Beyond Corporate Codes of Conduct

Work Organization and Labor Standards in Two Mexican Garment Factories

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Beyond Corporate Codes of Conduct:
Work Organization and Labor Standards in Two Mexican Garment Factories

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ABSTRACT

This paper presents a matched pair case study of two factories supplying Nike, the world's largest athletic footwear and apparel company. These two factories have many similarities - both are in Mexico, both are in the apparel industry, both produce more or less the same products for Nike (and other brands) and both are subject to the same code of conduct. On the surface, both factories appear to have similar employment (i.e., recruitment, training, remuneration) practices and they receive comparable scores when audited by Nike's compliance staff. However, underlying (and somewhat obscured by) these apparent similarities, significant differences in actual labor conditions exist between these two factories. What drives these differences in working conditions? What does this imply for traditional systems of monitoring and codes of conduct? Field research conducted at these two factories reveals that beyond the code of conduct and various monitoring efforts aimed at enforcing it, workplace conditions and labor standards are shaped by very different patterns of work organization and human resource management policies.

Keywords: codes of conduct, labor standards, globalization

Introduction

Globalization and the diffusion of industry supply chains to various developing countries has provoked a fierce debate over how best to improve labor standards in these emerging centers of production. Child labor, hazardous working conditions, excessive working hours, and poor wages continue to plague many third world factories, creating scandal and embarrassment for the global brands that source from them.[2] In the absence of a strong system of global justice[3], and given the limited ability (perhaps willingness) of many developing country governments to enforce their own labor laws[4], multinational corporations have developed their own "codes of conduct"[5] as well as a variety of "monitoring" mechanisms aimed at enforcing compliance with these codes. In fact, monitoring for compliance with codes of conduct is currently the principal way both global corporations and labor rights non-governmental organizations (NGOs) address poor working conditions in global supply chain factories.

Notwithstanding (or perhaps given) their widespread use, much of the literature on labor standards in global supply chains has revolved around a series of highly polarized debates over what should (or should not) be included in the codes of conduct, how compliance with the codes (i.e., specific audit protocols) should be assessed, and who (company employees, state officials, NGO representatives or even professional auditors) should monitor the factories to ensure the greatest transparency of the process. In this paper we argue that these debates are misguided in that they distract from the central question of what actually does lead to improved working conditions and enforced labor rights. Through a structured comparison of two factories supplying the same global brand – Nike – we show that beyond the codes of conduct and various efforts at monitoring for compliance, interventions aimed at reorganizing work and empowering labor on the shop floor lead to significant and sustained improvements in working conditions.

In many ways, our argument about the need to complement codes of conduct/monitoring programs with more systemic interventions aimed at tackling the root causes of poor working conditions, is precisely how previous issues (i.e., promoting occupational health and safety, redressing problems of equal opportunity in employment and promotion decisions) were tackled. In each of these prior cases, external pressures led to company-sponsored standards and compliance programs. The limited results of this initial response promoted companies to eventually adopt new management systems that elevated and integrated these issues into the core operations of the business. Programs aimed at ensuring basic compliance with OSHA and EEOC standards were replaced by new forms of work organization and human resource management systems that sought to promote not only more healthy and equitable workplaces but also new sources of competitive advantage for the firms embracing these policies.[6] Improving labor standards in global supply chain factories will require a parallel journey.

The remainder of this paper is divided into five sections. First we review in a highly synthetic way the major debates over codes of conduct and monitoring systems. Second we provide some "context" by providing background information about Nike and the branded footwear and sportswear industry. The third section presents findings from our field research in Mexico. This matched pair case study illustrates how notwithstanding many similarities between the two plants, working conditions and labor rights at these two facilities vary significantly. In one plant, workers are relatively well paid, work within the legal work hour limits, and participate in decisions affecting the pace and sequencing of their work. In the other plant, employees on average work longer hours for less pay and enjoy few, if any, freedoms at work. The fourth section seeks to explain these differences in shop floor working conditions. After exploring various alternative explanations, we elaborate on our own argument – that working

conditions and labor standards are very much the product of divergent patterns of work organization and human resource management. We draw on our field research in China and Turkey to reinforce this point. We conclude by pondering the more general implications this case study may have for on-going debates over globalization and labor standards.

This paper is based on field research conducted over the spring and summer of 2005. Over 90 interviews were conducted with factory owners, managers, workers, NGO representatives, union leaders, and various Nike managers both in the US and in Mexico. Factory visits were also conducted in two Mexican states and in Los Angeles, California. In addition to the Mexican field research, the larger research project entailed matched pair case studies in Northern China, Southern China and Turkey. This qualitative research was complemented by quantitative analyses of Nike's various factory audits for its 830 suppliers located in 51 different countries.

Codes of Conduct and Monitoring: A Review of the Debates

Corporate codes of conduct and various efforts aimed at monitoring compliance with these codes have been around for decades. Whereas initially, these efforts focused primarily on corporate or supplier compliance with national regulations and laws, over time, they have become increasingly concerned with compliance to private, voluntary codes of conduct, especially as they apply to labor and environmental standards.[7] Information is central to this model of "private voluntary regulation". The underlying assumption is that information collected through factory audits will be used by both labor rights NGOs to exert pressure on global brands to reform their sourcing practices and by the brands themselves, who rely on this information to police and pressure their suppliers to improve standards within their factories. Should these factories fail to remediate various workplace problems, brands are expected to switch their orders

to supposedly more "ethical" producers. Figure 1 depicts the causal linkages assumed in this model.

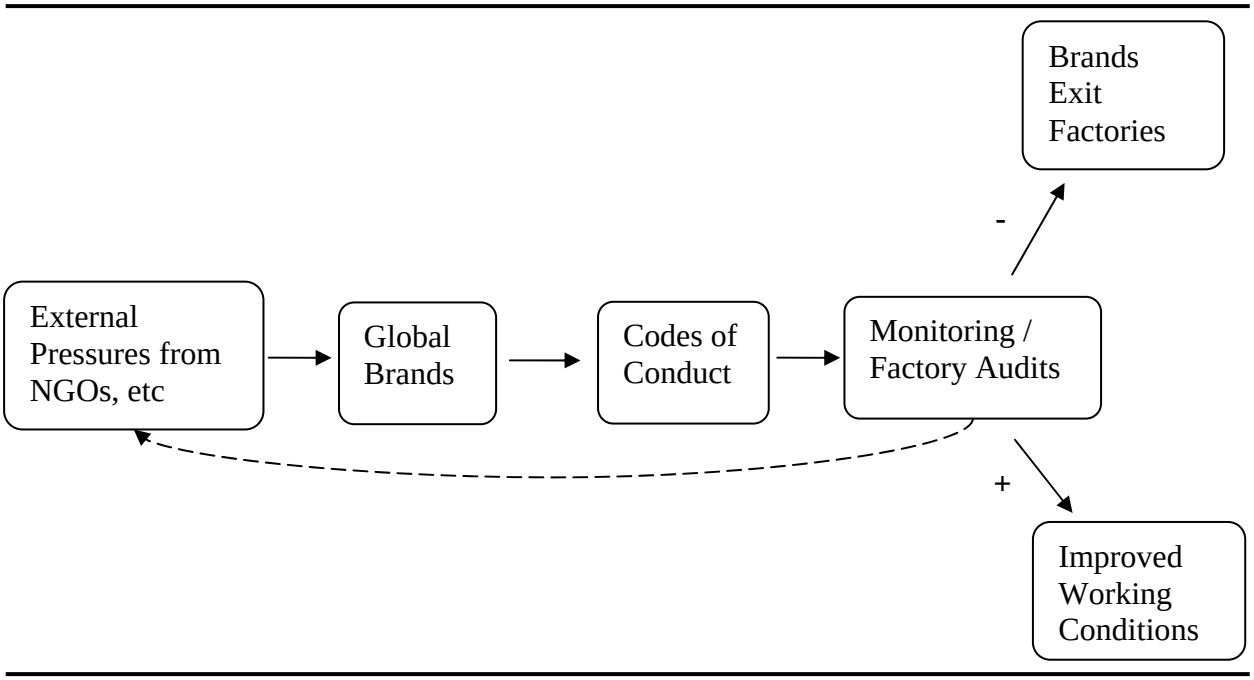

Figure 1: Traditional Model of Code of Conduct / Compliance

This model of workplace change has provoked heated debates over either the particularities of the actual codes and their compliance efforts (i.e., how these inspections are conducted, by whom, for what purposes) or their relation to other forms of regulation, especially state regulation. Critics of codes of conduct and voluntary monitoring regimes argue that they displace more thorough government and union intervention and are designed **not** to protect labor rights or improve working conditions but instead to limit the legal liability of global brands and prevent damage to their reputation.[8] Far from protecting workers, these private schemes eviscerate state regulation and undermine union power without replacing them with a viable alternative regime. Others, however, argue that private codes and monitoring are not attempts to undermine the state but rather appropriately flexible responses to the reality of global production networks and the low capacity of developing country states to fully enforce labor laws and

regulations.[9] According to this second group**, under certain conditions** (but these conditions vary, depending on the author), efforts to promote code compliance by brands, multi-stakeholder initiatives, and NGOs can work to improve labor standards, particularly when states lack the capacity or the resources to carry out systematic factory inspections.[10]

A related debate over codes and monitoring focuses on whether those conducting the compliance audits can be trusted to make accurate and honest assessments of factory conditions and transparently report their findings. Critics identify a number of important conflicts of interest that exist among the key actors involved in this process.[11] Given that brands and their suppliers may have an interest in hiding labor violations rather than reporting them, how trustworthy are these internal audits? Wouldn't the incentives for moral hazard be too great for these interested parties? If these audits are, instead, contracted out to "third party" organizations, be they NGOs or private auditing companies, how competent are the NGOs in assessing certain technical issues (e.g., air quality) and how forthcoming will the private monitoring firms be if they hope to please their clients (the brands and their suppliers pay for these services) and generate future business?

In response to these criticisms, various procedures and policies were established to promote greater transparency and oversight by "independent" organizations. Increasingly, external auditors, ranging from for-profit social auditing companies to local NGOs, are being certified by Multi-Stakeholder Initiatives (MSIs) like the Fair Labor Association and the Fair Wear Foundation. These institutional mechanisms are meant to bolster the credibility of monitors. Still, some (e.g., Workers Rights Consortium) argue that monitoring must be completely independent of brands and factories in order to be truly effective.

A third debate concerns the growing number and diversity of codes of conduct and auditing protocols as well as the uneven quality of the audits being performed.[12] The diversity of

codes and monitoring schemes being applied to global suppliers are well documented.[13] Underlying these different codes and implementation systems are very different principles and goals. Whereas some codes emphasize freedom of association and anti-discrimination policies, others instead focus on "living' (as opposed to minimum) wages, "excessive" work hours, and health and safety issues. Some codes are monitored by internal, company staff while other audits are conducted by third-party, external consultants or NGOs. Given this incredible diversity in inspection protocols and auditors, the room for controversy over whose audit protocol is more thorough or more accurate or even truly independent is enormous.

The ability to collect accurate information about a facility and report it in a transparent manner is only one of many key requirements for upholding and improving labor standards. Because debates have centered almost exclusively on what is (or is not) included in the corporate code of conduct and how monitoring for compliance to the code is conducted, the question of whether or not this system of private voluntary regulation is at all an effective strategy for improving labor standards has not been adequately evaluated.[14] If codes of conduct and monitoring for compliance do not (by themselves) improve workplace conditions in global supply chain factories, what does? This is the focus of our paper. Through a structured comparison of two plants subject to the same code of conduct and monitoring practices, we argue that beyond the code of conduct, improved labor standards are the results of particular interventions aimed at tackling some of the root causes of poor working conditions – by improving the ability of suppliers to better schedule their work and improve their quality and efficiency through new forms of work organization. These more "management systems" interventions appear to have a far greater impact on the quality of working life for employees than simply refining or enforcing the code of conduct. But to better understand our findings,

especially in light of the above debates, the next section provides some industry and company-level "context".

Context: Nike and the Athletic Footwear/Sportswear Industry

The athletic footwear industry experienced an explosive growth in the last two decades. In 1985, consumers in the United States alone spent $5 billion and purchased 250 million pair of shoes.[15] In 2004, they spent almost $15 billion and bought over 370 million pair of shoes.[16] Although the industry is highly segmented – by different sports, models and price – the branded shoe segment is dominated by a few large companies. Nike, Reebok and Adidas account for almost 60% of the global athletic footwear market.[17] Since displacing Adidas and Reebok in the 1980s, Nike has become the largest and most important athletic shoe company in the world. Even after the recent merger between Reebok and Adidas, Nike still controls over 36% of the US athletic shoe market and over 33% of the global athletic footwear market.[18]

Although still primarily known as a footwear company, Nike has also moved into other sectors (apparel and sports equipment) and expanded its sales beyond the United States into Europe, Latin America and Asia. In fact, only 70 out of its 830 suppliers produce shoes. In contrast, Nike apparel products are manufactured in 576 factories distributed throughout the world.[19] In 2004, the company made about US$12.2 billion in revenues, of which $6.5 billion came from footwear sales and $3.5 billion from apparel.[20]

Founded in 1964 by Phil Knight and Bill Bowerman, Nike (then called Blue Ribbon Sports--BRS) has evolved from being an importer and distributor of Japanese specialty running shoes to becoming the world leader in the design, distribution and marketing of athletic footwear and sportswear. According to company legend, Nike's business model was developed by Knight while attending Stanford Business School in the early 1960s. Knight realized that while lower-

cost, high-quality Japanese producers were beginning to take over the US consumer appliance and electronics markets, most leading footwear companies (e.g., Converse and Adidas) were still manufacturing their own shoes in higher-cost countries like the United States and Germany. By designing and marketing high performance athletic footwear at home but outsourcing manufacturing to lower-cost producers, Knight believed that Blue Ribbon Sports (renamed Nike in 1978) could undersell its competitors and break into this market. In 2004, all Nike products (footwear, apparel and equipment) are manufactured by more than 800 suppliers, employing over 600,000 workers in 51 countries. Nike has only 24,291 direct employees, the vast majority working in the United States.[21]

The same factors that permitted Nike to grow at an impressive rate over the last several decades – taking advantage of global sourcing opportunities to produce lower cost products and investing these savings into innovative designs and marketing campaigns – have also created serious problems for the company in recent years. Over the course of the 1990s, Nike was criticized for sourcing its products in factories/countries where low wages, poor working conditions, and human rights problems were rampant. This criticism was fed by a series of public relations nightmares – involving underpaid workers in Indonesia, child labor in Cambodia and Pakistan, and poor working conditions in China and Vietnam – combined to tarnish Nike's image. As Phil Knight lamented in a May 1998 speech to the National Press Club, "the Nike product has become synonymous with slave wages, forced overtime, and arbitrary abuse."[22]

At first, Nike managers took a defensive position vis-à-vis the various labor, environmental and occupational health problems found at their suppliers' plants. Workers at these factories were not Nike employees, and thus Nike felt no responsibility towards them. By 1992, this hands-off approach changed as Nike formulated its Code of Conduct for its suppliers

that required them to observe some basic labor, environmental and health/safety standards. (See Appendix A for the most recent version of Nike's Code pf Conduct.) All suppliers – current and potential – are obligated to sign this Code of Conduct and post it within their factories. Since 1998, Nike has increased the minimum age for footwear factory workers to 18 and all other workers (apparel and equipment) to 16. It has also insisted that all footwear suppliers adopt US Occupational Safety and Health Administration (OSHA) standards for indoor air quality.

To enforce compliance with its code of conduct, Nike has conducted numerous trainings with its suppliers as well as assembled a team of 90 compliance staff based in 21 countries, to monitor these suppliers.[23] In addition to these compliance specialists, Nike has about 1000 production managers working at/with its various global suppliers. All Nike personnel responsible for either production or compliance receive training in Nike's Code of Conduct, Labor Practices, Cross-Cultural Awareness, and in the company's Safety, Health, Attitudes of Management, People Investment and Environment (SHAPE) program.[24]

Aside from the initial, new source approval process that all potential suppliers of Nike must undergo[25], all factories are subject to three different types of audits: a basic environmental, safety and health (SHAPE) audit, a more in-depth management and working conditions audit (M-Audit) and periodic inspections by the Fair Labor Association (FLA). Nike provided us with data from all three of the above audits, as well as from their Compliance Rating program, which we analyzed in a companion paper.[26] We found that Nike's suppliers appear to be performing above average in terms of their scores on various factory audits, which suggests that working conditions in these factories are not as terrible as one might fear. However, we also found that there exists tremendous variation in working conditions across factories supplying Nike.[27] Some factories appear to be almost in complete compliance with Nike's code of conduct whereas

others suffer from endemic problems with poor wages, excessive work hours, harassment, etc. How do we explain this variation? In other words, why do factories making more or less the same products for the same brand treat their workers so differently? We also found inconsistencies in the assessments of the same factories. In other words, whereas particular factories appeared to be performing well on one audit, their performance on another assessment (employing a different audit protocol) indicated significant problems. How do we account for these differences and what do they suggest for the effectiveness of Nike's code of conduct and compliance program?

To answer these questions, we compare two factories, both suppliers to Nike and hence both subject to its code of conduct. Both factories (which we will refer to as Plant A and Plant B) are located in the same country (Mexico) and, therefore, operate in the same political and economic environment and are subject to the same labor regulations. Both plants interface with the same regional office of Nike (based in Mexico City) which is responsible for coordinating orders (sourcing) and compliance visits to the factories. In fact, the very same compliance specialists audit both factories. Compliance scores, based on the M-Audit, for the two plants are almost identical. Out of a possible perfect score of 100, Plant A received a score of 87 and Plant B received a score of 86 on their most recent M-Audits. However, beneath these apparent similarities, very different realities in terms of working conditions and labor rights exist. By systematically comparing the two factories along a number of dimensions (production systems, wage systems, work hour regimes, employee representation, etc.), we seek to shed light on the **underlying mechanisms** generating differences in working conditions at these two plants.

A Tale of Two Factories

Plant A is located in the Estado de Mexico. The plant is situated in an industrial park where other garment factories are also operating. A Mexican family has owned the group that runs this plant since 1955. When the North American Free Trade Agreement (NAFTA) was signed in 1994, the group began exporting. To support this new strategy, the company invested in state-of-the-art technology and trained its technical, operational, and administrative staff. Today, the group exports 95% of its production to Europe, Asia, North America, and South America.

Plant B is located in a western Mexican state, 800 km from the U.S. border and 2,000 km from the Nike regional office in Mexico City.[28] This has historically been an agricultural state but more recently, the state government has been promoting economic development through foreign investment. Plant B is part of a Taiwanese group, which owns three other plants: one in Taiwan, one in the United States, and another in the same Mexican state (recently opened). The plant in Taiwan manufactures fabrics and the other in Mexico produces garments for other brands. The group started producing for Nike in 1991 with its plant in the United States. In 1999, as production orders increased the owner opened Plant B in Mexico, where a low-wage labor force and a bigger facility allowed the company to increase its production.

Both plants are part of larger, vertically integrated groups. Plant A belongs to a group that includes spinning, knitting, and finishing operations in the same location where the garment assembly (sewing) takes place. Plant B is also part of a vertically integrated group engaged in the same range of productive activities. Being part of a vertical group is crucial for selling products to global buyers. Global brands tend to prefer plants that can offer "full package" services in order to avoid searching for material and component suppliers, which can increase the

risk of poor product quality and late deliveries, as well as add to the compliance burden by increasing the number of factories that have to be monitored.

Both plants also manufacture the same product (t-shirts) for Nike and other brands and have similar defect rates. Nike sets a 1.4% monthly defect rate ceiling for its contractors and considers both plants to be of high quality. Plant A has a 1% monthly defect rate and Plant B a 0.6% monthly defect rate. Finally, both plants pay the same legal minimum wage (US $5.15/day), have the same turnover rates (8-10% per year) and the same informal (based on skill) promotion policies. The labor forces in the two plants are both unionized. Table 1 describes the similarities between these two plants.

Table 1: Similarities Between the Plants.

	Plant A	***Plant B***
Country Location	Mexico	Mexico
Legal Minimum Wage	US $15/day	US $15/day
Structure	Part of a vertical group	Part of a vertical group
Product Type	t-shirts, graphic t-shirts	t-shirts, seamless and high-tech t-shirts
Defect Rate	1%	0.6%
Turnover rates	8-10%	10%
System of Promotion	Informal, based on skills	Informal, based on skills
Training	2 months	1 month (subsidized by state government)
Union	Mexican Workers Confederation (CTM)	Mexican Workers Confederation (CTM)

Two Worlds of Work

Notwithstanding their similarities, labor conditions at Plants A and B are, **in practice**, dramatically different, as illustrated through a more detailed comparison of wages, employee satisfaction, worker participation in production-related issues, work hours and overtime, and worker voice/representation at these two plants.

Wages

Workers in Plant A receive higher wages than those in Plant B. Notwithstanding that both plants pay the same legal minimum wage, workers at Plant A earn on average a weekly salary that is 21% higher than what workers at Plant B earn. The difference between these wages cannot be accounted for by differences in local wage rates since both plants are in the same region with respect to Mexican minimum wage laws. The National Commission of Minimum Wages, a division of the Federal Secretary of Labor and Social Welfare, divides Mexico into three geographic areas (A, B, and C) each with a distinct minimum wage. Plants A and B are located in the same (C) geographic area. Wage differences are instead due to different plant-level policies used to calculate worker wages.

In Plant A, workers are paid weekly. The factory opens a bank account for each worker and directly deposits their salaries into the account. Workers can withdraw money using an ATM card (there is an ATM station in the plant). Production workers receive a fixed daily wage of 65 pesos (US$ 5.8). In addition, individual workers can receive premiums for attendance, punctuality, and overtime, should they work extra hours. As a result, operators receive on average 644 pesos (US$ 57.6) per week plus any additional bonuses they may accrue. In each cell, workers also receive productivity bonuses once they exceed 70% of their production targets.

Table 2: Production Premiums in Sewing – Plant A

Percent of Production	***Premium (Mexican Pesos)***	***Premium (US Dollars)***[29]
70%	2	0.18
81%	25	2.22
86%	35	3.11
91%	46	4.09
96%	60	5.34
100%	70	6.23

Table 2 shows the bonus corresponding to different productivity levels. Given that the productivity for most cells in Plant A is very high, most workers earn close to, if not the entire, potential bonus. In other words, most operators earn their basic weekly wage of 644 pesos (US$ 57.6) plus a weekly bonus of 350 pesos (US$ 31.14) to earn a total of 994 pesos (US$ 84.52). Workers in other departments (i.e., ironing, quality control, and packaging) receive similar bonuses.

In Plant B, workers are also paid weekly, also through direct deposits into their bank accounts. Workers at Plant B can also withdraw money from an ATM machine located in the plant. Salary in Plant B is also determined through a mixed system that combines hourly wages and a piece rate system. However, the two systems vary in one fundamental way: in Plant A, productivity levels are calculated by cell; in Plant B, they are based on individual performance. Each garment produced at Plant B contains a ticket that reports the value of the individual piece. The value varies depending upon the complexity or style of the individual piece. Over the course of the work week, individual workers collect tickets from pieces they have worked on, and at the end of the week, they turn these into the accounting department which calculates their earnings. The minimum expected of individual operators is between 300-400 pieces per day (depending upon the complexity of the garment). This earns them their base salary of 51 pesos per day. Weekly salaries in Plant B are the product of fixed daily salaries, productivity bonuses, and premiums for attendance and seniority. On average, production workers at Plant B earn between 700 and 800 pesos per week.

Employee Satisfaction

Workers in Plant A are more satisfied with their work than are workers in Plant B. In Plant A, employees work in teams, operate more than one type of sewing machine, and are

responsible for routine maintenance of the equipment. Interviews conducted during the field research found that workers in Plant A appreciate job rotation. They value knowing how to perform a variety of operations and claimed that this opportunity to work on several operations plus in teams significantly improved working conditions over what existed under the previous, more modular production system where they performed the same repetitive task.

In contrast, employees at Plant B work in fixed, individual stations, are specialized in narrowly defined jobs, and thus perform the same operation over the course of the work day/week/year. The work is highly routinized and repetitive. Our interviews, however, revealed that although workers were not especially fulfilled by their jobs, they were not motivated to acquire new skills or perform a variety of operations. Instead, they preferred to stick with what they know and do well so that they can earn more through increased productivity. This is consistent with the bonus system in place at Plant B. Productivity premiums can significantly enhance the base salaries of average production workers and thus, they avoid all change that threatens to undermine these bonuses.

Participation in Production Planning

Workers in Plant A participate in decisions affecting the production targets, scheduling and even operations whereas workers in Plant B need to follow orders from above and do not have the opportunity to give their input. The relationship between supervisors and workers in Plant A is more collaborative than hierarchical. Supervisors in Plant A coordinate the work of different cells.[30] Every morning supervisors communicate to each cell the style and quantity of items they need to produce. Workers then get together and discuss how much they think they are able to produce that day. Finally, the workers meet again with the supervisor, share their opinions, and together reach a final agreement on the daily production target. Our field research

indicated that plant management was inclined to accept input from the workers and establish mutually agreeable production targets. If workers and/or supervisors do not agree with a particular sequence of operations, or even with an entire operation, they can suggest changes to the production manager, who usually accepts these changes. In other words, workers can suggest alternative ways to perform an operation, rendering it quicker and easier. We found that the opportunity to participate in decisions related to work process had a strong and positive effect on work climate. It provided operators both with greater control over their work and with opportunities to express their creativity/ingenuity at work.

In Plant B, production orders are communicated from the top of the plant's hierarchy and there is no place for worker participation. The plant manager plans production and distributes the orders to the area supervisors. Production in Plant B is divided into four areas, and each area has a supervisor. In each area, there are six lines, and each line has a supervisor. Area supervisors receive production orders from the plant manager, which they, in turn, divide up among the six lines under their control. The area supervisor is also in charge of explaining and teaching the operations involved in producing a given garment. Operators need to follow the precise instructions that they are given. One of the workers we interviewed claimed: "We cannot change or suggest different ways to produce a garment because it is a chain and we need to follow what they tell us". Moreover, while there is no formal policy against workers talking with one another and diffusing work practice innovations during their shifts, many workers complain that they simply do not have the opportunity to share work process innovations because the pace of production is fast and they are simply too busy to talk.

Work Hours and Overtime

Production workers at Plant A work 48 hours every week, from 7:30 am to 5:00 pm Monday through Friday. The cutting department has a different work schedule since it needs to stay 3 days ahead of the sewing operations. In cutting, there are two shifts in which employees work six 8 hour days from Monday through Saturday, either from 6:00am to 2:00pm or from 2:00 pm to 10:00pm. Every two weeks, cutting department workers change shifts. All workers have a 30 minute break for lunch. In Plant B, there are two shifts for all departments and workers do not alternate shifts. The first shift begins at 7:30am and goes until 5:00 pm; the second shift starts at 5:05pm and goes until 11:50pm, Monday through Friday. Both shifts include 30 minute breaks for lunch.

Nike, like most global brands, sets a limit of 60 hours as the maximum work week permitted under their code of conduct. Since Mexican law limits the regular work-week to 48 hours, workers in both plants can work no more than 12 hours of overtime per week. In both plants overtime is paid according to Mexican law: for the first 9 hours workers are paid twice their regular salary; for the subsequent 3 hours, they are paid three times their regular salary. However, the extent and form of overtime in the two plants are extremely different. When Plant A needs employees to work extra time, it makes workers aware of it and allows them to "apply" for it. Therefore, in this factory overtime is voluntary.

At Plant B, forced overtime is the norm. Workers of the first shift report that they often work until 7pm, sometimes even until 10 pm. This means that when they work overtime, they work between 12 and 15 hours in a day. During our interviews, several workers in Plant B reported that they actually work more than 60 hours per week.[31] This was confirmed by the M-Audits performed by Nike compliance staff in 2003 and 2004. Individual workers do not

volunteer to work extra hours; the supervisor chooses who has to stay longer. Supervisors explained that this is because they want their most experienced and efficient workers to stay longer in order to reach their production targets sooner. In practice this means that supervisors tend to assign overtime to Chinese workers because they claim that they work faster. This, in turn, generates animosity between the Mexican and Chinese workers since the Mexican workers, also eager to earn overtime wages, complain that they are being discriminated against.

Worker Voice

Workers at both factories are affiliated with the main Mexican labor union, the Confederacion de Trabajadores Mexcianos (CTM). In addition to the legally mandated yearly collective bargaining agreements negotiated by union leaders and plant management, in Plant A, union representatives meet more or less every week with the HR manager of the plant to discuss a variety of workplace issues. Relations between the HR managers and the union representatives are collaborative and these frequent meetings provide a forum for workers to express their concerns. In Plant B there are 11 union representatives, one for each area of production, and they too meet on a weekly basis with the plant's HR department as well as with the plant's owner. However, these meetings are reported to be more formal, with issues being addressed and solved depending primarily on the desire and mood of the plant owner.

In addition to the union, workers have other channels through which to communicate their grievances and suggestions to management but these practices as well, while apparently similar on paper, are very different in practice. For example, both plants have suggestion boxes that workers can use to voice grievances, ask questions, or even make suggestions to management. However, the implementation of this practice in the two plants varies significantly. In Plant A, workers' questions or comments remain anonymous and are dealt with in a non-

personalized manner. In Plant B, management posts both the suggestions (including the name of the worker who wrote it) and its response in a public area on the shop floor, thus compromising the anonymity of the worker. As some of these comments are of a personal nature (i.e., questions about discrepancies in individual paychecks, tensions between operators and their supervisors) this supposedly more transparent practice can at times embarrass individual workers and as a result, discourage them from using this system.

Both plants also possess various "mixed commissions" composed of representatives from the workers and managers that focus on health and safety, training, first aid, etc. These are required by Mexican labor law. In Plant A, these commissions are actively engaged in training and administration of first aid for minor injuries or checking to see that access to fire extinguishers and exits, etc. are all up to code. Plant B also possesses similar commissions on paper but during our field research, we found no evidence that they were actually functioning.

In short, notwithstanding many apparent similarities, including almost identical scores on their M-Audits, working conditions at Plants A and B are in practice quite different. Table 3 summarizes these differences. In Plant A, workers are paid better, work within the legal work hour limits and have a choice of whether or not to work overtime, engage in decisions affecting the pace, target and mechanics of production, and participate in various fora that provide them voice at work. Workers in Plant B are paid less well, often work longer hours, and have no voice over production decisions, let alone other aspects of life in the factory. How can we explain such different workplace realities in two plants that at first glance appeared so similar? Given that Plants A and B received almost identical scores on the M-Audit, what do these differences in actual working conditions imply for Nike's code of conduct and compliance program?

Table 3: Workplace Differences

	Plant A	***Plant B***
Average weekly wage	US$ 86/week	US$ 67.8/week
Team Work	Yes	No
Job Description	Multi-Tasks	Single Task
Job Rotation	Yes	No
Worker Participation in Work-related decisions	Yes	No
Overtime	Voluntary and within limit	Mandatory and over limit

On Monitoring and Measurement: Making Sense of Compliance Scores

Notwithstanding significant differences in working conditions and labor rights in Plants A and B, both received comparable scores on Nike's M-Audit. Out of a possible maximum score of 100, Plant A received a score of 87 and Plant B received a score of 86 after their most recent inspections. Given that these audits were conducted by the same individuals, following the same protocol, how is this possible? Detailed examination of the particular audit tool (M-Audit) employed by Nike's compliance officers reveals how two factories with such divergent labor practices and conditions could appear to be performing at similar levels of compliance.

Launched in the summer of 2002, the M-Audit (management audit) is seen by senior compliance officers as the most "rigorous" and "scientific" of Nike's audits.[32] In fact, the M-Audit provides a detailed assessment of the labor-management practices and working conditions at the factories. A typical M-Audit takes 48 hours to complete and thus is spread out over several days. The M-Audit is always conducted by Nike's in-house compliance specialists and inspections are announced beforehand. Each M-Audit reports a numeric score (0-100) that represents a percentage against a perfect compliance score. A score of 100 means that the factory is in full compliance with Nike's code of conduct. The M-Audit covers more than 80 items, focused on hiring practices, worker treatment, worker-management communications, and

compensation. Each item accounts for a specific weighting with respect to the overall score and all together sum up to 100.[33]

As a result of this scoring system, factories with different types of problems or mixes of compliance issues can receive similar overall scores. To better understand what is actually going on in the factories, one needs to examine the specific items in each M-Audit conducted in each of the two plants. By looking at these details, we found that, in fact, the M-Audits report different issues at these two factories. Plant A suffers from problems of documentation and written communications regarding its non-discrimination and harassment policies. It is because of these documentation problems that the factory received a less than perfect M-Audit score. Plant B, on the other hand, received perfect scores when it came to record keeping and documentation but suffered from excessive overtime and reported incidents of verbal abuse (supervisors yelling at workers). As a result of these issues, Plant B received a reduced overall score on the M-Audit. In other words, the comparable M-Audit scores reported for Plants A and B were, in fact, measuring very different issues. Underneath and partially obscured by these aggregate scores, the two plants suffered from very different kinds of problems, reflecting their divergent workplace conditions.

The limitations we uncovered with the M-Audits of these two plants are by no means unique to Nike but very much characterize many factory audits conducted by global brands and NGOs alike.[34] In order to accurately assess many workplace issues, one has to spend a lot of time in the factories. Because of serious time, resource and even knowledge limitations, most factory audits are brief and focus on reviewing factory records (i.e., birth certificates of employees, time cards, pay stubs, etc.). Some audits include interviews with individual workers, although these often take place within the factories and thus compromise the ability of workers

to express themselves freely. As a result of these various limitations, the quality of the information received during the audits is often mixed and thus, unable to convey factory conditions in their full complexity let alone provide guidance for how to remediate various labor standards problems.

To its credit, Nike also uses a second tool, a Compliance Rating (CR) grade, to further assess its suppliers. The Compliance Rating program assigns a grade (A-D) to all Nike suppliers. The letter grade reflects all the information collected about a factory from various sources, including periodic health and safety (SHAPE) inspections, M-Audits, external FLA audits, and factory visits by Nike compliance and operational managers. Grades are assigned by local compliance officers and appear on the factory's "balanced score card" (along with grades for quality, price, and on-time delivery) which is used by Nike sourcing managers to guide their purchasing decisions. (See Appendix 2 for an explanation of the different grades.) When reviewing the CR grades assigned to our two factories we find that Plant A received a "B", indicating that it has several minor issues but no serious or critical flaws, whereas Plant B received a "D", indicating that it suffers from one or more serious (i.e., excess overtime) issues.

Thus we find that on one measure, the M-Audit score, conditions at Plants A and B appear to be similar whereas on another measure, the Compliance Rating grade, they seem to exhibit significantly different workplace realities. Both plants suffer from compliance issues but the types of problems they have are qualitatively distinct, impacting workers in very different ways. These apparently contradictory assessments by Nike's own compliance staff is due to the fact that the two tools are measuring different things. The M-Audit, like most factory audits, privileges documentary evidence and company records whereas the Compliance Rating grade is a more subjective appraisal of factory management's attitude towards workplace standards.

Interviews with Nike compliance staff suggest that these two tools are, in fact, picking up different facets of the factory reality.

It is important to keep in mind that with the exception of some cases of excess overtime, Plant B **is** in compliance with Nike's Code of Conduct and local labor law and on certain issues (i.e., providing on-site day care services for employees) provides benefits that Plant A does not provide. Moreover, Plant A is not without its own issues. Aside from documentation problems, in the past Plant A also had supervisors who verbally abused workers. The point of our comparison is not to present Plant A as "good" and Plant B as "bad" on all dimensions but rather to illustrate the very different approaches to labor standards manifest at these two plants. Plant B managers very much follow the letter of the law and the code. However, their approach to the Code and to labor standards in general very much differ from the more substantive approach pursued by Plant A management. It is this difference in formal versus substantive approaches to labor standards and working conditions that is being picked up by the Compliance Rating program (but not the M-Audit) and which still needs to be explained.

Explaining Differences in Working Conditions: Alternative Explanations Considered

Plants A and B are not perfectly matched. They are of different size, their ownership is of different nationality, and they dedicate different percentages of their capacity to Nike. The differences between the two plants are summarized in Table 4. Perhaps these differences account for their alternative approaches to labor standards and divergent working conditions?

Table 4: Differences between Plants A and B

	Plant A	***Plant B***
Ownership	Local	Foreign
Proximity to Nike's regional office	Close (50 Km)	Far away (2,000 Km)
% of production for Nike	10%	50%
Surrounding Environment	Industrialized	Agrarian, undeveloped
Production Method	Lean (Cell)	Modular (Assembly lines)
Number of Workers	487	1,100
Workforce Nationality		
Managers	Mexican	Chinese
Supervisors	Mexican	Chinese
Production Workers	Mexican	90% Mexican 10% Chinese

Factory Characteristics

The literature on globalization and labor standards suggests that a variety of factors – ownership, size of plant, type/complexity of product being manufactured – may all affect working conditions in the factories. Some have speculated that factories owned/managed by foreigners treat their workers less well (for a variety of linguistic, cultural reasons) than do factories where the ownership/management of the plants share the same nationality as the workers. Others have argued that plants that are owned/managed by particular nationalities (i.e., Korean and Taiwanese) employ less sophisticated personnel management policies and treat workers in "host" countries with less respect and fairness than do factories owned/managed by other nationalities (i.e., US, European).[35] Given that Plant A is owned/managed by Mexicans and Plant B is owned/managed by Taiwanese, perhaps this feature could explain the differences we observed at the two plants.

In addition, some scholars have claimed that larger, more bureaucratic, "modern" factories will be better able to introduce modern management and personnel systems and thus, one would expect that larger factories would on average treat their workers better than smaller,

less formally managed plants.[36] Given the differences in size between Plants A and B, perhaps this could drive the divergent working conditions we observed. Finally, much has been written about the importance of skill and tacit knowledge in the production of high value-added, differentiated products. From this we speculate that perhaps factories producing more complex (and expensive) products, which require greater skill and technology, will treat their workers as valuable assets for the factory.[37] Given that Plants A and B manufacture somewhat different mixes of products, with Plant B specializing in more high-tech performance T-shirts and Plant A concentrating on simpler, printed T-shirts, perhaps this also could explain the divergent working conditions observed across the two plants. Table 5 summarizes these various factory characteristics, their expected effects on working conditions, and what we actually observed during our field research.

Table 5: Factory Characteristics and Working Conditions

Characteristic	***Expected Effect on Working Condition***	***Observed Working Condition Between 2 Plants***
Size	Greater Size, Better Working Conditions	Not confirmed. Smaller plant (A) possessed better working conditions
Nationality of Ownership / Management	Foreign Ownership (especially Taiwanese and Korean) treat workers less well than Domestic Ownership/Management	Confirmed. Domestically owned factory (A) has better working conditions.
Product Complexity	More Complex Product/Product Mix, Better Working Conditions	Not Confirmed. Plant A with less complex product mix has better working conditions.

Our field research in Plants A and B appears to contradict the expectations derived from the literature in terms of plant size and complexity of product mix. We found that workers in Plant A, the smaller facility manufacturing the less complex/lower tech product, were paid better, worked less overtime, and enjoyed more voice at work than did workers in Plant B. However,

our field research does appear to support the claim in the literature that foreign ownership/management negatively impacts labor conditions in global supply chain factories.

Elsewhere, we investigate the impact of these various factory-level characteristics on labor standards and working conditions through an analysis of all (830) of Nike's suppliers distributed across 51 countries.[38] Controlling for other (country and industry) variables, we found that there exists a significant negative relationship between factory size, as measured by total number of employees, and working conditions. This suggests that working conditions in smaller factories are on average better than in larger factories. This is supported by the field research in Plants A and B. One possible explanation for this somewhat counter-intuitive finding could be that smaller factories are relatively easier to control and monitor than larger facilities – some of which can employ tens of thousands of workers.

In addition, our analyses suggest that after controlling for other variables (i.e., industry and factory location) plant ownership (foreign vs. national) does not have a significant relationship with working conditions. This is supported by our field research in other countries. For example, in southern China, Guangdong Province, we studied five footwear factories, each owned by groups from different countries, some "local" and others "foreign" (i.e., Taiwanese, Korean). Notwithstanding differences in ownership, we uncovered remarkably similar patterns of labor standards and working conditions across the five plants.[39] In short, based on our quantitative analyses as well as our field research in other countries, it does not appear that foreign-owned factories treat their workers any better or worse than factories owned by compatriots.

Labor Market Differences

Plants A and B operate in very different labor markets, which, in turn, provide management in the two plants with varying degrees of leverage over their workers. Plant A is located in an industrial park close to Mexico City which is home to a large number of other garment plants. This has two effects on Plant A. On the one hand, it provides Plant A with an abundant supply of skilled and experienced workers who are current or former employees of neighboring plants. On the other hand, these other firms compete with Plant A to hire the same workforce, especially the more skilled and experienced workers. This mixture of threat and opportunity creates an incentive for management at Plant A to seek to minimize turnover. Of course, all firms try to hold on to their most valued employees through higher wages and improved benefits but Plant A also tries to tie workers to the firm through job enrichment and participation on the shop floor.

Plant B is the only garment factory in the area, and therefore in a powerful position vis-à-vis its workers—all eager for employment in this underdeveloped state. Moreover, Plant B imports 10% of its workforce from China, ostensibly to train the local, inexperienced, Mexican workers. These Chinese workers do not speak any Spanish and do not have any networks outside the factory. They conduct their lives exclusively in the factory, where they work, eat, and sleep (in the factory dorms). Under these conditions, it is very unlikely, if not impossible, that these more experienced and skilled Chinese workers would find an alternative job in a different factory. There simply aren't any other factories (and thus available jobs) around and Plant B uses this position to its advantage. In short, Plants A and B operate in very different local labor markets, providing their respective management teams with very different incentives and leverage over

their workforces. These differences could plausibly account for the divergent patterns of working practices and conditions observed at the two plants.

Yet differences in local labor markets, albeit important, can not fully explain the differences in working conditions at plants A and B. Again, the field research we conducted as part of this project helps elucidate the limits of this explanation. In Turkey, we studied two plants, of roughly the same size and same age, with similar production systems, and making identical products (cotton knit goods) for the same brands. Both plants are owned by the same Turkish conglomerate and the workforce and management of both plants is 100% Turkish. However, there too we observed differences in working conditions between the two plants. In one plant, work records were not properly kept, wages were not fully paid, grievances were ignored and workers seeking to organize a union were fired. In the other plant, wages were paid on time and freedom of association was guaranteed. Yet both plants are located in the same industrial city (Bursa), competing with one another as well as with many other factories for the same workforce.[40] Moreover, in addition to Plants A and B, we also visited another factory owned by the same group that owns/manages Plant B but is located in an industrial section of Los Angeles, California. In this locality, there were many other factories all competing for the same workers. Yet the attitudes and behavior of this plant's management towards its workers were more or less the same as what we observed in Plant B. In other words, the same company seems to possess the same attitudes and behavior towards its workforce, regardless of whether its plant is located in an underdeveloped rural state of Mexico or an industrial section of Los Angeles.

Thus, various differences in factory ownership, location, and product mix do not appear to account fully for the differences in working conditions and labor standards we observed. What else could be driving this variation? To address this question, we focus on the particular systems

of work organization and related human resources management policies embraced by the two plants. This permits us to identify the **underlying mechanisms** driving divergent labor standards at Plants A and B.

Work Organization and Employment Relations on the Shop Floor

In order to accommodate rapidly shifting consumer tastes, global brands are pushing their suppliers to reduce cycle times, produce varied products in smaller lots, and rapidly change production from one style to another. Suppliers are responding to these challenges in different ways. Plants A and B appear to have reacted to the same external market pressures by pursuing alternative choices in work organization and human resource management policies, which in turn, generated significant consequences for working conditions at their respective establishments.

Plant A

Plant A responded to the challenges (and opportunities) presented by global buyers by introducing lean manufacturing processes within their facilities.[41] Workers are organized in groups of six "islands" or production "cells" in which an entire garment is produced. Each worker performs a variety of operations and works on different machines. The machines are organized in a U-shape formation. The shop floor is clean and uncluttered by extra materials. Inventory is absent because the factory uses a just in time system that does not permit excess inventory.

When this factory began manufacturing, it employed an assembly line (bundle system) production system. In the mid-1990s, Plant A introduced a modular production system but after ten years, it began to transition to lean manufacturing.[42] In order to transform the modules into cells, the factory had to conduct extensive training with its workforce. All workers received 25 days (9 hours per day) of on-the-job training plus 10 hours of off-the-job training in preventive

maintenance of their workstations. Training was carried out by the plant's human resource department, with the help of a process engineer. In order to motivate workers to participate and not exit the plant, workers were paid their daily salary plus a production bonus during this transition period.[43]

Adjustment to a new system of production can take time. After the shift to cell production, workers who were working at 100% productivity levels in the previous modular system dropped to 50% levels.[44] As we saw earlier, these productivity bonuses are a significant component of workers' wages. In order to facilitate the process of adjustment, Plant A management not only guaranteed a significant percentage of the productivity bonus (81%) for the entire transition period but also introduced a variety of non-monetary rewards and incentives. For example, at the conclusion of the training, management organized a graduation ceremony attended by the owners and top managers of Plant A. All graduates received a t-shirt and a cake as a reward. Moreover, whenever particular cells achieved 100% productivity level under the new system, the cell was recognized with a small gift to celebrate the event and had their picture posted on the board at the factory entrance. At first, we thought that these rewards could not really make a difference, and that workers would not value them. To our surprise, interviews with workers (conducted out of the presence of their supervisors or managers) indicated that, in fact, the small gifts or celebrations made them feel part of the company, and created a more relaxed environment.

Overall, Plant A confirms what the literature on high performance work organizations suggests.[45] The HR manager indicated that the change from modular to lean production increased efficiency and quality.[46] By switching to lean manufacturing, the factory formed three cells (18 workers) from two lines (20 workers). With three cells they now produce 2,700 t-shirts,

while previously they used to produce 2,400 t-shirts with two lines. Quality improved as well. According to the head of operations, defect rates in sewing decreased by 40%. Achieving quality and output targets is considered a collective responsibility at Plant A, in which peer supervision and self-supervision play a large role. The production manager explained that each worker is accountable for quality at his/her workstation and that quality control is part of the basic job. Every worker has to check the quality of one out of every five t-shirts. Table 6 presents the differences between the two systems of production at the 80% productivity level. The numbers show that through cell production, workers have increased their productivity and their weekly salary. The salary has increased both because the factory raised wages and because by increasing their productivity, workers are now able to get more bonuses of production.

Table 6: Comparison between Old and New System of production in Plant A

	Old System (module)	***New System (cell)***
Number of workers	10	6
Number of t-shirts per day per module/cell	1,200 t-shirts/module	900 t-shirts/cell
Productivity per worker	120 t-shirts/day	150 t-shirts/day
Average weekly salary	US$ 68/week	US$ 86/week

This shift to lean production not only increased productivity, quality and wages but also led to a new work system in which multi-skilled workers operate a variety of machines and actively participate in key decisions affecting production and work orders. In other words, through the introduction of lean manufacturing techniques, Plant A not only enhanced its competitiveness but also improved working conditions.

Plant B

Plant B's response to increased buyer demands was to invest heavily in a modular system of production with assembly lines. The overall objective of modular production is to facilitate small shifts in large production runs with minimal delays in costs and without requiring

specialized machinery. Modularization is one of the ways mass producers are able to increase efficiencies, cut costs, and achieve a modest amount of customization.[47] As the head of operations in Plant B reported, every style requires a specific set of machines and sequence of operations, and requires a large area to set-up the line.[48] This is different from Plant A in which the layout of the machines is more flexible and people move from one machine to another as they do various operations. Cellular production is more conducive to rapid changes in styles and smaller batch production. In contrast, the modular system of production is especially good for producing large volumes because they do not require changes in machinery or plant lay-out.

Very much along the lines of Taylor's system of scientific management[49], Plant B closely monitors and controls its workers. In Plant B, production orders are communicated from the top of the plant's hierarchy and there is no space for worker participation. The plant manager plans the production and distributes the production orders to the area supervisors, who in turn, divide up the work among the six lines of workers under their control.

Table 7 compares the production systems in Plant A and Plant B. The table indicates that notwithstanding the high degree of worker specialization in Plant B, and their efforts (incentives) to produce as much as they can, their daily productivity is actually lower than that of workers in Plant A.

Table 7: Comparison of Production Systems in Plant A and Plant B

	Plant A	***Plant B***
Total # of workers in one line or cell	6	10
T-shirts per day per line or cell	900 t-shirts/day	800t-shirts/day
Daily Wage (fixed salary + bonuses) per worker	US$ 17.2	US$ 13.6
T-Shirts per worker	150 t-shirts/worker	80 t-shirts/worker
Labor cost per t-shirt	US$ 0.11	US$ 0.18

Plant A enjoys higher productivity than Plant B, pays wages that are higher than those paid to workers in Plant B, and has lower unit labor costs than Plant B. Unit costs (along with

quality and on time delivery) are what buyers really care about, which suggests that Plant A possesses both better working conditions *and* better business performance than Plant B. Moreover, its new production system permits Plant A to more quickly respond to shifts in consumer tastes and buyer demands for smaller and more varied batches. In short, Plant A does not appear to be sacrificing profit for better working conditions. Instead, these two outcomes appear to go hand and hand.[50]

In sum, the differences in working conditions between Plants A and B seem to be the product not of geographic location, product mix, or nationality of ownership but instead the result of very different ways that work is organized. In Plant A, work was reorganized along the lines of lean production, which relies on multi-skilled, autonomous work groups engaged in a variety of operations. This new system enhanced the plant's efficiency and quality, which allowed it to better schedule its workload (hence, avoid excessive overtime) and increase the wages of its workforce (share the efficiency gains). Plant B pursued a more scientific management approach, investing heavily in new plant and equipment. The goal of Plant B management is to increase productivity and quality through investment in new technology, strict control over the workforce, and various incentives (productivity bonuses) aimed at achieving ever greater economies of scale.

Yet we should be careful not to conflate particular production systems (lean versus modular) with differences in workplace conditions. Although lean production lends itself to various human resource practices (increased training, autonomous work teams, etc.), there is no automatic link between this system of work organization and better working conditions. There is an extensive literature that shows that firms can (and do) actually mix elements of different production techniques with a variety of human resource management policies, generating mixed

results.[51] This literature emphasizes the importance of bundling together particular systems of work organization with specific human resource management practices to achieve the greatest results for both companies and their workers.[52]

Closer examination of our two Mexican plants reveals the importance of both work organization and employment practices in shaping workplace conditions. In addition to introducing lean manufacturing, Plant A also employed various human resource management policies that provided workers with greater autonomy and power on the shop floor. For example, Plant A invested heavily in the training of its workers (in part to effectively implement lean manufacturing processes) and thus became wary of mistreating these highly skilled workers for fear that they would lose their investments in these workers. Skilled but dissatisfied workers could easily leave and work for a competitor. These same workers, now trained to stop production when they see defects and/or work in autonomous production cells in which they actively participate in decisions affecting production targets and techniques, also became more empowered to resist management abuses on the shop floor.

Plant B pursued an alternative approach to managing its workforce. Rather than invest in training and encourage worker autonomy/discretion, Plant B developed highly detailed work rules and maintained tight control over the shop floor. In contrast to Plant A, workers in Plant B are not seen as a resource for improving productivity and quality. Instead, management at Plant B considers workers a (variable) cost that needs to be reduced as much as possible. According to the head of operations at Plant B, "It's all about lowering the price of labor and increasing the quantity produced."

Faced with similar challenges (and opportunities) by Nike and other global buyers, Plants A and B made different choices on how to respond. In Plant A, work was reorganized along the

lines of lean production, which relies on multi-skilled, autonomous work groups (cells) to carry out a variety of operations. Aside from enhancing Plant A's productivity and quality, this new system also created the conditions for workers to earn higher wages, learn new skills, and increase the amount of discretion and voice they expressed at work. Once plant management had invested in these same workers, and saw how much the plant benefited from the new system, it became wary of mistreating these same workers for fear of losing them to local competitors. In the end, a virtuous cycle developed in which new forms of work organization and training led to enhanced competitiveness for the plant and improved working conditions for the workers, including greater discretion and participation over production decisions. Increased employee participation, in turn, generated operational innovations and efficiencies which subsequently produced savings that could be shared by plant owners and workers alike. In contrast, Plant B pursued a more technical approach by investing heavily in new process technologies and devising ever more specialized operations that less expensive, unskilled workers could perform under close supervision by factory managers. Increased productivity and quality resulted not from worker training and creativity but rather from new technologies, close supervision of the work process, and individual incentives that rewarded workers for ever-greater quantities of output and longer work hours.

Concluding Considerations

Almost a half-century ago, Douglas McGregor observed that the choices firms make in terms of how they organize work and manage their workforces are shaped by the assumptions managers hold about workers' motivations.[53] According to McGregor, workers could be seen as either variable costs to be reduced, reluctant contributors to the firm's prosperity and thus requiring constant supervision and control or as assets to be valued and developed, multi-faceted

individuals who are intrinsically motivated to work and contribute to their work organizations.[54] Clearly, the choices in work organization and labor practices at Plants A and B very much reflect these opposing assumptions. At Plant A, management invested in training and empowered employees to work in autonomous cells, often taking initiative to solve various production-related problems. "We want people here to feel important" reported the owners during our interviews. In contrast, at Plant B, workers are seen as an "input" to be controlled, a "cost" to be reduced. When we asked the head of operations at Plant B what would happen if he could not continue to lower labor costs in the factory, he replied "In that case we will move back to Asia."

However, choices are shaped not only by previously held assumptions about human nature but also by the context and the networks within which managers operate.[55] This was very evident at our two plants, especially in terms of the relationship between plant management and Nike's local staff. At Plant A, relations between factory management and Nike's local staff were collaborative and open. Nike managers would visit Plant A about once a month and the owners of Plant A would also frequently visit Nike's regional office in Mexico City. Nike staff and plant managers reported that they often went out for dinner or played golf together. Over time, these frequent visits led to greater transparency and trust between Nike and Plant A management as well as joint problem-solving. Whenever an issue related to workplace standards arose, both Nike compliance specialists and Plant A management worked together to quickly remediate the issue. Moreover, Nike production and quality managers were instrumental in supporting Plant A in its transition to lean manufacturing. They not only exchanged information and technical advice but also provided moral support to Plant A (in the form of an implicit agreement to continue to source from the plant during its transition) as it struggled to shift from a modular to a

lean production system. Interviews with managers at Plant A indicated that they saw Nike as a partner with whom they could collaborate to improve both productivity and working conditions.

The relationship between Nike's regional office and Plant B management is more formal and distant. Plant B receives fewer visits to its facilities (in part because of its geographic distance from Mexico City) and thus much of the communication between the local Nike office and Plant B occurs over the phone or through email. Yet Plant B is also one of Nike's "strategic partners." Strategic partners are those suppliers that Nike has designated as tier-one suppliers. Some of them (in footwear) are involved in collaborative design and product development processes. Others (in apparel) are permitted to source their own materials and seen as long-term partners in the future. Nike organizes periodic meetings with its strategic partners in order to share with them various strategic directions or opportunities the company is pursuing. Strategic partners, in turn, are supposed to share "best practices" with one another, thus enhancing the competitiveness of the entire network of tier-one suppliers. Thus, one would expect greater trust and transparency between Plant B and Nike's regional office. However, this is not the case. Management at Plant B sees Nike as a buyer whose requirements and deadlines it must respect in order to receive future orders. Nike's local staff, in turn, views Plant B as a technically excellent manufacturer but whose commitment to compliance is weak.

In many ways, the differences in relationships between Nike and the managers at our two plants resemble what Frenkel and Scott found in their study of supplier-buyer relations in China.[56] In this study, they argued that brands develop two distinct types of compliance relationships with their suppliers: a hands-on, cooperative relationship with some suppliers and an arms-length, more distrustful "compliance" relationship with the others. These differences, according to Frenkel and Scott, can shape not just the style but also the substance of compliance

programs within factories.[57] Our comparative study of two plants in Mexico appears to support their findings. More frequent visits and more open communication between Nike's regional staff and management at Plant A led to the development of greater trust and a better working relationship between these two actors. This, in turn, contributed to the up-grading of Plant A's production system and its consequent positive impact on working conditions at the plant. Less frequent, more formal communication patterns between Nike's local staff and Plant B management appears to have reinforced the arms-length nature of their relationship, in which Plant B seeks to deliver product to Nike at the lowest cost (highest margin) and Nike tries to ensure compliance with both its technical and workplace standards through ever-more sophisticated systems of policing and monitoring.

Unfortunately, the type of relationship that exists between Plant B and Nike is the more common/typical relationship that exists between global buyers and their suppliers. As a result, these two actors are often locked in a low-trust trap in which suppliers claim that brands are sending them mixed messages, insisting on faster cycle times, better quality, and lower prices while at the same time policing and admonishing them for poor working conditions. Brands, in turn, argue that problems associated with both production and labor standards are the result of the lack of professionalism and short sightedness of their suppliers. The experience at Plant A shows that there is a way out of this trap. Through increased communication and interaction, more collaborative and transparent relations can be created.[58] This process takes time and investment on the part of both suppliers and global brands but it promises to generate benefits for everyone involved, including the workers in these global supply chain factories.

Notwithstanding all the controversies over corporate codes of conduct and monitoring, this form of private voluntary regulation remains the principal way both global corporations and

labor rights NGOs seek to address poor working conditions in global supply chain factories. Through a structured comparison of two plants, both located in the same country, producing the same products, and subject to the same code of conduct and monitoring practices, this paper has sought to illustrate the limitations of this approach. Our findings also suggest an alternative model for improving working conditions in global supply chain factories. In contrast to the current emphasis on codes of conduct and monitoring for compliance of these codes, global brands (and perhaps labor rights NGOs as well) could provide suppliers with technical and organizational assistance so that they can tackle some of the root causes of poor working conditions in their facilities. Figure 2 depicts this alternative model.

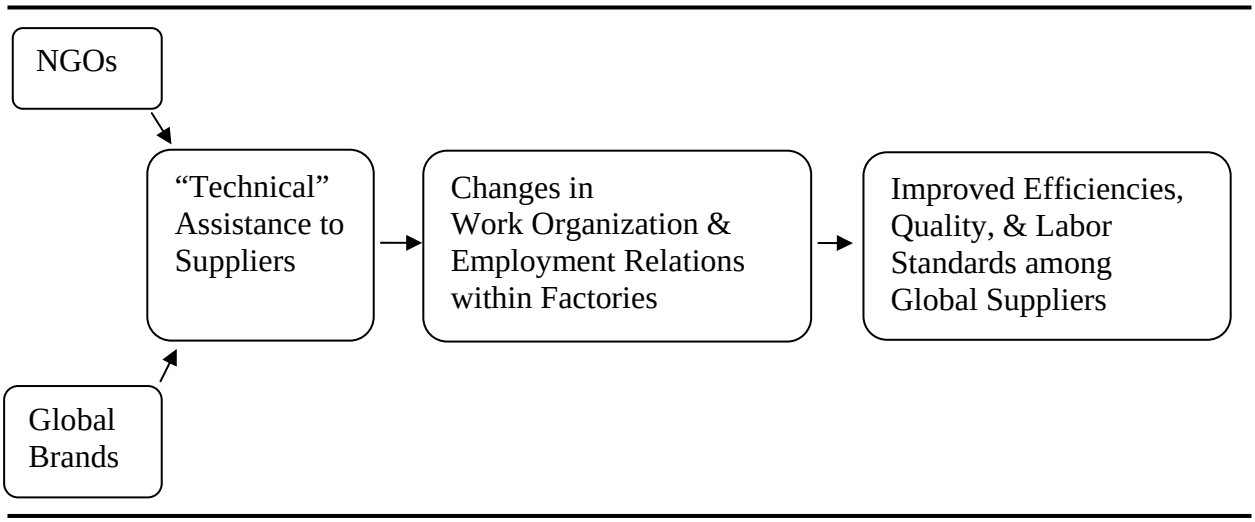

Figure 2: A New Model for Improving Labor Standards

Perhaps not all suppliers, even with the right incentives and communication, would be willing to collaborate with the global brands on these efforts but this could provide the brands with a justification to shift orders and consolidate production to certain, more efficient, cooperative, and perhaps even "ethical" suppliers.[59]

Technical assistance will not be enough. Some level of monitoring will still need to take place but perhaps this could be done in collaboration with and increasingly by local unions, NGOs and government authorities who could, in the process, gain capacity and legitimacy to exercise their roles. Looked at from this perspective, our case study suggests that a more systemic approach, one that combines external (countervailing) pressure, comprehensive and transparent monitoring systems, and a variety of "management systems" interventions aimed at eliminating the root causes of poor working conditions, is required to promote improved labor standards for the millions of workers employed in global supply chain factories[60]. This more systemic approach is exactly how previous issues concerning unsafe working conditions or discriminatory hiring practices were tackled in the past. It is time to move beyond our focus on codes of conducts and monitoring so that we can tackle the root causes of poor working conditions and labor rights in many developing countries. This is a necessary first step towards promoting substantive labor standards and building a system of global justice in today's world.

Appendix 1: Nike Code of Conduct

Nike, Inc. was founded on a handshake
Implicit in that act was the determination that we would build our business with all of our partners based on trust, teamwork, honesty and mutual respect. We expect all of our business partners to operate on the same principles.

At the core of the NIKE corporate ethic is the belief that we are a company comprised of many different kinds of people, appreciating individual diversity, and dedicated to equal opportunity for each individual.

NIKE designs, manufactures .and markets products for sports and fitness consumers. At every step in that process, we are driven to do not only what is required by law, but what is expected of a leader. We expect our business partners to do the same. NIKE partners with contractors who share our commitment to best practices and continuous improvement in:

1. Management practices that respect the rights of all employees, including the right to free association and collective bargaining
2. Minimizing our impact on the environment
3. Providing a safe and healthy work place
4. Promoting the health and well-being of all employees

Contractors must recognize the dignity of each employee, and the right to a work place free of harassment, abuse or corporal punishment. Decisions on hiring, salary, benefits, advancement, termination or retirement must be based solely on the employee's ability to do the job. There shall be no discrimination based on race, creed, gender, marital or maternity status, religious or political beliefs, age or sexual orientation.

Wherever NIKE operates around the globe we are guided by this Code of Conduct and we bind our contractors to these principles. Contractors must post this Code in all major workspaces, translated into the language of the employee, and must train employees on their rights and obligations as defined by this Code and applicable local laws.

While these principles establish the spirit of our partnerships, we also bind our partners to specific standards of conduct. The core standards are set forth below.

Forced Labor
The contractor does not use forced labor in any form -- prison, indentured, bonded or otherwise.

Child Labor
The contractor does not employ any person below the age of 18 to produce footwear. The contractor does not employ any person below the age of 16 to produce apparel, accessories or equipment. If at the time Nike production begins, the contractor employs people of the legal working age who are at least 15, that employment may continue, but the contractor will not hire any person going forward who is younger than the Nike or legal age limit, whichever is higher.

To further ensure these age standards are complied with, the contractor does not use any form of homework for Nike production.

Compensation
The contractor provides each employee at least the minimum wage, or the prevailing industry wage, whichever is higher; provides each employee a clear, written accounting for every pay period; and does not deduct from employee pay for disciplinary infractions.

Benefits
The contractor provides each employee all legally mandated benefits.

Hours of Work/Overtime
The contractor complies with legally mandated work hours; uses overtime only when each employee is fully compensated according to local law; informs each employee at the time of hiring if mandatory overtime is a condition of employment; and on a regularly scheduled basis provides one day off in seven, and requires no more than 60 hours of work per week on a regularly scheduled basis, or complies with local limits if they are lower.

Environment, Safety and Health (ES&H)
The contractor has written environmental, safety and health policies and standards, and implements a system to minimize negative impacts on the environment, reduce work-related injury and illness, and promote the general health of employees.

Documentation and Inspection
The contractor maintains on file all documentation needed to demonstrate compliance with this Code of Conduct and required laws; agrees to make these documents available for Nike or its designated monitor; and agrees to submit to inspections with or without prior notice.

Last updated March 2005
http://www.nike.com/nikebiz/nikebiz.jhtml?page=25&cat=code
Accessed June 21, 2006

Appendix 2: Nike's Compliance Rating System

Grade	Compliance Rating Criteria	Description
A	No more than five minor issues outstanding on the Master Action Plan *and* no more than 20 percent of MAP items past due.	Non-compliance issues that do not reach levels defined as C or D issues (see below).
B	More than five minor issues, but no serious or critical issues outstanding on the MAP *and* no more than 30 percent of MAP items past due.	Non-compliance issues that do not reach levels defined as C or D issues (see below).
C	**One** or more C-level issues, but *no* D-level issues, outstanding on the MAP or more than 30 percent of MAP items past due.	• Lack of basic terms of employment (contracts, documented training on terms, equal pay, discriminatory screening) • Non-compliance to local laws on treatment of migrant workers • Less-than-legal benefits not related to income security (e.g., leave) • Excessive hours of work: greater than 60 hours/week but less than 72 hours/week • Exceeding legal annual overtime work hour limit for 10 percent or more of the workforce • Not providing one day off in seven • Verbal or psychological harassment or abuse • Conditions likely to lead to moderate injury or illness to workers • Conditions likely to lead to moderate harm to the environment or community
D	**One** or more D-level issues outstanding on MAP *or* Serious issues past due; or more than 40 percent of open MAP items past due.	• Unwillingness to comply with Code standards • Denial of access to authorized Nike compliance inspectors • Falsification of records and coaching of workers to falsify information • Homework, or unauthorized sub-contracting • Underage workers • Forced labor: bonded, indentured, prison • Denial of worker rights to Freedom of Association where legal • Pregnancy testing • Confirmed physical or sexual abuse • Paying below legal wage • Denial of benefits tied to income security • No verifiable timekeeping system • Exceeding legal daily work hour limit or work in excess of 72 hours/week for 10 percent or more of the workforce • Not providing one day off in 14 days • Conditions that can lead to death or serious injury • Conditions that can lead to serious harm to the environment

Source: Nike Corporate Responsibility Report: Part II. FY '04. p25. Accessed June 21, 2006. http://www.nike.com/nikebiz/gc/r/fy04/docs/FY04_Nike_CR_report_pt2.pdf

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Notes

[1] This paper is part of a larger project on globalization and labor standards organized by Professor Richard Locke of M.I.T.. In addition to the results presented in this paper (some of which appear as well in Monica Romis, "Beneath Corporate Codes of Conduct: What Drives Compliance in Two Mexican Garment Factories," (Masters Thesis, M.I.T., Dept. of Urban Studies and Planning, 2005)), the project entailed field research in China, Turkey, Europe and the United States as well as systematic analysis of Nike's factory audits of working conditions in over 800 factories in 51 countries. We would like to thank Lucio Baccaro, Suzanne Berger, Joshua Cohen, Simon Johnson and Michael Piore as well as the other members of our research team: Alberto Brause, Dinsha Mistree, Jennifer Andrews, Fei Qin, Rushan Jiang, and Alonso Garza for their insightful comments on previous drafts of this paper. We would also like to thank the numerous Nike managers including Maria Eitel, Hannah Jones, Dusty Kidd, Kelly Lauber, Caitlin Morris, Mark Loomis, Jeremy Prepscius, Charlie Brown, and Catherine Humblet for their helpful comments on previous drafts of this paper. We would also like to thank Mike McBreen who shared with us his knowledge of the compliance process and facilitated access the audit data and the individual factories.

[2] For recent reports on these conditions, see Verité, "Excessive Overtime in Chinese Supplier Factories: Causes, Impacts, and Recommendations for Action.," http://www.verite.org/news/Excessiveovertime (Accessed September 7, 2004), Duncan Pruett, "Looking for a Quick Fix: How Weak Social Auditing is Keeping Workers in Sweatshops," Clean Clothes Campaign, http://www.cleanclothes.org/ftp/05-quick_fix.pdf (Accessed 2005), Tim Connor and Kelly Dent, "Offside! Labor Rights and Sportswear Production in Asia," Oxfam International, http://www.oxfam.org/en/policy/briefingnotes/offside_labor_report/ (Accessed May 22, 2006), and Charles Kernaghan, "U.S. Jordan Free Trade Agreement Descends into Human Trafficking & Involuntary Servitude," National Labor Committee, http://www.nlcnet.org/live/admin/media/document/jordan.pdf (Accessed June 26, 2006).

[3] Joshua Cohen and Charles Sabel, "Extra Rempublicam Nulla Justitia?," *Philosophy & Public Affairs* 34, no. 2 (March 2006): 147-75.

[4] Lucio Baccaro, "Civil Society, NGOs and Decent Work Policies: Sorting out the Issues," International Labor Organization (International Institute for Labour Studies), http://www.ilo.org/public/english/bureau/inst/download/dp12701.pdf; Kimberly Ann Elliott and Richard B. Freeman, *Can Standards Improve Under Globalization?* (Washington, D.C.: Institute for International Economics, 2003).

[5] For a good description of this movement, see Elliot J. Schrage, "Promoting International Worker Rights through Private Voluntary Initiatives: Public Relations or Public Policy?," University of Iowa Center for Human Rights (UICHR), http://www.uiowa.edu/~uichr/publications/documents/gwri_report_000.pdf (Accessed June 23, 2006) and Ivanka Mamic, *Implementing Codes of Conduct: How Businesses Manage Social Performance in Global Supply Chains* (Geneva: International Labor Organization, 2004).

[6] For more on the evolution of these practices, see Frank Dobbin and John R. Sutton, "The Strength of a Weak State: The Rights Revolution and the Rise of Human Resources Management Divisions.," *American Journal of Sociology* 104, no. 2 (September 1998): 441-76; David Weil, "Enforcing OSHA: The Role of Labor Unions.," *Industrial Relations* 30, no. 1 (Winter 1991): 20-36; David Weil, "If OSHA is so Bad, Why is Compliance so Good?," *RAND Journal of Economics* 27, no. 3 (Autumn 1996): 618-40.

[7] For an interesting historical review of corporate codes of conduct and their evolution over time, see Rhys Jenkins, "Corporate Codes of Conduct: Self-Regulation in a Global Economy," United Nations Research Institute for Social Development (UNRISD), http://www.eldis.org/static/DOC9199.htm. Another interesting historical parallel can be found in Gay W. Seidman, "Monitoring Multinationals: Lessons from the Anti-Apartheid Era," *Politics & Society* 31, no. 3 (September 2003): 381-406.

[8] Jill Esbenshade, *Monitoring Sweatshops: Workers, Consumers and the Global Apparel Industry* (Philadelphia: Temple University Press, 2004).

[9] Khalid Nadvi and Frank Wältring, "Making Sense of Global Standards," in *Local Enterprises in the Global Economy: Issues of Governance and Upgrading*, ed. Hubert Schmitz, (Northhampton, MA: Edward Elgar Publishing, 2004).

[10] Archon Fung, Dara O'Rourke and Charles F. Sable, *Can We Put an End to Sweatshops?: A New Democracy Form on Raising Global Labor Standards* (Boston: Beacon Press, 2001); Dara O'Rourke, "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring," *Policy Studies Journal* 31, no. 1 (February 2003): 1-30; Tim Bartley, "Corporate Accountability and the Privatization of Labor Standards: Struggles over Codes of Conduct in the Apparel Industry," in *Politics and the Corporation, Volume 14 (Research in Political Sociology)*, ed. Harland Prechel, 14 vols, (Oxford, UK: JAI Press, 2005); Cesar A. Rodriguez-Garavito, "Global Governance and Labor Rights: Codes of Conduct and Anti-Sweatshop Struggles in Global Apparel Factories in Mexico and Guatemala," *Politics Society* 33, no. 2 (June 1 2005): 203-333.

[11] National Research Council, *Monitoring International Labor Standards: Techniques and Sources of Information* (Washington, D.C.: The National Academies Press, 2004); Esbenshade, *Monitoring Sweatshops: Workers, Consumers and the Global Apparel Industry*; Pruett, "Looking for a Quick Fix: How Weak Social Auditing is Keeping Workers in Sweatshops;" Rodriguez-Garavito, "Global Governance and Labor Rights: Codes of Conduct and Anti-Sweatshop Struggles in Global Apparel Factories in Mexico and Guatemala."

[12] For a critique of existing auditing practices, see Pruett, "Looking for a Quick Fix: How Weak Social Auditing is Keeping Workers in Sweatshops."

[13] Dana L. Brown, "Cooperation without Trust? Reflections on the FLA's efforts to promote collaboration among its members and with other MSIs," Memo prepared under the supervision of Professor Richard Locke, (Massachusetts Institute of Technology Sloan School of Management, 2005); Jenkins, "Corporate Codes of Conduct: Self-Regulation in a Global Economy;" O'Rourke, "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring."

[14] Noted exceptions include two studies on monitoring practices in the US garment industry. See Esbenshade, *Monitoring Sweatshops: Workers, Consumers and the Global Apparel Industry*, Ch. 3 and David Weil, "Public Enforcement/Private Monitoring: Evaluating a New Approach to Regulating the Minimum Wage," *Industrial & Labor Relations Review* 58, no. 2 (January 2005): 238-57.

[15] Miguel Korzeniewicz, "Commodity Chains and Marketing Strategies: Nike and the Global Athletic Footwear Industry," in *Commodity Chains and Global Capitalism*, eds. Gary Gereffi and Miguel Korzeniewicz, (Westport, CT: Greenwood Press, 1994), 248.

[16] National Sporting Goods Association," www.sbrnet.com (Accessed 2005).

[17] Laura Petrecca and Theresa Howard, "Adidas-Reebok merger lets rivals nip at Nike's heels," *USA Today*, August 4, Money, Final Edition, B1.

[18] Ibid.

[19] Nike Inc., "FY04 Corporate Responsibility Report," http://www.nike.com/nikebiz/nikebiz.jhtml?page=29&item=fy04 (Accessed June 21, 2006), 4.

[20] Ibid., 2.

[21] Ibid., 3-4.

[22] Detail about these events can be found in Richard M. Locke, "The Promise and Perils of Globalization: The Case of Nike, Inc.," in *Management: Inventing and Delivering Its Future*, eds. Thomas A. Kochan and Richard Schmalensee, (Cambridge, MA: The MIT Press, 2003).

[23] For more on Nike's current compliance activities, see Nike, Inc., "FY04 Corporate Responsibility Report," Ch. 4.

[24] Simon Zadek, "The Path to Corporate Responsibility," *Harvard Business Review* 82, no. 12 (Dec 1 2004): 125-32.

[25] In 2004, only 57% of factories that underwent this process were approved. See Nike, Inc., "FY04 Corporate Responsibility Report," 18 for more on this process.

[26] Richard M. Locke, Fei Qin and Alberto Brause, "Does Monitoring Improve Labor Standards?: Lessons from Nike," Working Paper, 4612-06 (MIT Sloan School of Management, 2006).

[27] In this companion paper we systematically analyzed data from factory audits of over 800 suppliers located in 51 countries that occurred between 1998 and 2005 to explain this variation in factory working conditions. We found that variation in working conditions among Nike's suppliers is related to **country effects** (the ability of the labor inspectorate to enforce labor laws and standards in the country in which the factory is located), **factory characteristics** (the age and size of the factory) and **the relationship between Nike and the particular supplier**. In addition we found that notwithstanding Nike's very real interests in improving its image (defending the brand) and the company's significant efforts and investments over the last decade to improve working conditions among its suppliers, all of these efforts have produced mixed results. Whereas working conditions and labor rights improved among some of its suppliers, in others, conditions have either remained stable or deteriorated. Ibid.

[28] The name of the state will remain anonymous in order to protect the identity of the plant.

[29] Exchange Rate calculated as 1 US dollar = 11.24 Mexican Pesos. Source: Plant A Management.

[30] Supervisors can oversee between 5 to 8 cells, according to their experience. Thus, each supervisor may have 30 to 48 workers under his/her responsibility, which indicates a significant level of autonomy for workers. This also suggests that management trusts workers to do their jobs, based on clear expectations and peer monitoring within the teams. Supervisors are trained to work within this system of cell production. More specifically, they manage personnel, keep the workplace clean, and introduce continuous improvement in the production system. They are also responsible for insuring that cells have all the material they need, when they need, to get their work done (just-in-time). A mistake in the timing could stop the whole production process in the cell.

[31] During our interviews, workers reported that they expect to work overtime and look forward to the increase in salary due to the overtime. Working extra hours is one of the ways that production workers can enhance their basic wages.

[32] Based on interviews with several senior compliance managers at Nike World Headquarters, August 2005.

[33] For more on the M-Audit and its scoring system, see Nike, Inc., "FY04 Corporate Responsibility Report," 35-36.

[34] Based on an examination of factory audit protocols of several global corporations and multi-stakeholder initiatives (MSIs).

[35] Stephen J. Frenkel, "Globalization, athletic footwear commodity chains and employment relations in China," *Organization Studies* 22, no. 42001): 531-62, 542.

[36] Theodore H. Moran, *Beyond Sweatshops: Foreign Direct Investment and Globalization in Developing Countries* (Washington, D.C.: Brookings Institution Press, 2002), 16.

[37] Thomas A. Kochan, Harry C. Katz and Robert B. McKersie, *The Transformation of American Industrial Relations* (New York: Basic Books, 1986); Michael J. Piore and Charles F. Sable, *The Second Industrial Divide: Possibilities for Prosperity* (New York: Basic Books, 1984).

[38] Locke, Qin and Brause, "Does Monitoring Improve Labor Standards?: Lessons from Nike."

[39] Jennifer Andrews and Rushan Jiang, "Examination of How a Chinese Footwear Factory Improved its Labor Conditions," Memo prepared under the supervision of Professor Richard Locke, (Massachusetts Institute of Technology, 2005).

[40] Jonathan Rose and Dinsha Mistree, "A Tale of Two Factories in Turkey," Memo prepared under the supervision of Professor Richard Locke, (Massachusetts Institute of Technology, 2005).

[41] For a good, general description of lean manufacturing, see John F. Krafcik, "Triumph of the Lean Production System," *Sloan Management Review* 30, no. 1 (Fall 1988): 41-51.

[42] In 1995, the owners expanded their plant with another building. In the new structure they adopted a modular production system in order to have a more flexible and shorter production cycle. However, in 2003, the owners of the factory attended a meeting with one of their global buyers and heard about lean manufacturing and its application in the footwear sector. They became interested and learned more about lean manufacturing. The following year, they decided to implement this new system in their plant. For more on the different systems of production in the apparel industry, see Frederick H. Abernathy, John T. Dunlop, Janice H. Hammond and David Weil, *A Stitch in Time: Lean Retailing and the Transformation of Manufacturing--Lessons from the Apparel and Textile Industries* (New York: Oxford University Press, USA, 1999); and John. T. Dunlop and David Weil, "Diffusion and Performance of Modular Production in the US Apparel Industry," *Industrial Relations* 35, no. 3 (Jul 1996): 334-55.

[43] The production bonus was equal to 81% of worker productivity during their training period. Management chose a bonus corresponding to 81% productivity levels because it was the average bonus that operators were receiving under the previous, modular system of production in Plant A.

[44] Workers with more experience took less time to adapt to the new production method, but in general it took some time for an average worker to reach full productivity, and this can have a discouraging effect on the employees.

[45] Casey Ichniowski, Thomas A. Kochan, David Levine, Craig Olson and George Strauss, "What Works at Work: Overview and Assessment," *Industrial Relations* 35, no. 3 (Jul 1996): 299-333; Paul Osterman, "How Common is Workplace Transformation and Who Adopts It," *Industrial & Labor Relations Review* 47, no. 2 (January 1994): 173-88.

[46] At 100% level of productivity, one cell can produce 1,060 pieces/day for a basic t-shirt. This is equal to 181 pieces/person. For a more complex t-shirt, the cell can produce 782 pieces/day (132 per person).

[47] For more on this system, see Jody Knauss, "Modular Mass Production: High Performance on the Low Road," *Politics & Society* 26, no. 2 (June 1998): 273-96.

[48] When a new style has to be produced, the factory needs to change the order of machines and operations. In a modular system, once the line is set up it is hard to move the machines around. In addition, sometimes two or more machines are needed for the same operation because two styles may differ only for slightly different operations. In these cases, it is more convenient for the factory to have only one line that can work on both styles. As a consequence, one line can get extremely long.

[49] Frederick Winslow Taylor, *The Principles of Scientific Management* (New York: W. W. Norton & Company, 1967).

[50] It is worth noting that this is a very rough comparison. The comparison is made between a cell in Plant A and a line in Plant B that make comparable products (basic t-shirts), and it is based on information provided by the factories regarding the number of t-shirts produced by a cell or a line in a day, and workers' wages. A comparison between cells and lines that produce **different** types of t-shirts may provide different results.

[51] For more on this, see John Paul MacDuffie and John F. Krafcik, "Integrating Technology and Human Resources for High Performance Manufacturing: Evidence from the International Auto Industry," in *Transforming Organizations,* eds. Thomas A. Kochan and Michael Useem, (New York: Oxford University Press, 1992) and Knauss, "Modular Mass Production: High Performance on the Low Road."

[52] For a good review of this literature, see John Paul MacDuffie, "Human-Resource Bundles and Manufacturing Performance: Organizational Logic and Flexible Production Systems in the World Auto Industry," *Industrial & Labor Relations Review* 48, no. 2 (Jan 1995): 197-221; Ichniowski, Kochan, Levine, Olson and Strauss, "What Works at Work: Overview and Assessment."

[53] Douglas Murray McGregor, *The Human Side of Enterprise* (New York: McGraw-Hill, 1960).

[54] Ibid.

[55]Mark S. Granovetter, "Strength of Weak Ties," *American Journal of Sociology* 78, no. 6 (May 1973): 1360-80; Richard M. Locke, *Remaking the Italian Economy*, Peter J. Katzenstein ed., *Cornell Studies in Political Economy* (Ithaca: Cornell University Press, 1995).

[56] Stephen J. Frenkel and Duncan Scott, "Compliance, Collaboration, and Codes of Labor Practice: The Adidas Connection," *California Management Review* 45, no. 1 (Fall 2002): 29-49.

[57] Ibid.

[58] For more on how trust-like relations are built, not inherited, see Richard M. Locke, "Building Trust," Paper presented at Annual Meetings of the American Political Science Association, at San Francisco (September 1, 2001).

[59] Interestingly enough, a move in this direction is already being pushed (in somewhat different ways) by both global brands and certain NGOs. With the end of the Multi-fiber Agreement (MFA), many brands have begun to consolidate their supply base and focus on “strategic partners”. Likewise, the Workers Rights Consortium (WRC) is currently lobbying university licensees to source only to suppliers who ay living wages and guarantee freedom of association. See Workers Rights Consortium 2005 for more on their Designated Suppliers Program. Perhaps there is room for collaboration on this front?

[60] It appears as if Nike is already moving toward this mixed system, given recent changes to their compliance program which are focusing on root cause analyses of workplace problems. Based on interviews with senior Nike managers.