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Does better labor standard compliance pay? Linking labor standard compliance and supplier competitiveness

Chikako Oka
chika.oka@rhul.ac.uk
School of Management
Royal Holloway University of London
Egham, Surrey
TW20 0EX, UK

Abstract

Faced with growing demands for responsibility in global supply chains, multinational companies are increasingly regulating labour and other conditions of their suppliers through codes of conduct and monitoring. While research in this area has been expanding rapidly, there remain significant gaps in knowledge. One such gap relates to the link between labor standard compliance and competitiveness of supplier firms. This paper seeks to fill the gap by examining whether the supplier's level of labor compliance affects its likelihood of attracting and retaining buyers. Based on the original survey and panel data from Cambodia's garment sector, the paper shows that better labor standard compliance is a necessary condition for producing for reputation-conscious buyers but not a sufficient condition for attracting them as other criteria such as price, quality, and delivery time are driving buyers' sourcing decisions. Nevertheless, producing for a certain buyer type and respecting certain labour standards increases the supplier's likelihood of staying in a long-term relationship with the buyer, which is also critical to the supplier's competitiveness.

I. Introduction

In the past decade, the focus of the debate concerning labor standards appears to have shifted from the desirability to the efficacy of various forms of labor regulation, notably private and non-governmental schemes in global supply chains (Sabel et al., 2001; Elliot and Freeman, 2003; Weil 2005; Barrientos and Smith, 2007; Locke et al. 2007). While the burgeoning literature has examined various means by which labor conditions can be improved in global supply chains, there remain significant gaps in knowledge. One such gap relates to the link between labor standard compliance and competitiveness of supplier firms.

The lack of research in this area is partly explained by the fact that scholars studying the subject tended to focus on the plight of workers toiling under dismal

conditions and various means to regulate unscrupulous firms rather than ways to motivate firms to improve labor conditions (e.g. Esbenshade, 2004; Seidman, 2008). Another reason behind the dearth of studies linking labor standards and competitiveness lies in the difficulties in accessing the firm-level data on working conditions and productivity in global supply chains. Considering that many supplier firms still view labor standard compliance solely as a cost, it is of great importance to examine whether and to what extent improving labor conditions can also help enhance supplier competitiveness.

This paper looks at the nexus between labor standard compliance of supplier firms and their potential for attracting and retaining buyers. For supplier firms to survive and prosper, it is important to attract and retain buyers who give sufficient margins and constant orders. In the apparel industry, buyers are increasingly concentrated and competition among suppliers all over the world has become ever fiercer, putting constant downward pressures on price. Moreover, as the industry is marked by seasonal volatility, lack of orders during low seasons could be detrimental to the survival of supplier firms. Having reliable buyers with long-term relationship can help smooth out these risks. By examining the link between the supplier's labor standard compliance and its chance of attracting and retaining buyers, this paper seeks to shed light on the link between labor standard compliance and competitiveness of supplier firms.

To address these issues, this study uses two sets of data. First is a self-designed survey of 14 major buyers conducted by the author in 2008 that asked detailed questions regarding the process and mechanism of controlling labor standard compliance of suppliers. Second, firm-level data of nearly 400 firms in Cambodia's garment sector from 2006 to 2010 was obtained from Better Factories Cambodia (BFC), operated by the International Labor Organization (ILO). BFC has been monitoring Cambodia's garment export factories since 2001 with a view to encouraging continuous improvement.¹ One of the unique features of the program is that BFC monitors can access to virtually all exporting garment factories in the country as the Cambodian government requires all garment factories seeking export licenses to submit to BFC monitoring. Such unprecedented access and comprehensive data give an excellent

¹More information about Better Factories Cambodia can be found on their website: <http://www.betterfactories.org>

opportunity to explore the link between labor standard compliance and competitiveness of supplier firms.

The next section considers the nexus between human resource practices and firm performance. Section III discusses the result of the buyer survey to understand how buyers try to ensure the level of labor standard compliance in their supplier factories. Section IV builds an analytical framework to understand the process of buyer-supplier matching and relationship formation. Section V describes the data and provides summary statistics while Section VI analyzes the regression results. The last section concludes that labor standard compliance and competitiveness of supplier firms appear to be linked in a nuanced and subtle manner.

II. Human Resource Practices and Firm Performance

One potential channel by which human resource practices can help improve competitiveness of supplier firms is productivity. There is voluminous literature that examines the effect of so called “high-performance” or “high-commitment” work systems (e.g. selection, incentives, training, job enrichment, participation, teamwork etc.) on various measures of firm performance (e.g. Ichinowski et al., 1997; Shaw, 2006).

Work systems can affect productivity through at least two channels: employees’ skills and commitment. According to the human capital theory, workforce is a means of production, which needs to be invested and maintained just as physical capital (Becker, 1975). Hence, firms can improve performance through investing in employees and encouraging them to acquire knowledge and skills. From the organizational behavioral perspectives, high-performance work systems would motivate employees and make them more loyal and cooperative, contributing to productivity (Pfeffer, 2007).

While existing research on high-performance work systems mainly focuses on firms in advanced economies, Locke and Romis (2007) has conducted a matched pair case study of two garment factories producing for Nike in Mexico. They show that one factory has higher productivity and better wages than the other factory with otherwise similar characteristics because the former adopted the lean production system

characterized by multi-skilled workers and autonomous work teams as well as human resource management that trained and empowered workers.

While such work systems normally exceed the minimum legal requirements, the logic can be applied to the issue of labor standard compliance. Factory managers may well see productivity-enhancing effects of complying with labor standards through increased worker motivation and effort or other efficiency gains. Robertson et al. (2011) argue that such efficiency gains from human resource innovations may well be behind the broad-based progress in labor standard compliance in Cambodia's garment sector.

This paper looks at the other channel by which labor standards and competitiveness of supplier firms may be linked: attracting and retaining buyers. Previous research examining the link between buyers and labor conditions in supplier firms has focused on the nature of buyer-supplier relationship. Notably, researchers have found that established and collaborative relationship with buyers tends to have positive impact on labor conditions in supplier firms (Frenkel & Scott, 2002; Locke and Romis 2007; Locke et al. 2009). Nonetheless, the other side of the story regarding how labor standard compliance may affect the chance of attracting and retaining buyers has not been investigated.

Oka (2010a) has shown using the firm-level data from Cambodia's garment sector that factories producing for reputation-conscious buyers systematically outperform other factories with regard to labor standard compliance. She has identified three mechanisms by which buyer types may be related to the level of compliance: external pressures by NGOs and the media, buyers' proactive engagement, and suppliers' own efforts. Nonetheless, the direction of causality was not tested partly due to the short time period covered. Robertson et al. (2011) corroborated the findings about the effect of buyer types on compliance across various labor standards. Yet, they did not assess whether and how labor standard compliance may affect buyer variables. This article seeks to fill the gap by examining whether better labor compliance attracts and retain buyers, using the updated dataset through end-2010 and the original buyer survey discussed below.

III. Buyer Survey Results

The author conducted a buyer survey on 9-10 October 2008 in Phnom Penh, Cambodia during the Buyers Forum, a bi-annual event where major buyer representatives gather to exchange views with other buyers and stakeholders and to build consensus. In total, 14 responses from compliance staff were collected, of which 9 BFC member buyers, 4 non-BFC buyers, and 1 sourcing agent.² These 13 buyers account for 45 percent of Cambodia's garment export value in 2006.

This buyer survey sought to complement the Cambodia Buyer Survey conducted in 2004 by Foreign Investment Advisory Service (FIAS), a joint facility of the International Finance Corporation (IFC) and the World Bank.³ The objective of the FIAS survey was to gauge the importance of labor standard issues in buyers' sourcing decisions and to help devise sustainable strategies for Cambodia in the post-quota era. The survey targeted senior sourcing staff from 15 of the largest US and EU buyers accounting for about 45 percent of Cambodia's garment exports.

One of the key results of the FIAS survey was that labor standards figured prominently in buyers' decisions in selecting a country to source from, although it had to be balanced with traditional sourcing criteria such as price, quality, and delivery time. While the FIAS survey provided an interesting insight into buyers' sourcing decisions, it fell short of delving into how buyers ensure labor standard levels of their supplier factories. The buyer survey conducted by the author sought to fill this gap by asking detailed questions regarding the process and mechanism of controlling the level of labor standard compliance in supplier firms.

Buyer responses reported in Table 1 show that all of the surveyed buyers check compliance levels of their potential supplier factories before placing orders and rate compliance performance of existing supplier factories, showing buyers' great attention to labor standard issues. Almost all the buyers use the compliance rating to identify poor

² With the assistance of ILO-BFC, the author distributed questionnaires to 16 participating buyer representatives, of which 12 returned completed forms during the forum. Subsequently, the author contacted 15 other buyers who did not participate in the forum, of which 2 completed the questionnaire on-line.

³ The FIAS Buyer survey results can be found here: <http://www.betterfactories.org/content/documents/Cambodia%20Corporate%20Social%20Responsibility.pdf>

performers rather than good performers, confirming that buyers tend to use sticks rather than carrots to reduce labor standard violations in their supply chains.

As for the monitoring procedure, all the surveyed buyers have some kind of procedure to ensure an acceptable level of compliance. “Zero tolerance” means that violations of certain standards, often fundamental issues such as child labor lead to immediate cancellation of orders. “Three strikes” suggests that factories are required to achieve an acceptable level of compliance in three audits, or they lose orders. “Continuous improvement” indicates that buyers work closely with factories to solve problems on a continuous basis. Some buyers combine different procedures.

The surveyed buyers occasionally issue warnings to supplier factories that certain non-compliance leads to cancellation of orders and such warnings mainly concerned child labor, forced (or involuntary) labor, wage and contract issues. Nonetheless, cancellation of orders is a rare event. Only four buyers have ever resorted to this option, of which one buyer temporarily withheld orders in Cambodia.

The buyer survey results show that major buyers try to control the compliance level of suppliers through *pre-order sorting* and *post-order monitoring*. As shown in Figure 1, buyers check the compliance level of their potential suppliers before placing orders and select suppliers based on their criteria (pre-order sorting). When factories do not pass an initial audit, most buyers require them to provide a corrective action plan and submit themselves for follow-up visits. Once orders have been placed, supplier factories will be regularly monitored by the buyer’s compliance staff or third-party auditors who verify whether suppliers continue to satisfy the required standards (post-order monitoring).

If the supplier factory continues to satisfy the buyer in terms of compliance as well as other criteria, the factory continues to receive orders. Otherwise, in theory, the factory will lose orders and need to go through the pre-order sorting process again. In reality, however, the buyer survey suggests that once orders have been placed, except for egregious violations, labor compliance rarely affects buyers’ sourcing decisions. This underlines the importance of pre-order sorting over post-order monitoring.

IV. Analytical Framework

Based on the above findings and relevant literature, this section builds an analytical framework of buyer-supplier matching and relationship formation in the apparel industry to understand how labor standard compliance enters into the picture. The process can be conceptualized in three stages: (i) mode of transaction, (ii) sorting, and (iii) duration of relationship as shown in Figure 2. First, given a combination of sourcing criteria (price, quality, delivery time, as well as labor and other standards), buyers decide whether to transact directly with their supplier firms or indirectly through sourcing agents (in some cases, buyers use both channels). Second, buyers or agents select supplier firms based on their sourcing criteria. Third, once the buyer and the supplier enters into a business relationship, the duration can vary from one season to a number of years, depending on the extent to which the supplier continues to satisfy the buyer's needs.

Whether the firm gets selected as a supplier and forms a long-term relationship with the buyer is likely to depend on, among other things, the type of buyers the supplier is dealing with. Buyers in the apparel industry can be broadly classified into two types: specialty retailers and mass merchandisers. Specialty retailers specialize in certain apparel products and target certain market segments whereas mass merchandisers offer a variety of products including non-apparel products and appeal to the mass market. The major difference between the two is quality requirements: specialty retailers tend to demand more rigorous quality standards than mass merchandisers.

Buyers also differ in terms of reputation-consciousness. The Resource Dependency Theory posits that those organisations dependent on other actors for critical resources are more vulnerable to their demands (Pfeffer and Salancik, 1978). Similarly, those buyers that derive most of their profits from branding are dependent on image and social legitimacy, which can be easily tarnished by negative publicity surrounding dismal working conditions and child labour in their supply chains. Hence, those reputation-conscious buyers are more likely to carefully select and monitor their suppliers to minimise potential problems and safeguard their reputation.

In the first stage, buyers choose the mode of transaction based on the level of asset-specific investment required. From the perspective of Transaction Cost Economics (TCE), when transaction requires a higher degree of asset specificity, or non-transferable investment in one's partner, this raises a switching cost, inducing commitment and reducing opportunism (Williamson, 1975 & 1985). Thus, buyers requiring stringent quality and/or labor standards are likely to prefer a direct relationship that enables them to better control supplier opportunism, whereas buyers with more emphasis on price and quantity prefer using sourcing agents who can find the cheapest suppliers that satisfy the buyer's conditions (Oka, 2010b). In TCE terms, the former is a *hybrid* (between *hierarchy* and *market*) form of an inter-organizational relationship while the latter is a market-based relationship (Williamson, 1991). Accordingly, specialty retailers, especially reputation-conscious ones with stringent quality and labor requirements are likely to transact directly with suppliers while mass merchandisers with emphasis on cost tend to transact indirectly through sourcing agents.

In the second stage of supplier sorting, buyers or agents select suppliers based on their sourcing criteria. While mass merchandisers are more demanding in terms of price, specialty retailers tend to be more difficult about quality and delivery time. In addition to these traditional sourcing criteria, buyers increasingly demand their suppliers to satisfy labor, environmental, and other standards. Most buyers require suppliers to respect their codes of conduct, which sometimes exceed the legal requirements. Reputation-conscious specialty retailers are likely to select their suppliers more carefully than other buyers given their emphasis on various standards.

In the third stage of relationship formation, buyers requiring more stringent standards are likely to favor long-term relationship for the same reason they prefer direct transaction: better controlling supplier opportunism through repeated transactions and longer time horizons. Switching cost is higher especially for those buyers who select their suppliers carefully and invest in the relationship. On the other hand, the supplier's relationship with mass merchandisers is likely to be shorter as mass merchandisers often rely on agents to pick suppliers from one season to another, making it difficult to form a long-term relationship.

For the survival and competitiveness of supplier firms, at least three things appear to be important as shown in Figure 3: (i) to attract new buyers, (ii) to attract buyers who

give higher margins, and (iii) to form a long-term relationship so that supplier firms can have diversified sources of business, make profits, and count on future orders from reliable buyers. What remains unexamined is the link between labor standard compliance and these aspects of business outcomes, shown as the dotted arrow in Figure 3. To shed light on this possible link, this paper tries to answer the following questions: (i) Do better complying factories (i.e. violating fewer labor standards) attract more buyers? (ii) Do buyers who give higher margins require a higher level of labor standard compliance from their new suppliers? (iii) What kind of factories tend to be in a long-term relationship with their buyers?

V. Data and Summary Statistics

The data for this study draws on the firm-level data collected by ILO BFC. Pairs of BFC monitors conduct un-announced visits of all exporting garment factories every 8 months on average. While monitoring started in 2001, the data has been systematically stored only since December 2005. Thus, this study covers the data from December 2005 to December 2010. During this period, 1868 factory inspections were conducted for a total of 396 factories. In addition to the compliance data, BFC collects information on firm characteristics such as the number of employees, unions, country of ownership, as well as the name of buyers sourcing from the factories.

Compliance Measures

BFC monitors assess nearly 400 checklist items of labor standards, which are based on the Cambodian labor law and the international core labor standards. These are grouped into the following categories: contracts, wages, hours, leave, welfare, occupational safety and health (OSH), labor relations, and fundamental rights. Given that monitored standards for hours and leave are few and that they measure similar issues (i.e. the number of hours/days worked), they are combined together to form one category, hours-leave. Similarly, welfare is joined with OSH to form OSH-welfare, as welfare has only few monitored standards and the majority of them are closely related to OSH (e.g. drinking water and toilets). Fundamental rights need to be treated separately since violation of fundamental rights occurs only rarely, but one incidence of non-compliance has serious implications. Hence, non-compliance of fundamental rights is

measured by a binary variable (whether or not violation occurred) rather than a continuous variable (how many violations occurred).

As for monitoring procedures, un-announced visits span an entire day or longer for larger establishments. The process includes on-site inspection, meetings with human resource managers, union leaders, and shop stewards as well as interviews with workers. Copies of pay slips and hour records are collected for verification. BFC monitors assess each checklist item and determine whether a factory complies with a specified standard or not. Figure 4 shows the evolution of compliance rates, where a 100 indicates a full compliance for the category. While we can observe overall progress across issue areas, some violations remain stubbornly common, notably excessive overtime.

Buyer Variables

As monitoring is industry-wide, compliance and basic firm characteristic data are available for all exporting garment factories, but this is not the case for buyer variables. While most major buyers have joined BFC, not all buyers have, meaning that BFC does not possess complete information about which buyer is sourcing from which factory. Moreover, some buyers joined BFC later, making it difficult to analyze their relationship with suppliers over time. To circumvent this problem, this study limits the analysis to those buyers who have been the original members of BFC since 2006. Specifically, the study examines seven specialty retailers and three mass merchandisers, and together they account for more than half of Cambodia's export volume.

All of them are globally famous buyers who have invested in corporate social responsibility efforts, so I call them reputation-conscious buyers. But, the degree of reputation-consciousness is likely to vary. For instance, while all of them joined BFC at the outset, not all of them have joined other highly regarded multi-stakeholder initiatives such as the Fair Labor Association (FLA) and the Ethical Trading Initiative (ETI).⁴ Buyers join these initiatives to show their commitment to better working conditions and to safeguard their reputation, so the membership signals a high degree of reputation-consciousness. In fact, all the seven specialty retailers are members of either the FLA or the ETI while none of the three mass merchandisers are, suggesting that

⁴ See Oka (2010a) for discussion on the FLA and the ETI.

both quality and labor standards required by these specialty retailers are likely to be higher than mass merchandisers.

There is no obvious measure for margins buyers give to supplier firms as such information is well-guarded. Based on the field-based interviews of factory managers, however, the author has gathered convincing information that mass merchandisers tend to give supplier firms much lower margins than specialty retailers. One manager of a factory producing for Nike said that they would never produce for Walmart as margins would be too low. While all buyers tend to squeeze suppliers in the fiercely competitive apparel industry, mass merchandisers are generally known to be more aggressive than specialty retailers given their emphasis on cost leadership.

To evaluate the compliance pattern of suppliers producing for different buyer types, the following buyer dummies have been created. A specialty retailer dummy takes the value of one if the observation belongs to a supplier producing for an original BFC buyer classified as a specialty retailer, and zero otherwise. A mass merchandiser dummy is created in the similar manner. There is some overlap, suggesting that some factories produce for both types of buyers.

To focus on the compliance level required by buyers for new suppliers and to separate the effect of pre-order sorting from changes in the post-order period, observations where the supplier entered into a business relationship with a buyer for the first time have been singled out as “new” suppliers. As there is no buyer information prior to 2006, those suppliers that already produced for the original BFC buyers in 2006 are considered as pre-existing suppliers. When the supplier produced for the same buyer at least once, these observations are classified as “old” suppliers. Figure 5 shows the average number of non-compliance items for new suppliers by buyer types. As for the duration of buyer-supplier relationship, it is considered “long” when the relationship lasted at least from 2006 to 2010, covering the entire period of this study. Otherwise, the relationship is considered to be “short.”

Table 2 provides the summary statistics regarding the number of non-compliance items for different buyer and supplier variables. We can observe that fewer numbers of violations are reported for suppliers of specialty retailers (27.3) than those of mass merchandisers (32) but the latter is still better than the full sample average (37.9). New suppliers of specialty retailers violate fewer items (23.5) than the average, which is not

surprising as they tend to be newer observations. 55 percent of observations belonging to the suppliers of specialty retailers are in long-term relationship, compared to 23 percent for the suppliers of mass merchandisers. Generally, suppliers in long-term relationship have fewer violations than the average.

For regressions, other firm characteristics known to impact the level of compliance are also considered, namely the size and age of the firm, foreign ownership, and the number of unions in the establishment. The firm size is measured by the number of employees in the establishment. The age of the firm is proxied by the number of monitoring visits by the ILO since 2001, given the lack of original data and the regular interval of monitoring visits.

VI. Regression Results

First, in order to assess whether better complying factories attract more reputation-conscious buyers, I estimate an Ordinary Least Square (OLS) with fixed effects. Fixed effects use the time-series dimension of panel data to measure the expected change in the dependent variable given a unit change in an independent variable within cases (i.e. factory in this case). As we are interested in the effect of non-compliance items on the number of buyers, fixed effects models are appropriate. Given the data limitation, buyer numbers are limited to original BFC member buyers. To focus on the effect of non-compliance items on buyer numbers (not the other way around), the non-compliance variables are lagged by one period. Standard errors are clustered on factory to take into account repeated factory observations.

Column (1) in Table 3 show the results for the full sample: non-compliance items under Wage, Hours-Leave, OSH-Welfare, and fundamental rights have the expected negative signs although only non-compliance under Hours-Leave reaches statistical significance. In other words, factories with fewer violations categorized under Hours-Leave tend to attract more reputation-conscious buyers in the following year. Violations under Contract and Labor Relations have the positive signs and those under Contract are statistically significant, which is difficult to explain. In terms of firm characteristics, the firm size is highly significant and positively related to buyer numbers; as firms increase the number of employees and thus production capacity, they seek to attract more buyers.

Column (2) shows the results for the limited sample of factories producing for mass merchandisers and specialty retailers who are the original BFC members. While violations under Contract lose significance, non-compliance items under Hours-Leave retain significance. Reasons behind the significance of Hours-Leave can vary. On one hand, buyers may like to source from factories that manage work scheduling well. On the other hand, factories that respect standards on hours and leave may be underutilizing their production capacity and seek to attract more buyers to increase their capacity utilization. The equivocal findings and small R-squared suggest that the level of labor standard compliance is not driving buyers' sourcing decisions.

Second, to assess whether different types of buyers (giving different margins) require varying degrees of compliance levels from their new suppliers, I estimate a series of Ordinary Least Square (OLS) with the number of non-compliance items under each issue category as the dependent variable and new supplier variables as independent variables. To focus on the effect of pre-order sorting and to control for changes in the post-order period, both new and old supplier dummies are included along with other controls and run for both the full sample and the limited sample of selected specialty retailers and mass merchandisers. The results are reported in Table 4.

When run for the full sample, new suppliers of both specialty retailers and mass merchandisers generally have fewer violations than the other factories not producing for reputation-conscious buyers, indicating more rigorous pre-order sorting of these buyers. New suppliers of both specialty retailers and mass merchandisers have expected negative signs and are statistically significant for Contract, Wage, Hours-Leave and OSH-Welfare though not for Labor Relations and Fundamental Rights. Labor Relations and Fundamental Rights are likely to be qualitatively different from other issue areas as they are driven by sector-wide forces rather than firm-level factors. Robertson et al. (2011) also found that the buyer variables did not matter to the level of compliance with regard to union issues and core labor standards. As for the limited sample, new suppliers of specialty retailers retain statistical significance across issue categories while new suppliers of mass merchandisers lose significance, suggesting that new suppliers of specialty retailers systematically have fewer labor standard violations than those of mass merchandisers.

Lastly, to understand the characteristics of factories likely to be in long-term relationship, I estimate a logit regression, where the dependent variable is a “long-term” dummy that takes the value of one when the factory and the buyer stay in relationship continuously from 2006 to 2010. The sample is limited to the original BFC buyers because the duration of relationship for other buyers is unknown. Results reported in Table 5 show that the most significant predictors of long-term relationship are the size and age of factory ($p < 0.01$): larger and older factories tend to retain buyers longer. The size of the factory is likely to indicate the presence of firm network and firm capacity. The significance of age is not surprising given that newer factories could not be classified as long-term suppliers.

The next most significant variable is the specialty retailer dummy ($p < 0.05$): factories producing for specialty retailers are much more likely to be in long-term relationship than the suppliers of mass merchandisers, controlling for factory characteristics and labor standard compliance levels. This is consistent with the assumption that reputation-conscious specialty retailers prefer long-term relationship to better control their suppliers, given the rigorous standards they require.

As for labor standard compliance, OSH-Welfare and fundamental rights are significant at $p < 0.05$ level with the expected negative signs, meaning factories with fewer violations under OSH-Welfare and no incidence of violation of fundamental rights tend to be in long-term relationship. It is interesting to note that violation of fundamental rights, which was not related to the buyer variables in the earlier estimates, is significantly associated with the duration of relationship. It suggests that factors that attract buyers may well be quite different from factors that retain them, which requires further research. Hours-Leave has the expected negative sign but lacks significance while Contract and Wage have the wrong signs.

All in all, the regression results indicate a nuanced picture of how labor standard compliance may be related to supplier competitiveness. First, Hours-Leave is the only issue category whose number of non-compliance items is significantly and negatively related to buyer numbers. The equivocal findings suggest that changes in the level of labor standard compliance are not driving buyers’ sourcing decisions. Second, the labor standard compliance level required for a new supplier of reputation-conscious buyers—either specialty retailers or mass merchandisers—is much higher than the level required

by other buyers. Specialty retailers are even more stringent about the compliance level than mass merchandisers. Third, suppliers of specialty retailers are significantly more likely to be in long-term relationship than those of mass merchandisers, after controlling for firm characteristics and labor standard compliance. Those factories respectful of OSH-Welfare and fundamental rights are more likely to be in long-term relationship.

VII. Conclusion

While the literature on labor standards in global supply chains has been growing, it has mostly focused on how to regulate suppliers through codes of conduct, monitoring, or other means, and few studies have examined whether better labor standard compliance could affect the competitiveness of supplier firms. The potential benefit could notably arise from efficiency-enhancing effects of respecting labor standards as well as from attracting and retaining reputation-conscious buyers that give higher margins and prefer long-term relationship. This paper has tried to shed light on the second lesser known aspect using the survey and firm-level data from Cambodia's garment sector.

The buyer survey results indicate that most buyers verify the level of labor standard compliance before placing orders, but once orders have been placed, except for egregious violations of “zero-tolerance” issues such as child and forced labor, they rarely affect buyers' sourcing decisions. In short, the question of labor standard compliance appears to figure more prominently at the pre-order stage than the post-order stage.

The regression estimates suggest that better labor standard compliance is a necessary condition for producing for reputation-conscious buyers—specialty retailers in particular—but not a sufficient condition for attracting them as other criteria such as price, quality, and delivery time are driving buyers' sourcing decisions. Nevertheless, producing for reputation-conscious specialty retailers and respecting labor rights and complying with OSH standards increases the supplier's likelihood of staying in long-term relationship, which is also critical to the supplier's competitiveness.

One of the limitations of this paper is that the buyer information is not available for the full sample, reducing the scope of inquiry and the power of inference.

Nonetheless, the study covers the majority of buyers in terms of export volume and the core message is unlikely to be affected by this. Another limitation relates to the lack of separation between the direct effect of buyers' labor standard requirements and the indirect effect of other requirements such as quality. The observed compliance level of the supplier is likely to reflect a combination of the two effects rather than the sole effect of the buyer selecting the supplier's level of labor standard compliance. Moreover, while non-compliance items cover a wide range of issues, different degrees of severity is not taken into account in this paper. The author plans to address these issues in the future work.

Notwithstanding these caveats, this paper makes an important contribution to the literature on labor standards in global supply chains by investigating, probably for the first time, the link between labor standard compliance and competitiveness of supplier firms from the perspective of buyer-supplier matching and relationship formation.

Figure 1. Pre-order sorting and post-order monitoring

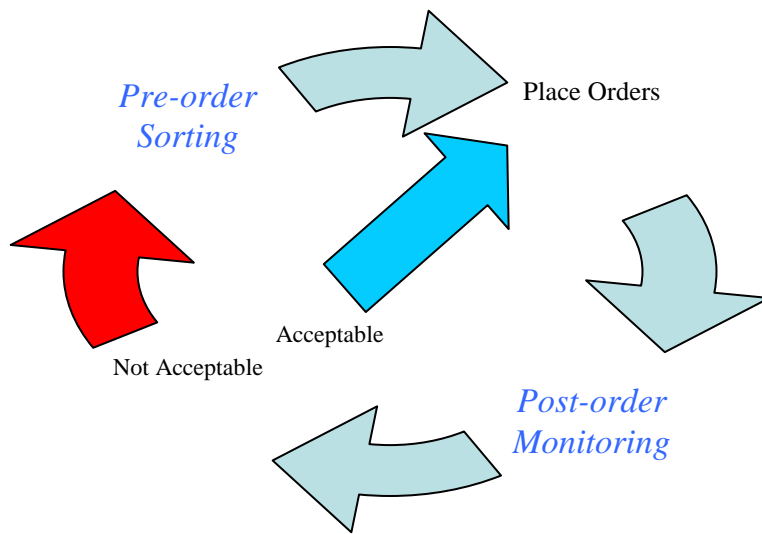


Figure 2. The process of buyer-supplier matching and relationship formation

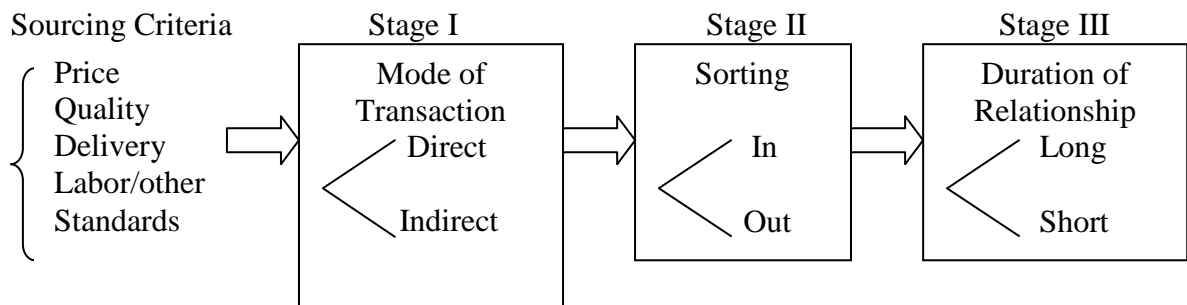


Figure 3. The potential link between labor standard compliance and competitiveness of supplier firms

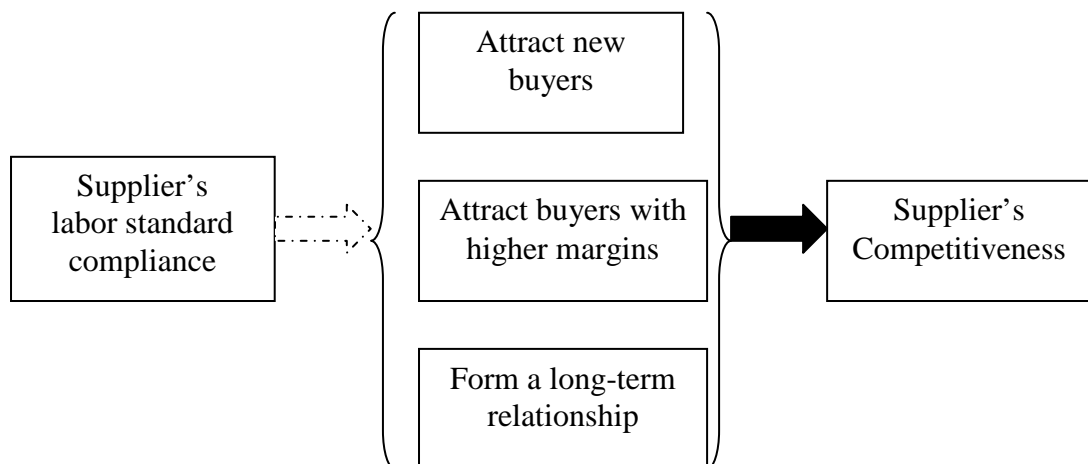


Figure 4. Evolution of compliance rates by issue category

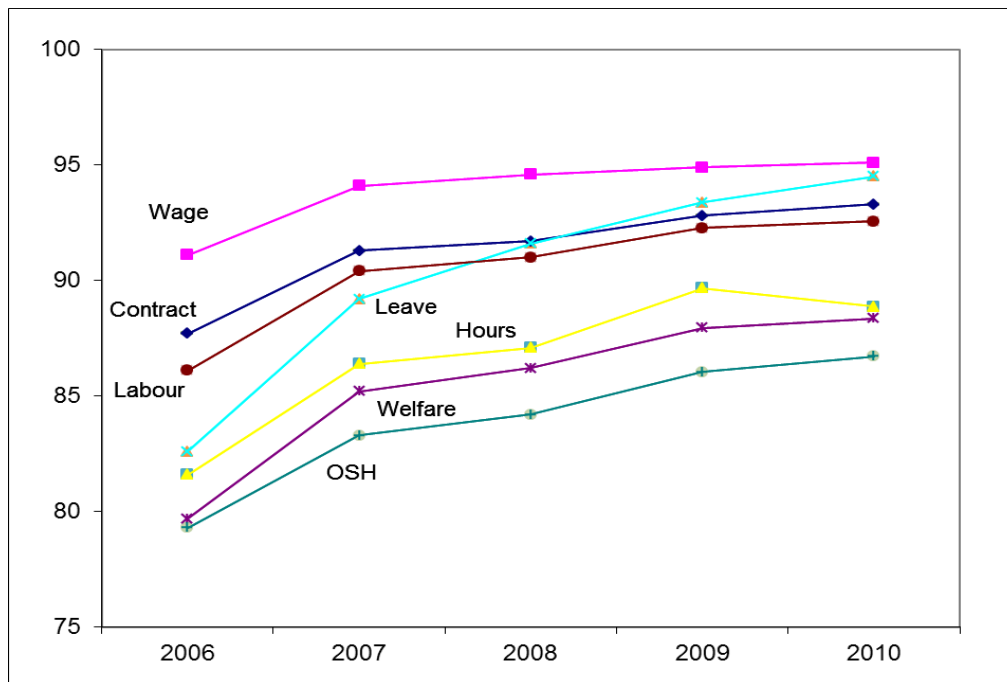


Figure 5. average number of non-compliance items for new suppliers

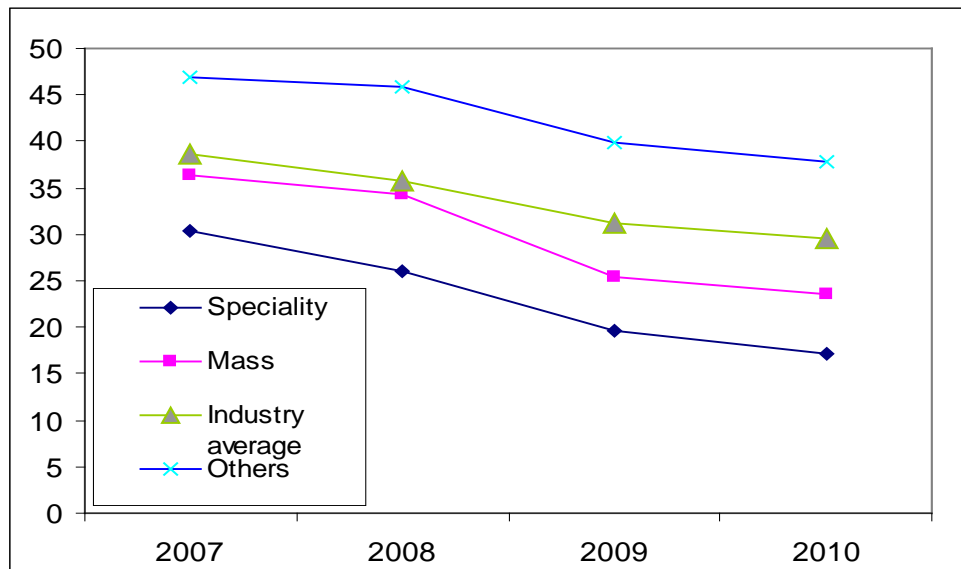


Table 1. Responses to the buyer survey regarding labor standard compliance of supplier factories

Survey Questions	Number	Valid	Missing
<u>1. Compliance Check</u>			
Does your company check compliance levels of factories before placing orders?		14	0
Yes	12		
Partially Yes	2		
No	0		
<u>2 Compliance Rating</u>			
2-a. Does your company rate compliance performance of supplier factories?	14	0	
Yes	14		
No	0		
2-b. If yes to above, how does your company use the rating? (multiple answers possible)		13	1
To identify poor performers and encourage them to improve	13		
To identify very poor performers and reduce/cancel orders	3		
To identify good performers and reward them with more orders	2		
<u>3. Monitoring Procedure</u>			
Which procedure, if any, does your company use to ensure an acceptable level of compliance at supplier factories? (multiple answers possible)		13	1
Zero Tolerance	6		
Three Strikes	6		
Continuous Improvement	7		
<u>4. Warning</u>			
4-a. How often does your company issue warnings to supplier factories in Cambodia that certain non-compliance leads to cancellation of orders?		13	1
Often	1		
Sometimes	6		
Rarely	5		
Never	1		
4-b. If yes to above, regarding which issues? (multiple answers possible)		9	5
Child labor, Forced labor	5		
Wage	4		
Contract	3		
Overtime, Disputes/Strikes, FoA, Welfare	2		
Leave, Safety & Health, Discrimination	1		
<u>5. Cancellation of Orders</u>			
Has your company ever cancelled orders because of compliance problems in Cambodia?		14	0
Yes	4		
No	10		

Table 2. Summary statistics of buyer and supplier variables

	Number of non-compliance items	Number of Observations	Share (%)
<u>Full Sample</u>	37.9	1959	100
<u>Limited Sample (suppliers of reputation-conscious buyers)</u>			
Suppliers of specialty retailers			
All suppliers (average)	27.3	509	26.0
<i>of which</i>			
New suppliers	23.5	81	15.9
Long-term relationship	25.7	280	55.0
Suppliers of mass merchandisers			
All suppliers (average)	32	745	38.0
<i>of which</i>			
New suppliers	32.1	191	25.6
Long-term relationship	29	171	23.0

Table 3. Labor standard non-compliance and the number of reputation-conscious buyers

	(1)	(2)
	Number of Reputation-Conscious Buyers	
	Full Sample	Limited Sample
<i>Number of non-compliance items under:</i>		
Contract (lagged)	0.031** (0.014)	0.024 (0.019)
Wage (lagged)	-0.014 (0.009)	-0.009 (0.014)
Hours-Leave (lagged)	-0.018** (0.008)	-0.029** (0.012)
OSH-Welfare (lagged)	-0.001 (0.004)	0.002 (0.005)
Labor Relations (lagged)	0.003 (0.009)	0.006 (0.012)
Fundamental Rights (lagged)	-0.035 (0.072)	-0.037 (0.100)
Size of factory (Log of total number of employees)	0.580**** (0.111)	0.478**** (0.146)
Age of factory (Number of ILO monitor visits)	0.041 (0.035)	0.071* (0.038)
Year controls	Yes	Yes
Constant	-2.987**** (0.85)	-1.987* (1.053)
Number of observations	1478	908
R-squared (within)	0.085	0.092
F-value	(12, 345) 5.29	(12, 213) 4.35
Prob>F	0.000	0.000

Note: * p<0.10, ** p<0.05, *** p<0.01, ****<0.001.
Robust standard errors in the parentheses.

Table 4-a. Labor standard non-compliance of new suppliers

	(1)	(2)	(3)	(4)	(5)	(6)
	Contact		Wage		Hours-Leave	
	Full Sample	Limited Sample	Full Sample	Limited Sample	Full Sample	Limited Sample
New suppliers of specialty retailers (1=yes, 0=no)	-0.731*** (0.241)	-0.513** (0.246)	-0.836*** (0.286)	-0.639** (0.256)	-1.004*** (0.331)	-0.559* (0.312)
New suppliers of mass merchandisers (1=yes, 0=no)	-0.302* (0.171)	0.081 (0.204)	-0.913*** (0.204)	-0.373* (0.205)	-0.974*** (0.231)	-0.116 (0.227)
Old suppliers of specialty retailers (1=yes, 0=no)	-0.579** (0.247)	-0.122 (0.263)	-1.387*** (0.289)	-0.729*** (0.274)	-1.462*** (0.361)	-0.508 (0.352)
Old suppliers of mass merchandisers (1=yes, 0=no)	-0.641*** (0.192)	-0.155 (0.220)	-1.137*** (0.213)	-0.354 (0.216)	-1.296*** (0.264)	-0.138 (0.291)
Size of factory (Log of total number of employees)	-0.705*** (0.142)	-0.746*** (0.184)	-0.667*** (0.227)	-0.549** (0.202)	-0.541** (0.221)	-0.441* (0.234)
Age of factory (Number of ILO monitor visits)	0.034 (0.042)	0.039 (0.047)	-0.001 (0.047)	-0.044 (0.048)	0.055 (0.058)	-0.000 (0.058)
Foreign ownership (1=yes, 0=no)	-0.537 (0.449)	-0.418 (0.353)	-1.700* (1.004)	-0.857 (0.668)	-2.098** (0.991)	-1.516*** (0.434)
Number of unions	0.006 (0.075)	0.049 (0.080)	0.037 (0.101)	0.110 (0.091)	-0.175 (0.107)	-0.012 (0.103)
Year controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	10.833*** (0.953)	10.134*** (1.240)	13.008*** (1.675)	9.780*** (1.511)	16.290*** (1.702)	13.270*** (1.621)
Number of observations	1862	1060	1862	1060	1862	1060
R-squared	0.176	0.132	0.187	0.110	0.280	0.258
F-value	(12, 385) 21.66	(12, 229) 10.84	(12, 385) 16.11	(12, 229) 6.95	(12, 385) 31.61	(12, 229) 18.70
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000

Note: * p<0.10, ** p<0.05, *** p<0.01, **** p<0.001.
Robust standard errors in the parentheses.

Table4-b. Labor standard non-compliance of new suppliers

	(1)	(2)	(3)	(4)	(5)	(6)
	OSH-Welfare		Labor Relations		Fundamental Rights	
	Full Sample	Limited Sample	Full Sample	Limited Sample	Full Sample	Limited Sample
New suppliers of specialty retailers (1=yes, 0=no)	-4.823**** (0.884)	-3.722**** (0.926)	-0.405 (0.270)	-0.394 (0.267)	-0.078 (0.287)	-0.050 (0.320)
New suppliers of mass merchandisers (1=yes, 0=no)	-2.240**** (0.567)	-0.921 (0.600)	-0.065 (0.200)	-0.078 (0.218)	-0.226 (0.215)	-0.245 (0.285)
Old suppliers of specialty retailers (1=yes, 0=no)	-6.009**** (0.883)	-3.718**** (0.896)	-0.703*** (0.254)	-0.476* (0.256)	-0.199 (0.236)	-0.004 (0.299)
Old suppliers of mass merchandisers (1=yes, 0=no)	-4.351**** (0.696)	-0.187*** (0.732)	-0.499*** (0.190)	-0.370 (0.233)	-0.074 (0.186)	0.037 (0.274)
Size of factory (Log of total number of employees)	-2.824**** (0.599)	-3.394**** (0.675)	-0.234 (0.170)	-0.380* (0.216)	0.151 (0.134)	0.096 (0.238)
Age of factory (Number of ILO monitor visits)	0.391** (0.167)	0.197 (0.189)	-0.030 (0.043)	-0.097* (0.052)	-0.105** (0.043)	-0.142** (0.060)
Foreign ownership (1=yes, 0=no)	-3.151 (2.192)	-0.508** (2.103)	-0.529 (0.081)	-1.415* (0.831)	-1.003*** (0.337)	-1.206** (0.562)
Number of unions	0.352 (0.292)	0.605* (0.321)	-0.097 (0.081)	-0.086 (0.090)	-0.036 (0.090)	-0.138 (0.106)
Year controls	Yes	Yes	Yes	Yes	Yes	Yes
Constant	48.49**** (4.357)	51.87**** (4.826)	8.604**** (1.189)	10.72**** (1.806)	-0.488 (0.860)	-1.589 (1.627)
Number of observations	1862	1060	1862	1060	1862	1060
R-squared (pseudo for (5) & (6))	0.297	0.237	0.144	0.169	0.040	0.050
F-value (Wald Chi-squared for (5) & (6))	(12, 385) 36.15	(12, 229) 18.63	(12, 385) 16.03	(12, 229) 9.88	(12, 385) 72.66	(12, 229) 53.76
Prob>F	0.000	0.000	0.000	0.000	0.000	0.000
(Prob > Chi-squared for (5) & (6))						

Note: * p<0.10, ** p<0.05, *** p<0.01, **** p<0.001. Robust standard errors in the parentheses. (5) and (6) are logit regressions.

Table 5. Long-term relationship, buyer type, and labor standard non-compliance

	Long-term Relationship
Suppliers of specialty retailers (1=yes, 0=no)	1.015** (0.402)
Suppliers of mass merchandisers (1=yes, 0=no)	0.202 (0.386)
<i>Number of non-compliance items under:</i>	
Contract	0.021 (0.057)
Wage	0.016 (0.051)
Hours-Leave	-0.007 (0.046)
OSH-Welfare	-0.043** (0.018)
Labor Relations	0.033 (0.044)
Incidence of non-compliance with Fundamental rights (1=yes, 0=no)	-0.633** (0.322)
Size of factory (Log of total number of employees)	0.855*** (0.290)
Age of factory (Number of ILO monitor visits)	0.226*** (0.073)
Year controls	Yes
Constant	-0.725 (2.203)
Number of observations	1061
Pseudo R-squared	0.199
Prob > Chi squared	0.000

Note: * p<0.10, ** p<0.05, *** p<0.01, **** p<0.001.
Robust standard errors in the parentheses.

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