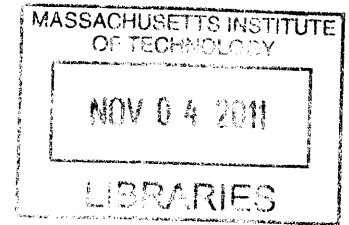


**Worker Rights Protection in Mexico's Silicon Valley:
Confronting Low-Road Labor Practices in High-Tech Manufacturing through
Antagonistic Collaboration**

By

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B.A. International Affairs
James Madison University, 2004



ARCHIVES

Submitted to the Department of Urban Studies and Planning
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ABSTRACT

Front and center against a backdrop of globalization and the ensuing outsourcing of manufacturing activities to low-income countries, has been a growing interest from scholars regarding the protection of labor rights and the means for improving labor conditions in the developing world. In the past half-decade, scholars have paid greater attention to these issues in the electronics manufacturing industry, particularly in response to recent publications highlighting its onerous working conditions around the globe. Yet, research regarding how specific actors contribute to improving working conditions in this sector remains largely absent. This thesis contributes to these scholarly discussions by analyzing the work of a local NGO, the *Centro de Reflexión y Acción Laboral* (CEREAL-GDL), which has been working to improve working conditions in the electronics manufacturing cluster known as Mexico's Silicon Valley located in Guadalajara for over a decade. Specifically, this thesis analyzes how the organization has evolved its activities over time and the local and international relationships it has developed to protect worker labor rights and promote working condition improvements in this sector. This thesis argues that the organization does not fold neatly into the molds within which scholars typically place and analyze the efforts of developing-country labor rights NGOs. These molds include participation in transnational advocacy and the monitoring of private codes of conduct (COC). While notably CEREAL-GDL was an indirect, yet central, actor in the birth of transnational advocacy related to the global electronics industry, which consequently led to global electronics industry firms establishing the first industry-wide COC, its efforts are not limited to participating in transnational advocacy or related to direct monitoring of firm adherence to the COC. Moreover, in addition to confrontational strategies such as organizing workers, CEREAL-GDL participates in an institutionalized direct dialogue and labor violations remediation process developed through antagonistic collaboration with electronics firms in Guadalajara. Ultimately, by analyzing the organization's activities and the interrelated web of actors and the context in which it operates, this thesis explores how and why there have been some working condition improvements, and whether the forged relationships among actors in Mexico's Silicon Valley may lead to future improvements, and, if so, how.

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List of Acronyms

CBA	Collective Bargaining Agreement
CADELEC	<i>Cadena Productiva de la Electrónica</i> (Electronics Production Chain)
CAFOD	Catholic Agency for Overseas Development
CANIETI	<i>Cámara Nacional de la Industria Electrónica, Telecomunicaciones, y Tecnologías de la Información</i> (Electronics, Telecommunications, and Informatics Industry National Chamber)
CAT	<i>Centro de Apoyo al Trabajador</i> (Center for Support to Workers)
CEPE	<i>Consejo Estatal de Promoción Económica</i> (State Board for Economic Development for the state of Jalisco)
CEREAL-DF	<i>Centro de Reflexión y Acción Laboral</i> (Center for Reflection and Action on Labor Issues)
CEREAL-GDL	<i>Centro de Reflexión y Acción Laboral: Guadalajara</i> (Center for Reflection and Action on Labor Issues: Guadalajara)
CM	Contract Manufacturer
COC	Private Voluntary Codes of Conduct
CTIE	<i>Coalición Nacional de Trabajadores de la Industria Electrónica</i> (National Coalition of Electronics Industry Workers)
EI	Electronics Industry
EICC	Electronics Industry Citizenship Coalition
EMS	Equipment Manufacturing Services
EOJ	<i>Equipo Obrero de Jesuitas</i> (Jesuit Worker Team)
EPC	Employer Protection Contract
FCyE	<i>Fomento Cultural y Educativo</i> (Cultural and Educational Promotion)
FDI	Foreign Direct Investment
F-JECA	<i>Juntas Especiales de Conciliación y Arbitraje</i> (Special Federal Labor Boards)
FOA	Freedom of Association
GVC	Global Value Chain
HP	Hewlett Packard
IBM	International Business Machines
JCA	<i>Junta de Conciliación y Arbitraje</i> (Labor Board)
JDM	Joint Design Manufacturing
JLCA	<i>Junta Local de Conciliación y Arbitraje</i> (State Labor Board)
JFCA	<i>Junta Federal de Conciliación y Arbitraje</i> (Federal Labor Board)
LFT	<i>Ley Federal de Trabajo</i> (Federal Labor Law)
NAFTA	North American Free Trade Agreement
NGO	Non-Governmental Organization
ODM	Original Design Manufacturer
OEM	Original Equipment Manufacturer
PAN	<i>Partido de Acción Nacional</i> (National Action Party)
PRD	<i>Partido de la Revolución Democrática</i> (Democratic Revolution Party)
PRI	<i>Partido de la Revolución Institucional</i> (Institutional Revolutionary Party)
SEIJAL	<i>Sistema Estatal de Información Jalisco</i> (Jalisco State Information System)

S-JECA	<i>Juntas Especiales de Conciliación y Arbitraje</i> (Special State Labor Boards)
SEPROE	<i>Secretaría de Promoción Económica</i> (Jalisco Ministry of Economic Promotion)
SOMO	Centre for Research on Multinational Corporations
STPS	<i>Secretaría de Trabajo y Previsión Social</i> (Ministry of Work and Social Welfare)
UNT	<i>Unión Nacional de Trabajadores</i> (National Union of Workers)
USD	United States Dollar
ZMG	<i>Zona Metropolitana de Guadalajara</i> (Guadalajara Metropolitan Zone)

Chapter 1: Introduction

Front and center against a backdrop of globalization and the ensuing outsourcing of manufacturing activities to low-income countries, has been a growing interest from scholars regarding the protection of labor rights and the means for improving working conditions in the developing world. For over two decades scholars have amply studied these issues in low-tech industries such as apparel and agricultural production. Until recently, the high-tech electronics manufacturing industry has been perceived “as a relatively ‘clean’ industry and has consequently been untouched by criticism” (ILO 2007, 116) or scholarly inquiry related to working conditions (exceptions include Klein 2002). In the past half-decade, scholars have paid greater attention to this industry, particularly in response to publications highlighting its onerous working conditions around the globe (see for example: CAFOD 2004; Good Electronics 2009; Schipper et al. 2005). Yet, research regarding how specific actors contribute to improving working conditions in this sector remains absent (exceptions include Locke et al., forthcoming). As related to actors, contemporary scholarly inquiry in the field of labor rights has generally focused on the role of state regulation, private voluntary codes of conduct, and increasingly non-governmental organizations (NGOs) in protecting labor rights and improving working conditions.

This thesis contributes to these scholarly discussions by analyzing the work of a local NGO, the *Centro de Reflexión y Acción Laboral* (Center for Reflection and Action on Labor Issues: Guadalajara—CEREAL-GDL), which has been working to improve working conditions in the electronics manufacturing cluster located in Guadalajara, Mexico for over a decade. Specifically, the thesis analyzes how the organization has evolved its activities over time and the interrelated local and international relationships it has developed to protect worker rights and promote working condition improvements in what is known today as Mexico’s Silicon Valley. The research demonstrates that the organization does not fold neatly into the molds within which scholars typically place and analyze the efforts of local, low-income country labor rights NGOs. These molds include participation in transnational advocacy and monitoring firm adherence to private codes of conduct. While notably CEREAL-GDL was an indirect, yet central, actor in the birth of transnational advocacy related to the global electronics industry, which consequently led to global electronics industry firms establishing the first industry-wide private code of conduct, its efforts in Guadalajara are not limited to participating in transnational advocacy or related to direct monitoring of firm adherence to the code of conduct. Moreover, in addition to confrontational strategies such as organizing and mobilizing workers, CEREAL-GDL participates in an institutionalized direct dialogue and labor violations remediation process developed through antagonistic collaboration with electronics firms in Guadalajara. Ultimately, by analyzing the organization’s activities and the interrelated web of actors and the context in which it operates, this thesis explores how and why there have been some working condition improvements in electronics manufacturing in Guadalajara, and whether the forged relationships among actors in Mexico’s Silicon Valley may lead to future improvements, and, if so, how.

As a means for establishing a framework for this thesis, as well as to highlight key findings, the remainder of the introduction provides an overview of: the characteristics and reasons for lackluster government labor rights protection in Mexico; key dynamics of electronics manufacturing in Guadalajara that result in low-road labor practices; and, within the context of contemporary scholarly analysis regarding labor rights NGOs, the role of CEREAL-GDL in

fostering working condition improvements through confrontation and antagonistic collaboration with electronics industry firms.

“Thinned” Worker Protection in Mexico

In the context of globalization and adherence to neo-liberal economic paradigms, since the 1980s low-income countries have by and large subscribed to trade-liberalization policies that focus on export-oriented economic growth fueled by foreign direct investment (FDI). While low-income countries may have strong labor protection legal frameworks, FDI-led development strategies “thin” the government’s willingness to enforce labor laws (Seidman 2009; see also Elliot et al. 2003; Baccaro 2001). For example, governments may waive certain labor laws or turn a blind-eye to known labor rights violations (Tendler 2002) and also repress trade union power (Seidman 2009) as a means to maintain flexible and stable labor relations that attract and anchor footloose foreign investors.

The terms labor flexibility and labor stability are utilized frequently throughout the thesis and are defined as follows: Labor flexibility refers to the ability of firms to have ample discretion over worker hiring and firing, and working hours.¹ A labor market with low flexibility restricts firms’ discretion regarding employment decisions through enforced labor regulations. For example, in a low flexibility context, collective bargaining agreements with trade unions or enforced labor law restrict which workers a firm hires, what hours they work, as well as when and under what conditions they are legally allowed to fire workers. Labor stability refers to labor relations that restrict worker strikes or other such potential disruptions to firm operations.

Particularly since the 1980s, the Mexican government’s role in protecting workers’ labor rights epitomizes the definition of a “thinned state.” Though Mexico’s labor rights are, on paper, some of the most progressive in the world (Cook 2007; Bensusán 2000; Bensusán 2006), the government maintains a limited willingness and ability to enforce national labor laws in order to attract FDI and maintain labor flexibility and stability (Bensusán 2000; Bensusán 2006; Cook 2007). For example, the government has facilitated the sterilization of trade union movements that represent workers’ interests. Specifically, the Mexican government promoted and today turns a blind eye to collective bargaining agreements that protect employers instead of workers. These agreements, known as employer protection contracts, constitute an estimated 90 percent of all collective bargaining agreements in Mexico (Bouzas Ortiz 2006). Further, the government tolerates illegal labor practices such as hiring discrimination, wrongful termination, and short-term contracts, utilized by employment agencies, which are increasingly subcontracted by firms to indirectly hire workers as a means to achieve greater labor flexibility and stability.

The Mexican government further facilitates its lackluster protection of labor rights through its discretionary implementation of labor law through omnipotent labor boards. Labor boards in Mexico are controlled by the executive branch of government without judicial

¹ For a detailed discussion and expanded definition of labor flexibility, see Cook 2007, 43-46.

² The other organization, which is based in Mexico City and coined the name Center for Reflection and Action on Labor Rights (*Centro de Reflexión y Acción Laboral*—CEREAL-DF), was established under the umbrella of the Jesuit institution in 1985. CEREAL-GDL borrowed the name, tweaking it by adding “Guadalajara” when it was incorporated as an initiative of the Jesuit institution.

³ The term “antagonistic collaboration” is inspired by the concept of antagonistic “cooperation” developed by Sanyal (1991).

oversight and are infamous for being the backdrop to collusive relationships between the State, corporatist trade unions and companies (Bensusán 2000; Bensusán 2006; Cook 2007; Gabayet Ortega 2006). For example, labor boards typically cite minute technicalities to block worker strikes, as well as to deny the registration of trade unions that have a genuine concern for representing workers' interests and in turn challenge corporatist trade unions engaged in collusive relationships with the government and companies. Meanwhile, labor boards claim a limited ability to take action against the prevalent phenomenon of trade unions that represent employer interest, thereby violating the spirit of Mexico's Constitution and labor law. In all, Mexico's "thinned" worker rights protection enables low-road labor practices that neglect worker interests and working conditions in industries across the country, none the least the electronics manufacturing industry.

Low-Road Labor Practices in High-Tech Manufacturing in Mexico's Silicon Valley

In direct response to Mexico's transition to trade-liberalization and export-oriented economic growth, electronics manufacturing companies flocked to set up subsidiaries in the country. The most important and renowned electronics manufacturing cluster in the country is located in Guadalajara, Mexico's second largest city and since the 1990s known as Mexico's Silicon Valley. While the term "Silicon Valley" conjures visions of high-technology research and design firms co-locating to produce "the most diverse and unimaginable technological marvels" (Palacios Lara 1992, 48), the reality is that Mexico's Silicon Valley is by and large an enclave composed of foreign multinational firms that assemble electronics for export (Gallagher et al. 2007). In line with electronics industry global trends, brand name firms have outsourced their manufacturing to contract manufacturing (CM) firms, which are the principal employers in the Guadalajara cluster. Two world-class brand name firms Hewlett Packard and IBM and a half-dozen of the world's leading contract manufacturers (CMs) anchor the Guadalajara cluster. CMs produce not just for brand name firms with subsidiaries in Guadalajara, but also brand name firms, such as RIM (the producer of Blackberry cell phones), that do not have subsidiaries in Mexico.

Given low profit margins and rapidly changing production demands, CM workers labor under onerous conditions that include: short term contracts and employment uncertainty, low wages, long and irregular working hours, lack of freedom of association, and hiring and workplace discrimination (CEREAL 2006; Good Electronics 2009; ILO 2007; Schipper et al. 2005). Mexico's lackluster regulation of worker protection facilitates these low-road labor practices. Indeed, CM firms rely on employment agencies to hire workers on short-term contracts, are signatories to protection contracts, and have a cadre of lawyers that make them, in the words of labor lawyers that represent workers, "untouchable" in labor violation claims made against them through labor boards (Gabayet Ortega 2006). In this context, workers have lost a sense of collective action. Many workers, for example, do not even know what the term 'trade union' means, and work to survive from one short-term contract to the next. Moreover, workers are by and large afraid to speak up against labor violations for fear of firm reprisal, which can easily take the form of a worker's contract not being renewed.

Against this backdrop, it is surprising that over the past half-decade there have been working condition improvements in Mexico's Silicon Valley. Notably, hiring discrimination practices such as pregnancy tests have decreased by over 65 percent (CEREAL 2009). Further,

electronics industry firms have engaged in an institutionalized dialogue to discuss and remediate labor rights violations with the local labor rights organization CEREAL-GDL, as well as, in what amounts to private self-regulation, launching a certification scheme that rates employment agencies on their labor practices. Why and how did these improvements occur, and why are firms, seemingly against their interests, remediating cases directly with a labor rights organization and regulating employment agencies? The work of CEREAL-GDL to advocate for and pressure for working condition improvements has been a significant direct and indirect cause for these phenomena.

Challenging Low-Road Labor Practices through Confrontation and Antagonistic Collaboration

Over the past two decades, scholarly interest has amplified regarding the role NGOs in regard to the promotion and protection of labor rights (Baccaro 2001; Heery et al. 2011; Osterman 2006). As related specifically to global value chain manufacturing, along a generalized continuum of considerations, the role of NGOs can be characterized as follows: at one end of the spectrum scholars argue that NGOs are inefficient and disrupt an unregulated free-market's ability to slowly, but naturally, ratchet up labor protections (see for example: Crook 2001; Trebilcock 2005). On the other end, scholars posit that NGOs serve a critical role in improving work conditions and adherence to labor rights as *de facto* monitors and regulators in a context where States do not adequately perform their regulatory and trade unions do not serve their worker protection functions (Santoro 2003). Indeed, as Santoro (2003) writes in regard to labor rights protection: "NGOs by default, are the primary channel for exerting pressure on [multinational corporations] to meet this moral obligation" (102).

Beyond arguments between scholars at these opposing extremes and those in between, the fact is that NGOs are increasingly playing a role in labor rights protection. It is important to make a distinction between two categories of labor rights NGOs: international and local. In accordance with what Seidman (2009) calls a "boomerang approach," international labor rights NGOs typically operate in high-income countries and focus on exerting pressure on high and low-income governments, as well as public opinion to push multinational corporations to make changes to their labor practices. The means for achieving this aim include building transnational networks with local, in-country NGOs, which collect and report information regarding firm malfeasance. Within this framework, contemporary scholars typically discuss the role of international and local labor rights NGOs in two ways. First, the role of NGOs is discussed in relation to their shaping and monitoring adherence to private codes of conduct (Bartley 2007; Esbenschade 2004; O'Rourke 2003; Seidman 2009). Second, there is ample discussion of the role of NGO participation in transnational advocacy networks epitomized by local NGOs receiving financial support from international NGOs (Fox 2004; Seidman 2009; Bandy 2004; Elliott et al. 2003). CEREAL-GDL's activities do not fold neatly into just one of these categories, nor are its activities limited to these areas of work. The following paragraphs discuss the structure of and diversity of the organization's activities.

First and foremost, CEREAL-GDL is one of two labor rights organizations funded by the Jesuit umbrella organization *Fomento Cultural y Educativo* (Cultural and Educational Promotion—FCyE), which financially supports a handful of initiatives that educate and empower

underrepresented populations in Mexico. Interestingly, though they share a common name² and are both initiatives of FCyE, there is an intellectual schism between the two labor rights organizations. Specifically, the original labor rights organization, CEREAL-DF, which focuses its efforts largely on democratizing trade unions in national industries in Mexico, does not consider CEREAL-GDL's sole focus on the electronics industry strategic given the footloose nature of multinational firms in Mexico. Nonetheless, FCyE supports CEREAL-GDL's focus on the electronics industry namely because the latter has sufficiently demonstrated through research that workers in this industry are highly vulnerable to exacting working conditions.

Under the umbrella of FCyE, CEREAL-GDL operates from what can be called a “safe space” that provides the organization financial stability, protection against criticisms and harassment faced by other labor rights organizations in Mexico, and access to electronics industry company managers. Specifically, it is common for local labor rights organizations to struggle to identify stable sources of funding and regularly face harassment from firms and the government. Linked to the Jesuit institution, which is highly respected in Mexico and especially in Guadalajara, criticisms and harassment of CEREAL-GDL and its staff would be considered a direct attack on the Jesuit institution. This reality hampers would be critics from overt criticism of the organization. Also, in some cases, firm managers have agreed to meet with and discuss labor rights issues with CEREAL-GDL because of their personal ties to the Jesuit institution. For example, some managers studied at Jesuit secondary and higher education schools. Overall, the “safe space” from which CEREAL-GDL operates facilitates the organization's ability to conduct long-term initiatives and avoid challenges faced by other labor rights organizations in Mexico.

CEREAL-GDL's activities can be categorized into four general areas: worker education, organization and empowerment; legal representation of workers in claims against firms; participation in transnational advocacy; and an institutionalized direct dialogue with firms. The organization has evolved these areas of work since its inception 15 years ago; each responds to the dynamics of electronics manufacturing in Guadalajara. For example, while CEREAL-GDL's primary focus at the time of its establishment and to date is worker education, organization and empowerment, the organization has calibrated its pedagogical methods to reflect a generalized lack of collective cohesiveness among workers. For example, the organization's training materials focus on how workers can uphold their individual, not collective, rights. Similarly, in the early 2000s the organization added pro-bono legal representation of workers to its repertoire to help ensure adequate representation for workers in labor disputes filed against electronics industry firms at labor boards. Before CEREAL-GDL engaged in this activity, workers were forced to rely on private or even unlicensed lawyers to navigate the complex State labor dispute mechanism that in Guadalajara can take upwards of two years to resolve a case. It is common for private lawyers to abandon cases that take too long as they earn a percentage of the final amount won by the worker. CEREAL-GDL typically represents individual worker claims since drumming up collective support from co-workers to file a joint suit against a company is difficult given worker concerns of firm reprisal.

² The other organization, which is based in Mexico City and coined the name Center for Reflection and Action on Labor Rights (*Centro de Reflexión y Acción Laboral*—CEREAL-DF), was established under the umbrella of the Jesuit institution in 1985. CEREAL-GDL borrowed the name, tweaking it by adding “Guadalajara” when it was incorporated as an initiative of the Jesuit institution.

While it is difficult to organize worker collective action, since 2007 CEREAL-GDL has played an instrumental role in the emergence of a coalition of electronics industry workers. The *Coalición Nacional de Trabajadores y Ex-trabajadores de la Industria Electrónica* (National Coalition of Workers and Former Workers of the Electronics Industry—CTIE or Coalition) conducts activities ranging from demonstrations outside of electronics manufacturing firms in Guadalajara to dissemination of press releases regarding working conditions in the sector generally or at a particular firm. CEREAL-GDL employs what could be called a “guiding hand” in relation to the activities and organization of the CTIE. For example, beyond offering CTIE member education workshops, CEREAL-GDL provides the coalition in-kind economic support such as materials to make protest cards and use of its office space. The CTIE is the most vociferous and the strongest representation of collective action against labor rights violations in the history of Mexico’s Silicon Valley.

Since the mid-2000s, CEREAL-GDL has also engaged in transnational advocacy efforts related to shining light on low-road working conditions in the electronics industry. In fact, CEREAL-GDL was a protagonist, albeit indirect, in the birth of transnational attention and activism regarding working conditions in the global electronics industry. With instrumental support from CEREAL-GDL, the Catholic Agency for Overseas Development (CAFOD) released a 2004 report, which is widely cited by scholars of the electronics industry as a turning point in bringing to the public’s eye the realities of work conditions in electronics manufacturing and increasing scrutiny of the sector’s labor practices. It was also the catalyst for the establishment of a transnational advocacy network of NGOs that work on labor issues related to the industry. Moreover, in an almost immediate response to the report and the media coverage it gained, a group of eight leading brand name and CM firms founded the Electronics Industry Citizenship Council (EICC) that established the first industry-wide private code of conduct (COC) for electronics companies. COC are formal written commitments by companies to uphold internationally recognized and host-country environmental and labor standards. Today over 45 companies are signatories to the EICC COC; combined these companies employ over 3.4 million workers (EICC 2009).

Together, worker education and empowerment, legal representation, and transnational advocacy activities conducted by CEREAL-GDL are focused on confronting electronics industry firm regarding their labor practices and working conditions. Following the rise of transnational advocacy related to the electronics industry, and with encouragement from CAFOD, which set up the first set of meetings, CEREAL-GDL and electronics industry firms with subsidiaries in Guadalajara launched an institutionalized dialogue to discuss and remediate labor rights violations. The dialogue links CEREAL-GDL to individual firms in the cluster, their business association, as well as to brand name companies headquarters in high-income countries. In broad strokes, the accord is a dispute resolution mechanism through which CEREAL-GDL is able to present labor rights violations directly to firms. Until a case goes through the whole process, CEREAL-GDL agrees not to sue the companies involved or disseminate the case in the local or international media. To the author’s knowledge, the institutionalized dialogue, known as the accord, is the first such form of collaboration between multinational companies and a local labor rights organization in Mexico, and arguably the world.

The unprecedented institutionalized dialogue between CEREAL-GDL and firms is best described as an antagonistic collaboration between these actors.³ As Bishwapirya Sanyal (1991) highlights, actors that are critical of one another may find that beyond their disagreements there are important benefits to collaborating. In the case of the institutionalized dialogue in Mexico's Silicon Valley, neither CEREAL-GDL nor firms were originally enthusiastic about collaborating. In fact, CEREAL-GDL was hesitant to engage with firms directly when CAFOD presented the opportunity, expressing concern that firms would utilize a dialogue to further circumvent listening to workers directly. Moreover, the organization believed that firms were interested in the dialogue simply as a means to protect their image, and were not genuinely interested in improving working conditions. On the other hand, CEREAL-GDL understood the dialogue as an opportunity to express its concerns directly to firms. Meanwhile, in the wake of significant media attention regarding exacting working conditions in the electronics industry, the dialogue presented firms the opportunity to demonstrate publically their intent to listen and respond to NGO concerns as well as to keep negative stories regarding labor conditions out of the press.

In essence, the CAFOD report, and the media coverage it gained presented a “collective action problem” for electronics industry firms. “[A]s activists mobilize consumer concern about social and environmental conditions of production, they create collective action problems for firms-in particular, interlinked problems related to *reputation, information, and competition*. Certification is designed to solve these problems” (Bartley 2007, 307, italics are his).⁴ The response to these problems was the launch of the EICC globally and, in Guadalajara, the institutionalized dialogue with CEREAL-GDL. The reason for the latter is linked to the strong cohesiveness among electronics industry firms in Guadalajara.

The managers of electronics industry firm subsidiaries in Guadalajara are by and large Mexican and have developed their managerial skills and their careers around the cluster, and thus have a personal stake in the cluster's survival (Hisamatsu 2008; Palacios Lara 2005). In other words, their interest is not limited to the success of only the firm they work for, but the cluster as a whole. “Consequently, they are more interested in receiving benefits from coordinating actions to promote their cluster” (Hisamatsu 2008. 271). The cohesiveness among electronics firm subsidiary managers in Guadalajara has led to the existence of a strong business association, *Cámara Nacional de la Industria Electrónica, de Telecomunicaciones, y Tecnologías de la Información* (Electronics, Telecommunications, and Informatics Industry National Chamber—CANIETI), which is actively involved in ensuring firm participation in the institutionalized dialogue with CEREAL-GDL. Notably, however, brand name firms without subsidiaries in Guadalajara are not part of CANIETI and are therefore not technically under the purview of the accord. According to CEREAL-GDL, whether a brand name company engages in the accord can largely depend on the person in a position to discuss a case with the organization. Further, suppliers of raw materials and electronics components, and some contract manufacturers with subsidiaries in Guadalajara tend to resist participating in the accord. Firms that resist are typically not members of the EICC, or for that matter have an internal COC.

³ The term “antagonistic collaboration” is inspired by the concept of antagonistic “cooperation” developed by Sanyal (1991).

⁴ Though COCs are not certification schemes per se, they can be analyzed as being in the same family of private sector responses to collective action problems.

The cohesiveness of electronics industry firms in Guadalajara is also reflected by their launch of certification scheme in 2009 to rate the labor practices of employment agencies in the city. It is too soon to tell what the impact of the scheme will be and whether it is a genuine attempt by firms to regulate employment agency hiring and employment practices, or whether it is a form of deflecting criticisms by CEREAL-GDL and international labor rights organizations of working conditions in the sector. Nonetheless, the emergence of the scheme is notable particularly as it further emphasizes the ability of firms in Guadalajara to organize and maintain reactive and proactive institutionalized responses to external criticism.

Improving Working Conditions in Mexico's Silicon Valley

Combined, the institutional structure and the set of confrontational and antagonistic collaboration related activities CEREAL-GDL conducts in Guadalajara have led to some working condition improvements in Mexico's Silicon Valley. For example, soon after the launch of the EICC and the accord, hiring discrimination decreased significantly. However, similar large-scale improvements have not been achieved in the past half-decade. Indeed, working condition improvements have largely been constrained to individual workers. For example, legal claims and the accord process typically resolve a labor rights violation for an individual worker. Yet, there is evidence that a continuing dialogue among CEREAL-GDL and firms could lead to firm-wide working condition improvements. For example, currently, CEREAL-GDL and a CM subsidiary in Guadalajara are negotiating what could turn into a pilot project related to increasing freedom of association for all of the firm's workers. Similarly, the evolution of the CTIE into a strong worker-led collective action organization, whether in the form of another NGO or a trade union, could one day lead to firm and/or industry-wide working condition improvements.

Thesis Methodology, Layout and Final note

Research for this thesis was conducted between January and May 2011 and relies heavily on interviews conducted with CEREAL-GDL staff as well as over a dozen electronics industry workers. Further, I spent January 2011 working in the offices of CEREAL-GDL, observing and participating in the organization's day-to-day work. I also interviewed two electronics industry firm and one employment agency representatives, as well as the Secretary General of the local labor board in Guadalajara and the CAFOD lead analyst responsible for the Agency's ongoing engagement with the electronics industry. Only comments made by interviewees that agreed to be quoted by name or anonymously are included in this thesis. All worker quotes are anonymous to protect their identity, and, as necessary, I have translated quotes into English.

Following the layout of the introduction, this thesis is organized as follows: Chapter 2 analyzes the lackluster labor protection government mechanisms in Mexico, the reasons for their weakness and their effects on labor conditions in the country. Chapter 3 analyzes the causes and the effects on workers of six key low-road working conditions in Mexico's Silicon Valley, including how workers perceive the electronics sector and what actions they take to make their lives "bearable". This is followed by a discussion of the State's labor dispute remediation mechanism. Chapter 4 analyzes the activities CEREAL-GDL undertakes and their evolution over time, highlighting and analyzing the organization's confrontational and collaborative efforts with electronics industry firms. Chapter 5 concludes with a discussion of the impact CEREAL-GDL's activities have had and could have in Guadalajara and elsewhere on working conditions. The

thesis includes two appendices. The first provides an overview of the emergence and dynamics of the electronics industry global value chain. The second presents an overview of the rise and composition of the electronics industry in Mexico, followed by a discussion of the dynamics of and key actors engaged in electronics manufacturing in Guadalajara.

On a final note: it is critical to note that this thesis is not intended to present a replicable model of labor rights protection for other NGOs to emulate. Nor is this thesis aiming to make a broad claim regarding the role of civil society. Indeed, as Bacarro (2001) writes: “What is important for this kind of research [regarding NGOs and labor rights protection] is, in fact, understanding the role played by particular types of organizations in specific policy contexts, not coming up with general assessments of the virtues and vices of civil society in general.”

Chapter 2: Strong Labor Rights, Thinned Worker Protection in Mexico

In the context of globalization and adherence to neo-liberal economic paradigms, since the 1980s, low-income countries have by and large subscribed to trade-liberalization policies that focus on export-oriented economic growth fueled by foreign direct investment (FDI). While low-income countries may have strong labor protection legal frameworks, FDI-led development strategies “thin” the government’s willingness to enforce labor laws (Seidman 2009; see also: Baccaro 2001; Elliott et al. 2003). For example, governments may waive certain labor laws or turn a blind-eye to known labor rights violations (Tendler 2002) and also repress trade union power (Seidman 2009) as a means to maintain flexible and stable labor relations that attract and anchor footloose foreign investors.

The Mexican government’s role in protecting worker’s labor rights epitomizes the definition of a “thinned state.” At the same time, Mexico’s labor rights are on paper some of the most progressive in the world (Bensusán 2000; Bensusán 2006; Cook 2007). Unchanged since their inception in the 1917 Mexican Constitution, the country’s labor rights include an eight-hour work day, no hiring or workplace discrimination, severance payments in the case of employment termination, maternity leave, and yearly profit sharing payments to workers from employers. Moreover, Mexican labor law is highly protective in relation to affording workers the right to organize, strike, and collectively bargain through trade unions. Mexican labor law is also structured around the premise that employers are to hire workers through indefinite contracts in order to protect employment stability; temporary and/or subcontracted work is legal under a very narrow set of conditions. Despite these Constitutional provisions, historically, it has never been the intention of the Mexican government for labor rights protection to stifle capitalistic economic development (Bensusán 2006). Indeed, over the past century, the Mexican government has sought to control “the working class [and its demands] while not depriving it from its rights afforded by the Constitution...” (Damgaard 1997, 72).

To this end, through the 1931 *Ley Federal de Trabajo* (Federal Labor Law—LFT), the government established federal and state level labor boards (*Juntas de Conciliación y Arbitraje—JCA*) that operate under the authority of the corresponding executive branch of government with no judicial oversight and with omnipotent control over trade union registration, worker strikes, and remediation of labor rights violations. The government, through these institutions, has historically reduced labor rights protection for workers in exchange for labor stability (Bensusán 2000; Bensusán 2006; Cook 2007).⁵ In particular, the functions of trade unions became dependent on the government controlled labor boards; and, as such, trade unions had the option of either pledging allegiance to the government to ensure their ability to legally operate, or be left out of the new labor relations structure represented by the JCAs (Bensusán 2000; Damgaard 1997). In turn, the most powerful trade unions in Mexico strengthened corporatist relationships with the State in the period following the establishment of the labor boards (Ibid.). As part of the corporatist relationship, in return for political favors and appointments, corporatist trade union leaders provided the State with political support.

⁵ In fact, the establishment of the contemporary labor board structure was a direct response from the Mexican government to trade union demands for labor rights protection and working condition improvements in the era of the Great Depression. The government feared that these demands would jeopardize economic growth and exasperate unemployment (Bensusán 2000; Bensusán 2006; Gutiérrez Castro 2006).

Importantly, while beholden to the State, corporatist trade unions leveraged their political power to gain working condition improvements for their members. In this way, though largely lacking internal democracy and partaking in a collusive *quid pro quo* political relationship with the State, corporatist trade unions continued to uphold the definitional role of a trade union: to represent worker interests and fight for better working conditions. Thus, as worker protection institutions, corporatist trade unions had the ability and willingness to improve working conditions, a reality that the State began to sterilize in the 1980s as it sought to attract FDI.

Since the 1980s, the government has significantly constrained corporatist trade union power to demand working condition improvements particularly from foreign firms operating in the country, through three interrelated methods: 1) reducing trade union political access and positioning; 2) promoting the use of collective bargaining contracts that protect employer instead of worker interests; and 3) tolerating the wide use of employment agencies by firms to contract workers through short-term contracts and thus eluding paying worker benefits and achieving labor flexibility not otherwise permitted by the country's labor law. Through the lens of their effect on corporatist trade union power, these contemporary keystones of Mexico's labor relations system are analyzed in the first section of this chapter.⁶ The second section of the chapter analyzes the structure and operation of labor boards in Mexico and how these institutions uphold these practices. Ultimately, the chapter concludes that though Mexico has a strong labor rights framework, the State has "thinned" not only its own willingness, but also the ability and willingness of trade unions to protect worker rights.

Section 2.1: Weakened Trade Union Power and Reduced Worker Protection

Over the past century, the Mexican government, ruled solitarily until 2000 by the political party the *Partido Revolucionario Institucional* (PRI), has maintained a corporatist relationship with the country's most powerful trade union federations, including the *Confederación Regional Obrera Mexicana* (Regional Mexican Worker Confederation—CROM), the *Confederación de Trabajadores de México* (Mexican Workers Confederation—CTM), and the *Confederación Revolucionaria de Obreros y Campesinos* (Revolutionary Confederation of Workers and Peasants—CROC).⁷ Historically, in return for political support and for maintaining relative labor stability, corporatist trade union leaders received "quotas" of political offices ranging from governorships to city block overseers (Robles 2008). Though corporatist trade unions maintained a collusive relationship with the State, prior to the 1980s they also exerted their power to gain work condition improvements for their members (Cook 1995). These trade unions had the strength to do so in large part due to the political favors received from the PRI. As Cook (1995) notes: "labor leaders had leverage not only because they headed mass organizations but also because they were centrally involved in party politics at both national and state levels" (78).

⁶ Today, corporatist trade unions saturate the country's industrial manufacturing sector, including electronics. As such, this chapter focuses on corporatist trade unions and does not discuss non-corporatist trade unions (known as independent unions) in detail. It suffices to say that independent trade unions are significantly repressed by the State through, for example, barriers to registration. For more information regarding the decline of independent trade union power in the 1980s see: (Bensusán et al. 1997; De la Garza Toledo 1991; De la Garza Toledo 2005).

⁷ Each confederation is made up of up to thousands of unions. For example, the CROC encompasses thousands of trade unions that together represent over 4.5 million workers and over 15,000 collective bargaining contracts.

In the mid 1980s, as it began its shift economic policies to trade-liberalization and FDI-led export-oriented economic growth, a key strategy of the PRI was to reign in corporatist trade unions' power and weaken their ability to pressure for better working conditions (Bouzas Ortiz 2006; Cook 1995; Leyva Piña 2006). Following is a discussion of the means by which the State weakened corporatist trade union power and consequently worker rights protection.

2.1.1: Weakening Trade Union Power Under the Guise of Democratization

At first, to achieve the aim of reducing corporatist trade union power, the PRI forcibly replaced trade union leaders that resisted the neoliberal transition (Cook 1995). Yet, against the backdrop of its waning control of politics in Mexico beginning in the mid to late 1980s, the PRI resorted to more covert methods. For example, under the guise of internal party rejuvenation, the PRI began to dismantle its quota of political support to union leaders and supported the establishment of new union confederations, which were sold publicly as being more democratic. However, the reality was that the PRI utilized these new federations to decrease the political power of and to gain increased control over traditional corporatist unions. For example, the PRI supported the creation of the *Federación de Sindicatos de Empresas de Bienes y Servicios* (Federation of Unions of Goods and Services firms) to serve as a counterweight to criticisms and demands of corporatist unions such as the CTM (Ibid.). Ultimately, these practices eroded the ability of corporatist trade unions to pressure and negotiate from within the political system and to positively affect working conditions (Ibid). Trade union power was further weakened by the PRI's promotion of collective bargaining agreements that represent employer instead of worker interests. Such agreements, known as employer protection contracts, are discussed in the following section.

2.1.2: Promoting the Proliferation of Employer Protection Contracts

As a tool to weaken trade union power and attract foreign investors to Mexico, the PRI promoted the use of employer protection contracts (EPC or protection contracts) in the 1980s (Bouzas Ortiz 2006). In general, EPCs can be defined as legally registered collective bargaining agreements (CBA) between a workers union and an employer through which the union represents employers' interests.⁸ Technically, EPCs are legal per the LFT, which implicitly stipulates that firms are allowed to elect which trade union represents its workers.⁹ The PRI promised EPCs to foreign firms operating in the country and made them readily available by facilitating their registry through the country's labor boards (Bouzas Ortiz 2006). Prior to the 1980s, EPCs were relatively few and generally limited to traditional sectors such as agriculture (Bensusán 2008). Once the PRI opened the floodgate, however, there was no turning back. Today, Mexican labor experts estimate that over 90 percent of all registered CBAs in the country are EPCs (Bouzas Ortíz 2008). Interestingly, as discussed in this section, corporatist trade unions are typically signatories to such CBAs. Hence, the phenomenon of EPCs has critical consequences for worker protection across Mexico.

⁸ There is a lot of controversy among scholars and legal practitioners regarding the precise definition of a protection contract (See: Xelhuantzi Lopez 2008). For example, some argue that a collective contract by definition is meant to protect workers and thus cannot be used in a description of an EPC. In turn, they prefer to use the term "instrument."

⁹ The LFT does not stipulate a due process for determining which trade union has the right to a collective bargaining contract in the event that more than one union request it from an un-unionized firm (Bensusán 2006). Thus, if more than one trade union request to represent a firm's workers, the firm has the option to chose between them. Similarly, under this legal framing, a firm and a union's secretary general can reach an agreement to establish a protection contract before any other unions even consider requesting a collective bargaining agreement.

Generally, trade unions that are signatories to protection contracts are nicknamed “ghost unions” (*sindicatos fantasmas*): they exist legally on paper, but have no internal union life (i.e. they do not engage with workers). Indeed lawyers serving as secretary-generals of such trade unions are the signatories to protection contracts (Robles 2008).¹⁰ For example, Ramón Gámez Martínez, considered the “czar of EPCs,” currently resides overseas to avoid legal charges against him related to sexual abuse of children in Mexico, and nonetheless is the signatory to thousands of EPCs representing hundreds of thousands of workers in dozens of industries (Muñoz Rios 2007; Ramírez Cuevas 2005). In most cases, workers do not know that they are represented by EPCs (Bensusán 2008). Indeed, it is not uncommon for firms to sign protection contracts even before workers are hired. For example, when Wal-Mart opened stores across Mexico, it signed EPCs before a single employee had been hired (Bouzas Ortiz et al. 2008). Besides not knowing that a ghost union represents them, workers cannot expect EPCs to serve as means for improving their working conditions.

EPCs generally stipulate the bare minimum of protections for workers, and signatory trade unions rarely renegotiate terms. For example, it is not uncommon for protection contracts to include minimum wages for salary ranges (Xelhuantzi López 2008). Indeed, in the manufacturing sector between 1991 and 1995, workers salary was only 3 percent higher than non-union workers (Bensusán 2006). Furthermore, nationally, approximately 10 percent of collective bargaining contracts are revised annually, which many scholars signal as a consequence of the promulgation of protection contracts (Bensusán 2006, 337). Lastly, labor flexibility is a key attribute of EPCs. This is exemplified by a handful of CBAs I obtained between protection unions and electronics industry firms in Guadalajara. The contracts lack stipulations for wage increases over time and also give firms the power to choose and change employee working hours and days as they see fit. For example, one contract stipulates the following: “Based on the needs that arise and with the objective of providing excellent service and to achieve maximum efficiency and productivity, personnel services may be used with complete or reduced labor hours per day, by hour, or part time, in continuous or discontinuous labor hours per day...”¹¹ The contract also stipulates that: “...the employer is the only one that can freely hire or fire personnel [represented by this contract], without any intervention by the trade union.”¹²

In return for this flexibility, firms pay protection unions a monthly quota. CBAs obtained by the author, exemplify this reality. For instance, one contract stipulates that the firm is responsible for paying its union two times the average annual salary of workers per month. Clearly, this is not a bad deal for a protection union: its secretary general is paid to essentially do nothing other than maintain a hands-off approach that assures long-term labor stability and flexibility for firms. In fact, as will be discussed in the second section of this chapter, once a firm

¹⁰ Per the LFT, the secretary general of a union is the only person legally allowed to negotiate and renegotiate the terms of a collective bargaining agreement, and he/she can do so without consulting workers affiliated with the trade union (Robles 2008).

¹¹ Clause 4, paragraph 2 of the collective bargaining agreement signed on February 22, 2005 between Sanmina-SCI and the *Sindicato de Trabajadores y Empleados en Comercio y Oficinas Particulares del Estado de Jalisco*. This trade union is a member of the CROC. Note that it is unknown whether this contract has been updated in the past six years.

¹² *Ibid.* Clause 3, paragraph 3.

has signed a CBA, including an EPC, it is very difficult for another trade union to challenge and replace an existing CBA.

Notably, trade unions that utilize EPCs are typically registered under the umbrella of corporatist trade union federations like the CTM, CROC and CROM (Bouzas Ortiz 2006). This reality seems counterintuitive since participating in EPCs decreases union militancy and therefore corporatist union power. Scholars are also intrigued by this reality, and no clear answer has emerged. As Bouzas Ortiz (2006) concludes: “either [corporatist federations] have not bothered to limit this practice...or possibly tolerate it” (123). There are at least two possible reasons why federations tolerate this practice. First, if corporatist trade union federations do not allow this practice, other federations can easily take their place and reap the economic rewards. Indeed, today’s protection contracts can even be purchased online (Robles 2008, 54), and trade unions openly advertise EPC services through newspaper classifieds.¹³

A second reason corporatist trade unions may tolerate EPCs is that their leaders subscribe to the neoliberal agenda. For example, in 1987, 60 workers at an electronics manufacturing firm in Guadalajara protested that the firm had not paid one of their benefits in full and turned to their trade union under the umbrella of the CTM for support. The workers met with the head of the CTM in Jalisco, who in turn told them: “stop making a scene, the only thing you are going to gain is having these firms, which do so much good for the country, leave” (cited in Gabayet Ortega 2002, 30). Subsequently, all of the protesting workers were fired from the firm. Overall, irrelevant of the reasons for which corporatist trade unions engage in EPCs, the fact is that EPCs seriously restrict the ability and willingness of trade unions to fight for working condition improvements. The increasing utilization of employment agencies by firms in Mexico to indirectly hire workers on short-term contracts has exasperated this reality.

2.1.3: Tolerance of Employment Agencies

Trade union power and member militancy has been further eroded by the proliferation of employment agencies. Employment agencies (agencies) emerged in Mexico starting in the 1960s (Lopez Pedroza 2010). In their nascent stage, agencies primarily focused on recruiting and contracting workers related to services such as cleaning (Ibid.). Since the 1980s, employment agencies have promulgated and are widely utilized today by industrial manufacturing firms (Fressmann 2005; Partida Rocha 2001). Employment agencies are contracted by firms to hire workers typically through short-term contracts. Temporary employment through agencies is mired in legal controversy in Mexico.¹⁴ As Paul Ochoa, CEREAL-GDL’s labor lawyer, notes:

¹³ For an example of a protection union classified advertisement, see: nuevo-leon.nexolocal.com.mx/p2897190-membresias-de-proteccion-sindical

¹⁴ For a detailed legal analysis of the legal controversies surrounding employment agencies, see Fressmann (2005). To exemplify a legal controversy, following is brief example. Mexican labor law allows firms to hire temporary workers, but only under very strict circumstances including that they work on a time-limited project. Electronics industry firms argue that temporary workers hired through employment agencies only work on specific projects, such as assembling a new cell-phone model. Yet, the start and finish of a project can never be pinpointed as the demand for the product may end quickly or new orders may be requested over a long period of time. Based on interviews conducted by CEREAL-GDL with workers over the past 10 years, it is common for firms to fire and rehire workers to work on the same project, or to lay off workers only to immediately replace them with newly hired agency workers to work on the same project.

“Proponents and opponents of temporary contracts through employment agencies can each make generally valid legal arguments that the practice is legal or illegal.”¹⁵

Firms utilize employment agencies as a means to reduce labor costs and human resources responsibilities and to increase labor flexibility. Though it can cost 80 percent more to hire a worker through an employment agency, firms recuperate the up front cost by not having to pay benefits, including year-end bonuses and severance pay (Partida Rocha 2001). Further, expenditures on subcontracting firms are tax deductible (Gabayet Ortega 2006), and firms do not have to spend time or money recruiting workers.¹⁶ Employment agencies also offer full-package human resources services. Indeed in many cases, employment agencies are a firm’s *de facto* human resources department (Fressmann 2005; Gabayet Ortega 2006). As a regional manager of one of the largest employment agencies in Mexico notes:

“The employment agency... assumes the labor relationship with workers...[we] contract them, administer their paycheck, and are in charge of all aspects of their development in relation to their labor efforts and measures of their productivity... We administer this area of work for our clients and are also responsible for the results” (cited in Gabayet Ortega 2006, 32).

Employment agencies are not regulated by the Mexican government, which to date has by and large turned a blind eye to labor law violations committed by these actors and the firms that contract them. For example, though by law workers hired by employment agencies are to have the same benefits as permanent workers, in practice this is not the case. According to Mexican labor law, workers may be hired once under a 30-day trial period, after which they are entitled to a severance payment in the case of being fired. Employment agencies typically offer workers 15-28 day contracts and in essence hire, fire, and re-hire them as trial-period workers. The revolving door hiring-and-firing model utilized by employment agencies hinders the ability of genuine trade unions, labor rights groups, and workers themselves to mobilize collective action given the rotating workforce and worker fear of not having their contract renewed. This reality is discussed in greater detail in Chapters 3 and 4 of this thesis.

2.1.4: Current State of Corporatist Relationship and Trade Union Power

Overall, then, corporatist trade unions’ power and ability to improve working conditions have declined significantly in the wake of the state-led neo-liberal economic reforms in Mexico. Further, compared to previous decades, the traditional political *quid pro quo* between the State and corporatist trade unions has weakened substantially. Specifically, the State cannot readily rely on corporatist trade unions to provide support for political candidates given decreased member militancy, while corporatist trade union leaders can no longer rely on political appointments (Bensusán 2004). Nonetheless, although weakened, the corporatist relationship remains intact. Corporatist trade unions, though with less political power than before, remain the most organized and politically savvy organizations in the country (Bouzas Ortiz 2006). Indeed, corporatist trade unions publicly criticize the government and can still flex their muscle to impact government legislative priorities (Bensusán 2004; Bouzas Ortiz 2006). For example, corporatist trade unions have been strong voices against and succeeded in stalling government proposals to

¹⁵ Interview with Paul Ochoa Aguirre, CEREAL-GDL labor lawyer, January 2011.

¹⁶ Recently, CEREAL-GDL learned that a leading employment agency contracted by leading electronics manufacturing firms will soon begin registering a different *razón social* (official registered name) for every factory in which it operates, even if it is owned by the same firm. This will allow its contracting firm to receive multiple tax breaks.

reform the country's labor law.¹⁷ Moreover, as key protagonists in the phenomenon of EPCs, corporatist trade unions are a critical ingredient for maintaining the labor stability and flexibility sought by foreign investors. It is therefore in the government's interest to maintain good relationships with these trade unions. Indeed, beyond the rhetoric of breaking corporatist ties from politicians, including Vicente Fox, the first non-PRI president since the establishment of the modern Mexican Republic, the government has maintained the corporatist relationship (Ibid.).

Corporatist trade unions also have incentives to maintain a corporatist relationship with the State. Reminiscent of the post-Great Depression era, it can be posited that trade unions have maintained a corporatist relationship as a means to maintain power within Mexico's labor boards. Through a strong position within labor boards, corporatist trade unions are able to, for example, shield themselves from losing ground to competing non-corporatist trade unions (Cook 2007). Critically, however, compared to earlier in the twentieth century, the ability and willingness of corporatist trade unions to fight for working condition improvements is largely nonexistent.

Section 2.2: Structure and Operation of Labor Boards in Mexico

Mexico's labor boards, which per the LTF operate under the authority of the corresponding executive branch of government with no judicial oversight, institutionalize processes designed to protect labor rights and working conditions. In practice these processes are manipulated through a collusive relationship between the State and corporatist trade unions to the benefit employers. Specifically, labor boards maintain a labor relations system with ample labor flexibility and stability, and inert attention to labor rights violations (Bensusán 2006; Cook 2007; Gabayet Ortega 2006). This chapter section explores these realities through an analysis of the structure and operations of Mexico's labor boards.

2.2.1: Decentralized Structure of Mexico's Labor Boards

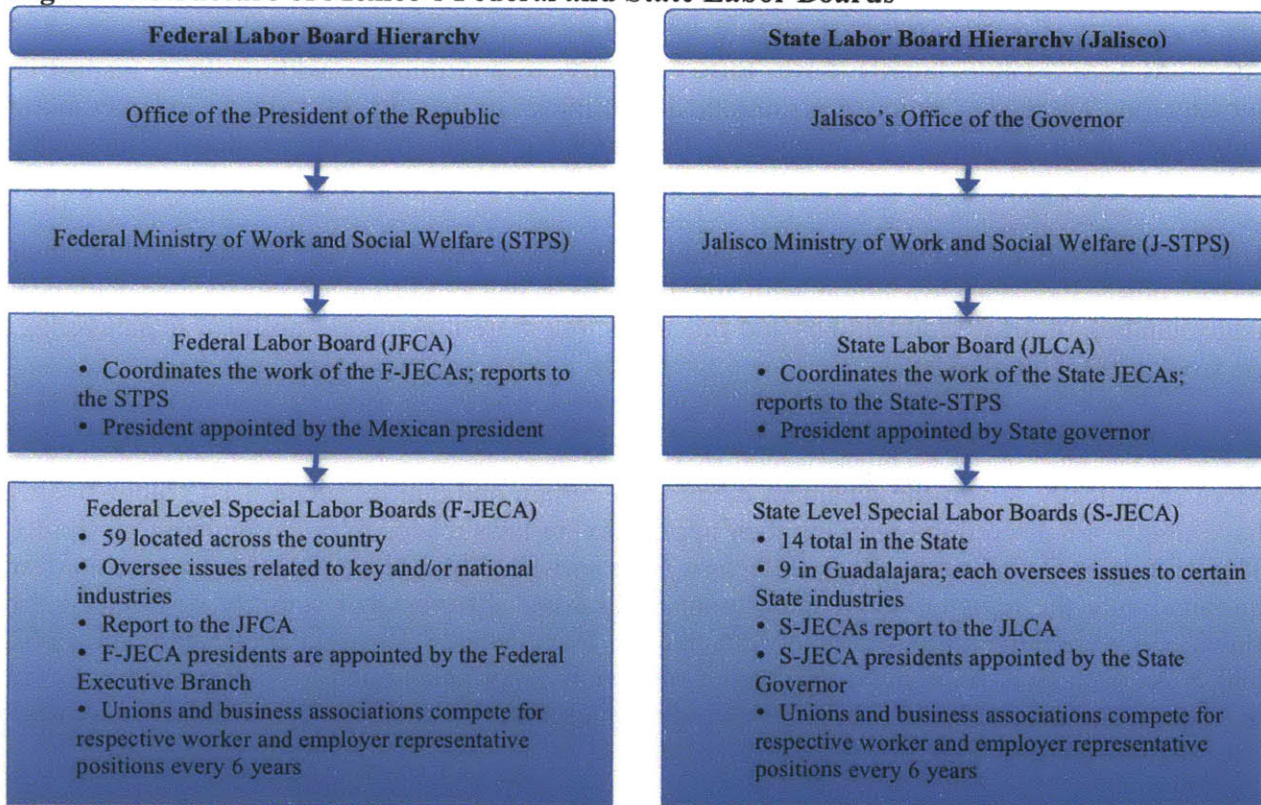
Mexico's LTF establishes state level labor boards (*Junta Local de Conciliación y Arbitraje*—JLCA), and a federal labor board (*Junta Federal de Conciliación y Arbitraje*—JFCA). The JFCA reports to the federal *Secretaría de Trabajo y Previsión Social* (Ministry of Work and Social Welfare—STPS) and is responsible for overseeing nationalized industries such as oil production, industries of key national importance such as energy production and procurement, as well as the public sector and industrial sectors with national-level trade unions. At its discretion, the JFCA establishes what are known as special labor boards (*Juntas Especiales*

¹⁷ In the 1990s all three of Mexico's most important political parties, the PRI, the conservative *Partido de Acción Nacional* (PAN), and the leftist *Partido de la Revolución Democrática* (PRD), proposed reforms to the country's labor law. The PAN's 1995 and the PRD's 1998 proposals were the most developed. The proposals differed primarily as related to issues surrounding labor flexibility and each maintained the support of different constituencies ranging from employer business associations to non-corporatist trade unions (Bensusán 2006b; Cook 2007). However, both proposals called for modifications that would transfer labor remediation responsibilities from the tripartite labor boards to the judiciary. Corporatist trade union, which have maintained privileged positions within labor boards through their political relationship with the State, were adamantly opposed to such a change, as it would reduce their power in the boards (Ibid.). Ultimately, neither of the proposed reforms was successful due to political gridlock. Most recently, the PAN, which has held the Mexican presidency since 2000, renewed the debate regarding labor law reform in Mexico. As in the 1990s, the labor reform proposal is mired in controversy (see for example: Bacon 2011) and has been stalled by the PRD and corporatist trade unions in the Mexican congress.

de Conciliación y Arbitraje—F-JECA) across the country to facilitate operations. For example, in the case of a labor dispute, workers and employers in Chiapas would not need to travel to Mexico City to engage with the JFCA.¹⁸

State labor boards report to the state level executive branch of government (i.e. the governor), and oversee industries specific to each state in the Republic. Like at the federal level, states may establish State-JECAs (S-JECA) within their geographical boundaries. Each S-JECA may oversee all industries in a geographical area, or, if there is more than one S-JECA in a geographical area, industry oversight may be divided. As a case in point, in the state of Jalisco, there are a total of 14 S-JECAs. One is located in the city of Puerto Vallarta and is charged with overseeing all industries in a geographical area near the city. In other words, the Puerto Vallarta S-JECA oversees industries ranging from the service sector to manufacturing. Meanwhile, there are nine S-JECAs in Guadalajara, Jalisco’s capital. Each is charged with overseeing specific industries. For example, currently S-JECA number 3 is dedicated to overseeing, among others, the electronics industry, while S-JECA number 5 oversight responsibilities includes employment agencies.¹⁹ Figure 1 visually reflects the hierarchy of labor boards in Mexico, using state labor boards in Jalisco as an example.

Figure 1: Structure of Mexico’s Federal and State Labor Boards



¹⁸ There are currently 59 federal JECAS across Mexico’s 31 states and federal district. See: stps.gob.mx for their locations.

¹⁹ Note that every six years, the state governor may alter the industries overseen by S-JECAs. For example, in 2012, the governor may elect to restructure the JLCA so that S-JECA number 3 oversees the service sector and the number 5 oversees the electronics industry coupled with say mining.

As reflected in the Figure, there is no formal institutional relationship between state and federal labor boards. Also, the internal structure of FJCAs and LJCAs are identical, yet overseen by different levels of the executive branches of government. Each labor board (including JECAs) has a tripartite managing council, made up of a government, worker, and employer representative. For example, in Jalisco there are 15 managing councils: one at the JLCA and 14 at S-JECAs. The government representative is the president of the labor board. Mexico's president, through the STPS appoints the president of all federal labor boards, while the respective governor of each state through its STPS equivalent appoints the president of all state labor boards. Business associations and trade union federations compete every six years to hold the respective employer and worker managing council position on each labor board. As related to worker representation, given their membership size, corporatist trade unions typically hold the worker representative position on the managing council. For instance, the CROM and CTM are the strongest union federations in the State of Jalisco in terms of membership. These federations hold every one of the 15 worker representative positions available in state labor boards in Jalisco. This fact is significant given that the managing councils have omnipotent control over the operation and implementation of labor board responsibilities, which they exert in ways that maintain flexible and stable labor relations in Mexico. The next subsection analyzes the operation of state labor boards to exemplify the means by which these actors achieve this aim.

2.2.2: Operation of State Labor Boards

Mexican labor boards have three primary responsibilities within their respective jurisdiction. These are: union registration, determining the legality of strikes, and mediating individual labor disputes. To exemplify the implementation of these responsibilities, this subsection analyzes the operation of state level labor boards.

Union Registration: JLCAs are responsible for the registry of all unions within their jurisdiction.²⁰ Registering a union with the JLCA is a feat requiring a sophisticated technical understanding of legal requirements and processes, but more importantly political maneuvering. As Cook (2007) highlights:

“since there is a government representative on the board, and since the union representative has tended to be from a pro-government union, labor boards rarely find in favor of independent unions or union challengers to one of the official unions” (154).

More specifically, given the technical nature and certain ambiguities of the LFT, labor boards have significant discretion regarding their application of laws related to union registration (Ibid.). Thus, for example, unions such as *sindicatos fantasmas* readily achieve registration within a few months while the registration of trade unions that could disturb labor stability or threaten the status of a corporatist union can take years and are often denied (Bensusán 2000, 2006 and Cook 2007). As discussed in the previous chapter section, it is not uncommon for workers who decide to form a union to find that they are already represented by an employer protection contract “negotiated” on their behalf by a *sindicato fantasma*.

²⁰ Note that that the federal level, unions must register directly with the STPS. In other words, if a union seeks to represent workers of an industry across various local jurisdictions, they have to register directly with the federal government. It is beyond the scope of this discussion to analyze this process; see Bensusán (2006) for a detailed discussion.

Importantly, from the labor boards' perspective, unofficially they recognize that in practice ghost unions exist, but from a legal perspective they do not recognize that there is such a thing as *sindicatos fantasmas*. As the Secretary General of the Jalisco labor board notes:

“From our perspective, legally, all the trade unions registered with the board, including the so-called ghost unions are legitimate as they meet all of the legal requirements on paper to serve as the rightful representatives of workers; beyond ensuring that they meet these requirements, there is nothing we can do within our purview to review the means by which they ensure worker participation.”²¹

In other words, as suggested by this statement, as related to union registration, labor board leaders view their role as technocratic. In so far as a trade union seeking to register meets the technical registration labor law requirements, and is approved by the board's managing council, there is no further role for the labor board. Once a trade union is registered, the labor board only reviews the union registration in the event that the trade union calls for a strike, it enters into a CBA renegotiation with a firm, or another trade union challenges its CBA.

Since by law only one trade union may hold the collective bargaining agreement, if there is a challenge to the existing CBA, the JLCA is responsible for overseeing a worker vote (known as a *recuento*) to determine which union will, moving forward, have the right to the collective contract. This process can take years and firms exert coercive pressure on workers to desist from the *recuento* or to vote for the current union if the *recuento* takes place. For example, in June 2010, after years of legal proceedings, a *recuento* was organized for 20,000 workers of a call center company in Mexico that works for various European multinational telecommunications firms. Workers were represented by a *sindicato fantasma* headed by Ramón Gamez, the “czar of EPCs.” The *Sindicato de Telefonistas de la República Mexicana* (Union of Telecommunication Workers of the Mexican Republic) challenged the EPC.²² Prior to the vote, some workers highlighted that the company had taken away their company identifications making it impossible to participate in the vote. Further, the day of the vote a large number of individuals were present outside of JLCAs in Mexico City that oversaw the *recuento* intimidating the workers in line to vote. It is illegal for non-voting individuals to be within that area, yet the police and JLCA officials did not take action against their presence. Ultimately, the ghost union won the election and workers continue to be “represented” by the EPC.

Strikes: JCAs review and authorize or deny union requests (*emplazamientos*) for labor strikes within their jurisdictions. More concretely, by approving a strike (deeming it *existente*), the labor board requires that the employer fully stop production until the strike is resolved through a mutual agreement between the union and the employer, or the employer enters bankruptcy.²³ A denial of a strike request can come in one of two forms. The labor board can rule that a strike is non-existent (*inexistente*) or illegal. If a strike is ruled non-existent then workers are required to return to work within 24 hours; if it is ruled illegal, then all workers involved face termination.

At the national level, in 2004 trade unions filed 6,122 *emplazamientos*. Of these, only 68 (or about 1 percent) resulted in strikes taking place (Bensusán 2006). In Jalisco, more recent data reflects a similar ratio. In 2009, unions filed 1,924 *emplazamientos* at the JLCA, and only 5

²¹ Interview with Ruben Dario, Secretary General of the Jalisco JLCA, June 2011.

²² I discussed the details of the case with non-governmental organizations that followed the process. I also served as an observer at one of the *recuento*'s voting sites.

²³ Clearly, strikes are catastrophic for employers who in turn will do almost anything to avoid them, for example sign an EPC with a trade union that promises labor stability (Bensusán 2006, 379).

(2.6%) took place (Jalisco STPS). What explains that such a small percentage of *emplazamientos* lead to *estallamientos*? There are two key dynamics at play: either the corresponding labor board deemed the union's request non-existent or illegal, or the union and the employer reached a mutual agreement.

Unions may use *emplazamientos* as a tactic to pressure their respective firm to meet their demands.²⁴ For example, Bensusán (2006) finds that, of cases filed at the city's local labor board, 83 percent were closed due to unions desisting from the *emplazamiento*. This implies that the respective trade unions succeeded in getting firms to meet their demands, or that trade unions were pressured politically to desist. As related to the latter, labor boards, at the behest or under pressure by employers may find technicalities to deem a strike illegal or non-existent. For example, in her analysis of *emplazamientos* in Mexico City in 1999, 2000, and 2003, Bensusán (2006) finds that 46 percent were deemed in-existent due to minute technicalities, reflecting the priority of labor boards to maintain labor stability.

Individual Labor Disputes and Remediation: Another critical function of labor boards is to mediate and arbitrate individual grievances against employers. A worker, independent of the union that represents him/her, may file a grievance claim at his/her corresponding labor board. The vast majority of claims made by individual workers are related to wrongful termination.²⁵ Wrongful termination occurs when an employer terminates a worker without an appropriate motive established by the LFT.²⁶ If a JLCA finds that a firm fired a worker unjustly it must reinstate a worker or pay the worker a significant remuneration package.²⁷

The efficiency of the dispute process varies greatly across state labor boards in Mexico. Based on a 2010 survey conducted by the newspaper Mural, JLCAs resolve claims the quickest in the state of Nuevo Leon (Ortiz 2010). On average a case is closed in between three to five months. On the other end of the spectrum, resolving cases takes the longest in Jalisco. Claims in the state take an average of three years to resolve. The caseload of both states is comparable thus highlighting the possibility of inefficiencies in the Jalisco JLCA (Ibid.). To the author's knowledge there is yet to be an analysis of the reasons for the resolution time differences between labor boards across Mexico. This said, as discussed in Chapter 3 in relation to the electronics industry in Guadalajara, reasons likely include JLCA backlogs as well as firm tactics that stall the process.

²⁴ Remember that about 90 percent of CBAs in Mexico are EPCs held by *sindicato fantasmas*. Against this context, trade union demands are more than likely related to renegotiating a higher protection quota from a firm, not working conditions or wages (Bensusán 2006).

²⁵ Bensusán (2006) finds that more than 96 percent of individual claims between 2000 and 2003 at the local JCAs in Mexico City were related to wrongful termination. Similarly, 95 percent of CEREAL-GDL's legal cases are related to wrongful termination.

²⁶ See Article 47 of the LTF for the list of legally acceptable reasons for termination.

²⁷ Workers that are fired without motive are entitled to: three months of salary; 20 days of salary for every year worked; 125 percent of a daily salary for every unused vacation day; 12 days per year of work; the corresponding prorated amount of that year's annual holiday bonus; and every salary between when they were fired and a ruling that an unjust layoff took place is reached.

Section 2.3: Chapter Summary

Though on paper Mexican workers are protected by a strong labor law and afforded significant labor rights, in practice, especially since the 1980s, Mexican labor boards and corporatist trade unions do not adequately protect these rights. In line with a shift to neoliberal economic policies, the State has ramped up efforts to emphasize labor flexibility and stability over labor rights as a means for attracting foreign investors. The government has succeeded in these efforts by reducing corporatist trade union power in the country and through its discretionary implementation of labor law through labor boards. In effect, the State has “thinned” not only its own willingness, but also the ability and willingness of trade unions to protect worker rights.

Prior to the 1980s, corporatist trade unions in Mexico had the ability and willingness to seek and promote better working conditions for their members. As part of the neoliberal transition in Mexico, the government restricted trade union power through various means including reducing trade union political access and positioning; promoting the promulgation of EPCs; and turning a blind eye to illegal labor practices utilized by employment agencies. Corporatist trade unions kowtowed to these realities and today are key protagonists in maintaining labor stability and flexibility in the country. For example, corporatist trade unions are the principal signatories of EPCs. Though the political *quid pro quo* between the State and corporatist trade unions has been weakened by these practices, the corporatist relationship remains intact. The government relies on corporatist trade unions to maintain labor stability and flexibility and seeks to avoid political confrontation with these actors. In return, corporatist trade unions secure privileged positions within labor boards, which shield them from competing non-corporatist trade unions.

The power of labor boards in Mexico is extensive. The structure of the boards provide the executive branch of government ample discretion in relation to the country’s labor relations system, which it utilizes selectively and in collusion with corporatist trade unions and firms to disarm potential threats to labor flexibility and stability. For example, on the one hand labor boards apply their discretion by citing minute technicalities to block strikes, as well as to deny registration to trade unions that have a genuine concern for representing workers’ interests, and in turn challenge corporatist trade unions and the EPCs. On the other, labor boards claim a limited ability to take action against the known phenomenon of unrepresentative ghost unions, which violate the spirit of worker representation articulated in the Mexican Constitution and LFT. Further, although workers’ voices can be heard within labor boards through direct claims against employers, if workers elect to use this process they may face significant hurdles to achieve success against employers. In sum, though labor law in Mexico is highly protective of workers, its implementation is coopted by collusive relationships among the State, corporatist trade unions and firms, ultimately facilitating low-road labor practices that neglect workers’ interests and conditions.

In this context, the following chapter analyzes the working conditions of manufacturing workers in Mexico’s Silicon Valley. Unsurprisingly, the dynamics discussed in this chapter play critical roles in enabling the exacting work conditions faced by workers in this industry.

Chapter 3: Low-Road Labor Practices in Mexico's Silicon Valley

Mexico's transition to trade-liberalization and export-oriented economic growth in the 1980s, including its facilitation of low-road labor practices, led to a dramatic increase of FDI and to the establishment of countless foreign firm subsidiaries, including electronics manufacturers, in the country. In the 1990s, foreign electronics firms rushed to Mexico to take advantage of its geographic proximity to and preferred trading position with the United States, the largest consumer market in the world (Alba Vega 1999; Dedrick et al. 2001; Dussel Peters 2003).²⁸ Between 1994 and 2000, FDI in the electronics sector increased fivefold and accounted for 10 percent of the country's overall FDI in 2000 (Gallagher et al. 2007, 126). In 2008, Mexico produced 50 percent of the world's Blackberry cell phones, 80 percent of all Blu-Ray discs, and more than 5 million Nokia cell phones (CEREAL 2009).

The most important electronics manufacturing cluster in Mexico emerged in Guadalajara, the capital of the state of Jalisco. While, historically, Guadalajara has been known as the "great city of small industry" (Arias 1985), today it is best known as Mexico's Silicon Valley. As will be discussed in the first section of the chapter, two brand name multinational subsidiaries, Hewlett Packard (HP) and International Business Machines (IBM), and a set of top foreign contract manufacturing firm (or Equipment Manufacturing Services—EMS) subsidiaries anchor the Guadalajara electronics manufacturing cluster. There is a strong cohesiveness among brand name firms (or Original Design Manufacturers—OEM), and EMS subsidiary managers located in Guadalajara, as reflected by the strength of the industry's local business association. Indeed, local managers have a vested interest to not only look after the health of their own firm, but the cluster as a whole.

There is a strong cohesiveness among, yet a very distinct division of labor between, OEM and EMS firm in Guadalajara. Specifically, OEMs focus on supply chain management and high-value activities such as technology consulting, and outsource all manufacturing activities to EMS firms, which are the principle employers in Mexico's Silicon Valley. Importantly, EMS firms rely heavily on employment agencies to hire and administer their human resources and are signatories to EPCs. Unsurprisingly, then, employment in Mexico's Silicon Valley is characterized by low-road labor practices represented by short term contracts and job uncertainty, low wages, long and irregular working hours, lack of freedom of association, and hiring and workplace discrimination and harassment (CEREAL 2006; Good Electronics 2009; ILO 2007; Schipper et al. 2005).

The second section of the chapter analyzes each of the six labor conditions. While each condition has a unique set of dynamics, they are ultimately interconnected and, together, paint a picture of worker repression, as well as employment and personal instability. Interestingly, as will be discussed in the third section of the chapter, workers typically maintain a positive view of the electronics industry, though they are highly critical of the onerous working conditions. Workers rarely voice these critiques to managers directly for fear of firm reprisal. Moreover, as will be discussed in the fourth section of the chapter, in the event that workers decide to file a formal complaint with the local labor board, workers face a notoriously inert labor dispute resolution process in which firms have a significant legal advantage leading most workers in the industry to desist from legal claims.

²⁸ See Appendix 2 for a review of the growth of electronics manufacturing in Mexico and Guadalajara.

Surprisingly, against this backdrop, over the past half-decade there have been notable working condition improvements, particularly related to hiring discrimination. The fourth section of this chapter discusses these improvements, leading to the question: given all of these circumstances, why and how did these improvements emerge?

Section 3.1: Overview of the Electronics Industry in Mexico’s Silicon Valley

In tandem with Mexico’s trade liberalization and export-oriented economic growth strategies in the 1990s, exemplified by tariff reduction policies and signing of the North American Free Trade Agreement (NAFTA), electronics firms located manufacturing operations in Mexico, and particularly in Guadalajara (Dussel Peters 2004; Hisamatsu 2008; Palacios Lara 2001; Palacios Lara 2005; Peres et al. 2009).²⁹ The resulting cluster of electronics industry firms in Guadalajara is known today as Mexico’s Silicon Valley, and is anchored by two world-class OEM subsidiaries, HP and IBM, along with numerous EMS subsidiaries. Following global trends in the electronics industry, between the mid 1990s and early 2000s, OEMs in Guadalajara outsourced electronics manufacturing to EMS firms³⁰ and turned their focus to managing their manufacturing supply chain and other “high value” activities (Palacios Lara 2004).³¹ For example, today HP primarily focuses its operations in Guadalajara on coordinating its supply chain in Mexico, as well as business and information technology consulting.³² Concurrently, as reflected in the Table 1, a significant number of the world’s largest EMS firms, established operations in Guadalajara between 1997 and 2001 (see Palacios Lara 2004 for a complete list).

Table 1: EMS Subsidiaries in Guadalajara

Company	Year Established in Guadalajara	Employees in Guadalajara***	World Rank by Revenues (2007)**
Solelectron*	1997	N/A*	2
Flextronics*	1997	21,000	2
Jabil Circuit	1997	12,000	3
Benchmark Electronics	1999	1,200	6
Sanmina-SCI	2001	13,000	4

Source: Palacios Lara 2004 *Flextronics acquired Solelectron in 2001; **Source: Cassia 2010 ***Source: Media stories published between late 2010 and 2011.

²⁹ Whereas in 1980, tariffs for electronics imports in Mexico was over 20 percent, today they are effectively zero (Dedrick et al. 2001). Further, under Article 303 of NAFTA, key electronics final product inputs such as motherboards manufactured in the three signatory countries may be freely traded; if they are sourced from other countries they must be taxed by the recipient country (Alba Vega 1999). See Appendix 2 for a detailed review of Guadalajara’s location advantages compared to other regions of Mexico as well as other countries.

³⁰ For example, IBM in 2003 sold all of its manufacturing facilities around the world to Sanmina-SCI, a leading EMS firm. Similarly, Lucent Technologies transferred its manufacturing facilities to EMS firms Celestia in 2001 and Solelectron in 2002 (Lüthje 2007).

³¹ Today, OEMs predominantly focus on research and development and marketing and sales (Cassia 2010) and subcontract 75 percent of manufacturing to contract manufacturers (Good Electronics 2009). OEMs utilize contract manufacturing as means to reduce the cost of production against the backdrop of a global value chain where the greatest value added is in research and design activities. For a detailed discussion of the evolution and dynamics of the global electronics value chain and contract manufacturers see Appendix 1.

³² Interview with Iliana Ponce, GPS Quality and Process Lead, HP-Mexico, February 2011.

There are approximately 80,000 workers in the Guadalajara electronics industry. As reflected in Table 1, close to 50,000 of the industry's workers (more than 60 percent) work for EMS firms. Of the remaining 30,000 workers in the sector, the large majority work for smaller EMS firms such as USI. Hence, though it was named after the research and development-rich Silicon Valley in California, Mexico's Silicon Valley is mainly an enclave composed of foreign multinational firms that assemble electronics for export (Gallagher et al. 2007).³³ Importantly, EMS firms located in Guadalajara do not produce exclusively for HP and IBM, but also other OEM firms without subsidiaries in Mexico. For example, the Canadian company Research In Motion, the producer of Blackberry cell phones, does not have offices in Guadalajara, but contracts manufacturing of BlackBerrys to EMS firms in the city. Figure 2 reflects the basic contracting structure in Mexico's Silicon Valley.

There are two other key relationships reflected in Figure 2 that require further explanation. First, OEM and EMS subsidiaries located in Guadalajara are dependent on decisions made by their respective company headquarters located in high-income countries. Ultimately, as Palacios Lara (2004) writes:

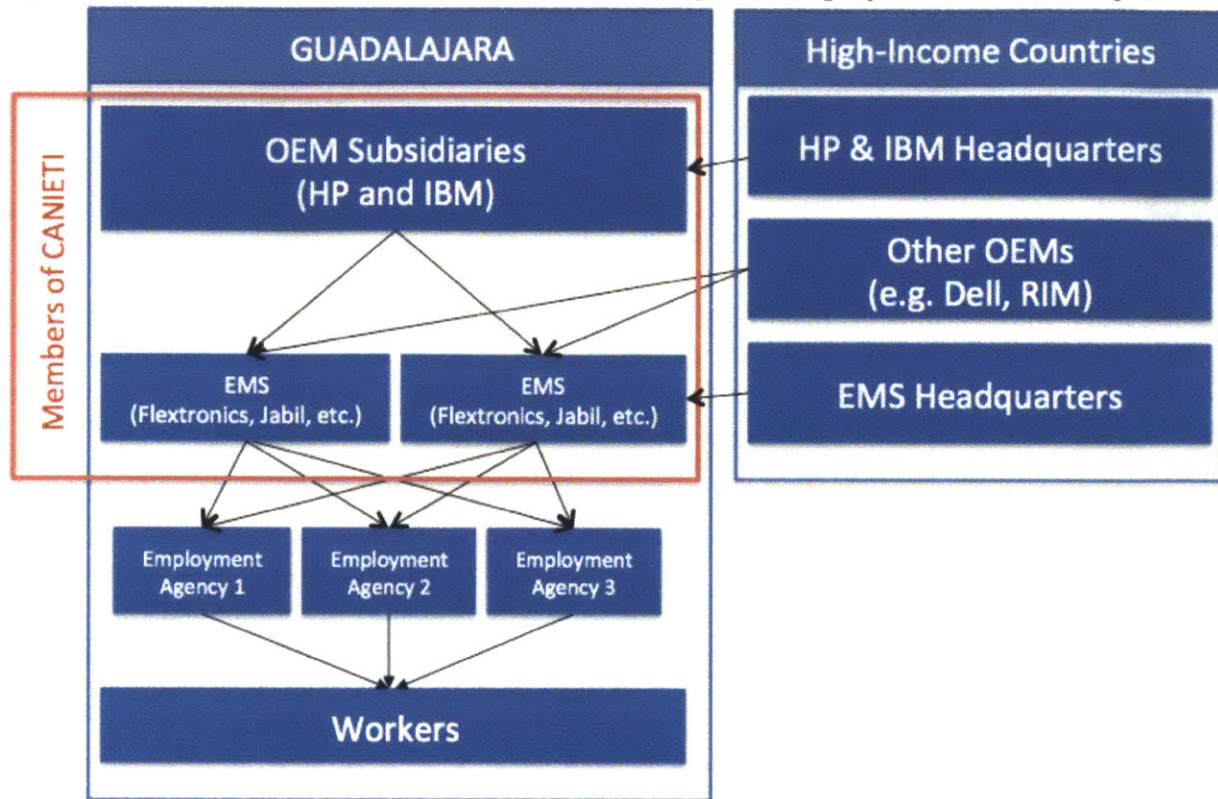
“the permanence of subsidiaries in this Mexican enclave depends on what their corporate headquarters' strategies dictate...” he continues “similarly, the scale of operations and expansion or contraction decisions of [operations] that make up [Mexico's Silicon Valley] are ultimately dictated by the corporate headquarter strategies, which in turn respond to the exigencies of the market and the ups and downs of the international economy...” (69, 71).

In other words, decisions regarding whether or not to maintain operations in Guadalajara rest on the shoulders of leaders at firm headquarters in the U.S. or other high-income countries. For example, during the 2001 recession numerous OEM firms, including Motorola, which was one of the first OEMs to locate in Guadalajara, closed their subsidiaries in Guadalajara and moved manufacturing operations to Asia. In 2008, Hitachi made the same decision. These examples highlight the footloose nature of the electronics industry in Guadalajara: the risk of multinational capital flight in Mexican electronics clusters is real and could occur at any time (Hisamatsu 2008). Thus, it is in the self-preservation interests of local subsidiary managers to make the cluster function as efficiently as possible and to prove their abilities to headquarters. For example, as Iliana Ponce, GPS quality and process lead at HP-Mexico indicates: “over the years, we have *gained the confidence* of HP [Headquarters] and have thus been able to focus more on high-value activities in Guadalajara.”³⁴

³³ With exports exceeding 17.8 billion USD, Mexico's Silicon Valley exported close to 26 percent of Mexico's high-tech products in 2008 (SEIJAL 2010). Further, the sector has accounted for the largest percentage of Jalisco's exports annually since the early 1990s, reaching over 60 percent in 2009 (Ibid.). Notably, economic linkages to domestic industry are largely absent (Hisamatsu 2008; Palacios Lara 2001, Palacios Lara 2005; Peres et al. 2009). In fact, today less than ten percent of components utilized for manufacturing are sourced locally (Hisamatsu 2008).

³⁴ Interview with Iliana Ponce, GPS Quality and Process Lead, HP-Mexico, February 2011, emphasis added by me.

Figure 2: Subcontracted Electronics Manufacturing and Employment in Guadalajara



In this context, it is important to highlight the cohesiveness among electronics firm subsidiaries operating in Guadalajara, manifested through strong business associations. As reflected in Figure 2, OEM and EMS firms with subsidiaries in Guadalajara are members of a regional chapter of the business association *Cámara Nacional de la Industria Electrónica, de Telecomunicaciones, y Tecnologías de la Información* (Electronics, Telecommunications, and Informatics Industry National Chamber—CANIETI).³⁵ The regional chapter of CANIETI collaborates with various public-private institutions and the state of Jalisco’s *Secretaría de Promoción Económica* (Ministry for Economic Promotion—SEPROE). Since their establishment in the mid-1990s, CANIETI, SEPROE and other related institutions coordinate efforts to attract foreign investment in the Guadalajara electronics cluster and improve its competitiveness compared to other countries (Palacios 2008).³⁶ For example, in collaboration with SEPROE, CANIETI established the *Cadena Productiva de la Electrónica* (Electronic Supply Chain—CADELEC), a non-profit organization tasked with facilitating connections between local raw materials and component suppliers to OEM and EMS firms (Palacios Lara 2005). The establishment of CADELEC highlights the cohesiveness of electronics industry firms operating in Guadalajara. This cohesiveness, however, is constructed not by the firms as entities, but by the local managers of these firms. Specifically, local professional managers of

³⁵ Note that OEMs without a subsidiary in Guadalajara are not members of CANIETI. Neither are employment agencies, which serve the electronics industry, but are not electronics, telecommunications or information technology firms in and of themselves.

³⁶ For more information about these institutions, their emergence and their efforts to promote the cluster, see Appendix 2.

multinational subsidiaries are the key actors in the associations. Local managers have developed their managerial skills and their careers around the cluster, and thus have a personal stake in the cluster's survival (Hisamatsu 2008; Palacios Lara 2005). In other words, their interest is not limited to the success of only the firm they work for, but the cluster as a whole. "Consequently, [local firm managers] are more interested in receiving benefits from coordinating actions to promote their cluster" (Hisamatsu 2008. 271). As analyzed in Chapter 4, this dynamic is important to understanding coordinated responses from electronics firms in Guadalajara to critiques regarding working conditions in the industry.

Lastly, Figure 2 reflects that OEM firms subcontract manufacturing to EMS firms, which in turn subcontract the hiring of workers to employment agencies. The economic survival of EMS firms, which operate in profit margins between 3-5 percent (Cassia 2010), is based on their ability to provide OEM firms quality, uniform and low-cost products (Gallagher et al. 2007; Lüthje 2004a; Lüthje 2004b; Lüthje 2006). To accomplish this task, EMS firms establish assembly-line manufacturing and rely on employment agencies to reduce labor costs and increase labor flexibility. The latter is particularly important to firms given rapidly changing demand for products in the electronics industry (Cassia 2010). Acquiring temporary workers through employment agencies that offer short-term contracts, allows firms hire and fire workers based on production peaks or valleys, and facilitates low-road labor practices reflected by systemic labor rights violations and exacting working conditions in Mexico's Silicon Valley. The following section of this chapter analyzes the dynamics of working conditions and their effects on electronics manufacturing workers in Guadalajara.

Section 3.2: Working Conditions in Mexico's Silicon Valley

Work conditions in Mexico's Silicon Valley include: short-term contracts and employment uncertainty, low wages, long and irregular working hours, lack of freedom of association, and workplace and discrimination and harassment. This section analyzes each of these six working conditions, which are facilitated by Mexico's weak worker protection institutions discussed in Chapter 2. The analysis draws from research conducted by CEREAL-GDL, which has been documenting labor conditions in the Guadalajara's electronics industry for over a decade; ethnographic research conducted by scholars regarding working conditions in this sector; as well as formal interviews and informal conversations with workers conducted by the author in January 2011. The six conditions analyzed in this section were chosen given that they are the most often discussed by workers.³⁷

3.2.1: Short-term Contracts and Employment Uncertainty

The majority of electronics manufacturing workers in Guadalajara, close to 60 percent (or 45,000), are hired through employment agencies that offer temporary short-term contracts ranging from 15 to 28 days (CEREAL 2009). Short-term contracts create a high level of employment uncertainty for workers, who are kept wondering if their contracts will be renewed. In line with the discussion of employment agencies in Chapter 2, electronics manufacturing firms in Guadalajara rely on employment agencies to reduce labor costs and increase labor flexibility. Each is discussed in turn, with a specific focus on the effects of these dynamics on industry workers in Guadalajara.

³⁷ Note that the analysis is limited to assembly-line workers and excludes white-collar staff such as firm managers and engineers.

As discussed in Chapter 2, though it can cost 80 percent more to hire a worker through an employment agency, firms recuperate the up-front cost by not having to pay benefits, including year-end bonuses and severance pay (Partida Rocha 2001). For example, in a survey of 157 electronics industry workers, Gabayet Ortega (2006) finds that a significant number have been working for the same firm for years, some close to a decade, through short-term contracts, without earning benefits related to seniority (*antigüedad*). Further, firms do not have to spend resources recruiting workers, which often involves visiting Guadalajara's peripheral working-class neighborhoods.³⁸ As is the case nationally, employment agencies in Guadalajara offer electronics industry firms full-package human resources services. Based on interviews conducted by the author with industry workers in Guadalajara, employment agencies have on-site staff known as *implants*, which liaise with workers regarding all human resources issues, including payroll and layoffs.

As related to labor flexibility, by allowing short-term contracts to run out, firms are essentially able to lay off workers without presenting a valid reason in the eyes of the law, or providing severance payments. Firms may decide to lay off workers for reasons ranging from temporary decreases in production to discontent with a worker that encourages co-workers to organize, both of which, per Mexico's labor law are illegal. As related to the latter, two workers hired by an employment agency to work at the IBM manufacturing plant were fired in 2003 because they had spoken to a UK development agency about working conditions (CAFOD 2004). Importantly, to protect themselves from legal suits in cases of wrongful termination, employment agencies typically pressure employees to sign voluntary resignation forms every time they are laid off. If a worker "voluntarily" resigns, the agency is no longer obligated to pay the worker a severance or be held responsible for any wrongdoing related to its reasons for firing him/her.³⁹

Ultimately, employment agencies are often the only option for workers seeking employment in the electronics industry. As one worker who had just been laid off by an employment agency noted, "What do I do now? Well, I guess I'll head to the next agency, or maybe the same one, they are always firing and re-hiring."⁴⁰ The process of getting a new position could take a few days or a few months, causing a high level of employment uncertainty and, in turn anxiety, for workers, who depend on the income to support their families. A second interrelated issue is that workers do not have a clear employer. On the one hand, agencies are in charge of administering human resources, yet, on the other, firm managers oversee their day-to-day labor and production on assembly lines. Thus, when labor rights violations occur, what entity is responsible: employment agencies, firms, or both? As explored later in this thesis, the answer to this question has shifted over time in part due to pressure from labor rights advocates. Compared to the early 2000s, today OEM firms in the Guadalajara cluster take co-responsibility for violations workers hired by employment agencies may face.

³⁸ Interview with anonymous employment agency worker recruiter, January 2011.

³⁹ The first question CEREAL-GDL staff ask laid-off workers when they come to their offices is whether or not they signed a resignation form. If they have, then there is not much CEREAL-GDL can do legally to hold a firm or agency accountable for a wrongful termination.

⁴⁰ Interview with an electronics industry worker, January 2011.

3.2.2: Low Wages

Wages in electronics manufacturing across Mexico are not commensurate with productivity and are not sufficient to cover a family's basic needs. Though worker productivity in the electronics-manufacturing sector at the national level increased 365 percent between 1988-2002, wages have stayed relatively stagnant and decreased in real value given inflation (Dussel Peters 2004). The salary for an assembly-line worker in the Guadalajara cluster is typically between 7.5 and 9 USD per day.⁴¹ While this salary is one and a half to two times the minimum wage in Mexico,⁴² its purchasing power has decreased dramatically. For example, between 2003 and 2011, the cost of a basic food basket in Mexico increased by over 78 percent (Salazar 2011). CEREAL-GDL estimates that to meet food, transportation, basic recreation, clothing, and education costs for a family of four requires approximately 250 USD per week, suggesting that workers earn one quarter of the necessary wages to cover these costs (CEREAL 2006). A laborer who has worked in the electronics industry for over 20 years highlights that up to 10 years ago her salary was sufficient to cover her and her kids' basic needs, while today salaries are stagnant and she can barely make ends meet.⁴³

It is important to note that a worker's remuneration is based on their base salary and bonuses related to attendance and timeliness. Workers, however, are not systematically informed of these bonus structures (CEREAL 2007). Further, bonuses can make up a significant part of a worker's salary, and they are deducted from their pay should they miss a day of work or arrive tardy. For example, one worker notes: "When someone misses work, [the company] deducts 230 pesos [21 USD]. Can you imagine that? They pay [7.2 USD] a day and they deduct [21 USD] - almost three days' pay. That's not right, but it's company policy," (cited in CEREAL 2006). To supplement their salary, workers often work overtime hours.

3.2.3: Long and Irregular Working Hours

By law, firms are required to give workers one day off per week, and may require up to 48 hours of work per week without paying overtime. Thus, the majority of laborers work eight hour days, six days per week. Short-term contracts give firms and employment agencies ample flexibility to rotate workers' hours or days of work.⁴⁴ The same dynamic occurs with overtime. While workers often agree to work or proactively request overtime hours to supplement their income, firms may coerce workers to work extra hours without overtime pay. For example, if there is a lull in production, workers may be given time off, but then required to "make up the time" in subsequent weeks by working longer shifts or on days off without overtime pay. Similarly, workers may be required to work longer hours or on days off prior to a temporary scheduled firm closure. For example, recently a major EMS firm suspended its operations for a week and required workers to work on their days off for four weeks beforehand without overtime pay to make up for the week the factory would be closed.⁴⁵ This practice is called *tiempo por tiempo* (time for time) and is illegal. Ultimately, however, if a worker does not agree with or

⁴¹ These estimates are based on CEREAL (2009) and a unique data set compiled by me of workers that sought assistance from CEREAL-GDL between 2008-2010.

⁴² Minimum wage for large cities in Mexico in 2011 is 59.82 pesos per day (approximately 5 USD).

⁴³ Interview with an electronics industry worker, January 2011.

⁴⁴ For example, one week a worker may have Tuesdays off and the next have Thursdays off.

⁴⁵ Interview with an electronics industry worker, January 2011. See (CEREAL 2006) for similar cases.

voices an objection regarding scheduling changes or “requested” overtime work, their short-term contract may simply not be renewed again.

Additionally, it is important to highlight that most workers live in peripheral areas of the Guadalajara metropolitan area (ZMG, its acronym in Spanish) and that public transportation tends to be limited. For example, bus routes may not reach these areas or end service early in the evening. Many workers rely on private company buses that transport them to the factories. Whether through public or company transportation, workers may spend upwards of two hours each way to reach their worksite. Moreover, in cases when firm buses arrive at worksites before a shift is scheduled to start, firm managers are known to require workers to start work immediately upon arrival and do not compensate for the extra time on the assembly line.

3.2.4: Lack of Freedom of Association

Worker’s freedom of association (FOA) is a pillar of Mexico’s labor law. FOA rights stipulate that workers have the right to organize unions and collectively bargain with their employers. In practice, as discussed in Chapter 2, workers across Mexico, none the least in the electronics sector in Guadalajara, are not afforded genuine FOA rights. This is not to say that electronics industry workers are not unionized. Indeed, whether they are hired directly by a firm or through an employment agency, more than likely every single one of them is. This circumstance is due to the existence of employer protection contracts and interrelated ghost unions discussed in Chapter 2.

The vast majority, if not all, of the collective bargaining contracts in the Guadalajara electronics industry are EPCs held primarily by ghost unions under the umbrella of the CTM and CROM corporatist trade union federations. As Oscar Maldonado, Senior Director of Human Resources for Sanmina-SCI operations in Guadalajara, notes:

“I have a collective contract with the CTM to which I pay a quarterly amount [in representation of worker dues] which is tax deductible...I don’t have a union representative at the plant: [the firm], the union, and our employees do not think it is necessary because we have our own human resources department which workers can turn to with any issues...and they are all treated fairly.”⁴⁶

According to Maldonado, all workers at the Sanmina-SCI Guadalajara plant know they are represented by the CTM. Based on research conducted by CEREAL-GDL and other academics, this is highly unlikely. According to CEREAL-GDL, close to 90 percent of workers do not know that they are part of a union (CEREAL 2006; CEREAL 2009). Similarly, in a survey with 440 workers of the electronics industry, Partida Rocha (2005) finds that 88 percent of interviewed workers did not know they were unionized and further that some of the interviewees did not even know what the term “trade union” meant.

Importantly, because workers are already “represented” by ghost unions, if a trade union genuinely interested in representing workers attempted to challenge a ghost union’s EPCs with firms, they would have to go through a *recuento* (employee voting) process, which as discussed in Chapter 2 is long and is likely to end in defeat. In the context of employment agency hiring and firing, it would be particularly difficult, as organizing a core group of workers who may be laid off at any time is in itself a considerable challenge. Indeed, electronics industry workers in

⁴⁶ Interview with Oscar Maldonado, Senior Director of Human Resources for Sanmina-SCI operations in Guadalajara, March 2011.

Guadalajara find that even discussing issues related to FOA or organizing workers may lead to being suspended or fired. For example, in 2005, 11 workers were suspended from a leading contract manufacturing firm for discussing labor rights over lunch (CEREAL 2006). This case is emblematic of the reasons workers are generally afraid of even discussing labor rights or organizing in the workplace (see also CEREAL 2007 and CEREAL 2009).

3.2.5: Hiring and Workplace Discrimination and Harassment

Discrimination can take many forms. At the time of hiring, workers may be discriminated against for sexual preferences, having tattoos, being pregnant or even for having a relative or friend who is a labor lawyer (CAFOD 2004; CEREAL 2006). For example, through 2006 it was common practice for agencies to require workers to strip in order to check to see whether they had tattoos. Female workers were also required to take pregnancy tests. Such hiring practices are illegal. Since 2006 the use of these practices by employment agencies and firms has decreased by over 65 percent (CEREAL 2009). Similarly, while “voluntary resignations” remain a hallmark of agency work, it is an improvement over past practices that included employment agencies that obligated workers to sign blank resignation forms as a condition for being hired. While these improvements are laudable, there is evidence that hiring discrimination may take other forms. For example, an employment agency insider notes that the agency conducts socio-economic studies of potential workers. When possible, they take pictures of their homes and, in some cases, based on the reflected economic situation of the person, may reduce the starting salary.⁴⁷

Discrimination and sexual harassment within the workplace remain prevalent issues. Promotions based on favorable relationships with managers and not merit is typical (see CEREAL 2006 and 2009 for documented cases). For example, a group of workers at the EMS firm Jabil Circuits is suing the firm because salary increases and promotions were not given uniformly in their division. This group did not receive adequate increases, though their performance reviews were excellent. After filing the suit, these workers were fired. They are now also suing for wrongful termination. Sexual harassment is also a prevalent issue, especially for female workers. CEREAL-GDL routinely asks workers if they have witnessed colleagues being sexually harassed. In a survey of workers in 2006 and 2009, 90 and 85 percent said “yes” respectively (CEREAL 2009). However, victims rarely report sexual harassment.

Section 3.3: Worker Perceptions of and Response to Working Conditions

Against the context of exacting work conditions and the risk of being laid off at any time, workers prefer to remain silent and not risk losing their employment in the Guadalajara electronics industry. Workers tolerate demanding conditions due to economic necessity (Mendoza 2009; Gabayet Ortega 2006). Salaries in the sector are higher than in other local manufacturing sectors and, though employment is a revolving door, the sector is more stable: electronics firms have a lower risk of going out business, as well as pay on time and offer overtime hours (Ibid.). Compared to other sectors, in the event of layoffs workers can generally find another electronics manufacturing position through the same or another employment agency relatively quickly. Further, while workers are upset about working conditions, they generally maintain a high regard for the work itself. As one worker notes in relation to working conditions: “I like this type of work, but, in general, I see it as the worst of industries...”(Mendoza Zárte 2010, 9). As Mendoza Zárte (2010) concludes: “workers find certain satisfaction with their

⁴⁷ Interview with anonymous employment agency worker recruiter, January 2011.

work, even when they are not fully content...it is not the work itself that causes worker malaise and critique, but its conditions..." (9).

The critique of working conditions is more often than not expressed through non-confrontational individual and collective action. Workers develop what Mendoza Zárte (2010) calls "personal arrangements" that make their day-to-day work life more bearable. For example, workers express their discontent individually by reducing their efforts when supervisors are not paying attention or in some cases taking tools or work materials home. Collectively, workers may arrange with supervisors to have a few extra minutes of lunchtime in return for a higher assembly line speed to catch up with production. Such actions offer workers satisfaction, but do not confront firms about working conditions directly (Ibid.). As discussed previously in this chapter, openly discussing labor rights among themselves, let alone bringing them directly to the attention of management, is likely to lead to firm retribution.⁴⁸ In other words, workers may find comradely and support from their co-workers, but their social cohesiveness toward confrontational collective action is limited by "revolving door" employment practices that rotate in new workers constantly and threaten to lay off outspoken individuals or groups of workers raising issues related to conditions.

Beyond coping mechanisms within the workplace, if a worker decides to file a legal grievance against an employer, as discussed in the next section, the process is long and would likely lead to the worker desisting from the claim before it was concluded.

Section 3.4: Labor Dispute Remediation through Mexico's Labor Boards

As discussed in Chapter 2, starting and following through on a legal claim regarding a labor violation in Mexico can be a long and complex process. Table 2 reflects the steps of the claims process, as well as the time allotted by law and the time it takes in practice. The claims process takes on average three years to resolve a labor violations case and is mired with hurdles and complexities inherent in the system itself and exasperated by firm and employment agency tactics that include denying the receipt of labor board notifications in Guadalajara since they are officially registered in another state. Indeed, the claims process is almost impossible to navigate without the support of a lawyer willing and able to represent a worker over a long period of time. This in and of itself is a challenging task given that private lawyers are generally interested in taking cases that end quickly since they are paid a percentage of what is won.

Labor board inefficiencies and case backlogs can play a significant role in causing delays in the claims process, but so can firm tactics. For example, in January 2011, the author attended the hearing of a case between workers and the electronics manufacturing subcontractor Sanmina-SCI and the employment agency Damsa. The hearing was postponed because the labor board was not able to properly notify Damsa of the hearing. This was due to the fact that, while Damsa has offices in Guadalajara, the agency is officially registered in the state of Michoacán. As such, when the notification of the hearing arrived at the Damsa Guadalajara offices, the agency refused

⁴⁸ Electronics manufacturing firms in Guadalajara maintain that there are ample avenues for workers to express their concerns. As detailed by CEREAL-GDL (2006), firms highlight that they have anonymous suggestion boxes and that workers are free to express their concerns to any managers without fear of retribution. However, interviews with workers conducted by CEREAL-GDL, as well as by me highlight that workers are generally not aware of suggestion boxes and do not feel safe sharing concerns with managers.

receipt. It was up to the workers (or their lawyers) to either get Damsa's Guadalajara offices to accept receipt of the notification, or to determine the correct address of the firms' headquarters in Michoacán. In the event of the latter, the Jalisco labor board would have to send the notification to the corresponding labor board in Michoacán via mail. The Michoacán labor board would then have to notify the agency. Note that all notifications must be made personally and only by personnel certified by each state. In short, this process could take weeks or months.

Table 2: Length of Labor Board Dispute Resolution in Guadalajara, Theory vs. Practice

Theory	Action	Actor Responsible	Practice⁴⁹
Day 1	Claim is submitted	Worker or his/her representative	Day 1
Day 2	Labor Board confirms receipt	Labor board	Day 10-15
Day 5	Employer Notified of claim	By law the labor board must notify an employer of a claim within 5 days of receipt and within 10 days of the scheduled hearing	Day 16-35
Day 16	First Hearing Held	The hearing is held at the Labor Board; employer and worker representatives are required to be present. Attempt is made to negotiate a settlement. If a settlement is not reached, then workers list evidence they have at their disposal regarding employer wrongdoing, and the employer responds.	Day 46-60
Day 31	Date set for presentation of evidence	Labor board	Day 47-61
Day 41-44	Hearing to present evidence	The hearing is held at the labor board. Workers and employers present evidence for and against the claimed labor violation.	Day 91-210
Day 45	First draft of Labor board's decision	Labor board drafts an arbitration decision. Many times this step requires labor lawyers to request a legal injunction against the labor board to speed up the process.	Day 302-486
Day 47	Labor board votes and claim is closed	Labor board managing council meets to decide a ruling in favor of the worker or employer. Both parties are informed.	Day 488
Day 48	Notify the parties of ruling	Labor board	Day 503-518

⁴⁹ The time it takes in practice is based on the experience of CEREAL-GDL's labor lawyer who has represented over 50 workers in claims against electronics firms. Note that these are very conservative estimates.

While a worker filing a claim is not required to have a lawyer represent him/her, as demonstrated by the example above, it is a practical necessity, especially when going up against a multinational firm and its cadre of lawyers. Labor lawyers in Guadalajara interviewed by Gabayet Ortega (2006) express the sentiment that there is an unofficial list among them of “untouchable” firms, including all of the multinationals “against which claims cannot succeed” (36). It is of no surprise that private lawyers representing workers are interested in negotiating a settlement with these firms as quickly as possible. Private lawyers get paid a percentage of whatever the settlement is, and are not interested in following a case for years at a time.⁵⁰ With regard to lawyers, it is also critical to highlight the role of *coyotes*. There are often dozens of individuals outside of the labor board offering legal aid. These individuals are hired by private labor lawyers to recruit clients, or offer to represent workers themselves. The competency of *coyotes* to follow a case themselves is limited. For example, as the newspaper *Mural* highlights, a vast majority of *coyotes* are not licensed lawyers, though they pass themselves off to be (Velazco 2010). Their interest is also to negotiate a settlement as quickly as possible; and, like private lawyers, if they are not able to, then it is not uncommon for them to simply drop the case.

Overall, then, it is no easy feat for a worker to endure a labor rights claim process. The process can take months if not years. The examples provided above demonstrate that, in the case of Jalisco, the process is arduous and fraught with potential hurdles for workers, particularly those making a claim against multinational firms. It is therefore not surprising that, in the electronics industry, the majority of cases filed by electronics industry workers at the labor boards end in the workers desisting from the claim (De la O Martínez cited in Gabayet Ortega 2006).

Section 3.5: Chapter Summary

Mexico’s Silicon Valley is composed of a cluster of electronics industry multinational subsidiaries that located in Guadalajara in the 1990s in tandem with the country’s shift to neo-liberal economic policies. The cluster is essentially an enclave of foreign OEM and EMS firms focusing on manufacturing electronics for export. Importantly, there is a strong cohesiveness among these firms’ local managers in the cluster. This cohesiveness is reflected by their active participation in CANIETI, as well as the establishment of the not-for-profit organization CADELEC. Ultimately, local managers’ job security is dependent on decisions made by firm headquarters in high-income countries. Through cluster promotion efforts, local managers seek to strengthen not just their respective firms positions within the cluster, but the cluster as a whole. This serves as a means of incentivizing their headquarters to maintain a presence in Guadalajara, an increasingly important effort for local managers given growing competition from Asian countries to attract electronics manufacturing.

Though there is cohesiveness between OEM and EMS firms in the cluster, there is also a highly demarcated division of labor between these types of firms. OEMs outsource electronics manufacturing activities to EMS firms, which are by far the primary employers in the cluster and rely on low-road labor practices facilitated by EPCs and employment agencies, to constrain costs, as well as worker rights. These dynamics lead to exacting working conditions for manufacturing workers, notably: employment uncertainty, low wages, long and irregular working hours, lack of FOA, and hiring and workplace discrimination and harassment.

⁵⁰ Interview with Paul Ochoa Aguirre, CEREAL-GDL labor lawyer, January 2011.

Importantly, low-road labor practices are facilitated by the State's lack of labor law enforcement and its inert labor remediation mechanism, particularly in Jalisco. Fearful of firm retribution, particularly implicit employment termination through non-renewal of short-term contracts, workers rarely voice demands for better working conditions and, if they make them at all, desist from legal claims at labor boards.

Under these conditions, it is surprising that over the past half-decade there have been working condition improvements related to hiring discrimination in Mexico's Silicon Valley. As discussed in this chapter, hiring discrimination practices such as pregnancy tests have decreased by over 65 percent. Further, electronics industry firms have engaged in an institutionalized dialogue to discuss and remediate labor rights violations with the local labor rights organization, CEREAL-GDL, as well as, in what amounts to private self-regulation, launching a certification scheme that rates employment agencies on their labor practices. Why and how did these improvements occur, and why are firms, seemingly against their interests, remediating cases directly with a labor rights organization and regulating employment agencies? These questions are analyzed in the following chapter.

Chapter 4: Confronting Low-Road Labor Practices in Mexico's Silicon Valley

As discussed in Chapter 3, labor conditions for electronics manufacturing workers in Mexico's Silicon Valley are characterized by low wages, excessive working hours, hiring through short-term contracts, lack of freedom of association, and hiring discrimination against workers. In the past five years there have been improvements in some labor conditions, particularly those related to hiring discrimination. Additionally, electronics firms in the cluster, through their business association, have engaged in an institutionalized dialogue with the local labor rights organization CEREAL-GDL to discuss and remediate labor rights violations, as well as launched an initiative in 2009 to certify the labor practices of employment agencies servicing the sector. The objective of this chapter is to analyze the factors and the relationship between firms and a local labor rights organization that facilitated these working condition improvements in Guadalajara's electronics manufacturing sector.

The Jesuit labor rights organization CEREAL-GDL has played a critical role in the fomentation of working condition improvements, as well as efforts by electronics firms in Guadalajara and around the world to pay greater attention to labor rights in their supply chains. Currently, CEREAL-GDL conducts activities which can be categorized into four general areas: worker education, organization and empowerment; legal representation of workers in claims against firms; participation in transnational advocacy; and an institutionalized direct dialogue with firms. The organization has evolved its areas of work since its inception 15 years ago; each builds off of the other and responds to dynamics of electronics manufacturing in Guadalajara. Specifically, for example, while CEREAL-GDL's primary focus at the time of its establishment and to date is worker education and empowerment, the organization has calibrated its pedagogical methods to reflect a generalized lack of collective cohesiveness among workers. Further, by the early 2000s the organization added legal representation of workers to its repertoire, followed by transnational advocacy in the middle of the same decade. Together with worker education, organization and empowerment, these areas of work are focused on confronting electronics industry firm regarding their labor practices and working conditions.

In the mid-2000s, these confrontational strategies, particularly transnational advocacy, led to a collective response from electronics firms, not only in Guadalajara, but also around the world to establish of the first electronics industry private code of conduct to self-regulate their labor practices. Further, firms with subsidiaries in Guadalajara engaged in an antagonistic collaboration with CEREAL-GDL manifested by an institutionalized dialogue between local subsidiaries and their headquarters with the organization to discuss and remediate labor rights violations.

Given CEREAL-GDL's role in advancing labor rights protection in the electronics industry in Guadalajara, this chapter analyzes the factors and relationships that have led to working condition improvements and that could lead to future improvements, from the perspective of the activities conducted by CEREAL-GDL. In other words, the chapter analyzes each of the organization's areas of work as they have evolved over time. This approach offers a systematic analysis of the organization's calibration of strategic activity foci, including the reasons for and conditions under which antagonistic collaboration among a labor rights organization and firms emerged.

The chapter is organized as follows: The first section analyzes the roots and structure of CEREAL-GDL, emphasizing the organization's direct ties to the Jesuit institution in Mexico. This link offers the organization stable funding, a positive public image, and access to firm managers that set it apart from other local labor rights organizations operating in Mexico. This section also analyzes why CEREAL-GDL decided to focus on the electronics industry and how this decision created a schism between it and another Jesuit labor rights organization that provided substantial early support to the founders of CEREAL-GDL and, on paper, oversees CEREAL-GDL's work. Sections two through five of the chapter analyze each of CEREAL-GDL's areas of work, their impact on working condition improvements, and the response from electronics industry firms to each effort. The sixth section of the chapter analyzes the emergence of the employment agency certification scheme launched by firms. The seventh section discusses CEREAL-GDL's efforts to support electronics industry workers in Mexico's northern border region, which have been significantly less successful than in Guadalajara. This reality serves to highlight particularities of electronics manufacturing in Guadalajara, for example the existence of a very cohesive business association which is highly supported by brand name firms such as HP, as well as the physical presence of CEREAL-GDL, that have established a foundation from which working condition improvements have occurred and could continue to progress in Mexico's Silicon Valley.

Section 4.1: Establishment and Structure of CEREAL-GDL

4.1.1: CEREAL-GDL's Roots

*"At first it was only the desire of a group of Jesuits, students of philosophy and social sciences, to remain close to the realities faced by workers."*⁵¹

CEREAL-GDL's roots can be traced back to a group of undergraduate Jesuit students who in 1994 participated in a mission to the northern border of Mexico to experience first-hand the working conditions in and the everyday realities of workers laboring for *maquiladoras*.⁵² Struck by their experience working in *maquiladoras*, upon returning to Guadalajara to continue their studies, two of the Jesuit students formed the group *Equipo Obrero de Jesuitas* (Jesuit Worker Team—EOJ). The EOJ, which at its peak in 1996 was composed of six full-time undergraduate Jesuit students, canvassed a handful of working-class neighborhoods in the Guadalajara metropolitan area (ZMG) inviting *maquiladora* workers, regardless of the industrial sector to which they pertained, to participate in workshops related to labor rights.⁵³ By 1997, the

⁵¹ Unpublished chronology of CEREAL-GDL's founding, written and provided to me by Gabriel Mendoza Zárate, a founding member of the EOJ and CEREAL-GDL.

⁵² As part of their formation, students training to become Jesuit priests are required to participate in service missions that allow them to experience the lived realities of oppressed populations. As one of these Jesuit students and founders of CEREAL-GDL, Gabriel Mendoza Zárate, notes: "As Jesuits we don't want to be outside of the world, but within it; this also means within the working world and being close to workers, sharing their suffering, hopes, their likes and their life in general..." During the mission to the border "I, like all of [the workers in the region], looked for a job, waiting in lines to land employment, and I was finally hired by a *maquiladora*. And, well, I experienced the monotony and difficulties that these workers face...and saw first hand what the life of the workers was really like inside factories. This left me with the restlessness that something needed to be done about the unjust situations that are found in these types of places" (Gabriel Mendoza Zárate, Interview February 1, 2011).

⁵³ Through these activities, the EOJ gained the following of firm-specific groups of workers. For example, the EOJ routinely conducted workshops for a group of workers from the Hershey's factory in the ZMG. Note that when the group turned their focus to the electronics industry they dissolved their work with all non-electronics sector worker groups.

rapidly increasing demand for workshops began to infringe on EOJ members' responsibilities as full-time students. In turn, EOJ members secured funding from their Jesuit superiors to hire a part-time researcher to systematically study the *maquiladora* industry and the condition of its workers throughout Guadalajara, as well as to develop a strategic plan for the future of the EOJ.

It is important to highlight that the founders of CEREAL-GDL have a rich intellectual background, which they have applied to the research undertaken by CEREAL-GDL, beginning with this first study. For example, unsatisfied with the social analysis methodology utilized by FCyE, the hired part-time researcher, now the coordinator of CEREAL-GDL and a trained sociologist, and the leader of the EOJ, Gabriel Mendoza Zárata, who is currently studying his doctorate in sociology in France, collaborated to develop a new methodology and set of instruments to analyze the social dynamics in Guadalajara taking into account industrial relations, political and economic actors.⁵⁴ It was through these instruments that CEREAL-GDL identified the needs and conditions of *maquiladora* workers in Guadalajara.

In addition to highlighting working conditions such as employment instability, the research also highlighted that *maquiladora* workers reside in neighborhoods scattered throughout the ZMG and not necessarily located near their employers. The report also presented the size and scope of various industry sectors, noting that the electronics industry stood out in terms of employment creation and financial investment;⁵⁵ and, moreover, that workers in the sector were the most vulnerable, as measured in terms of precarious work conditions including employment instability, low wages, and long working hours. Based on the report findings, the EOJ concluded that, as Gabriel Mendoza Zárata recollects: "if we really wanted to make a contribution [to working conditions in *maquiladoras*] we had to focus on a sector and not a handful of neighborhoods, and, of the sectors it seemed important to prioritize electronics manufacturing workers."⁵⁶ In other words, the EOJ decided to shift its worker outreach strategy from focusing on geographical areas (specific working-class neighborhoods) to a specific industrial sector (the electronics manufacturing industry) with workers that reside throughout the ZMG.

4.1.2: Institutionalization of CEREAL-GDL as a Jesuit Initiative

Actualizing the shift to focus on the electronics industry required increased staffing and financial resources. In turn, the EOJ sought to become incorporated as an initiative (known as a *proyecto*) of the Mexican Jesuit umbrella organization *Fomento Cultural y Educativo* (Cultural

⁵⁴ FCyE trained *proyecto* staff and encouraged them to utilize a Gramscian Marxist social analysis model to analyze the social conditions of workers and as a basis for designing activities. In general terms, this approach takes a dualistic view of society: the working class and the capitalist class which controls cultural hegemony. CEREAL-GDL's founders found this analytical model outdated, as it did not allow them to paint a nuanced picture and understanding of industrial relations and workers' needs. "The reality that we encountered did not reflect two blocks [workers and capitalists] that could account for all of the involved actors [in the industrial relations system], but also a multiplicity of levels and a variety of [political and economic] conflicts" (Mendoza Zárata 2002, 8). In turn, CEREAL-GDL developed a social analysis methodology and corresponding instruments founded on the notion that interactions between actors is multifaceted and takes place in space and time and not in "theoretical buckets" social relations. For a detailed review of CEREAL-GDL's methodology see Zárata (2002). Notably, in recent years, FCyE has adopted the CEREAL-GDL social analysis instruments.

⁵⁵ As discussed in Appendix 2, the electronics manufacturing industry boomed in Guadalajara in the mid-1990s and, as EOJ's research indicated, between 1995 and 1997 this sector had achieved foreign direct investment of close to 500 million dollars and had generated over 22,500 jobs.

⁵⁶ Interview with Gabriel Mendoza Zárata, founding member of the EOJ and CEREAL-GDL, January 2011.

and Educational Promotion—FCyE). Established in 1973, FCyE financially supports a handful of *proyectos* that educate and empower underrepresented populations in Mexico. EOJ's candidacy to become a *proyecto* was supported by the only other labor rights NGO under the umbrella of FCyE: the Center for Reflection and Action on Labor Rights based in Mexico City (*Centro de Reflexión y Acción Laboral*—CEREAL-DF). Since its founding in 1985, CEREAL-DF has promoted the internal democratization of trade unions in Mexico with a focus on “strategic” unions representing “strategic” economic sectors, such as national level industries and the public sector.^{57,58} In its nascent years, the EOJ members relied on worker education materials developed by CEREAL-DF and with permission from the latter began to use the name CEREAL-GDL when attending meetings and events.

Ultimately, with the backing of CEREAL-DF, FCyE incorporated the EOJ as a *proyecto* in March 1998. That month, the EOJ officially changed its name to CEREAL-GDL and opened its offices in Guadalajara. CEREAL-GDL's legal status then and to this day is that of a subsidiary of FCyE. Notably, though CEREAL-GDL is under the umbrella of FCyE, Jesuits have limited oversight over the organization's day-to-day decision-making. First, unlike every other FCyE *proyecto*, all of CEREAL-GDL's staff members, who today include five full-time staff and one full-time volunteer that receives a stipend, are non-Jesuits (non-Jesuits are referred to as *laicos*).^{59,60} Further, as related to strategic oversight, FCyE is by and large hands-off with its *proyectos*, recognizing that it is the implementers on the ground that understand the circumstances of the populations they are aiming to reach. In fact, each FCyE *proyecto* is required to undertake a research project at the time of its founding to identify its strategic foci. To this end, CEREAL-GDL built on the foundation of the initial research conducted in 1997 and solidified its commitment to focus on aiding workers in the electronics manufacturing sector in Guadalajara. This decision caused significant controversy within FCyE, including an ideological schism between CEREAL-GDL and CEREAL-DF.

4.1.3: Internal Controversy due to CEREAL-GDL's Focus on Electronics Manufacturing

Within FCyE's operations structure, CEREAL-GDL is, on paper, a sub-*proyecto* of CEREAL-DF, meaning that the organization reports directly to CEREAL-DF on issues ranging from annual budgets to reporting on activities. In practice, however, since 2000, CEREAL-GDL reports directly to FCyE. This shift in the reporting structure was a product of CEREAL-GDL's decision to focus its efforts on the electronics manufacturing sector in Guadalajara, which

⁵⁷ See: http://www.sjsocial.org/fomento/proyectos/plantilla.php?texto=cereal_m.

⁵⁸ These sectors are considered strategic because they represent hundreds of thousands of workers and, in theory, positive changes within local trade unions in the sectors could lead to significant trickle down working condition improvements throughout the entire sector.

⁵⁹ At the time of CEREAL-GDL's founding EOJ members maintained voting rights within the organization. In other words, they had a say in organizational planning and activity development. Importantly, however, they were no longer engaged with the day-to-day operations of the organization, and further, many were only intermittently in Guadalajara as they were sent on missions for long periods of time while they finished their studies or permanently after graduating. Ultimately, CEREAL-GDL's *laico* staff and the founding EOJ members mutually agreed in 2003 that the latter would no longer have a voice or vote in regard to organizational decisions.

⁶⁰ In 2003, CEREAL-GDL requested that an ordained Jesuit join the organization, not for religious reasons but as a means to add a cost-neutral staff member (the Jesuit institution fully supports ordained Jesuit financially). FCyE denied the request noting that the organization was functioning well enough and that ordained Jesuits were demanded in other areas of the country.

CEREAL-DF does not consider a “strategic sector,” as well as CEREAL-GDL’s move away from activities related to democratizing trade unions, CEREAL-DF’s primary focus.

At the time of its establishment under the umbrella of FCyE and before deciding to focus solely on the electronics manufacturing sector, CEREAL-GDL maintained the intention of mimicking CEREAL-DF’s work related to democratizing “strategic” sector trade unions in Guadalajara. To this end, starting in 1995 EOJ members actively participated in workshops conducted by the *Coordinadora Intersindical Democrática Jalisciense* (Democratic Jalisco Inter-union Coordinator) regarding trade union internal democratization.⁶¹ The objective of the Jesuit student members was to become versed in methods by which workers could be mobilized to push corporatist trade union internal democracy and independence from the State and private sector interests. To this end, the EOJ established relationships with some public service trade unions in Jalisco. However, these relationships did not take root, in large part because the Jesuit students were themselves just beginning to learn about the internal structure and operation of trade unions and thus had little to offer trade union members in terms of advice or workshops related to democratizing trade unions.⁶²

Following CEREAL-GDL’s incorporation into FCyE and its increasing focus on the electronics manufacturing sector, CEREAL-DF expected CEREAL-GDL to continue democratizing trade unions in strategic sectors, which in their view did not include the *maquiladora* sector because of the footloose nature of multinational manufacturing firms. As Gabriel Mendoza Zárte recollects: “...in essence, CEREAL-DF through [CEREAL-GDL], seemed to want to replicate its line of work in Guadalajara.”⁶³ Yet, CEREAL-GDL staff and the EOJ founding members were fully committed to working with *maquiladora* workers, and moreover those laboring in the electronics manufacturing sector. While CEREAL-DF disapproved of CEREAL-GDL’s shift to focus on this sector, FCyE accepted CEREAL-GDL’s decision namely because the organization had sufficiently demonstrated through research that workers in this industry were highly vulnerable to exacting working conditions. Ultimately, against this backdrop, the internal reporting structure within FCyE shifted, and today CEREAL-GDL in practice operates without administrative or operational oversight from CEREAL-DF. In short, CEREAL-GDL’s ties to CEREAL-DF were essentially cut in 2000. Though today the two organizations communicate amicably, there remains a perceptible tension between them. On the other hand, CEREAL-GDL’s relationship with FCyE remains fully intact and offers the former critical support as related to resources, public image, and access to industry leaders.

⁶¹ The CIDJ coordinated a set of small unions considered independent and democratic operating in the state of Jalisco, such as unions representing faculty of the *Universidad de Guadalajara* (University of Guadalajara) (Flores Robles et. al. 1999). An approximation of the number of workers it represented is 3,000 (Ibid, 27). CEREAL-GDL maintained this relationship until the CIDJ ceased to exist in the mid 2000s.

⁶² Email interview with Gabriel Mendoza Zárte, May 2011.

⁶³ Interview with Gabriel Mendoza Zárte, founding member of the EOJ and CEREAL-GDL, January 2011.

4.1.4: Benefits of Being Under the Umbrella of the Jesuit Institution

“We may be a staff of only five, but we have the full backing of the entire [Jesuit institution], which supports us and is with us every step of the way.”⁶⁴

The institutional support of FCyE creates what can be called a “safe space” from which CEREAL-GDL conducts its activities. This “safe space” sets the organization apart from many other labor rights organizations operating in Mexico. First and foremost, the financial stability provided by FCyE to CEREAL-GDL cannot be overstated. Between 2000 and 2010, the Mexican Center for Philanthropy (*Centro Mexicano para la Filantropía*), in collaboration with the international organization Civics,⁶⁵ undertook the first representative survey of Mexican NGOs. Survey results⁶⁶ highlight that there are over 30,000 NGOs currently operating in Mexico, a third of which rely solely on volunteers. In other words, these NGOs have no salaried staff. Further, if an NGO has salaried staff, they are typically few. Contrary to these trends, FCyE provides CEREAL-GDL stable funding that covers its staffing, office and supply needs. The ensured institutional and financial commitment from FCyE offers CEREAL-GDL the ability to maintain a sustained presence in Guadalajara, offering long-term support to workers to improve working conditions, a luxury many other labor rights organizations in Mexico do not have.

This is not to say that other labor rights NGOs in Mexico do not count on external support. Indeed, many Mexican labor rights organizations are linked to transnational advocacy networks. Such networks are comprised of formal or informal coalitions of national and international NGOs that pressure firms to change labor practices (Bandy 2004; Elliott et al. 2003; Fisher 1997; Fox 2004; Seidman 2009).⁶⁷ On the one hand, this form of advocacy can be of significant support to national labor rights NGOs undertaking specific campaigns (see for example Hermanson et al. 2005). On the other hand, international NGO attention tends to be time-limited: attention and funding floods as a labor rights campaign, typically focused on a particular factory, gains footing; however, once the campaign ends, international NGO attention and funding is placed elsewhere, leaving behind limited resources for local NGOs to continue providing support to workers (Damgaard 1997, 253; Seidman 2009, 37).⁶⁸

Being tied to transnational relationships also makes labor rights organizations vulnerable to criticisms that they are pawns of international actors by those opposed to their work (Fisher 1997). For example, firms or corporatist trade unions may release press releases or go to the media with stories that labor rights organizations are following orders from international actors.

⁶⁴ Interview with Rubenia Guadalupe Delgado Figueroa, CEREAL-GDL staff member, January 2011.

⁶⁵ The international organization Civics launched a research initiative known as the Civil Society Index (CSI) in 2000 to capture the state of civil society in various countries. Mexico is one of the countries participating in the study (see: www.civics.org). Mexico specific findings will eventually be available at: www.iscmexico.org (the results sections of the website remain under construction as of May 2011).

⁶⁶ Mexico specific CSI results were made public during an August 12, 2010 workshop in Mexico City I attended.

⁶⁷ The characteristic of this advocacy model is what Seidman (2009) calls a “boomerang approach.” This approach consists of national NGOs providing information regarding firm malfeasance to international NGOs in developed countries, which in turn organize support and put international pressure on firms to remediate labor violations.

⁶⁸ Critics of transnational advocacy networks also highlight that they tend to focus on general labor rights issues and miss local nuances (Seidman 2009) and also highlight that they have not typically led to sustained positive outcomes (Bandy 2004).

CEREAL-GDL has not completely avoided this issue. For example, in 2001 corporatist trade unions prepared a confidential document that was leaked to the press naming NGOs in Mexico, including CEREAL-GDL, that “infiltrate firms with the support of United States and Canadian unions” (Universal. 2001). Yet, these types of criticisms are minor compared to the serious threats to labor rights NGO staff that CEREAL-GDL has avoided.

In Mexico, It is not uncommon for leaders and staff of labor rights NGOs to be harassed and even threatened. For example, on December 20, 2011, the offices of the labor rights organization *Centro de Apoyo al Trabajador* (Center for Support to Workers—CAT) in Puebla were broken into in what can be speculated to have been a response to a campaign to support freedom of association at an automobile plant in Puebla. The unidentified robbers vandalized the office, hacked the organization’s email address, and sent death threats to the organization’s leader (MSN 2011). This is one of dozens of similar examples. Yet, nothing like this has happened to CEREAL-GDL. As the organization’s coordinator Jorge Barajas notes: “perhaps it’s just a matter of time before something like what happened at the CAT happens to us. But, to a large extent we are shielded by the Jesuits. [In other words,] if something like this happened at our office, it would be construed in public opinion as an attack on the Jesuit institution, which in Mexico and especially in Guadalajara is held in high regard.”

It is essential to also highlight that beyond funding and operational support, CEREAL-GDL’s ties to the Jesuit institution facilitates access to and relationship development with leaders of electronics manufacturing firms in Guadalajara. As discussed in Chapter 3, many senior managers of electronics manufacturing subsidiaries located in Guadalajara are Mexican. Additionally, in some cases these managers studied at a Jesuit high school or university. For example, the general director of HP in Guadalajara studied at a Jesuit university and according to CEREAL-GDL staff this is one of the reasons he cites for being open to discussing labor rights issues with them. In another recent example, the owner of a leading employment agency in Guadalajara refused to meet with CEREAL-GDL until he found out that CEREAL-GDL is a Jesuits supported organization.⁶⁹ The owner of the agency conducted his high school and university studies at Jesuit institutions.

In sum, under the umbrella of FCyE, CEREAL-GDL is financially stable and benefits from the prestige the Jesuit institution holds in Mexico, especially in Guadalajara. From this “safe space” CEREAL-GDL is able to perform its activities without financial uncertainty or, until now, the serious threats faced by other Mexican labor rights organizations. Against this backdrop, the remaining sections of this chapter analyze the organization’s activities, as they have evolved over time. The organization’s activities are divided into four categories: educating and organizing workers, legally representing workers and using the local media, promoting and participating in transnational advocacy, and negotiating settlements with firms through an institutionalized dialogue. Each category is analyzed separately, though it is clear to see throughout the analysis how the activities complement one another and how they, separately and together, paint a picture of the dynamics and relationships within Mexico’s Silicon Valley that have led to working condition improvements through confrontation and antagonistic collaboration between CEREAL-GDL and firms.

⁶⁹ Interview with Jorge Barajas, CEREAL-GDL coordinator, May 2011.

Section 4.2: Educating and Organizing Workers

“When we started CEREAL-GDL our first intention was to educate and empower workers to democratize trade unions. When we realized this was not going to be possible, we changed course.”⁷⁰

Since its roots as the EOJ, CEREAL-GDL has maintained a strong belief that independent and representative trade unions are the best means by which to sustainably increase working conditions. As discussed in the previous section, in its early years, the organization conducted activities related to educating trade union members’ about their rights to the end of helping them pressure for increased internal democracy (democratization) in their respective trade unions. CEREAL-GDL intended to make this type of work a central activity. Yet, in 2000 as CEREAL-GDL solidified its focus on the electronics manufacturing sector, it discontinued such activities. This section analyzes CEREAL-GDLs experience working on trade union democratization and why it decided to end this work, as well as how it re-calibrated its methods of educating and organizing workers in Mexico’s Silicon Valley.

Though by 1998 CEREAL-GDL began to focus exclusively on the electronics manufacturing industry, this did not mean that CEREAL-GDL intended to fully abandon activities related to trade union democratization. Indeed, the organization’s original intent was to educate and empower electronics industry workers to uphold their labor rights *through* efforts to democratize trade unions. A key component to this approach was establishing firm-specific worker groups that CEREAL-GDL would support in pressuring for increased democratization within trade unions. By 1999, CEREAL-GDL had succeeded in organizing AT&T, IBM and NEC worker groups.⁷¹ Workers participating in these groups frequented CEREAL-GDL’s offices and attended labor rights workshops. Yet, as CEREAL-GDL learned more about the dynamics of the electronics industry through research, conversations with workers, as well as living through firm closures in the early 2000s, the organization came to the conclusion that democratizing unions was not a viable option in the electronics manufacturing sector and that firm-specific worker groups were not the best approach to sustained engagement with workers.

First, as related to democratizing unions, EPCs and ghost unions are the norm in the electronics manufacturing sector (see Chapters 2 and 3). As Jorge Barajas, coordinator of CEREAL-GDL notes:

“We came to realize that workers were represented by EPCs and that workers didn’t know they were unionized. Thus, trade unions exist on paper, but there was no one we, or workers, as educated as they could be about labor rights and trade unions, could pressure [to increase internal democracy]...

Additionally, workers in the industry tend to be young and many don’t even know what a union is.”⁷²

Second, employment instability and firm closures highlighted the weaknesses of organizing firm-specific worker groups. For example, “revolving door” employment through employment agencies (see chapter 3) makes it difficult to maintain stable or to grow firm-specific worker groups. Moreover, when firms, such as NEC in 2000, closed factories in Guadalajara, CEREAL-

⁷⁰ Interview with Gabriel Mendoza Zárate, founding member of the EOJ and CEREAL-GDL, January 2011.

⁷¹ As a means to develop firm-specific groups, CEREAL-GDL organized holiday parties and celebrated worker birthdays at its offices and asked workers to invite their coworkers. During these events, CEREAL-GDL staff would discuss labor rights and invite workers to attend such workshops on a regular basis. By 1999 CEREAL-GDL groups of AT&T, IBM and NEC workers frequented workshops.

⁷² Interview with Jorge Barajas, CEREAL-GDL coordinator, May 2011.

GDL from one day to the next lost an entire group of core workers with whom they had been working for almost two years. Facing these realities, CEREAL-GDL abandoned its aim to democratize trade unions and reformulated its worker organizing strategy to focus on inter-firm worker groups.

Moving forward, CEREAL-GDL began to conduct workshops that included workers from diverse electronics firm. In other words, at these inter-firm workshop there may be two workers from IBM, three from Sanmina-SCI, and so forth. Importantly, these workshops are more focused on individual versus collective action. Whereas firm-specific workshops intended to mobilize collective action, inter-firm workshops focus on individual protection of rights. This shift is exemplified in the modification of language used in CEREAL-GDL's training materials. Prior to 2000, training materials used phrases such as "lets organize ourselves" (*organicémonos*), while today training materials use phrases such as "if *you* are fired" (*si te despiden a ti*) or "this is *your* right" (*este es tu derecho*).

Although CEREAL-GDL ended its work related to democratizing trade unions and increasingly focused its training materials on individual action, this does not mean that the organization abandoned its interest in collective action. It is more accurate to state that, in adherence to its Freireian approach to education, the organization tailored its pedagogy to the expressed needs of workers, which in 2000 were focused on understanding their individual labor rights in a context where collective action is repressed. It would be seven years later that a group of workers would reach out to CEREAL-GDL demonstrating a serious interest in organizing some form of collective effort to counterbalance the power of electronics manufacturing firms. With support from CEREAL-GDL this group established in 2007 the *Coalición Nacional de Trabajadores y Ex-trabajadores de la Industria Electrónica* (National Coalition of Workers and Former Workers of the Electronics Industry—CTIE or Coalition), the most vociferous and the strongest representation of collective action in the history of Mexico's Silicon Valley.

4.2.1: CEREAL-GDL and the CTIE

*"Like a snowball, the worker movement emerging from the discontent of workers laid off from the Hitachi plant, grows and organizes itself while it focuses on the issue of labor indignation; from this base surged what is today the [CTIE]. Its leaders...promise to turn it into an avalanche"*⁷³

In late 2007, Hitachi announced that it would close its plant in Guadalajara the following year. Concerned for their jobs, approximately 15 Hitachi plant workers reached out to CEREAL-GDL to explore their options for fighting the closure. While according to labor law in Mexico, firms cannot unilaterally decide to close a plant without first dialoging with workers, this conversation must be conducted between a trade union and the firm. Unbeknown to the Hitachi plant workers, they were represented by an EPC held by the corporatist trade union federation the CROM, which expressed no interest in fighting the closure or for that matter meeting with workers (Milenio 2008a). Facing this reality, the workers proposed to CEREAL-GDL starting their own trade union to replace the CROM. CEREAL-GDL staff conveyed to the workers that such a process would take years and would likely be unsuccessful given the implementation of labor law in Mexico (see Chapter 2). Nonetheless, CEREAL-GDL committed itself to supporting

⁷³ Quote from Milenio (2008a).

the workers in whatever decision they made, but advised them to form a coalition of workers as a means to publically express their concerns.

Figure 3: CTIE Protest at Foxconn



Source and reproduction permission from CEREAL-GDL

Following the suggestion by CEREAL-GDL, the CTIE was born. Though worker mobilization and demonstrations by the CTIE did not impede Hitachi from closing its plant, it helped ensure that Hitachi paid legally appropriate severances to all of its workers. Over the course of past three years, CTIE membership has grown to approximately 60 members. Today CTIE members represent a variety of electronics manufacturing firms. Further, as the Coalition's name implies, former electronics industry workers may be a part of the group, a decision made by the CTIE as a means to incorporate laid off workers that have not yet regained employment in the sector. Coalition activities range from demonstrations outside of electronics manufacturing firms in Guadalajara to dissemination of press releases regarding working conditions in the sector generally or at a particular firm.⁷⁴

Importantly, while the Coalition is headed by and made up of workers, it is highly dependent on CEREAL-GDL. As a leader of the CTIE states: “We are not yet independent...we are still in diapers.”⁷⁵ CEREAL-GDL employs what could be called a “guiding hand” in relation to the activities and organization of the Coalition. Beyond offering CTIE member education workshops, CEREAL-GDL provides the coalition in-kind economic support such as materials to make protest cards and use of its office space. CEREAL-GDL also organizes Coalition meetings. For example, CEREAL-GDL staff routinely choose meeting dates and reach out to Coalition members to remind them of meeting times. Further, during Coalition meetings, including one attended by the author in January 2011, CEREAL-GDL staff steer the conversation through “suggestions” regarding the internal division of labor of CTIE members and the tasks that need to be completed. It seems evident that without strong leadership and support from CEREAL-GDL, the CTIE would not currently be able to stand on its own two feet.

This reality should not be viewed negatively, as the establishment of any worker movement requires significant guidance and support. Indeed, it is ultimately the objective of CEREAL-GDL to support the Coalition until they are ready to be independent. As a CEREAL-GDL staff member notes: “It’s up to them to decide what they want to be: another NGO or a trade union perhaps; we are here to support them unequivocally and to prepare them to take on bigger tasks.”⁷⁶ In this regard, for example, in addition to the labor rights workshops open to any electronics industry worker, CEREAL-GDL offers Coalition workers English classes. The idea

⁷⁴ During demonstrations, CTIE members wear masks to protect their identity and possible firm retaliation (see Figure 3).

⁷⁵ Interview with electronics industry worker/CTIE leader, January 2011.

⁷⁶ Interview with Rubenia Guadalupe Delgado Figueroa, CEREAL-GDL staff member, January 2011.

being that ultimately Coalition members will be able to communicate with international audiences and firm representatives directly.

Overall, whether the Coalition does indeed become an “avalanche” remains to be seen. What is clear until now is that at a minimum there is a collective movement taking shape in the Mexico’s Silicon Valley and that CEREAL-GDL has been an instrumental actor in the evolution of this movement.

Section 4.3: Legally Representing Workers and Using the Local Media

Since 2000 CEREAL-GDL has represented electronics industry workers’ legal claims at the corresponding Guadalajara labor board. To fully understand this effort, it is important to recapitulate the dynamics of the labor dispute system in Guadalajara’s local labor board discussed in Chapter 3. In general, the mechanism is inert, complex and arguably stacked in the favor of firms, particularly those with seasoned teams of labor lawyers.⁷⁷ In Guadalajara unsurprisingly, labor lawyers representing workers often consider multinationals “untouchable,” (Gabayet Ortega 2006).⁷⁸ Moreover, private labor rights lawyers are incentivized to end a trial quickly to receive their paycheck or to abandon cases that are too complicated. In many cases these lawyers employ the services of un-licensed *coyotes* to refer cases or handle the cases on their behalf. Ultimately, a vast majority of electronics industry workers that present labor rights claims often desist before a ruling is reached (Ibid.).

In this context, CEREAL-GDL presents an important option for workers in the electronics industry in Guadalajara to receive adequate legal representation. Unlike private lawyers and *coyotes*, CEREAL-GDL maintains a full-time labor lawyer on staff that represents workers pro-bono and is committed to sticking with a case until it is resolved to a worker’s satisfaction. As CEREAL-GDL’s labor lawyer notes:

“when firms offer settlements, we present them to workers, but it is completely up to do them to decide whether to accept a settlement; unlike other lawyers, we do not pressure workers to settle in order to get a paycheck and will continue forward with a case until a worker feels it has been resolved or the labor board makes a ruling. The latter can take years.”⁷⁹

Indeed, the reason CEREAL-GDL decided to begin providing legal representation to workers in 1999 was to ensure that workers receive appropriate representation. Specifically, in the wake of the NEC plant closure in 1999 and after consulting with CEREAL-GDL, a group of

⁷⁷ Multinational firms typically have a cadre of lawyers dedicated to labor disputes that often take advantage of nuances in the legal framework of the dispute mechanism to make the process as complicated and long as possible for workers (see Chapter 3).

⁷⁸ The following example highlights possible tactics utilized by firm labor lawyers even at the end of a case, and the inattention or disinterest by labor board staff related to worker rights. Recently, a worker won a two yearlong legal suit against an electronics industry firm with the support of CEREAL-GDL. The organization’s labor lawyer was unable to make the final meeting at the labor board during which the worker received his severance payment. During this meeting, the firm’s labor lawyer included a letter stating that the worker desisted from the claim in the packet of severance payment documents. The worker signed all of the documents without realizing that by signing that letter he had technically desisted from his two-year old claim. The labor board representative overseeing the proceedings did not make any mention of this to the worker, though he/she is responsible for verifying all documents presented by the parties. Fortunately, the firm disbursed the severance payment to the worker. But, technically, on paper, the worker desisted from the claim.

⁷⁹ Interview with Paul Ochoa Aguirre, CEREAL-GDL labor lawyer, January 2011.

10 workers decided to sue the company to ensure they received the adequate severance payment required by law. CEREAL-GDL staff agreed that the only way to guarantee the workers appropriate legal representation was for the organization's labor lawyer to represent them. The case lasted over six months and ended in a negotiated settlement in which the company agreed to pay the 10 workers their lawful severance packages. While a victory for the workers that made the legal claim, the company's remaining 440 workers did not benefit from this result, receiving a lower severance than what is stipulated by law.

Learning from this experience, CEREAL-GDL coupled local media outreach with its legal representation activities in a case related to IBM in 2001. In June of that year, the employment agencies Saturn Electronics and Caspem, which hired workers on behalf of IBM, notified employees that their salaries would be reduced while their hours would remain the same.⁸⁰ Workers who did not sign a release form agreeing to the salary cut were intimidated or, in the case of six workers, fired by these firms (CEREAL 2001). About a dozen workers turned to CEREAL-GDL for advice. In addition to initiating a legal claim on their behalf, the organization went public with the story to the local media. Since the 1980s, this was the first case related to the electronics industry in Guadalajara that produced significant media attention (Gabayet Ortega 2006, 34).

According to CEREAL-GDL staff, the organization turned to the media for two reasons. First, Caspem and IBM had extraordinarily strong legal teams; thus media coverage was a strategy to gain leverage over these firms. Second, IBM maintained that it was not responsible for these workers as the brand-name firm was not their direct employer (Orihuela 2001). CEREAL-GDL saw this as an opportunity to shine light on the issue of employment agencies and their relationships with brand-name firms. Ultimately, within a month of the legal claim and media attention, the two employment agencies retracted the salary cut for all 4,500 workers. The case also created a lot of attention regarding the issue of indirect employment through agencies. Such agencies had never experienced so much attention; they were used to operating outside of the public eye and scrutiny (Ibid.).

Since these cases, CEREAL-GDL has represented hundreds of workers legally in claims against electronics industry firms. For example, between 2008 and 2010, the organization filed 56 claims on workers' behalf. As exemplified by the cases discussed above, sometimes groups of workers seek representation from CEREAL-GDL, which in turn files a joint suit. Yet, typically legal claims are related to individual workers. Thus, through the legal claims process, CEREAL-GDL, with some exceptions such as the IBM case, secures labor violations remediation for workers on an individual basis.⁸¹ In many cases an individual worker will come to CEREAL-GDL with a violation that affects other co-workers. The organization encourages these workers to drum up support from co-workers and to file a joint legal suit. Yet for the reasons discussed in Chapter 3, workers are usually reluctant to fight rights violations. For example, one worker, as related to a suit she is considering filing, notes: "I'm not the only one facing this challenge; I've

⁸⁰ This is in line with the *tiempo por tiempo* employment practices discussed in Chapter 3.

⁸¹ Note that as discussed in Chapter 3, the legal process can take upwards of two years and the majority of legal claims are related to illegal layoffs and incomplete severance payments.

tried talking to some of my co-workers, but they are afraid of or uninterested in making a fuss about it.”⁸²

Importantly, CEREAL-GDL’s legal representation work keeps them abreast of dynamics in the sector and provides an opportunity for sustained engagement with workers. As word has spread about CEREAL-GDL’s legal support, the organization has seen an increase in the number of workers that come to its offices. Once at their offices, the organization encourages workers to sign up for education workshops and the CTIE, as well as to tell co-workers about CEREAL-GDL. Moreover, through these interactions with workers, CEREAL-GDL keeps up to date about, for example, what employment agencies firms are subcontracting to hire workers, as well as current working conditions. This information is critical to the organization when it engages the media about the dynamics and conditions in the sector.

As related to its use of the local media, CEREAL-GDL continues to, with some limitations as discussed in a subsequent subsection, present cases to the media. Media attention, however, typically revolves around the organization’s annual reports regarding labor conditions in the sector, as well as demonstrations held by the Coalition. By and large, none of this local media coverage has garnered the same level of attention as the IBM case in 2001. The critical exception is a 2004 report regarding labor conditions in the sector drafted by an international organization with collaboration from CEREAL-GDL that gained significant media attention locally and internationally.

Section 4.4: Shinning an International Spotlight on Working Conditions: Transnational Advocacy and the Response from Firms

Every year the Catholic Agency for Overseas Development (CAFOD) releases a report discussing issues and challenges related to injustices faced by populations around the world. In 2002, the Latin America office of CAFOD became aware of CEREAL-GDL’s work, particularly due to the media coverage of the 2001 IBM case. Through connections with FCyE, CAFOD connected with CEREAL-GDL and decided to focus an annual report on working conditions in the electronics industry globally. The resulting report, entitled “Clean up Your Computer” discusses working conditions and environmental issues related to electronics manufacturing in Mexico and China. The case study of Mexico is specific to Guadalajara and was based on research conducted by CEREAL-GDL as well as new research conducted collaboratively between the two organizations.

Published in 2004, the report is widely cited by scholars of the electronics industry as a turning point in bringing to the public’s eye the realities of work conditions in electronics manufacturing and increasing scrutiny of the sector’s labor practices. It was also the catalyst for the establishment of a transnational advocacy network of NGOs that work on labor issues related to the industry, exemplified by the establishment of the international NGO Good Electronics, which today encompasses local NGOs from over 15 countries working on labor and environmental issues in the electronics industry. Moreover, in an almost immediate response to the report and the media coverage it gained, a group of eight leading brand name and contract manufacturing firms founded the Electronics Industry Citizenship Council (EICC) that

⁸² A worker made this comment during her interview with CEREAL-GDL staff about the labor rights violation. The worker gave me permission to record and use her comment anonymously.

established the first industry-wide private code of conduct (COC) for electronics companies. COC are formal written commitments by companies to uphold internationally recognized and host-country environmental and labor standards. Today over 45 companies are signatories to the EICC COC; together these companies employ over 3.4 million workers (EICC 2009). In short, the CAFOD report created an immediate NGO and private sector collective response to working conditions in the electronics industry. Each is discussed in turn.

4.4.1: Transnational Advocacy

Good Electronics and the Dutch NGO Center for Research on Multinational Corporations (SOMO for its acronym in Dutch) are the primary electronics industry transnational advocacy stakeholders. Good Electronics is the largest network of local NGOs working on labor rights issues in this industry. Good Electronics began as an informal group of NGOs that met to discuss the results of the CAFOD report. In 2005, the group acquired financial support and hosting for its headquarters from SOMO. Founded in 1973, SOMO was established to research the impacts of multinational corporations particularly as related to labor rights. Prior to 2005, SOMO had not systematically investigated issues related to the electronics industry. Today, SOMO not only hosts Good Electronics, but is also the coordinator of two European NGO initiatives to educate consumers and governments about labor conditions in the industry and to take these into account when making purchasing decisions.⁸³ Meanwhile, Good Electronics conducts its own research, disseminates information regarding labor conditions in factories, as well as coordinates advocacy efforts of NGOs, with a particularly focus on the global south.⁸⁴

Through the Good Electronics network, NGOs can foster international support for specific labor rights campaigns or as a means to highlight specific issues. For example, in May 2011, NGOs around the globe held demonstrations outside of EMS firm Foxconn factories in protest of the labor conditions in Chinese electronics manufacturing plants that have been linked to almost a dozen worker suicides. Concurrently, Good Electronics is also coordinating a global campaign related to Apple Inc., which relies on Foxconn to produce many of its products. CEREAL-GDL is a steering committee and founding member of Good Electronics and actively participates in supporting campaigns. By extension, the CTIE also responds to such campaigns.

Through these means, Good Electronics is able to create a global awareness of working conditions in the electronics sector. The organization does so through what Seidman (2009) calls a “boomerang approach.” This approach consists of local NGOs providing information regarding firm malfeasance to transnational NGOs in developed countries, which in turn organize support and put international pressure on the violators. Similarly, this is the model utilized by CAFOD to shine light on the working conditions in the electronics manufacturing industry, and which led to companies responding by establishing the EICC and an industry-wide code of conduct.

4.4.2: The Electronics Industry Citizen Coalition and Code of Conduct

The EICC was founded in June 2004, less than six months after the release and significant media coverage of the CAFOD report. “[A]s activists mobilize consumer concern about social and environmental conditions of production, they create collective action problems

⁸³ Information about these initiatives, named Make IT Fair and Procure IT Fair can be found on the SOMO website somo.nl

⁸⁴ See: Goodelectronics.org

for firms-in particular, interlinked problems related to *reputation, information, and competition*. Certification is designed to solve these problems” (Bartley 2007, 307, italics are his).⁸⁵ The CAFOD report served as the catalyst for the “collective action problems” electronics industry firms faced in 2004.⁸⁶ The response to these problems was the launch of the EICC.⁸⁷

The mission of the EICC is to promote improved working and environmental conditions throughout the electronics global value chain through the promotion and enforcement of an industry-wide COC (EICC 2009). Prior to the EICC, some electronics industry companies had their own COCs. Yet, there was significant variance between the codes in regard to the topics each covered (CAFOD 2004; CEREAL 2006). The most advanced COC in the electronics industry before the EICC was HP’s, which served as the building block of the EICC COC (Locke et. al, forthcoming).

The current EICC code of conduct is divided into five sections outlining standards related to 1) labor, 2) health and safety, 3) the environment, 4) operations for monitoring, and 5) business ethics. Each section includes between 6 and 11 provisions which firms are meant to monitor.⁸⁸ Member companies are responsible for monitoring themselves and their next tier suppliers. In other words, for example, brand-names are responsible for monitoring adherence by their contract manufacturers and the latter are responsible for monitoring their suppliers. Notably, there is no mention regarding employment agencies. As of 2010, a coordinated auditing system was launched to reduce auditing redundancy, and third-party privately contracted auditors certified by the International Register of Certified Auditors conduct factory-level audits (EICC 2009).⁸⁹ In recent years, CEREAL-GDL’s requests to serve as an auditor have been denied.

Against this background, it is important to highlight scholarly inquiry regarding the effectiveness of COCs in improving working conditions. Some scholars posit that COCs are an important and successful response to the inability or disinterest by government to uphold standards (Nadvi et al. 2004). Meanwhile, critics argue that the codes are used as means to protect firms from legal liability (Esbenshade 2004), as well as maintain that COC monitoring methods are typically not sufficiently independent from firm oversight, and are therefore untrustworthy (Esbenshade 2004; Rodriguez-Garavito 2005). Beyond these binomial controversies, empirical evidence reflects that the impact of codes on adherence to labor

⁸⁵ Though COCs are not certification schemes per se, they can be analyzed as being in the same family of private sector responses to collective action problems.

⁸⁶ Notably, for example, in a timeline of the EICC provided to me by HP-Mexico, the CAFOD report is the first entry.

⁸⁷ Interestingly, in contrast to other industries, for example the garment sector (see Bartley 2007), through the EICC, electronics industry companies achieved a unified response to this problem, and in a relatively short period of time. Perhaps this is due to a stronger interconnected reliance between actors in the electronics global value chain (GVC) compared to the garment sector’s GVC. Or, it could be due to timing: electronics firms were perhaps better prepared to deal with such an issue given a decade of experience witnessing the responses to similar “sweatshop” discourses in other sectors. This is certainly an area for further scholarly inquiry.

⁸⁸ There are currently 45 member companies of the EICC including brand-name firms (45% of members), contract manufacturers (50% of members) and raw material extractors (5%). As of 2009, 74% of member companies used the EICC COC as their own company COC word for word (EICC 2009).

⁸⁹ Through a validated audit system, a firm may be inspected once and the resulting audit results may be used to report to multiple companies above it in the supply chain.

standards largely depends on how they are implemented (Locke et al. 2009; Locke, Kochan, et al. 2007; Locke, Qin, et al. 2007; Locke et al. Forthcoming; Locke et al. 2010).

As related specifically to the implementation of the electronics industry COC in Guadalajara, Locke et al. (forthcoming) conducted a study of HP's implementation of the code in two of its contract-manufacturing firms. The authors find that in regard to environmental issues the implementation of the COC was effective in identifying and remediating compliance problems at both firms. In regard to labor issues specific to employment agency workers, the authors highlight that HP's monitoring of the COC indeed does not capture the use of recurring 15 day contracts by employment agencies, given that agencies are not stipulated as actors in the COC. Moreover, the authors note that because CEREAL-GDL brought this issue to the attention of HP, the latter pressured the respective contract manufacturer and agency to desist from the practice. These findings highlight that, as related to environmental issues and as implemented by HP, the COC can be an effective tool on its own to identify and remediate violations. In regard to labor issues, the results are underwhelming in regard to the code functioning effectively on its own. However, the findings do emphasize that direct dialogue between CEREAL-GDL and firms can lead to positive results with structural impacts.

A critical question that arises from this discussion is: what is this direct dialogue and why did it come about? This is the topic of the next section.

Section 4.5: Antagonistic Collaboration: Institutionalized Dialogue with Firms

In 2005, through intermediation by CAFOD, CEREAL-GDL and electronics manufacturing firms with subsidiaries in Guadalajara launched what has come to be known as "the accord," a dispute resolution mechanism between CEREAL-GDL and members of the business association CANIETI. Following the release of its report, CAFOD met with electronics industry leaders in low and high-income countries to discuss the findings. In September 2005, CAFOD facilitated a meeting between EICC member firms in Guadalajara and CEREAL-GDL. As Anne Lindsay, CAFOD's Lead Analyst for the Private Sector notes: "We did not want CAFOD to act as an intermediary forever, we wanted firms to speak directly with CEREAL about the problems they had identified. It was important that brand executives could hear firsthand about the experience of workers in their supply chains..." Further, from CAFOD's perspective: "[g]iven CEREAL's aim of organizing workers it made sense that they should be talking to the companies directly about the problems that the workers faced as well as pursuing legal cases."⁹⁰ CEREAL-GDL was reluctant to participate in the meeting at first.

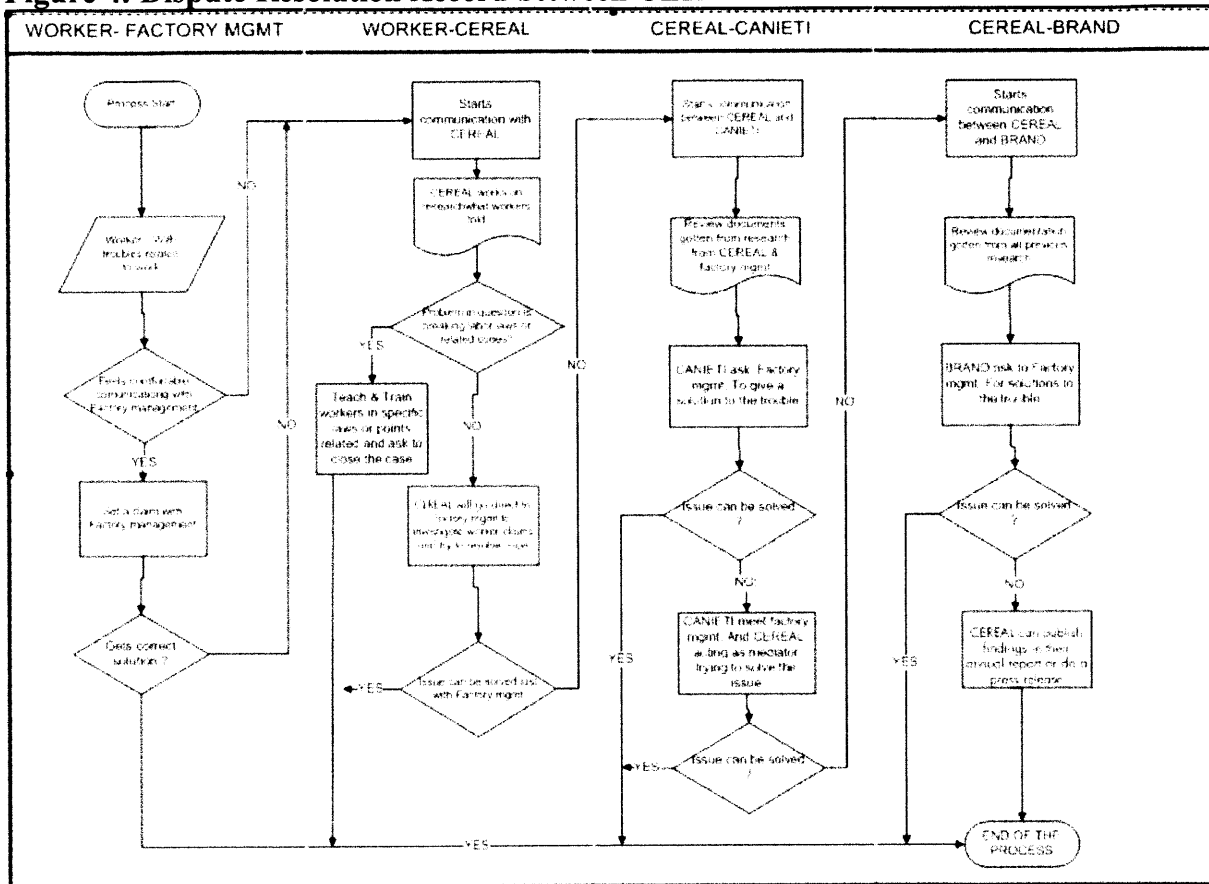
In broad strokes, the accord is a dispute resolution mechanism through which CEREAL-GDL is able to present labor rights violations directly to firms. Until a case goes through the whole process, CEREAL-GDL agrees not to sue the companies involved or disseminate the case in the local or international media. The following subsections details the accord process as designed and how it is implemented in practice, as well as analyze why firms in Guadalajara agreed to institutionalize the dialogue with CEREAL-GDL, as well as the impacts the accord has had on working condition improvements in Mexico's Silicon Valley.

⁹⁰ Interview with Anne Lindsay, CAFOD Lead Analyst for the Private Sector, May and June 2011.

4.5.1: The Accord Mechanism

First and foremost, it is important to remember from Chapter 3 that CANIETI is the electronics industry business association in Guadalajara and that all electronics industry firms with subsidiaries in Guadalajara are part of the association. Every member of CANIETI is required to abide by the accord. Note that this does not include employment agencies since they are not officially part of CANIETI. With this said, the Figure 4 reflects the accord mechanism, which is comprised of four phases to dispute resolution.

Figure 4: Dispute Resolution Accord between CEREAL-GDL and Electronics Firms



Phase 1-worker and factory management: The first phase begins with a worker experiencing a perceived labor rights violation. If comfortable doing so, the worker brings the issue directly to their respective firm’s management. Note that the accord mechanism implicitly reflects the employment realities in the Guadalajara electronics industry, specifically that EMS firms are hired by brand name firms to manufacture goods and are the largest employers in the Guadalajara electronics industry. As such, the first phase of the accord is targeted to EMS firms. Moreover, though employment agencies are not directly included in the accord mechanism since they are not members of CANIETI, it is implied that firms are co-responsible for perceived labor violations caused by employment agency. The majority of cases that arrive at CEREAL-GDL are related to wrongful termination, which by nature means that the worker and the firm could not reach a solution.

Phase 2- worker and CEREAL-GDL: If the issue is not resolved between the worker and firm management, in the second phase of the accord a worker meets with CEREAL-GDL to discuss the case. Implicit in this phase is that a worker is aware that CEREAL-GDL exists. Certainly firms do not refer workers to CEREAL-GDL if their issue is not resolved internally. If and when a worker meets with CEREAL-GDL, the organization is responsible for investigating the worker's claim and if it finds that his/her condition is violating stipulations in the electronics industry COC or Mexican labor law, they may escalate the case directly to the factory management.

In cases related to wrongful termination, the first question CEREAL-GDL asks workers is whether they signed a resignation letter when they were laid off. If they did, then there is nothing more CEREAL-GDL can do for the worker given that firms are able to demonstrate that the worker left the firm on his/her own free will. If a worker was unjustly fired and did not sign a resignation letter, CEREAL-GDL advises the worker to begin a legal claim process. This action is contrary to the official accord mechanism, but responds to the reality that a firm could argue that the worker abandoned his/her post and deny that he/she was ever fired if a claim is not filed. Once the case is filed, CEREAL-GDL discusses the case with firm management.

If a worker comes to CEREAL-GDL with a complaint unrelated to wrongful termination, then the organization follows the accord mechanism by discussing and investigating the case before bringing it to the attention of a firm's management. Importantly, when the accord was first developed, CEREAL-GDL staff met with firm managers to discuss every single case. This approach drained significant staff time. In turn, today, CEREAL-GDL consolidates a group of cases and presents them all at once during meetings with firm managers.

Phase 3: CEREAL-GDL and CANIETI: In the event that CEREAL-GDL and a firm's management do not agree on a resolution, the former may escalate the case to CANIETI. The business association discusses the case with the respective firm management and serves as a mediator in the event that the latter does not accept wrongdoing. Critically, some firms, for example EMS firms Benchmark and USI typically refuse to participate in the accord, the reasons for which are discussed in a subsequent subsection. In these cases, CANIETI has historically reached out to these firms and required that they dialogue with CEREAL-GDL directly or through a discussion mediated by CANIETI.

Phase 4: CEREAL-GDL and Brand Name Firms: If a mediated dialogue does not resolve an issue, CEREAL-GDL can escalate the case to the brand name level. If the issue cannot be resolved at this level, then CEREAL-GDL, per the accord, is allowed to publish the case in its annual report and/or in the local or international media. In general, CEREAL-GDL respects the accord in regard to media. However, it has been less rigorous with publishing cases still being discussed through the accord or that have been closed through a negotiated settlement in its annual reports.

To sum up, the accord establishes a dispute resolution process by which a worker's claim is escalated through channels beginning with the worker's employer. The structure of the accord largely reflects employment dynamics in the Guadalajara electronics industry. Specifically, it implicitly considers that a worker is laboring for an EMS firm, which assumes responsibility for

workers hired through employment agencies. Ultimately, if CEREAL-GDL is unable to reach a settlement directly with an EMS firm, CANIETI and brand name firms become involved in the process. Markedly, CANIETI pressures reluctant EMS firms to participate in the accord. Ultimately, the discussion of how the four phases of the accord are implemented in practice highlight that the process is generally adhered to by the parties involved. Important caveats include: some firms pertaining to CANIETI are reluctant to actively engage with CEREAL-GDL; CEREAL-GDL advises workers to file legal claims immediately in cases of wrongful termination; and CEREAL-GDL publishes open or closed cases in its annual reports. The next subsection analyzes why the accord actors participate in this dispute resolution mechanism.

4.5.2: Motivations for Participating in the Accord

Per the discussion of the accord phases, there are four primary actors: 1) workers; 2) firms located in Guadalajara; 3) CEREAL-GDL; 4) CANIETI; and 5) brand name firms. Key points regarding why each is motivated to participate in the accord follow.

Workers: Workers are motivated to participate in the accord because it presents an opportunity to resolve a case more quickly than the legal claims process. This will be discussed in more detail in the subsection regarding impacts. This observation, of course, comes with the caveat that many workers would rather not engage with CEREAL-GDL or make known labor violations for fear of firm reprisal. Once a worker comes to CEREAL-GDL, so long as they have not signed a resignation letter in the event of a wrongful termination, they are by default engaged in the accord. However, CEREAL-GDL does not contact firm managers unless a worker agrees that it should do so. As the process moves forward, CEREAL-GDL assures that workers are kept abreast of negotiations with firms.

Guadalajara Firms: The motivation for firms located in Guadalajara to engage with the accord is to keep cases out of the media, CEREAL-GDL reports and ostensibly to reduce legal suits and the resources required to litigate them. Based on the discussion in Chapter 3 regarding the relationship between local managers of firm subsidiaries located in Guadalajara and their respective headquarters in high-income countries, it can be posited that achieving the aforementioned goals keeps them in good standing with their international headquarters which have an interest in avoiding negative press regarding poor labor conditions and labor rights violations. A major caveat to this is the fact that there are some firms that have historically not engaged with CEREAL-GDL. Per the organization, these firms include suppliers of raw materials and electronics components to contract manufacturers, and some contract manufacturers like Benchmark and USI. Notably these firms are not part of the EICC and in some cases do not have internal codes of conduct.

CEREAL-GDL: The organization would rather workers be, by default, treated justly and protected by institutions such as independent trade unions that can ensure workers' voices are heard and that their rights are collectively protected. When CAFOD presented CEREAL-GDL with the opportunity to dialogue directly with firms, CEREAL-GDL expressed concern that firms would utilize a dialogue to further circumvent listening to workers directly. Moreover, the organization believed that firms were interested in the dialogue simply as a means to protect their image, and were not genuinely interested in improving working conditions. On the other hand, CEREAL-GDL understood the dialogue as an opportunity to express its concerns directly to

firms.⁹¹ If anything, as encouraged by CAFOD, the organization did not have much to lose by attempting the dialogue approach. Ultimately, as Jorge Barajas, coordinator of CEREAL-GDL notes:

“we weren’t looking for [a direct discussion] with firms. We were very happy with a confrontational approach. The dialogue approach is very European and we learned it from [CAFOD] and we saw that it had results... this was a surprise, a discovery for us.”

CANIETI: The motivation for CANIETI to engage with the accord can be posited to be similar to those of Guadalajara firms. As a key promoter of the electronics industry in Guadalajara, CANIETI conducts activities to encourage new firms to come to Guadalajara. A prospective firm could ostensibly reconsider locating in the city given negative media stories and reports regarding labor rights violations in the electronics industry to which they could be vulnerable. Against this backdrop, in cases where a CANIETI member refuses to meet with CEREAL, CANIETI has historically intervened and pressured the firm to meet with CEREAL-GDL.

Brand Name Firms: Brand name firms are ostensibly motivated to engage with the accord as they are the last point of contact before CEREAL-GDL has green light to publish the case. Like Guadalajara firms, some brand name companies refuse to engage with CEREAL-GDL. Firms that do not have a subsidiary in Guadalajara are not part of CANIETI and therefore are not technically under the purview of the accord. CEREAL-GDL states that whether a brand name company engages in the accord can largely depend on the person in a position to discuss a case with the organization. For example, a recent staffing change at Dell’s headquarters decreased the company’s willingness to discuss cases with CEREAL-GDL.

4.5.3: Impact of the Accord

There are three possible impacts the accord can have. First, through the accord, the resolution of a legal claim can be reached more quickly. A unique dataset I compiled of cases undertaken by CEREAL-GDL between 2008-2010 suggests that whereas a legal claim may take upwards of two years to resolve, cases negotiated through the accord are closed within six months. Moreover, the data suggest that through the accord dispute resolution mechanism workers tend to receive a higher percentage of their due severance in cases of wrongful termination.⁹²

As related to this discussion, the second type of impact the accord can have is that an individual worker’s case is resolved. While such a result is positive, similar to the discussion of educating one worker at a time, solving one worker issue at a time does not hold much promise for firm-wide labor condition improvements. In some cases, firms will acknowledge that a particular case affects other workers, but will refuse to act beyond responding to the particular worker(s) that brought the case to CEREAL-GDL. For example, recently workers at a contract manufacturing plant were being forced to work *tiempo por tiempo* hours. Following the implementation of the accord process, the firm agreed to exempt the worker that highlighted the practice to CEREAL-GDL from the practice, as well as any other workers that requested an

⁹¹ These observations are based on an internal CEREAL-GDL memo, which includes a pro and con list of dialoging directly with firms.

⁹² Note that these results are not statistically significant given a small sample of cases. Yet, the trends are clear and are supported by CEREAL-GDL’s experience working in this sector for over a decade.

exemption from this illegal labor practice. In other words, the firm refused to make a firm-wide decision to desist from the practice.

The third type of impact the accord can have is facilitating firm-wide changes in working conditions. To date there has been one such case, but it is a mixed result. Last year a group of workers sought CEREAL-GDL's assistance because the EMS they worked for had given uneven salary increases within the workers' division, in what amounted to favoritism. The firm fired all of the workers that met with CEREAL-GDL and opened a legal claim against the firm. However, the firm restructured its internal labor market, establishing a structured system for seniority and promotions within the division.

Overall, the accord is an example of antagonistic collaboration between electronics industry firms and a local NGO. Moreover, it is in part a result of a market response to the collective action problems caused by CEREAL-GDL to local firms. In this context, it is critical to highlight that in 2009, firms in Guadalajara launched a certification scheme to monitor employment agency hiring and operational practices. Could this lead to firm or industry-wide changes in employment practices, or is it a means for firms to further deflect criticism of their low-road labor practices? This question is explored in the following section.

Section 4.6: Employment Agency Certification in Guadalajara

Just like the EICC was a collective response by electronics industry firms globally, in 2009 firms in Guadalajara, through their business association, developed a certification scheme for employment agencies operating in the cluster. As discussed in the previous subsection, the EICC code of conduct does not mention employment agencies, thus making it an ineffective tool to appropriately identify and address hiring and employment practices undertaken by agencies. OEM firms, notably HP, have attempted to apply the EICC code of conduct to monitor employment agencies, but with limited success. As Locke et al. (forthcoming) highlight: "staffing agencies have indicated that responding to, and preparing for, these HP audits have been difficult and challenging" since the specific indicators and principles of the code of conduct does not specifically apply to them. The response to this dynamic by firms has been notable and reflects the strong institutional power of firm collaboration in Guadalajara.

The employment agency certification is managed and overseen by CADELEC, which recall is the non-for-profit offshoot of the electronics business association CANEITI (see Chapter 3). The following description of the certification is based on information provided to the author by HP-Mexico.⁹³ CADELEC conducts external audits of employment agencies in Guadalajara and provides each agency a rating between 0 and 1000. A score of 251-500 is considered not satisfactory; 501-700 reflects potential; 701-850 reflects satisfactory; a score above 850 reflects "world class" operations and adherence to the certification guidelines. 40 percent of the score is based on an agency's "social responsibility," which includes labor issues. Specifically, certification guidelines inquire into whether agencies have internal management and processes established to identify and remediate labor violations such as hiring discrimination.

Given the nascent nature of the certification scheme, there is very little information about its results to date. According to CEREAL-GDL some agencies in Guadalajara have been graded

⁹³ HP-Mexico PowerPoint document provided to me.

and certified, but public information about which agencies have been audited and their respective scores is not available. To date, CEREAL-GDL has not noticed a demonstrable impact of the certification on working conditions. It remains to be seen what impact the certification will have on working condition improvements and if indeed firms decide to utilize one employment agency over another based on their scores on the certification guidelines. According to HP, while the certification is currently voluntary, their intent is to make it compulsory for all employment agencies to become certified (Locke et al., forthcoming). The question is, however, beyond Guadalajara, what institution will conduct this certification?

Section 4.7: Beyond Guadalajara

Since 2001, CEREAL-GDL staff have conducted regular trips to meet with and organize electronics industry workers operating on the border of Mexico and the United States. Mexico's northern border region also has a high concentration of electronics industry manufacturing, though it focuses on televisions and consumer appliances (see Appendix 2). The organization began this outreach to workers on the border primarily because a former staff member has family roots in the region and would informally meet with workers while visiting her relatives. This person has since left the organization, but was replaced by a staff member in charge of, among other responsibilities in Guadalajara, overseeing outreach to workers on the border. Specifically, she organizes training and education workshops for workers laboring in the industry in that region of Mexico. At the moment CEREAL-GDL has organized groups of workers in the cities of Reynosa and Monterrey, which have been incorporated into the CTIE. Yet as the staff member notes: "although the workers are from the same industry and even from the same firms [operating in Guadalajara], the situation and context on the border is very different; and it is very difficult to maintain engagement with them from far away."⁹⁴ Each of the points the staff member mentions are unpacked in turn.

As related to the context on the border, there are multiple factors that must be highlighted. For example, beyond working conditions, the violence experienced in the region has a significant effect on workers and the ability of CEREAL-GDL to organize workers. As CEREAL-GDL's staff member in charge of work on the border notes, it is not uncommon for CEREAL-GDL to have to suspend trips or activities given the insecurity. "Just like workers have had to adapt their lives to the condition of violence in which they live, we as CEREAL-GDL have to adapt our engagement with these workers to face this reality, which for example begins with finding a way to hold workshops in secure locations."⁹⁵ In this regard, it is also important to highlight the challenges to organizing workers with limited on-the-ground engagement.

CEREAL-GDL does not have offices in the northern border region. This reality limits their ability to for example represent workers in the region legally. Given the decentralized structure of labor boards, a legal claim for a worker in that region would have to be filed in their respective state. It is impossible for CEREAL-GDL's labor lawyer to maintain the required attentiveness to cases and scheduled meetings at labor boards traveling by bus dozens of hours back and forth in order to make these meetings. For a number of years, there have been discussions of CEREAL-GDL expanding to include an office in the northern border region, but

⁹⁴ Interview with Sagrario Gutierrez Ramirez, CEREAL-GDL staff member, January 2011.

⁹⁵ Ibid.

to date this has not been possible due to funding limitations. As such, sustained engagement with workers on the border is largely related to their incorporation into the CTIE.

CEREAL-GDL encourages CTIE members in Guadalajara to reach out to electronics industry workers in the northern border region to discuss collective aims and activities. While in Guadalajara during January 2011, I witnessed occasions when a handful of CTIE members organized a phone bank and for a couple of hours reached out to workers on the border to discuss the results of a recent CTIE meeting. Also, CEREAL-GDL, on a number of occasions has funded travel by some workers on the border to travel to Guadalajara to participate in CTIE meetings. Along these lines, CEREAL-GDL has also funded workers on the border to attend meetings with EICC member firms in Guadalajara.

In the most recent meeting between CEREAL-GDL and EICC member firms held in May 2011, some workers from the border were present. Notably, they were very interested to learn about the CADELEC employment agency certification scheme and wondered if it could be expanded to their region. In theory, yes it could. But in practice, the institutions present in the border region are not as developed as in Guadalajara to do so. Recall that the certification scheme is managed by CADELEC, a Guadalajara-specific offshoot of the Guadalajara electronics industry business association. Such an institution does not exist on the border, and in general the business associations on the border have not engaged with issues related to working condition improvements to the same extent as they have in Guadalajara. There could be numerous factors for this reality. It is beyond the cope of the research conducted for this thesis to demonstrate what these are. However, based on the discussions in this thesis thus far, some reasons may be posited. These range from labor to institutional dynamics.

On the border worker reliability is limited compared to Guadalajara. As discussed in Appendix 2, electronics industry firms located in Guadalajara in part because labor turnover due to workers crossing the border may be as high as 100 percent in the border, compared to 5 percent in Guadalajara. Thus, perhaps this dynamic increases worker tolerance of exacting conditions as they are more likely than in Guadalajara to view electronics industry employment as a temporary means for saving money to pay for their migration to the United States. Against this context, it may be posited that firms are less pressured to engage in discussions related to working condition improvements, a reality which may be augmented by the firms that locate on the border. For example, HP seems to be a leader in pushing electronics industry firms, notably its subcontractors and their respective employment agencies to focus on labor rights issues (Locke et al., forthcoming). HP does not operate on the border. Similarly, it could be that business associations are less cohesive on the border than in Guadalajara and are thus less likely to respond to collective action threats through coordinated market based approaches such as the CADELEC certification scheme.

In regard to the presence of other institutional actors, CEREAL-GDL does not have the same level of interaction with workers on the border as they do with those in Guadalajara. Could it be that this absence of strong engagement by an actor like CEREAL-GDL is a main factor in the comparatively lackluster response from firms operating on the border related to working conditions? Analyzing and comparing the institutional actors and dynamics in electronics manufacturing on the border and Guadalajara would undeniably be an important topic for future

research attempting to understand the role and impact CEREAL-GDL plays in ratcheting up working conditions in the industry. What is clear at this point is that, interestingly, while the organization has had an important impact on working conditions locally in Guadalajara and has been an important actor in bringing global attention to these issues internationally, it has had a limited impact within Mexico.

Section 4.8: Chapter Summary

CEREAL-GDL has been working to organize and empower electronics industry workers in Guadalajara for over a decade with the central aim of improving labor conditions. The organization has inarguably played a critical role in fomenting improvements in Guadalajara, as well as focusing international attention on labor conditions in the electronics industry around the world. Under the umbrella of the Jesuit institution in Mexico, CEREAL-GDL operates from what can be called a “safe space” that provides financial stability, protection against public criticisms made of other labor rights organizations in Mexico, and access to electronics industry company managers. Overall, this safe space facilitates the organization’s ability to conduct long-term initiatives, as well as avoid challenges faced by other labor rights organizations in Mexico including harassment and threats against organization staff.

From this safe space, CEREAL-GDL focuses its efforts solely on the labor conditions faced by electronics industry workers. The decision to focus on this sector can be traced back to the organization’s origins as the EOJ. Notably, the decision created significant disagreement between the organization and CEREAL-DF, the only other Jesuit-supported labor rights initiative in Mexico. Specifically, though CEREAL-DF was an early supporter and advocate of the EOJ, its incorporation into FCyE, as well as its eventual transformation into CEREAL-GDL, CEREAL-DF disagrees with CEREAL-GDL’s sole focus on the electronics industry arguing that the industry is not strategic sector given its footloose nature and the inability of labor organizations to attempt democratizing trade unions within the sector. Nonetheless, FCyE has historically supported CEREAL-GDL’s sole focus because the latter has sufficiently demonstrated through research that workers in this industry are highly vulnerable to exacting working conditions and labor rights violations. To achieve its aim of improving working conditions in the electronics industry, CEREAL-GDL undertakes activities which can be categorized into four general areas: worker organization, education and empowerment; legal representation of workers in claims against firms; participation in transnational advocacy; and an institutionalized direct dialogue with firms.

As demonstrated in this chapter, since its establishment, CEREAL-GDL has focused on organizing and educating workers about labor rights and empowering them to take actions to protect these rights, individually and collectively. This objective remains the organization’s central focus. “We could change all of our activities, but not worker education, organization and empowerment. It is our primary objective; this is what we established ourselves to do.”⁹⁶ Indeed, in the view of CEREAL-GDL staff, all of the other activities it conducts supplement this objective.

Any worker organization and education process is slow and difficult. Frequent shift changes and layoffs disrupt the ability of workers to attend workshops and to, for example,

⁹⁶ Interview with Jorge Barajas, CEREAL-GDL coordinator, January 2011.

actively engage with the nascent coalition of electronics industry workers that CEREAL-GDL supports. Furthermore, as discussed in Chapter 3, collective action in the industry is restricted by the employment conditions within factories, notably for example it is common for firms to reprimand workers discussing labor rights with co-workers. This situation is coupled with the phenomenon of EPCs, and a new generation of workers that do not have a sense of collective struggle and for that matter may not even know what a trade union is. While collective compared to individual action is undoubtedly the preferred method for worker organization, in response to this context, CEREAL-GDL adjusted its organization and education approach in the early 2000s to focus on individual responses to labor rights violations. More recently, through its work supporting the CTIE, CEREAL-GDL is seeking to foment a stronger worker-led collective response to violations.

With 80,000 “revolving door” workers in the electronics-manufacturing sector in Guadalajara, working at the individual level inherently poses a challenge to achieving sustained changes in working conditions. Note, however, that in extreme circumstances, such as firm closures, a small group of individual workers may be able to mobilize their co-workers to for example demand rightful severance payments. In essence this was the case with the Hitachi factory workers. Whether the CTIE, a product of the Hitachi struggle, will be able to maintain and grow its collective movement and achieve systematic changes to day-to-day working conditions remains to be seen. In the meantime, CEREAL-GDL is betting on the Coalition as the most promising option for collective action in this industry.

An often-used cliché in the NGO world is: “we are working ourselves out of a job.” In line with this saying, CEREAL-GDL’s coordinator notes:

“our approach has been and will remain that workers should be the protagonists of change...our role is to help workers organize themselves to uphold their rights and to empower them through education and tools to stand up themselves to their firms and employers...CEREAL-GDL must be seen as temporary: once we achieve this goal, which of course will take many more years, our role as a *proyecto* will end.”⁹⁷

With the support of CEREAL-GDL, a strengthened and stable Coalition or similar type of worker group could in the long-term replace CEREAL-GDL, perhaps as an independent union or NGO serving electronics industry workers. While ultimately, from the organization’s view, all of the other activities CEREAL-GDL conducts are a means for reaching this end, the organization’s other areas of work highlight notable efforts to improve working conditions in the electronics industry.

CEREAL-GDL’s legal representation of workers fills an important gap in Mexico’s labor dispute mechanism. Building on the discussion of labor boards in Chapters 2 and 3, as demonstrated in this chapter, workers are ill protected by private or *coyote* labor lawyers and by a complex system of legal proceedings related to the State’s labor dispute resolution mechanism. Indeed, workers are more likely to meet with CEREAL-GDL staff when they suffer a labor rights violation because of the organization’s proven ability to provide pro-bono legal support, which succeeds in resolving labor disputes. However, absent complementary efforts by CEREAL-GDL, legal representation does not lead to far-reaching working condition improvements. Though CEREAL-GDL has represented hundreds of workers in legal claims,

⁹⁷ Ibid.

they are usually in benefit to individual or small groups of workers, representing a minority of those that routinely face labor rights violations.

This said, when coupled with media coverage, legal suits may lead to larger-scale outcomes. Further, local media coverage of CEREAL-GDL's cases leads to increased awareness, locally and internationally, of work conditions in the sector. The 2001 IBM case discussed in this chapter exemplifies these points. Importantly, for example, not only did media coverage help lead to IBM's contracted employment agencies to desist from an effort to cut wages while maintaining wages the same, the coverage also caught the attention of CAFOD. With instrumental support from CEREAL-GDL, CAFOD released a 2004 report that turned the international spotlight to working conditions in electronics manufacturing globally. The results of this effort significantly augmented CEREAL-GDL's efforts in relation public awareness of working conditions and its legal representation of workers. Moreover, it was the catalyst for the emergence of transnational advocacy related to working conditions in the electronics industry globally and the first industry-wide code of conduct. In this way, CEREAL-GDL was a protagonist, albeit indirect, in the birth of transnational attention and activism regarding working conditions in the global electronics industry.

Through transnational advocacy efforts, international NGOs such as Good Electronics and SOMO are working to encourage consumers and governments to act on the findings of the CAFOD and subsequent reports partner organizations have produced over the past seven years regarding working conditions in the electronics industry. To date campaigns targeting specific industry firms have grown dramatically. Moreover, as related to CEREAL-GDL's work in Guadalajara, the organization's relationship with transnational organizations such as CAFOD led to antagonistic collaboration between CEREAL-GDL and electronics industry firms with subsidiaries in Guadalajara. This collaboration is manifested by an institutionalized labor violations dispute resolution mechanism in Guadalajara known as the accord.

The accord functions as an institutionalized mechanism by which CEREAL-GDL can highlight labor rights abuses to electronics manufacturing firms. The accord represents antagonistic collaboration between CEREAL-GDL and electronics industry firms with subsidiaries in Guadalajara. Prior to the accord, the strategies of CEREAL-GDL focused on confrontational activities such as utilizing media outlets to criticize labor conditions. Similarly, electronics industry firms largely did not directly engage with CEREAL-GDL in discussions related to labor rights violations. This changed in large part due to CAFOD's intermediation between these two actors. Following the release of the 2004 CAFOD report regarding working conditions in the electronics industry, firms with subsidiaries in Guadalajara agreed to CAFOD's requests to meet with CEREAL-GDL as a means to keep negative stories about violations out of the press. CAFOD also played a central role in encouraging CEREAL-GDL to directly dialogue with firms. Indeed, CEREAL-GDL was at first hesitant to undertake direct discussions with firms, but with encouragement from CAFOD agreed to the first round of meetings which ultimately led to the establishment of the accord.

While the establishment of the accord is in itself a notable phenomenon, its results related to improving working conditions have been mixed. On the one hand, direct dialogue between firms and CEREAL-GDL led to a significant decrease of violations related to hiring

discrimination. Yet, beyond this achievement, other firm or industry-wide changes have not taken place. Indeed, with few exceptions, firms respond to issues highlighted by CEREAL-GDL through the dialogue on a worker by worker basis. Whether the accord can serve as a means to foster firm-wide changes in labor practices remains to be seen. What is clear, however, is that for CEREAL-GDL, the ability to negotiate settlements instead of having to go through the entire legal claims process reduces the amount of resources, particularly staff time, spent on litigation, as well as offers an additional value added for workers to engage with CEREAL-GDL. In other words, workers come to CEREAL-GDL in part because they know that the organization can help them succeed in a legal claim against a firm and both receive a quicker and higher compensation, particularly as related to cases of wrongful termination. Similarly, for electronics industry firms, the accord offers a means to respond to, or at a minimum be aware of the issues and cases CEREAL-GDL could highlight in the press.

Importantly, a central actor in upholding the accord mechanism is the Guadalajara electronics industry business association CANIETI. In fact, CANIETI has gone so far as to pressure members of the association, all of which are required to participate in the accord, to dialogue directly with CEREAL-GDL. Yet, this does not mean that participation in the accord by CANIETI or firm subsidiaries should be presented as a pure attempt to address labor rights violations. As critics of private regulation note, firms may utilize mechanisms such as the accord and the EICC to deflect criticisms of not engaging with and attempting to overcome labor rights violations and exacting work conditions. Interestingly, in Guadalajara, the electronics industry has developed a certification scheme to rate the labor practices of employment agencies in the city. It is too soon to tell what the impact of the scheme will be and whether it is a genuine attempt by firms to regulate employment agency hiring and employment practices, or whether it is a form of deflecting criticism. Nonetheless, the emergence of the scheme is notable particularly as it further emphasizes the collective strength of the electronics industry business association in Guadalajara and its ability to organize and maintain reactive and proactive institutionalized responses to external criticism.

Lastly, CEREAL-GDL faces significant challenges to organizing workers in the northern border of Mexico stemming from its lack of a stable on-site presence, as well as contextual conditions, such as pervasive violence, in the region. Similarly, it seems evident that compared to the northern border region of Mexico, the electronics industry business association in Guadalajara is better organized and/or willing to take steps to address criticisms of their labor practices as signaled by the development and institutionalization of the accord and the employment agency certification scheme. In short, antagonistic collaboration among CEREAL-GDL and electronics industry firms emerged in Guadalajara in large part given the resources, organization and interest of local and international actors to respond to labor rights issues in Mexico's Silicon Valley. To date, the impact of this attention and collaboration in Guadalajara has by and large been limited to working conditions improvements for individual workers. Nonetheless, it is possible that the growing coalition of electronics industry workers, as well as ongoing antagonistic collaboration between CEREAL-GDL and firms may serve as the catalyst for firm and industry-wide labor condition improvements in the future.

Chapter 5: Conclusion

Born from the restlessness of a handful of Jesuit students in the mid 1990s to support workers facing labor rights violations, CEREAL-GDL has evolved into a critical actor in relation to labor rights promotion in Guadalajara, Mexico's Silicon Valley. Though the organization has maintained its core focus on worker education, organization and empowerment, it has evolved its activities to respond to the dynamics of electronics manufacturing in Guadalajara. These dynamics include the promulgation of contract manufacturers, employment agencies, and a lack of representative trade unions, and are a product not only of the fractured structure of the electronics global supply chain, but also national State economic and labor policies and inert institutions. The objective of this final chapter is to analyze CEREAL-GDL's activities, including antagonistic collaboration with electronics industry firms, through the lens of their impact on working condition improvements in Guadalajara and the potential they hold for further improvements in Mexico's Silicon Valley.

The main actors in the electronics industry supply chain are brand name firms that subcontract EMS firms to assemble products. Mexico's Silicon Valley is built around an enclave of foreign brand name and EMS firms that locate in Guadalajara to take advantage of low-cost production and Mexico's preferential access to the United States consumer market, the largest in the world. Profit margins, particularly for EMS firms, which are by far the largest employers in the cluster, are razor thin. In turn, these firms seek to institute low-road labor practices that ensure a flexible and stable labor force. A common strategy utilized by EMS firms is to outsource hiring and human resources responsibilities to employment agencies. The Mexican government, in tune with trade-liberalization and neoliberal paradigms and especially through its omnipotent labor boards, restricts genuine worker representation by trade unions, as well as turns a blind eye toward labor rights violations committed by firms and employment agencies in the country. For example, through labor boards, the government restricts the registration of trade unions that aim to genuinely represent worker, and favor the persistence of employer protection contracts that represent employer not worker interests.

Against this backdrop, this thesis highlighted six key low-road labor practices in Mexico's Silicon Valley and their causes and effects on workers. These include: short-term contracts and employment uncertainty, low wages, long and irregular working hours, lack of freedom of association, and hiring and workplace discrimination and harassment. These practices create a flexible and individually focused workforce with a limited understanding of labor rights and that faces repression from firms for even discussing rights. For example, workers' short-term contracts may not be renewed should they discuss labor rights or criticize company management within or outside of a production factory. Action in response to labor rights violations is also subdued by the inert State labor dispute mechanism that can take upwards of two years to resolve a claim. Indeed, most electronics industry workers that initiate a claim desist before a resolution is reached. Ultimately, workers undertake non-confrontational individual and collective actions to make assembly-line work bearable. For example, workers may arrange with supervisors to have a longer lunch break in return for a higher production speed after the break. Such actions do not serve to pressure firms to respond to labor violations or to ratchet up working conditions.

For over a decade, CEREAL-GDL has undertaken labor rights advocacy and protection activities that focus on increasing worker awareness and understanding of their labor rights. A

foundational belief of the organization's staff is that workers should demand and be the protagonists of change in relation to working conditions and that CEREAL-GDL's role is to educate, organize and empower them to achieve this objective. As such, the primary activity of CEREAL-GDL has, and will continue to be, worker education organization and empowerment. Importantly, the organization's efforts in this regard have shifted over time in response to the dynamics of the electronics manufacturing industry. Specifically, for example, the organization ended its work aimed at educating workers to democratize trade unions, recognizing that the structure of employer protection contracts disallows any form of internal union life and that workers rarely know that they are represented by such contracts. Also, the organization restructured its education materials to focus on individual instead of collective labor rights protection.

This is not to say that collective action does not remain a high priority of the organization. Its support of the growing CTIE is a prime example. Its work with the CTIE highlights that the organization continues to actualize its belief that it is workers that must decide if, when and how to organize. In other words, CEREAL-GDL did not actively create the CTIE, but has taken advantage of worker interest to foment its development over the past three years following expressed interest by workers to establish a collective worker movement in response to low-road working conditions. Similarly, the organization maintains that it is up to the workers of the CTIE to determine how they want the coalition to evolve in the future. It is possible that the CTIE could in the long-run become a national labor rights NGO focusing on the electronics industry, or perhaps even an independent trade union that genuinely represents electronics industry workers. To reach either of these peaks, the coalition will require significant and ongoing support from CEREAL-GDL, which to date not only offers coalition members educational workshops related to labor rights and English, but also financial backing. In the meantime, the CTIE remains the most vociferous and the strongest representation of collective action in the history of Mexico's Silicon Valley. Yet, its impact to date on working conditions remains limited as there are no clear examples of improvements directly related to the coalition's efforts.

Notably, CEREAL-GDL's efforts to represent workers legally and utilize the local media to highlight labor rights violations have resulted in certain working condition improvements in Mexico's Silicon Valley. However, these improvements have not tended to benefit large groups of workers. A notable exception occurred in 2001 when CEREAL-GDL represented a group of workers hired by employment agencies subcontracted by IBM that sued the firms because their wages were being decreased illegally. Due in large part to the extensive local media coverage of the story, the employment agencies retracted the salary cut for all workers, not just those that sued. This firm-wide victory resulting from a legal claim coupled with media attention has not been repeated.

This said, international and local media attention following the release of the 2004 CAFOD report regarding electronics industry working conditions led directly to a significant reduction in hiring discrimination practices utilized by employment agencies. CEREAL-GDL was a critical collaborator to this report, which was also a catalyst for the emergence of transnational advocacy related to working conditions in the electronics industry. Additionally, the media attention opened the door for a collective response from electronics industry firms

globally. Specifically, leading firms around the world established an industry-wide code of conduct. Though electronics industry firms that are signatories to the COC audit their second tier suppliers including subcontracted CMs, it is important to note that the audits do not include employment agencies, which are often the biggest culprits of labor rights violations. Research highlights that in Guadalajara, COC audits have not proven effective in identifying or remediating labor rights violations (Locke et al., forthcoming).

In the past half decade, the most notable working condition improvement has been the significant reduction of hiring discrimination practices undertaken by employment agencies. This change was a product of the media attention to the CAFOD report, but also the direct dialogue between CEREAL-GDL and electronics industry firms in Guadalajara that ensued. This dialogue became institutionalized and is today known as “the accord.” Beyond this improvement, to date there have not been other substantial firm or industry-wide changes to labor practices. At the individual worker level the accord has proven to be effective as related to CEREAL-GDL solving a labor violations case by reaching an agreement with firms and without having to go through the entire legal claims process at the local labor board. Thus, in sum, the accord to date has served mostly to remediate individual workers’ labor disputes and has yet to achieve ongoing firm or industry-wide working condition improvements. However, it is important to highlight that the underpinning of the accord is the direct dialogue between CEREAL-GDL and firms. The dialogue has set a foundation for possible improvements in the near future. For example, there is a discussion currently taking place between CEREAL-GDL and a leading CM to pilot a freedom of association program at the firm.

Overall, then, a continuing direct dialogue with firms that leads to new forms of collaboration among CEREAL-GDL and firms, as well as the evolution of the CTIE into a strong worker-led collective action organization, whether in the form of another NGO or a trade union, are seemingly the most promising efforts that could lead to future firm or industry-wide working condition improvements. A critical question, however, is whether past and potential working condition improvements could only be possible in Guadalajara or if similar improvements could take hold in other regions of Mexico or internationally. Indeed, working condition improvements in Mexico’s Silicon Valley cannot be seen solely as a result of CEREAL-GDL’s work. It is critical to keep in mind that the organization does not operate in a vacuum, but in a complex web of relationships, including with highly coordinated and cohesive electronics industry firms located in the city. Similarly, CEREAL-GDL cannot be divorced from its relationship to the influential Jesuit institution, which facilitates its operation.

In regard to electronics industry firms located in Guadalajara, the strength of their business association and its offshoot CADELEC demonstrate the cohesiveness of local firm managers. These managers prioritize the well-being of the cluster in Guadalajara even above the well-being of their individual firms. The majority of firms and their business association have demonstrated a genuine interest, at least operationally, in maintaining their end of the accord. CANIETI strong-arming hesitant member firms that are purview to the accord to dialogue with CEREAL-GDL exemplifies this reality. As a case in point, some CM firms with subsidiaries in Guadalajara often refuse to engage with CEREAL-GDL, but do so at the behest of CANIETI, which in these cases serves as an intermediary to the dialogue. Notably brand name firms without subsidiaries in Guadalajara are not purview to the accord and have been known to refuse

dialoguing with CEREAL-GDL. In such cases, the accord mechanism fails in its purpose of allowing CEREAL-GDL to bring issues to the attention of brand name firms in the event that a labor violation is not resolved directly with a CM or CANIETI. In short, the effectiveness of the accord process is limited to the interest of firms to engage in and the ability of an actor such as CANIETI to pressure firms to uphold the process.

As related to the CEREAL-GDL's operational structure, FCyE provides a "safe space" from which CEREAL-GDL may operate its activities. Indeed, the Jesuit umbrella organization guarantees the organization stable financial and institutional backing from a well-respected institution Mexico. In fact, the clout of the Jesuits often opens doors to dialoguing with firms and protects the organization from challenges often faced by other Mexican labor rights NGOs. These challenges range from harassment by firms and in some cases government to a lack of funding to maintain a stable staff or long-term engagement with workers. In regard to the latter, CEREAL-GDL's institutional presence in Guadalajara is a critical variable in its ability to successfully undertake its activities. For example, though CEREAL-GDL staff meet with workers on the northern border of Mexico frequently in order to organize them and incorporate them into the CTIE, they cannot offer them legal representation since a physical presence to attend hearings is critical.

Beyond a physical presence, it is important to account for contextual differences that exist from one location to another. For example, the northern border region is currently experiencing a bout of extreme violence, which requires CEREAL-GDL and workers to exercise extreme caution when arranging meeting times and locations. Moreover, worker turnover is significantly higher in the border region, and it seems evident that the electronics industry business association in Guadalajara is much more cohesive than business associations on the border. There are certainly hundreds of other differences like these between the two locations, and it goes without saying that how similar efforts could be applied or fare in other locations is highly dependent on a locations' context. In turn, it would be overly speculative to project if and how the set of activities CEREAL-GDL has developed over the past decade in Guadalajara could impact working conditions on Mexico's northern border or elsewhere in the world. Certainly, this is a topic for future research.

APPENDICES

Appendix 1: Overview of the Electronics Global Value Chain

The electronics industry (EI)⁹⁸ has evolved in the past 30 years from being a vertically integrated supply chain to a complex Global Value Chain (GVC) characterized by subcontracting relationships between brand-name firms and contract manufacturers. Today, brand name firms are generally “fabless” companies, meaning that they do not manufacture products and are primarily focused on innovation-related activities. This division of labor within the GVC impacts the location of electronics manufacturing firms and employment conditions of workers within this industry. As such, this appendix explores the evolution and current characteristics of the EI GVC. Specifically, the first section focuses on the historical evolution of the EI supply chain during its nascent stage in the 1980s. During this decade, brand name companies fragmented the traditionally vertical integration of the EI supply chain against a backdrop of the personal computer revolution. The disintegration of brand name companies’ supply chains went hand in hand with the emergence of contract manufacturers, which took over manufacturing responsibilities from brand name firms.

The second section of this appendix reviews interrelated dynamics of brand name supply chain disintegration and the consolidation of vertical supply chains by contract manufacturers. The third section analyzes the growth of and the critical importance of contract manufacturing in the EI GVC. Indeed contract manufacturers are a key to understanding labor conditions in this sector, as they are the primary employers of workers in the electronics industry. The fourth and final subsection highlights the geographical distribution of EI manufacturing across the globe.

Section 1: Evolution of the Brand Name EI Supply Chain

Through the mid-1980s it was the norm for brand name electronics companies, known in the supply-chain literature as original equipment manufacturers (OEM), to conduct the majority or all of the emerging and rapidly growing sector’s supply chain functions in-house (Cassia 2010; Borrus et al. 1997; Dussel Peters 2004). See 5 for the components of the electronics supply chain processes. For example, a company like International Business Machines (IBM) or Hewlett Packard (HP) would design components and final products; procure and manufacture all components; assemble final products; and market and deliver the final product to end users; and provided customers with after-sale customer support and repair service.⁹⁹ This is not to say that there weren’t electronics sector companies focused on designing and/or manufacturing very specialized software and hardware products. Indeed, companies such as Microsoft and today’s leading micro-chip designer and producer, Intel, have been operating since the 1970s. These specialized companies, along with countless others, which tended to cluster in what became

⁹⁸ There are multiple sub-sectors within the electronics industry which range from commercial and military to consumer based products. This thesis is concerned with high-tech electronics, such as computers and peripherals, software, cell phones, televisions and internet routers, but not products such as refrigerators. As analysts of this industry regularly note (see for example: (Sturgeon et al. 2010; ILO 2007; Lüthje 2006), it is quite difficult to analyze each of these divisions individually as the lines between them often sub-sector and global definitions vary.

⁹⁹ Note that, within the vertical business model, not all aspects of production took place in one geographical region. Rather, starting in the 1960s, OEMs operated offshore product assembly plants, and particularly in Asia, to reduce labor and operating costs (Borrus et al. 1997; Gallagher et al. 2007). However, unlike today, these plants were direct subsidiaries of and were managed wholly by the OEMs (Gallagher et al. 2007).

known as Silicon Valley in California, produced key electronic components rather than complete computer systems (Lüthje 2006).

Figure 5: Components of the Electronics Industry Supply Chain Process

The electronics supply chain can be broken down into nine components:

- 1) Research and design
- 2) Design of a final product prototype
- 3) Design engineering
- 4) Procurement of materials and parts
- 5) Printed Circuit Boards (PCB) assembly
- 6) Box assembly
- 7) Systems testing
- 8) Marketing and sales
- 9) After-sales customer service

Sources: Adapted from Cassia (2010) and Dedrick (2002),

In response to the personal computer (PC) revolution that began in the 1980s, IBM, one of the leading OEMs, restructured its business model to incorporate components produced by specialized hardware and software firms into its final products. This unprecedented collaboration with specialized component producers profoundly changed the division of labor within the electronics industry supply chain and is attributed as the catalyst for the contemporary disintegrated OEM vertical supply chain structure (Cassia 2010; Lüthje 2006).

Section 1.2 IBM's New Business Model and the Rise of "Wintel" Production

In the early 1980s, electronics components were becoming small and cheap enough for OEMs to design computers for the consumer market. The opening of the consumer market (and the start of the PC revolution) for electronics brought unparalleled economic opportunities for OEMs; whichever company secured their place in this electronics sub-sector would reap major economic rewards. In the early stages of the PC revolution, a keystone to the achievement of an edge on competitors rested on getting products to the market. Thus, time to market was of critical importance to OEMs.

Against this backdrop, IBM, competing particularly with the PC developed by Apple Inc. (Borras et al. 1997), restructured its business model to reduce time-to-market for its products (Cassia 2010). This new business model was characterized by a shift from designing and producing all of the components of a final product to utilizing parts whose intellectual property was owned by other companies, as well as to sub-contracting the assembly of components. In 1981, IBM introduced its first PC into the electronics consumer market. The computer utilized an Intel microprocessor and the Microsoft MS-DOS operating system. Additionally, the PC's motherboard was assembled by a then relatively unknown company SCI based in Alabama (Lüthje 2006). As Cassia (2010) writes: "In recent economic history, few strategic decisions like the one made by IBM opening up to external outsourcing have had such profound consequences..." (43).

The rise of a production system dubbed by economists Borrus and Zysman (1997) as “Wintelism” was a key consequence of IBM’s business model change. Wintelism production is characterized by a move away from the production of fully proprietary, “closed standards” systems by OEMs that compete on time to market and client marketing and uptake, to systems that incorporate key “open but owned” components and that compete based on quality and price (Ibid.). An explanation of each concept follows.

Before “Wintelism,” OEMs produced fully proprietary, closed standards systems. IBM’s early computer mainframes are an example of such systems. The components in the mainframe, including its operating software, were the sole intellectual property of IBM, and only IBM had the technical specifications to produce them. Moreover, each component could only function with other IBM hardware and software. The key to the economic success of a “closed standards” system is to get clients to purchase and become “locked-in” to using the system (Borrus et al. 1997). For example, once a company elected to purchase and use an IBM mainframe, they were locked into purchasing future components, replacement parts and service solely from IBM.

In contrast, IBM’s first personal computer, the catalyst for the rise of Wintelism, utilized “open but owned” components (i.e. an Intel microprocessor and a Microsoft operating system) (Borrus et al. 1997; Zysman 2003). These components are the intellectual property of the third party firm (owned), which releases key technical specifications to allow for interoperability with another firm’s components (open). Following this “open but owned” model, Microsoft and Intel released, through licensing agreements, proprietary information to IBM about their specialized products so that the latter could ensure interoperability of its own proprietary components to *their* standards. By the mid-1980s, Wintelism was the *de-facto* mode of production for OEMs (Cassia 2010). For example, PCs were marketed as having “Microsoft operating system installed” and as running on Intel microprocessors.

Whereas before the key to economic gain was time to market and getting clients locked into using their components through closed standards systems, the new Wintelist dynamics rewarded OEMs that innovated standard setting components that could be licensed to other companies through the “open but owned” dynamic. In short, “the process of creating value and the role of production changed...” (Zysman 2003, 7): research and development with the aim of developing components that would allow for quasi-monopolistic control of standards took a front seat compared to manufacturing and assembly (Borrus et al. 1997; Cassia 2010; Lüthje 2006). As Zysman (2003) states:

“Where in the value chain would you want to be? Do you want to be the producer of the final product, the box, even if, like Gateway or H.P., the box carries your logo? Or would you prefer being the producer of the constituent elements, the components of the system such as the chip, the screen, and the operating system. The value added is in the components, the subsystems, and in that sense the standards to which they must be built” (7).

Over a short period of time, OEMs widely adhered to emerging standards. By the mid-1990s almost every PC designed by OEMs included Microsoft’s operating system and third-party microprocessors, particularly those designed and produced by Intel.^{100,101} Meanwhile,

¹⁰⁰ Apple Inc. PCs are the main exclusion to this as they utilize proprietary operating system and component construction. Though it should be noted that today most Apple Inc. PCs utilize Intel microprocessors.

OEMs shifted to a two-pronged approach to outcompete each other. First, they focused more of their attention on component innovation and trend setting to control the components used within PCs across the industry. Concurrently, they cut costs in their manufacturing and assembly supply chains by outsourcing manufacturing activities to contract manufacturing (CM) firms.

These changes led to the vertical disintegration of the OEM EI supply chain, resulting in the formation of what is now referred to as the EI Global Value Chain (GVC) (Zysman 2003).¹⁰² This disintegration is a keepsake in the current EI GVC. Contrary to this trend, however, the EI GVC is also characterized by an *increasing* vertical integration of CM supply chains (Cassia 2010; Dussel Peters 2004; Lüthje 2004a; Lüthje 2006). To understand the EI manufacturing supply chain as a whole today, it is critical to explore these interrelated vertical disintegration and integration dynamics.

Section 2: Vertical Disintegration and Consolidation within the EI GVC

During the decade of the 1990s, OEMs increasingly focused on product innovation while aiming to maintain their manufacturing costs low. As such, they increasingly outsourced manufacturing activities to CMs (Cassia 2010; Lüthje 2006; Peres et al. 2009, chapter 4). CMs tailor their products to OEM specifications and ultimately do not brand their products with their own company name. The New York Times, as such, routinely utilizes the term “stealth manufacturing” when discussing CM firms. As reflected in Figure 6, in the 1990s, CMs became responsible for manufacturing activities starting with providing electronic components to OEMs and ending with product final assembly and testing (green and red components). It is no wonder that by 2001, the chief executive officer (CEO) of Flextronics, a leading contract manufacturer, noted in a New York Times article:

"Everyone is trying to get out of manufacturing," arguing that the standard business approach for a growing number of high-tech companies is: "It's impossible to open a factory; the hollow corporation is here; end of story" (cited in Markoff 2001).

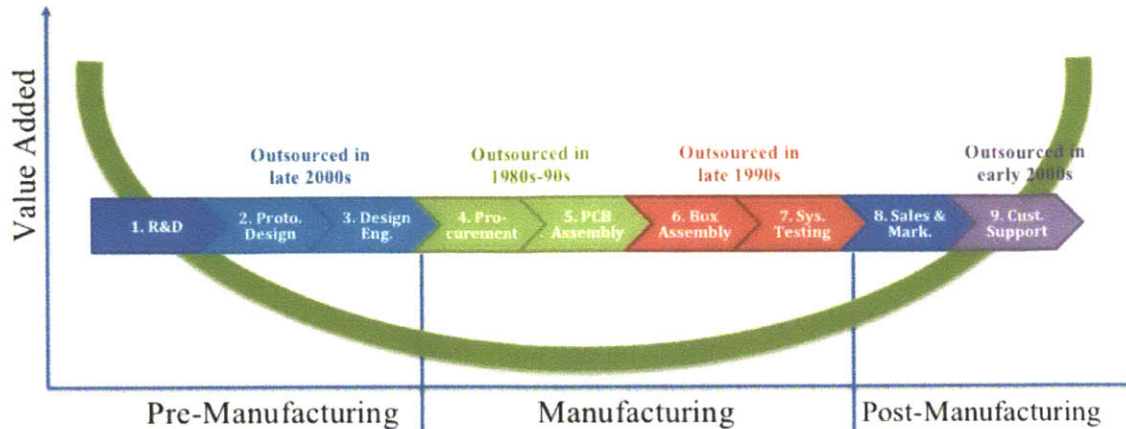
While, as reflected in Figure 6, manufacturing is the lowest value added component of the electronics GVC, it is also wrought with operational complexities, which CM firms have become experts at managing. For example, CM's are responsible for complex inventory control systems and in most cases when they produce final products, they are not accepted by an OEM until they are fully tested as functional (Hisamatsu 2008). Thus, while OEM's original economic rationale for subcontracting manufacturing to CMs was to save costs on factory establishment and management (including labor), the growing efficiency of CMs in more complex aspects such as raw material procurement as well as product final assembly and testing, led OEMs to increasingly rely more on CMs (Cassia 2010). Ultimately, CMs “earn profits from their capacity to manage complex supply chains to a large scale to suit the particular specifications and timelines of a number of [OEM] customers...indeed [big name CMs] coordinate such a

¹⁰¹ Ironically, for IBM the Wintel system to which they had unknowingly given birth led to the company's doom as a PC producer. Microsoft and Intel wrestled away Big Blue's control of the PC with the “furious pace [of innovations] that focus and specialization permitted” and which allowed them to become *the* standards-setters for PCs (Borras et al. 1997, 12).

¹⁰² The focus of a global value chain is not on manufacturing activities *per se*, but cross-national systems of manufacturing *processes*. In other words, the focus is on managing a supply chain with components in more than one country to ensure that final products meet delivery deadlines and quality standards.

multiplicity and diversity of transactions they could be seen as global supply flagships in their own right” (Gallagher et al. 2007, 77).

Figure 6: Outsourcing of the Electronics Industry Global Value Chain



Source: Author elaboration based on (Cassia 2010; Peres et al. 2009)

Overall, as OEM supply chains disintegrated,¹⁰³ CMs increasingly specialized in complex aspects of the EI GVC, consolidating along the way their own verticalized supply chain. OEMs became what are dubbed “fabless” companies, meaning that they do not directly manufacture the goods they design, market and sell.¹⁰⁴ Concurrently, what had started as a model of “traditional outsourcing” had evolved into “strategic” and “operational” outsourcing. Traditional outsourcing is characterized by a low level of managerial complexity and tasks, such as OEMs providing raw materials to a CM and the CM only being responsible for their processing into an electronic component (Cassia 2010). Along the continuum of this typology, strategic and operation outsourcing are characterized by complex and coordinated processes between the lead and the outsourcing firm (Ibid.). These latter outsourcing models best represent the structure of outsourcing relationships in the electronics GVC. Indeed, by the mid-1990s, the name “contract manufacturers” no longer represented the reality of what CM firms did. Electronics Manufacturing Services (EMS) firms is the name now used to describe firms that undertake these levels of operational and managerial complexity.

Subsection 2.1: From EMS to Original Design Manufacturing

EMS firms specialized in the manufacturing of electronics products by the turn of the 21st century. During the first decade of the 21st century, the OEM supply chain further disintegrated, and along with it came the emergence of a new type of outsourcing firm: Original Design Manufacturers (ODM). As reflected in Figure 6, during the past decade (2000-2010), OEMs further outsourced higher value activities beginning with post-sale customer support and product

¹⁰³ Note that, until recently, some companies, notably Japanese and South Korean firms, have maintained a vertically integrated supply chain. There are signs, however, that this situation is beginning to shift. In 2000, for example, Sony outsourced the production of a number of its components to contract manufacturers (Lüthje 2004a). Along these lines, it is also important to note that some companies, such as Dell, maintain product assembly in-house under the premise that these activities are an important link to their customers (Lüthje 2006).

¹⁰⁴ This is not unlike companies such as Nike in the garment industry sector, which relies on subcontracting to produce their products.

repair, and, most recently, prototype design and engineering. Outsourcing firms that are highly focused on proprietary research and development (R&D) and the production of final goods are known as ODMs. In other words, the difference between an EMS and an ODM firm is that the former, though they do collaborate with OEMs on prototype design and engineering, do not develop their own intellectual property (Cassia 2010).

As part of the ODM model, outsourcing related to R&D and product engineering occurs, in many cases, through the buying of intellectual property and final manufactured goods from independent firms, thus saving the OEM R&D and production time and resources (Cassia 2010, 125-134; ILO 2007). In other cases, outsourcing activities can be classified as Joint Design Manufacturing (JDM), in which OEM firms actively collaborate on the design of new products (Ibid.). A clear example of the OEM/ODM relationship is the production of notebook computers.

By 2007, 83 percent of all notebook computers were built in Taiwan, where ODM firms have made breakthroughs in areas such as compact PC design and battery power saving. In fact, one Taiwanese ODM firm, Quanta Computer, produced one third of the world's notebooks in 2007 (Cassia 2010, 125-134). It is likely that consumers do not know Quanta computer as a brand, as notebooks are sold under better known OEM branding (i.e. HP or Dell). As such, with regard to branding final products, the ODM model is similar to the EMS model. On the other hand, ODM profit margins can be up to two times higher than those in the EMS sector (Ibid.). It is therefore of no surprise that EMS firms have strong economic incentives to diversify and strengthen their vertical supply chains to provide not only "full packaging" services (i.e. from product prototyping to after sale support), but also proprietary design which epitomizes the ODM business model. Though the economic incentive was put into jeopardy during the 2001 world wide economic recession, as explored in the following subsection, it has not deterred EMS firms from seeking to integrate ODM models. Moreover, the recession in fact served to strengthen their position within the EI GVC, which went through restructuring during this time period.

Subsection 3.1: Economic Recessions and their impact on subcontracting models

The 2001 global economic recession highlighted the weaknesses of the Wintelist production system as related to EMS and ODM firms. Weakened consumer demand for electronics products, especially in the United States and consequently overproduction in the sector led OEMs to dramatically decrease manufacturing activities (Dussel Peters 2005; Lüthje 2007). Those hardest hit by this shift were subcontracting firms. Faced with decreasing orders from OEMs, EMS/ODM firms cut employment (as a whole, the electronics industry lost over 2 million jobs worldwide between 1997 and 2003 (ILO 2007). Some industry analysts, and notably Boy Lüthje (2007), argue that the recession led subcontracting firms to retract their aspirations to become ODMs and instead re-focused on EMS activities.

Indeed, subcontracting firms focused increased attention on EMS services and further consolidated their EMS vertical supply chains. This was done against a backdrop of OEM firms further outsourcing manufacturing work as cost-cutting measures (ILO 2007; Lüthje 2007). For example, IBM in 2003 sold all of its manufacturing facilities around the world to Sanmina-SCI, a leading EMS firm. Similarly, Lucent Technologies transferred its manufacturing facilities to Celestia in 2001 and Solectron in 2002 (Lüthje 2007). The verticalization strategy was also a

response to OEMs strategically reducing the number of subcontractors with whom they worked. For example, Lucent technologies reduced its number of subcontractors from 30 to 16 (Ibid.).

In short, the recession led to a restructuring of the EI GVC characterized by a larger OEM role in procurement as well as a consolidation of subcontracting relationships. Additionally, it is important to highlight that in this time period OEMs began to recentralize the procurement of basic electronics components such as semiconductors, decreasing profits that subcontractors gained from serving as intermediaries between component providers and OEMs (Ibid.). In response, EMS firms focused their attention to strengthening their internal vertical supply chains to be increasingly competitive in the manufacturing market. However, EMS firms have also increasingly sought to incorporate ODM strategies, in particular through JDM activities (Cassia 2010). This trend appears to have been unfazed by the current worldwide recession that began in 2008 (Cassia 2010).

The most recent analyses suggest that the trend of EMS firms attempting to enter the ODM market are alive and well and, in fact, it is becoming increasingly difficult to classify especially the largest subcontractors as either EMS or ODM. As Cassia (2010) writes: “Top class EMS...have completed some acquisitions with the aim of maintaining a strong competitive position in the mass-market business areas specific to the ODM segment. It is therefore difficult to clearly distinguish between EMSs and ODMs” (107).¹⁰⁵ Acquiring smaller firms with intellectual property is a means for subcontractors to extend their internal expertise and offer to enter JDM relationships with OEMs. Nonetheless, industry analysts do not fully agree on how to define certain subcontractors. As a clear example, Boy Lüthje classifies the world’s largest outsourcing firm Foxconn as an EMS/OEM (Lüthje 2006), while another expert, Cassia (2010, 107-113), classifies the firm as an EMS and/or ODM. Regardless, it is clear that many of the top subcontractors define themselves as EMS *and* ODM firms. For example, the Flextronics website, the second largest outsourcing firms in the world, highlights the firm’s operational capabilities as both an EMS and an ODM (Flextronics). Indeed the firm boasts that it recently “co-designed, developed, and produces” the thinnest PC currently in the market (Ibid.).

Overall, the 2001-2002 worldwide recession led to a restructuring of the EI GVC. Specifically, as OEM firms further outsourced their manufacturing work leading to a subcontracting firms further consolidated their roles as the key manufactures in the EI GVC. This reality however has not dissuaded EMS firms from increasingly focusing on adopting ODM models. Moreover, the 2008-2009 economic recession led OEMs to further outsource production albeit with a more concentrated number of outsourcing firms. This has created a cycle of maintaining “outsourcing relationships that proved successful during the recession because there is insufficient time to install new capacity to meet rapidly growing demand [post-recession]” (Sturgeon et al. 2010, 8). In short, though economic recessions have put economic strains on subcontracting firms, these companies tended to come out ahead in the end with stronger internal vertical supply chains and stronger relationships with OEMs. It is therefore critical to understand the size and scope of these actors, which is the topic of the next section.

¹⁰⁵ An example of such an acquisition is the EMS (though some argue it is an ODM) firm Foxconn, currently the world’s largest subcontractor in the electronics industry, purchasing an electronic manufacturing firm that produces phone for Motorola, along with various other manufacturing firms with strong ties to other world-class OEMs (Cassia 2010, 109).

Section 3: The Scope of EMS/ODM Firms

Based on the most recent reliable data known to the author, EMS firms have, as of the end of 2007, sales approximating 180 billion USD per year, a more than 800% increase since the 1990s (Cassia 2010, 95). The EMS sector is highly concentrated and controlled by a small group of firms. By 1999, the top five EMS firms controlled 38% of the EMS market (Lüthje 2006). As of 2008, the top five firms controlled approximately 60% of the EMS market (based on numbers provided by Cassia 2010). Table 3 reflects the top ten EMS firms by economic value in 2007. The table also highlights the number of estimated employees and where the firms' country of origin.¹⁰⁶

Table 3: Top EMS Firms Employment, Revenue, and Origin

Firm	Revenue 2007 (M\$)	Employees 2007	Country of Origin
Foxconn	52,495	550,000	Taiwan
Flextronics	29,336	162,000	USA ¹⁰⁷
Jabil Circuit	12,291	61,000	USA
Sanmina-SCI	10,384	45,610	USA
Celestica	8,684	42,000	Canada
Elcoteq	5,911	24,222	Finland
Benchmark	2,916	10,522	USA
Venture Manu.	2,690	n.a	Singapore
USI	2,008	12,905	Taiwan

Source: Cassia (2010)

Like the EMS sector, the ODM sector has also seen dramatic growth since the 1990s. In fact, it is the most rapidly growing sector of the EI; by 2008 the ODMs accounted for 120 billion USD in revenue (Cassia 2010). Table 4 reflects the 2007 revenue and the country of origin of the top five ODMs. These five firms controlled more than 66% of this sector in 2007.

Table 4: Top ODM Firms Revenue and Origin

Company	Revenue 2007 (M\$)	Country of Origin
Quanta Computer	23,969	Taiwan
Asustek	23,289	Taiwan
Compal Electronics	15,362	Taiwan
Wistron Corp.	8,841	Taiwan
Inventec	8,087	Taiwan

Source: Cassia (2010)

As highlighted in Table 3, the main EMS firms are from the United States and Asian countries, a reality that holds true even with smaller EMS firms. The root of most of these EMS firms is in California's Silicon Valley where SCI (before their merger with Sanmina), Flextronics and Solectron (originally a solar panel manufacturer) were launched in the 1970s (ILO 2007). Another location is the United States Midwest, the launching pad for Jabil Circuits. Asian EMS

¹⁰⁶ Note that, in 2007, Flextronics bought Solectron, which had over 10 billion USD revenue in 2006.

¹⁰⁷ Currently headquartered in Singapore

firms are concentrated in Singapore and Taiwan (Ibid.). Table 4 demonstrates that Taiwan is the country of origin of most ODMs. Indeed, according to Cassia (2010), more than 77% of the ODM revenue comes from Taiwanese companies, followed by 18.2% from China and Japan. European and U.S. ODMs account for approximately 4.4% (Ibid.). Taking aside the country or origin differences for a moment, we can also see that together these outsourcing sectors play an increasingly important economic role in the EI GVC.

Together, the ODM and EMS sectors produced approximately 300 billion USD in revenue in 2007. In 2010, the sectors grew their revenue to over 350 billion USD and are expected to add another 100 billion USD by 2014 (Ventureoutsourcing). This is an outstanding growth of over 1,700 percent in just two decades (based on numbers from Cassia (2010). Though during the 2001-2002 economic recession EMS/ODM growth rates were negative, they quickly recovered (Lüthje 2006). By 2004 EMS/ODM growth returned to double digits (Cassia 2010). This reflects OEMs further relying on subcontractors for design and manufacturing of their products. As highlighted in the previous section, the same trend holds true for the 2008-2009 economic recession. Ironically it can be posited that without the first economic recessions of the 21st century, subcontractors would not be as central in the GVC as they are now, and that their revenues would not be as high. The said, it is important to differentiate between revenues and profits. For example, subcontracting firms operate on profit margins between 3-8% (Cassia 2010; Lüthje 2006). ODMs are able to achieve higher profit margins because of the services they provide to OEMs. Nonetheless, whether an ODM or EMS, subcontracting firms operate on very low profit margins.

As discussed in the prior subsection, the line between defining an EMS and ODM is becoming increasingly blurred. For example, taking into account both outsourcing sectors, EMS and ODM, the firm Foxconn stands out as the industry leader. The growth and strength of the Taiwanese firm is impressive. Cassia (2010) attributes its success to strategic acquisitions of services firms in the electronics industry such as the ones noted in the previous subsection, as well as its focus on streamlining its increasingly vertical supply chain. What distinguishes Foxconn “is its high level of verticalization: the company’s aim is to carry out end-to-end operations, from design to production and aftersales service and repair” (Cassia 2010, 110).

In short, increasing verticalization for both EMS and ODM firms is the name of the game (Cassia 2010; ILO 2007). As Flextronics boasts on their website, they operate industrial parks throughout the world that provide “full-packaging” production. “Positioned in low cost regions of all major world markets, our Industrial Parks diminish the cost of production.” Moreover, every Industrial Park provides complete plastic injecting molding capabilities, including prototyping, mold making, verification, and validation, with injection types that include gas assist, thin wall, two shot forward/BI color, and invert/over molding” (Flextronics).

In sum, subcontracting firms are the backbone of the EI GVC. They are increasingly incentivized to further consolidate their vertical supply chain of services offered to OEMs as a means to increase profits. Profit margins, however, are quite thin, leading subcontracting firms to maintain their operating costs as low as possible. Sanmina-SCI, the fourth largest outsourcing firm succinctly states these dynamics on its website:

“Outsourcing is becoming increasingly necessary for Original Equipment Manufacturers (OEMs) in their quest to boost return on capital and focus on core competencies such as product development, marketing

and branding. As a result, the EMS industry continues to experience rapid change and growth, and the demand for highly efficient and flexible operations is a prerequisite”(Sanmina-SCI).

These are two factors that impact where subcontracting firms decide to locate their operations, a topic discussed in Section 5. Before reaching this discussion, the following section provides a full panorama of the EI GVC today, introducing two crucial actors that have not been discussed.

Section 4: A Fuller Panorama of the Electronics Industry Global Supply Chain Operation

Thus far, this appendix has highlighted key actors and attributes of the EI GVC. These include the importance of subcontracting firms and their relationship with OEMs. There are two other actors in the GVC that have yet to be discussed. They are: electronic components suppliers, and supply chain logistics firms. Each is discussed in turn. Following this discussion, the manufacturing model used by subcontracting firms is explored. This section concludes with an overall summary of the EI GVC.

Materials and Components Suppliers

Electronic components are the basic building block of any electronic device. Cassia (2010, 63-89) distinguishes between two types of components: active and passive. Active components include for example microprocessors while passive components refers to goods such as transistors and capacitors and plastic for product casing. Ernst and Lim (2002) divide suppliers of components into “higher-tier” and “lower-tier.” The former typically interact directly with OEMs and/or subcontractors; they are able to deliver high quantities of high quality components (Ibid.). An example of a higher-tier supplier is Intel, which produces and sells microprocessors in large quantities to OEMs. As discussed in Section 3, the 2001 global recession has led OEMs to strengthen their procurement directly from such components suppliers.

Lower-tier suppliers are typically local to a country or region, have limited technical capacity to produce large quantities of quality products, and thus rarely interact with OEMs or subcontractors directly (Ernst et al. 2002). Instead, they deal primarily with higher-tier suppliers, and are in the most precarious economic position within the GVC. Higher-tier suppliers typically use lower-tier suppliers as price breakers or capacity buffers, dropping them at any time in response to, for example, decreased demand for a product (Ibid., 1422).

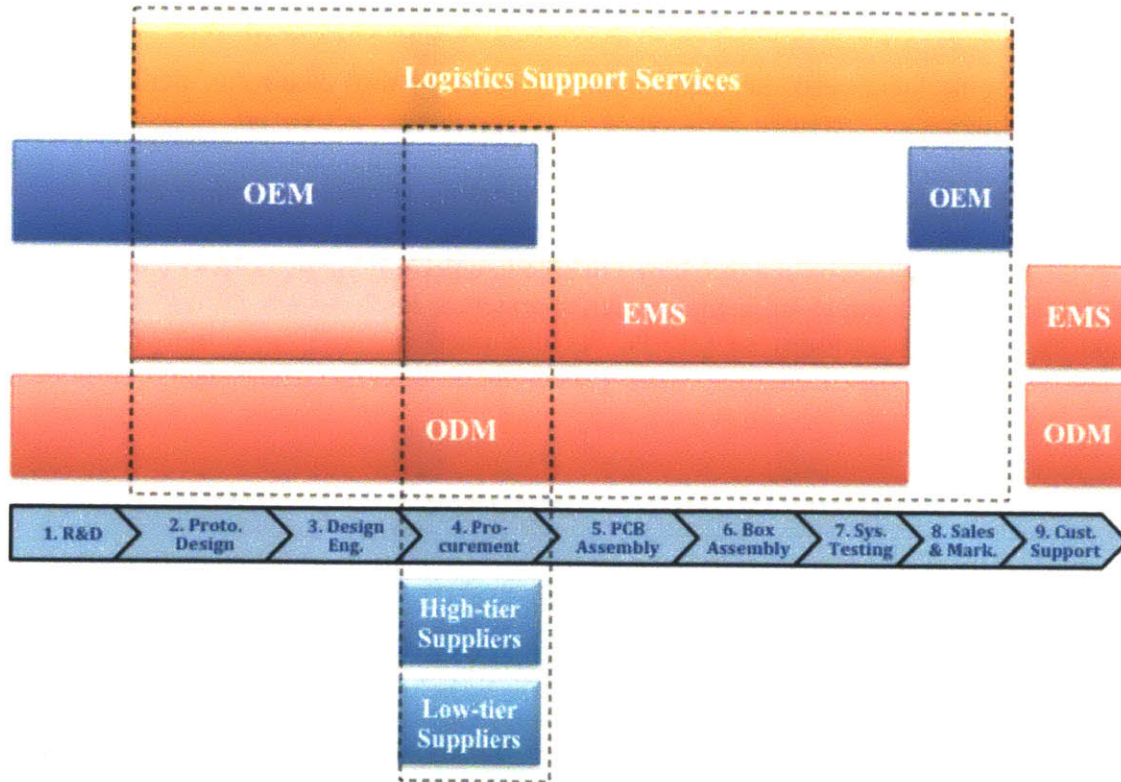
Supply Chain Logistics Firms

As the EI GVC has increased in complexity, firms have emerged to help OEMs and subcontractors manage supply chains. These firms are particularly important to subcontractors given the latter’s increasing need to manage complex inventories as OEMs rely increasingly on a just-in-time production model (Hisamatsu 2008; Palacios Lara 2005). Per the just-in-time production model, subcontractors are generally in charge of maintaining component and final product inventories until requested by OEMs. As Hisamatsu (2008, 267) notes, subcontractor firms do not view their expertise being in inventory management, thus they rely on specialized companies to aid them in this endeavor. The largest supply chain logistics firms are subsidiaries of multinational firms (Palacios Lara 2005).

A Fuller Panorama of the EI GVC

The above discussion of suppliers and logistics firms rounds out the presentation of the main actors in the EI GVC. Figure 7 summarizes the EI GVC visually. As reflected in the figure, the main actors are: OEM's, Subcontractors (EMSs and ODMs), logistics support services, and high and low-tier suppliers. The relationship between each actor and they activities each performs is presented in relation to the nine components of the electronics supply chain discussed at the beginning of this appendix. For example, ODM firms take on research and development and design activities, while EMS enter the GVC at the manufacturing process, beginning with supply procurement. Note that there can be variations to the GVC structure. While, for example, some OEMs continue to rely on outsourcing firms to procure all electronic component supplies, there is a trend of OEMs procuring high-value (active) components directly and allowing subcontractors to procure only low-value (passive) components (Lüthje 2007).

Figure 7: Actor Relationships in the EI GVC



To sum up, then, following is a brief description of the key actors in the EI GVC:
OEMs: are brand-name companies that today focus on innovation and outsource manufacturing processes and after-sale customer support. In the past decade, there are increasing examples of OEMs outsourcing research and design activities to subcontractors, while trends suggest that they are reintegrating component procurement into their internal supply chains. OEMs maintain control of sales and marketing.

EMSs: are contract manufacturers with increasingly vertical supply chains. OEM firms subcontract EMS firms to manufacture and to provide after-sale customer support for electronics

components and final goods. EMS firms also collaborate with OEMs on prototype design and design engineering, though they do not develop their own intellectual property.

ODMs: are contract manufacturers that play the same role as EMS firms, but also design and produce intellectual property and product innovations. Sometimes the later activities are conducted in coordination with OEMs through joint design manufacturing.

Logistics Support Services: are firms that facilitate the logistics, such as inventory control and product distribution, of the GVC for both subcontractors and OEMs.

Suppliers: provide electronic components to OEMs and/or subcontractors. Such firms can be divided into higher-tier and lower-tier.

It needs to be noted that the diagram does not reflect every actor involved in the GVC. Among others, final product distributors, resellers, and final customers are not included to simplify the figure.¹⁰⁸ Regardless, as the discussion of this appendix demonstrates, the relationships between actors in the EI GVC is complex and dynamic. Importantly, these relationships do not take place in a vacuum, but in physical locations. The following section explores factors that determine where firms locate.

Section 5: Location Decisions of Outsourcing Activities

What Conditions are Subcontractors seeking?

While subcontracting firms are the backbone of the EI GVC, it is important to remember that they are a service sub-sector serving OEM firms (Gallagher et al. 2007). As such, their existence is based on their ability to provide OEMs with quality, uniform and low-cost products to OEMs. Coupled with low profit margins and a rapidly changing demand for products, subcontractors thus seek locations with low-waged workers, as well as labor flexibility and stability. Flexibility includes, for example, the ability to have laborers work overtime when necessary. Stability includes, for example, low labor turnover and no worker strikes (Gallagher et al. 2007; Lüthje 2007). Moreover, subcontractors establish assembly line manufacturing as a means of ensuring quality control and product uniformity (Gallagher et al. 2007; Mendoza Zárate 2009). Beyond the variable costs of production, notably labor, subcontracting firms also seek low fixed costs.

Fixed costs are predominantly based on factory establishment and upkeep. In this regard, subcontracting firms seek government subsidies and tax breaks ranging from land acquisition to discounted electricity rates (Lüthje 2006). Subcontracting firms also seek government policy and macro-economic stability. For example, it is important to firms that currency exchange rates are relatively stable and that government policies will not change dramatically and, for example, leave them without promised tax-breaks (Ibid.).

Proximity to OEMs and OEM target markets are other critical factors that subcontracting firms take note of when deciding where to locate (Lüthje 2007). Specifically, locating near OEMs provides higher levels of day-to-day interaction with OEM management and thus a higher possibility for collaboration (Ibid.). Locating close to OEM target markets provides a value

¹⁰⁸ For a more detailed example of the EI GVC see Dedrick (2002).

added, as they can offer to get final products to the target markets quickly and at lower costs (Lüthje 2007; Hisamatsu 2008). This is especially important in electronics industry subsectors, such as computer production, in which just in time production is shifting to “real time” production. For example, Dell computers are shipped to customers between 48 and 72 hours from being custom ordered (Dussel Peters 2005).

The interrelated factors highlighted in the previous subsection are critical in location decisions, but the importance relative to one another varies over time. For example, as the ILO (2007) notes:

“the relative weight of each variable (and thus the decision as to where to locate) may well change over time and over the product cycle, as they did in Mexico and China. When Microsoft was preparing to launch the Xbox [game console] in mid-2001, it chose to centralize production for the US market at Flextronics’ Guadalajara facility so that its engineers could easily fly down for last-minute design tweaks. However, a year later Microsoft transferred production to two Chinese plants to be closer to their supply base” (56).

Where do subcontracting firms locate?

Subcontracting is a global operation, meaning that subcontracting firms operate in numerous countries worldwide. Yet, it is evident, and unsurprising, that the majority of manufacturing operations are established in low-income countries, while their research and design units and operational headquarters are located in developed countries (ILO 2007; Lüthje 2006; Lüthje 2007; Peres et al. 2009; Hisamatsu 2008). Though operations are dispersed globally, it is important to highlight that following the 2001-2002 worldwide recession many subcontractors opted to close manufacturing production in low-wage countries and seek out “lower-wage” countries. China and other Asian locations became a significant destination for these operations during this time (ILO 2007; Lüthje 2004b). China has become the largest producer of electronics products, as well as an increasing internal market for these products (ILO 2007; Lüthje 2004b; Sturgeon et al. 2010). Of course, it needs to be noted that a key factor for locating operations in China was the country’s ascension into the World Trade Organization in late 2001 which significantly reduced its tariffs and quotas and reduced subsidies to national firms (Dussel Peters 2005; Gallagher et al. 2007).

This does not indicate that other regions are not of critical importance. For example, while Mexico may not always compete with China with regard to wages, its proximity to the US market is of strategic importance for subcontractors. For example, as a Sanmina-SCI-Mexico executive noted: “If you were to order ice cream from China you would get five containers of vanilla. Whereas Mexico is a Baskin-Robbins: we can mix and match flavors and deliver the ice cream the next day” (cited in Gallagher et al. 2007, 137). Thus, labor costs are not always *the* determining factor for deciding where to locate subcontracting operations. Though, as highlighted by the Microsoft Xbox case, OEMs may require subcontractors to produce new products closer to target markets and then switch to lower-wage areas once design quality and functionality have been established.

Section 5: Summary

This appendix analyzed the emergence, evolution and current status of the EI GVC. The EI GVC has gone through significant changes in the past 30 years and is currently managed by two major actors: OEMs, such as HP and IBM, and contract manufacturers such as Foxconn and Flextronics. The latter have evolved in the past three decades to become the manufacturing

backbone of the industry, due particularly to the rise of a Wintelist model of production in the industry.

As part of the Wintelist model, OEMs moved away from manufacturing products and instead focused on research and design, marketing, and sales. Manufacturing became the central role of CMs, which evolved into EMS firms with a vertical internal supply chain that allowed them to provide integrated services to OEMs. Economic recessions further strengthened the role of subcontracting and today EMS firms have further consolidated the manufacturing of electronic products. Additionally, there has been a rise in efforts by EMS firms to provide more services to OEMs, including prototype development and research and design. Subcontractors with such capabilities are known as ODMs. The distinction between EMS and ODM firms is increasingly blurred, but as a whole they are appropriately dubbed “stealth manufacturers.”

The EI GVC is based on low-cost production targeting a rapidly changing consumer demand. Manufacturing of products is the lowest value added activity in the EI GVC and cost reduction measures are focused in this part of the chain. Thus, in order to meet OEM demands for quality, uniform and low-cost products subcontractor firms locate in low-wage countries, particularly China and Asian countries. However, subcontracting is a global business and low-costs are not the only factors firms consider when determining where to locate. Other factors include proximity to OEMs and OEM markets, as well as host country economic and institutional conditions.

Appendix 2: Overview of Electronics Manufacturing in Mexico and Guadalajara

Almost every top electronics industry contract manufacturer in the world operates in Guadalajara, Mexico. This appendix analyzes the combination of historical, economic and institutional factors that led to a clustering of electronics industry production in Mexico and specifically in Guadalajara.

Low-income countries around the world compete with one another to capture the foreign direct investment (FDI), employment, and technology transfers promised by the EI (Gallagher et al. 2007). Mexico is not exception. Since the mid 1980s, in tandem with the country's shift to a neoliberal, export-oriented economic growth, the electronics manufacturing industry boomed. While the industry is dispersed in three regions of the country, by far the largest cluster of electronics firms is in Guadalajara, Mexico's second largest city. Indeed, by the mid-1990s, Guadalajara would become known around the world as "Mexico's Silicon Valley." To understand the dynamics of the electronics industry in Guadalajara, the first question is: why did firms choose to locate in Guadalajara? For starters, as explored in the first section of this annex, national economic policies directed at growing export industries throughout Mexico played a significant role. Proximity to the United States has also been paramount, but has been a double-edged sword. The electronics manufacturing industry in Mexico is tied to the health of the United States economy; as such recessions in the U.S. have had significant repercussions for the industry and highlighted the footloose nature of electronics firms.

Zooming in on Guadalajara in the second section, specific factors that have led electronics industry firms to locate in the city include better infrastructure, a preferred balance of high-skilled and low-wage workers, and a cosmopolitan culture compared to other regions of the country. The third section analyzes the actors involved in and the dynamics of the cluster. As related to firms, while through the mid 1990s, the cluster witnessed an emergence of national firms, today it is best described an enclave composed of CMs that assemble electronics for export. In fact more than 60 percent of workers in the Guadalajara cluster work for foreign CMs. While in recent years there has been a growth of software and design firms locating in the cluster, it can be posited that given the amount of employment, export revenue and FDI the cluster produces in relation to manufacturing, it is not likely that electronics manufacturing will cease to exist in Guadalajara. Other important actors include strong business associations that work in collaboration with the state to promote the growth and sustainability of the cluster. The fourth section of the appendix synthesizes the factors that lead firms to locate in Guadalajara.

Section 1: Overview of Electronics Manufacturing in Mexico

Mexico has a long history of electronics manufacturing, starting with radios and radio components in the 1940s. Since then, electronics manufacturing has diversified into the production of not only radios, but also high-tech electronics such as computers and cell phones. For example, in 2008 Mexico produced 50 percent of the world's Blackberry cell phones, 80 percent of all Blue-ray discs, and more than 5 million Nokia cell phones (CEREAL 2009). Electronics manufacturing is one of Mexico's most important export-oriented industrial activities: over 90 percent of electronics manufactured in Mexico in 2002 were exported (Dussel Peters 2004). Moreover, as reflected in Table 5, in 2008 the electronics manufacturing industry exported 90.86 billion United States dollars (USD), representing over 10 percent of the country's overall GDP and 30 percent of all of the country's exports (ProMexico).

Table 5: Electronics Manufacturing in Mexico in 2008¹⁰⁹

Sector	Jobs		% of Ntl. GDP	Exports	
	<i>Direct</i>	<i>Indirect</i>		<i>Bil. USD</i>	<i>Percent</i>
Electrical	258,399	775,197	2.4	21.12	7
High-Tech	330,445	991,335	7.9	69.74	23
Total	542,092	1,626,276	10.3	90.86	30

Source: ProMexico; Mexico's national GDP in 2008 was 885 billion USD.

The majority of Mexican exports—80.5 percent in 2009—go to the United States, which is by far Mexico's most important trading partner (ECLAC 2010, 179). Similarly, a majority of electronics products are exported to the U.S. For example, in 2004 more than 94 percent of the electronics manufactured in Mexico were exported to the U.S. (CEREAL 2006). This reality is unsurprising given Mexico's geographic proximity to the United States and Mexico's trade-liberalization policies, particularly its membership in the North American Free Trade Agreement (NAFTA).

1.1: Geographic Proximity to the United States

The proximity of Mexico and the U.S.—the countries share a 2,000-mile border—significantly reduces transportation costs and time for traded goods as well as allows for quick delivery of customer customized products to the U.S. market. For example, as a Sanmina-SCI-Mexico¹¹⁰ executive notes: “If you were to order ice cream from China you would get five containers of vanilla. Whereas Mexico is a Baskin-Robbins: we can mix and match flavors and deliver the ice cream the next day” (cited in Gallagher et al. 2007, 137). The benefits of geographic proximity are reinforced by Mexico's trade-policies, which provide preferential treatment to exports headed to the United States.

1.2: Mexican Trade Policies and FDI

Mexico's trade policies encourage export-oriented electronics manufacturing FDI. Since the mid-1980s Mexico has adopted export-oriented economic growth strategies through trade-liberalization policies that reduced foreign investment and import restrictions as well as tariffs (Dussel Peters 2003). Such policies include NAFTA, which eliminated trade barriers between the Mexico, the U.S. and Canada (Moreno-Brid et al. 2009), as well as programs including the *Programa de Importación Temporal para la Exportación* (Temporary Importation for Exportation Program) that reduce tariffs on imported goods used to produce final goods for export (Dussel Peters 2003).^{111,112} Whereas in 1980, tariffs for electronics imports was over 20 percent, today they are effectively zero (Dedrick et al. 2001). Further, under Article 303 of NAFTA, key electronics final product inputs such as motherboards manufactured in the three

¹⁰⁹ Electronics manufacturing in Mexico is divided into two categories: electrical and high-tech electronics. The electrical category consists of generators, engines, refrigeration equipment, household appliances, and circuit breakers. The high-tech category includes communications equipment, audio, video, computers, semiconductors and integrated circuits.

¹¹⁰ Sanmina-SCI is one of the largest electronics manufacturers in the world.

¹¹¹ Under the program, as long as over 65 percent of final products are exported, inputs may be imported into Mexico duty-free.

¹¹² To get a better sense of the scope of the export-oriented policies note that according to Dussel Peters ((2003), electronics produced for the domestic market are almost 50 percent more expensive than those produced for export.

signatory countries may be freely traded; if they are sourced from other countries they must be taxed by the recipient country (Alba Vega 1999). Overall, coupled with the proximity to the U.S. market, foreign electronics manufacturing firms rushed to Mexico in the mid-1990s to take advantage of the country's trade-liberalization policies and preferred trading position with the U.S. through NAFTA. Between 1994 and 2000, FDI in the electronics sector increased fivefold and accounted for 10 percent of the country's overall FDI in 2000 (Gallagher et al. 2007, 126).

1.3: Vulnerability to Economic Downturns

Electronics manufacturing in Mexico is reliant on foreign multinational firms producing for the U.S. market and is thus susceptible to economic downturns in the latter. The bursting of the tech bubble and the U.S. economic recession in 2001, coupled with China's ascension into the World Trade Organization (Dussel Peters 2005; Gallagher et al. 2007), caused numerous electronics manufacturing firms to relocate from Mexico to Asian countries, notably China (Hisamatsu 2008; ILO 2007; Lüthje 2004b). For example, the firms Motorola and Lucent closed their Mexican operations completely. The benefits of lower wages in Asian countries outweighed Mexico's proximity to and trade access to the U.S. market. Specifically, as consumer demand in the U.S. waned in this period, electronics manufacturing firms sought lower production costs and were less pressured to get products to the U.S. market as quickly as before (Dussel Peters 2005).

Half a decade later, the 2008-2010 economic recession has caused production downsizing in firms, but has not led to a mass exodus as in 2001. This can be explained in part by the fact that wages in Mexico relative to Asian countries have decreased (CEREAL 2009). Other factors may include, for example rising oil costs, which increases transportation expenditures for firms. Nonetheless, the footloose nature of the industry was highlighted during the 2001 recession. Though Mexico has a location advantage, it is clear that electronics manufacturing in the country is highly dependent on the health of the U.S. economy and that it is facing increased competition from Asian countries seeking to court electronics manufacturers. In short, the risk of multinational capital flight in Mexican electronics clusters is real and could occur at any time (Hisamatsu 2008).

1.4: Geographic Location of Electronics Manufacturing

As reflected in Figure 8, Mexican electronics manufacturing is concentrated in nine of the country's 31 states, representing three broad geographic areas: the state of Jalisco, the border region, and the central region. As highlighted in the figure, high-tech manufacturing takes place primarily in the state of Jalisco and in the border region. Also Figure 9 highlights that Jalisco's electronics manufacturing cluster is the largest in the Republic in terms of the number of companies, all of which are located in Guadalajara. This cluster is world-renowned for electronics manufacturing as it is home to what is widely known as "Mexico's Silicon Valley." The following section provides a brief overview of the city and is followed by an analysis of the main characteristics of contemporary electronics manufacturing in Guadalajara.

Figure 8: Geographical Location of Electronics Manufacturing in Mexico



Source: Hewlett Packard Mexico

Figure 9: Geographical Location of High-Tech Electronics Industry Companies in Mexico



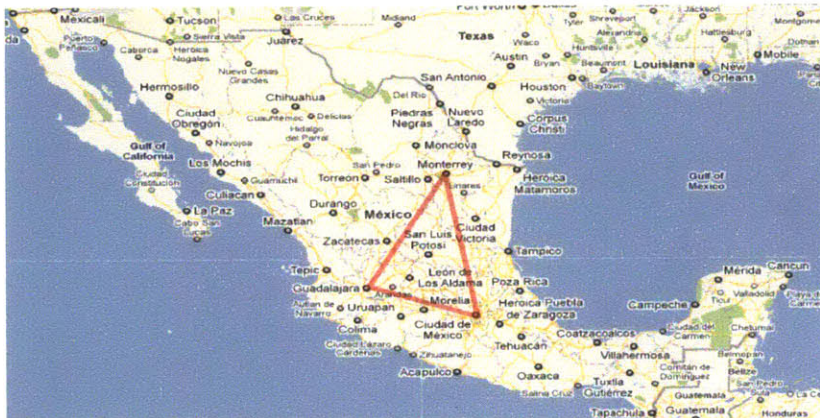
Source: CEREAL (2009)

Section 2: Guadalajara: The City

Guadalajara, the capital of the state of Jalisco, is located in the western part of Mexico and is the country's second largest city with a population close to four and a half million people. The city, which is in fact a metropolis, is made up of six "central" and two "exterior" municipalities. Together, the central municipalities make up the *Zona Metropolitana de Guadalajara* (Guadalajara Metropolitan Zone, ZMG).¹¹³ Population growth and territorial expansion has been rampant in Guadalajara, particularly in the latter half of the twentieth century (see: Consejo Estatal de Población, Jalisco 2008; Municipio de Guadalajara 2010; Harner et al. 2009; Estado de Jalisco 2009). Currently, it is home to approximately two thirds of the state of Jalisco's entire population. Since the 1960s, the City's population has roughly doubled every 15 years and is expected to increase by another million between now and the year 2030 (Ibid.).

Since the start of the nineteenth century, Guadalajara has been the most important commercial and industrial center in the western part of Mexico (Roberts 1989, 43). As Figure 10 reflects, the city is part of what is commonly referred to as Mexico's "golden triangle" formed by its connections to Mexico City, and Monterrey with critical trade routes and access to the United States (Palacios Lara 2005). As related to manufacturing, Guadalajara has appropriately been dubbed the "great city of small industry" (Arias 1985). From its founding by Spanish colonizers in the sixteenth century, the city has produced consumer goods such as food, shoes, textiles, and tobacco (Arias 1985; Roberts 1989). These industries continue to play an important role in the city's economy accounting for 45 percent of manufacturing in the state (OECD 2009). However, today Guadalajara is known nationally and internationally not as a "small industry city," but as "Mexico's Silicon Valley" given the cluster of electronics manufacturing that operates in the city.

Figure 10: Mexico's Golden Triangle



Source: Author using Google Maps

¹¹³ The central municipalities are: Guadalajara, Tlaquepaque, Tonalá, El Salto, Zapopan, and Tlajamulco de Zuñiga. The municipality of Guadalajara is the urban center of the ZMG. The remaining central municipalities meet the following criteria for inclusion in the ZMG: physical proximity, conurbation and close functional socio-economic ties to the urban center (Consejo Nacional De Población 2005, 21). The exterior municipalities of Juanacatlan and Ixtlahuacán de los Membrillos are defined as sharing a border with a central municipality and, while they are not physically linked to the urban center, they demonstrate an urban character and have a high level of integration with the metropolitan zone (ibid, 22).

2.1: Why Electronics Firms Locate in Guadalajara

Compared to other regions in Mexico, particularly the northern border, Guadalajara offers significant advantages that attract electronics manufacturing firms. Notably, Guadalajara has a more reliable workforce and infrastructure. For example, as related to reliability, while both the border region and Guadalajara have an abundant supply of low-wage labor, turnover in the border region is high as laborers may cross into the United States at any time (Hisamatsu 2008). According to estimates, turnover on the border region may be as high as 100 percent, while in Guadalajara its less than 5 percent (Ibid.). Similarly, education quality and the number of educational institutions are more developed in Guadalajara than in the border region (Palacios Lara 2005; Palacios Lara 2004; Hisamatsu 2008). A well-educated and trained population subset is important for electronics firms, as they depend on local engineers and factory managers to manage manufacturing.

As related to infrastructure, the border region and Guadalajara have transportation options adequate for importing and exporting activities: both are well connected to the United States through highways and airports suited for commercial activity. However, the border region is known for experiencing water shortages, while this resource is reliable in Guadalajara (Ibid.). Similarly, the border region is generally saturated with manufacturing plants, while Guadalajara offers low-cost *greenfields* for the development of production locations such as industrial parks (Palacios Lara 1992). Lastly, compared to the border region, Guadalajara is a much more cosmopolitan city with cultural activities and areas of the city designed with expatriates in mind, including for example gated communities and golf courses (Audirac 2003).

The remaining sections of the appendix will specify other factors that today make Guadalajara an attractive location within Mexico for electronics manufacturing, including a more detailed discussion of labor stability and flexibility, as well as business associations and public-private ventures that court firms to locate in the city. The last section of this appendix systematically presents all of these factors.

Section 3: Characteristics, Actors and Dynamics of Mexico's "Silicon Valley"

3.1: Growth of the "Silicon Valley"

The birth of electronics manufacturing in Guadalajara can be traced back over 40 years, though its contemporary structure initiated in the mid to late 1990s. This subsection briefly reviews the current composition of the cluster.

In the mid to late 1960s electronics industry firms Siemens, Motorola and Borroughs were the first to locate in Guadalajara. Computer producers International Business Machines (IBM) and Hewlett Packard (HP) opened operations in the city in the mid-1970s and early 1980s, respectively. Since then, the Guadalajara electronics manufacturing cluster has been anchored by these two brand-name firms, or as they are referred to in the electronics global value chain (GVC) literature Original Equipment Manufacturers (OEMs). In this regard, unlike the original Silicon Valley in California, electronics clustering in Guadalajara was "set off by the establishment in the area of a group of subsidiaries of foreign companies, which has been the pattern since then, as multinational corporations continue to be the main players..." (Palacios Lara 2001, 31). Importantly, however, during the 1980s and early 1990s, the emerging Guadalajara cluster gave birth to numerous domestic start-ups and company spin-offs, similar to

the phenomenon in California's Silicon Valley, leading national and international media to dub the cluster "Mexico's Silicon Valley" (Hisamatsu 2008; Palacios Lara 2001; Palacios Lara 2005).

Against the backdrop of Mexico's economic liberalization policies and the country's severe 1994 economic recession, this dynamic came a dramatic halt. Most national electronics firms went bankrupt due to the economic crisis and also as a result of Mexico's removal of protectionist policies in the electronics sector (Palacios Lara 2001).¹¹⁴ While national firms closed, foreign firms raced to locate in the cluster, especially contract manufacturers known in the GVC literature as equipment manufacturing services firms (EMS).

3.2: Concentration of EMS Firms and Limited Local Linkages

Following trends in the electronics GVC around the world, between the mid 1990s and early 2000s, OEMs in Guadalajara outsourced electronics manufacturing to EMS firms¹¹⁵ and turned their focus to managing the manufacturing supply chain and other "high value" activities (Palacios Lara 2004).¹¹⁶ For example, today HP primarily focuses its operations in Guadalajara on coordinating work with EMS firms related to manufacturing, as well as business and information technology consulting.¹¹⁷ A significant number of the world's major EMS firms established operations in Guadalajara between 1997 and 2001 (see Palacios Lara 2004 for a complete list).

EMS firms operating in Guadalajara have highly verticalized supply chains. This reality is appreciated visually in Figure 11. In its Guadalajara industrial park, Flextronics groups together component suppliers, distributors, logistics support firms, along with its manufacturing activities and warehouse in one central location. Notably, all of the firms co-located in the Flextronics industrial park are foreign firms. This dynamic reflects an important reality of the Guadalajara cluster: economic linkages to domestic industry are largely absent (Hisamatsu 2008; Palacios Lara 2001, Palacios Lara 2005; Peres et al. 2009). In fact, today less than ten percent of components utilized for manufacturing are sourced locally (Hisamatsu 2008).¹¹⁸ Data from SEIJAL highlights that from 2004-2010 there has been a trade deficit related to the electronics

¹¹⁴ For example, in 1985, Mexico began to dismantle a protectionist policy which restricted foreign ownership of computer manufacturing production in Mexico to 49 percent ownership and required 45 percent of parts used to produce electronics to be sourced domestically (Gallagher et al. 2007; Whiting 1992).

¹¹⁵ For example, IBM in 2003 sold all of its manufacturing facilities around the world to Sanmina-SCI, a leading EMS firm. Similarly, Lucent Technologies transferred its manufacturing facilities to Celestia in 2001 and Solectron in 2002 (Lüthje 2007).

¹¹⁶ Today, OEMs predominantly focus on research and development and marketing and sales (Cassia 2010) and subcontract 75 percent of manufacturing to EMS firms (Good Electronics 2009). OEMs utilize subcontracted manufacturing as means to reduce the cost of production against the backdrop of a global value chain where the greatest value added is in research and design activities. For a detailed discussion of the evolution of dynamics of the global electronics value chain and contract manufacturers see the Annex to this thesis.

¹¹⁷ Interview with Iliana Ponce, GPS Quality and Process Lead, HP-Mexico, February 2011.

¹¹⁸ OEMs and EMS firms alike highlight that local firms do not meet quality or production standards (Hisamatsu 2008). Barriers to high-standard local production include lack of access to credit and high interest rates, as well as the hesitancy of local investors to enter the market for fear of the country's macro-economic volatility (Ibid.).

industry. In other words, more imports come into Guadalajara than exports leave (SEIJAL 2010).¹¹⁹

Figure 11: Flextronics Industrial Park in Guadalajara



Source: Boy Lüthje from <http://www.oecd.org/dataoecd/5/42/39518330.pdf>

Overall, the reality is that “Mexico’s Silicon Valley” is best described as an “enclave economy” anchored by foreign OEMs and EMS firms that attract foreign specialized suppliers, and that has little economic ties to the local economy (Gallagher 2007; Hisamatsu 2008; Palacios Lara 2004). In essence, the Guadalajara cluster largely functions as a manufacturing base from which foreign firms export high-tech electronics goods primarily to the United States market (Ibid.).

That said, over the past decade, numerous design and software development firms, the majority of which are Mexican, have emerged in the cluster. According to Palacios (2008), these types of firms are in large part responsible for the increase of sophistication of electronics manufacturing in Guadalajara. For example, between 2000 and 2007, the cluster stopped producing keyboards and cables while adding the production of computer servers and medical equipment (Ibid.). This reality puts into question the cluster’s “enclave economy” paradigm, as it signals a growth in technological capacity, diversification of activities within the cluster, and a re-emergence of national firms (Palacios 2008). On the other hand, this relatively new sub-sector must be taken in context to the reality that by far the largest activity, measured by employment, remains manufacturing conducted by EMS firms. Indeed, it is estimated that 90 percent of all electronics sector activity in Guadalajara is manufacturing based. Select EMS firms make up the largest part of employment. Close to 50,000 of the approximately 80,000 (more than 60 percent) laborers in the Guadalajara cluster work for top EMS firms. Similarly, the conditions of manufacturing work are the same regardless of what is being produced.

¹¹⁹ In 2009, the Guadalajara electronics cluster exported 14.8 billion USD, 60.3 percent of Jalisco’s total exports. The cluster imported 15.5 billion USD.

3.3: Labor Flexibility and Stability

Coupled with low profit margins and a rapidly changing demand for products, electronics manufacturers, seek locations with low-waged workers, as well as labor flexibility and stability. Flexibility includes, for example, the ability to have laborers work overtime when necessary. Stability includes, for example, no worker strikes (Gallagher et al. 2007; Lüthje 2007). In the Guadalajara electronics industry, to maintain flexibility and stability, OEM and EMS firms rely on inert government regulation of labor law, as well as employment agencies and trade unions that protect firm interests instead of workers. These dynamics and how they impact work conditions are discussed in Chapter 3 of this thesis.

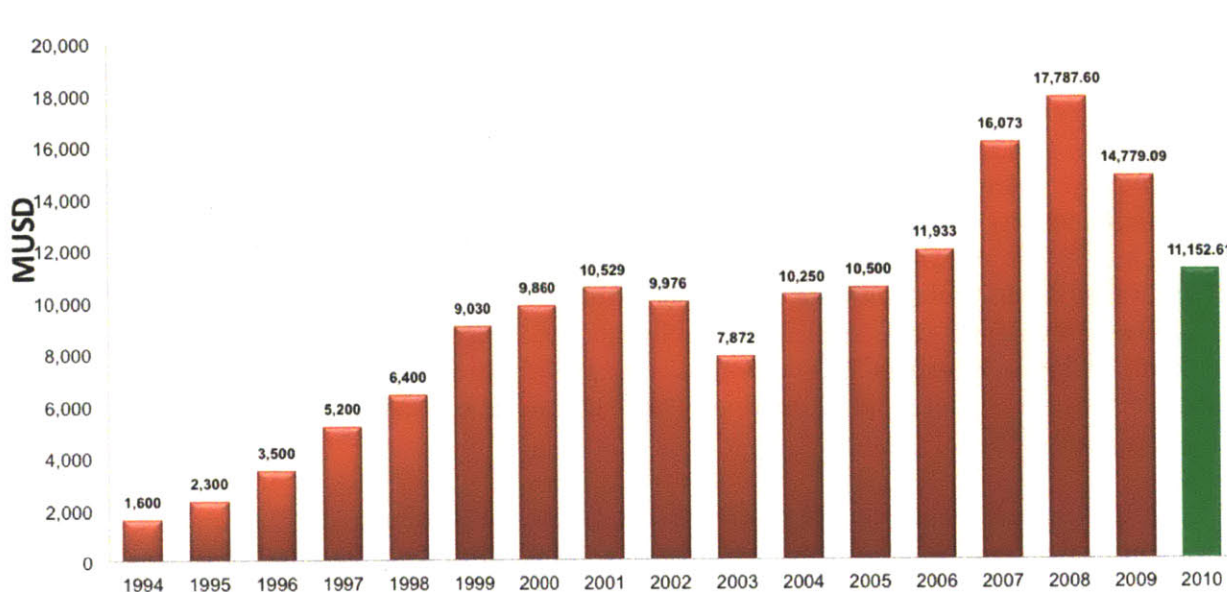
3.4: Economic Output of Electronics in Guadalajara

Undeniably, Guadalajara plays a crucial role in Mexico's electronics manufacturing sector. With exports exceeding 17.8 billion USD, "Mexico's Silicon Valley" exported close to 26 percent of Mexico's high-tech products in 2008 (SEIJAL 2010). Additionally, high-tech manufacturing employed approximately 80,000 direct workers in 2008, close to one quarter of all direct high-tech employment in the country.¹²⁰ It is also an important component of Jalisco's economy.

In 2004, electronics manufacturing in Guadalajara accounted for over 22 percent of Jalisco's manufacturing activities (OECD 2009). The sector has accounted for the largest percentage of the state's exports annually since the early 1990s (SEIJAL 2010). The 2001 economic recession however caused exports to decrease. Over 20,000 workers were laid-off due to firm relocations to Asia or other countries (Gallagher et al. 2007; Palacios Lara 2005). The sector did not recover until 2005, but has bounced back in subsequent years as measured by exports. See Figure 12. In 2009, it accounted for over 60 percent of the state's exports. Further, electronics industry FDI into Guadalajara quadrupled between 1995 and 2002 (Palacios Lara 2001, Gallagher et al. 2007). In 2009, the cluster received over 100 million USD in FDI (SEIJAL 2010). In sum, the significant amount of FDI into Guadalajara makes it a key industry for the state. Between 1994 and 2002, the Jalisco government focused particular attention to the growth of the cluster, establishing key policies and public-private ventures to secure FDI growth.

¹²⁰ Source: CADELEC, cited in a Hewlett Packard Mexico presentation provided to me. Note that the most recent estimates of employment in the sector signal an increase of 7,000 between 2008 and 2010 (Ibid.)

Figure 12: Jalisco Electronics Industry Exports



Source: HP presentation to the author based on information from SEIJAL. 2010 numbers reflect January-August.

3.5: Jalisco Economic Promotion Policies

For the first time in its history, in 1995 the state of Jalisco instituted planned economic promotion programs and activities (Alba Vega 1999).¹²¹ Between 1995-2001, the Jalisco state government undertook “the most aggressive state policy to foment the [electronics manufacturing] sector” (Palacios Lara 2005, 227). Notably, the *Secretaría de Promoción Económica* (State’s Ministry for Economic Promotion—SEPROE) was restructured and given more funding, and the administration established the *Consejo Estatal de Promoción Económica* (State Board for Economic Development—CEPE).

Together, CEPE and SEPROE are responsible for promoting and implementing Jalisco’s *Ley de Promoción Económica* (Law for Economic Promotion). The law allows the Jalisco government to provide monetary and indirect incentives (such as tax breaks) to companies based on the number of expected jobs created, among other indicators. In 1998, for example, CEPE invested 30 million pesos in economic promotion activities, more than three fourths of which went to job creation and investment promotion, such as a fifty percent reduction on state payroll taxes for qualifying firms (Palacios 2001). CEPE and SEPROE are also responsible for planning and constructing industrial parks; over a dozen electronics industry industrial parts were completed in the second half of the 1990s (Alba Vega 1999; Palacios 2005). Most recently, in 2008 CEPE provided Flextronics 35 million pesos to support their establishment of a new factory in Guadalajara (Milenio 2008b).

¹²¹ In the wake of the 1994 financial crisis, over 37,000 jobs were lost in Jalisco (Alba Vega 1999). The economic recession coincided with state elections. The candidate from the Mexican conservative party, the PAN, won the 1995 governorship on a platform that promised economic development and job creation. This turn of events was significant for Jalisco. First, it was the first time in over sixty years that the PRI had not won the governorship. Secondly, the new PAN administration implemented for the first time in the State’s history economic promotion programs and activities (Alba Vega 1999).

3.6: Public-Private Ventures and Business Associations

Key public-private ventures and business associations relevant to the electronics industry were also created in the mid-1990s in Jalisco. In 1995, as a public-private venture, the government, in coordination with electronics firms, established the *Instituto de Fomento del Comercio Exterior* (Institute for Promoting Foreign Trade) to promote an “exporting culture” (Palacios Lara 2005, 131). Second, in 1992 the business association *Camara Nacional de la Industria Electrónica, de Telecomunicaciones, y Tecnologías de la Información* (Electronics, Telecommunications, and Informatics Industry National Chamber—CANIETI), which was founded in 1935 in Mexico City, opened a regional and independent chapter in Guadalajara, CANIETI-Occidente (Palacios Lara 2005). In coordination with SEPROE, CANIETI-Occidente (heretofore referred to as CANIETI) established the *Cadena Productiva de la Electrónica* (Electronic Supply Chain—CADELEC), a non-profit organization tasked with facilitating connections between local raw materials and component suppliers to foreign companies (Palacios Lara 2005).

Public-private ventures and business associations coordinate efforts to attract foreign investment in the Guadalajara cluster, improve its competitiveness compared to other countries, as well as attract higher-value activities such as research and design (Palacios 2008). For example, activities range from: CANIETI conducting initiatives that promote and attract specialized suppliers and research centers to the cluster with government support and technical assistance from the association (Ibid.); and CADELEC conducting research to determine methods by which firms in the cluster can more efficiently procure raw materials. CADELEC and CANIETI also collaborate on initiatives to strengthen local supplier linkages and capacity as a means to keep firms from exiting the cluster. For example, Hitachi closed its operations in Guadalajara in 2008, largely as part of the company’s plans to move production to Asia, but also partly due to a lack of local component supplies necessary for its manufacturing (Palacios Lara 2008).

The examples above highlight the cohesiveness of electronics industry firms operating in Guadalajara. This cohesiveness, however, is constructed not by the firms as entities, but by the local managers of these firms. Specifically, local professional managers of multinational subsidiaries are the key actors in the associations. Local managers have developed their managerial skills and their careers around the cluster, and thus have a personal stake in the cluster’s survival (Hisamatsu 2008; Palacios Lara 2005). In other words, their interest is not limited to the success of only the firm they work for, but the cluster as a whole. “Consequently, they are more interested in receiving benefits from coordinating actions to promote their cluster” (Hisamatsu 2008, 271).

3.7: Location Factors

This appendix has demonstrated that manufacturing is the central activity in the Guadalajara cluster and that contract manufacturers are by far the biggest employers in the cluster. It has also explored the reasons why firms locate in Guadalajara. Table 6 sums these up. Overall, firms seek to produce in locations with ease of access to principle markets, developed infrastructure, a low-wage workforce that is stable and flexible, as well as other factors including state economic promotions and business associations and the cosmopolitan nature of the location.

Table 6: Location Factors for Electronics Manufacturing Firms

Factor	Purpose	How Guadalajara meets these criteria
Location near the United States	Access to the United States Market and Reduced Transportation Costs.	Guadalajara is connected to the U.S. through modern highways and a commerce-friendly airport.
Well-Developed Infrastructure	Facilitates transportation and sites for on-the-ground operations.	Greenfields, industrial park development, reliable services such as water.
Co-Location of other electronics industry firms	Proximity to OEMs increases coordination and potential for collaboration. Supply and logistics service firms facilitate internal supply chain management (see Cassia 2010).	A clustering of OEMs, EMS firms and supply and service firms has developed over the past thirty years in Guadalajara.
Strong Business Associations & Gov. Economic Promotion	Government programs and business associations that incentivize location in an area increases the economic viability of production as well as serves to attract other firms to the area.	Guadalajara has strong business associations and government promotion programs.
Cosmopolitan region	Expatriates prefer to locate in areas with cultural and recreational activities.	Guadalajara is a culturally rich, cosmopolitan city with amenities that include gated communities golf clubs and other recreational activities.
Availability of skilled labor	Engineers and technicians are needed to manage plant operations.	Over 10 higher education institutions are located in Guadalajara.
Availability of low-wage, reliable workers	Low-wage labor is necessary to run primarily assembly-line manufacturing. A low-turnover rate is desirable to reduce training and worker replacement costs.	Guadalajara has a large low-wage labor force, and turnover rates are less than 5 percent, compared to up to 100 percent on the northern border.
Flexible and stable low-wage labor	It is beneficial to be able to increase/reduce labor force based on rapidly changing demand for electronics	National labor law laxly enforced and employment agencies abound

Section 4: Summary

This appendix highlighted key factors that led to the growth and current dynamics of the electronics industry cluster in Guadalajara. Coupled with physical, geographic, and worker population advantages, national trade liberalization policies and economic promotion schemes led to a notable group of world class OEMs locating in Guadalajara in the 1980s. Through the 1990s, the cluster was the location of a vibrant growth of national and international firms, leading the city to be dubbed “Mexico’s Silicon Valley.” Yet, this ended abruptly in the mid 1990s in tandem with Mexico’s 1994 economic recession and the shift in the EI GVC to contract manufacturing. Today the cluster operates as an enclave in which EMS firms reign supreme and are by far its largest employers.

In recent years there seems to be an important emergence of national software and design firms in the cluster. This is a welcome development, particularly to the state of Jalisco and business associations in Guadalajara. Indeed, as related to the latter, business association members are mostly Mexicans who have formed their careers working in the electronics industry. This has led to a strong cohesiveness within business unions, characterized by the belief that their personal and firm well-being is dependent on the well-being of the cluster as a whole. This said, it does not seem likely that electronics manufacturing activities will cease in Guadalajara. So long as Guadalajara maintains globally competitive low wages compared to other regions, like Asia, as well as labor stability and flexibility, the city’s location and other factors explored will still make it a prime location for electronics manufacturing. Moreover, for the government of Jalisco, the importance of this sector is not simply in its economic output, but also the amount of employment it creates. Electronics design employs a limited number of workers compared to the mass employment possible through manufacturing. Thus, it can be posited that a shift to design-only activities is unlikely, and that design oriented activities will not replace or supersede the dynamics and work conditions related to electronics manufacturing anytime soon.

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