

IZA DP No. 3227

**Steering towards the High Road:
A Study of Human Resource Management in
Two Indian Garment Factories**

Henrietta Lake

December 2007

Steering towards the High Road: A Study of Human Resource Management in Two Indian Garment Factories

Henrietta Lake

IZA (Research Affiliate)

Discussion Paper No. 3227
December 2007

IZA

P.O. Box 7240
53072 Bonn
Germany

Phone: +49-228-3894-0
Fax: +49-228-3894-180
E-mail: iza@iza.org

Any opinions expressed here are those of the author(s) and not those of the institute. Research disseminated by IZA may include views on policy, but the institute itself takes no institutional policy positions.

The Institute for the Study of Labor (IZA) in Bonn is a local and virtual international research center and a place of communication between science, politics and business. IZA is an independent nonprofit company supported by Deutsche Post World Net. The center is associated with the University of Bonn and offers a stimulating research environment through its research networks, research support, and visitors and doctoral programs. IZA engages in (i) original and internationally competitive research in all fields of labor economics, (ii) development of policy concepts, and (iii) dissemination of research results and concepts to the interested public.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ABSTRACT

Steering towards the High Road: A Study of Human Resource Management in Two Indian Garment Factories

What are the performance benefits of investing in human resources in a low-cost labor environment where returns to such investment are widely perceived as negligible? This paper presents a matched pair case study on the performance effect of human resource management systems at two garment factories manufacturing for export in India. They make the same product for the same buyer with the same local pool of labor. One factory views its workforce as a variable cost to be minimized, limits training, prefers strict hierarchy and job definitions. It relies on a range of factors including the offer of overtime and a lack of available alternatives to workers for retention. The other factory, which is located almost next door and pays the same basic wage, focuses on skills development, opportunities for promotion and encouraging employee participation. Employee turnover at the first factory is almost three times greater than that of the second, its absenteeism one third higher, while its product quality is 2.6 times lower and its production efficiency over 28 percent lower. This study demonstrates that even in a low-wage environment, HRM and work organization have a tangible and independent impact on performance.

JEL Classification: J24, J8, O15

Keywords: human resource management, labor productivity, labor standards, India, garments

Corresponding author:

Henrietta Lake
PO Box 345
Bicester
Oxon, OX26 9EE
United Kingdom
E-mail: lake@iza.org

INTRODUCTION

When clothing companies first started outsourcing their manufacturing to the developing world in the 1950s, intent on reaping the ‘efficiency’ gains, they paid little attention to the human resource management (HRM) practices at these overseas contractors. Paradoxically it may now be this same drive for efficiency that is leading some of the brands to look more closely at the potential benefits of delivering technical assistance on HRM and steering their overseas contractors towards the ‘high road’ of more sophisticated HRM practices. However, there will be more chance of these contractors implementing such practices, whether steered or on their own initiative, if evidence can first be shown of their tangible benefits.

This paper seeks to investigate some of the benefits of investing in advanced HRM for a context in which labor is typically viewed as a variable cost to be minimized rather than an asset to be developed. Do advanced systems have an impact on performance, and if so how significant is that impact? Two workplaces were identified in Bangalore, India that allowed for a natural experiment to be conducted to test the performance effect of HRM. The factories are matched in terms of the variables that might account for performance difference including their location, size, age, capital investment, product type and buyers. The primary difference between the two plants is the work organization and HRM that each has adopted; two approaches that produce a striking impact on their respective performances and hence serve potentially to inform the shape of technical assistance delivered by buyers.

The global apparel business is typical of a “buyer-driven” value chain. The large North American and European buyers hold most of the power in the chain; they dictate the specifications of the garment, the acceptable price range, they often even source the raw materials, and yet they do not own the overseas manufacturing operations where the product is made and hence have no direct control over the people working at and managing these

facilities. Despite this arms-length relationship, the buyers have seen their brand image dented and profits jeopardized by allegations of poor working conditions at these overseas manufacturing plants. They have responded with a multitude of ‘corporate codes of conduct’ supported by top-down monitoring to ensure compliance. The buyers may have little direct or legal influence over conditions on the factory floor, but they do wield considerable leverage and can use the threat of discontinuing orders to encourage their suppliers to comply with certain standards in working conditions.

Yet the present system of compliance, driven by buyers from a distance, is increasingly seen as fundamentally flawed and unsustainable (Bank-Jørgensen 2003, Locke et al 2007, O’Rourke 2003). The plethora of buyers’ codes is generating frustration and confusion among suppliers (Freeman 1998, ILO 1998, Varley 1998) and many factory managers are simply becoming more adept at covering up abuses. The local manufacturers meanwhile, which operate in a low-margin industry and an environment where labor is typically plentiful and employee turnover is high, have historically seen little reason to invest in training or even providing basic health services for their workers. In this context investment in human resources is usually perceived as a cost with few associated benefits. Why, they argue, should they seek to change their primary competitive advantage: the supply of low-cost labor? There is no consensus on what the benefits to improved working conditions might be from their perspective.

This drive to improve working conditions is taking place in an increasingly competitive environment. Many of the apparel buyers, spurred on by the official end of the quota system of the Multi-fiber Agreement (MFA) in January 2005 have been pushing their suppliers, not just on price, but also for smaller production runs, shorter lead times, and more inventory kept at point of manufacture. This is supposed to be achieved by the supplier while maintaining, if not increasing, product quality and raising labor standards.

The challenge is to find the most effective tools for resolving the apparently conflicting demands of production and welfare. Following the relatively blunt instrument of codes of conduct and compliance operations some of the most forward thinking global brands are beginning to look for other, more sustainable ways to meet their need for a competitively priced, quality product, delivered on time and manufactured in humane conditions. Focus is being put on the need for buyers to deliver different kinds of technical assistance (Ansett 2007; Locke and Romis 2006). There is a move to engage suppliers 'beyond compliance', to encourage them, among other things, to improve the human resources function at their firms. This is seen as having the benefit of on the one hand addressing social compliance issues such as employment relations and overtime and on the other improving suppliers' productivity, thereby encouraging the adoption of new practices. The problem is there is little empirical evidence on what the most effective HRM practices might be in a low-wage environment.

The fieldwork for this study took place in India over 19 months, beginning in February 2004. Interviews were conducted with factory owners, managers, supervisors, NGO representatives, independent auditors, industrial engineers, union leaders and the global brands sourcing from these factories. 17 months' worth of data on performance were collected from each factory. In addition to the interviews at these two factories, around 200 further interviews were conducted as part of a wider study examining the effect of HRM on performance and for which panel data were collected from over 40 factories in Bangalore and Chennai, India¹. The results of this work can be seen in Lake (2007).

This paper seeks to find out what the returns to investing in HRM are, in terms of factory production efficiency, in a developing country context. It does not directly examine the factors that lead certain factories to adopt particular practices and others not. Nor does it try to answer the wider question about the impact of HRM on firm profitability or

competitiveness. Data were unfortunately not available to answer the latter question; although as the quality and volume of data gathering improves in this region and as the companies themselves begin to see the benefit of sharing more information such an investigation may be possible in the near future.

THE INDIAN GARMENT INDUSTRY

The productivity of India's garment industry is notoriously poor in relation to its global peers. Exporting garment manufacturers in India today achieve only 35 percent of the productivity levels of their US peers (McKinsey 2004) and labor productivity in particular is very low in India even when compared with its Asian competitors (ILO 2003, UNCTAD 2005). This disparity can be partially attributed to the highly protectionist and 'welfare-orientated' regime following Independence in 1947. The government saw the apparel and textile industry as a vehicle to harness India's vast cotton and labor resources and allocated the sector the role of 'labor absorber'. In order to 'protect' the workforce apparel firms were forced to remain small-scale. To avoid sources of conflict that might undermine economic development the regime also strictly regulated many aspects of industrial relations including health and safety, leave, layoffs and dismissals. Firms were prevented from closing and the government stepped to bankroll a business if it was no longer viable.

Much of the restrictive labor laws remain in place today allowing Indian apparel firms limited scope to respond to market forces. The Indian garment industry consequently developed an expertise in small volume, high fashion goods that were orientated towards the smaller European markets and later select US buyers. But it was these countries that instituted the most stringent textile and garment quota systems to protect their markets in 1970s, further constraining the growth of the Indian garment industry and any potential efficiency gains. Chinese apparel manufacturers by contrast orientated themselves early on towards Japan and other Asian countries and did not face these constraints.

The end of the MFA in 2005 was cited as being the ideal opportunity for the Indian apparel industry to realize its potential to gain around 14 percent global market share of garment manufacturing, but this was contingent on investments in a number of areas, not least human capital. The shift in the labor profile of garment manufacturing presents the industry with its main challenge, and opportunity. In the 1980s many garment manufacturers started to move production from northern India and Mumbai, where it was the preserve of highly skilled male ‘tailors’, to the South where work is performed by unskilled female machine ‘operators’. This shift was made in part to get away from the sites of the ‘old industrial relations’ where labor costs were rising and strikes were increasingly frequent (Tewari 2005). The move created a fundamental change in the nature of work organization from a cottage industry of craftsmen to mass production. It also brought with it a tradeoff in terms of HR investment costs; from higher wages in the north, to recruitment and training costs of the ‘unskilled’ workforce in the south.

Having moved from being a small-scale, high skill, high quality business mainly in the North to a large-scale, low-skill and lower-quality business further south, the garment business now faces a challenge. If the industry wants to meet buyers’ specifications and move up the product value-added chain, it has to maintain the benefits of large scale while producing higher quality products. Yet there is little understanding on how to manage these two characteristics simultaneously.

HUMAN RESOURCE MANAGEMENT AND PERFORMANCE

As human capital has come to be seen as a strategic resource to be maximized, rather than purely a cost to be minimized, attention has focused on trying to measure the benefit it contributes to an organization. Research in this area has centered on so-called ‘high performance work systems’ (HPWS), what their components should be and what performance effect can be expected.

A number of empirical studies have been conducted which help to establish a link between HPWS and a range of performance variables. Some studies are industry-specific, making comparison between manufacturers easier due to the similar production processes. These include studies on the machine tool industry (Kelley 1996), integrated steel mills (Ichniowski, Shaw and Prennushi, 1997), automobile assembly (MacDuffie, 1995) and textiles (Bailey 1993). In the US garment industry a number of studies demonstrate the productivity gains of shifting from traditional piece-rate to teamwork (Hamilton et al 2003) or modular production, which incorporates teamwork, cross-training and job rotation (Berg et al. 1996; Dunlop and Weil 1996). All these intra-industry studies find that the adoption of 'advanced' HRM practices such as selective recruitment practices for lower end jobs, cross training and job rotation, team building, decentralization of decision-making, worker participation and incentive pay results in higher performance than more 'traditional' practices, which are based on Fordist principles involving strict work rules, narrow job definitions and hourly pay with close supervision. Other cross sectional studies use more nationally representative samples of firms and also find a correlation between workplace practices and productivity: Betcherman (1997), Black and Lynch (2001, 2004), Huselid (1995), Huselid and Becker (1996) and Delaney and Huselid (1996).

But it is not just what practices are implemented, but how they implemented and in what combination that matters. Black and Lynch (2001) and Osterman (1994) show that it is the method of implementation that is required for a performance effect, for example the extent to which new training methods are diffused. In addition, many of the studies on the topic of HPWS reveal that rather than marginal changes in individual work practices being sufficient for a tangible productivity effect a synergy is required between HRM practices, making their collective effect greater than the sum of their individual parts (Milgrom and Roberts 1995). For example, the introduction of teams also requires new methods of job

analysis, assessment, recruitment and socialization activities (Klimoski and Zukin 1998) or the use of group-based incentive pay requires selective recruiting for workers with ‘team spirit’, creating a norm or a culture of ‘high effort’ and maintained through peer pressure and engaging in extensive meetings in order to overcome the free rider problem (Kandel and Lazear 1992). Although there is no agreement in the studies as to the necessary ‘standard’ bundle of practices required for a performance effect, common to almost all are higher levels of employee involvement and communication; increased and targeted training, and more sophisticated performance management tools. This paper therefore investigates these areas at the two Indian plants under observation to see how the practices have been implemented, how the elements of the system work together, and most importantly to test what effect the alternative HRM systems have on factory performance.

The main contribution of this study is test the performance effect of HRM in a previously undocumented context. To date very little empirical work has been done on the performance effect of HRM outside the Western, industrialized world. A few of the exceptions include the MIT group that extended its work on auto assembly plants from the United States, Japan, Australia and Korea to include Mexico and Brazil (MacDuffie 1995; Kochan et al 1997), plus the work of Huang (2000) and Min and Tsang (1990) on the Taiwanese and Chinese auto industries respectively. Shaiken (1994) has also examined skill formation and labor productivity in the TV as well as auto manufacturing industries in Mexico. Although these handful of studies were conducted in different countries they establish many of the same HRM-performance links and effects as those conducted in the US and Europe. However, they are all based on evidence collected in high-technology ‘leading industries’ such as electronics or automobiles; higher value, higher skilled and more capital intensive, than the low-wage, low skill and labor intensive garment industry. It is particularly

in these types of low-skill, labor-intensive industries in developing countries that the assumption concerning the negligible impact of human capital investment prevails.

A handful of case studies have been done on the garment industry in the developing world, but they do not directly investigate how HRM affects factory performance in terms of production efficiency or productivity. Locke and Romis (2006) present an interesting case study of the Mexican garment industry, examining how HRM and knowledge transfer from brands impact labour standards and working conditions at two factories very differently, and the implications this has for corporate codes of conduct. Tewari (1999) provides another case study from the Indian garment industry, which shows how the Ludhiana knitwear cluster responded to negative economic shocks in part by adopting changes in work organization.

ALTERNATIVE APPROACHES TO MANAGING A WORKFORCE

This paper presents a natural experiment on the impact of HRM on factory performance. Two factories in the same region, with the same customers, same product, same labor market and even paying the same base salaries have vastly different outcomes in terms of turnover, absenteeism, product quality and production efficiency. The main difference between them is their alternative approach to managing their workforce. One factory, “Plant B”, B for traditional or “Basic” HRM, views its workforce as a variable cost to be minimized, observes strict hierarchy and control and substitutes capital for labor where possible. It relies on a range of factors including the offer of overtime and a lack of available alternatives to workers for its retention policy. The other factory “Plant A”, A for innovating and “Advanced” HRM, which pays the same basic wage as Plant B, focuses on developing the skills of its workforce and offering opportunities for progression. It concentrates on building a strong company culture, sharing information with its workers and treating them with respect. By comparing these two factories, this paper explains how HRM and work organization has a tangible and independent effect on production efficiency.

FACTORY BACKGROUND

The two factories Plant A and Plant B are almost identical in the variables that are widely believed to be the main determinants of plant-level production efficiency. They are situated almost opposite each other in an industrial zone on the northwest outskirts of Bangalore. The Yeshwanthpur Estate is one of the largest industrial zones in India and contains a high concentration of garment manufacturers. Both establishments compete for labor with at least five other garment factories situated within half a kilometer of their premises and hundreds more within a 5-10 km radius. Not only are the two factories in the same place, they are also roughly the same size, employing around 2000 workers each and were established within a year or two of each other during the mid-1990s boom in garment outsourcing to India. Due to their age and because they both offer roughly the same range of services and product mix to the same buyers, the type and age of the capital stock at the two plants is also very similarⁱⁱ. The only difference between them in this respect is that Plant B has substituted capital for labor where possible by investing more in labor-saving high-tech equipment in its cutting department and some ‘special purpose’ machines in order to expand its product range. But this special equipment is used by a tiny fraction of its workforce. The machinery used by the bulk of assembly-line workers on the production floor at both establishments is almost identical. For their production set-up both factories have moved from the ‘traditional’ progressive bundle system (PBS) arrangement to a type of un-automated unit production system (UPS); an overhead chain mechanism moving single pieces of a garment between work stations along the production line.

Their product is similar in terms of complexity; both factories make garments with on average 80-90 operations per style. Both use imported man-made fiber materials which puts them at the higher end of the spectrum of Indian apparel manufacturers in terms of product value-added and machinery. Due to the similar product complexity, ‘advanced’ materials and

machinery, both factories require similarly ‘higher’ skilled workers for their production. Their close proximity to each other and product mix therefore mean that the two factories are likely, all else being equal, to be competing directly for workers from the same local pool of labor.

Both establishments manufacture only for the export market and exclusively for US brands, one of which they share: WorldSport. This similar customer base means they face an identical competitive environment and the same product and process standards set by this buyer. WorldSport has been sourcing from these two factories, and other factories at each firm, for more than 10 years. Both factories are ‘preferred’ vendors for WorldSport. As such they receive more attention, support and technical assistance from this brand compared to other ordinary or non-‘preferred’ vendors. The factories close proximity to each other and the hour’s drive from the WorldSport sourcing office allow for regular visits from the US buyer’s staff, offering the opportunity for extensive knowledge transfer on HR and other issues. The similarities between the two contractors are summarized in Table 1 below:

Table 1: Similarities between the Two Contractorsⁱⁱⁱ

	Plant A	Plant B
Location	Yeshwanthpur Industrial Estate, Bangalore	Yeshwanthpur Industrial Estate, Bangalore
Product	Jackets and trousers	Jackets and trousers
Number of employees	1500 - 2500	1500 - 2500
Capital investment	Medium-High	Medium-High
Production system	UPS (Switch-track)	UPS (Switch-track)
Volume for export	100%	100%
Relationship with WorldSport	> 10 years	> 10 years
‘Preferred vendor’	Yes	Yes

Plant B and Plant A do have some differences between them. But these differences, which are mainly in their respective 'networks', should assist Plant B's comparative performance in relation to Plant A's, but in fact the opposite is true.

There are a number of factors which indicate that Plant B can offer more than Plant A to WorldSport, thereby strengthening its customer-supplier relationship and increasing the chance of knowledge transfer on HRM and technical assistance from WorldSport. Plant B is part of a larger and more vertically integrated firm than Plant A. Its size offers benefits from economies of scale in terms of purchasing inputs that it could pass onto its customers through lower prices. Its scale also gives the firm more leverage with buyers because many of its competitors cannot offer equivalent production volumes and product range. Plant B has the full complement of garment processing facilities at its disposal and the firm has even integrated backwards in order to produce many of the inputs required for garment manufacturing. It is a genuinely 'full-package' supplier and has more control over the entire production process than Plant A, which should, in theory and all else being equal, boost its production efficiency. For example, fabrics are less likely to be late which holds up production, plus they have more control over the quality of these inputs, reducing the chance of defects.

Although both factories have the same primary customer: WorldSport, only 25-30 percent of production capacity at Plant A goes to this customer, while at Plant B all production is dedicated to WorldSport. One might expect product quality therefore to be higher at Plant B as both the managers and workers are so familiar with the styles and specifications of WorldSport, as it is the factory's only client, that there are less likely to be mistakes.

On the other hand, Plant A has a more diversified *external* network than Plant B. The firm has branched out into industries in other higher value-added sectors than apparel. While

this diversification could lead to distractions on the part of senior management, it is also possible that this wider experience brings exposure to innovative methods in HRM and other business practices from these more advanced industries. Plant A's General Manager of HR reports that he is aware of no direct knowledge transfer on HRM between the different divisions within the company. Yet the executives from the various divisions share the same company headquarters and by default the owners of Plant A are familiar with the standards and processes of industries other than garment manufacturing. Moreover, in interviews the workplace philosophy that Plant A top management espouses reflects this broader experience with a more sophisticated human capital approach.

Table 2: Differences between the Two Contractors

	Plant A	Plant B
Number of apparel manufacturing establishments within the firm	< 10	> 15
Vertical integration (facilities available within the firm)	Cut, sew, embroider, wash	Weave, cut, sew, print, embroider, wash
Other industry experience	Yes	No
Buyers	Multiple	One
Production Volume dedicated to WorldSport	25-30 %	100 %

PERFORMANCE OUTCOMES

Given the strikingly similar production set-up, product, machinery, location and buyers of Plant A and Plant B one would expect their performance to be similarly closely matched. This section details the actual performance of the two contractors, summarized in Table 3 below, of monthly averages taken over the 17-month data collection period (August 2004 to December 2005).

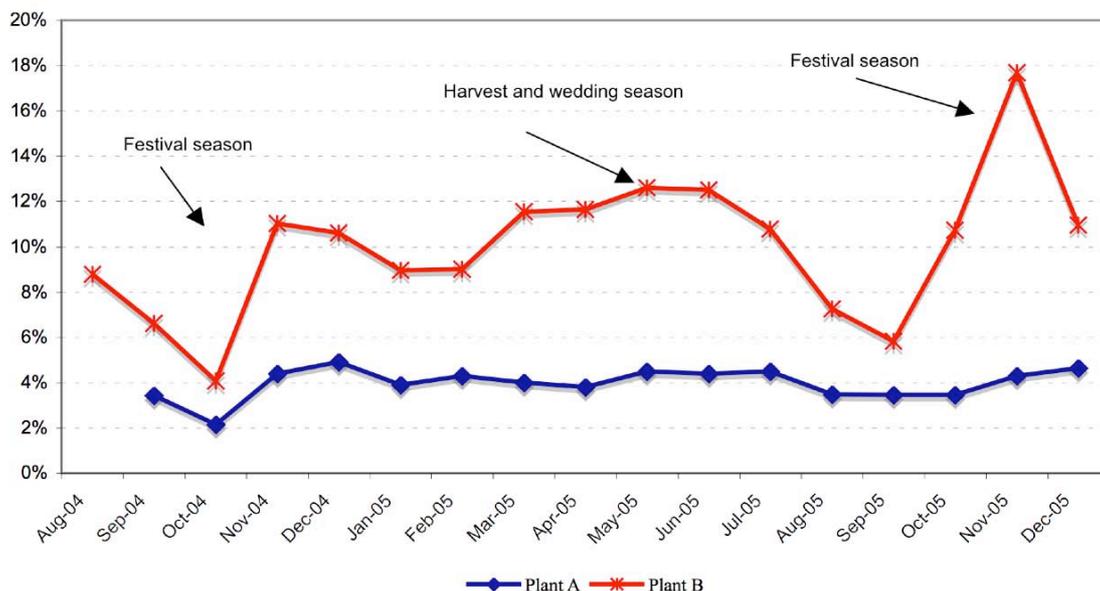
Table 3: Comparison of Outcome Measures between the Two Contractors

	Plant A (%)	Plant B (%)
Average monthly employee turnover	3.93	10.03
Proportion of workforce hired during past 12 months	15	50
Average monthly absenteeism	3.79	5.03
Average monthly alteration rate	2.98	7.83
Average monthly production efficiency*	77.14	60.12

The efficiency rates displayed here are not directly comparable because targets are set differently at the two contractors. Plant A's standards (production targets) are set higher than Plant B's so the fact that Plant A is able to achieve a higher average rate than Plant B is even more impressive. This is explained in more detail below.

One of the most startling results revealed in Table 3 above, is the large difference in employee turnover of the two establishments. Plant B has almost three times the average monthly turnover of Plant A, despite the two vendors being situated so close to each other, drawing from the same pool of similarly skilled workers and paying the same basic wage. Figure 1 below, charts employee turnover for the two contractors over the length of the study period.

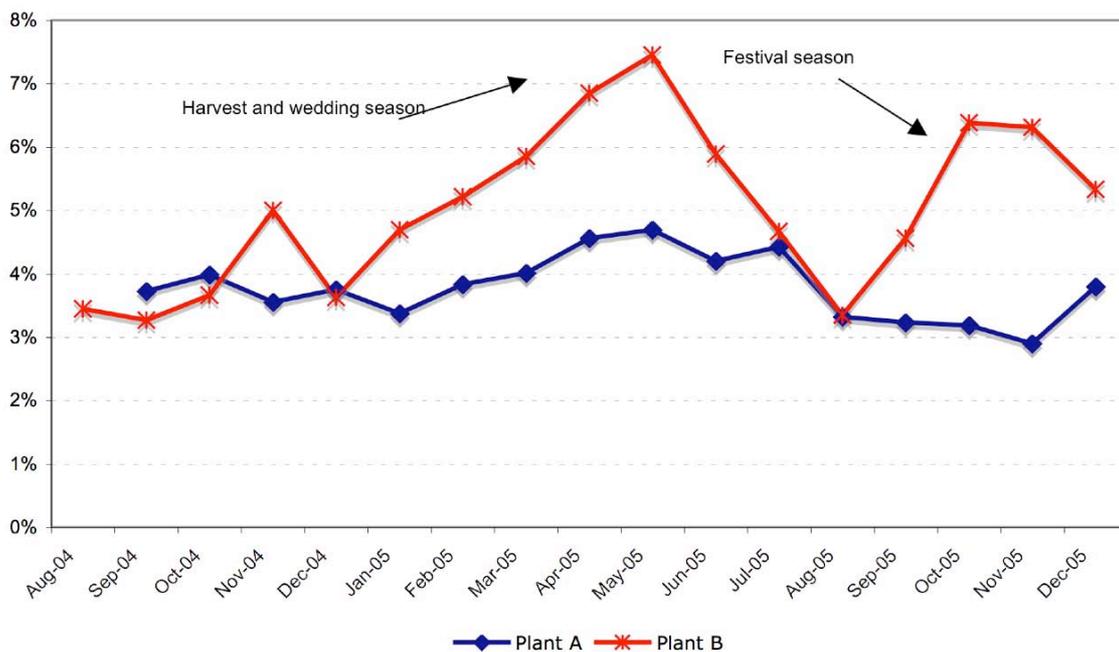
Figure 1: Comparison of Employee Turnover at Plant A and Plant B



The two establishments follow roughly the same seasonal fluctuations, the difference is simply in degree. Attrition is one of the biggest problems facing this industry: 6-8 percent turnover a month is common and is a huge disincentive to invest in HR for many firms. Plant B's attrition is particularly concerning because it is driven by longer serving workers, not just young, inexperienced workers who arrive and leave within a couple of months. Only half of Plant B's workforce had worked at the factory for more than a year in July 2005, as compared to 85 percent at Plant A.

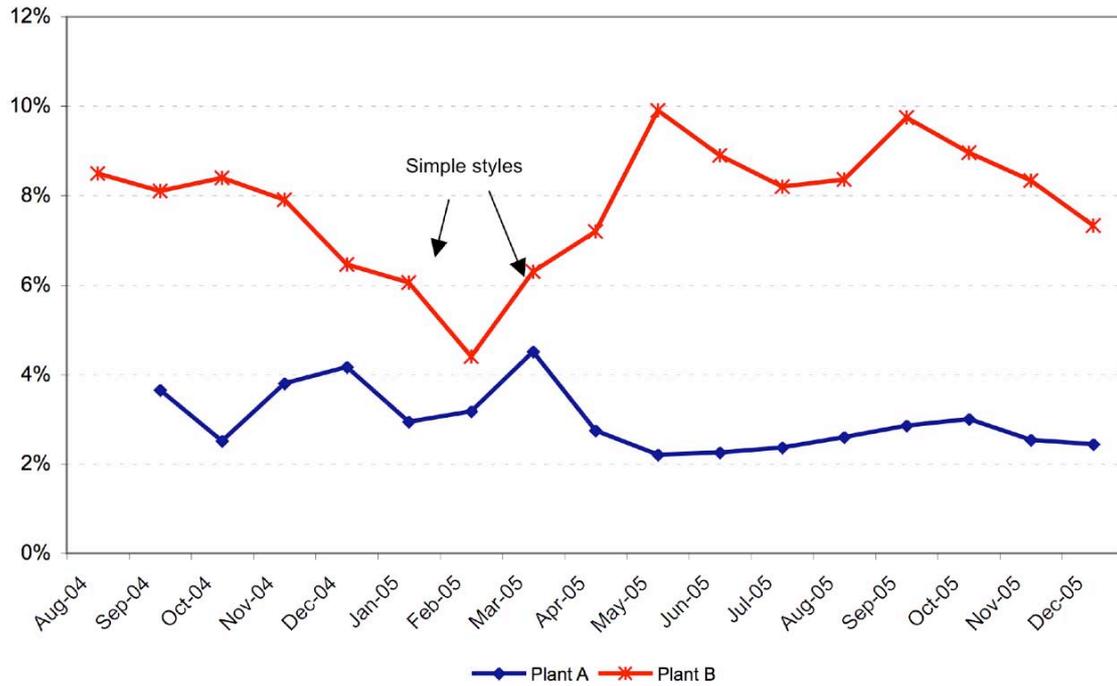
Workers at Plant B are also absent more often than at neighboring Plant A, as shown below in Figure 2. Many of the peaks and troughs are again dictated by holiday periods when workers spend time with family or return to rural areas to marry or for the harvest. Absenteeism is often attributed in this context to illness and may reflect the state of working conditions and general health provisions at the factory^{iv}. Higher rates of absenteeism at Plant B lower efficiency as temporary replacements have to be found for the absentee workers delaying the start of production on the assembly lines and disrupting workflow.

Figure 2: Comparison of Absenteeism at Plant A and Plant B



Plant B's high levels of employee turnover and absenteeism are matched by an equally poor record on operator-caused defects (alteration rate), as shown below in Figure 3.

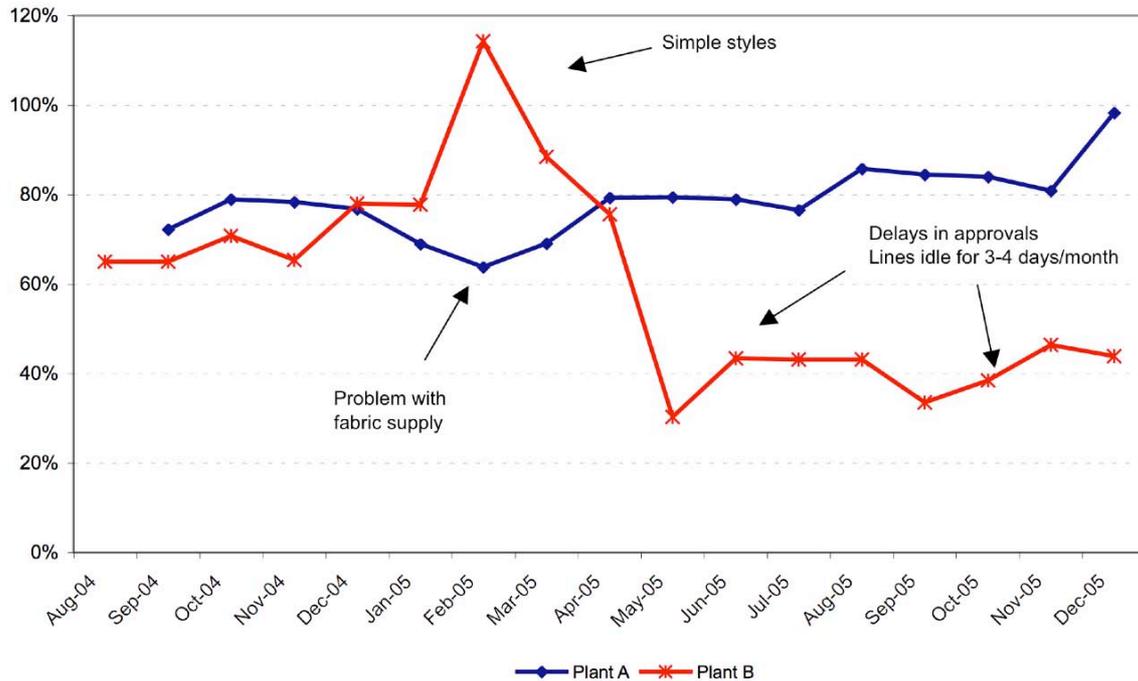
Figure 3: Comparison of Alteration Rates at Plant A and Plant B



Plant B has an average monthly alteration rate almost three times that of Plant A. The alteration rate is the number of garment pieces per hundred that have defects and need to be reworked. Alteration rates are a large contributory factor to overall production efficiency. High defect rates are an indicator of poor labor quality, insufficient training and are linked to retention rates as new hires take time to learn unfamiliar product styles.

There are many different kinds of production efficiency to measure in any manufacturing environment. The particular production efficiency selected for this study is the ratio of *target* number of pieces produced to the *actual* number of pieces produced in an 8-hour day. Based on the data submitted by these two factories, Plant A has on average 28 percent higher production efficiency than Plant B, as shown in Figure 4 below.

Figure 4: Comparison of Production Efficiency at Plant A and Plant B



It should be noted that although it is possible to distinguish changes in performance over time at each factory in response to specific events such as changes in the HRM system, it is harder to make a fair comparison of efficiency rates between these two factories because they set targets differently. Plant A uses an international industry standard called ‘Global Sewing Data’ (GSD) to calculate its production targets that allows it to benchmark its own performance objectively over time and with other plants. Plant B sets its targets based on the judgment of the Production Manager and his experience of the number of pieces per hour that it *should* be possible to produce for a particular style at his factory. Needless to say the ‘international standard’ used by Plant A is set higher than the ‘standard’ used at Plant B. This was tested informally by asking each Production Manager to estimate the number of pieces per hour that a line at their respective plants could produce for the same garment. The fact that Plant A exceeds Plant B’s production efficiency even when the standard it sets is higher, makes Plant A’s performance even more impressive.

COMPARISON OF WORK ORGANIZATION AND HRM SYSTEMS

Plant A and Plant B are similar in many of the ways that would lead one to expect them to have similar performance outcomes and yet this is not the case, as shown above. The explanatory variable for the cause of this disparity is HRM and work organization. Numerous factory visits and detailed interviews revealed that the two establishments do indeed take very different approaches to managing their respective workforces. The following section details these differences from recruitment preferences and training techniques to performance management and ‘communication’ methods, and looks at how these factors affect performance.

Workforce Composition and Organization

As is typical in the global garment industry the workforce at these two factories is over 90 percent female, with men occupying almost all the senior roles. The employee registers of Plants A and B reveal that Plant B has a slightly more technically skilled workforce than its neighbor (i.e. a higher ratio of ‘A-grade’ machine operators)^v and yet the plant’s quality and production efficiency are lower than Plant A’s, which suggests that factors other than the recorded starting skill levels, i.e. how the workers are actually managed on-site, plays a more critical role in determining performance.

The average age of production workers at Plant B is 23 years, three years younger than the average at Plant A. The disparity is most likely due to Plant A’s higher retention rate; the firm prides itself on the longevity of service of its workers. As the workers age they are more likely to already be married and have families and are thus less likely to leave work for these life-stage related reasons. Plant A does not have a policy of hiring older workers.

The ratio of managers and supervisors to line workers is higher at Plant A than B. Plant A employs one supervisor for every 14 assembly-line workers on its production floor, while at Plant B the ratio is one supervisor to 34 workers. Plant A also has an additional line

of management: the Assistant Production Managers (APM). There is one APM for every 6 supervisors. These job designations are in line with Plant A's approach of decentralized management and give the factory a higher level of management expertise on the production floor ready to respond quickly to problems as they arise. Although this extra layer of management does add to the wage bill, it also offers increased promotion opportunities for workers, support for worker-management communication and workers' access to training, which together all contribute to retention and performance. Plant B on the other hand is typical of most other apparel establishments where a single Production Manager (PM) and his handful of deputies: the 'floor-in-charges', run the floor.

Recruitment

Plant A and Plant B both recruit only workers with experience, rather than focusing on 'freshers', an alternative recruitment policy pursued by many of their neighboring competitors. But Plant A takes over twice as long on average to fill vacancies than Plant B (5 days as opposed to 2 days). This may be because it is not an attractive employment option, but that seems unlikely given the long lines of job seekers that gather at its factory gate every morning (there are no lines outside Plant B at the same time). The other reason is that Plant A has more stringent hiring criteria. Indeed in-depth interviews with management reveal important differences in approach between the two establishments. Plant A adopts a more sophisticated criteria than its rival for screening new recruits, by testing memory and numeracy in addition to requiring a school certificate. Plant A requires schooling until the age of 12 for all basic machine operators and to age 15 for higher-level workers and supervisors. The preference for new recruits with basic knowledge of English and mathematics aligns with Plant A's focus on training and the aim to recruit workers with the 'potential' for additional learning and promotion. Plant B changed its recruitment criteria during the study period; extending the schooling requirement to the age of 15, from helpers only to checkers

and packers, recognizing the need for English language and counting skills in these functions and departments. But for all other workers at Plant B - the majority - including all machine operators, there is no minimum level of schooling required, only experience. Table 4 below, summarizes the recruitment practices at the two sites.

Table 4: Comparison of Recruitment Practices at the Two Contractors

	Plant A	Plant B
Average time to fill a vacancy	5 days	2 days
Recruit for Skill	Yes	Yes
Screen for Education		
Supervisors:	Yes	No
Operators:	Yes	No
Helpers:	No	Yes

Performance Management

Plant A invests more than Plant B in carefully managing the performance of its workers via a mix of pecuniary and non-pecuniary compensation, regular performance appraisal, team building and other motivation techniques.

Plant A and B both pay \$68 per month (3000 rupees) to medium-skilled workers (B-grade) and \$136 (6000 rupees) to supervisors, 15 percent above the average of other establishments surveyed in the area. The only discernable difference between the two is in the wage for the highly skilled cutters, which is 50 percent higher at Plant A than B.

The owner of Plant A explained the dilemma that many of the more established apparel manufacturers, such his firm and Plant B, are facing: “There is a real shortage of skilled operators in Bangalore due to new factories springing up which are poaching our workers by paying above the market rate. We don’t overpay here because that would upset the apple cart.” The head of HR at Plant A said pricing pressure from the buyers was keeping workers’ pay fixed. Instead they were focusing on investing in worker development.

Workers supplement their income at both factories with on average 200-450 rupees per month from overtime at Plant B, and a mix of overtime and incentive pay at Plant A. Around three quarters of the workers at Plant A receive some sort of incentive pay based on their performance. The HR department would not share details of the payment scheme but revealed that the supplement was typically no more than 10-15 percent of basic pay. Although these incentive payments make up a small part of total take home pay, compared with what is typical in other countries such as Sri Lanka or China, it may still have sufficient psychological rewards to motivate workers to do well. There is an annual competition within Firm A to be the best performing factory out of the group manufacturing garments. At Plant A at the end of each style run the top performing team receives a monetary award based on a percentage of the profits for that particular purchase order. The advantage is that workers are rewarded immediately on their performance, but the lack of transparency in how the calculations are made and the fact that the amount varies with each style because of the link to profits, makes it quite confusing for workers. Individual workers at Plant A are judged and rewarded based on a their attitude, years of service, productivity and quality performance. ‘Attitude’ includes whether the worker arrives on time, commits any ‘misbehavior’ in addition to their absenteeism record. “We hope to attain a balanced awareness amongst all our employees between their rights and duties,” explained the HR chief.

Plant B reported it also used monthly and annual competitions between factories in the group based on the criteria of “cleanliness, staff attitude, job satisfaction and production efficiencies”, but no financial reward was given to the workers. In 2004 managers at Plant B tried unsuccessfully to implement an incentive scheme linked to individual performance, but because they did not simultaneously monitor for product quality, so defects rose as workers raced to meet their volume targets. They also found supervisors altering production figures to benefit their favorite workers, upsetting others in the process. The underlying problem of

Plant B's inability to collect accurate performance data on individuals and its management ethos made the introduction of performance-based pay unviable.

According to law in India, workers are entitled to a health insurance and savings scheme, child care facilities, first aid room and canteen. Plant A provides all of these, while Plant B offers only the health insurance and savings schemes and built a first aid room recently and only after being pressured to do so by its buyer, WorldSport and an NGO. Plant A provides additional, non-statutory benefits for its workers including a few days of extra leave per year, free transport, subsidized meals, counseling and health services from family planning to eye screening, and scholarships and uniforms for workers' children. Religious festivals are also celebrated and gifts offered on special occasions such as weddings.

Plant A strengthens its retention rates by tying some of its benefits to the tenure of its workers, for example loans are only made available to those who have been with the firm for at least 2 years. Workers who have been with the firm for 3 years or more receive annual gifts, such as saris, watches, casseroles and flasks based on their tenure. Such elaborate schemes do keep the HR department busy and add expense. Plant B invests in none of these kinds of benefits apart from an attendance bonus: a one-off payment each month for full attendance, which it raised from the industry standard 100 rupees to 200 rupees a month, in July 2005. However, this was clearly not enough to improve attendance as evidenced in Figure 1, above.

Plant A again demonstrates its willingness to invest in its workers through its system of performance appraisal. Indian law stipulates that firms need only review workers' performance and pay once a year, which is what Plant B, and many other firms do. But workers who believe their skills have improved may not want to wait till their annual review. Many quit a factory to join another simply in order to have their performance reviewed on hiring and potentially rise a skill grade and increase their monthly wage. Plant A combats this

type of attrition by reviewing worker performance and giving them the opportunity for promotion (and demotion) at the end of every style, which is typically every few weeks. This uncommon approach places a large administrative burden on the HR department and the data management system needs to be relatively sophisticated in order to manage the process, but it can clearly pay dividends as evident in Plant A's performance outcomes. The HR 'department' for Firm A which manages these systems, consists of several people and is no larger than the equivalent 'department' at Firm B. Due to the data system and approach Plant A has a more developed internal labor market than Plant B: a quarter of the lowest grade workers are promoted on average to higher levels, while only 10 to 15 percent typically receive this opportunity at Plant B. One in five of Plant A's most highly skilled machine operators were promoted internally compared with only one in seven at Plant B.

Teamwork is also more encouraged at Plant A. The 'finishing' operations of checking, ironing and folding the garments, have all been incorporated onto the end of each assembly line rather than being situated in a separate 'finishing department', as at Plant B. This re-ordering of production helps to develop a sense of team within the lines and encourages competition between them. It also delivers additional efficiency gains by cutting down on the amount of 'traveling' that the actual garment pieces undergo within the factory.

Both factories reported in the HRM survey that they use colored flags on individual workstations to motivate workers and encourage better performance. Plant A uses them to indicate any deteriorating efficiency and work quality of individual workers during the day to their peers and supervisors. Plant B's colored flags do not monitor change, but merely indicate the presence of a new worker, a critical operation or a broken down machine to the supervisor, and as such do little to encourage higher performance from workers.

One of Plant A's main methods of motivating workers is to share information on their own performance with them. Each workstation is equipped with a small electronic panel

displaying the operator’s production efficiency in real-time while large blackboards at the end of each line record the team’s productivity and are also updated regularly. Photographs of the best performing workers are displayed on notice boards in high traffic areas. All these measures are designed to give workers a sense of pride in their work and encourage superior performance. By contrast, production workers at Plant B do not have easy access to information on their own or their line’s performance. Instead data are displayed on small wall-mounted boards at the end of the line and near the checkers table and are clearly intended for viewing by the supervisors, not the workers themselves. Table 5 below, outlines the contrasting performance management techniques of Plants A and B.

Table 5: Comparison of Performance Management Techniques

	Plant A	Plant B
Basic pay – machine operator	\$68 per month	\$68 per month
Incentive Pay	Yes	No
Benefits for longevity of service	Yes	No
Teamwork	Yes	No
Flags for productivity/quality	Yes	No
Performance appraisal	~ 3-4 weeks	Annual
Helpers promoted	25%	13%

Worker Participation and Communication

As well as sharing data with workers, eliciting their ‘participation’ is seen as a critical component of high performance work systems. Plant A and Plant B ‘communicate’ very differently, not only in style but also in what information they choose to share.

The traditional ‘communication’ tool of statutory workers’ committees on health and safety or harassment issues hardly function at most garment factories in the region, including

Plant B. Plant A has tried to set up most of these committees but they involve such a small percentage of the workforce, rarely meet and workers do not yet know how to utilize them fully. Instead Plant A's primary method of finding out about workers' concerns is a bi-annual survey of just under 10 percent of the workforce. Questions relate to working conditions (drinking water, toilet breaks etc) and issues such as abuse, maternity leave and family problems. The survey also collects feedback on supervisors' performance from the line workers.

At Plant B not only are the statutory committees defunct, there is no alternative communication vehicle for the workers comparable with Plant A's survey. In management's own words: "When we want to find out about anything we take the ring leaders and the meek ones and question them. Then we get a good picture of what is going on." When it was pointed out that this was more about getting information from workers, rather than letting them express themselves and their concerns, the management added: "We find out about the workers problems through the feeding helpers. They know each of the workers and their problems. We train them to do some of the counseling and ask them to help us identify the women who look like they need help." Whether this system works in practice is debatable; the feeding helpers are typically the youngest and most inexperienced workers in the factory whose ability to 'counsel' older colleagues is likely to be limited. An external NGO observer explained that since the buyers' compliance teams had been pushing for some sort of channel of communication for workers at Plant B there is now a system in place where between 4 and 5pm each day workers can go and talk to the factory managers. But given the company's culture, described below, it seems unlikely that this opportunity is taken up very often.

Plant A's claim to have an open door policy for workers is more credible than Plant B's efforts due to the power wielded by the HR department. "The HR team at [Plant A] has been empowered by the senior management," explains an external compliance auditor, "So

the workers do go to them when they have problems or grievances to report. This is not the case at [Plant B].” According to the same compliance auditor the workers at Plant B do not bother to report any grievances to their HR department because they know that they do not have the power to change anything. The management at Plant B concedes: “These are newly created roles in welfare and compliance. It is only in the last 2 years that compliance has become a big issue. We are learning.” Plant B’s management clearly sees creating the welfare positions as part of its obligation to fulfill their buyers’ compliance regulations, rather than as something to help them with their core operations and worker retention problems. Information exchange between managers and workers at Plant A is richer and more frequent than at Plant B. The higher proportion of supervisors and additional layers of management provide more avenues for workers to express concerns, ask questions or provide feedback directly to managers. This ratio also makes the delivery of training more intensive. Every morning at Plant A, before the start of the shift, there is a meeting that all workers attend to discuss production issues and goals. Plant A tries to elicit ideas from workers by having a monthly prize for the best suggestion from a worker. In order for such a suggestion system to work optimally Plant A has to share information with its workers, which it does. Not only are data on performance more readily available and displayed for workers as well as supervisor at Plant A, but workers are also given more information about their tasks. Rather than just give workers instruction on the one operation that they are assigned to for a particular style, as is typical in the industry, managers at Plant A tell workers about the whole garment at the beginning of a new style. This helps them understand how their operation fits into the entire assembly process and is aimed at encouraging higher product quality because operators understand the consequences of their mistakes further down the line. Plant B does not involve workers in production meetings and instructs workers only on their own operation.

One of the reasons why Plant B's managers and supervisors are not able to communicate effectively with their workers and distribute information to them is that they simply do not collect the information themselves. Many of the more 'advanced' HRM policies and practices begin with good data management. The firm that owns Plant A reports that it evaluates 136 parameters at each of its manufacturing units every month. Plant A has a culture of monitoring and data collection. As its owner explains: "We do a lot of reporting within the company. Every section produces daily production reports and all the managers attend weekly meetings so everyone can see how each department is running." He adds: "We can then innovate based on the analysis of the reports that we have generated." Using the technologies installed on its production floor Plant A is able to track production efficiencies and alteration rates for individuals in real-time. Managers can then see and address production problems immediately. And as the HR head explained this also: "Makes increments and promotions much easier because we have a complete profile of all the employees, so their performance is very easy to quantify". In this way Plant A avoids one of the primary areas of contention between management and workers in a traditional factory: the politics of monthly pay. In many establishments that do not use similar performance tracking technology, the subjectivity of supervisors in the decisions over basic pay (what skill level workers are operating at), bonus pay and promotion can cause a considerable amount of tension on the production floor. At Plant B production data are recorded for each line by helpers on pen and paper making it slower and harder to collate information and use it to solve production problems. Management says the facility will be shifting to a 'broadband' electronic performance-tracking device 'soon'. Managers clearly know what systems *should* be in place. Overall Plant B appears to prioritize communication within top management and buyers over that with its workers. Plant B focuses on trying to signal a good impression to the outside world with impressive building exteriors and garden landscaping. The company has

also sought external endorsement via the ISO 9001:2000 quality standard certification. Table 6 below, summarizes the communications at the two sites.

Table 6: Comparison of Communication between the Two Contractors

	Plant A	Plant B
Employee Voice	Moderate/Good	Low
Data Management	Good	Poor
External Certification	None	ISO 9001:2000

Training

Training is given very different priority by the two contractors. Plant B allocates its resources directly to payroll, hiring workers with existing skills, but does not invest in worker development after this point. Plant A also almost exclusively hires experienced workers, but then also invests in training and worker development.

Interviews with the owners of each firm highlight the contrasting attitudes towards training. Plant A’s owner explained: “We have a high retention rate here because workers know that knowledge is the most important gain. We can’t hold them just by paying them more money, we have to offer learning to them and the opportunity to progress through training”. He added that 3/4 of the workers who quit the factory “come back because they have not learned anything anywhere else, no one else bothers to train them”.

Plant B’s owner refers to a new off-site ‘training center’ which in practice is not used for this purpose. The head of compliance for the firm concedes: “training is a new thing for us”, adding that workers often don’t want to be trained for fear of not meeting their targets in the short-term (as they slow down initially because they are assigned harder operations). If they do not meet their targets workers at Plant B have to stay and finish after hours, usually at

a fraction of the legal overtime rate and often unpaid if the supervisor believes they have been ‘lazy’ during normal work hours.

The majority of training in the apparel industry remains on-the-job (OJT). Yet the literature suggests and the buyers believe, that additional training in a formalized setting can also add value. The rise in formal training is driven by increasing product complexity as India moves up the value-added chain and works with new fabrics and designs, plus a simultaneous tightening of the labor supply that is bringing in a higher proportion of inexperienced workers. For their part the buyers are encouraging their contractors to build training areas away from the production floor to help workers focus on learning and to maintain quality by keeping novices away from their garments until they have received the proper training.

Almost all training at Plant B is OTJ or done ad hoc on the production floor in the few hours or days of ‘batch setting’ when the assembly lines are being set up for the production run of a new style. The Production Manager (PM) explained that less experienced machine operators receive an hour or so of OTJ training in the first few days of new style, but after this training tails off, there is nothing ongoing. Only one in five production workers at Plant B are given some sort of training during the year, in contrast to Plant A where all workers receive some training. Training at Plant A is organized into four ‘training cycles’ throughout the year, some of which takes place in the dedicated on-site training center away from the production floor. Plant A not only provides more hours of training which is more diffused in the workforce, it is also delivered by the appropriate external providers from NGOs to equipment suppliers. All the training at Plant B is delivered by the supervisors. Table 7 below, compares the training characteristics of the two plants.

Table 7: Comparison of Training Characteristics between the Two Contractors

	Plant A	Plant B
Date started formal training	1999	2002/3
Supervisors who received training in last 12 months	100%	25%
Production workers who received training in last 12 months	100%	20%
Timing of Training	Pre-set schedule and at batch setting	At batch setting
Location of Training	On-site training center and on-the-job	On-the-job

The different approaches to training are made apparent in the different way each factory handles product quality issues. Plant B follows the traditional method, placing dedicated quality inspectors at different checkpoints on the assembly line. This approach is ‘reactive’ and is an after-the-event screening process. Defects are caught by placing dedicated quality checkers (QCs) at strategic points in-line, often after critical operations. Workers are not ‘trusted’ to do their own quality control, rather the aim is to achieve a certain ‘acceptable quality level (AQL), which is the number of defects allowed per hundred garments, stipulated by the buyer. When asked about quality methodology at Plant B the Factory Manager revealed his tokenism, lack of urgency and seriousness towards the issue, repeating one line like a mantra and delivered with a wink: “Quality is not a destination, it is a journey”.

Plant A meanwhile has a more proactive and preventative approach to quality control. It trains all assembly line operators to engage in their own quality control and trusts them to report their own mistakes. It has adopted the ‘get it right first time’ quality mantra of total quality management, which attempts to identify defects in the garment as soon as possible before they get too far down the production line and waste resources. It does this using statistical process control (SPC), a more instantaneous and preventative performance

monitoring approach. Every operator at Plant A also receives a mock-up of their operation pinned to a piece of card above their machine so that they always have a prototype to refer to. Each morning the supervisor analyzes the record of the previous days’ defects identifying the operators who made mistakes and visiting them to find out what the problem is and whether more training is required. As the owner of Plant A explained: “We can have the best equipment, but that is not enough, [quality] starts with the operator. It cannot be achieved by monitoring, but by training.” Supervisors from Plant A say that 80 percent of their time is spent training workers, while at Plant B they report only 15 percent of their time is spent training, the rest is dedicated to ‘encouraging’ production. Table 8 below, compares the quality systems at each factory.

Table 8: Comparison of Quality Control Systems between the Two Contractors

	Plant A	Plant B
Type of Quality Control System	SPC	AQL
Workers who receive self-QC training	100%	20%
In-line QCs and checkers (vs. end-line QCs and checkers)	0%	70%

Both factories reported that it was easier and quicker to train new hires than 5 years ago because of workers’ higher education levels. But while Plant B said this reduced training requirement, Plant A’s PM explained that the increasingly exacting standards set by the buyers more than compensated for this and that training times had in fact remained the same. Interestingly the responses given for the ‘time to proficiency’ for certain jobs was far higher at Plant A than Plant B (3 months versus 15 days for an average B-grade operator), which given the former plant’s focus on training is likely to be an indication of higher standards.

Both factories report using the promise of training as a retention tool. Plant B says it rewards workers who do well with additional training and the chance of promotion. The data show that it only offers the highly prized and lucrative ‘multi-skill’ training to between 6-10 percent of workers, while Plant A offers around 15 percent of its operators the chance to upgrade and become multi-skilled ‘A+’ operators, which helps with retention. The challenge for Plant A managers is to put in place mechanisms specifically designed for these valuable workers so that they do not leave the establishment after gaining and building on these highly transferable skills. Plant A’s PM does not just focus on the highest end of the skill spectrum. He reported that he provides the least skilled operators with the opportunity to improve their skills too and wants as few C-grade operators on his production floor as possible.

Other forms of non-technical training such as labor rights and health issues training for workers are becoming more common in the industry. This type of training is provided by NGOs at both Plants A and B. Plant A is generally more open to using external organizations to meet its training requirement than Plant B, indicating a willingness to invest in the most appropriate forms of worker training and a degree of transparency uncommon in the industry. Many factories are wary of letting external organizations have contact with their workers for fear of stirring unrest. Yet Plant A employs private consultants, equipment suppliers, NGOs, industry councils, government-funded programs, and the technical colleges to provide about 20 percent of its training need. All training at Plant B is in-house.

Management training for supervisors is another innovation encouraged by the buyers, not only to improve efficiency through better team building and motivation skills, but also to lower the incidence of verbal and other abuse that is commonplace in the industry and a key contributor to attrition. All of the supervisors at Plant A have received ‘supervisory skills’ training. Plant B trained ¼ of its supervisors at the instigation of WorldSport. Table 9, below summarizes the contrasting level of training diffusion at the two contractors.

Table 7: Comparison of Training Diffusion between the Two Contractors

	Plant A (% of workforce)	Plant B (% of workforce)
Supervisors who receive management training	100%	25%
Production workers who receive labor rights training	100%	75%
Production workers who receive multi-skill training	15%	8%

Management Philosophy

Many of the differences in the HRM systems at Plants A and B described above, derive from the company values each espouses, and are reinforced in their respective management styles. In line with the vast majority of garment manufacturing firms in India both factories are family owned, yet their management style could not be more different.

Plant A's story is one of the owners learning to delegate and empowering a second line of professionalized management class. The owner explains how the shift began about 9 years ago: "I knew something had to change when I was still being woken up at 3am with phone calls concerning problems with a shipment that had just come in. My brother and I realized we were becoming a bottleneck, as there was no second line of management." After some deliberation the brothers took action and went to the local fashion technology and engineering colleges and hired 40 graduates, whom they then trained to become managers in the business, quality assurance, finishing and cutting divisions. "It took us 3 to 4 years to train them how to take decisions," explained the owner. The main Production Managers, who run the assembly lines were not replaced by the more educated professional class of manager, however. At the same time the brothers started developing and instituting their own standard operating procedures (SOPs) so that less decision-making was improvised. "We are a very systems driven company. We generate reports for consistency and quality and so we can

innovate. This way we can pinpoint the cause of mistakes and address them.” Power was consciously de-centralized and these newly hired managers were given better data management tools in order to make more informed decisions. The owner explains: “What we have become did not happen by accident. It took 7 to 8 years to get this management team properly organized and the SOPs correct.”

Communication and knowledge exchange between departments at Plant A is more intensive than at Plant B. Plant A has a strict reporting regime and meetings to evaluate and discuss the results of the data generated from different parts of the company. The General Manager of HR at Plant A is, for example, much more conscious of production related technical issues outside his own remit, than his opposite number at the HR departments of most other establishments. The owner is still engaged with management, and personally attends the monthly evaluation meetings. He is also involved in the human resources side of the business and the head of HR reports directly to him. The HR department at Plant A is much more empowered than is the norm in the industry. According to an outside NGO observer, Plant A’s owner, “trusts the General Manager of HR, and listens to him”. This in turn strengthens the hand of HR internally: “The workers know that the HR team is empowered, they feel that they can go to them and that their complaints or views will be heard and taken seriously by management.” The workers have a reliable medium to express themselves, a key component of a well functioning HRM system.

Plant B meanwhile is still a traditional family-run firm. The children of the founder manage the company and are grooming the next generation to follow in their footsteps. The family has built a highly successful garment-exporting house and is in the vanguard of firms adopting new technologies to drive Indian apparel manufacturing into the future. The owner is respected within the industry for his business acumen but seems to be feared by those directly in his employ. All decisions regarding production and “sensitive labor issues” still go

directly to this one man, quite an achievement given the size of the firm. Management at Plant B has not been empowered to make its own decisions; instead inquiries are constantly referred to “the boss”. After numerous visits paid to four factories within this firm it is clear that all but the most mundane management decisions are taken high up the management chain in what is a very opaque process. It is the job of factory management to implement the decisions of the “boss”, rather than to query or provide feedback. When questioned by the author over various basic human resource initiatives at Plant B, the Factory Manager replied, apparently quite genuinely: “I cannot answer that, I do not know what management thinks.” The compliance manager of the Plant B group confirmed: “Day to day matters I handle, but sensitive matters go up through the chain to ‘the boss’.”

Managers at Plant B are clearly under a huge amount of pressure, evident in the arguing and raised voices from company headquarters to the manufacturing units. Extreme deference to seniors is the norm and the firm appears to be run by bullying and fear. As a matter of company policy the production managers of the factories are regularly circulated between the different production units. The reason given is the perfectly legitimate aim to bring in fresh ideas to each unit, but it is clear that the primary motive is to create intense competition between the managers based on their short-term performance. Senior management positions at the factories are often only held for one to two years and are rewarded with frequent promotions and demotions conveyed by the prestige and size of the units the managers are assigned to run. As one production manager remarked: “We [the Production Managers] are like old horses ready for the knacker’s yard, if we hurt our leg, if we make one mistake or have a bad month that’s it, we’re out.” The priority is clearly on short-term results, and a discounting of the destabilizing effect on a factory of the regular rotation of senior management.

Company values at Plant A and Plant B are consistent with their approach to HRM. Plant A knows how to ‘talk the talk’ of concern for worker welfare as rather trite phrases trip easily off the tongue of the General Manager of HR such as: “The most important link in the [Plant A] chain is the ‘status of the worker’”; “Working at [Plant A] is an addiction,” and “We offer an emotional connection, like the family, which maintains high worker satisfaction”. Company values such as these and their priorities are reinforced in a daily morning prayer with all the production staff. However, these values appear to be backed up by action, as can be seen in the HRM practices. “We believe that what we are doing for the workers is a moral obligation.” “If we exceed targets, we share the benefits with the workforce”. The owner of Plant A says he often conducts exit interviews with employees himself and that, “It is not the monetary benefit that keeps them here: it is the training and respect we offer, particularly to lady workers”. He added that the firm has a ‘no shouting’ rule; “They used to shout, thinking that if they instilled fear they would get good production but our supervisors’ training has changed all that”, he explains. Plant A’s value system is based on one of respect for the dignity of the workers, fair compensation for work done, and a careful balance of employer’s responsibility and workers’ duties.

Plant B has a quite different approach and set of values that it communicates. In regular discussions with managers regarding this study on HRM and work organization no mention was ever made of the value of worker welfare. When management was asked about what they wanted to see improved through training and welfare programs one characteristically commented: “I would like to see workers attitudes change, their dedication rising. Right now their dedication is to the clock.” The compliance and HR team at Plant B was very concerned that any worker welfare activities might take time away from production. As one of their managers pointed out at another meeting: “We are running a factory, not a charitable institution.” Another manager confessed that, “If ‘the boss’ heard that there was

any talk of union organizing or collective bargaining going on at one of his factories he would close it down in an instant.” After a moment’s reflection, he back tracked a little and added: “I’m not saying that he would, but he might.” This overall impression of a business run by means of threatening and bullying behaviors pervades all levels of relations at Plant B from the company headquarters down to the factory management, and from the factory management to the workers themselves.

CONCLUSION

Plant A and Plant B provide an example of two diametrically opposed approaches to work organization and HRM. The effect of these different approaches has been demonstrated: Plant B has inferior production efficiencies, its workers produce lower quality goods, half its workforce has quit over the last year and it has a third higher absenteeism. The cause of these different outcomes is clear; having controlled for all the other variables that might explain production efficiency, such as location, size and age of plant, capital investment, product and buyer, the explanatory variable for the difference in performance is HRM and work organization

Plant A is by no means a paragon of virtue, like Plant B it has problems with excessive overtime and payment of benefits in kind to disguise this. But in comparison to Plant B, Plant A has managed to establish a virtuous cycle with regard to its workforce. It invests in developing good HRM systems, which leads to higher retention, which leads to better product quality and higher production efficiencies, which allows for continued investment in training, the provision of other benefits and the potential to pay higher wages. Plant A hires predominantly experienced workers but also has the capacity to train inexperienced workers it needs to. This will become an increasingly valuable tool for the firm as the labor market tightens and experienced workers are in shorter supply. Plant A prides itself on the longevity of service of its workforce and achieves this primarily by means of

performance pay, the promise self-improvement through training and by treating its employees with respect.

Plant B's strategy is altogether different. Like its neighbor it also invests in skill but it prefers to buy it in the market place rather than develop workers' capacities in-house. It expends no resources on designing a system of benefits or performance pay or in trying to 'engage' with its workers. Instead Plant B invests heavily in specialized machinery so that it can offer its buyers an extensive product range. Yet the scope for human capital development through technological upgrading is limited because these machines are used by only a tiny fraction of its workforce. Capital is not expended on technological improvements for the majority of its workforce, such as electronic production monitoring systems or the rearrangement of the production floor to encourage teamwork. This HRM strategy has led to lower production efficiencies when measured straight off the production line, lower product quality, and an uncommitted workforce that exhibits high levels of turnover and absenteeism.

This leaves one with the question that if one type of HRM clearly delivers such superior performance benefits then why don't they all do it? Explaining the adoption of advanced HRM practices by firms was not the purpose of this paper. Instead the experiment was set up to see whether advanced systems have an impact on performance, and if so how significant that impact is, in a context where people widely believe it makes no difference. However, the question on uptake is one worth asking. There are a number of possible answers. Firstly, there is the knowledge gap: that firms simply do not know which are the best systems to implement. For many of the firms visited as part of this study this may a likely explanation. However, in the case of Plant B there is already a close relationship with the foreign buyer whose staff advises plant management on a host of best practices. Indeed Plant B management seemed to be familiar with many of the HR concepts, but chose not to implement them.

A second explanation is that both HRM models make business sense: both firms are very successful and it is possible that each has found its own equilibrium at opposite ends of the HRM spectrum. Plant A has found its own virtuous cycle and as long as Plant B ‘wastes’ no money on investing in its workforce and makes up for the consequent lower production efficiency by cost savings in other areas its overall productivity and profitability may not be affected. It is indeed possible that Plant B could be more profitable than Plant A. Unfortunately measuring the overall productivity of the two factories was not possible for this study due to a lack of data that the factories were either not willing to share or had simply not tried to collect and calculate, even for themselves. Although Plant A trumps Plant B on factory production efficiency, in order to account for profitability additional costs need to be taken into account such as capital and material inputs, as well as other organizational qualities and logistical efficiencies. Plant B’s size and position in the market place mean that it is likely to have access to cheap capital and its vertical integration means that inputs should also be cheap. Plant B does indeed offer much of what the buyer wants in terms of production volume, flexibility and product mix. One WorldSport manager explained: “They can get a lot of product under one roof. They are very versatile and can do almost any product”. It could be argued that Plant B almost holds the brand captive because virtually no other manufacturing firm in the city can offer the same product range and production capacity. This may allow Plant B to get away with poorer performance when it comes to WorldSport’s code of conduct and labor standards. The US brand acknowledges that Plant B is “not open when it comes to people”. While Plant A is described by WorldSport as being very “steady and stable”. “Management attitude is better at Plant A and they keep pushing themselves”, adds another representative of the firm. WorldSport has retained both establishments as preferred vendors and presently sees advantages in working with both firms, despite their very different approaches to HRM (that the brand openly acknowledges). In this sense Plant B has been

able, up to this point, to pursue the low-road in terms of HRM, when compared to its neighbor. While workers are to some extent voting with their feet, with 10 percent on average leaving every month it should be remembered that Plant B still offers higher wages and better facilities than the majority of other exporters or domestic garment manufacturers in the vicinity. Plus the opportunity to do large amounts of overtime at Plant B is likely to be lure for many workers desperate to raise their monthly wage and in spite of the trade-off for health and family life. These exhausted workers have been shown to have lower production efficiency and quality rates compared to Plant A, but the owners of Plant B can afford, due to the other cost savings, to employ additional workers to simply to filter out product defects at the end of the production line. Plant B may also engage in some sub-contracting and employing laborers off the books at a lower wage.

As has been shown, the low-road in HRM may be more efficient in certain contexts (Bailey and Bernhardt 1997). Perhaps Plant B can defer making the investments in HRM and work organization that Plant A has made and still do well while there is just enough skilled labor to meet its needs in the local market. But Plant B's strategy may not be sustainable over the long term. As the labor market tightens and as the buyers' product and process parameters become more demanding and buyers get more vigilant at monitoring their supply chain Plant B will likely find that it does not have the requisite tools, such as in-house training and open management attitude, to adjust to this changing marketplace. It is going to be less and less able to continue to ignore such investments in HRM and work organization and retain high-value clients such as WorldSport.

REFERENCES

- Ansett, Sean. 2007. Mind the Gap: A Journey to Sustainable Supply Chains. *Employee Responsibilities and Rights Journal*, 19 (4): 295-304.
- Bailey, Thomas. 1993. Organizational innovation in the apparel industry. *Industrial Relations*, 32 (1): 30.
- Bailey, Thomas and Annette Bernhardt. 1997. In Search of the High Road in a Low-Wage Industry. *Politics & Society*, 25 (2): 179-201.
- Bank Jørgensen, Helle, Peder Michael Pruzan- Jørgensen, Margaret Jungk, and Aron Cramer. 2003. *Strengthening Implementation of Corporate Social Responsibility in Global Supply Chains*. Washington DC: The World Bank Group, International Finance Corporation.
- Berg, Peter, Eileen Appelbaum, Thomas Bailey, and Arne L. Kalleberg. 1996. The performance effects of modular production in the apparel industry. *Industrial Relations* 35, (3) (July): 356-373.
- Betcherman, G. (1997): *Changing workplace strategies: Achieving better outcomes for enterprises, workers and society*. Government of Canada and OECD.
- Black, Sandra E., and Lisa M. Lynch. 2004. What's driving the new economy?: The benefits of workplace innovation. *The Economic Journal* 114, (493) (Feb): F97.
- . 2001. How to compete: The impact of workplace practices and information technology on productivity. *Review of Economics and Statistics* 83, (3) (August): 434.
- Delaney, John T., and Mark A. Huselid. 1996. The impact of human resource management practices on perceptions of organizational performance. *Academy of Management Journal* 39, (4): 949.
- Dunlop, John T., and David Weil. 1996. Diffusion and performance of modular production in the U.S. apparel industry. *Industrial Relations* 35, (3): 334-355.
- Freeman, Richard B. 1998. *What Role for Labor Standards in the Global Economy?* New York: United Nations.
- Guest, David E. and K. Hoque. 1994. The good, the bad and the ugly: Employee relations in new non-union workplaces. *Human Resource Management Journal* 5, : 1-14.
- Hamilton, Barton H., Jack A. Nickerson and Hideo Owan. 2003. Team Incentives and Worker Heterogeneity: An Empirical Analysis of the Impact of Teams on Productivity and Participation. *Journal of Political Economy* 111: 465-497.
- Huang, Tung-Chun (1997): The effect of participative management on organizational performance: The case of Taiwan. *International Journal of Human Resource Management*, 8 (5): 677-689.
- Huselid, M. 1995. The impact of HRM practices on turnover, productivity and corporate financial performance. *Academy of Management Journal* 38: 635-672.

- Huselid, M. and Brian E. Becker. 1996. High Performance Work Systems and Firm Performance: Cross-Sectional Versus Panel Results. *Industrial Relations* 35: 400-422.
- Ichniowski, Casey, Kathryn Shaw, and Giovanna Prennushi. 1997. The effects of human resource management practices on productivity: A study of steel finishing lines. *The American Economic Review* 87, (3) (Jun): 291.
- International Labour Organization. 2005. *Promoting fair globalization in textiles and clothing in a post-MFA environment*. Report for discussion at the tripartite meeting on promoting fair globalization in textiles and clothing in a post-MFA environment. Geneva, Switzerland: International Labour Organization.
- . 1998b. *Overview of Global Developments and Office Activities Concerning Codes of Conduct, Social Labelling and Other Private Sector Initiatives Addressing Labor Issues*. Report to the Governing Body of the Working Party on the Social Dimension of the Liberalization of International Trade, GB.273/WP/SDL/1(Rev.1), 273d Session. Geneva: International Labor Office.
- Joseph, Bobby. 2005. *Workplace based intervention to reduce prevalence of anemia through multi-pronged approach*. Bangalore, India: St John's Medical College.
- Kandel, Eugene and Edward Lazear. 1992. Peer Pressure and Partnerships. *Journal of Political Economy*, 100: 801–817.
- Kelley, Maryellen R. 1996. Participative bureaucracy and productivity in the machined products sector. *Industrial Relations* 35, (3) (Jul): 374.
- Klimoski, R. J., and L. Zukin. 1998. The staffing of work teams. In *Supporting work team effectiveness: Creating contexts for high performance.*, ed. E. Sundstrom. San Francisco, CA.: Jossey Bass.
- Kochan, Thomas A, Russell D. Lansbury, John P. MacDuffie (eds.). 1997. *After Lean Production: Evolving Employment Practices in the World Auto Industry*. Cornell International Industrial and Labor Relations Report. Ithaca: ILR Press.
- Lake, Henrietta. 2007. Unraveling Performance: Work Organization and Human Resource Management in the Indian Export Garment Industry. *IZA Discussion Paper Series*.
- Locke, Richard M., Fei Qin, and Alberto Brause. 2007. Does Monitoring Improve Labor Standards?: Lessons from Nike. *Industrial and Labor Relations Review* 61, (1): 3.
- Locke, Richard M., and Monica Romis. 2006. Beyond Corporate Codes of Conduct: Work Organization and Labor Standards in Two Mexican Garment Factories. Working Paper, 4617-06 (MIT Sloan School of Management).
- MacDuffie, John Paul. 1995. Human resource bundles and manufacturing performance: Organizational logic and flexible production systems in the world auto industry. *Industrial and Labor Relations Review* 48, (2): 197-221.
- McKinsey. 2004. *DHL-McKinsey apparel and textile trade report*. McKinsey.

- . 2001. *India: The growth imperative: Understanding the barriers to rapid growth and employment creation*. McKinsey Global Institute.
- Milgrom, Paul, and John Roberts. 1995. Complementarities and fit: Strategy, structure, and organizational change in manufacturing. *Journal of Accounting & Economics* 19, (2,3) (Mar-May): 179.
- Min, Wei-Fang and Mun Chiu Tsang. 1990. Vocational Education and Productivity: A Case Study of the Beijing General Auto Industry Company. *Economics of Education Review*, 9 (4): 351-364.
- O'Rourke, Dara. 2003. Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring. *The Policy Studies Journal*, 31 (1).
- Osterman, Paul. 1994. How common is workplace transformation and who adopts it? *Industrial & Labor Relations Review* 47, (2) (Jan): 173.
- Pfeffer, J. 1994. *Competitive advantage through people: Unleashing the power of the workforce*. Boston: Harvard University Press.
- Shaiken, H. 1994. Advanced manufacturing and Mexico: A new international division of labor? *Latin American Research Review* 29: 39–71.
- Tewari, Meenu. 2005. *Post-MFA adjustments in India's textile and apparel industry: Emerging issues and trends*. New Delhi, India: Indian Council for Research on International Economic Relations, Working Paper 167 (accessed September 15, 2005).
- . 1999. Successful adjustment in Indian industry: The case of Ludhiana's woolen knitwear cluster. *World Development* 27, (9) (Sep): 1651.
- Varley, Pamela. 1998. *The Sweatshop Quandry: Corporate Responsibility on the Global Frontier*. Washington, D.C.: Investor Responsibility Research Center.

NOTES

ⁱ This paper is part of a larger project which examines the effects of HRM on performance. The results of the larger study are available in Henrietta Lake, *Learning to Compete: The Performance Effect of Human Resource Management and Work Organization in the South Indian Garment Industry* (Ph.D. dissertation) The Fletcher School, Tufts University 2006; and Henrietta Lake “Unraveling Performance: Work Organization and Human Resource Management in the Indian Garment Industry”. IZA Discussion Paper, 2007.

I would like to thank my doctoral dissertation advisers, Lisa Lynch of The Fletcher School and Richard Locke of the Massachusetts Institute of Technology who provided invaluable assistance and support throughout my research.

This paper is based on field research conducted from February 2004 to August 2005 in India. The author visited over 70 garment factories and panel data were collected from 42 of these, all based in or near two south Indian cities: Bangalore and Chennai. Interviews were conducted in English with factory owners, managers, supervisors, NGO representatives, independent auditors, industrial engineers, union leaders and the global brands sourcing from these factories. English is widely spoken in southern India. In addition to the interviews at Plant A and Plant B, around 200 interviews were conducted for the wider study. Subjects were interviewed either alone or in small groups in a meeting room away from the shop floor or off-site from the factory. Additional documentary and statistical data were collected, analyzed, and, where necessary, clarified by workplace managers, technicians or labor practices staff subsequently by e-mail and telephone

Representatives from the buyers, in the case of this paper, WorldSport, did not accompany the author on the factory visits. Most of the top 10 garment exporters from Bangalore and Chennai participated in the wider study, ensuring the sample includes many of the largest garment-exporting firms in India. Despite selecting the ‘biggest’ firms, the establishments in the sample are of sizes varying from almost 3000 workers to just 300. Altogether the data set represents practice at establishments at firms producing around 20 to 25 percent of Indian apparel exports (by value). Bangalore and Chennai were selected for study as opposed to other garment centers such as Delhi or Tirupur, because a large and growing proportion of Indian garment manufacturing takes place in this region and also because the longer production runs and more standardized product in south India make comparison between factories fairer. Finally, there is more experimentation by managers, and hence differentiation between factories in the practice of HRM and work organization when compared to the northern and more traditional garment centers.

ⁱⁱ Neither firm would provide a detailed breakdown on capital investment in rupee nor dollar amount at their respective plants, but detailed information was collected on the numbers, type and age of machines in use.

ⁱⁱⁱ Detailed data on the two factories is not shown in this table in order to protect confidentiality.

^{iv} A study of worker health status in garment exporting factories in this area found that 75 per cent of production workers were anemic (Joseph 2005).

^v Machine operators in the Indian garment industry are divided into roughly three skill tiers from A to C, and including a number of sub-divisions within these categories. Unskilled workers start as ‘C-graders’, while at the other end of the spectrum ‘multi-skilled’ workers, capable of operating multiple machines, are ‘A+’. Monthly pay is dictated by the skill classification of the worker and follows State Government set minimum levels.