁷¹ Interview (2) German senior manager Pongrac.

²⁷² Interview (2) German senior manager Pongrac. Neither in China nor in Mexico did Company X employ financial penalties for production mistakes – other than not qualifying for certain bonuses.

²⁷³ Interviews worker Daniel, Miguel.

“Our working day was from six to three, but because it was a new production process the cars sometimes came out with mistakes or much too late. So we had to stay four, five hours extra to finish the work. That meant we worked for about 13 hours a day to meet the production targets. It [the conflict] was a question of the authoritarianism of the department manager. [...] The boss came around, because the process was going very badly – we had to do a lot of rework, a lot! The mistakes mainly came from one team, so the boss went to the line and started to shout swear words around – first without addressing anyone in particular. But then he came back and picked out a union *compañera*, and she told me that he started shouting at her: ‘Why are you not working? Why don’t you get the work done that we pay you for? You look like...’ well, words that were very offensive to her. He failed to show any respect, which made us really angry. So amongst the *compañeros* we reached an agreement that we would not do the extra time; and we went home at three. This infuriated our boss. The next day he had called the union representation and wanted to find out who had instigated that we left early. He told us how many dollars of losses we had caused – we responded by saying that we would not permit his authoritarianism, nor that of the union, demanding that he would not again come down to the shop floor to address us directly, that for these issues he has his auxiliaries; and we demanded a shuttle service for the evening. [...] This battle we won, but there are many, many frictions.”²⁷⁴

This anecdote also helps to illuminate the social implications of the question of error corrections. In both China and Mexico, smaller errors and stoppages were handled by prolonging the working day either by operation the whole production process for an additional time span (where the shift system allowed it) or by ordering a certain number of workers to do rework in a separate area. As an indicator of how central rework was to final output, a German senior manager (Rordorf) at Company X/JV1 stressed that a ratio of 75% to 80% of cars leaving the plant without rework was a good result, as was a rate of 0.7 to 0.9 B-type errors per car.²⁷⁵ In order to reach target output in a desired time period, it was vital that

²⁷⁴ Interview worker Daniel.

²⁷⁵ Interview German senior manager Rordorf. Errors are classified according to frequency of occurrence, which usually concurs with the gravity of the problem. A-type errors are minor aesthetic and easily fixable problems, like scratches or dents, making up about 70% of all errors. B-

the flow production process did not stop. The flexible handling of overtime and allocation of personnel to rework was crucial to allow for the continuation of production, even after an error had been detected at an earlier stage in the process. German senior manager Pongrac elaborated this point:

“If I have one hundred cars requiring rework, I can deploy five to ten workers on a Saturday or Sunday to finish them. But if we do not reach the target number, if I have no cars at all, I cannot do anything on a Sunday. That’s why it is very important not to stop the assembly line. If I need to build 1200 cars each day and someone stops the line every five minutes – that’s impossible.”²⁷⁶

In other words, times of high production volume China meant that technological and human capacities would be pushed to the limit. This came at the price of more production errors – which was counter-balanced by the flexible allocation of overtime. The emerging bottleneck situation put workers under significant stress – but could also increase their leverage to bargain for concessions. Workers in Mexico strategically used overtime refusals, slowdowns, and sabotage to protest perceived injustices.²⁷⁷

In this section I have put particular emphasis on the frequency of production mistakes, the monitoring techniques management employs to control the workforce, and the responses that workers have embraced. I have demonstrated that the most efficient exploitation of technological means was in both China and Mexico achieved through a flexible unilateral command over working and cycle time, which ironically however backfired in the case of Company X/JV2 due to the

type errors require more rework and might negatively affect the functionality of the car, such as cracks or easily installable, but missing parts. C-type errors require most rework, but occur rarely, within a 10% range. They could concern, for example, more serious assembly mistakes or defunct (often electronic) parts (Brüggemann & Bremer 2012).

²⁷⁶ Interview (2) German senior manager Pongrac.

²⁷⁷ The workers I interviewed who carried out such actions usually also established some connection to the union structure, either because they already held positions as grassroots representatives – or because the union apparatus intervened to resolve the issue through negotiations. As the union had stronger leverage (and arguably interests) to support permanent workers, these actions were however not so prevalent amongst temporary workers: “When I was an eventual I did not try anything, because as an eventual you are kicked out too easily.” (Interview worker Daniel) That is, the employment status mattered in determining the degree to which workers dared to take actions that put them at heightened risk of getting sanctioned.

limited time for maintenance work. Production errors thus became more frequent – which in turn was balanced with more overtime for workers. On the basis of an example from the Mexican case I have shown how personal supervision and managerial authoritarianism caused workers to protest. In this case they used overtime refusals as a strategic weapon, which was not necessarily linked to the issue of production mistakes, but rather a strategy that workers in Mexico embraced in various instances, as the anecdote of worker Santiago in the preceding chapter indicated. Time therefore became a contested terrain between managerial and workers' interests – in which the former however clearly dominated.

4. Conclusion

In this chapter I have argued that the development and deployment of machinery is indeed to the largest extent controlled by capital, with few – if any – possibilities for workers at Company X in either Mexico or China to affect the technological composition of the production process itself. In cases where increasing automation replaced living labour, workers at Company X in China and Mexico indisputably found themselves at the receiving end of technological change. I have demonstrated that in order to exploit the properties of high-cost machinery to the fullest extent, management in both cases maintained flexible control over working hours and allocated extensive overtime – in particular in the Chinese case. In China, Company X used time accounts to balance fluctuations in capacity utilisation, while in Mexico – where the union refused the introduction of the *banco de horas* – forced vacations or layoffs of temporary workers were the preferred measures. In both cases an intensification of work through increases of line speed was at the sole discretion of the enterprise.

However, I have also demonstrated that the fragmentation of capital into different managerial groups responsible for machine design, implementation in production and day-to-day operations can lead to situations in which the technological composition of the production process might in fact not reflect the interests of shop floor managers. The day-to-day agency of both managers and workers *vis-à-*

vis the technological composition was constrained by the path dependency stemming from the machine design and production paradigm itself. Management was limited in its ability to freely modulate the production process, due to the sensitive timing of an integrated flow-production system – speed ups of production, recalibration of machinery or increasing automation require long-term planning and systemic adaptations of the entire production process.

“Modular production” amplified the tendency to technological convergence, because the production of similar models at different locations requires the presence of certain specialised machines – such as those used for laser welding and dip coating, as well as Company X’s internally developed framer etc. This does however not imply that automation rates had to converge, although it seems likely that in those Chinese plants where they were still rather low, they would rise over time due to the phasing out of older models (with lower quality demands and hence more manual labour), and increasing pressure to raise productivity. Flexible substitution of machinery for living labour is essentially limited to the body shop, and to a lower degree the paint shop. This is so, because either – as an effect of automotive manufacturing being a highly competitive and mature industry – other departments have already been automated to the utmost degree, such as the press shop; or the demand on flexible operations limits (for the time being) the feasibility of technological fixes, which is the case for most assembly tasks.

In this context, shop floor managers had to strike a balance between maximal efficiency and minimal disruptions. This was not always possible. At Company X in China operating hours were extended to an extent that technological disruptions occurred due to insufficient time for maintenance work – or caused fatal accidents as a result of workers being too exhausted. Furthermore, the technological limitations of worker agency could not fully preclude smaller acts of defiance or evasion, which gave workers some relief from the exhausting work rhythm – at Company X/JV2 for example the omission of certain tasks, socialising or having a nap when the assembly line stopped etc. In Mexico, worker agency took a more coordinated form through the union, which bargained for *ad hoc* wage increases in cases of an augmentation of the line speed. Outside the union workers in Mexico

also made strategic use of overtime refusals to bargain for concessions of various types. However, all these measures had little effect on the technological composition – though the time regimes could be adjusted, as for example at Company X/JV1 in 2009. This means, *ex negativo*, that where technological change happens, it comes from outside the production process proper – e.g. from strategic decisions by the board of directors or from its systemic disruption.

Concurring with the arguments of the *operaists* and Silver, the connection between technology and worker agency might therefore indeed reside in an external confrontation of the entire production system itself, by targeting technologically determined nodal points and bottle-necks. Management has tried to find further intra-paradigmatic technological solutions to the problem of increasing buffer-reduction making the production process ever more failure-prone. In this context workers potentially have substantial structural power through their capacity to bring the entire process to a halt with minimal effort – sabotaging a machine, not delivering parts in time, stopping the assembly line etc. Increasing automation also eases collective organising, as fewer workers need to be mobilised to carry out effective action. However, this structural power remains a mere potentiality and neither in Mexico nor in China – arguably with the exception of the 2000 strike in Mexico mentioned in the preceding chapter, in which workers turned to sabotage and slowdowns – did workers at Company X actually mobilised it.

So far we have analysed the internal labour process at Company X in China and Mexico. However, its current form of a concentration on core manufacturing activities resides on the provision of external services and the supply of parts, components and pre-assembled modules. As Silver and others have suggested, the just-in-time integration between terminal assemblers and suppliers implies that worker agency in the supply chain could potentially have severe knock on effects for terminal assemblers. It is for that matter that in the following chapter we will turn to a closer analysis of the linkages between Company X and its suppliers, and the smaller and larger institutional changes that worker agency in the supply chain has triggered in China and Mexico.

Chapter 7: Outsourced Trouble – Worker agency in the Supply Chain and Institutional Change

Outsourcing, the out- or subcontracting of activities previously performed by an enterprise's direct personnel, investment and processes, is not a new phenomenon – historically, enterprises have always contracted suppliers to fulfil functions beyond their own capacity. However, since the 1980s outsourcing has become a deliberate cost-saving business strategy. Moving away from high vertical and broad horizontal integration, which enabled economies of scale and centralised control, but which also involved high direct and overhead costs, new managerial thinking in the 1980s encouraged enterprises to “lean” their businesses down to certain core activities (Lonsdale & Cox 2000) – a philosophy that was shortly thereafter epitomised for the car industry in Womack et al.'s *The Machine that Changed the World* (1990).

Automotive factories first began to outsource services – such as the canteen, security, cleaning and maintenance, and following advances in IT and data processing, logistics and administrative activities. While the complexity of the product had always required the supply of prefabricated parts, platform strategies and the modularisation of production enabled terminal assemblers – with Company X taking the lead – to outsource entire segments of their production processes: such as the manufacture of seats, bumpers, or the cockpit. As terminal assembly plants became “leaner”, rather than through economies of scale it was “increasingly through better logistics and supply chain management that efficiency and productivity [could] be achieved, leading to significantly reduced unit costs” (Christopher 2011, p.5). Lead firms put suppliers under considerable pressure (Sturgeon et al. 2008), leading to low profit rates and fierce competition, but to high demands on expertise and significant production costs, which supply firms began to compensate through concentration and expansion. In a nutshell, automotive suppliers became squeezed by “the necessity to compensate declining margins through size and a larger share of the value chain – and the limited

resources to meet these necessities” (Jürgens 2011, p.24).²⁷⁸ These limits had severe effects on working conditions and wages in the supply chain. As Juárez-Núñez has concisely formulated:

“The transfer of productive processes is not solely a technical issue. It is about a reduction of the overall cost of labour through contracts that establish parameters for wages and benefits inferior to those in terminal assembly plants.” (Juárez Núñez 2005a, p.147)

In other words, the cost pressure on suppliers was to a large extent translated into deteriorating wages and working conditions – and a relief of terminal assemblers from higher labour cost, as I have argued for in the case of Company X in chapter 4. In this chapter I will engage these issues in more detail with regards to the case of Company X’s supply chain in Mexico and China; and in doing so I will pursue two arguments.

In 2003 Beverly Silver still assumed that the Mexican and Chinese car industry would remain characterised by a “lean and mean” model – lean production and little job security – which would perpetuate an associated dynamic of growing workplace bargaining power and cycles of relocation (Silver 2003, p.72). She contrasted the Mexican and Chinese cases to those of a “lean and dual” model – i.e. lean production with secure employment for a core workforce and little job security, as well as lower pay and worse working conditions, for a peripheral group of workers. In these cases, Silver argued, the centre of labour unrest would shift towards “the lower-tier workers in the subcontracting system. Yet, in these sites, strong grievances do *not* go hand in hand with strong workplace bargaining power. Moreover, while upper-tier workers are likely to have strong workplace bargaining power, they are also likely to have fewer grievances, and at the same time they are likely to be physically and psychically separated from lower-tier workers with greater grievances and less structural power.” (Silver 2003, p.73)

²⁷⁸ Terminal assemblers, on the other hand, lost control over innovation processes and new technologies with competencies being increasingly concentrated at the suppliers of the respective modules – a reason why Japanese automakers, such as Honda and Toyota, have not jumped on the modularisation-bandwagon to the extent that Company X has (Jürgens 2011, p.24).

It is not without irony that Silver's student Zhang found that by the mid-2000s an increasing number of automotive enterprises in China had moved towards the "lean and dual" model (L. Zhang 2014a, p.40) – and that, as we have seen, the findings presented for Company X in both China and Mexico point towards the same direction (although caution is demanded when characterising production at Company X as "lean"). In other words, while Silver's 2003 predictions pictured the Chinese and Mexican automotive sectors as strongholds of a "lean and mean" model, the evidence presented so far and in this chapters confirms Zhang's findings for both cases: they have moved substantially towards the "lean and dual" ideal type. Similarly, I will show that, as the model predicts, labour unrest does indeed seem to concentrate in the supply chain in both the Mexican and Chinese case. *Pace* both Silver and Zhang, I will however argue that caution is required when interpreting these trends as indicators for a sector-wide cyclical recurrence of capital relocations and labour unrest (Silver 2014; L. Zhang 2014a; 2014b). Rather, the distinctiveness of conditions, coping strategies and leverage for workers in the supply chain suggests that recent strikes in the supply chain do *not* indicate the emergence of strong labour movements across the entire automotive sector, but rather suggest that they are specifically limited to the autoparts industry. I will supply empirical evidence for recent strikes occurring in the autoparts supply chain in China and Mexico, and for cases in these regions where workers employed coping strategies other than striking.

Second, *vis-à-vis* institutionalist arguments of convergence and divergence, I argue that the means by which Company X manages its supply chain diverge between China and Mexico – which however is not reflected in a divergence in working conditions, pay and other issues concerning the workforce in the supply chain. On the other hand, I argue that the 2010 autoparts strike wave in South China caused the emergence of new institutions, providing strong evidence for growing worker agency leading to institutional change through a process of relational agency. I will shed light on how worker agency in the supply chain was responded to by policy makers and capital, showing in particular how in both Mexico and China corporatist unions provided the preferred tools to depress worker agency and install channels controllable by management and local governments. I will

therefore make a case for the interpretation of institutional change as an unintended consequence of the interaction of these stakeholders, which was not attributable to the sole interest of a single party.

I will first briefly outline the particularities of Company X's outsourcing efforts in China and Mexico and its relation to its suppliers, before discussing working conditions and workers' grievances at some of Company X's and other autoparts suppliers. Zooming in on particularly significant strikes in the autoparts industry more recently, I will provide the necessary empirical foundations to then demonstrate in more detail how in the Chinese case these have induced institutional changes in labour market institutions and shop floor relations between capital and labour.

1. Relations between Company X and Suppliers in Mexico

Outsourcing at Company X in Mexico took off on a large scale only after the 1992 conflict. With the new collective contract the union had lost the right to influence decisions on the distribution of workers within the plant, and on in-house production *versus* external subcontracting. Worker Miguel commented:

“In '92 they removed this, that to a certain point we could protect the work areas – today there is nothing of the sort; the enterprise can simply notify the union: ‘You know what: this, this and this, I do not need that here anymore, they will make this externally from now on. We can relocate the workers, and those who do not want to, can leave.’ Nothing more.”²⁷⁹

As outlined in the preceding chapters, Company X demanded a leaner organisation of the production process, with shorter timespans and lower storage capacity for delivered components. In light of the obligation to source a majority of parts from the NAFTA region, the German headquarters pressured its Mexican subsidiary to restructure the supply chain (Pries 2000). In the contract renegotiations of 1996 and 1998 it proposed that certain modularised parts for a model to be newly

²⁷⁹ Interview worker Miguel.

introduced in 1998 should be produced by workers of external suppliers, who would work alongside Company X's unionised personnel within the facilities of the main plant. The truck factory that Company X opened in 1996 in Brazil – where the only in-house workers were those in quality control, and all other activities, including final assembly, purchased from suppliers – inspired this proposal.²⁸⁰ While the collective agreement still allowed the union to firmly reject this, it could not prevent the outsourcing of the respective processes *per se* (Juárez Núñez 2006). Consequently, Company X continued to pressure its traditional German and other foreign suppliers – which had been involved in the design phase of the 1998 model – to relocate to the next-door and newly constructed supply park (Pries 2000).

This early power constellation set the course for two long-term results. On the one hand, Company X had full discretion to use market pressure in order to restructure the supply chain. Over the course of the outsourcing project, various suppliers have been replaced; and certain components, such as seats, were sourced from two competing suppliers at the time of my fieldwork, both of which were present in the nearby supply park.²⁸¹ In the long run global players ended up replacing the pre-1992 pool of Mexican suppliers nearly entirely on the higher tiers of the supply chain (Juárez Núñez 2005c, p.204ff.). On the other hand, Company X “created” a new layer of suppliers by outsourcing more and more segments of its highly vertically integrated production process. The first areas affected were the assembly of wire harnesses and the production of small metal parts, as well as indirect activities, such as the canteen and logistics, for which two different suppliers were subcontracted in the 1990s (Bensusán & Martínez 2012). By 2005, suppliers made up 60% of the total value of the 1998 model (Juárez Núñez 2005a, p.157).

²⁸⁰ This model was initially seen as a prototype for all future ventures, but ultimately not deemed effective enough, mainly due to the decentralisation of control and the vulnerability to disruptions within the pool of suppliers.

²⁸¹ As mentioned, initially supply firms tried to create a counterweight to the power of terminal assemblers through concentration, expansion and product diversification.

In sum, the post-1992 power constellation between management and union could prevent the establishment of a truly fragmented factory as in the Brazilian case, but not large scale outsourcing more generally. In the absence of any non-market institutions that could shield the Mexican supply industry, the result was a highly competitive environment for the suppliers of Company X, in which only the largest – non-Mexican – suppliers had the chance to establish a long-term cooperation with Company X.

2. Relations between Company X and Suppliers in China

At the time of my fieldwork the overall structure of Company X's supply chain in China, including the degree of outsourcing, was the same as in Europe. Cost reductions did thus not result from an additional leaning of in-house production, but from the fact that Company X's traditional global suppliers were substituted with cheaper Chinese ones, or that these global suppliers could offer lower prices due to lower production cost in China.²⁸² However, the relationship between terminal assembly and suppliers in China was deeply shaped by Company X's joint venture structure, which created different means of control that Company X could mobilise against its suppliers. This gave rise to very different supply chain structures at Company X/JV and -/JV2. While the 50/50 ownership structure of Company X/JV1 granted the German side a higher degree of control over the sourcing process, the 60% majority holdings of JV2 made it favour suppliers within its own company group.²⁸³ In fact, at the time of my fieldwork, all tier one suppliers of Company X/JV2 were joint ventures with JV2.²⁸⁴

²⁸² Interview German senior manager Schütte.

²⁸³ Company X's upscale brand, that held 10% of Company X/JV2, however made use of the ownership structure in another peculiar way. It made an extra profit by shipping high-tech – and high-value – components such as GPS and information technology in from Germany: “The premium brand only holds ten percent in the joint venture, so its profit margins in China are rather low. One seeks to make money through the import of components. These components are of course not imported for free, but classically sold from one plant to the other – with a certain mark-up” (Interview German senior manager Schütte). In other words, JV2 and other divisions of Company X would cover ninety percent of the purchasing costs.

²⁸⁴ Interview German senior manager Schütte. There is a range of European and American suppliers that Company X traditionally sources from and that it desires to be present in China as well. At Company X/JV2 its interests clash with those of JV2, which intends to secure as many orders as possible for suppliers under its own roof, in order to maximise profits and gain managerial and technological expertise. According to senior manager Schütte this led JV2 to attempt to circumvent German suppliers, especially when it concerned the production of higher value components.

In the following, and on the basis of the quality problems haunting Company X in China, I will briefly discuss how the particular ownership structure of Company X/JV2 created limits and potentials for interventions into the supply chain. This will allow me to illustrate not only the vulnerability of terminal assemblers to any kind of problems occurring in the supply chain – including strikes, which have been taken as an argument for the increasing power of supply chain workers (Silver 2003; L. Zhang 2014b) – but also the particular means Company X/JV2 had at hand to resolve such issues.

Low quality of supplies was lamented by German managers of both joint ventures at multiple locations – especially at those of Company X/JV2. German senior manager Pongrac for example estimated that a change of the supplier of bumpers alone would reduce the rate of production errors by twenty percent.²⁸⁵ However, because Company X could not penalise or withdraw a contract from a supplier through market relations and without prior approval of its joint venture partner – which was unlikely to punish companies under its own roof – suppliers had more leverage than usual in lead-firm driven automotive chains (contrasting to e.g. Sturgeon et al. 2008). This power relation was well illustrated when the German management of Company X/JV2 rejected a delivery of faulty bumpers, whose supplier refused to re-work them or adjust its processes. For three days both the German side and the JV2-supplier remained adamant, which meant that no bumpers were delivered and 6,000 cars had to be assembled without the missing parts. Supplies were only resumed after the Chinese side of Company X/JV2 facilitated a compromise between the German side and the JV2-supplier.²⁸⁶

The example indicates that the effect of faulty or undelivered parts is immediate and drastic. The German side of Company X/JV2 therefore embraced certain counter-measures. First, in order to force suppliers to deliver the desired quality, German managers insisted that component prototypes had to be sent to the

²⁸⁵ Interview German senior manager Pongrac. Low quality bumpers are however not necessarily a China-specific problem. The complexity resulting from many other parts being assembled within and around the bumper make it a component that is rather difficult to manufacture, therefore always resulting in certain problems.

²⁸⁶ Interview German senior manager Vogt.

German headquarters for initial approval.²⁸⁷ Second, they sought to establish monitoring processes, which involved not only a technological quality check of the product itself, but also personal visits to suppliers, during which Company X asserted pressure on process optimisation. As senior manager Schütte explained:

“When the first parts arrive there will be an assessment: are they good or bad; why is that so; what can be optimised etc. The supplier will then be told what to change and optimise. Usually, but that is China-specific, the solution is dictated to the supplier, because Chinese suppliers are not – or not yet – able to do that by themselves. So one really has to go there and tell them: ‘This is the way these processes have to be operating.’ So one does indeed intervene at that stage.”²⁸⁸

According to German senior manager Schütte, such interventions were frequent and supported by JV2 – and serve to illustrate yet another point. Due to the influence of the Chinese joint venture partner over the supply chain – and the proven feasibility of interventions for the sake of process optimisations – the potential for the lead firm to affect working conditions and wages along the supply chain were extraordinarily high in the Chinese case. It is of course unsurprising that despite Company X’s extensive CSR agenda, no such efforts were made by either the German or Chinese side (for a note on CSR see the Appendix). In fact, Company X’s German supply chain managers in China had no illusions about low wages being one of the main reasons that the China business was still lucrative – and argued that working conditions and wages in the supply chain were beyond the responsibility of Company X.²⁸⁹

In sum, the particular ownership structures of Company X’s joint ventures in China – in particular its minority holdings at Company X/JV2 – endowed it with less discretion over utilising market pressure to structure the supply chain. Instead, it had to rely on its joint venture partner to establish satisfying conditions along the supply chain, which could lead to certain animosities between the German and Chinese side. Hypothetically speaking, the fact that the majority of Company

²⁸⁷ Interview German white-collar worker Hensch.

²⁸⁸ Interview German senior manager Schütte.

²⁸⁹ Interviews German senior manager Schütte, Bohnert, Näher.

X/JV2's suppliers were part of the JV2 conglomerate could have shielded the supply chain from lead-firm induced pressure on wages and working conditions, but this potential was, unsurprisingly, not realised.

3. Working Conditions in the Supply Chain

Before I discuss the grievances and agency of workers in the supply chain in more detail, the following table (Table 6) gives a brief overview of working conditions at some of Company X's – and other companies' – suppliers in Mexico and China. Mexparts 1 is an internal logistics provider; Mexparts 2 a tier two supplier for metal engine components and carpets; Mexparts 3 a tier one supplier of seats; and Mexparts 4 a tier two supplier of break pedals, hinges and other metal and plastic parts. Chinaparts 1 produced break pedals, handles and door locks in the East of China; Chinaparts 2 was a tier two spring supplier; and Chinaparts 3 a tier one supplier of electronic components – both were located in South China. The Honda gearbox factory is the one that triggered the 2010 strike wave in, and beyond, the autoparts industry in China. Apart from the latter and Chinaparts 2, all companies were suppliers of Company X.

	Ownership	Product	Class composition	Time regime	Remuneration	Overtime benefits	Minimum wage
Mexparts 1	German	Logistics	Temporary contracts, fluctuating heavily: 3,500 (2000); 750 (2012)	Flexibly adapted to Company X's shift system (3 shifts à 8h + overtime)	\$82/day (min); \$194/day (team leader)	Yes	\$63/day
Mexparts 2	German	Metal components, carpets	360 permanent workers, mostly male	In 2012: 7 days à 12h, no rest days	\$70/day (min); \$153/day + premium (12 years seniority)	Yes	\$63/day
Mexparts 3	US-American	Seats	Plant 1: 550 workers Plant 2: 450 workers Plant 3: unknown	4 days à 12h (week: 48/45/42h morning/day/night shift)	\$85/day (min)	Not fully paid: <i>banco de horas</i>	\$63/day
Mexparts 4	US-American	Break pedals, hinges, metal components	470 workers; 40% female; division of permanent/contract workers unknown	4 days à 12h (week: 48/45/42h morning/day/night shift)	\$700-\$1,900/week (including allowances, bonuses, premiums)	Not fully paid: rest days used	\$63/day
Honda China	Japanese	Gearboxes	1,800; Formal migrant workers; interns (2010: 45% of assembly)	3 shifts	Regular workers: ¥1,500/month	Yes	¥770 (2010) ¥1,530 (2012)
Chinaparts 1	Taiwanese	Break pedals, handles, door locks	Ca. 500; formal migrant workers, interns	Contractual minimum: 180h/month	Formal: ¥1,680/month (2013) Interns: ¥1,280/month	No	¥1,620 (2013)
Chinaparts 2	Japanese-Taiwanese	Springs	Formal: 400 Dispatch: 100	5-day week, 2 11h shifts, bi-weekly rotation; high orders: 2 day/night/rest shifts à 11h +	¥1,300 (2010) ¥2,270 (2013); including allowances, excluding bonuses	Yes	¥770/month (Jan 2010) ¥1,530/month (2012)
Chinaparts 3	Japanese	Electroparts	Formal workers: 1480 (70% migrants) Dispatch: unknown	5-day week, 2 11h shifts, bi-weekly rotation; high orders: 2 day/night/rest shifts à 11h +	Similar to Chinaparts 2; up to ¥4,500 with bonuses, benefits	Yes	¥770/month (Jan 2010) ¥1,530/month (2012)

Table 6: Working conditions in the supply chain, China and Mexico

Sources: Interviews workers Maria, Rafael, migrant workers Wang and Zhao, worker Shao; Damián Jiménez 2009b; Bybee 2010; MSN 2010; Juárez Núñez et al. 2012; Bensusán & Martínez 2012; Lau 2012; Liang 2013.

3.1. Workers' Grievances in the Supply Chain

Workers' grievances in the autoparts supply chain in China and Mexico concerned not only absolute but also relatively low wages, long working hours and exhausting work rhythms. This is hardly surprising, as these conditions were not only much lower than at Company X's terminal assembly plants, but also much closer to the legal minimum more generally.

At Mexparts 2, 3 and 4, long working hours combined with high work intensity and physical strain, due to working standing-upright, produced intense pressure on employees, particularly on women shouldering the double burden of factory and housework: an average working day for my interviewee at Mexparts 2 meant getting up at three in the morning, cleaning and preparing meals for her husband and her two children, leaving for the factory around five, working her shift from six in the morning to six in the evening, returning home, preparing dinner, cleaning, resting and sleeping – every day for the last eight months. As she commented:

“It wears you down. As a woman it wears you down. The hours that we sleep are very few.”²⁹⁰

Workers at Mexparts 3 and 4 complained about similar conditions, aggravated by sexual harassment and the regular dismissal of pregnant workers (MSN 2010; Juárez Núñez et al. 2012).

At Mexparts 1 work was exhausting not so much because of the nature of the tasks, but rather because of the intensity of the work rhythm, which mainly resulted from the marginal number of employees (see section 4.3. for more details). As Rafael, a team leader, remarked:

“Because they manage people, their profit is that you work for two; that is how they make a profit. And because that is not well-defined they try to get the utmost

²⁹⁰ Interview worker Maria.

from what you do, so that they don't have to hire another person – that is where the profit of the supplier comes from.”²⁹¹

Echoing Silver, on top of the managerial pressure, workers at Mexparts 1 indeed suffered from a certain “psychical” dissociation from the permanently employed workers of Company X. Several of my interviewees reported that they had witnessed how Company X workers ridiculed and harassed the workers employed by the suppliers, or even paid a logistics worker a share of their benefits to do their overtime, while going home themselves.²⁹² Consequently, the relationship between unionised workers and those of the suppliers within the plant could be rather tense, as the following anecdote exemplifies:

“In the restrooms you can read scribbles: ‘Fucking workers of Company X.’”²⁹³

In China, working conditions at the Southern suppliers, including the Honda gearbox factory, had improved since the strike wave in 2010 (discussed in more detail in section 4.). A randomised survey amongst the workforce of Chinaparts 2, organised by the restructured trade union in 2012, indicated that the main complaints amongst the workforce regarded pay and food quality.²⁹⁴ Overtime could be, periodically, excessive and working days generally extended beyond eight hours, but workers usually had at least one rest day per week, which kept physical exhaustion in check.

Conditions were, however, much worse at Chinaparts 1 in East China. Although my interviewees considered the working environment to be safe – under the conditions that “you are careful, pay attention, wear the safety equipment and make no mistakes” – they also said that accidents were frequent: “Just two days ago, someone snapped the sinews in his wrist,” which one of my interviewees attributed to carelessness, the other one to exhaustion.²⁹⁵ As at Company X/JV1’s

²⁹¹ Interview worker Rafael.

²⁹² Interviews worker Arturo, Rodrigo, Jesús.

²⁹³ Interview worker Rodrigo.

²⁹⁴ Interview worker Lai.

²⁹⁵ Interview migrant workers Wang and Zhao.

main plant, which was located nearby, the combination of long working hours and the subtropical climate put a particular strain on workers. Similar to the strategies embraced at Company X/JV1's paint shops, "if we get tired from the long work and heat, the company gives us health care products (*baojianpin*) against dizziness and heatstroke."²⁹⁶

Apart from the exhausting work rhythm, workers at Chinaparts 1 were extremely unhappy with their living conditions. They lived in a superficially decent looking complex of dormitories, which housed migrant workers of ten different Company X suppliers. Most of the workers were housed in cohorts according to their place of origin and were 19 or 20 years old, only a few senior workers being older than 22. On the inside, however, the dormitories were badly maintained, with no administrative personnel on site. Eight people shared one 20m² room and a 3m² shower and toilet. Due to leakages the dormitories were constantly wet and dirty, and as a consequence swarming with cockroaches. The company deducted a monthly ¥100 from their payroll – i.e. a total of ¥800 per room. This contrasted rather sharply with the pre-strike situation of the Honda gearbox factory, where student interns were housed in double rooms in a small hotel, and changed to dormitories only when they became formal workers.²⁹⁷

What was most frustrating to the workers of Chinaparts 1, however, was the way they had been recruited. An HR representative had come to their vocational school in Gansu and advertised internships at Company X/JV1, after which many signed contracts on the spot. Only upon arrival did they realise that they were actually working for a supplier; and therefore felt they had been cheated.

Most autoparts workers in China were young domestic migrants, and their grievances could be interpreted as indicators of the discontent amongst the so-called "second generation of migrant workers" (*dierdai nongmingong*) (e.g. Lu & Pun 2010; Pun et al. 2010; Butollo & ten Brink 2012; Elfström & Kuruvilla 2014).

²⁹⁶ Ibid.

²⁹⁷ Interview worker Shao.

In a striking example, worker Shao, who had worked at Honda until 2011 remarked as follows:

“Young people, our generation, cannot accept being treated like machines.”²⁹⁸

However, the fact that both young non-migrant workers in China, as well as older workers in Mexico complained about essentially the same issues and even embraced the same metaphors – emphasising their refusal be treated like “machines”, “tools” or “robots” (see chapter 5) – indicates that discontent with the experience of industrial labour is neither a label pinned to a particularly young segment of the working class, nor anything uniquely Chinese. It is rather a shared perception amongst automotive, and arguably any industrial, workers, independent of location or age. This, in turn, confirms Silver’s assumption that the car industry produces similar conditions and class-reconfigurations everywhere, although, since in the following I will show how the presented grievances resulted in different coping strategies and patterns of conflict, this is probably where the explanatory value of such similarities ends.

4. Coping Strategies and Labour Conflicts in the Supply Chain

‘What did you feel during the strike?’

‘Revolution!’

– Worker Shao, a leader of the 2010 Honda strike

In both China and Mexico there have been larger strikes and labour conflicts in the supply chain since the early 2000s, the most prominent arguably being the one at the Honda gearbox factory in South China that kicked off a nation-wide strike wave in the summer of 2010. In the following I will analyse the coping strategies and strikes in the autoparts supply chain and the institutional responses they triggered. The latter are particularly far-reaching in the Chinese case and will therefore be analysed in more detail in a separate section.

²⁹⁸ Interview worker Shao.

4.1. Strikes at Company X's Autoparts Suppliers in Mexico

The automotive supply chain around Company X's main plant in Mexico saw multiple labour conflicts in the late 1990s and early 2000s, kicked off by a strike of female workers at a German supplier of electronic components in 1999, followed by strikes at Mexparts 1 and another logistics provider in the spring, respectively summer of 2000 (Juárez Núñez 2006). The Company X union – and the group of dissident workers, and other grassroots activists – offered their support to workers at the suppliers, but failed to bring them under the roof of the union. Worker Miguel explained:

“The statutes allow for an expansion, but the union does not see the benefits, nor does it bother to embrace this strategy. The primary reason is that it is threatened by the enterprise. As soon as the union establishes a branch at a supplier, Company X will revoke the contract with that supplier and give it to someone else. This has always been a problem; that there has never been any success with a widening of the union base, because of this scheme with the suppliers.”²⁹⁹

All these strikes, as well as the two more recent ones at Mexparts 3 and 4 discussed below, had the recognition of independent unions as part of their aims, and, defying their assumed “docility”, were in the majority started, organised and maintained by women. The strikes at Mexparts 3 and 4 illustrate very well not only the potential and limits of local organising and struggle – in particular the degree of violence worker activists face – but also how after an apparent victory management and policy makers retaliated through the implementation of institutional changes that allowed them to reinstate formal or informal control over the workforce.

By 2010 Mexparts 3 operated three plants (in the following plants 1, 2, 3) in close proximity to Company X's main plant, all unionised under corporatist unions. At plant 1, which employed 550 workers that were unionised in the CROM, workers had repeatedly (2006, 2008, 2009) been fired on the basis of the exclusion clause

²⁹⁹ Interview worker Miguel.

when demanding to be shown the collective contract. Facilitated by a local Workers Support Centre – which a female leader of a 1999 strike at a German electroparts supplier had set up in 2001 – dismissed workers at Mexparts 3 formed a transnational coalition with US-American unions to protest working conditions and the autocracy of the CROM. This included the sending of a delegation of Mexican workers to Mexparts 3's headquarters in the US in 2010 (Bensusán & Tilly 2010; Bybee 2010), which, however, was entirely futile as the US-American headquarters remained adamant.

Nonetheless, while solidarity rallies for plant 1 continued in the US, in May 2010 100 workers at plant 2 went on strike over the annual profit sharing of only \$104 (£5.56), their numbers swelling to 400 of the 450 production workers over the next three days. During the strike workers demanded the insourcing of subcontracted workers and a disaffiliation from the *Confederación de Organizaciones Sindicales* (COS), which organised plant 2 and was linked to the local PRI government. After the third day, the enterprise agreed to the demands, paid workers \$1,300 in shared profits and allowed the formation of an independent union.³⁰⁰ Briefly celebrated as a success by activists and observers (MSN 2010; Damián Jiménez 2010; Martínez 2010), the strike however turned out to be a failure when the unfolding dynamic between the different stakeholders resulted not only in violent clashes, but also in backroom deals that facilitated the final closure of plant 2 in 2012. In the following I will briefly reconstruct the course of events.

At the end of the strike, under consultation of the Workers Support Centre and US American unions, the strikers decided to set up their new union as a local section of the mineworkers union SNTMMSSRM. This was a tactical move to lift the question of union recognition to the federal state level – where all metallurgical unions are organised – and avoid leaving it to local authorities to make that decision (Nolan Garcia 2013, p.126). Once the federal labour board had recognised the union, on the local level workers only had to show that within the enterprise

³⁰⁰ Pressure from US American unions might have played a role in determining the enterprise's different stance in the case of plant 2 (Barrett 2010), and in facilitating the formation of a new union (Nolan Garcia 2013).

there was a majority in favour of an affiliation to the mineworkers union – which they did. Elections for the central committee took place shortly after the strike and a new collective contract was drafted and proposed to the enterprise (Damián Jiménez 2010).

However, Mexparts 3 delayed the process of recognising the new collective contract, giving the COS the chance to send around 70 thugs into plant 2, beating up and injuring 8 people – amongst them two pregnant women – and, joined by two low level managers, holding two members of the central committee captive for seven hours, forcing them to sign resignation letters (Martínez 2010). Workers reacted with a blockade of the highway and another strike, which was settled after three days with an agreement to reinstate and compensate the injured workers and investigate the role of the two supervisors (Anon 2010a). After that incident it became quiet around Mexparts 3, but members of the Workers Support Centre were physically attacked, received death threats and saw their offices vandalised (MSN 2011).³⁰¹ Regular wage negotiations took place at plant 2 in April 2011, resulting in a 7.5% increase. However, and at first glance out of the blue, in March 2012 Mexparts 3, citing financial reasons, announced the closure of plant 2, despite a ten percent revenue for the NAFTA area during the fiscal year 2011 (Juárez Núñez 2012).

Workers complained that the company had begun to lay off personnel and redistribute machinery and orders to plants 1 and 3 from summer 2011 onwards, without the union responding adequately. At the final decision to close the plant, there were allegations that the union had never intended any resistance in the first place anyway. In fact, the closure was announced during the negotiation period for the annual wage revision, in which workers hoped the union would address the continuing non-payment of bonuses and premiums and other irregularities (Puga Martínez 2012c). Instead, and even though the national union federation officially

³⁰¹ The workers support centre was closed and its leader temporarily exiled to Canada in June 2012, after one of her co-workers had allegedly been abducted and tortured for days (Anon 2014). Although the circumstances of this abduction are far from clear, other activists and academics confirmed the destruction of the offices. At the time of my fieldwork a feminist collective used the former premises of the Workers Support Centre. Interviews Rosa, Huberto Juárez-Núñez.

condemned the plant closure – two days after all workers had been fired (SNTMMSSRM 2012) – it demanded a higher compensation for the laid-off, and a reinstatement of the formerly employed at other facilities, including the possibility of re-opening the old facilities (which did not occur). Because the only two ways to close a factory under Mexican labour law were with the consent of the union, or through a formal process in which the enterprise would have to demonstrate the economic unfeasibility of continuing operations – which was not engaged – suspicions about union complicity aggravated over time. As Juárez-Núñez explained:

“It was a pact. On the day of the closure, instead of just leaving the factory, workers were awaited by union buses that took them to the Junta [the local labour administration] to collect their compensation. [...] Bit by bit the issues came to the surface, and now they blame two men, two of the national delegates. The executive committee at Mexparts 3 was not at all leftist, not at all [implying that it did not resist the decision from above]. The *compañeras* of the initial executive committee were simply bought off by the company – four, five months after the movement they were offered money and left.”³⁰²

In sum, the victory of Mexican workers against one of the largest global autoparts suppliers turned out to be short-lived. The tactic to avoid local union recognition through the affiliation to the SNTMMSSRM backfired when it turned out that the union leadership had made a deal with Mexparts 3. No significant repercussions were felt at Company X. The support structure collapsed with the attacks on the Workers Support Centre; and no long-term institutional changes were implemented as the SNTMMSSRM had damaged its legitimacy and plant 2 was closed.

The conflict at Mexparts 4 started out similarly. In December 2011 three female workers with 14 to 17 years of seniority were fired and urged to accept a compensation of \$38,000 (which they refused) – the reason being that they had demanded a copy of the collective contract from the CTM-affiliated enterprise

³⁰² Interview Huberto Juárez-Núñez.

union (Juárez Núñez & López Barajas 2013). The laid-off workers began to develop what turned out to become a year long campaign, accusing the company of various labour rights violations – such as regular twelve-hour shifts; no overtime benefits; unjustified layoffs and insufficient or no compensation payments;³⁰³ harassment through supervisors and security personnel etc. Apart from their reinstatement and a general improvement of working conditions and pay, they also demanded the resignation of the CTM union leader. Similar again to Mexparts 3 they accused him of embezzlement of the weekly \$40 membership fees, collaboration with management and a assumption of a proactive role in lay-offs of dissident workers by invoking the exclusion clause (Puga Martínez 2012a; Juárez Núñez & López Barajas 2013).

The campaign was initiated through the publication of the laid off workers' stories in local newspapers (Puga Martínez 2012a; Tirzo 2012), and at its critical stage mobilised crucial support from parts of the Company X union (in particular the small group of worker dissidents discussed in chapter 3), the local university, the union of Mexican telephone workers and a delegation of the US American United Automobile Workers (UAW). Most important, however, was the careful mobilisation of their former colleagues inside the plant – one of whom was fired and joined the core group of organisers in May 2012³⁰⁴ – to whom they made house-calls and debated the issues throughout the spring of 2012. The organising efforts resulted in a carefully prepared strike early one morning in June 2012, with the night shift remaining inside the plant, the morning shift entering and refusing to commence work, and the laid-off workers with their supporters picketing the outside gates and preventing deliveries from leaving the compound.

Workers, assisted by a local university professor as their *asesor*, entered into negotiation with the enterprise, but did not succeed in gaining the reinstatement of the four laid off workers. However, the enterprise accepted the formation of an independent union (Anon 2012b). In the following months the movement engaged

³⁰³ Workers accused Mexparts 4 of having security personnel examine the bags of employees it wanted to dismiss, finding 'stolen' parts amongst their belongings, leading to instant dismissal without legal compensation (Puga Martínez 2012a).

³⁰⁴ Another twelve were laid off shortly thereafter.

in further negotiations but lost momentum over the awaited legalisation of their union through the Local Conciliation and Arbitration Junta – the step strategically avoided in the case of the Mexparts 3 conflict.

Meanwhile, the CTM union leader at the plant announced that he would defend the *titularidad* “with blood” (Macuil Rojas 2012) and together with the provincial CTM representative started a smear campaign against the activists and in particular the workers’ *asesor*, who received threats against his person and family (Puga Martínez 2012b). In August the CTM attempted to pre-empt the formation of an independent union by formulating a new collective contract with Mexparts 4 through a different national branch, which excluded the contentious CTM enterprise union leader. Workers at Mexparts 4 rejected the new collective agreement and the mobilisation efforts of the CTM at plant 2, but altered course when, in September, the local authorities denied the recognition of their independent union. They agreed to an assembly with the provincial CTM. In this assembly, which took place in November 2012, workers accepted the new collective contract and integrated their union – whose leaders were elected in the assembly – into the CTM as a local section. In January 2013, salaries were renegotiated and a seven percent increase and improved benefits and allowances agreed, as well as the reinstatement of one of the four laid-off workers (Juárez Núñez & López Barajas 2013). At a later stage, Mexparts 4 retracted from any offers of reinstatement again; and the conflict ended in October 2013 with the laid-off accepting a higher compensation offer (e-consulta 2013).

The strike at Mexparts 4 did not backfire as dramatically as the one at Mexparts 3. However, what looked like a promising campaign with the potential to trigger more significant institutional change by ousting the CTM, was turned around by the concerted efforts of enterprise management, local policy makers and national CTM representatives, who managed to re-install a corporatist union under a new leadership. Nevertheless, both cases illuminate well that even under rather adverse conditions of corporatist union control and easy dismissal of potential troublemakers, workers managed to organise effective strike action. Local support was crucial, though not without risks, as external advice did not necessarily work

out in favour of the workforce (e.g. the suggestion to affiliate with the SNTMMSSRM). Most important seems to have been the ability to build networks of solidarity between laid-off workers and their still employed colleagues. In both cases the strikes were relatively short-lived and had no significant repercussions for Company X. Institutional changes were nullified with the plant closure at Mexparts 3; and bound back into a constellation that allowed political authorities and union leaders to retain control on the shop floor at Mexparts 4. It is the latter dynamic that unfolded much more pronounced in the case of the 2010 strike wave in China – up to a degree that it caused large-scale formal institutional changes. In the following I will briefly recapitulate the events of the strike wave before analysing the institutional changes in more detail in section 5.

4.2. The 2010 Autoparts Strike Wave in South China

The most prominent case of conflicts and strikes in the Chinese autoparts industry is that of the Honda gearbox factory in South China – and consequently it has been covered extensively in the literature (e.g. IHLO 2010; Carter 2010; Wang 2011; Lau 2012; Chan & Hui 2012; Chan & Hui 2014; K. Chang 2013; Gray & Jang 2014; L. Zhang 2014b; Lüthje 2014). Based on these accounts, in the following the course of events will therefore only be briefly rehearsed, in order to provide the necessary background for a more in-depth discussion of the institutional changes they triggered.

The strike at Honda's gearbox factory in Nanhai involved 1800 workers and lasted from May 17th to June 1st 2010. Though prepared and initiated by two experienced workers, migrant assembly line workers, about a third of them on student internships, became the backbone of the strike. The immediate reason for the strike was that the latest increase in the legal minimum wage was not reflected in workers' actual pay, as the company had reduced certain benefits in parallel. The initial demand of an ¥800 increase for both permanent and temporary workers ultimately came down to still significant increases of ¥500/33%, respectively ¥600/70%.

The spatial condition that entailed management confining workers to the factory grounds enabled strikers to build cohesion across employment status through face-to-face communication with colleagues; and to stop production effectively without risking confrontations at an outside picket line. Solidarity building was also eased by modern communication technology, enabling a quick spread of information through *QQ* groups and online message boards. Workers used these means to release statements and document events within the factory compound for the outside world, which was particularly important before and after the brief window of Chinese news reporting between May 27th and 29th. The temporally changing power dynamics between workers, management, the union and an outside legal advisor triggered a dynamic of cumulative causation that fuelled the strike – or, as worker Shao, one of the strike leaders, explained:

“The longer the strike lasted, the more disappointed I got with management not doing anything about our demands. And the more frustrating it got, the more did we feel that it was necessary to stand together.”³⁰⁵

The first inconclusive meeting with management on May 20 and 21 fuelled the anger of a larger number of workers and provided the critical mass not only to continue the strike, but also to revise and escalate the initial wage demands upwards. A repetition of the same dynamics on May 24 drew the whole workforce into the conflict. Internal cohesion decreased briefly after the company encouraged college principals to threaten interns on May 29, but was restored after 200 outsiders wearing union caps entered the factory ground and physically attacked workers on May 31. As a consequence, riot police began to cordon off the factory on June 1. But what looked like a *de facto* lockout was resolved when the company management agreed to respond to the demands within three days. Workers returned to work and engaged a university professor in drafting the final settlement of June 4, which included the final pay raise and an agreement to reorganise the enterprise union.

³⁰⁵ Interview worker Shao.

The Honda strike sparked a spatiotemporal and cross-sectoral expansion of copycat actions throughout the summer of 2010, most of which resulted in similar wage gains of between 20% and 40% (Gongchao 2010; Butollo & ten Brink 2012).³⁰⁶ Although autoparts suppliers in other regions of China experienced strikes as well, the repercussions for Company X were negligible – differing from Honda, whose entire Chinese production ground to a halt.³⁰⁷ Chinaparts 2 and 3 witnessed strikes within two months after the Honda strike, not because of any immediately pressing issues at their enterprises, but as a response to strike-induced wage hikes at autoparts firms in the surrounding area.³⁰⁸ Learning processes about the rationale, low risks and high yields of a strike at this particular point in time and in this especially highly interconnected industrial sector were crucial. As at Honda, the results were a ¥500 wage increase – quick settlements being partly induced through visits by Honda managers – and a restructuring of their enterprise unions, which in the cases of Chinaparts 2 and 3 was not demanded by the striking workers, but rather an implementation from above through the city and provincial branches of the ACFTU.

The 2010 strike wave was unprecedented in China, not only due to its cross-factory, cross-sectoral and spatial expansion, but also due to the institutional changes it triggered. Before I analyse these in more detail in section 5. , in order to understand the peculiarities of the recent strikes in South China and at Mexparts 3 and 4 it is important to contrast them to other cases, where similar structural and institutional conditions did not result in comparable strike action.

³⁰⁶ As many of these strikes occurred in Japanese-owned enterprises, there were allegations that the strike wave was driven by anti-Japanese sentiment. This was denied not only by the strike participants I interviewed in South China, but also by most first-hand and academic accounts of the case (IHLO 2010; Chan & Hui 2012; Lyddon et al. 2015). As worker Shao explained: “It was not about Japanese managers, but about managers.” (Interview worker Shao, similar sentiments were conveyed in the interviews with workers Sheng and Lai).

³⁰⁷ This is mainly explained by geographical factors, since even though the strike wave spread to other locales than the South, it did not affect any of the supply networks close or linked to any of Company X’s plants. As senior German manager Schütte explained: “We also had a few cases [of strikes in the supply chain], but they were limited. We have some Japanese suppliers too, but not to the degree of suppliers from Europe or the US. No, we were not affected in any meaningful way; to my knowledge we did not notice anything.” Interview German senior manager Schütte.

³⁰⁸ Interviews worker Lai; Sheng.

4.3. Perseverance, Exit and Substitution

The strike wave in, and beyond, the autoparts industry in China in 2010, and the examples of Mexparts 3 and 4 of course do not necessitate the conclusion that the harsher working conditions in the supply chain automatically triggered protest and large-scale conflicts. Chinaparts 1, as well as Mexparts 1 and 2, were examples of suppliers with similar conditions, where, despite workers' discontent, strikes occurred on a much smaller scale or were entirely absent.

In the case of Mexparts 1, which had an independent union, there were multiple smaller strikes around the annual wage negotiations from the early to late 2000s, resulting in considerable wage increases (García 2000; 2002; Toledo 2008). However, the total workforce of Mexparts 1 shrank from about 3,500 workers in 2000 to 750 in 2012, due to a new logistics centre built at Company X in 2002,³⁰⁹ the emergence of competing suppliers, and the deliberate strategy of Mexparts 1 to break the collective agreement by firing the workforce and rehiring it in part under worse working conditions (Damián Jiménez 2009a; 2009b). Mexparts 1, although it had seen strikes that made it one of the best paying suppliers of Company X by the early 2000s ended up like most other suppliers of Company X: with low wages, exhausting work rhythms and high labour turnover (Juárez Núñez 2006; Bensusán & Martínez 2012). Worker Miguel of Company X, who with other members of the clandestine group (presented in chapter 3) had supported organising efforts at Mexparts 1, commented on this:

“Mexparts 1 suffered changes of different kinds, which reduced it from the second, first or second, best paid supplier to just another one on the pile. [...] Ultimately, practically all the suppliers enter this dynamic in which workers have no other option than quitting. You can see the ads in the newspapers all the time, in which

³⁰⁹ At its peak Mexparts 1 employed around 2300 workers, each specialised in a particular task – forklift drivers, quality and quantity control, administrators, dolly drivers, and distributors on the production line. The 2002 opening of the new logistics centre caused the immediate dismissal of 30, respectively 50% of ordinary logistics workers, respectively administrative personnel, reducing the workforce to 743 by 2008. Each worker now had to fulfil multiple tasks at once, in particular quality and quantity control, which was aided by the introduction of a barcode system and synchronised data processing, reducing error rates, time and miscoordination between flow production and parts delivery (Martínez & Salgado Cortés 2005; Bensusán & Martínez 2012).

they are looking for people, they are always looking for people. But everyone knows that already, saying: ‘Well, yes, I need a job, but I end up losing more than they pay me – transport, food, coming and going – so I better look for something else.’”³¹⁰

Migrant workers at Chinaparts 1 also considered exit options the most feasible form of agency, feeling unhappy with the work, and being particularly frustrated with the hiring process. Of my interviewees’ initial cohort of 100 interns, only twenty to thirty remained on the job. Worker Wang commented:

“I don’t really know what I should do. Of course I am not satisfied with the low salary and the long working hours. I will wait for the next pay rise and then see.”³¹¹

They did not consider protesting or striking a realistic option, although they knew that workers had gone on strike in 2010 to demand more overtime pay after management had augmented the production targets. The main reason to abstain from striking were the perceived risks:

“I don’t want to go on strike, because the strike leaders are punished, lose their salary and get disciplined (*chufen*) by the manager in front of the crowd;” and “it is difficult to gather people for a strike, because everyone is afraid of the punishment – especially when there are no leaders who could assist.”³¹²

This contrasted rather sharply with the strike perception of workers in South China, who saw strikes as a much more rational way to improve their salaries. Worker Lai commented on the strike at Chinaparts 3:

“A strike was something that greatly excited those on the assembly line. A strike, if successful, brings only benefits to them; if failed, little harm. So I think most

³¹⁰ Interview worker Miguel.

³¹¹ Interview migrant workers Wang and Zhao.

³¹² Their paycheque provided evidence of this fact: it included a separate position reading “strike deduction” (*bagong fakuan*). Author’s field notes.

workers on the assembly line were eager to participate in a strike. It's like an instinct to that particular group of people."³¹³

However, the sentiment of workers Wang and Zhao was felt by worker Maria at Mexparts 2 as well. The conditions at Mexparts 2 were virtually identical to those of Mexparts 3 and 4 at the outbreak of the strikes in 2010, respectively 2012: working conditions, hours and pay were similar if not worse; and the enterprise union – in this case the FROC-CROC – collected the weekly \$30, but was otherwise “practically showing its presence through neglect.”³¹⁴ However, Mexparts 2 had never seen a strike. As Maria explained, the enterprise was quite rigorous in laying off potential troublemakers:

“Normally, if someone raises their hand to say ‘I speak for my *compañeros*, I want that this or that improved’, well, the first thing we gain is the street. ‘You know what!? You are provoking trouble, you are making a racket amongst the *compañeros*, get out!’ – and they kick us out.”³¹⁵

However, Mexparts 3 and 4 had laid off workers in similar ways and still seen larger-scale strikes. Reasons why this was not the case at Mexparts 2 might include that the laid off workers, having lost their leverage in the plant, did not resort to organising efforts around their former employer – and workers inside the plant became cautious not to share their fate. In the cases of Mexparts 3 and 4, outside support or at least external contact persons – the Workers Support Centre, students, the Company X union – were crucial in kick-starting organisational efforts, and arguably at maintaining the dynamism throughout the conflicts, although their role has to be seen much more ambivalently here, due to patronising interventions.

Similar to the case of Chinaparts 1, Maria also looked for an individual exit strategy, stating “I don’t think I will enslave myself there for much longer.”³¹⁶ As

³¹³ Interview worker Lai.

³¹⁴ Interview worker Maria.

³¹⁵ Interview worker Maria.

³¹⁶ Interview worker Maria.

her children were close to finishing school, the financial pressure on the household would soon diminish – in fact, she hoped that the company would make her redundant, so that she could claim compensation.³¹⁷

Higher pressure and worse working conditions in the supply chain, although leading to similar grievances amongst supply chain workers in China and Mexico, do not lead to the same practical responses. Small scale organising efforts on the local level were required in the Mexican case, while in South China workers could mobilise the structural power accruing to them due to the labour shortage, making an offensive direct-action strategy a low-risk option. Where these external conditions were different, and where no solidarity organising developed around victimised workers, the necessary social cohesion for collective action did not materialise and workers' chose to pursue smaller-scale or individual coping strategies. However, where worker agency did turn into a cross-sectoral and spatially expansive wave of unrest, the implications for institutional change were significant.

5. Institutional Changes in South China after the 2010 Strike Wave

The 2010 strike wave turned into a precedent with which to transform local labour policies into a more institutionalised framework under the auspices of the provincial ACFTU. The medium-term result was the establishment of a *de facto* and, since January 2015, also *de jure* collective bargaining system (GPRCC 2014). Despite their different interests, participants of the strikes, union leaders and local government officials all agreed on one point: the emergence of collective bargaining in the automotive supply chain around Guangzhou was an effect of the 2010 strike wave.

³¹⁷ Working in subsistence agriculture in addition to earnings from industrial labour also seemed to be more widespread amongst households of workers in the supply chain, than in the terminal assembly plant of Company X. Both of my interviewees at Mexparts 1 and 2 had plots of land in the surrounding areas, confirming that many of their colleagues pursued the same strategy for reproduction. In fact, while these two workers lived in the city, they claimed that many of their colleagues actually resided in the rural surroundings, indicating that industrial wage labour was an additional, rather than a primary source of income.

In Nanhai, Honda was one of the biggest taxpayers, contributing 220 million RMB in 2012 alone.³¹⁸ The collapse of the automotive supply chain had immediate repercussions on the public budget (Figure 13). Fear of social destabilisation and straightforward economic pressure produced strong incentives for the local authorities, including the provincial ACFTU, to act. As the former Chairman of the municipal ACFTU concisely put it:

“In China it usually takes a big social incident to initiate any kind of reform.”³¹⁹

I will use the examples of Chinaparts 2 and 3 to analyse processes of collective bargaining on the enterprise level, with emphases on the composition of enterprise unions and negotiation teams, bargaining procedures and the content of final agreements. Addressing the emergence of cross-factory coordination amongst enterprise unions and employers, I will exemplify the process of institution building as an effect of the particular processes of relational agency in the aftermath of the strike wave. This also allows for an improved assessment of the benefits and limitations accruing to the main stakeholders in the emergent collective bargaining procedures on enterprise and sectoral levels.

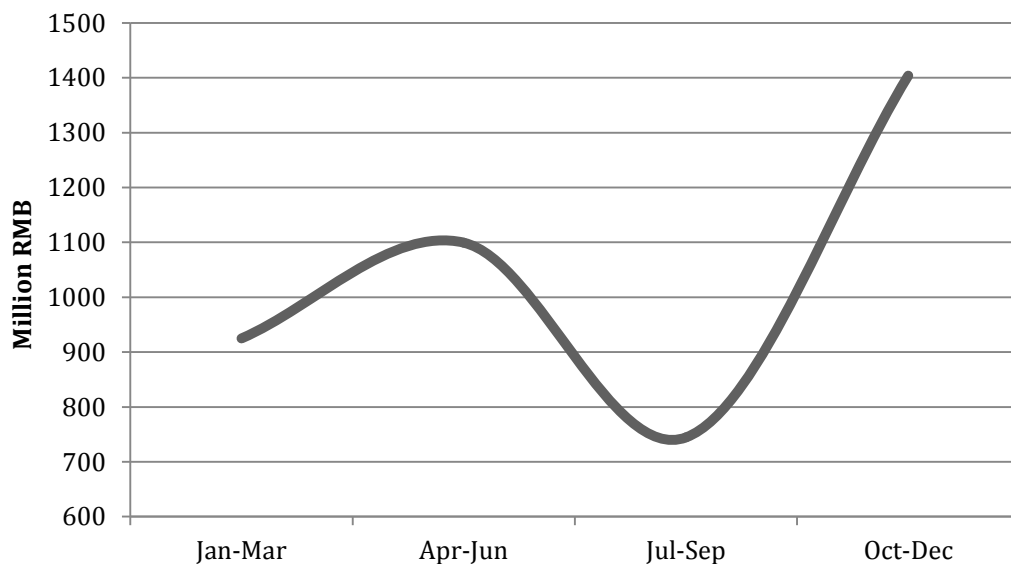


Figure 13: Tax revenue Shishan town (the location of Honda and other autoparts suppliers)

Source: Nanhai Investment Promotion Bureau

³¹⁸ Interview government official Nanhai Investment Promotion Bureau.

³¹⁹ Interview Chairman Li.

Composition of enterprise unions and collective bargaining teams

A first measure the ACFTU embraced after the summer of 2010 to deescalate the situation was enterprise union elections. In both Chinaparts 2 and 3 elections took place within less than a year after the strike wave; and in neither case were they explicitly demanded during the strike. As usual, enterprise union representatives were selected indirectly in a pyramid format: members of a directly nominated pool of representatives would select amongst themselves a smaller group representing the next higher level until after repeated rounds of selection a small number of candidates remained – in the case of Chinaparts 2 a group of six. Of these six the higher-level union “recommended” three candidates, from whom the six would single out one person as the union chairman (see also Howell 2008).³²⁰ This process is prone to follow the desired course of the higher union levels – and to be influenced by the company. Citing his own example, worker Sheng of Chinaparts 2 however assessed that external interference stopped short of affecting the final election of the chairman.

“Maybe the company suggested its desired candidates to the higher-level union for recommendation. But when the six candidates elected the chairman, there was no interference at least – neither from the central trade union nor the company. Because when they were having the conversation with me, I confessed to them that I was not inclined to become the chairman.”³²¹

This election process was similar at Chinaparts 3. It is important to note that both cases followed standard procedure, which had not been significantly altered by the strike wave. The preceding union chairman at Chinaparts 2 had been elected the same way – and he was the company’s administration manager. What changed with the strike wave were therefore not formal election procedures but the strategic preferences and degree of interference of higher union levels. The selective process still ensured a flexible degree of higher-level union control to keep undesired workers from taking up posts in the union. At Chinaparts 3 assembly line workers, who were the backbone of the 2010 strike, ended up not

³²⁰ Interviews worker Sheng, Lai.

³²¹ Interview worker Lai.

being represented in the union committee at all, while – as at Chinaparts 2 – a foreman became chairman of the union. Follow-up studies on the Honda plant have shown that it was not possible to replace the union chairman (Lüthje 2011), that grassroots labour leaders had left the factory (Lau 2012) and that higher levels of the provincial ACFTU continued to paternalistically intervene in consultation and negotiation processes (Chan & Hui 2014). While in the past the ACFTU tried to avoid the emergence of any linkage between labour conflicts and union elections, it embraced them in 2010 as a divide and conquer strategy to co-opt a segment of strike participants.

For collective bargaining, a separate committee would be formed to negotiate on behalf of workers, composed of representatives from the enterprise union and the Staff and Workers Council, formally selected by the latter. At Chinaparts 3, the bargaining round of 2013 was preceded by the aforementioned survey amongst the workforce (this chapter, section 3.1.). Prior to negotiations with the management delegation – made up of all division managers and the company director – union/SWC representatives took part in a joint meeting on the company's sales and profits. Information from the survey and the company briefing entered into the formulation of their proposal.³²²

Two conclusions can be drawn from these observations. Firstly, union control over election processes continued to ensure a high degree of quasi-state control over enterprise union formation and collective bargaining procedures. However, an inclusive shift in the preferences of the provincial ACFTU was practically visible in the encouragement of non-managerial staff to become trade union leaders. Higher levels seem to have kept enterprise unions on a longer leash, monitoring election and bargaining procedures and making “suggestions”. Secondly, a shifted focus from blatant interference towards the professionalization and formalisation of bargaining procedures is observable. With a lowered risk of open conflict workers demands are kept within the confines of company profitability – the survey and company briefing at Chinaparts 3 are telling indicators in this regard.

³²² After various rounds of negotiations a final 11.5% direct wage increase emerged from the original 15.7% versus 9.2% proposals by the union, respectively the enterprise. Author's field notes.

Sectoral Collective Bargaining in the Making?

It has been argued that the domination of foreign invested enterprises in South China hindered the development of local employers' associations that could bargain with the union on a sectoral level – and that the provincial ACFTU thus failed in its endeavour to develop “an institutionalised response to labour market instability.” (Friedman 2014b, p.498). While this might have been true at the time of Friedman's fieldwork, it is undeniable that the 2010 strike wave triggered an institutional shift. Similar to experiments in Zhejiang (Liu 2010; Pringle 2011; Friedman 2014b) this shift remained limited to the particular geographical locations of the respective sector. The close integration of the autoparts supply chain, as well as good communication networks amongst rank and file workers – and the continuous demonstration of their willingness to strike – produced strong incentives for the ACFTU and employers to coordinate wage increases between their respective companies. Though collective bargaining remained confined to the enterprise level, informal but regular communication amongst enterprise unions emerged:

“In the development zone, we have a federation of trade unions for us component manufacturers; 11 enterprises in total. [...] They were more or less affected [in 2010]. But there were strikes in no more than half of the 11 enterprises. [...] The unions of these 11 enterprises have meetings every one or two months. Typical topics include the big issues the companies face; we exchange ideas with one another and stay informed.”³²³

This was mirrored by coordination amongst employers, usually through their membership in local business associations.

“Among Japanese companies, the bosses themselves have communication over the same issues, trying not to pay workers too much. The two levels of communication are quite compatible now.”³²⁴

³²³ Interview Sheng.

³²⁴ Interview worker Lai.

The linchpin of wage negotiations remained Honda. The employers' association therefore not only coordinated individual enterprises, but also lobbied the provincial union levels to interfere favourably in negotiations:

“The annual collective bargaining rounds at Honda Nanhai have become something like a weather vane for autoparts manufacturers in the area. All companies will have to raise their wages in correspondence to the increases at Honda. This is why the head of the Guangdong Automotive Parts Association once asked me if I could help to slow down the income raises at Honda.”³²⁵

In the particular case of the autoparts industry in South China, sectoral collective bargaining can be said to have emerged, yet on a level that until very recently used to be neither legally formalised nor completely informal. It was *de facto* coordinated through the provincial ACFTU's new emphasis on inter-enterprise union communication and the involvement of the employers' federation in wage setting. According to chairman Li, wage growth in the autoparts sector decreased with each round of collective bargaining since 2010.³²⁶ At Chinaparts 2 collective bargaining took place in 2011 and 2012, leading to monthly wage rises of ¥250 and ¥220 respectively.³²⁷ Taking the low starting point of wage increases in 2010 and the general post-crisis labour shortage in South China into account (C. K.-C. Chan 2010; CLB 2011), if compared to the *status ante* – i.e. a situation characterised by disruptive strikes and the absence of formalised bargaining – workers' economic gains decreased since the introduction of collective bargaining.

The emergence of collective bargaining can therefore neither be said to be a necessary condition nor the most effective route to sector-wide wage increases. As indicated by the experiences of Chinapart 2 and 3, the Honda strike triggered a learning process, with workers beginning to perceive strikes as a high-yield, low-risk strategy. The precedence of the ¥500 increase prompted copycat demands in succeeding strikes. Given the particular structure of the autoparts industry in the area, management across the supply chain was forced – sometimes under direct

³²⁵ Interview Chairman Deng.

³²⁶ Interview Chairman Li.

³²⁷ Interview worker Sheng.

influence of Honda personnel – into a *de-facto* sectoral collective agreement. The evidence suggests that non-institutionalised labour relations resting on an active participation of ordinary workers in a conflictive direct action-centred strategy can lead not only to single-factory success stories, but to geographically extended, sectoral gains.

5.1. Governmental and Union Rationale Behind Collective Bargaining

Ironically, in the medium term, local policy makers and foreign capitalists found the strike wave to have had a positive impact. The strike-related wage increases alleviated the effects of the labour shortage, as more workers became attracted to the area. Local authorities claimed to have made a virtue out of necessity in utilising the heightened media attention to realise more investments:

“In 2010 we have attracted seven or eight Japanese enterprises. After the strike in Nanhai we became famous with Japanese companies. We go to Japan every year.”³²⁸

The official inferred that the improved relationship with Japanese enterprises was a result of how the government had dealt with the strike wave. Instead of a case by case and *ad hoc* intervention, which was the preferred governmental strategy of the past, the 2010 strike wave triggered a concerted effort between provincial and local authorities and the ACFTU to establish new institutions to deal with workers’ demands in the future:

“First, we launched the collective bargaining system. Second, we established a party branch to gather information from workers and transfer it to the local authorities. And we regularly send government officials to companies to talk to workers.”³²⁹

³²⁸ Interview government official Nanhai Investment Promotion Bureau.

³²⁹ Ibid.

While the provincial and Shenzhen municipal governments began to draft a new legislation on collective bargaining in 2010 – which was withdrawn after opposition from foreign chambers of commerce and Hong Kong trade associations the same year – the ACFTU national leadership intensified its calls for a step up of collective contracts and negotiations in foreign-invested and private enterprises (Ligorner & Liao 2010; Wu & Sun 2014). In the meantime the provincial ACFTU was already carrying out described collective bargaining procedures along the automotive supply chain, as well as supporting the aforementioned governmental surveillance efforts:

“A permanent online connection has been built between the unions on the city and district level. We, the provincial union, have a system to survey the public opinion on the Internet. This system allows us to be informed on time when- and wherever a strike is breaking out. You can also get such information through formal channels, but at a horribly slow rate. It cost us several hundred thousand RMB to build this system.”³³⁰

The union not only monitored workers’ online communications on *weibo* and *QQ*, but also engaged them in direct conversations via these channels. When workers at Honda were effected by the wave of anti-Japanese sentiments raging in China prior to a one-day strike on March 18th 2013 (Cheung 2013), union members tried to deescalate the situation by using *QQ* to contact workers, who expressed that “they have long been eager to punch their Japanese managers.”³³¹ This is but one example of the union overseeing workers’ behaviour in order to contain spontaneous excesses and to present itself as the voice of reason: “It is the union that persuades workers not to carry out drastic behavior like damaging machines or people – instead, just refer to the union for help.”³³²

³³⁰ Interview Chairman Deng. The union also installed an online consultation system for workers to submit their complaints to the union.

³³¹ Interview Chairman Deng; Again, it is worth noting that worker Sheng, the union Chairman of Chinaparts 2, gave a rather rational explanation of the concentration of strikes in Japanese enterprises: “From my own perspective, why strikes often take place in Japanese rather than in Chinese companies is because profits in Japanese companies are higher, and workers know that they have advantageous conditions to bargain.” Interview worker Sheng.

³³² Interview Chairman Deng.

A closer look at the tactical behaviour and strategic rationale of the provincial ACFTU in this 2013 strike is quite illustrative. 100 assembly line workers went on strike, because they were unhappy with negotiations between union representatives and the company, which had provided them with 9.6% less of a wage increase than senior employees (Cheung 2013). They achieved an additional 3.8% increase after the intervention of chairman Deng, whose perception of the situation is worth quoting at length:

“Workers felt that a 10.2% income raise was not enough, knowing that they had had income raises of 20% over the past three years. [...] Management proposed a 10% income rise initially. That reduces the efforts of the union to a 0.20% compromise, making it 10.2%. This is a terrible strategy! So I told them, if they had initially proposed an 8% raise and compromised on 11%, then an extra 3% would have been attributable to the union’s bargaining efforts. But instead workers felt that the union had not achieved much. So they were neither pleased with the union nor with the Japanese management. [...] Because of the strike, the Japanese were forced into re-negotiation. At the end, they agreed to a 14% raise. So we analyzed: ‘If you had started with an 8% increase and we compromised on 13%, then there would have been 5% attributable to the effort of the union. Workers would not have gone on strike. But instead, now you have to pay more and have earned a bad reputation.’ So this time they really screwed up.”³³³

ACFTU reformers realised that if well-handled, strikes could enable them “to build faith and trust amongst workers”, so that “when workers’ rights are infringed they are willing and ready to seek support from the trade union, instead of taking irrational risks.”³³⁴ This, however, would only be possible if the union had practical results to show for their efforts. In the quoted example the provincial union therefore attempted to broker a deal with management towards the end of a moderate compromise that was not only acceptable to all sides but also justified the existence of the union. Essentially, provincial ACFTU reformers envisioned the

³³³ Ibid.

³³⁴ Ibid.

union to become a stabilising arbiter between capital and labour. A major obstacle to be overcome is the “irrational” demands of workers:

“I think collective bargaining is good, but what we should focus on now is how to make it sustainably compatible with the growth rate of companies. If income demands rise above the economic capacity of companies, they are likely to relocate. [...] Workers do not use authoritative and objective figures as reference for their demands. [...] The issue at stake at the moment is not the lack of cohesion amongst workers, but rather the irrationality of the demands they propose, which is a headache for the union. Not only does the union have to hold the workers tightly together, but it also has to guide them towards more reasonable demands.”³³⁵

Neither during the 2010 nor the 2013 Honda strike were workers’ demands oriented towards company profits or the legal minimum. Such “irrationalities” cause “headaches” that the ACFTU sought to alleviate through an extension of formal procedures, one of which was a new legislation on collective bargaining (Guangdong Provincial Regulations on Collective Contracts, hereafter: GPRCC). In this law, the provincial ACFTU saw some of its described practices formalised. For example, collective negotiations were to be based on overall enterprise profitability and comparable industry-wide or regional wage increases (§10 and 11). Employee negotiation teams should be headed by a union representative and either chosen by the enterprise union or elected through union organised elections (§13). During negotiations employees were bound to fulfil their contractual duties and prohibited from striking, picketing or disturbing public order (§24). However, certain “worker-friendly” clauses that ACFTU reformers wanted to see implemented were removed from an earlier draft (§17; 26; 30, GPRCC (draft) 2013). In particular, a clause was excluded that banned the dismissal of workers for striking in reaction to the enterprise’s failure to respond to a collective bargaining request – a politically delicate article that made a case for strike action going unpunished by either the enterprise or local authorities (§59).³³⁶ ACFTU

³³⁵ Interview Chairman Li.

³³⁶ Lyddon et al. (2015, p.10) have convincingly argued that Honda workers ignoring the threat of

reformers also desired the formalisation of industrial collective bargaining – but were met by resistance from the local government.³³⁷ Policymakers instead sided with Hong Kong trade associations that had, amongst others, demanded the amendments (IHLO 2014).³³⁸

Were the practices of the ACFTU and their *ex post facto* formalisation in the GPRCC a sign of state-led models of collective “negotiation” and “consultation” transforming into collective “bargaining”? The described cases do of course not allow for a representative picture. However, given that the Southern Province can be considered the most open and inclusive when it comes to labour conflicts, we can assume that the described institutional transformations were as far-reaching as possible at that time. If the examples give direction to a new “Southern model” then we can indeed observe a move beyond existing laws, regulations and practices elsewhere in China (Wu & Sun 2014): enterprise unions and employers gained more room to manoeuvre both *de facto* and *de jure*, so that agreements – at least in the autoparts chain – did indeed become results of actual negotiations. Yet, this room to manoeuvre still depended on the goodwill of the local authorities and the ACFTU, with the different versions of the GPRCC indicating that their respective perceptions differed by degree.

But whatever the range of collective negotiations, there can be no doubt about local authorities having favoured business interests and the provincial ACFTU having pursued a paternalistic and co-optative approach towards workers. Strikes were not met with repression but with a step-up of surveillance, “guidance” of disaffected workers, top-down mediation and a general effort to set up enterprise unions and regular collective negotiations under the auspices of ACFTU control. The element of immediate collective agency and empowerment, including collective learning processes and the possibility of developing autonomous forms of organising, was subverted by an institutionalised form of conflict resolution

their 2010 strike being “illegal” remained without consequence, because there was simply no legal stipulation on the legality and illegality of strikes – an issue that has changed with the GPRCC.

³³⁷ Author’s field notes.

³³⁸ Though some, arguably essential, provincial ACFTU initiatives are missing in the final draft, it stretches the point to speak of local authorities “sidelining” the ACFTU (Friedman 2014b, p.499) – rather, both instances supplemented and depended on each other’s efforts.

leading to indirectly achieved results, oriented towards company profitability and competitiveness. Rather than to the empowerment of ordinary workers, the overall strategic aim of the institutional changes, indicated by the formalisation and professionalization of enterprise level negotiations, and the practices and visions of ACFTU reformers, points to a Fordist linkage of wage increases and profit rates.

6. Conclusions

What have been the conditions for and effects of worker agency in China and Mexico's automotive industry in the face of extensive outsourcing? In the broadest sense, Silver's predictions of a convergence of social contradictions and labour unrest in the automotive industries of Mexico and China hold, however with important qualifications.

First of all, the relationship between terminal assemblers and suppliers differed for the Chinese and Mexican cases. While Company X in Mexico could mobilise strong market pressure to control and penalise suppliers, in China it was constrained by the fact that most of its suppliers were subsidiary joint ventures of its own Chinese joint venture partner. However, these differences were not significant enough to diminish the power of the lead firm to a degree that would have reflected positively on labour-related issues at suppliers in China. Working conditions and salaries in the supply chain in both cases instead showed a high degree of convergence – although Company X's interventions into the supply chain were frequent in China, but remained limited to issues of process optimisation. *Vice versa*, the effects of supply chain strikes on terminal assemblers were limited in the case of Company X – in Mexico, where strikes occurred at its first tier suppliers, mainly due to quick settlements – but, in comparison, severe for Honda during the 2010 strike wave. As the Honda case and Company X's concerns over component quality indicate, just in time deliveries made terminal assemblers increasingly vulnerable to strikes in the supply chain. This implies that while autoparts workers' "workplace bargaining power" might have been low due to low

job security – which was clearly the case in Mexico – their potential power to disrupt the overall production network was indeed significant.

Lead-firm pressure, workers' grievances and strikes clearly indicate that working conditions in the supply chain in both Mexico and China were comparatively harsh and perceived as such by the workforce – although degrees of variation have to be acknowledged. In both cases long working hours, frequent dismissals and exhausting work rhythms were combined with incomes much lower than in terminal assembly plants and closer to the legal minimum. However, in comparison to the wages and working conditions at Company X, the gap was much wider in Mexico than in China, at least for the autoparts producers in South China. In fact, the 2010 strike wave and follow up wage increases lifted the potential income for workers at Chinaparts 3 up to nearly the same level as at Company X/JV2, if benefits, overtime and other bonus payments were included. In Mexico, on the other hand, incomes at the reviewed suppliers were about 50% of what workers at Company X made on average.

I have demonstrated that these conditions alone were insufficient to explain recent strikes at autoparts suppliers in China and Mexico – but that in a broader perspective the gravitational centre of labour unrest was located in the supply chain, rather than in terminal assembly plants, Company X in particular. More than that, and adding support to Silver's convergence thesis, the form, dynamics and results of labour unrest in China and Mexico's autoparts industry showed considerable similarities.

All strikes at the reviewed autoparts producers were wildcat strikes, initiated and maintained by grassroots organising, and to some degree externally supported and/or shaped by external advisors, unions (other than the ones in the respective workplace), mutual help networks, and/or the clandestine group of workers discussed in chapter 3. In all cases local governments, enterprise management and workplace unions formed a formidable coalition to suppress these strikes, although their strategic positions changed over the course of events. In the cases of Mexparts 3 and 4 and the South China strike wave it was particularly the role of

official unions that was crucial – and straightforward: they either remained passively absent (Chinaparts 2 and 3) or openly opposed to the strike while the latter was still ongoing. Upon realising that a confrontational approach had failed and that a settlement would have to involve certain concessions to the rank and file, these unions – in the cases of Honda, Chinaparts 2 and 3 and Mexparts 4 – turned towards a more inclusive corporatism, supported by policy makers and enterprise management. In the final settlements external advisors played an important role – in the cases of Honda and Mexparts 4 university professors for labour relations; in the cases of Chinaparts 2 and 3 and the follow up strike at Honda the provincial union chairman.

Of course, these strategies varied by degree: violence, blatant corruption and backroom deals between management and “democratic” unions were more pronounced in the Mexican cases, whereas in South China the strike wave induced a remarkable strategic and concerted reorientation of governmental and ACFTU approaches to industrial relations, shifting from *ad hoc* interventions to changes in union strategy and legal institutions. These far-reaching transformations provide strong evidence for processes of relational agency between capital and labour – which in this case were in fact retraceable to the pro-active agency of workers – inducing institutional change. Interestingly though, the nature of these changes in South China points towards a convergence between the Mexican and Chinese cases: the emergence of an institutional web of worker-inclusive organisations that are characterised by bureaucratic centralism, top-down hierarchies, state corporatism and paternalism; and labour laws that legally circumscribe the room to manoeuvre for worker agency and open “excesses” to legal persecution and repression.³³⁹ Compared to the treatment of labour relations in other Chinese SOEs, however, these transformations were rather exceptional – and we will see in the following chapter how these differences played out when Company X/JV2 opened a new assembly plant in close proximity to the Honda gearbox factory.

³³⁹ It is in this case important to emphasise, that the conciliatory approach in China might be related to the fact that at the event of the strike wave no inclusive institutions and laws existed yet – the comparative tolerance of wildcat strikes might change towards selective repression and a divide and conquer strategy, once the new formal organisational and institutional channels are enforced and define what are legal and what are illegal forms of worker agency.

Chapter 8: Geographies of Power – Capital Relocation and Enterprise Expansion

In the preceding chapter we have seen how the agency of workers in the supply chain has resulted not only in large-scale institutional change in South China, but also in local wage increases and a sustainably high level of strikes. In light of Silver's core argument that "the successive geographical relocation of capital constitutes an attempted spatial fix for crises of profitability and control" (Silver 2005, p.39), why of all places would Company X/JV2 open its latest subsidiary in the middle of this trouble spot?

This chapter revisits the rationale behind the spatial development of Company X in this and other cases in China and Mexico from a perspective of dynamic power relations and processes of relational agency between policy makers, managers, unions and workers. The planning and opening of new production facilities during the time of my fieldwork in both China and Mexico provided a unique opportunity to revisit these processes empirically. On the basis of an analysis of Company X's most recent projects in both countries, I will argue that the rationale for Company X's spatial development is rather different in each of the two cases, and only partly echoes Silver's grand developmental pattern. I will pay particular attention to the role of labour in these processes, both from the receiving end – i.e. the implications for working conditions and labour-capital relations following spatial change – and the constitutive effects of its practical interventions into decision-making processes dominated by policy makers and managers. As these factors are rather different in China and Mexico, I will discuss the cases separately before synthesising the findings in the conclusion. For the Chinese case this will concern the examples of Company X/JV2's Western and Southern plant; and in Mexico the latest projects of a new engine plant and a terminal assembly factory for its upscale brand.

1. Power Relations and the Spatial Organisation of Production at Company X in China

Company X has expanded rapidly in recent years, surpassing its previous expansionary leap after the mid-1990s crisis in which twelve new production sites were opened in only four years (including components factories) (Pries 2003, p.62). In 2013 alone seven new manufacturing facilities went operational in China. The scope of this expansion and the related pressure on timing and cost has in fact transformed Company X's philosophy of plant construction. Greenfield assembly plants now follow a standardised design and layout to save planning and construction costs and to ease the installation of established processes for later productive operations. The first plant to follow this design was one opened in the United States in 2011, followed by one in East China in 2012. All of Company X's new plants opened after this date in China have adopted this standard – including the one in South China. The same design seems to have been adopted in the construction of the new upscale brand plant in Mexico (Company X 2013).

The main driving force behind this expansion was market access. Car sales in China are comparably localised because preferential policies for military and strategic (bulk) goods like grain, coal or ores limit train capacity for automobile cargo.³⁴⁰ Those who had been the first to venture into new geographical areas were therefore likely to become regional market leaders. Similarly, different regional demand patterns could require the construction of new factories with an adapted model range. German senior manager Schütte explained why the South was chosen as the location for Company X/JV2's new assembly plant:

“Simply because there is a market. We build our smaller models there. In South China the market is different from the rest: smaller cars are in higher demand. The other reason is that one simply wanted to be present in that region as well. It is usually the case in China that things are bought where they are produced. Thus one

³⁴⁰ CKDs and components are transported by train from an Eastern plant to the one in the far West, which is an exception stemming from the latter's remote geographical location – all other logistics for the Eastern plant are handled by trucks. Models that are only produced in one location are also distributed all over the country, but transported by trucks. Interview Chinese manager Lao.

had to move down there to get this piece of the cake as well – our competitors were there already.”³⁴¹

It is important to stress that the rationale behind Company X/JV2’s expansionary drive is not cost-push pressure, particularly not labour cost. Both areas of the new Company X/JV2 locations had higher minimum wage levels, and Company X/JV2 did not offer lower wages at these locations (however, these new locations also have higher living expenses, which will be discussed in the next section).³⁴² Rather, it was a tightening of Company X’s traditional local markets that drove the expansion. Senior manager Pongrac explained:

“The gigantic leaps in growth of twenty, thirty, even forty percent that we had in the past will not occur anymore. In East China there is certain saturation and not that much growth. But in the inner parts of the country there are so and so many megacities that don’t have car dealers for our premium brand, and only a few for our main brand. And that is where we have to go now – then we will still have growth rates of five, six, seven percent. It is at least the long-term projection that we will still reach that dimension.”³⁴³

Confirming findings from the literature (Thun 2006; Chin 2010; L. Zhang 2014a), the actual implementation of Company X’s new Chinese ventures was shaped by bargaining processes with local and central policy makers. For local governments the successful attraction of a terminal assembly plant offers strong potential for the development of a local supplier industry, and usually leads to substantial preferential policies. Yet, regional differences appeared to persist:

“That [support] depends on the local government. In the North and West there were almost no problems, because the headquarters of JV2 are located in the North. There is a very close political connection through the party and the

³⁴¹ Interview German senior manager Schütte.

³⁴² This appears to have been slightly different for the expansion of Company X/JV1, which opened new greenfield plants in relatively close proximity to its Eastern main plant. While this was also an expansionary drive, minimum wage levels in these areas were lower than in the Eastern metropolis of the main plant, where they were amongst the highest in the country (L. Zhang 2014a).

³⁴³ Interview (3) senior German manager Pongrac.

provincial government. I think JV2 alone is responsible for almost eighty percent of the Northern province's tax base; it is essentially the cash cow of the region. In the West it was similar. The government was more than willing to support us, saying: 'We will build you this, this and this.' In the South, the location of the new plant, it was different. The province is rather rich and already had everything, including a supply industry and automotive manufacturers. It proceeded rather sluggishly there and took a long time until we had all the building permits etc."³⁴⁴

Despite these suspicions towards local authorities and the actual adversarial lobbying of existing Japanese car producers in the area, it was interference from the centre rather than local dynamics that forestalled the timely construction of the Southern plant. As in the case of the Western plant,³⁴⁵ the local government in the South was rather eager to attract another global car manufacturer – and provided support and incentives by building roads and highways, granting land lease exemptions, tax breaks and subsidies to the construction of the surrounding industrial and logistics park.³⁴⁶ However, the central National Development and Reform Commission delayed the construction permit because Company X was hesitant to develop innovative technology, designs and models in China. Company X, for example, remained adamant to not share its battery technology for hybrid cars.³⁴⁷ The central government introduced new regulations, making the permission for factories in new locations dependent on global car manufacturers developing indigenous brands or new-energy vehicles. In exchange for the Southern plant Company X/JV2 thus constructed a prototype of an electric car. The prototype was however never intended for serial production (Xu 2011). Similarly, in exchange for the permission to expand further in Eastern China, Company X/JV1 had to construct an assembly facility in China's far West.³⁴⁸

³⁴⁴ Interview senior German manager Schütte.

³⁴⁵ While construction works could be finished according to schedule, the Western plant also had to delay the start of production of its first model. Though it had been approved in 2007 already, production did not commence until 2009 due to shareholder hesitations after the 2008 Sichuan earthquake and new macroeconomic policies for the development of the Western regions of China. (Interview Chairman Qiao).

³⁴⁶ Interviews government official Nanhai Investment Promotion Bureau; senior German manager Schütte; Chairman Qiao.

³⁴⁷ Interview German senior manager Vogt.

³⁴⁸ Interviews German white-collar worker Hensch, senior managers Rordorf, Pongrac.

In short, Company X's expansion in China was primarily attributable to the large but fragmented domestic market – and it was willing to make certain concessions towards the end of gaining a larger share of the pie. The fact that Company X was expanding rather than relocating was also aided by the capital-intensity of automotive production and the depth of its supply networks, which made the abandonment of old production sites a costly undertaking. In comparison, more labour intensive industries, such as electronics, garments or toys, do in fact relocate from their former largest agglomerations, e.g. in the South, due to falling profit rates, cost-push pressure and governmental policies fostering industrial upgrading (Lüthje et al. 2013; Butollo 2014) – all of which goes hand in hand with defensive labour struggles.³⁴⁹ Before I discuss in more detail how Company X/JV2 dealt with its expansion into the 2010 hotbed of autoparts strikes in section 1.2. , I will shed light on another peculiarity stemming from the rapid expansion in China. This takes us back to Company X/JV2's training schemes and its flexible managerial command over labour.

1.1. Expansion and Labour Turnover

In a globally unique system Company X/JV2 concentrated the training of all workers, independent of their employment statuses, at the Northern main plant, before they were redeployed to the subsidiaries in the West and South.³⁵⁰ Aggravated by its extensive use of short-term interns, the production run ups in the West and South implied that huge sections of the workforce would be periodically replaced.

³⁴⁹ Chairman Deng summarised this development as follows: "I am dealing with the calculation at the moment, but I believe that in the Pearl River Delta there are daily strikes of different sizes. Those sensational enough to attract mass media are few but smaller strikes are common occurrences. [They agglomerate] in autoparts, electronics, garments, toys and transportation – in fully foreign-owned enterprises. Two aspects account for most of the strikes: first, higher wages and better welfare; second, when an OEM relocates out of the Delta, workers are unwilling to relocate, so they demand compensation from the company. But the company argues that it did not dismiss you, and you could accompany it. These OEM – electronics, garments, toys – usually have humble profits. They cannot afford the increase of all sorts of costs in the area. That's also why Foxconn gradually moves its factories out of the Delta, because of the low profits. The government also encourages such kinds of enterprises to leave for reasons of industrial upgrading." Interview Chairman Deng.

³⁵⁰ Interview German senior manager Vogt.

When Company X/JV2 decided to expand into the West, it hired 3,500 local workers and sent them to the Northern plant for training, before construction of the plant itself was finished. Usually, the investment in training staff prior to its productive utilisation is considered to be too costly. However, the booming market situation in China gave rise to the coincidence between expanded demand for workers at the Northern plant and the training requirements in the West. Future workers of the Western plant could thus be utilised productively in the North while receiving their (anyway limited) training. Though the training in the Northern plant would not correspond fully to the production requirements in the Western one – due to the different range of models in the North – this arrangement was still preferable to training local personnel at the German headquarters, which was for example the chosen procedure for the recently opened US plant. Similarly, the Southern Chinese plant hired 280 local workers prior to the opening in mid-2013 and sent them to the North for training.³⁵¹

The specific arrangement of shifting thousands of workers from one plant to two other facilities – new production launches in Western China and in the South occurred almost simultaneously – led to significant challenges in the North, as a large part of the workforce needed to be replaced once or, in some departments, twice a year, depending on the length of the internships. German managers of the assembly department in the North complained because the personnel strategy is developed independently of their requirements. Meeting production targets could thus become a challenge in times of high turnover:

“At the moment when you recall, let’s say, 2000 or 3000 [workers], the departments in the North get a massive problem too. Because they have had the colleagues on the job, in training, in special processes. They play an active role – they build cars there! Now you take them away again, replacing them with new ones. Hence, this is an unbelievably challenging task, which, for this location [West], developed with, let’s say, one or the other obstacle, but overall truly superbly – if we consider the first phase, well, first and second phases. We had to struggle pretty hard though, because the production departments were of course

³⁵¹ Interview (1) German senior manager Pietsch.

not interested in releasing people who are qualified. They hold fast – and we pull. Indeed, now and then one had to go through the board of directors.”³⁵²

If the planned turnover due to training requirements was already creating problems, the situation was aggravated by the regular replacement of interns that were hired across the board for normal operations, but also functioned as temporary placeholders for workers relocated to the Western plant. This issue was criticised by German managers at Company X/JV2, in particular as due to the German-Chinese managerial division of labour, their influence on human resource management was strongly limited. A German manager at the Northern main plant explained the rationale behind that system:

“One does simply save a lot of money: ‘interns’ they are called, working for six months – in comparison, a permanent worker with 10 years of experience would earn two and a half times as much. [...] In Germany one would have said: ‘due to quality concerns I cannot simply exchange a large batch of the workforce every six months’, but that is exactly what happens here. That adds to profits, but the Germans are vehemently against it. But 60% of the shares belong to the Chinese JV partner, so they do it. [...] But, if I really want to have quality, I cannot simply exchange the team, I would say a third of the team, every six months! But that’s what makes for high profits [shrugging his shoulders].”³⁵³

The challenges that labour turnover produced in the Northern main plant were however not felt in the new Western plant, which was still in the process of commencing serial production. A German manager at the Western plant put it quite simply:

“Turnover doesn’t matter. We constantly enlarge production at this stage and thus have a constant inflow of new employees. If some people leave, we simply hire a few more.”³⁵⁴

³⁵² Interview German senior manager Wendler.

³⁵³ Interview (2) German senior manager Pongrac.

³⁵⁴ Interview German senior manager Bohnert.

That is, Company X/JV2's expansion strategy rested on unilateral control over labour, which allowed it to employ workers on short-term contracts or internships and to relocate them flexibly between plants.

1.2. Strike Vaccination: Unionism at Company X/JV2's Southern Plant

That Company X/JV2 opened a new subsidiary immediately in the hotbed of the 2010 strike wave did not imply that it considered the danger of labour unrest to be negligible. Quite the opposite was the case as Company X/JV2 reacted to the strike wave in two ways. In an offensive move against its competitors, it spread rumours of ordinary workers at its new Southern plant having the possibility to earn wages of up to ¥5000 within three years (Anon 2010b). When asked about this number, chairman Peng at the Northern plant however replied:

"I don't know where you got this number from. That does not seem plausible."³⁵⁵

Apart from the fact that Company X/JV2's intention to actually pay such wages therefore seems rather dubious, the rumours alone were enough to give workers at Honda an important reference point in the collective bargaining rounds after 2010.³⁵⁶

In a defensive move, Company X/JV2 began to prepare itself for the possibility of strikes at its new Southern location. When asked on his perception of the 2010 strike wave, chairman Peng of the enterprise union at Company X/JV2's main plant emphasised that the conditions in the South and the North were very different. In the North the majority of the workers were local residents with stable families, which had a "harmonising" effect on labour relations. At the Honda plant in the

³⁵⁵ Interview Chairman Peng.

³⁵⁶ Chairman Li explained: "There is fierce competition in the auto industry. In the South Japanese auto companies prevail. Since Company X/JV2 moved into the district right next to Honda, it strengthened Honda workers' demands for income raises. The first strike of Honda had nothing to do with Company X/JV2, but it has influenced more or less every single strike at Honda afterwards, because Company X/JV2 proclaimed to raise workers' income to ¥5000 within three years. So workers at Honda would take that into account when making their demands. It is more than double of what Honda workers' wages are after seven rounds of collective bargaining." Interview Chairman Li.

South on the other hand, workers were temporarily employed and came from all over the country – “wages are very important to them; and fluctuations can result in disaffection and strikes.”³⁵⁷ Pointing out that he had, in fact, dedicated time and effort to “analyse the situation,”³⁵⁸ he was worried about the more heterogeneous composition of the workforce in the South. Already in 2013, before the factory was fully operational, the workforce was composed of local residents; relocated workers from the Northern main plant; and workers from an additional eight provinces. Tensions in this case were indeed likely to rise, in particular for relocated workers from the North, as their wage level would be held constant, but they would now find themselves in an area that ranged amongst the top ten most expensive cities in China. Chairman Peng’s hope was therefore that similar “harmonising” effects would over the long run result from workers with long-term contracts settling down and building a family in the South.³⁵⁹

Apart from these hopes that were rather detached from managerial influence, Company X/JV2 pursued the strategy of consulting the local trade union in the South over mechanisms of strike prevention.³⁶⁰ Chairman Deng – who shortly after my interview would visit Company X’s German headquarters for an exchange on industrial relations in Germany and China – explained:

“They [Company X/JV2] are aware of potential competition and dangers. Because they know that strikes are common in the area that they are moving to, they also fear seeing them in their own branch. So they invited me to tell them particularly how to prevent strikes.”³⁶¹

In this communication process, certain rivalries surfaced: both enterprise and district union insisted that it was their respective responsibility to represent the

³⁵⁷ Interview Chairman Peng.

³⁵⁸ Ibid.

³⁵⁹ Interview Chairman Peng.

³⁶⁰ Managerial consultation of unions or labour NGOs for the sake of strike prevention does in fact not seem to be an isolated case. In September 2015 the German Chamber of Commerce in China, for example, offered a seminar for German managers with a Chinese labour lawyer and a representative of a labour NGO on “Strikes – Strategies and Risk Prevention from a legal perspective & the Role and Function of NGOs.” (German Chamber of Commerce in China 2015)

³⁶¹ Interview Chairman Deng.

workforce at Company X/JV2's Southern plant. Although these issues were also linked to the question of who collected the union dues,³⁶² the real contention was rooted in the inclusive-corporatist approach of the provincial and district union on the one hand, and the hierarchical style of the Company X/JV2 union on the other. Chairman Li of the municipal ACFTU in the South elaborated the differences with an anecdote:

“Two years ago I went to Shanxi for a national conference of union chairmen, where I argued that both buttocks of the union should be sitting on the workers' chair, rather than one on the side of management. And immediately I was challenged by the union chairman of the Northern city [where Company X/JV2's main plant is located], who argued that unions should be neutral, rather than siding with workers. So here you can see, if the chairman of the city union embraced neutrality, what else could you expect from the Northern way of dealing with labour issues?”³⁶³

What emerged from this dispute was that the Company X/JV2 union retained full control over the internal affairs of the enterprise, while local unions merely assisted, consulted and provided information. Chairman Deng of the provincial union emphasized that Company X/JV2 would receive notice if relevant information was gathered through the internet surveillance system installed after 2010. He also stressed that, even though he was displeased with Company X/JV2 insisting on relying on “staff that they fly in all the way from the North, while it takes us one hour to reach the Southern plant,”³⁶⁴ they could rely on the local unions if push came to shove:

³⁶² Chairman Li explained: “This problem here is not uncommon. According to national union stipulations, the enterprise union is supposed to be under control of the local district union. But JV2 wants it to be different, which has to do with the distribution of union fees. Because if JV2 subordinates its enterprise union to the district union, the fees will be distributed to the district authority, and not to Company X/JV2's Northern headquarters. So there is conflict of interests in terms of finances. But this situation will change on August 1st this year when a revision of the law comes out that requires companies to pay their taxes on the basis of an inclusion of union dues, which means that the union at JV2's headquarters will probably lose this part of its income. However, it would still retain direct control of its union in the South. But I still think that since the Northern headquarters are miles away from here, if the enterprise union does not cooperate with the district union, it will not be able to run functionally.”

³⁶³ Interview Chairman Li.

³⁶⁴ Interview Chairman Deng.

“If there was a strike in Company X/JV2’s branch in the South, we would still be there for them anyway.”³⁶⁵

Though workers played no active part, neither immediately nor through the union, in the decision-making process on the expansion and new locations of Company X in China, the potential risks of strikes at its new Southern plant caused Company X/JV2 to consider preventive measures. Despite its opposition to the union reform efforts in the Southern province, it approached union leaders and ultimately found a compromise, which allowed it to maintain its unilateral and vertical management style, while drawing on the resources of the local union structure. The strategy chosen by Company X/JV2 is not surprising and the example arguably tells us more about the flexibility and actual purpose of trade union reforms in China, namely the creation of intermediary channels to appease labour conflict and prevent strikes.

2. Power Relations and the Spatial Organisation of Production at Company X in Mexico

*The present collective contract applies only and exclusively to the industrial unit under the ownership of Company X that is located at...
– 2010-2012 Collective Contract of Company X in Mexico*

That labour cost was not the decisive factor in the calculus on plant locations is of course a case-specific result of the large Chinese domestic market.³⁶⁶ In comparison, Company X’s recent projects in Mexico were more strongly driven by cost considerations, and – as the overall share of labour in total cost is very low – by questions of flexible control over the production process. Local and central governments attempted to shape the geographical distribution of operations in

³⁶⁵ Ibid.

³⁶⁶ In the late 1990s Company X for example took advantage of lower labour costs stemming from the devaluation of the Brazilian *real* to relocate a large part of its South American production facilities from Argentina, which maintained its currency pegged to the dollar (Tuman 2003, p.38).

Mexico in similar ways to the Chinese case, but union politics and worker agency played a more significant role in the actual application of Company X's "spatial fix".

At the time of my fieldwork, Company X was developing two new projects in Mexico: an engine plant in the North, opened in early 2013 and about to commence pre-serial production; and a new terminal assembly plant for Company X's upscale brand, for which construction was underway within the same local state, about forty miles from the main plant. Contrary to China, the union shaped the decision-making process on the geographical location by means of its influence on industrial relations, working conditions and salaries. The context in which the particularities of this expansion unfolded was, once again, a hangover from the 1992 alteration of the collective contract, respectively the inability of Company X's workers and union to muster sufficient strength and tactical coordination to *de facto* disable a central post-1992 clause: the limitation of the Company X collective contract to the single industrial unit of the main plant. The former 2000-2008 general secretary of the Company X union put this into the context of what he perceived to be a cyclical recurrence of large-scale clashes between enterprise and workers:

"My theory is that because a collective contract lasts for 10 years, the enterprise wants to implement important changes after each 10-year period. And because it is unable to achieve these changes through the regular contractual revisions, it creates a conflict. These conflicts usually take the form of intra-union conflicts, that the enterprise uses as a pretext to impose its plans as desired. [...] In '81 this concerned outsourcing, the permission to bring in third party providers for service and maintenance work – and today, many of these services are in fact in the hands of external suppliers, for example the canteen, logistics, civil engineering. In '92 they managed to introduce a paragraph whose application we are witnessing at the moment, namely that when Company X installs a plant outside the existing industrial unit, this plant does not necessarily have to be represented by Company

X's independent union. This is what is happening to the new engine plant – and the new upscale brand plant will probably have the same 'luck'.³⁶⁷

In fact, the new upscale brand plant turned out to be “lucky” in yet another way, which was the outcome of the particular strategy of the Company X union after its experience with the case of the engine plant. Although Company X's rationale behind both projects was the reduction of labour costs and de-regulation of working time, in the following both projects will be addressed separately.

2.1. The Engine Plant in North Mexico

At the time of my fieldwork the 2012-2016 central committee had succeeded the 2008-2012 leadership. Construction works at the new engine plant in the North had finished and Company X began to gradually staff the facility towards the end of the year. By that time it had surfaced that workers at the new plant would neither be hired under the collective agreement of Company X's main plant nor be represented by Company X's independent union. Instead, the *titularidad* – union recognition and responsibility for the collective contract – had gone to the CTM. The actual course of events that had led to this situation was still not fully transparent to either scholars or workers at that time, and the new union leadership was eager to present its own particular interpretation. The following account is based on my interviews and observations, but greatly indebted to Antonio Espinal Betanzo's detailed reconstruction of the case (2015).³⁶⁸

It is difficult to satisfactorily determine the reasons for the decision to locate the new plant in the North, rather than at the location of the main plant. While the managerial response was simply that “there is no more space here for an extension

³⁶⁷ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

³⁶⁸ Espinal Betanzo undertook research on the historical changes of industrial and union-worker relations at Company X at the same time I carried out my fieldwork. We discussed our findings on multiple occasions.

of the plant,”³⁶⁹ the 2012-2016 union leadership pointed to the lack of preferential policies offered by the local government:

“It was different with the engine plant and the preceding PRI government. [...] The governor only offered them the building ground and no other benefits – but two other states up North did. And one of them [where the plant is located now] also has a well developed inland port.”³⁷⁰

Logistics considerations might indeed have played an important role, as the plant would primarily produce engines for export to the terminal assembly plant in the United States that commenced operations in 2011. However – particularly in light of the negotiations on the new upscale brand plant discussed below – the introduction of new work regulations, especially a deregulation of working time through *banco de horas*, was most likely a factor in the calculations made by management. In addition, according to Juárez Nuñez, the central government – more precisely the Secretary of Labour – intervened to lobby for the CTM and the location in the North, i.e. a local state notorious for its hard stance on independent unions.³⁷¹ Whatever the reason, the decision on the Northern location was deeply troublesome for workers and the union at Company X’s main plant.

There were two accounts of how the union behaved and intervened in this process. The first, shared by workers and union representatives prior to and after 2008-2012, attributed the failure to unionise the Northern plant within the confines of the Company X union to strategic and tactical errors committed by the 2008-2012 union leadership:

“The former general secretary broke off relations with the UNT [*Union Nacional de Trabajadores*, the national union federation Company X joined under the 2000-2008 central committee] and the IG Metall [the majority union at Company X in Germany] and tried to work on his own. [...] He did not pay much interest to the

³⁶⁹ Interview Mexican manager Joel.

³⁷⁰ Interview Carlos and Oscar, members of the central committee Company X union in Mexico (2012-2016).

³⁷¹ Interview Huberto Juárez-Núñez.

issue in the North; but all this also coincided with the election campaign for the new central committee – and he focussed on his re-election, rather than on the new plant opening.”³⁷²

While nearly all my interviewees confirmed that the 2008-2012 leadership focussed its attention on the main plant, decreasing its efforts to branch out to suppliers and the general public, the neglect of international relations has been contradicted by the union leader’s own account (discussed in Espinal Betanzo 2015). According to him, the enterprise offered him the recognition of the Company X union at the Northern plant in exchange for acceptance of the *banco de horas* system. When he refused to compromise on this issue, the enterprise in Mexico communicated to the German headquarters that the Company X union was not interested in representing the Northern plant and that therefore negotiations with the CTM would be initiated. This, in turn, brought the IG Metall and the works council at the German headquarters onto the scene. Both sent representatives to assist the Company X union in Mexico, and invited its general secretary to Germany in order to pressure the German headquarters to revoke any agreements with the CTM. The IG Metall succeeded in convincing the enterprise to sign the collective contract with Company X’s independent union. This implied that the 2008-2012 union leadership, amongst others, would have had to administer the process. While my interviewees, in particular the 2012-2016 union leadership, blamed their predecessors for neglecting the issue of the Northern plant over their interest in re-elections, Espinal Betanzo argues that it was mistrust between the preceding and succeeding leaderships that forestalled the formation of an agreement, ultimately leading to a loss of the contract to the CTM (Espinal Betanzo 2015, p.239f.). Similarly, Juárez Nuñez, investigating the issue, found that the 2008-2012 leadership had indeed signed a first agreement, but that the succeeding central committee failed to retain it over the course of events unfolding in the spring of 2012.³⁷³

³⁷² Interview Carlos and Oscar, members of the central committee Company X union in Mexico (2012-2016).

³⁷³ Interview Huberto Juárez-Núñez.

It does indeed seem plausible that the particular failure to gain union recognition in the North is attributable to the 2012-2016 central committee. However, it is debateable that this was simply an issue of neglect or misunderstanding. For although the new central committee might have failed to take up the issue of the agreement again at the beginning of 2012, the event that finally turned the tide was a strike of 137 blue- and white-collar trainees at the Northern engine plant in April 2012. These trainees, who were funded by a scholarship from the local government, approached the CTM over their discontent with working conditions and pay (Hernández 2012). The CTM for its part seized the opportunity and assisted the trainees in organising a strike, demanding that their situation be dealt with by signing a new collective agreement for the plant in the North. This new agreement was at that time valid for the entire future workforce, although there were no directly employed Company X workers yet (Anon 2012d). The Company X union at the main plant was surprised by this move and before the enterprise signed an agreement with the CTM only managed to demand that an election on the *titularidad* should be held – a proposal that the local government was eager to support. Such governmental enthusiasm was a rarity in itself, and arguably indicated that local politicians were anticipating a result in their favour. In effect, the Company X union had merely two days to organise its electoral campaign and mobilise amongst the trainees:

“When we entered office, the issue of the Northern plant had nearly been lost, and we went there to proselytise, talking to the *muchachos*, asking for their votes. We presented ourselves, who we are, how an independent union compares to a centralist one, but we were not very successful. When the elections came we gained about a third of the votes – but I am sure that if we had had more time, we would have gained this collective contract.”³⁷⁴

³⁷⁴ Interview Carlos and Oscar, members of the central committee, Company X union in Mexico (2012-2016).

The Company X union lost the vote, but at the time of my fieldwork was still in communication with workers in the North, and considering demanding re-elections after a certain legal waiting time.³⁷⁵

In hindsight, that the Company X union was unable to establish a foothold at the new plant was the result of a chain of events, which, following Espinal Betanzo, was set in motion by the union's inability to retain the deal on the *titularidad* – signed at a moment when the balance of forces was in its favour (i.e. after the IG Metall intervention) – through the period of leadership transition. The CTM seized this moment to instigate a strike amongst trainees, who were financially dependent on the local government, which in turn paved the way for suspiciously prompt elections on the *titularidad*. However, in the absence of more detailed information the issue still remains obscure and a final evaluation inconclusive. Why, for example, if the 2008-2012 committee had signed an agreement already, did the 2012-2016 committee not simply demand its enforcement in the April conflict, but instead agreed to the more risky election over the *titularidad*?

Irrespective of who won union recognition in the North, each opening of a new plant presents unions in Mexico with a dilemma that structurally increases the room to manoeuvre for the enterprise: *when* should a collective contract be formulated? Although under Mexican law union recognition depends on majority support amongst the respective workforce, it is also legal for a company to sign a collective contract for an industrial unit before the respective workforce is hired or even before the physical facilities exist. An independent union waiting for the hiring and election process might therefore result in the enterprise signing an agreement with a different, usually management-controlled or state-affiliated corporatist, union (CTM, CROM, CROC, FROC) prior to the elections. These collective agreements usually take the form of “protection contracts” and offer conditions worse than those in comparable independently unionised plants – as was the case for Company X's Northern plant (for details see Table 7). It is this dilemma that determined the strategy of Company X's union in the case of the new upscale brand plant.

³⁷⁵ Ibid.

2.2. The Upscale Brand Plant

Multiple variables need to be factored into the final decision to locate the new upscale brand in close proximity to the existing main plant of Company X. In a change of the local government in 2011, a coalition led by the PAN came into power, which offered substantial preferential policies to Company X, including a twelve-year tax break and other infrastructure measures.³⁷⁶ In addition, with a projected (initial) workforce of 3,800 blue and white-collar workers, the terminal assembly plant had a much higher demand for skilled workers, which could be provided through the training facilities at the main plant, as well as through unemployed and already qualified automotive workers in the area. Good connections to a port on the Atlantic coast and the fact that the upscale brand shares supply networks with the existing main plant may have added to the decision.³⁷⁷

The union at the Mexican main plant on the other hand was eager to see the new plant established in close proximity, figuring that it would increase the likeliness of influencing the *titularidad* in their favour. In the 2013 revision of the main plant's collective contract, the union maintained a compromising stance and agreed on a reduction of the individual premium for punctuality in exchange for a new collective quality-dependent premium (based on the percentage of cars with B-type mistakes within one year). Judging by interviews with union personnel carried out by Espinal Betanzo, the rationale was to increase chances for attracting the new upscale brand plant, signalling to the enterprise that the union was committed to proactively co-managing quality problems; and, more generally, willing to negotiate and compromise without wider conflict (2015, p.258f.).

Most likely, however, is that the final decision on the location was determined by the question of the new plant's collective agreement. According to Juárez-Núñez,

³⁷⁶ According to an interview carried out by Espinal Betanzo (2015, p.242), the preceding union leader approached the local government once he learned about Company X's intention to build a new upscale brand plant in North America, in order to convince them to intervene in the decision-making process.

³⁷⁷ Interview Carlos and Oscar, members of the central committee Company X union in Mexico (2012-2016), Huberto Juárez-Núñez.

the German union and works council representatives were eager not to repeat the debacle of the Northern plant, and pressured the German headquarters to sign the collective contract with the Company X union.³⁷⁸ The Company X union for its part sought to ensure the *titularidad* by compromising on one of the most controversial issues amongst Company X workers – the *banco de horas*:

“Yes, the collective contracts of the engine plant in North Mexico and the one of the new upscale brand factory here do have *banco de horas*. [...] If the upscale brand brings its collective contract along and we don’t accept it, the CTM, FROC or CROM, or some other union will. So we were basically forced to accept *banco de horas*, in order to gain recognition for the collective contract. We managed to negotiate some changes, because the company wanted to allocate a huge number of working hours to the *banco de horas*, which we managed to get down to 120, I think [it is 180 hours]. So once the work commences, we will try to lower this number further, which is something that we know they are doing in Germany as well.”³⁷⁹

The twofold pressure of the upscale brand plant being located somewhere else and the *titularidad* going to a rival (and corporatist) union federation caused the Company X union to make substantial concessions. These, however, extended far beyond the introduction of working time accounts. In comparison to the main plant, the collective contract for the upscale brand stipulated lower wages and, in particular, lower benefits and allowances; had a longer working week; less vacation days; relaxed rules for the employment of third party providers; extended discretion of the enterprise over work rules; and a special clause that fixed the increase of wages at 5.8%/year, without growth in benefits and allowances or the possibility for renegotiation until the year 2019.³⁸⁰ In fact, the contract for the upscale brand plant left workers in nearly every regard worse off than their colleagues, not only at the main plant but also than the ones at the CTM-unionised

³⁷⁸ Interview Huberto Juárez-Núñez.

³⁷⁹ Interview Carlos and Oscar, members of the central committee Company X union in Mexico (2012-2016).

³⁸⁰ In case that the inflation rate exceeded 5.5% at the end of the year, or fell 2% over three consecutive trimesters, the wage rate would be renegotiated.

engine plant (Table 7). The entire procedure as well as the content of the agreement caused shock and outrage amongst workers at the main plant:

“Our union leader has announced that the collective contract for the new upscale brand factory is already deposited at the Labour Secretariat. Some *compañeros* know the particular clauses, and there are some that implement the *banco de horas*, which they will apply from 2016 onwards – that is, they have signed a collective agreement in advance; there are no workers yet, but they have already signed an agreement! Impossible! This is simply impossible! A collective contract that will be valid for all the workers, but there is not a single worker there at all!”³⁸¹

In both cases of the engine and upscale brand plant, the Company X union failed to unionise the prospective new workforces under conditions comparable to the standards at the main plant – in the first case because it had to concede the *titularidad* to the CTM, in the second because it felt pressured to water down its demands to a compromise that was even worse than the collective agreement of the engine plant. Apart from the fact that this casts doubt on the relevance of a clear-cut dichotomy between corporatist and independent unions in Mexico, the examples illustrate that union agency – arguably rather that of the IG Metall and CTM than of the Mexican Company X union – did indeed shape Company X’s spatial development in Mexico. How beneficial this has been to the workers of Company X is however another story.

³⁸¹ Interview worker Jesús.

	Main plant	Upscale plant	Engine plant
Union	Company X	Company X	CTM
Weekly working hours	44, 42, or 40 + overtime (comp.)	48, 45, or 42 + overtime (comp. >2h/day, or >6/week)	48, 45, or 42 + overtime (comp. >2h/day, or >6/week)
Working days/week	5 or 6	6	6
Shifts	3 shifts; special shifts (comp. norm. shifts: 6 th day 135%, Sun 145%; comp. special shifts: 1 day 120% premium; 6 th day 135%, if Sun 220%)	3 shifts; special shifts (comp. Sun 125%)	3 shifts; special shifts (comp. Sun 145%)
Breaks	30 minutes	30 minutes	30 minutes
Working time accounts	No	+/- 180h; no limit; application at enterprise discretion*	+/- 100 hours; no more than 2 times ≤2h/week (50% comp./50% in time account); application with union consent*
Vacation	1-8 years: 14 days (comp. 16/25/29 days); 9-13 years: 17 days (comp. 31 days); 14-18 years: 20 days (comp. 31 days); after that 3 days for each 5 years;	1 year: 6 days; 2 years: 8 days; 3 years: 10 days; 4 years: 12 days; after that 2 days for each 5 years until max. 24 days; (comp. 125%)	1 year: 7 days; 2 years: 9 days; 3 years: 11 days; 4 years: 13 days; 5-9 years: 14 days; after that 2 days for each 5 years; (comp. 200%)
Paid leave	Marriage: 5 days (+ \$700); Birth: 2 days (+ \$700); Death of parent/partner/child: 3 days (+ \$700); Union duties; Sports	Marriage: 2 days; Birth: 2 days; Death of parent/partner/child: 2 days	Marriage: 2 days; Birth: 2 days; Death of parent/partner/child: 2 days
Work on rest days	Requires union consent (comp. as overtime + 6 th day/Sun premium)	At enterprise discretion (added to time account)	Union notified (added to time account)
Third party providers	Outside regular tasks; services (further restrictions apply; union needs to be notified)	Outside regular tasks; services; "quality stabilisation"; temporary increases in demand	Outside regular tasks; services
Lowest/highest daily wage	176/605 (includes separate grades for team leaders)	180/500 (+ 2 days salary/month for team leaders)	180/360 (+ 10% for team leaders)
Remuneration	Meritocratic (evaluations: 9 months; ascend along wage grade)	Meritocratic (evaluations: 6 months; bonuses)**	Seniority/meritocratic (12 months; ascend along wage grade, given targets fulfilled)

Benefits/allowances	Health and life insurances above legal minimum; food stamps: \$2039/month; savings account: \$150/month; educational material: \$1,254.84/year; Christmas bonus 58 days salaries; stipends for workers enrolled in further studies; lottery for cars; lump sum paid to union for each sports and cultural promotion	Social security as legally stipulated	Life insurance above legal minimum; Food stamps: pesos 510/month; Christmas bonus 20-30 days salaries
Premiums/bonuses	Punctuality (monthly/yearly); since 2013: quality; Profit sharing: 14 days salaries in Dec; 18 days salaries in May	Team: ≤5% of monthly wage each for quality/quantity; Individual: ≤5% of monthly wage after half year evaluation; profit sharing according to law	Profit sharing according to law
Transport/Food	Transport paid by enterprise/canteen price \$5.41	Proportionally paid by workers	Transport not stipulated; canteen price 10% of daily minimum wage in Mexico City
Voluntary retirement compensation	≥17 years seniority: 3 months salary + 20 days salaries/year of seniority	6-3 months salary before age 60-63	No stipulations
Layoffs	As legally stipulated	As legally stipulated + if internal work rules violated***	Mechanisation; economic reasons (union notified)
“Social stability pact”	-	2012-2019; wage increase: 5.8%; stagnant benefits and allowances	2013-2015; increase of wages, benefits and allowances: inflation + 1.5%

Table 7: Collective contracts at Mexican plants of Company X Group

Source: Collective contracts of Company X's plants in Mexico

* The *banco de horas* at Company X's upscale brand plant recorded hours below or above the regular working week up to a limit of 180 hours. Time exceeding the regular working day/week by two/six hours was not recorded in the time account, but paid at regular overtime rates. As long as the account did not reach 180 positive hours, the respective additional working time was compensated at a normal rate. Once the account showed 180 hours, it was cleared and the worker paid the overtime benefits. Time accounts were reset every four years, all respective positive hours compensated, negative ones transferred to the next period. If the employment relationship terminated, positive hours were compensated and negative ones deducted from the worker's salary (§12, Collective Contract upscale brand of Company X in Mexico). The *banco de horas* at the Northern engine plant was similar, but stipulated a threshold of 100 hours; was cleared every year; and compensated half of the hours in the time account as overtime (§19, Collective Contract Northern engine plant of Company X in Mexico).

**Although the contract specified different wage grades, it did not stipulate what criteria determine which wage grade individual workers were allocated to.

*** This referred explicitly to a violation of the “social stability pact” attached to the collective contract, which stipulated the latter's irreversibility until 2019 (i.e. any action on the side of the union to revise the agreement can be interpreted as a violation, justifying dismissal).

2.3. Intra-company Competition and Pressure on Labour

The clear contractual discrepancies between the different plants increased the structural power of management, by putting workers at the main plant under competitive pressure. Worker Miguel explained:

“Economic pressures, and the pressure within the [Company X] Group, will begin to harm us through a strategy in which they will make us compete with the upscale brand plant for orders and jobs. Independent of what happens in the global economy, now we also have to be concerned about the local economic situation. For years Company X has tried to change the working conditions here, but for one reason or another they have not managed, at least not totally, to make our contract disappear in order to lower costs. They couldn’t do it. Now, these two new strategies put us under pressure, if we want it or not, with this stupidity of ‘If you don’t give in, there are others that will do it more cheaply.’ We do not know the wages they have in US City XY at the moment, but those they had at the beginning were well under the average of what they pay in the North American car industry. The new upscale brand plant will also pay much less than the Mexican average. Hence, if we want it or not, this puts a lot of pressure on us at Company X in Mexico.”³⁸²

In the long run, it is therefore likely that the new plants will put workers at Company X’s main plant under growing pressure to water down the collective agreement. However, Company X also embraced the utilisation of space as a managerial lever for increasing intra-workforce competition on a smaller scale. Most factory compounds of Company X in China and Mexico possessed multiple departments of the same type. Modern greenfield sites for example were deliberately designed to allow for the “mirroring” of the factory in the process of increasing productive capacity and the introduction of new models – i.e. an exact copy of the existing productive facilities would be constructed on an already acquired neighbouring plot of land. As a by-product, the mirroring increased

³⁸² Interview worker Miguel.

internal competition within the workforce of the plant, as workers' performance in each plant section would be compared to the other. For workers in one section of the plant there was always the threat that particularly lucrative orders – those with overtime (if overtime is paid accordingly, which is not always the case in China) – would not be placed in their area, but in the other. In the Mexican case, workers from the East factory were for example allowed to share in the overtime of a project in the West factory, but when the distribution of work was reversed, workers of the West factory were not invited to partake in the benefits accruing to the East factory.³⁸³

3. Concluding Remarks

In this chapter I have discussed the geography of Company X's operations in China and Mexico under the particular question of the rationale for its spatial reorganisation. I have demonstrated that the case of Company X does not show evidence of capital relocation proper. The opening of new plants coincides with neither a disinvestment in other regions nor with a downsizing of productive capacity (although this might occur in the future). It is pure and simple expansion. Power relations between local and central policy makers, capital and labour, respectively the processes of relational agency between them, have shaped the rationale and effects of Company X's expansionary drive to diverging degrees in China and Mexico.

In the Chinese case, at least of Company X/JV2, this is straightforwardly driven by considerations of market access. *Pace Silver*, Company X/JV2 neither employs a "spatial fix" in response to problems of labour control nor as a result of cost-push factors, including labour costs, as it pays roughly the same wages at all of its plants. Arguments of a profit-squeeze do also not hold fully – although profit margins were shrinking due to competition and saturated markets, Company X did not abandon or downsize facilities with lower profit rates in exchange for an expansion in new locations (although this might happen in the future). This however did not mean that considerations of labour and worker agency were

³⁸³ Interview worker Daniel.

delinked from this spatial dimension. First, Company X/JV2 benefitted from rumours about the earning potentials for ordinary workers at its new Southern plant, which put pressure on its competitors, as workers began to utilise an alleged ¥5,000 salary as a reference point in their collective bargaining rounds. That this strategy would ultimately drive up the wage level for all companies in the area was apparently less of a concern.

Secondly, the speed of the expansion posed challenges of adequate hiring and training to Company X/JV2, which it solved in a unique way by circulating thousands of workers between its headquarters and the new subsidiaries and keeping a flexible stock of interns to compensate for any personnel bottlenecks. This strategy required management's unilateral command over labour in terms of hiring and firing, and labour force allocation between different geographical locations.

Finally, Company X/JV2 began to realise that its vertical management style could backfire when it moved to regions with higher labour turnover and strike activity. It therefore sought the assistance of the provincial and city union in the South – famous for their allegedly “labour-friendly” stance (Friedman 2014c) – to learn from their experience with strike mediation and prevention through inclusive channels. In effect the Company X/JV2's enterprise union retained full authority over factory-internal affairs, while the local union federation offered its support by sharing its intelligence on strike activity, and by remaining on standby for a potential *ad hoc* intervention in case of a strike.

In Mexico, on the other hand, the main reason for the particular geographical choices were indeed labour cost and control related – echoing some of Silver's arguments. As in the Chinese case, the main protagonists in the decision making process were local policy makers and management, but Mexican and German workers' representations and rank and file workers had a more proactive role. In the case of the engine plant the action of central and local policy makers affected the decision to locate the engine plant in the North, while critical strategic mistakes and coordination problems within the Company X union, aggravated by

effective manoeuvres of the CTM, gave management sufficient leverage to achieve the unionisation of the plant outside the Company X union and the collective contract. This provided a precedent for the new union leadership and the Company X union in Germany when it came to the negotiation of the location of the upscale brand plant. In this case the union chose to take a cooperative stand, which, given that the German union mustered sufficient pressure, succeeded in having the plant represented by the Company X union, but on the basis of a collective contract far inferior to the agreements at the main plant and even the engine plant. The most likely effect is that workers at the main plant in Mexico will come under increasing pressure to lower the standards of the collective agreement in the future.

Returning to the initial question, working conditions and labour-capital relations converged between the Chinese subsidiaries of Company X/JV2, as market access was the driving momentum behind its geographical expansion. In Mexico on the other hand, a divergence in these issues – i.e. an exploitation of local idiosyncrasies – has most likely been the reason why Company X chose the particular spatial organisation for its new subsidiaries. The agency of workers and unions in Mexico clearly had effects on a negotiation process dominated by policy makers and capital, while these aspects were absent but anticipated as potential future events by Company/JV2's management in China. In short, the agency of workers and unions modulated the development and outcomes of Company X's recent expansion, but the critical decisions remained concentrated in the interactions of policy makers and managers.

Chapter 9: Conclusion

Through a comparative case study of a global automotive manufacturer and its subsidiaries in China and Mexico, this study has engaged with the puzzle of a transnational company's institutional resilience, i.e. its adaptation – or lack thereof – to local political economic conditions. It has further addressed the research gap identified in the existing institutionalist and state-centric explanations of institutional convergence and divergence by studying the contribution of worker agency to these processes. By asking how, why, and under which conditions worker agency has shaped the convergence and divergence of Company X's operations in China and Mexico, it has provided empirical evidence for instances in which processes of relational agency between workers and other social agents have led to unintended consequences in the company's strategic development and day-to-day operations. I have argued that the main trajectory of the effect of worker agency on the company is a deflection of the agency of managers and policy makers. In addressing these questions, I examined broader institutional and structural conditions of worker agency in both China and Mexico, and contrasted them with episodes and instances of worker agency on and beyond the shop floor. In doing so, I have demonstrated that workers creatively mobilise institutions and structures, such as overtime or alternative sources of income, in order to increase their leverage against, or to evade, the agency of other social agents. I have argued that these forms of mobilisation often defy the behaviour that less labour-focused and/or more static readings of the institutional matrix would have predicted. I have shown that different forms of worker agency can trigger such a deflection to greater or lesser extent: large-scale open conflict and strikes; defiance; evasion; exit; and negotiation, albeit in a mediated form through trade union representatives. On the other hand, I have identified areas in Company X's operations in the global South where workers have had hardly any influence, particularly the technological composition of the production process.

This study therefore contributes empirically to an enhanced perspective “from below” on industrial development, enriching seminal studies on the case such as the works of Zhang (2014), Montiel (2001, 2010) or Juárez-Núñez (2005, 2006).

Crucially, it embraces a comparative perspective on Company X in China and Mexico to move beyond the realm of national specificities to which the aforementioned studies remain wedded, and to put the idea of company-specific “profit strategies” and “productive models” to the test. The empirical findings lead to a reconsideration of the driving forces of industrial development and “varieties of capitalism”, implying that a move beyond explanations based on a dynamic state-capital nexus; the conceptual development and comparison of static institutional ideal-types; or patterns of cyclical recurrences is demanded.

In this conclusion I will briefly review the main findings of the thesis, paying particular attention to the structural conditions which constrain and enable processes of relational agency to affect outcomes, before looking at how and why such processes play out differently, with important implications for institutional convergence and divergence. I will then tease out the implications of my findings for both existing theories and for theory-building going forward, before turning to the implications for policy design. Finally, a section on the unavoidable limitations of this thesis and desirable avenues for future research will conclude this chapter.

1. Key Findings

1.1. The Conditions for Relational Agency

Throughout this study I have argued that the relevance of comparative institutionalism, as well as Silver (2003) and Wright’s (1985) forms of workers’ “structural power”, are useful tools to chart a heuristic map of conditions that could potentially be mobilised as resources in processes of relational agency. However, for an explanation of historical change, an analysis of the latter is demanded, which remains external to the theoretical and methodological edifice of institutionalism, structuralist Marxism and Silver’s WST. In the following section, I will briefly recapitulate the most crucial conditions for worker agency identified in this particular case study.

In chapter 3 I have shown that a labour shortage in China at high levels of economic growth *versus* sustained population growth at a crisis-torn economy in Mexico suggested higher levels of workers' "marketplace" bargaining power in the former. On the other hand, different union cultures pointed to higher "associational" power in Mexico. In Mexico, the Company X union was a vehicle for grassroots activism, although this function was severely curtailed after the 1992 conflict. In China, on the other hand, the Company X union was essentially party- and management-controlled and at best acted paternalistically on workers' behalf – but usually did not object to managerial decisions.

The legal setting for worker agency in both places has recently moved towards converging characteristics, albeit from different starting points. Mexico's "labour-friendly" laws were reformed to flexibilise work rules, remuneration, and hiring and firing, as well as to curtail trade union influence and the right to strike. In China, on the other hand, the 1994 labour law – with its loopholes and lack of sanctions for transgressions – was reformed over the last decade to widen the influence of the ACFTU, to formalise labour relations, and to create legal channels for workers' grievances. Most recent legal reforms, as in the case of the GPRCC, are moving closer to a system of legal definitions of (and therefore constraints on) worker agency, as exists in Mexico and most other countries.

In chapters 5 and 6, I identified institutional and structural setups on the shop floor that appeared to converge at first glance in both cases - meritocratic remuneration systems, teamwork, training schemes and time regimes. These institutions were however mobilised in different ways by workers and managers. The technological composition of the production process varied between Mexico and China, and between different Chinese plants. This was determined by multiple factors that ultimately narrowed down to questions of cost - labour was just another factor in a calculation driven by considerations of demand, output and quality. I have argued that technological composition was indeed beyond the immediate influence of workers.

In chapter 7, I confirmed Silver's (2003) argument that the "technological fix" of just-in-time production increased the vulnerability of terminal assemblers to low quality or non-delivery of parts and components. The supply chain therefore becomes a nodal point for worker agency, by virtue of strikes potentially having severe knock-on effects on other suppliers and lead firms. I have shown that with its modular production system, Company X relied on a high degree of outsourcing that, at least in theory, made it particularly vulnerable.

Despite its limited value to genealogical explanations, throughout this study I have demonstrated the virtues of comparative statics in charting a heuristic map of conditions that could potentially be mobilised as resources in processes of relational agency. However these heuristics only chart possible outlines of change processes, the actualities of which depend, in part, on how processes of relational agency actually pan out.

1.2. How and why worker agency affects institutional change and the strategic development of Company X

I have argued that structures and institutions that at first glance appear as stable constraints governing human behaviour, are in fact subject to constant re-interpretation, reproduction and transformations through the agency of those supposed to be governed by them. Following Knafo and Konings (both 2010) I have suggested that institutions and structures should therefore be perceived as idle agentic capacities that become activated, and a historical force only when they are practically mobilised in processes of relational agency. In chapters 5 and 6 I have shown that such processes are present in a less visible form in the reproduction or gradual change of day-to-day routine operations. In chapters 3 and 7 I have demonstrated that worker agency can take the form of cataclysmic conflicts with stronger implications for institutional and structural change, such as? What changes?. And throughout this study I have shown how processes of relational agency unfolded along formally defined routes of interest representation through unions and other organisations, particularly in the Mexican case. I first

summarise the findings of how workers and managers have utilised the existing institutions and structures described in the preceding section, namely, labour shortage and alternative sources of income. Thereafter, I extract the different forms worker agency has taken in these instances, and the effects it has had on institutional and structural changes of Company X.

1.2.1. Mobilising the Conditions for Agency

The agency of autoparts workers in South China seems to have been influenced by a wider labour shortage, but similar strikes have happened at individual autoparts suppliers in Mexico as well. The labour shortage in China therefore does not provide a strong argument in itself for the outbreak of strikes in individual enterprises, but helps to understand why the signal effect of the Honda strike could trigger an extensive wave of strikes amongst labour-intensive manufacturing enterprises. In Mexico on the other hand, the strikes at Mexparts 3 and 4 remained isolated cases, although structural and institutional conditions at other suppliers were very similar. Company X specifically did not suffer from a labour shortage in either China or Mexico, as its wages compared favourably to alternative forms of income. Workers with permanent contracts in both China and Mexico were unlikely to exit the company, though in China they more frequently sought in-house transferrals to less strenuous jobs.

The exception to the latter trend were migrant dispatch workers, who at least temporarily saw a viable outside option in a return to the countryside, where they or their family still held *usufruct* rights to a plot of land. In short, migrant dispatch workers could mobilise an alternative strategy for reproduction in their favour, that fully proletarianised workers with an urban *hukou* could not. As I have demonstrated, one of the effects of this was that a seemingly comprehensive training scheme at Company X was in fact deliberately limited for migrant dispatch workers (and interns), i.e. groups of workers that were most likely not to stay with Company X for longer.

Legal institutions played a significant and very direct role in labour conflicts in Mexico. The trade union routinely declared strikes to coincide with the annual wage bargaining rounds, and management had strikes declared illegal through the Secretariat of Labour in 1992 and 2000. While workers hardly used the law in practice, for the clandestine group of worker activists it functioned as a discursive reference point in their organising efforts amongst colleagues.

I have shown that Company X employed different means to exercise control over its supply chain, stemming from the variations in ownership structures between Mexico and China. In China, Company X's joint venture partners had direct influence on production and labour relations in the supply chain, as the first tier suppliers were part of their wider corporative structure. This could give the Chinese side of the joint venture a faster reaction time to deal with issues in the supply chain if it was willing to intervene. Company X also departed from lean-production principles and increased storage capacities as buffers against late or non-deliveries of parts and components. In Mexico, on the other hand, Company X regulated the supply chain more directly through competition and market pressure, which was maintained by having multiple suppliers of similar activities compete with each other. In this case, Company X influenced strikes at its supplier units by its potential to withdraw its contract, forcing suppliers to quickly settle conflicts with their labour force in one way or another. In both cases, strikes in the supply chain either did not occur or had a limited impact on Company X.

A significant area where worker agency in both China and Mexico had no immediate effect was the technological composition of the production process. While particular techno-organisational changes could be a response to disruptions caused by worker agency as Silver and the *operaists* have argued (Silver 2003; Tronti 1974; Alquati 1974; Panzieri 1980), or could empower workers through the comparably easy way of disruption flow and lean production systems; but, I found that workers had no influence on the implementation of technology itself in either China or Mexico.

Worker agency has affected institutional and structural changes at Company X and beyond through three different pathways. These differ according to the level of confrontation seen, which can vary from formal union negotiations to hidden acts of refusal to open conflict. The outcomes in each case are quite different, ranging from a extensive reshuffling of the institutional matrix, to compromise solutions or smaller-scale effects.

1.2.2. Cataclysmic clashes

As I have demonstrated through the reconstruction of the 1992 conflict, the strikes at Mexparts 3 and 4, and the aftermath of the 2010 strike wave in South China, cataclysmic clashes between workers, union leaders, managers and policy makers set off institutional and structural changes on and beyond the shop floor. They thereby created a certain (soft) path dependency for the future development of Company X and transformed the conditions for the agency of all stakeholders through new rules and regulations. I have emphasised two important aspects in this context.

In 1992 in Mexico, Company X mobilised the legal and repressive capacities of the government, and was therefore able to implement the changes it desired to a large extent. However, due to strong grassroots resistance, it could not do away entirely with the union and its influence over wage setting and contract negotiations. This implied a continuous, albeit reduced presence of formal channels for worker agency on the shop floor. In the struggles at Mexparts 3 and 4, on the other hand, workers gained certain short-term concessions, which were eventually cancelled out by union corruption, or in the case of Mexparts 4, subsumed under corporatist union control.

In China, the 2010 strike wave caused political instability and financial losses for capital and the local government. In reaction to the strikes, Honda managers intervened into the supply chain to quickly settle copycat strikes, while ACFTU and local policy makers began to implement significant institutional reforms. These reforms - such as an emergent collective bargaining system, new preferences in

enterprise union elections and a step-up of Internet surveillance - reflected neither the demands of striking workers, nor a governmental master plan. Of all the agents involved, the changes arguably adhered most closely the interests of ACFTU reformers. If anything, the post-2010 reforms in South China have strengthened the role of the ACFTU in mediating in labour conflicts.

Second, the emergence of clandestine groups of worker activists in Mexico after the 1992 conflict, as well as the 2013 follow-up strike at Honda in China, demonstrated that the newly implemented institutions (i.e. legal institutions, collective bargaining, etc.) were (so far) unable to restructure the behaviour of workers towards greater passivity. The result was a situation of continuous discontent at the grassroots, standing in tension with both managerial authority and union incorporation.

To summarise, the outcome of these cataclysmic events did not follow a predetermined logic – of capital accumulation, pressure on productivity increases, a rebalancing of the developmental model etc. – but was an unintended consequence of the tactical and strategic behaviour of the involved agents. The playing field for worker agency was rearranged as a side effect, but not to a degree that made it disappear.

1.2.3. Acts of defiance and refusal

While cataclysmic events are by their nature both relatively rare and extremely visible, other forms of worker agency are more continuous and harder for company management (and researchers) to detect. I have shown how workers' less visible acts of defiance and refusal, in relation to the agency of management, had effects on Company X's day-to-day operations.

As argued in chapter 5, certain forms of agency of both management and workers ran into an impasse that rendered some of the institutions governing the production process dysfunctional in practice. Although teamwork and quality circles were implemented in both the Mexican and Chinese case, their function to

motivate workers to pro-actively engage in self-management and productivity improvements, was severely impaired due to an authoritarian management style from above, which was countered with frustration and a reduction of effort from below. Other institutions, such as the aforementioned training schemes at Company X/JV2, were adapted to workers' exit strategies.

Workers also used any room for manoeuvre opened by technological factors, in order to get some (even marginal) relief from the exhausting work rhythm. The implications for capital were however rather minor – workers in China omitted certain tasks they were supposed to do, or used stoppages of the assembly line to socialise with their colleagues or even to have a short nap. These instances also indicated that workers more generally treated the disciplining efforts of management with a certain non-confrontational neglect.

As issues of overtime and overwork were amongst the core grievances of workers in both China and Mexico, they also constituted a terrain for struggle, especially in the Mexican case. In multiple instances, workers in Mexico refused to do overtime when they were disaffected by the behaviour of managerial personnel, usually resulting in the union stepping in to negotiate a compromise solution.

The aftermath of the strikes at Company X in Mexico in 1992 and 2000 also indicated that workers used less visible forms of resistance, such as sabotage, to retaliate against management or as an alternative to a more overt, and hence more easily defeated, strike strategy.

1.2.4. Formal channels

Of course, worker agency can also manifest itself indirectly through channels of formal representation, such as the legal system, political parties or unions. As I have shown in chapters 2 and 3 there is a tendency in the literature to approach labour as a social agent, if at all, exclusively through the lens of trade unions or works councils. Arguing that the autonomy of workers' representatives can set them apart quite significantly from rank and file interests, I have consciously

differentiated between the agency of workers and that of union leaders or advisors throughout this study.

Confirming findings from the literature on unions in China's automotive sector (Huang et al. 2008; L. Zhang 2014a) I have shown that workers at Company X in China regarded the trade union as useless or even counterproductive. This was a result both of the unions being under straightforward managerial control and of their practical policies on the shop floor, which mainly exhausted themselves in the organisation of cultural and social events, measures to improve productivity, and in some cases, offering support through telephone hotlines or Internet forums.

In Mexico on the other hand, the Company X union had always been characterised by a tension between leadership and rank and file. However, until 1992 it had institutions in place that allowed worker agency to take place to a large extent within the union structure. After 1992 the intermediate levels of the union were severely cut down, which limited the agency of workers within union confines, widening the gulf between the central committee and the membership base, and allowing management to corrupt union leaders. In periods of "benevolent leadership", as between 2000-2008, union leaders chose to reinstate some of the intermediate institutions and revived rank and file activism. As demonstrated in chapter 4, the other side effect of the 1992 transformation was the birth of clandestine forms of workers organising.

One of the main channels through which unions exert influence on the enterprise is collective bargaining and formal negotiations with management. These can result in concrete changes though it remains a political question to assess how beneficial they actually are to the workforce. The very different union structures in Mexico and China unsurprisingly generated quite asymmetric results. In Mexico, at times, when the leadership was willing, the union retained the role of a modulator of Company X's developmental strategy through its role in collective bargaining. In chapter 5 I have shown that although the union at the Mexican plant lost much of its former influence on the shop floor after the 1992 conflict, it retained a crucial role in collective bargaining over wages and overall changes to the collective

agreement. This could at times deflect the more drastic managerial intentions for change into processes with less negative effects on the workforce. Collective bargaining also caused the institution of meritocratic remuneration, which was in place in both China and Mexico, to function differently in the two cases.

However, I have demonstrated that the results the Mexican union bargained for were, in each and every case, substantial compromises that at least the workers in the dissident group thought of as insufficient. In chapter 7 I have discussed the behaviour of the Company X union in Mexico in the process of the foundation of new subsidiaries, and shown that the dichotomy between progressive independent and regressive corporatist unions in Mexico does not illuminate much about actual union politics and gains for workers. In fact, it rather suggests that the most relevant factor is the balance of forces between rank and file *versus* union leadership, and this *en bloc* against management and governmental authorities. With the post-1992 transformation, the Company X union had severed the direct link to the grassroots, and therefore lost a form of insurance against its leadership pursuing policies similar to those of the CTM.

As I have argued in chapter 7, in the Chinese case, the institutional changes after the 2010 strike wave opened up the possibility for the Company X/JV2 union to transform its branch in the new Southern plant into a more inclusive corporatism through collaboration with the reform-oriented provincial union. It chose not to take this route. Instead, the provincial union agreed to offer surveillance of workers activism and ad-hoc interventions in case of a strike at Company X/JV2. I have argued that this was but one indicator of the ACFTU remaining paternalistic and hierarchical, even in its reformed version that aimed at the implementation of a collective bargaining system based on a quasi-Fordist linkage of wages and company performance.

In sum, the strategies of unions offered ambivalent channels to worker agency, and were in certain cases clearly aimed at constraining rather than enabling it. While the assessment of these strategies is ultimately a political question, a methodological implication is that a comprehensive research programme on

labour issues and their social impact has to differentiate clearly between unions and ordinary workers – a point that is often neglected in the literature on the automotive industry.

1.3. Issues of convergence and divergence

We are now able to address the three main questions of convergence and divergence. First, what is the likeliness of an emergence of strong automotive labour movements in China and Mexico? Second, do the operations of Company X in China and Mexico show a convergence with the “Company X model”? Third, if not, is there evidence for a convergence between the Chinese and Mexican cases that would allow us to speak of a “peripheral model” of Company X’s global operations? Not surprisingly, the tension between Company X’s interest in a coherent integration of its global operations into a functional system, and its interest in an “exploitation of local idiosyncrasies” does not lead to a definite conclusion on *either* convergence *or* divergence. If at all, dynamics of convergence and divergence can be shown for different aspects of Company X’s operations that are combined in different ways. In these concrete operations processes of relational agency between workers and managers have had a determinate impact.

Of course, a single company case study does not allow for a revision of assumptions derived from large data samples, as in Silver’s study (2003). In her study of the Chinese automotive industry, Zhang (2014) confirmed Silver’s hypothesis of the emergence of strong labour movements, inferring her conclusion in particular from the 2010 strike wave. While it is certainly true that the strike wave was significant, it has been rather quiet around terminal assemblers in China. In Mexico, on the other hand, the labour movement at Company X and beyond seemed more dynamic and similar strikes as in the Chinese autoparts sector had taken place at Company X’s suppliers. As a prediction of future developments must remain speculative, it is arguably better to rephrase the question in terms of the conditions for worker agency and the success rate of automotive strikes, which seems to be more favourable in the Chinese case due to the conditions of higher

profit rates for automotive companies and the persistence of an overall labour shortage. It is also important to stress that recent strikes in both cases occurred in the supply chain, where conditions bear more similarities with other labour-intensive sectors such as the electronics industry, than with capital-intensive terminal assemblers. It therefore begs the question of whether it is legitimate to subsume the 2010 strike wave to a long cycle of automotive sector strikes extrapolated from dynamics that occurred primarily when the sector was still characterised by a high degree of vertical integration.

The answer to the second question can still be given with relative confidence. In the 1990s Streeck spoke of the “beneficial constraints” of German neo-corporatism: rigid industrial relations would force capital to embrace product innovations, investment in transferrable skills, co-determination in corporate decision making, and restricted managerial command over labour on the shop floor (Streeck 1992, p.32ff.). In many ways these conditions were epitomised by Company X in Germany. However, as we have seen, none of these “beneficial constraints” have been transferred to China, and only a few of them to Mexico prior to the 1992 conflict, e.g. the stronger union influence on work rules. In the Mexican case a divergent pathway was inaugurated by the conflict of 1992, where management sought to strengthen its control over shop floor relations by diminishing the power of the union and rank and file workers. In China on the other hand, divergence was partly a result of the influence of the Chinese joint venture partners who followed their own *modus operandi*, and partly because management had full unilateral discretion to determine shop floor relations to begin with. In short, the Chinese and Mexican subsidiaries do not converge with the Company X model in the aforementioned regards.

The question however is whether the “Company X model” in Germany still is what it used to be. The “German” institutional setting that Streeck had in mind in the 1990s has changed rather substantially over the following two decades (Streeck 2009, pt.I), providing indications that the “Company X model” has been eroding since the mid-1990s, as argued in chapter 3 (Jürgens 2009). The divergence from principles of co-determination, the harsher pressure on labour cost and work

rules, the segmentation of the workforce, and other dynamics observable in the foreign subsidiaries could also be read as effects of a strategic shift in corporate governance at the German headquarters. More plausible though, is a reversal of the causation: the competitive pressure from divergent foreign subsidiaries on the German headquarters has fostered the erosion of the “Company X model” in its erstwhile heartland. Either case would indicate that the particular power relations and processes of relational agency in the Global South and at the German headquarters have co-constitutive effects – the actual causal directions requiring further careful investigation of such processes.

However, there is at least one area where one might expect strong convergence across all plants, namely the technological composition of the production process. Platform strategies and modularisation suggest that similar models will be produced in similar processes at different locations. And indeed, at its newer plants, Company X consistently deployed state of the art machinery. However, because the pressure for technological upgrading has been lower in China and Mexico, older models and older machinery are kept alive for longer than in Europe. In practice therefore the time at which a given factory is established determines the technological means by which production is organised. This point heavily qualifies two other widely held assumptions: one, that pressure on productivity would lead to continuous technological upgrading; the other that the replacement of human labour by machines could be applied uniformly throughout a manufacturing plant. The result is that the technological composition in 2012/13 was still rather different between individual plants, even within one factory compound. There was no incremental technological upgrading (yet), partly due to technological rigidities (e.g. in the press shop and assembly department), or because the pressure to increase productivity and depress real wages was still low enough to maintain automation at lower levels for certain models. Still, within the technologically imposed constraints, management gave priority to an adaptation of the technological composition to local circumstances – e.g. in the body shops in China.

Regarding the third question, at first glance the institutions supposed to govern the shop floor seemed to be rather similar in China and Mexico – meritocratic remuneration, teamwork and *kaizen* processes, in-house training processes, time regimes – giving rise to the temptation to speak of a “peripheral Company X model”. Additionally, the convergence of autoworkers’ grievances in China and Mexico could be taken as an indicator that automotive production indeed recreates similar social contradictions across countries. However, two qualifications apply. Firstly, workers’ grievances were for the most part so general – insufficient pay, exhausting work rhythms, no career options, unfair superiors etc. – that they could in fact apply to any manufacturing job, or any form of wage labour. Secondly, as I demonstrated in chapters 5 and 6, how the institutions governing the shop floor worked in reality depended on the particular power constellations and processes of agency between management and workers. This could indeed lead to convergent results as in the case of the impasse between management and workers causing dysfunctional teamwork and processes of continuous improvement. It could, however, also take rather divergent forms, where workers were able to exert influences on management that were absent in the respective other case. Relevant examples of these influences were the retained role of the union in wage setting or workers’ overtime refusals in Mexico; the exit strategies of migrant dispatch workers affecting training schemes in China; or the role of the Mexican union, in concert with the IG Metall, to shape decisions on the geographic expansion of Company X.

In sum, the empirical investigation has demonstrated that the convergence/divergence puzzle is unresolvable on the level of a comparison of ideal typical structures and institutions alone. An understanding of the strategic development and operations of transnational companies requires a deeper analysis of the power dynamics and actual processes of relational agency between workers, managers and other social agents.

2. Theoretical implications

As mentioned above, the prime motivation for the central research question was a theoretical lacuna in the diverse literature seeking to explain processes of divergence and convergence in the development of economic institutions. My main argument throughout has been that labour relations, and more specifically the relational agency of workers, must be "brought back in" to provide a full and coherent explanation of these processes. Having developed and analysed a theoretically informed contrastive case study, I can now draw implications for the development of theory going forward.

The lack of focus on worker agency and the refusal of whole branches of theory to view such agency as relational *vis-à-vis* capital, contrasts starkly with the amount of attention that has been given to the relationship between state and (different factions of) capital. It is undeniable that the interaction between central and local governments on the one hand and transnational corporations on the other remains the determining factor in the initial set-up and external institutional regulation of subsidiaries. However, an *a priori* theoretical and methodological limitation to these two factors ignores the capacity of worker agency to at least deflect the decision making process between state and capital.

Similarly, as argued above and throughout, the tools of institutional analysis are useful in developing the structural framework within which agency can unfold, but as I have shown, even that is fraught with danger, especially when actual outcomes lie outside of the framework of the expected. While such outcomes can be accommodated by the theory to a degree, they cannot satisfactorily be explained. The beauty of an institutionalist argument when confronted with deviant agency is of course to point out that this deviance is itself an effect of the institutional matrix. For our example, institutionalists could argue that workers turn to clandestine organising and wildcat strikes precisely because the institutions for their interest representation are ineffective and exclusive. Such arguments have to be deciphered as sleights of hand, because they can only be made at the expense of violating a crucial axiom of institutionalist theory: namely that institutions explain

human behaviour. If this axiom is watered down to “institutions shape human behaviour, but knowing the properties of the institutions does not allow us to say how”, the explanatory value of institutionalist reasoning becomes severely limited – and an analysis of actual processes of agency necessary.³⁸⁴ In fact, such a position would be very close to what I have proposed in this study, although I set off from a different theoretical starting point.

There is thus room for constructive debate, in particular because institutionalists are one step ahead of capital-logic or market-logic explanations, offering arguments for intra-capitalist variation and therefore avoiding the downplaying of divergence under a grand theme of the law of value (or profit). The argument that capitalist property relations impose converging constraints on all social agents in the form of a necessity to secure their reproduction in the market can, in and of itself, not explain how these constraints pan out in reality. On the one hand, there is the question of the impact of alternative sources of income or substitutes for wage labour, which have not (yet) been subjected to market relations, such as subsistence agriculture or unpaid housework – an aspect of particular relevance in the Global South. On the other hand, even under an ideal-typical uniform capitalism, individual and collective agents still have a range of options to pursue different strategies for reproduction – ranging from occupational choices to crime – which make for different macro-structural effects. Moreover, there are many different ways in which a company can achieve a given rate of return, especially in the short and medium term – the necessity to reproduce alone does not condition a particular type of behaviour. There is thus always an explanatory gap, which structural approaches of any kind can only close by the abandonment of their method and an ad-hoc incorporation of historical analysis. The claim as regards theory-building is simple: Theory should be treated as a radical heuristic, instead of a claim to true representation.

Developing theory as history, I have provided empirical material that allows for such an endeavour, centred on the idea of processes of relational agency. In

³⁸⁴ Similar arguments can be made against utility theory, which of course underlies some of the variants of the institutionalism.

particular I have shown that workers' continuous grievances with the exhausting, monotonous and heteronomous nature of work constitute an always present albeit latent source of conflict that could become acute in strikes and acts of defiance. My findings therefore suggest that institutional compromises and productive models might be less stable and continuous than widely assumed in the literature; or at least that their reproduction rests on a fragile, politically upheld balance of forces. In other words, institutions change not (only) because of intrinsic qualities that might erode or transform over time (the ideas of institutional layering and exhaustion; Streeck & Thelen 2005); or because elite decisions result in the pursuit of a different productive strategy (North et al. 2009; Johnson 1982; Amsden 1989). Rather, the social foundation on which any productive model rests is based on two antagonistic but interdependent strategies of reproduction (through the sale of labour power, and through the exploitation of the same) that constantly undermine its stability. It is therefore useful to chart these social conditions in the form of structural and organisational power, in order to map out the 'playing field' for the involved social agents. However, this still tells us very little about when, how and why these resources, institutions or structures are mobilised in processes of relational agency, and even less about what happens if they are. These questions cannot be addressed on the level of assumptions on structural forms of power, nor on institutional matrices providing an incentive structure for rational (employment of) agency. What is required is an agency-centred analysis of actual historical processes, beyond their *a priori* closure as expressions of pre-determined ideal types or cyclical developmental patterns.

Finally, rather than intra-theoretical revision, much of the implications to be drawn from this study could simply be addressed through a methodological commitment to inquire what "non-elite groupings of people actually do" without stopping short at this point, but relating it back to its effects on the strategies and agency of elites. This requires a move beyond comparative statics and a genealogical approach, which in turn necessitates longitudinal observations and sufficient empirical data. This in turn, would imply an approach to fieldwork that does not only rely on official channels, but rather explicitly seeks out the real, if often hidden, activities of non-elite groups through intensive and long-term

qualitative study. Re-theorisation could become a productive enterprise once this data exists at a sufficient scale to facilitate comparison across different periods and spaces.

3. Policy implications and possible future scenarios

The policy implications of this study are clearly dependent on the vantage point of the respective social agents – governments, managers, union leaders and workers would most likely draw different conclusions. The first two perspectives tend to be dominant in discourses on development, industrial policy and institution building. There are clear implications for both, pertaining to the minimisation and containment of industrial strife so as to ensure the smooth flow of production and sales. Workers and their representatives on the other hand, are more likely to wish to learn from the experience of others engaged in seeking to better their conditions at work. However, as argued above, the interests of workers and unions should not be conflated. Union leaders might also view themselves as intermediaries between the workforce and management, and therefore be more interested in pacification of worker agency, formal negotiations, and indirect representation.

Judging by past and recent trends, policy makers in both China and Mexico are likely to further mobilise the virtues of trade unionism as a de-escalating channel for worker agency, in order to stabilise shop-floor relations characterised by strict managerial hierarchies and unmediated coping strategies from below. In areas with higher labour turnover and strike activity, such as the location of Company X's new Southern Chinese plant, state-controlled collective bargaining and more inclusive enterprise unions have been developed to fulfil these functions. In Mexico, where a wider array of unions exist, government and enterprises are likely to make a concerted effort to substitute state corporatist for independent unions as in the case of Company X's engine plant or Mexparts 4; to corrupt independent unions as in the case of Mexparts 3; or to manoeuvre them into situations in which their options are severely constrained, as in the case of Company X's new upscale brand plant.

For executives at Company X, the newly opened plants in Mexico and China provide a new playing field to implement cooperative unions after the image of the German social partnership model in the context of diminished and strictly limited influence of rank and file workers. Its interest in social stability within its plants thereby coincides with the efforts of local governments and union reformers in South China. It is not surprising that it is there that Company X's German headquarters seek communication with trade union officials and labour scholars. In light of the retained emphasis on managerial authority in the Chinese and Mexican plants however, it is unlikely that a substantial shift towards an inclusive unionism that would open up greater room to manoeuvre for the rank and file will occur. This also implies that the impasse of pressure from above and resistance, refusal and evasion from below will most likely persist.

Implications for workers are challenging. In comparison to the Chinese case, it is undeniable that the existence of the union in Mexico opened up channels for rank and file activism at times of benevolent leadership; and that, even though management curtailed their influence, certain intermediate level institutions – such as the divisional representatives – gave workers a certain influence on day-to-day operations. On the other hand, the union leadership repeatedly engaged in compromise agreements that were ultimately detrimental to working conditions and workers' influence on the shop floor. Against this backdrop, clandestine forms of organising seemed a better option for workers in disagreement with official union politics. Of course, this comes with certain risks, and is by nature limited to small-scale activism or vanguardism. Clandestine organising might also be the only feasible option in China, if workers want to avoid incorporation into the undeniably top-down controlled, paternalistic ACFTU (even in its reformed version).

In short, the political implications to be drawn from this study depend on the reader's perspective and his or her political evaluation of the presented evidence. While the interests of governments and businesses might overlap in this regard, there is clearly no win-win situation involved in which all agents would benefit.

4. Limitations and avenues for future research

This study has focused on the relationship between agency and institutions. In doing so it has addressed how particular strategies of workers and managers to mobilise the structural and institutional conditions they find themselves situated in has caused changes in these or other institutions and structures. I have outlined areas where worker agency has mattered or could potentially matter, but more research needs to be done to reliably determine the relative relevance of these processes in comparison to, for example, narratives that focus on the interactions of state and corporations.

A limitation of this study has been the qualitative nature of the data collected, which confined me to establishing my arguments on logical and historical grounds but not on statistically representative ones. Testing these issues through statistical methods would require extensive data collection, of the type discussed at the end of Section 2, which is notoriously difficult for the automotive sector, particularly in China.

Limitations on data collection also pertain to the small, and to a certain extent, asymmetrical sample of interviews (in particular the larger amount of interviews with management in China) that was partly a result of the sensitivity of the research topic and the limited accessibility of the industrial sector. Another factor was the comparative cross-country framework of this study, which limited the amount of time that could be spent conducting fieldwork on each of these cases. However, in my view this disadvantage is made up for by the increase in analytical depth and richness that results from the comparison made. To my knowledge, no comparative study on working conditions and worker agency in the global automotive industry in China and Mexico – and Latin America and Asia more generally – exists so far. In order to move beyond single-country studies and their tendency to stress the uniqueness of their respective case, these limitations were consciously taken into account and tolerated. Clearly, future research could aim at an extension of the empirical basis for this study, and increase the number of comparisons made in a systematic manner.

In chapter 6 I touched upon the relationship between worker agency in the machine-building industry, design processes of particular machinery, and their social effects in the production processes where they are applied – for example in the automotive industry. This issue was necessarily beyond the scope of this study, but would make for a worthwhile investigation in the future.

Lastly, readers might argue that the role of the state *vis-à-vis* capital and labour, for example as a facilitator of the general institutional matrix for capital accumulation, industrial policy and labour laws, has not been systematically explored or compared in its country-specific differences. In this study I have consciously given priority to an analysis of the agency of workers, managers and union leaders to address the research gap of their interactions in broader discourses on industrial policy, varieties of capitalism, WST and structuralist versions of Marxism. Future research to elaborate on these relationships might arguably be most productive, not in the area of theoretical refinement, but in a closer “worker-centric” historical and empirical revision of cases that are results of processes that have excluded labour as an explanatory factor.

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Appendices

Appendix I: Trade Relations in the Automotive Industry of China and Mexico

The “rise of China” has caused debate amongst Mexican – and more generally Latin American – observers about whether new opportunities for bilateral trade could outweigh the potential pressure on domestic producers stemming from cheap imports and competition over Mexico’s traditional export markets (e.g. Dussel Peters 2005; Dussel Peters & Trápaga Delfín 2007; Dussel Peters et al. 2008). This question has more specifically concerned the automotive sector as one of Mexico’s largest export industries (e.g. Juárez Núñez 2005b; Álvarez Medina 2007; Rueda Peiro 2011; Gachuz 2011; Dussel Peters 2012). Here, we are interested in trading patterns not for the question of competitiveness in its own right, but mainly for the reason that the “China threat” is a trump card played by management to increase its leverage by pitching different locations against each other in negotiations over new projects (Juárez Núñez 2006). As the general secretary of the Mexican Company X union between 2000 and 2008 remarked:

“All the years, every year at the time of negotiations – publicly through the media and internally in the negotiations – Company X threatens that production might go somewhere else, not only China, but also Slovakia, Poland, Argentina. There is always the threat of losing production, but there is also the threat of not attracting new projects. [...] So you always have to consider that although this is a fight amongst equals, the work should go to Mexico instead of going to China. I think this has a huge impact on you having to engage in negotiations over flexibility, respectively negotiations convenient to the enterprise.”³⁸⁵

The following section will thus briefly assess how real this threat actually is on the basis of data on international trade.

Since the mid-1990s both Mexico and China have become increasingly export dependent (Figure 14), up to the degree that the Chinese government has

³⁸⁵ Interview Alejandro, general secretary Company X union in Mexico (2000-2008).

announced it will “rebalance” growth through increasing domestic consumption and welfare, industrial upgrading, R&D etc. (officially announced with the eleventh five year plan and reiterated with the following five year plans, including the most recent thirteenth for 2016-2020; Huang 2015). The picture for the automotive industry is however rather different, with China running a substantial trade deficit (Figure 5), which is however offset by exports from other (light industrial) industries and sectors. Mexico on the other hand is a net exporter of finished vehicles, which in the majority are exported to North America. Nearly 70% of passenger cars made in Mexico and over 90% of autoparts and components were exported to the US in 2013 (Table 8 and Table 9). The vulnerability of Mexico’s automotive industry is therefore its dependence on the US market, which not only implies that demand crises in the US have grave repercussions on the sector in Mexico – as seen in 2008-2009 – but also that competitive pressure from foreign car manufacturers mainly manifests itself as competition over US market shares. As passenger car imports from China go to different and dispersed target markets, in this market segment the “China threat” is virtually negligible (Table 8). For the time being, China mainly exports domestic brand cars to developing countries, because these products, although cheap, cannot (yet) compete with European-, US- or Japanese-made cars in terms of quality.

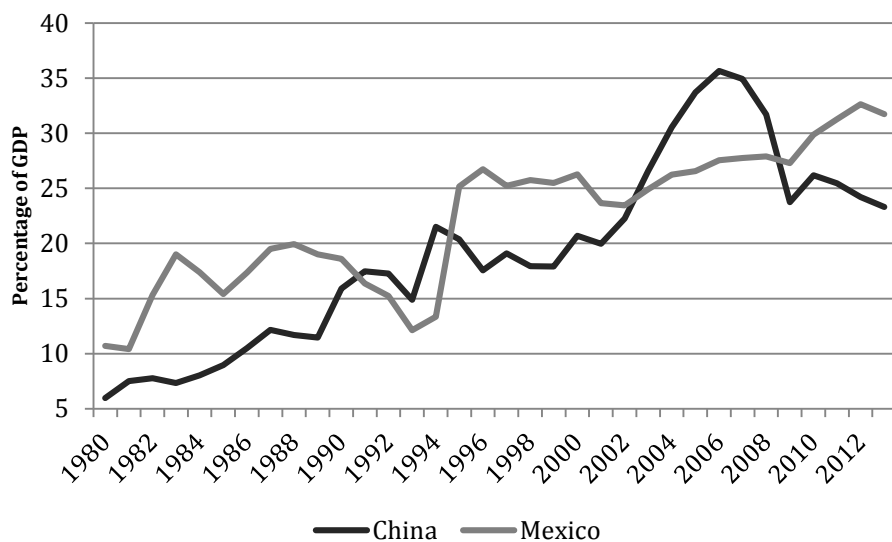


Figure 14: Exports as percentage of GDP, China and Mexico
 Source: World Development Indicators

China				Mexico		
Rank	Destination	Value (m USD)	Percentage	Destination	Value (m USD)	Percentage
1.	Russia	639.44	15.6	USA	22,148.57	69.1
2.	Iran	408.78	10.0	Germany	2,072.85	6.5
3.	Chile	404.60	9.9	Brazil	1,954.38	6.1
4.	Algeria	245.69	6.0	China	1,386.16	4.6
5.	Ukraine	165.81	4.1	Canada	1,374.82	4.3
6.	Colombia	162.98	4.0	Argentina	801.38	2.5
7.	Peru	157.44	3.8	Italy	219.69	0.7
8.	Uruguay	150.82	3.7	Russia	174.00	0.5
9.	Egypt	123.145	3.0	Colombia	162.98	0.5
10.	Iraq	No data	No data	Japan	160.04	0.5
Total	World	4,090.20	100	World	32,046.68	100

Table 8: China and Mexico's top ten export markets for passenger cars 2013

Source: CAAM 2014, INEGI, OECD.Stat³⁸⁶

Exports				Imports		
Rank	Destination	Value (m USD)	Percentage	Origin	Value (m USD)	Percentage
1.	USA	52,031	90.1	USA	20,872	54.6
2.	Canada	1,547	2.7	China	4,488	11.7
3.	Brazil	825	1.4	Japan	2,317	6.1
4.	Germany	398	0.7	Canada	1,774	4.6
5.	China	388	0.7	Germany	1,737	4.5
6.	UK	236	0.4	S. Korea	1,713	4.3
7.	Japan	185	0.3	Brazil	606	1.6
8.	S. Korea	184	0.3	Spain	539	1.4
9.	Thailand	148	0.3	Nicaragua	519	1.3
10.	Nicaragua	147	0.3	Taiwan	516	1.1
Total	World	57,833	100	World	38,897	100

Table 9: Mexico, foreign trade in autoparts 2013

Source: INA 2014

However, competitive pressure on the Mexican autoparts industry is indeed increasing, as Chinese exports of parts and components to the US have grown steadily in recent years – although much more slowly than exports from Mexico (Figure 15).

³⁸⁶ Ranking for the Chinese top export markets is based on number of units, following CAAM 2014. In order to compare data between the two cases, the value of trade volumes in passenger cars is based on OECD.Stat.

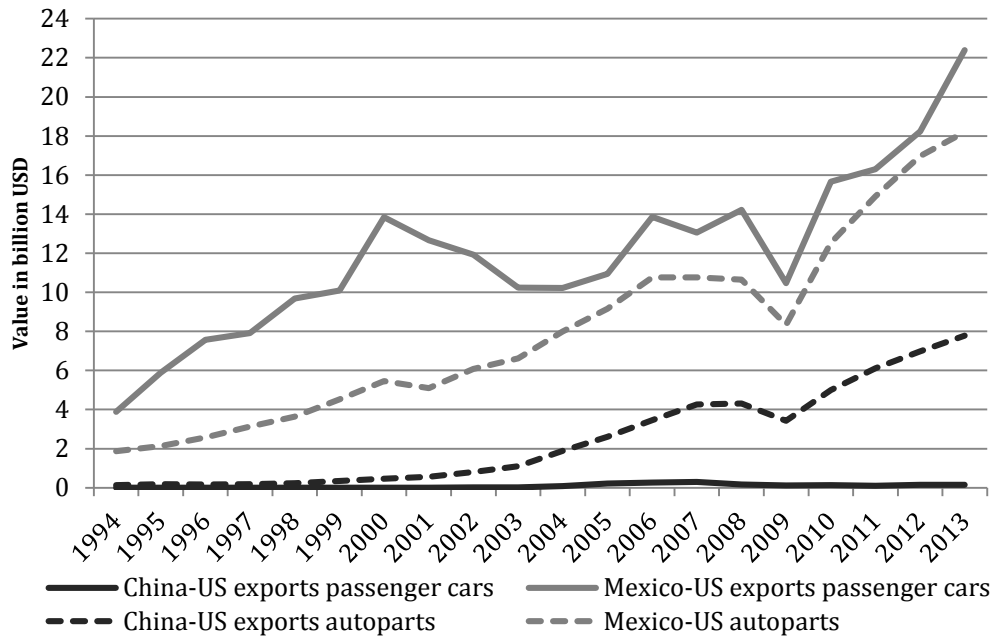


Figure 15: China and Mexico automotive exports to the US

Source: UN Comtrade

At the same time, China has become an increasingly important trading partner for Mexico, and a pattern of growing exports in finished vehicles from Mexico and increasing net-imports of Chinese autoparts is emerging (Table 9 and Figure 16).

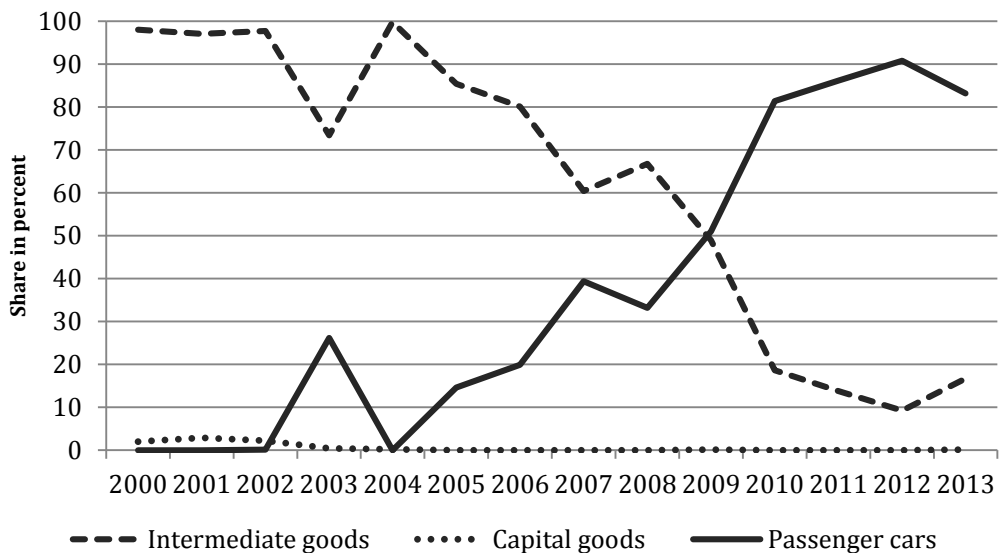


Figure 16: Composition of automobile exports from Mexico to China

Source: OECD Stats

Exports of autoparts to China have remained relatively stagnant, but the value of exports in finished vehicles has increased sharply after the 2008 crisis (Figure 17), which is most likely due to the devaluation of the Mexican peso in the financial crisis and its sluggish recovery (Graham & O’Boyle 2011).

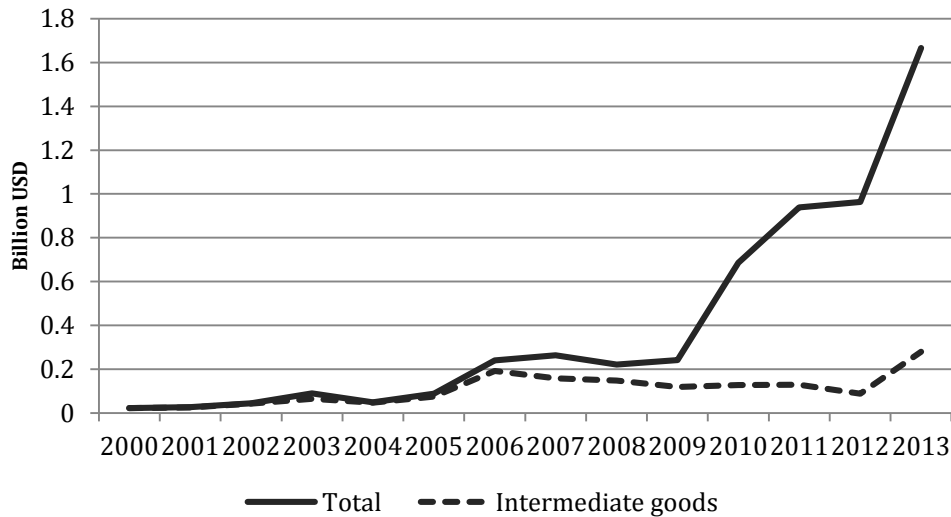


Figure 17: Value of Mexican automobile exports to China

Source: INEGI 2014, HKTDC

More generally speaking, it is important to recall that global car manufacturers do for the largest part not export finished vehicles from China – and that as a consequence in 2013 the overall volume of China’s exports in passenger cars was eight times smaller than Mexico’s (Table 8). Sales figures for Company X illustrate this fact very well: In 2012 Company X had an output of 2,642,789 domestic market-designated cars at its Chinese ventures (3,134,665 in 2013). In Mexico 604,508 cars were produced, of which 520,438 or 86.1% were exported.³⁸⁷ The main reason for the limited exports from China is of course its huge domestic market potential, but it is also linked to two other factors: on the one hand, most global car manufacturers operating in China do not possess the necessary export licenses (for the time being); on the other hand, the industrial relations at Company X in Germany might forestall an increase in exports from China, in order to limit competition with German factories. A senior manager of Company X explained the implications of this arrangement:

³⁸⁷ Company X annual report 2013

“No there is no plan to export, and that also has political reasons. The works council in Germany, for example, does not want a car to be exported from China to Germany, or even to Australia. Because where does the car for Australia come from? From Germany. So, that is the reason – and because the [Chinese] market still allows for it. [...] The cars only have licenses for sales in China; and as long as we can sell them here, there is simply no need to export. If the need to export from China did actually arise, I have no idea how the negotiation process would turn out. [...] There would be a real struggle between different locations, and one would say: ‘You have never had the license to export from China, now see to it that you fix your problems.’”³⁸⁸

To sum up, the competitive pressure for Mexico stemming from automotive production in China is for the time being negligible as far as it concerns finished vehicles³⁸⁹ – on the contrary, China is emerging as a new target market for cars made in Mexico. However, this trend is reversed for the autoparts sector. Not only is competitive pressure on Mexico increasing with Chinese exports to the US (Figure 15), but Mexico has also become a net-importer of autoparts from China (Table 9). The “China threat” to terminal car assemblers therefore has to be seen more as a tactical weapon in the hands of management than a reality – although a different picture emerges for the autoparts sector.

³⁸⁸ Interview (2) senior manager Pongrac

³⁸⁹ Only very recently has a US American car manufacturer announced the intention to export its China-made cars not only to emerging markets but also to the US – which caused protest by the United Automobile Workers union (Reuters 2013; Bomey 2015).

Appendix II: A Brief Note on Corporate Social Responsibility

They even got a prize for being a ‘Socially Responsible Enterprise.’ They still have to explain to me what that is supposed to mean, ‘socially responsible’...
– Worker Santiago at Company X in Mexico

In 2002 Company X signed a document with the International Metalworkers’ Federation and the Company Group’s Global Works Council, entitled the *Declaration on Social Rights and Industrial Relationships at Company X*. This document stipulated the Company X Group’s commitment to local minimum labour standards as well as to the ILO core conventions on freedom of association; discrimination; and forced and child labour (Company X 2002). The Declaration has been followed up by charters on labour relations (Company X 2009), temporary work, i.e. contract workers (Company X 2012), and vocational training (Company X 2015). Although with its European and Global Works Councils Company X has international bodies of workers representations involved in negotiating and monitoring these charters – something that sets them apart from CSR initiatives and codes of conduct at most other global car manufacturers – they leave a lot of room to manoeuvre in adaptation to local conditions and standards, establishing mostly suggestions and non-binding benchmarks.

Despite Company X’s public relations efforts to portray an image of sustainability and responsibility (e.g. *Automobilwoche* edition 2013), the efforts undertaken so far are limited to its direct subsidiaries – with considerable (downwards) deviation in the Chinese, Russian and US-American cases.³⁹⁰ The effects on the supply chain remain rhetorical and factually negligible. The 2002 *Declaration* merely “encourages its contractors to take this declaration into account in their

³⁹⁰ The document that goes furthest in its binding prescriptions is arguably the *Charter on labour relations*. It lays out details of the right of labour representations affiliated to the European or Global Works Council to participate in and co-determine managerial decision making, in principle translating industrial relations at the German main plant to the global level. The aim is to “enable stable labour relations” through “the spirit of co-operative conflict management” (Company X 2009). The actual form and content of labour-management relations are however to be determined by agreements between the respective local parties, meaning that company-wide standards find their limits in the actual application on the ground – which has been visible most clearly in the Chinese, Russian and US ventures (on the latter, see Eidelson 2015).

own respective corporate policy” (Company X 2002). Debates on CSR and codes of conduct on social standards along the Company X supply chain (e.g. Koplín et al. 2007; Beske et al. 2008; and for the Mexican case Bensusán & Tilly 2010), can be cut off quite shortly, simply because the initial approval and later reviews of suppliers do not require an assessment of social and working conditions. Contrary to rhetorical commitments of Company X and the ILO that are also replicated in the academic literature (Bensusán & Tilly 2010, p.65) there are no legal regulations that would bind Company X to do so, nor does the *Declaration* establish any hard criteria for the choice of suppliers (e.g. compliance with local labour standards).

Appendix III: List of interviews

Mexico

Code	Position (and age)	Duration of interview	Date
David	Worker at Company X, late 40s	1.09h	Oct 15, 2012
Focus group interview Miguel, Santiago, Fernando	Workers at Company X	1.32h	Oct 21, 2012
Miguel	Workers at Company X, early 40s	1.17h	Oct 24, 2012
Santiago	Worker at Company X, early 50s	2.14h	Oct 26, 2012
Alejandro	General Secretary at the 2000-2008 Company X union, mid 50s	1.05h	Nov 12, 2012
Arturo	Worker at Company X, mid 50s	1.55h	Nov 13, 2012
Joel	Human Resource manager at Company X	52h	Nov 19, 2012
Daniel	Worker at Company X, early 50s	2.26h	Nov 22, 2012
Fernando	Worker at Company X, early 50s	1.46h	Nov 22, 2012
Ricardo	Worker at Company X, early 40s	1h	Nov 23, 2012
Jesús	Worker at Company X, late 50s	1.39h	Dec 5, 2012
Rodrigo	Worker at Company X, late 40s	2.08h	Dec 5, 2012
Maria	Female supply chain worker, late 40s	42min	Dec 8, 2012

Rafael	Supply chain worker, mid 40s	1.21h	Dec 8, 2012
Huberto Juárez- Núñez	University professor	1.12h	Dec 12, 2012
Rosa	Local political activist, late 30s	1h	Dec 18, 2012
Carlos and Oscar	Members of the 2012-2016 union leadership, mid 40s and early 50s	48min	Jan 19, 2012
Lourdes Alvarez	University professor	1.18h	Jan 22, 2012

China

Code	Position	Duration	Date
Pietsch	German senior manager at Company X/JV2	27min; 1h	June 8, 2013; July 30 2013
Wendler	German senior manager at Company X/JV2	1.11h	June 8, 2013
Bohnert	German senior manager at Company X/JV2	34min	Jun 8, 2013
Chairman Qiao	Chairman of the enterprise union at Company X/JV2's Western plant	1.36h	June 8, 2013
Li, Wang, Zhang	Chinese HR managers at Company X/JV2's Western plant	21min	June 8, 2013
Liang	Worker at Company X/JV2	47min	June 8, 2013
Sheng	Worker and Union Chairman at Chinaparts 3	2.16h	June 14, 2013
Hensch	German white-collar worker at Company X/JV2	1.58h; 2.47h	July 3, 2013; Sept 9, 2013
Government official Nanhai Investment Promotion Bureau	Official at the Nanhai Investment Promotion Bureau	1.45h	July 19, 2013

Qian	Teacher at a Polytechnic College in South China	1.24h	July 20, 2013
Chairman Deng	Ex-chairman of the provincial ACFTU in South China	3.03h	July 25, 2013
Shao	Ex-worker at the Honda gearbox factory in Nanhai, early 20s	1.11h	July 26, 2013
Chairman Li	Ex-chairman of the city ACFTU in South China	1.50h	July 27, 2013
Vogt	German senior manager at Company X/JV2	1.07h	July 30, 2013
Pongrac	German senior manager at Company X/JV2	43min; 1.50h; 1.38h	July 30, 2013; July 31, 2013
Chairman Peng	Chairman of the enterprise union at Company X/JV2's main plant	43min	July 31, 2013
Schütte	German senior manager at Company X/JV2	1.03h	Aug 1, 2013
Bo and Peng	Chinese managers at Company X's China Group	36min	Aug 3, 2013
Rordorf	German senior manager at Company X/JV1	37min	Aug 13, 2013
Näher	German senior manager at Company X/JV1	42min	Aug 13, 2013
Lao	Chinese manager at Company X/JV1	27min	Aug 13, 2013
Lu	Worker at Company X/JV1	1.22h	Aug 14, 2013
Zhang	Worker at Company X/JV1	1.30h	Aug 15, 2013
Wang and Zhao	Dispatch migrant workers at Chinaparts 1	1.25h	Aug 16, 2013
Xun and Liu	Migrant dispatch workers at Company X/JV1	1.35h	Aug 17, 2013
Ping	Worker at Company X/JV1	1.58h	Aug 18, 2013
Liao	Dispatch worker at Company X/JV1	1.13h	Aug 19, 2013

Lun	Female worker at Company X/JV1	2.10h	Aug 21, 2013
Lai	Worker and member of union leadership at Chinaparts 2	1.58h	Sept 5, 2013