Internal Stakeholders and Socially Irresponsible Employment: Evidence from Exporters in Emerging Markets

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**ABSTRACT** 

What explains the prevalence of socially irresponsible employment practices? This study proposes an understanding of poor working conditions in emerging markets that draws on stakeholder theory and competitive strategy. We view socially irresponsible employment as a set of relationships to internal stakeholders—employees—that is tied to product market strategy. Quality-focused manufacturers invest in stakeholder skills and improved working conditions to retain employees and motivate effort. Yet manufacturers may also pursue cost-focused strategies that minimize such investments and reduce costs by skirting costly labor regulations. We test the implications of this theory on a unique dataset linking working conditions and supplier performance in over four thousand exporters across the developing world. We first find that socially irresponsible employment practices are highly correlated with one another, suggesting they share a common cause. We then show that social irresponsibility is associated with poorer product quality, delayed order deliveries, and lower revenue per worker, consistent with a cost-focused manufacturing strategy. The theory and findings suggest that interventions to change firms' strategies of value creation may promote more socially responsible employment in emerging markets.

Keywords: stakeholder theory, social responsibility, labor standards, private regulation, strategy.

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## INTRODUCTION

Over the last decade, stakeholder theory has made significant advances in explaining why firms behave in socially responsible ways. Alongside its contributions to strategic management (Blair and Stout 1999, Kivleniece and Quelin 2012, Klein et al 2016), stakeholder theory explains why profit-oriented organizations may find it economically rational to engage in prosocial activities that superficially appear unrelated to the creation or capture of value (Roberts 1992, Donaldson and Preston 1995, Baron 2009, McDonnell, King, and Soule 2015, McDonnell 2016). It is supported by a large and growing body of empirical research establishing financial payoffs associated with corporate social responsibility, discussed in the following section.

To date, much of the theory and empirical research on corporate social responsibility pertains to stakeholders outside the boundaries of the firm. Whether these stakeholders are primary (such as shareholders and customers) or secondary (such as activist groups and financial analysts), scholars have focused on how these external actors create the conditions for firms to pursue or eschew socially responsible behaviors. This study turns attention to the role of *internal* stakeholders, specifically employees, in shaping socially responsible practices. It proposes that relationships to these internal stakeholders play an important role in social responsibility. Employees are simultaneously (a) the potential beneficiaries of socially responsible employment practices (e.g. paying minimum wage, providing legally mandated benefits, or maintaining a safe work environment) and (b) direct participants in the value creation process.

This study proposes that employees' role in value creation establishes a link between social responsibility in employment and value-creation strategies. In brief, firms whose strategies depend on firm-specific skills and intrinsic motivation of employees are more likely to adopt responsible employment practices in order to retain and motivate those employees. Firms whose strategies focus purely on cost minimization and skills that are readily available on the labor market are relatively less sensitive to employee turnover, and therefore prioritize minimizing labor costs over employment practices that help to retain and motivate existing employees.

After developing this stakeholder model of socially responsible employment, we explore its implications in the context of exporters in emerging markets. This is a setting typically beset by socially *irresponsible* employment practices, ranging from child labor to excessive overtime to danger of industrial fires and building collapses. Using a unique dataset of factory labor standards and operational outcomes, we explore the implications of our model. We first find that socially irresponsible employment practices are clustered—violating one workplace standard is associated with violations in several others—suggesting that nominally diverse violations of labor standards share a common cause. Consistent with our model in which manufacturers adopting cost-focused strategies select into less social responsible employment practices, we show that firms that violate labor standards also exhibit lower product quality, more frequent failures to deliver products on-time, and lower purchase orders per employee, even after adjusting for observable confounders.

Theoretically, this study proposes a new relationship between stakeholders, social responsibility, and firm strategy. We view socially responsible employment practices as shaped by strategy in the product market, through the varying relationships firms pursue with their internal stakeholders. This argument complements research recognizing social responsibility as an element of corporate strategy (Flammer 2015) as well as a tool of employee governance (Flammer and Luo 2017). Building upon these insights, this study argues that social responsibility to internal stakeholders is intimately linked to product market strategy. High-quality strategies in manufacturing benefit from investing in internal stakeholders, thereby eliciting higher quality and predictability of production. Low-cost strategies can instead treat internal stakeholders as a commodity input to production, resulting in higher rates of labor abuses (i.e. low CSR).

This study also contributes to a growing body of research on corporate responsibility in emerging markets. In recent years, scholars have responded to the emphasis on corporate responsibility in advanced economies to focus on the behavior of both local and multinational firms in emerging markets (Chapple and Moon 2005, Husted and Allen 2006, Marquis and Qian 2013, Zhang and Luo 2013). Despite extensive research on labor standards enforcement in global supply chains (Amengual 2010,

Locke 2013), we believe this to be the first study to integrate stakeholder theory with strategic management to understand the challenge of labor standards enforcement in this setting.

The stakeholder model of socially responsible employment practices also has implications for policy and management practice. Many researchers and activists have viewed the problem of socially irresponsible employment practices in emerging markets through an institutional lens, focusing on the absence of regulatory or representative institutions to protect worker rights. We recognize the crucial role of these institutions for enforcing minimum labor standards, but we propose adding the role of firm strategy as a contributing factor to this problem. If public policies or large purchasers in global supply chains incentivize supplier firms to pursue quality-based strategies, our model predicts these firms will also exhibit improved compliance with standards of socially responsible employment. This expands the toolkit of potential remedies for workplace abuses in emerging market employers.

#### STAKEHOLDER APPROACHES TO CORPORATE SOCIAL RESPONSIBILITY

The socially responsible practices among firms, often under the heading of "corporate social responsibility," has been a subject of significant scholarly inquiry in recent decades. One dominant perspective on corporate social responsibility is the stakeholder theory of the firm. Stakeholder theory posits that firm behavior and performance is best understood as the product of interaction with stakeholders who are able to influence its success in creating and capturing value (Freeman 1984, Donaldson and Preston 1995). Stakeholders comprise the set of actors capable of influencing firm performance, ranging from investors to regulatory agencies to the communities in which firms do business.

Stakeholder theory helps explain why firms engage in prosocial activities that may appear unrelated to value creation and capture. In this theoretical approach, a broad array of stakeholders, including but beyond customers and shareholders, shape firm financial performance. Activities targeting these stakeholders therefore also shape firm performance. A variety of studies affirm benefits that accrue to firms for engaging in socially responsible business practices. Socially responsible activities by

corporations have been shown to offer insurance-like benefits (Godfrey, Merrill, and Hansen 2009, Koh, Qian, and Wang 2013), to reduce capital constraints (Cheng, Ioannou, and Serafeim 2014), to increase long-term returns through resilience (Ortiz-de-Mandojana, and Bansal 2016), and to attract positive recommendations from stock advisors (Ioannou and Serafeim 2015, Luo et al 2015). On the other side, disclosure of socially harmful activities is associated with negative financial shocks (Klassen and McLaughlin 1996, Flammer 2013) and stimulate activist campaigns that also threaten financial performance (King and Soule 2007). Looking at both sides of stakeholder influence, Henisz, Dorobantu, and Nartey (2014) persuasively show that local stakeholder support or opposition explain a remarkable amount of variation in the valuation of gold mines.

This research literature also recognizes adopting socially responsible practices involves costs and trade-offs (Barnett and Salomon 2006, 2012, Wang, Choi, and Li 2008, Garcia-Castro and Francoeur 2016). Increasing social responsibility is not mechanically predictive of improved financial performance. Ioannou and Serafeim (2015) find that when social responsibility is perceived as an agency cost, it can negatively impact financial advisor recommendations. Barnett and Salomon (2012) suggest that threshold levels of stakeholder influence are required before firms can benefit from costly investment in social responsibility. Hubbard, Christensen, and Graffin (2017) show that increased social responsibility reduces the job security of low-performing CEOs. These studies recognize that high levels of social responsibility are not optimal for all firms. We build upon that research tradition by proposing a theory explaining when firms find it profitable to engage in socially responsible employment practices. We argue that this is influenced by firms' strategies and their effects on relationships with a specific set of stakeholders: their employees.

## INTERNAL STAKEHOLDERS, STRATEGY, and SOCIAL RESPONSIBILITY

Stakeholder theory distinguishes between secondary stakeholders (e.g. the news media, activist organizations, regulators) and primary stakeholders, whose support and participation is crucial to the continued functioning of the enterprise (Clarkson 1995: 106). Shareholders are one key primary

stakeholder—many studies cited above examine how shareholders respond to information about corporate social responsibility, and shareholder mobilization against corporations may be more effective than protests by secondary stakeholders (Vasi and King 2012). Consumers, another primary stakeholder, have also attracted significant attention in the literature on CSR. Beyond price and quality, products associated with socially responsible firms or charitable giving may also satisfy the preferences of certain consumers. (Baron 2009). Evidence from the marketing literature suggests that consumers respond positively to information about the socially responsible practices of firms (Sen and Bhattacharya 2001, Du, Bhattacharya, and Sen 2011). Again, this relationship is not uniform across firms, benefits accrue mostly to firms serving individual consumers (Lev, Petrovits, Radhakrishnan 2010) and to those that spend more on advertising (Servaes and Tamayo 2013). In the retail setting, demand for socially responsible goods is relatively price-inelastic for consumers of high-end products (meaning producers can pass some costs of responsibility on to consumers), but elastic for lower-end products (Hainmueller, Hiscox, and Sequeira 2015).

Employees are primary stakeholders, but they are also *internal* stakeholders. The organizations they support provide their primary source of income, exercise significant control over their daily activities, and usually control the physical environment in which these stakeholders work. This distinguishes employees from other primary stakeholders, whose daily lives are not directly shaped by the authority hierarchies inside firms.

Corporate responsibility research has shown how social responsibility can contribute to the recruitment and retention of employees. Early research showed the firm ratings of social responsibility are correlated to their reputation as employers and attractiveness to potential employees (Turban and Greening 1997). Subsequent work further defined the benefits that employees derive from social responsibility (Bhattacharya, Korschun and Sen 2009). Burbano (2016) shows that prospective employees, especially high-performers are willing to sacrifice wage differentials in order to obtain employment at more socially responsible firms. Bode, Singh, and Rogan (2015) show that employee participation in social impact activities is associated with higher levels of retention.

Our theory also focuses on employees. We adopt the view of employees as primary stakeholders, and affirm the role that socially responsible practices can play in recruiting and retaining them. However, we also argue that firms adopt varying relationships to these stakeholders based on product market strategies. This argument draws upon the literature on stakeholders and strategy. Stakeholder theory posits that corporations form to enable joint production among employees (Alchian and Demsetz 1972, Grossman and Hart 1986). This insight links the compensation offered to stakeholders—including wages, non-wage benefits, and other terms of employment—to the value created by firms. The level of employee compensation generally reflects employees' best outside options at the date of employment. Thus, for the firm to generate a profit, it must create joint value greater than the cumulative value of the next-best options of all employees. Firms sustain themselves by creating more value with these assembled resources than their next-best use (Barney 1986, Brandenburger and Stuart 1996).

Firm management organizes the work and establishes the routines, goals, and governance rules for distributing the value jointly produced with internal stakeholders (Gibbons and Henderson 2012). The co-specialization of the human capital of employees and the firm's organizational capabilities is expensive for both the employee and the firm, and can only be justified if the joint product delivers sufficient value to compensate all the parties that must invest to create the value. This same co-specialization makes the firm vulnerable in ex-post bargaining (Williamson 1985), such as by employees over their salaries. In response to this tension between investment, co-specialization, and ex post hold-up, firms develop coherent human-resource strategies that reflect the value of joint production. These strategies seek to align with strategy in the product market, which produces multiple human resource equilibria within industries.

Within manufacturing, there is a significant divide between cost- and quality-based strategies of value creation (Youndt et al 1996). Cost strategies focus on generating value for customers primarily by reducing prices, rather than increasing customer benefits. In contrast, quality strategies focus on increasing the benefits that accrue to customers, through differentiated offerings in product or service quality. These varying strategies have implications for managing internal stakeholders. In cost-competing

employers, the push to maintain low costs disincentivizes investments in social responsibility. Firms minimize costs by managing down compensation, reducing investment in employee training and retention, and claiming as much of the jointly produced value as possible for the firm itself. Because employees are relatively unspecialized, possessing few firm-specific skills, employee turnover is inexpensive. Therefore, employee satisfaction and retention are less important to management. We therefore expect these cost-focused strategies to be associated with higher levels of socially irresponsible employment practices.

For manufacturers pursuing quality-focused strategies, specialization and employee training support differentiation through product quality. Employees therefore possess assets that are essential to the firm's success (Kochan and Rubinstein 2000), and this results in increased employee bargaining strength and ultimately increased employee compensation. However, this is offset by greater value creation through joint production. This jointly-created value is tied to higher quality products and higher prices for the firm, which generates a greater stream of revenue that can be distributed both in salaries and toward profits. In this environment of high co-specialization and high levels of discretionary effort, employee turnover is costly (Ton and Huckman 2008), as new hires require significant training or experience to achieve the productivity of departed workers. Incumbent employees can use their bargaining strength to obtain desirable working conditions. Therefore manufacturers pursuing a quality strategy should exhibit higher levels of social responsibility in employment practices.

In this model, firms' relationships to internal stakeholders are intimately linked to their strategy. These stakeholder relationships in turn shape firms' social responsibility in employment practices. This implies that a wide range of socially irresponsible practices are influenced by a common cause: product market strategy. Therefore, it predicts that socially irresponsible practices will be highly clustered, as the level of social responsibility reflects coherent strategic orientations of each employer, rather than one-off deviations from the standard.

#### H1. Clustering

Socially irresponsible employment practices will be highly correlated with one another

More importantly, the model argues that we should observe two equilibria in social responsibility, based on whether manufacturers pursue cost- or quality-based strategies. Cost-competing firms will simultaneously exhibit poorer social responsibility in employment practices and poor performance in the dimensions that increase customer benefits, such as product quality or reliable delivery. Those firms will also exhibit lower revenues per employee, as a result of their pursuit of cost advantages. In contrast, firms competing on quality will exhibit both improved employment relationships and improved performance. This leads to our second hypothesis

## H2. Socially irresponsible practices and manufacturing performance

Socially irresponsible employment practices will be negatively correlated with product quality, on-time delivery, and revenue per employee.

## SETTING: EMERGING MARKETS, TRADE, and PRIVATE REGULATION

We examine the empirical implications of our theory in the setting of exporters in emerging markets. Global trade has been a driver of growth and poverty reduction in emerging markets (Dollar and Kraay 2004). Yet at the same time, export industries have been the site of major concerns around socially irresponsible employment practices, often discussed under the heading of labor violations, worker abuses, or poor working conditions. These concerns range from child labor to excessive working hours, wage theft to major industrial accidents.<sup>1</sup>

These concerns have led to mobilization of activists and advocacy organizations against multinational corporations. In particular, anti-sweatshop campaigns that accelerated in the 1990s targeted multinationals that outsourced production to settings with weak labor rights (Soule 2009, Bartley and Child 2011, Bartley and Child 2014). Corporations targeted by social movements often respond with concessions, making new prosocial claims and adopting new institutions to defend their reputations (King 2008, McDonnell and King 2013, McDonnell, King, and Soule 2015). In the case of anti-sweatshop

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<sup>&</sup>lt;sup>1</sup> See, for example, Charles Duhigg and David Barboza, "In China, Human Costs Are Built Into an iPad" *The New York Times*, January 25, 2012. Ruma Paul, "Bangladesh charges 38 with murder over 2013 garment factory collapse" *Reuters*, July 18, 2016

campaigns, multinationals responded in party by adopting systems of private regulation to monitor their supplier factories in high-risk localities. Private regulatory programs attempt to induce suppliers to comply with minimum labor and environmental standards (Keck and Sikkink 1998, Seidman 2007, King and Pearce 2010, Harrison and Scorse 2010).<sup>2</sup> By imposing minimum standards on the activities of suppliers in emerging markets, thereby addressing stakeholder concerns about labor, environmental, and health conditions in global supply chains (Locke 2013).<sup>3</sup> Despite these stated goals, empirical studies have found that private regulation fails to bring employers into full compliance with private standards (Locke 2013). Even after repeated workplace audits, extended interactions with buyers' compliance personnel, and training programs targeting noncompliant employers, socially irresponsible employment practices persist in suppliers of consumer electronics (Distelhorst et al 2015), footwear (Frenkel and Scott 2002), apparel (Locke, Amengual, and Mangla 2009), toys (Egels-Zanden 2007), and agricultural products (Barrientos and Smith 2007).

## **DATA and METHODS**

Private regulatory programs generate a wealth of information about labor conditions in exporting factories. This study uses data generated through private regulation of manufacturers to test hypotheses generated by our model of socially irresponsible employment practices. Our data come from a global sourcing company, which serves customers seeking to import goods from exporting factories around the world. The sourcing firm coordinates the purchase of these goods, primarily by retailers and wholesalers based in North America and Europe. Company records include information on exporters producing a variety of products, including apparel, toys, electronics, home furnishings, and other light manufactures.

To measure socially irresponsible employment practices in these factories, we use data collected during the sourcing company's social and environmental compliance audits of suppliers. The sourcing

<sup>&</sup>lt;sup>2</sup> Consumer-facing multinationals managing significant private regulatory compliance programs include industry leaders in retail (Walmart, Target, Ikea), electronics (Apple, Microsoft, HP), toys (Mattel, Hasbro), soft drinks (Coca Cola), and nearly all the most valuable global apparel brands.

<sup>&</sup>lt;sup>3</sup> One objection to private enforcement of private standards is that it may substitute for state enforcement of public laws (Vogel 2010, Yue, Luo, and Ingram 2013).

company monitors exporter compliance through an audit-based private regulatory regime. Factory audits occur prior to initial orders and regularly thereafter. The sourcing company audits for labor, health, environmental, and legal standards as defined in a supplier code of conduct (Bartley 2007).

We examine eight socially irresponsible employment practices prohibited by the sourcing company's code of conduct: failure to pay base wages according to local law, failure to pay overtime wages according to local law, failure to satisfy employee social insurance requirements, exceeding legal maximum working hours on a daily, weekly, or monthly basis, failure to give employees at least one day of rest for each seven days of work, employing underage labor, failure to sign employment contracts with workers, and unethical disciplinary practices. These practices range from extremely rare (unethical discipline and underage labor) to roughly half of all audited factories (overtime hours and rest days).

Compliance auditing is far from perfect. Scholars have pointed out that one-off visits from auditors may miss important violations due to either limitations in technical expertise, deception by factories, or simply the limited time available to observe and investigate supplier factories (O'Rourke 2003, Anner 2012). While acknowledging these shortcomings, we believe that compliance auditing offers a valuable source of data on workplace practices in the developing world. In the subsequent analysis, our assumption is that workplaces assessed to exhibit socially irresponsible employment practices have higher levels of these practices, on average, than workplaces that are not assessed violations.

Data on product quality, on-time delivery, and order placement at factories comes from a separate database maintained by the sourcing company, which we merge into the compliance data. This database tracks three key performance indicators for its worldwide suppliers, aggregating data by year. The first is the on-time delivery rate, which is simply the percentage of orders that the factory satisfied prior to the contracted delivery date in that year. The second indicator is the quality inspection pass rate, which indicates the percentage of "passes" that the factories products received in quality control inspections. Finally, the data also report the total purchasing value in USD by the sourcing company at this supplier

factory each year.<sup>4</sup> While this does not reflect total sales by the factory, we use this as a proxy measure for revenue. The sourcing company also shared information on various other features of export factories, including their locations, main products, total employment, and share of foreign workers.

In total, our factory sample contains 4,456 factories and 6,204 factory-year observations (Table). The majority are in mainland China (2,757 factories, 61 percent of observations), with significant numbers in India (399 factories), Bangladesh (250), Vietnam (206), and Indonesia (175). Most manufacture clothing (54 percent), with significant proportions also engaged in toys, home décor, and cookware. The average factory has nearly six hundred employees, but there is great heterogeneity in plant size. The smallest has only two employees, while the largest employs over fifteen thousand. On average, these factories have relatively few (foreign) immigrant workers. As socially irresponsible employment practices are relatively common in this sample of emerging market employers. On average each factory-year exhibits 2.26 of the eight socially irresponsible practices, with 69% exhibiting at least one socially irresponsible practice. The factories average 2.77 million USD of business with the sourcing company in a given year, roughly eleven thousand dollars per employee.

#### [Table 1 around here]

## **METHODS**

Our empirical approach compares factories that exhibit socially irresponsible employment practices to those that do not. We report both raw comparisons and comparisons that adjust for observable confounders. We make covariate adjustments using both traditional regression techniques and preprocessing techniques like entropy balancing (Hainmueller 2011). Entropy balancing is a nonparametric preprocessing technique for achieving balance on the moments (e.g. mean, variance) of a set of covariates

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<sup>&</sup>lt;sup>4</sup> Out of concern of sensitive business information, shared data on annual factory spend were binned into fourteen categories. We use the mid-point of each bin as the estimated spend. For example, factories in the zero to \$50,000 bin are estimated to have received \$25,000 of purchase orders from the sourcing company.

for two samples.<sup>5</sup> It shares features of other preprocessing techniques, such as nearest neighbor matching, but it allows unit weights to vary smoothly. In our case, the two samples are factories that exhibit socially irresponsible employment practices and those that do not. We target equality in both the first (means) and second (variances) moments of covariates used for balancing. After reweighting our data and confirming that the resulting samples are balanced on these covariates, we estimate the effect of social irresponsibility on performance using bivariate OLS regression. Similar to other preprocessing techniques (Ho et al 2007), entropy balancing generally reduces model dependence compared to parametric regression (Hainmueller 2011). However, we also report results from more familiar OLS models in the appendix. None of our results are sensitive to the approach chosen.

#### SOCIALLY IRRESPONSIBLE EMPLOYMENT and EXPORTER STRATEGIES

Clusters of socially irresponsible employment practices

We first note that socially irresponsible employment practices are common among the export factories in our sample. Prevalence ranges from 5% percent of factory-year observations in unethical disciplinary practices to 46% in excessive overtime hours. In total, 69% of factory-years exhibit one or more socially irresponsible employment practices.

We find that socially irresponsible employment practices are strongly correlated with one another. Table 2 reports correlation coefficients between all eight socially irresponsible employment practices. It shows that the presence of any one practice is positively correlated with the presence of each other practice. These correlations hold even for seemingly unrelated practices. Factories that fail to sign labor contracts with workers are also less likely to have protections in place for the use of juvenile workers, more likely to use disciplinary practices like punitive wage deductions, more likely to pay less than the legally mandated wages and benefits, and more likely to ask workers to work in excess of overtime limits. Here we report pairwise correlations for simplicity, but these relationships are robust to rebalancing

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<sup>&</sup>lt;sup>5</sup> An implementation of entropy balancing is available for STATA (Hainmueller and Xu 2013).

formal and informal samples using entropy balancing on observable characteristics (Appendix Table A2). The positive association among all eight socially irresponsible employment practices suggests that they represent a coherent management approach to internal stakeholders. "Low road" export firms are more likely to subject internal stakeholders to a variety of unfavorable treatments, but others adopt a "high road" that is less likely to exhibit each of the practices.

## [Table 2 around here]

Socially irresponsible employment and supplier performance

An internal stakeholder theory of socially irresponsible employment also predicts that socially irresponsible practices will be associated with a cost-focused strategy, whereas firms pursuing a quality-focused strategy will be more likely to exhibit socially responsible practices. This generates the expectation that socially irresponsible employers will also exhibit poorer performance in product quality and on-time delivery.

In simple difference-of-means tests, factories exhibiting at least one socially irresponsible employment practice do perform worse in on-time delivery by 2.1 percentage points (p<.01) and in product quality by 2.7 percentage points (p<.001). However, these comparisons do not address the possibility that compliant and noncompliant firms differ in other important dimensions, such as the local regulatory institutions or the industry in which firms are competing. These characteristics may have their own effects on performance metrics, thereby confounding our estimates of the relationship between social irresponsibility and performance. To address this, we use entropy balancing to generate a more plausible counterfactual sample for the pool of factories exhibiting any socially irresponsible practices. The balancing variables include product type, factory location, total employment, and share of foreign immigrant employees.

Pre-balancing and post-balancing sample means are reported in Table. Indeed, socially responsible and irresponsible factories differ in several ways prior to balancing. More socially responsible employers have more employees and are more likely to produce for the apparel and home

decor industries than the noncompliant plants. The concentration of Chinese factories is markedly higher within the group exhibiting any socially irresponsible employment practices. After reweighting the compliant firms subsample using entropy balancing, the means and variances of these covariates converge on those in the informal pool ("Post-balancing" columns of Table).

## [Table 3 around here]

Using the balanced sample, we estimate the effect of socially irresponsible employment practices on four indicators of supplier performance. As covariates in the treatment and control groups are now balanced in both their first and second moments, we need not include these variables in the regressions. Table reports statistically significant negative effects of socially irresponsible employment practices on product quality, on-time delivery, and the value of total orders. The use of socially irresponsible employment practices is associated with a 1.8 percentage point decline in the quality inspection and a 3.8 percentage point decline in the proportion of orders delivered on-time. Factories using informal employment practices receive 713 thousand USD less in annual purchasing from the sourcing company and \$1,854 less on a per employee basis.

## [Table 4 around here]

To ensure that this result is not some idiosyncrasy of our approach for measuring socially irresponsible employment practices, we repeat this exercise for each of the eight socially irresponsible practices individually. Table 5 shows that exhibiting any of the eight socially irresponsible employment practices is associated with declines in product quality, on-time delivery, order value, and value per employee in nearly every case. Finally, the appendix presents more familiar OLS estimates with parametric controls, including models that measure social irresponsibility with a continuous indicator of the count of socially irresponsible employment practices (Appendix Tables A3 and A4). The results are consistent with the results of entropy balancing.

## [Table 5 around here]

#### DISCUSSION

We proposed that socially irresponsible employment practices may be explained by stakeholder theory, focusing on relationships with *internal* stakeholders (employees). In this view, labor standards violations are not aberrant but instead part of coherent approaches to these internal stakeholders. These approaches vary with manufacturing strategy. Cost-focused strategies benefit from "low road" human resource practices that hold labor costs to a minimum to offset low levels of employee intrinsic motivation and productivity. Quality-focused strategies enjoy greater returns to employee skill and therefore result in better working conditions to motivate employee effort and reduce employee turnover. This perspective helps explain why employers within the same institutional setting and industry exhibit variation in socially responsible employment practices.

This perspective helps explain the patterns observed in the empirical section: when emerging market employers exhibit socially irresponsible employment practices, their performance in product quality and on-time delivery suffers. At the same time, the total value of purchasing and value-per-employee also tend to decline. We cannot observe unit prices in our data, but the pattern we observe is consistent with firms that exhibit socially irresponsible employment practices also pursuing a cost-based manufacturing strategy that minimizes costs at the expense of product quality and timely execution of orders.

The internal stakeholder view of socially irresponsible employment complements an existing focus on macro institutions and labor markets in understanding labor violations. The institutional approach argues that the persistence of labor violations in emerging markets is due primarily to the desperation and depth of local labor supply, poor government enforcement of labor law, and the absence of trade unions capable of protecting worker rights. The results of this study should not be interpreted as evidence against the macro institutional view of worker rights in emerging markets; we affirm that these institutions are crucial to ensuring that enterprises adhere to socially responsible employment practices. In addition, we argue that manufacturing strategy and the resulting stakeholder relationships also

influence working conditions and labor violations, looking within industries and institutional environments.

The stakeholder theory and competitive strategy perspective on social irresponsibility also helps to explain why violations of basic labor standards are sticky and resistant to change. Even labor standards that seems superficial and easy to comply with, such as issuing formal employment contracts, are tied to a product market strategy and a variety of complementary employment practices. Consistent with past research on private regulation (Locke 2013), we also find that repeated monitoring through audits leads to only limited improvements. Figure 1 shows the change in socially irresponsible practices over successive audits in the same panel of factories. Over the first three audits, factories tend to improve and reduce socially irresponsible practices. Yet they show little improvement in subsequent audits. Even after being audited six or more times by the sourcing company, over 60% of factories exhibit at least one socially irresponsible employment practice.

## [Figure 1: Diminishing returns to audits, around here]

Our theory implies that eliminating socially irresponsible employment practices is not simply a matter of finding the right threats or blandishments. Instead, it requires institutional entrepreneurs who can implement an alternative strategy of value creation to supplant the old. This requires not only recognition of problematic practices, but the identification and promotion of an alternative strategy to replace them (Misangyi, Weaver, and Elms 2008). One promising approach to such institutional entrepreneurship may be for multinational enterprises to support transitions to quality-focused manufacturing strategies by offering process improvement programs to their manufacturing partners. It is possible that many employers wish to adopt a more differentiated, quality-based strategies, but find themselves in a "competency trap" that prevents change (Repenning and Sterman 2002). Intensive management interventions can improve a variety of operational metrics (Bloom et al 2013) and certain process improvement interventions have spillover benefits for working conditions (Distelhorst,

Hainmueller, and Locke 2017). The stakeholder approach we develop posits that when such interventions lead to quality-focused manufacturing strategies with higher effort and skill requirements, they will also lead to a reduction in socially irresponsible employment practices.

This theory also contributes to a growing literature on "private politics" in management (Yue, Rao, and Ingram 2013, King and Pearce 2010, Ingram, Yue and Rao 2010, Rao, Yue and Ingram 2011). Private regulatory programs are themselves the result of activists pressuring multinationals to fulfill ethical obligations to the workers in their supply chains (Seidman 2007). When these campaigns succeed, multinationals accept responsibility for meeting certain standards in their transaction partners worldwide. Our findings suggest that activists seeking to enforce labor standards through private channels should also attend to the product market strategies of employers and consider interventions that align these strategies with improving working conditions for internal stakeholders.

When interpreting these results, it is important to keep in mind that our data is not a random sample of manufacturers in emerging markets. We examine exporters serving the retail and wholesale industries in the supply base of a large sourcing company. Exporters generally exhibit superior management practices to purely domestic producers (Bloom and Van Reenen 2010). It is therefore likely that socially irresponsible practices are even more widespread in firms that are not exposed to compliance auditing. Indeed, we show in Figure 2 that factories do improve over successive audits. At the same time, we cast a relatively wide net within the pool of emerging market exporters. Our sample includes manufacturers across a variety of firm sizes, national labor markets, and product types.

Although the patterns are broadly consistent with our theory, our measures of social responsibility explain a relatively small amount of inter-firm variation in business performance in the reweighted sample. Indeed, the R<sup>2</sup> values in our parametric models of factory performance range from .057 to .205, indicating large residual variation in business performance (Appendix Tables A3 and A4). We by no means claim that product market strategy completely determines working conditions; compliance with basic labor standards is shaped by a variety of institutional features that vary across countries (Toffel, Short, and Ouellet 2015). Instead, we argue that social responsibility in employment relationships is

complementary to a broader set of management practices that support either cost- or quality-focused manufacturing strategies.

The quantitative strength of our study—using data from a large pool of emerging market firms—is the mirror image of qualitative weakness. Our arms-length approach to studying the human resource management practices of these workplaces means we can offer limited living detail on the network of practices, beliefs, and symbols that constitute these workplace practices. This is a tradeoff of firm-level quantitative analysis, without which it would be challenging to establish these broader patterns across countries and product-types. However, it would be desirable for future research to employ qualitative research techniques, like case studies and ethnography, to better understand the constellation of practices surrounding the adoption of socially responsible employment practices in emerging market factories.

We believe stakeholder theory offers a relatively holistic and sobering view of the challenges associated with reducing socially irresponsible employment in global supply chains. We are skeptical of the ability of importing firms to rely entirely on monitoring and purchasing practices to change these institutions of employment. Even in the face of potential performance benefits associated with "high road" HRM practices, informal employment and labor violations may persist. Instead, intensive management interventions may be required to shift strategies among employers engaged in socially irresponsible practices. On this front, recent evidence is more encouraging, suggesting that interventions to change management practices in emerging market exporters can yield improvements in labor standards (Distelhorst, Hainmueller, and Locke 2017). At the same time, the intervention described in this study was costly and long-term. Although opportunities for "social upgrading" may exist in global supply chains (Barrientos, Gereffi, and Rossi 2011), the fixes do not appear to be quick or cheap.

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# Tables and Figures

Table 1. Descriptive statistics of factory sample

| Variable                         | Mean     | Std dev   | Min  | Max    |
|----------------------------------|----------|-----------|------|--------|
| FACTORY LOCATION                 |          |           |      |        |
| Bangladesh                       | 6%       | 23%       | 0    | 1      |
| Cambodia                         | 1%       | 11%       | 0    | 1      |
| China                            | 61%      | 49%       | 0    | 1      |
| India                            | 9%       | 29%       | 0    | 1      |
| Indonesia                        | 4%       | 20%       | 0    | 1      |
| Philippines                      | 1%       | 11%       | 0    | 1      |
| Vietnam                          | 5%       | 22%       | 0    | 1      |
| Taiwan                           | 2%       | 14%       | 0    | 1      |
| Thailand                         | 2%       | 16%       | 0    | 1      |
| Turkey                           | 2%       | 13%       | 0    | 1      |
| (Other country)                  | 6%       | 24%       | 0    | 1      |
| PRODUCTS                         |          |           |      |        |
| Clothing                         | 54%      | 50%       | 0    | 1      |
| Cookware                         | 12%      | 33%       | 0    | 1      |
| Footwear                         | 3%       | 17%       | 0    | 1      |
| Furniture                        | 7%       | 26%       | 0    | 1      |
| Home Décor                       | 19%      | 39%       | 0    | 1      |
| Jewelry                          | 2%       | 12%       | 0    | 1      |
| Stationery                       | 5%       | 22%       | 0    | 1      |
| Toys                             | 19%      | 39%       | 0    | 1      |
| WORKFORCE                        |          |           |      | _      |
| Employees                        | 587      | 947       | 2    | 15,569 |
| Immigrant employees              | 1%       | 7%        | 0    | 1      |
| SOCIALLY IRRESPONSIBILE EM       | PLOYMENT | PRACTICES |      |        |
| Any irresponsible practices?     | 69%      | 46%       | 0    | 1      |
| Count of irresponsible practices | 2.26     | 2.22      | 0    | 8      |
| Base wage                        | 34%      | 47%       | 0    | 1      |
| Overtime wage                    | 37%      | 48%       | 0    | 1      |
| Social insurance                 | 38%      | 49%       | 0    | 1      |
| Overtime hours                   | 46%      | 50%       | 0    | 1      |
| Days of rest                     | 39%      | 49%       | 0    | 1      |
| Underage labor                   | 6%       | 24%       | 0    | 1      |
| Employment contracts             | 21%      | 41%       | 0    | 1      |
| Unethical discipline             | 5%       | 22%       | 0    | 1      |
| PERFORMANCE                      |          |           |      | _      |
| Quality (% pass)                 | 92%      | 14%       | 0    | 1      |
| On-time delivery (% on-time)     | 71%      | 28%       | 0    | 1      |
| Order value (thousand USD)       | 2,774    | 4,959     | 25   | 45,000 |
| Order value per employee         | 10.83    | 26.9      | 0.01 | 1,000  |

*Notes*. Summary of the factory sample. Data are aggregated annually over the period 2009-2012. Total of 4,456 factories and 6,204 factory-year observations. Full correlation table in appendix.

Table 2. Pairwise correlations between informal contracting and other labor violations

|                                  | Base<br>wage | Overtime wage | Social insurance | Overtime<br>hours | Days of rest | Underage<br>workers | Contracts |
|----------------------------------|--------------|---------------|------------------|-------------------|--------------|---------------------|-----------|
| Base wage violation              | -            |               |                  |                   |              |                     |           |
| Overtime wage violation          | 0.72         | -             |                  |                   |              |                     |           |
| Employee social insurance        | 0.40         | 0.38          | -                |                   |              |                     |           |
| Excessive overtime hours         | 0.56         | 0.56          | 0.33             | -                 |              |                     |           |
| Insufficient days of rest        | 0.66         | 0.64          | 0.34             | 0.71              | -            |                     |           |
| Underage workers prevention      | 0.23         | 0.23          | 0.13             | 0.19              | 0.22         | -                   |           |
| Failure to sign labor contracts  | 0.27         | 0.29          | 0.14             | 0.20              | 0.25         | 0.16                | -         |
| Unethical disciplinary practices | 0.23         | 0.24          | 0.14             | 0.19              | 0.21         | 0.21                | 0.14      |

*Notes.* Pairwise correlation coefficients among eight socially irresponsible employment practices (binary indicators of violations). All correlations significant at the 0.01 level after applying Bonferroni adjustment for multiple comparisons. All correlations robust to adjusting for observable factory covariates using entropy balancing (Appendix Table A2).

Table 3. Socially responsible and irresponsible employers: pre- and post-balancing covariates

|             |               | Means     |           |               | Variances |           |
|-------------|---------------|-----------|-----------|---------------|-----------|-----------|
|             | Irresponsible | No irres  | ponsible  | Irresponsible | No irres  | ponsible  |
|             | practices     |           | tices     | practices     | prac      |           |
|             | All           | Pre-      | Post-     | All           | Pre-      | Post-     |
|             | All           | balancing | balancing | All           | balancing | balancing |
| WORKFORCE   |               |           |           |               |           |           |
| Employees   | 582           | 600       | 582       | 933,628       | 812,372   | 933,696   |
| % immigrant | 0.009         | 0.015     | 0.009     | 0.005         | 0.007     | 0.005     |
| PRODUCTS    |               |           |           |               |           |           |
| Clothing    | 0.518         | 0.583     | 0.518     | 0.250         | 0.243     | 0.250     |
| Cookware    | 0.110         | 0.150     | 0.110     | 0.098         | 0.128     | 0.098     |
| Footwear    | 0.031         | 0.024     | 0.031     | 0.030         | 0.023     | 0.030     |
| Furniture   | 0.075         | 0.062     | 0.075     | 0.069         | 0.058     | 0.069     |
| Home Décor  | 0.170         | 0.235     | 0.170     | 0.141         | 0.180     | 0.141     |
| Jewelry     | 0.015         | 0.016     | 0.015     | 0.015         | 0.016     | 0.015     |
| Stationery  | 0.047         | 0.056     | 0.047     | 0.045         | 0.053     | 0.045     |
| Toys        | 0.190         | 0.199     | 0.190     | 0.154         | 0.160     | 0.154     |
| FACTORY     |               |           |           |               |           |           |
| LOCATION    |               |           |           |               |           |           |
| Bangladesh  | 0.067         | 0.032     | 0.067     | 0.062         | 0.031     | 0.062     |
| Cambodia    | 0.012         | 0.017     | 0.012     | 0.012         | 0.016     | 0.012     |
| China       | 0.661         | 0.503     | 0.661     | 0.224         | 0.250     | 0.224     |
| India       | 0.066         | 0.150     | 0.066     | 0.062         | 0.128     | 0.062     |
| Indonesia   | 0.052         | 0.017     | 0.052     | 0.050         | 0.016     | 0.050     |
| Philippines | 0.010         | 0.020     | 0.010     | 0.010         | 0.019     | 0.010     |
| Vietnam     | 0.043         | 0.063     | 0.043     | 0.041         | 0.059     | 0.041     |
| Taiwan      | 0.015         | 0.028     | 0.015     | 0.015         | 0.027     | 0.015     |
| Thailand    | 0.017         | 0.042     | 0.017     | 0.017         | 0.041     | 0.017     |
| Turkey      | 0.019         | 0.013     | 0.019     | 0.018         | 0.013     | 0.018     |
| YEAR        |               |           |           |               |           |           |
| 2011        | 0.326         | 0.349     | 0.326     | 0.220         | 0.227     | 0.220     |
| 2012        | 0.492         | 0.536     | 0.492     | 0.250         | 0.249     | 0.250     |

*Notes.* Results of entropy balancing targeting equality of first and second moments for factories that have violations (irresponsible practices) and do not have violations (no irresponsible practices) of at least one of the eight labor standards listed in Table 2. The post-balancing subsample moments are effectively identical across the two groups. Note that the reference categories for the year 2010 and "Other countries" are omitted, which leads to columns that do not sum to 100 percent.

Table 4. Socially irresponsible employment practices and factory performance (entropy balanced samples)

|   | Quality<br>(% pass) | Delivery<br>(% on-time) | Revenue (thou USD) | Revenue per employee |
|---|---------------------|-------------------------|--------------------|----------------------|
| Any socially irresponsible employment practices | -1.76***            | -3.76***                | -712.7***          | -1.854***            |
|   | (0.439)             | (0.807)                 | (155.7)            | (0.707)              |
| Constant  | 92.5***             | 74.5***                 | 3,203***           | 11.83***             |
|   | (0.371)             | (0.681)                 | (139.5)            | (0.581)              |
| Observations                                    | 6,204               | 6,204                   | 6,204              | 6,204                |
| R-squared                                       | 0.004               | 0.005                   | 0.005              | 0.001                |

*Notes*. Estimated effect of socially irresponsible employment practices on four performance metrics in post-balancing manufacturers sample described above. Results of OLS estimation on balanced sample of factories that exhibit socially irresponsible employment practices or do not. Other covariates not included because violators and compliers have identical means in the post-processing sample (Table 3). On-time delivery and quality inspection performance are measured as the probability that an order is delivered on-time and a manufactured unit has no serious quality defects. \*\*\* p<.01, \*\* p<.05, \* p<.1

Table 5. Socially irresponsible practices and factory performance (each cell is a separate estimate using entropy balancing)

|                                | (1)         | (2)             | (3)         | (4)             |
|--------------------------------|-------------|-----------------|-------------|-----------------|
|                                | Quality     | Delivery        | Order value | Order value per |
|                                | (pass rate) | (share on-time) | (thou. USD) | employee        |
| Base wage violations           | -0.0238***  | -0.0323***      | -697.9***   | -2.133***       |
|                                | (0.00475)   | (0.00823)       | (116.3)     | (0.783)         |
| Overtime wage violations       | -0.0209***  | -0.0454***      | -721.9***   | -1.591**        |
|                                | (0.00467)   | (0.00798)       | (115.1)     | (0.774)         |
| Employee social insurance      | -0.0221***  | -0.0446***      | -786.7***   | -1.582**        |
| violations                     | (0.00454)   | (0.00821)       | (121.6)     | (0.788)         |
| Excessive overtime hours       | -0.0212***  | -0.0334***      | -582.0***   | -1.880***       |
|                                | (0.00416)   | (0.00738)       | (140.1)     | (0.668)         |
| Insufficient days of rest      | -0.0220***  | -0.0384***      | -396.9***   | -1.308*         |
|                                | (0.00441)   | (0.00771)       | (132.9)     | (0.690)         |
| Underage workers               | -0.0398***  | -0.0504***      | -756.0***   | -4.535***       |
|                                | (0.0103)    | (0.0156)        | (206.3)     | (0.682)         |
| Failure to sign contracts      | -0.0121**   | -0.0243**       | -516.2***   | 0.367           |
| -                              | (0.00541)   | (0.0103)        | (125.7)     | (1.043)         |
| Unethical discipline practices | -0.0568***  | -0.0165         | -525.4**    | -5.279***       |
|                                | (0.0143)    | (0.0180)        | (245.7)     | (0.709)         |

*Notes*. Estimated effects from 32 OLS regressions of entropy balanced subsamples of factories that do an do not engage in the socially irresponsible employment practices listed in the leftmost column. Variables used in entropy balancing listed in Table 3. On-time delivery and quality inspection performance are measured as the probability that an order is delivered on-time and a manufactured unit has no serious quality defects. Each estimation from 4,456 factories and 6,204 factory-year observations.

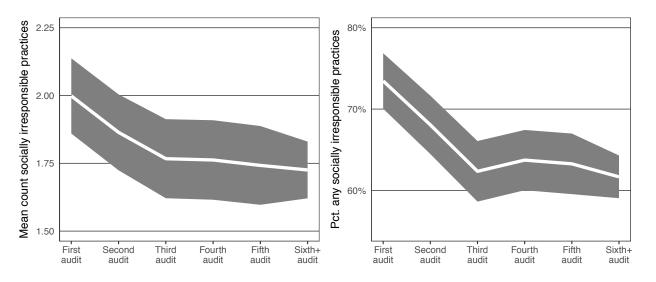


Figure 1. Diminishing returns to repeated compliance audits

*Notes*. Change in socially irresponsible employment practices detected over sequential audits of factories. Estimated from a balanced panel of 648 factories audited six or more times between 2009 and 2013. Left pane shows the mean count of socially irresponsible employment practices (maximum of eight). Right pane shows the percentage of factories exhibiting any socially irresponsible employment practices. Line thickness represents 95 percent confidence intervals of mean estimates. All audits after the sixth pooled into the rightmost estimates.

## 1. APPENDICES

Appendix Table A1. Correlation table for factory-year data

|                        |        |        |        | Proc    | lucts |         |         |      | Wor   | kforce | Irres | ) <u>.</u> |      |      |      |       |      |        |         |        |         | Perfor  | rmance |         |
|------------------------|--------|--------|--------|---------|-------|---------|---------|------|-------|--------|-------|------------|------|------|------|-------|------|--------|---------|--------|---------|---------|--------|---------|
|                        | C1 41  | C 1    | г ,    | г :     | Home  | Y 1     | Ct. t   | т    | г 1   | · ·    | Any   | Count      | Base | OT   | Soc. | OT    | Rest | Under- | Labor   | Disci- | o .:    | 0 17    | Order  | Orders  |
|                        | Cloth. | Cookw. | Footwr | Furnit. | décor | Jewiery | Statnry | Toys | Empl. | Immig. | SIEs  | SIEs       | wage | wage | Ins. | hours | days | age    | contrct | pline  | On-time | Quality | value  | per emp |
| Bangladesh             | .20    | 09     | 04     | 06      | 12    | .01     | 06      | 12   | .29   | 03     | .07   | .06        | .05  | .05  | .08  | .06   | .09  | 06     | 01      | 05     | 11      | .01     | .03    | 07      |
| Cambodia               | .11    | 04     | 02     | 03      | 06    | 01      | 03      | 06   | .11   | .00    | 02    | 06         | 07   | 06   | 07   | 03    | 01   | 01     | 01      | 02     | .04     | 02      | .09    | 02      |
| China                  | 28     | .05    | .09    | .01     | .02   | .04     | .12     | .30  | 23    | 16     | .15   | .22        | .18  | .18  | .15  | .23   | .17  | .16    | 08      | .16    | .20     | 16      | 07     | .01     |
| India                  | .13    | .02    | 02     | 01      | .17   | 02      | 05      | 12   | 03    | 05     | 13    | 14         | 09   | 14   | 10   | 15    | 13   | 08     | .07     | 07     | 20      | .04     | 06     | 02      |
| Indonesia              | .00    | .05    | 03     | .10     | .03   | 01      | 04      | 09   | .13   | 02     | .08   | .02        | .02  | .01  | .05  | .00   | 03   | 05     | .09     | 05     | .02     | .09     | .03    | 02      |
| Philippines            | .01    | 03     | 02     | .04     | .05   | .01     | 01      | 01   | 03    | 01     | 04    | 05         | .00  | 03   | 03   | 10    | 04   | 02     | .01     | 03     | 04      | .05     | .00    | .03     |
| Vietnam                | .08    | 04     | 03     | .05     | 04    | 03      | 04      | 07   | .14   | 01     | 04    | 06         | 06   | 03   | 03   | 06    | 05   | 03     | 01      | 04     | .02     | .05     | .12    | 04      |
| Taiwan                 | 05     | .03    | .00    | .00     | .00   | .00     | .02     | .00  | 08    | .07    | 04    | 08         | 07   | 03   | 01   | 11    | 10   | 03     | 03      | .00    | .04     | .05     | 04     | .16     |
| Thailand               | 05     | .06    | 01     | 02      | .05   | .02     | .02     | 04   | 04    | .20    | 07    | 10         | 08   | 09   | 07   | 10    | 06   | 04     | .01     | 04     | 01      | .03     | 04     | 02      |
| Turkey                 | .11    | 05     | 01     | 04      | 06    | 02      | 03      | 06   | 03    | 02     | .02   | 01         | 04   | 03   | 04   | .03   | .00  | .02    | .00     | 03     | 05      | .00     | .03    | .05     |
| (Other countries)      | .09    | 05     | 03     | 04      | 11    | 03      | 05      | 12   | .05   | .28    | 15    | 13         | 12   | 10   | 15   | 10    | 09   | 05     | .04     | 05     | 08      | .07     | .04    | .02     |
| Clothing               | 1.00   | 25     | 08     | 22      | 31    | 01      | 19      | 40   | .22   | .02    | 06    | 07         | 06   | 08   | 09   | 03    | 02   | .01    | 03      | 09     | 16      | .01     | .30    | .07     |
| Cookware               | 25     | 1.00   | 06     | .16     | .40   | .03     | .06     | .10  | 13    | 02     | 05    | 04         | 01   | 01   | 02   | 07    | 04   | 04     | 02      | .00    | .05     | 03      | 10     | .03     |
| Footwear               | 08     | 06     | 1.00   | 05      | 08    | .02     | 03      | 07   | .03   | 02     | .02   | .05        | .04  | .04  | .02  | .05   | .05  | .05    | 02      | .02    | 03      | .01     | .02    | .00     |
| Furniture              | 22     | .16    | 05     | 1.00    | .22   | .05     | .04     | .02  | 07    | .06    | .02   | .03        | .05  | .05  | .01  | .00   | .01  | 05     | .04     | .01    | .03     | 02      | 05     | .02     |
| Home Décor             | 31     | .40    | 08     | .22     | 1.00  | .02     | .12     | .26  | 18    | 04     | 07    | 07         | 03   | 04   | 03   | 11    | 09   | 05     | .02     | 04     | .06     | .01     | 12     | .07     |
| Jewelry                | 01     | .03    | .02    | .05     | .02   | 1.00    | 02      | 01   | 04    | 01     | .00   | .01        | .00  | .00  | .03  | .01   | .00  | .01    | 02      | 02     | .00     | .01     | 03     | .04     |
| Stationery             | 19     | .06    | 03     | .04     | .12   | 02      | 1.00    | .16  | 06    | .00    | 02    | 02         | 01   | 01   | 02   | .01   | .00  | .00    | 04      | .00    | .04     | .01     | 06     | .01     |
| Toys                   | 40     | .10    | 07     | .02     | .26   | 01      | .16     | 1.00 | 10    | 04     | 01    | 05         | 07   | 04   | .02  | .01   | 06   | 03     | 08      | 01     | .20     | .05     | 13     | .02     |
| Employees              | .22    | 13     | .03    | 07      | 18    | 04      | 06      | 10   | 1.00  | .01    | 01    | 09         | 12   | 12   | 11   | .04   | .00  | 04     | 07      | 07     | 02      | .06     | .33    | 14      |
| % immigrant employee   | .02    | 02     | 02     | .06     | 04    | 01      | .00     | 04   | .01   | 1.00   | 03    | 06         | 07   | 07   | 07   | 04    | 02   | 03     | .01     | 01     | .03     | .04     | .06    | .00     |
| Any SIEs               | 06     | 05     | .02    | .02     | 07    | .00     | 02      | 01   | 01    | 03     | 1.00  | .68        | .48  | .51  | .52  | .62   | .53  | .17    | .35     | .15    | 04      | 09      | 09     | 05      |
| Count SIEs             | 07     | 04     | .05    | .03     | 07    | .01     | 02      | 05   | 09    | 06     | .68   | 1.00       | .82  | .82  | .59  | .77   | .82  | .38    | .47     | .37    | 06      | 15      | 12     | 04      |
| Base wage              | 06     | 01     | .04    | .05     | 03    | .00     | 01      | 07   | 12    | 07     | .48   | .82        | 1.00 | .72  | .40  | .56   | .66  | .23    | .27     | .23    | 04      | 12      | 11     | 03      |
| Overtime wage          | 08     | 01     | .04    | .05     | 04    | .00     | 01      | 04   | 12    | 07     | .51   | .82        | .72  | 1.00 | .38  | .55   | .64  | .23    | .29     | .24    | 05      | 11      | 12     | 02      |
| Social insurance       | 09     | 02     | .02    | .01     | 03    | .03     | 02      | .02  | 11    | 07     | .52   | .59        | .40  | .38  | 1.00 | .33   | .34  | .13    | .14     | .14    | 02      | 08      | 12     | 01      |
| Excessive overtime     | 03     | 07     | .05    | .00     | 11    | .01     | .01     | .01  | .04   | 04     | .62   | .77        | .56  | .55  | .33  | 1.00  | .71  | .20    | .20     | .19    | 02      | 11      | 04     | 05      |
| Days of rest           | 02     | 04     | .05    | .01     | 09    | .00     | .00     | 06   | .00   | 02     | .53   | .82        | .66  | .64  | .34  | .71   | 1.00 | .22    | .25     | .21    | 05      | 11      | 04     | 04      |
| Underage workers       | .01    | 04     | .05    | 05      | 05    | .01     | .00     | 03   | 04    | 03     | .17   | .38        | .23  | .23  | .13  | .20   | .22  | 1.00   | .16     | .21    | 03      | 10      | 03     | 04      |
| Labor contracts        | 03     | 02     | 02     | .04     | .02   | 02      | 04      | 08   | 07    | .01    | .35   | .47        | .27  | .29  | .14  | .20   | .25  | .16    | 1.00    | .14    | 07      | 04      | 09     | 01      |
| Disciplinary practices | 09     | .00    | .02    | .01     | 04    | 02      | .00     | 01   | 07    | 01     | .15   | .37        | .23  | .24  | .14  | .19   | .21  | .21    | .14     | 1.00   | .02     | 12      | 06     | 04      |
| Quality inspection     | 16     | .05    | 03     | .03     | .06   | .00     | .04     | .20  | 02    | .03    | 04    | 06         | 04   | 05   | 02   | 02    | 05   | 03     | 07      | .02    | 1.00    | .16     | .05    | .05     |
| On-time delivery       | .01    | 03     | .01    | 02      | .01   | .01     | .01     | .05  | .06   | .04    | 09    | 15         | 12   | 11   | 08   | 11    | 11   | 10     | 04      | 12     | .16     | 1.00    | .08    | .05     |
| Revenue (k USD)        | .30    | 10     | .02    | 05      | 12    | 03      | 06      | 13   | .33   | .06    | 09    | 12         | 11   | 12   | 12   | 04    | 04   | 03     | 09      | 06     | .05     | .08     | 1.00   | .30     |
| Revenue per employee   | .07    | .03    | .00    | .02     | .07   | .04     | .01     | .02  | 14    | .00    | 05    | 04         | 03   | 02   | 01   | 05    | 04   | 04     | 01      | 04     | .05     | .05     | .30    | 1.00    |

Notes. Correlation table of variables in the factory sample. Annual data for 4,456 factories over the period 2010-2012, with 6,204 factory-year observations.

Appendix Table A2: Clustering analysis robustness (entropy balanced subsamples)

|                            | (1)     | (2)      | (3)       | (4)      | (5)      | (6)      | (7)       |
|----------------------------|---------|----------|-----------|----------|----------|----------|-----------|
|                            | Base    | Overtime | Social    | Overtime | Rest     | Underage | Labor     |
|                            | wage    | wage     | insurance | hours    | days     | labor    | contracts |
| Base wage violations       |         | .716***  | .371***   | .591***  | .685***  | .112***  | .240***   |
|                            |         | (.0104)  | (.0136)   | (.0114)  | (.0106)  | (.00829) | (.0124)   |
| Overtime wage violations   | .688*** |          | .359***   | .565***  | .644***  | .109***  | .235***   |
|                            | (.0108) |          | (.0133)   | (.0118)  | (.0113)  | (.00785) | (.0124)   |
| Employee social insurance  | .400*** | .415***  |           | .340***  | .382***  | .0799*** | .197***   |
|                            | (.0134) | (.0133)  |           | (.0143)  | (.0136)  | (.00698) | (.0109)   |
| Excessive overtime hours   | .535*** | .538***  | .291***   |          | .696***  | .0889*** | .182***   |
|                            | (.0107) | (.0110)  | (.0130)   |          | (.00942) | (.00683) | (.0106)   |
| Insufficient days of rest  | .639*** | .622***  | .331***   | .715***  |          | .102***  | .219***   |
|                            | (.0106) | (.0111)  | (.0129)   | (.00942) |          | (.00757) | (.0116)   |
| Underage workers           | .379*** | .383***  | .273***   | .326***  | .362***  |          | .269***   |
|                            | (.0236) | (.0225)  | (.0258)   | (.0209)  | (.0225)  |          | (.0263)   |
| Failure to sign contracts  | .302*** | .321***  | .245***   | .283***  | .315***  | .0963*** |           |
|                            | (.0164) | (.0163)  | (.0159)   | (.0162)  | (.0162)  | (.0102)  |           |
| Unethical discipline prac. | .397*** | .422***  | .269***   | .349***  | .402***  | .214***  | .267***   |
|                            | (.0247) | (.0217)  | (.0284)   | (.0217)  | (.0228)  | (.0266)  | (.0299)   |

*Notes.* Regression coefficients from 56 OLS estimates regressing each socially irresponsible employment practice on each of the others, after entropy balancing on covariates reported in Table 3.

Appendix Table A3: Socially irresponsible employment practices (binary) and performance, OLS models (Table breaks across two pages)

|                          | (1)                  | (2)                 | (3)        | (4)              |
|--------------------------|----------------------|---------------------|------------|------------------|
|                          | Quality              | On-time             | Revenue    | Revenue /        |
|                          | Quanty               | delivery            | (thou USD) | employee         |
| Socially Irresponsible   | -0.0185***           | -0.0440***          | -815.5***  | -1.477*          |
| Empl. Practices (Binary) | (0.00377)            | (0.00744)           | (146.4)    | (0.855)          |
| Empi. Fractices (Binary) | (0.00377)            | (0.00/44)           | (140.4)    | (0.833)          |
| WORKFORCE                |                      |                     |            |                  |
| Employees                | 5.53e-06***          | 1.03e-05***         | 1.543***   | -0.00352***      |
| 1 3                      | (1.71e-06)           | (3.75e-06)          | (0.191)    | (0.000389)       |
| % immigrant              | 0.0266               | 0.226***            | 4,139**    | -5.052           |
| C                        | (0.0171)             | (0.0552)            | (1,642)    | (4.909)          |
|                          |                      |                     |            |                  |
| YEAR                     |                      |                     |            |                  |
| 2011                     | 0.00313              | 0.0253***           | 86.39      | 0.801            |
|                          | (0.00567)            | (0.00968)           | (123.7)    | (0.588)          |
| 2012                     | 0.0117**             | 0.0305***           | 617.8***   | 3.686***         |
|                          | (0.00535)            | (0.00942)           | (131.3)    | (0.677)          |
| PRODUCTS                 |                      |                     |            |                  |
| Clothing                 | -0.000241            | -0.0360***          | 2,641***   | 9.638***         |
| Clothing                 | (0.00499)            | (0.00946)           | (154.7)    | (0.998)          |
| Cookware                 | -0.0124*             | 0.00606             | -45.12     | 0.780            |
| Cookware                 | (0.00693)            | (0.0118)            | (141.4)    | (1.185)          |
| Footwear                 | 0.0265**             | -0.0663***          | 919.0*     | 3.966            |
| rootwear                 | (0.0108)             | (0.0215)            | (486.8)    | (2.459)          |
| Furniture                | -0.0122              | -0.00373            | 269.6      | 3.342**          |
| rumture                  | (0.00833)            | (0.0140)            | (179.8)    | (1.672)          |
| Home Décor               | -4.20e-05            | 0.0140)             | 398.3***   | 5.978***         |
| Home Decoi               | (0.00628)            | (0.0111)            | (144.0)    | (1.078)          |
| Lawaley                  | 0.0177**             | -0.00936            | -746.8***  | 6.772**          |
| Jewelry                  |                      |                     |            |                  |
| Stationam                | (0.00849)<br>0.00954 | (0.0261)<br>-0.0251 | (267.4)    | (3.453)<br>1.338 |
| Stationery               |                      |                     | -60.00     |                  |
| Т                        | (0.00796)            | (0.0177)            | (160.9)    | (1.645)          |
| Toys                     | 0.0364***            | 0.0833***           | -446.0***  | 2.856***         |
|                          | (0.00566)            | (0.0101)            | (137.9)    | (1.009)          |

(continued, next page)

|              | (1)        | (2)       | (3)        | (4)       |
|--------------|------------|-----------|------------|-----------|
|              | Quality    | On-time   | Revenue    | Revenue / |
|              | Quality    | delivery  | (thou USD) | employee  |
| FACTORY      |            |           |            |           |
| LOCATION     |            |           |            |           |
| Bangladesh   | -0.0274*** | -0.000945 | -1,612***  | -8.463**  |
|              | (0.00947)  | (0.0256)  | (529.2)    | (3.417)   |
| Cambodia     | -0.0572**  | 0.217***  | 1,835      | -7.010**  |
|              | (0.0224)   | (0.0301)  | (1,319)    | (3.363)   |
| China        | -0.0563*** | 0.141***  | 843.0**    | -2.488    |
|              | (0.00713)  | (0.0196)  | (397.9)    | (3.562)   |
| India        | -0.0122    | -0.0571** | -1,113***  | -7.648**  |
|              | (0.00785)  | (0.0232)  | (417.1)    | (3.508)   |
| Indonesia    | 0.0379***  | 0.144***  | 212.2      | -3.712    |
|              | (0.00784)  | (0.0263)  | (504.5)    | (3.744)   |
| Philippines  | 0.0210**   | 0.0116    | 619.9      | 0.297     |
| • •          | (0.00854)  | (0.0401)  | (615.6)    | (4.830)   |
| Vietnam      | -0.00345   | 0.129***  | 1,620**    | -5.935*   |
|              | (0.00865)  | (0.0246)  | (629.5)    | (3.387)   |
| Taiwan       | 0.0164     | 0.158***  | -143.3     | 27.98***  |
|              | (0.0146)   | (0.0325)  | (479.0)    | (9.352)   |
| Thailand     | -0.00665   | 0.0457    | -612.4     | -6.703**  |
|              | (0.0100)   | (0.0312)  | (465.0)    | (3.388)   |
| Turkey       | -0.0297*   | 0.0268    | 773.3      | 5.116     |
| ,            | (0.0153)   | (0.0296)  | (631.3)    | (4.992)   |
| Constant     | 0.949***   | 0.615***  | 169.1      | 7.140**   |
|              | (0.00849)  | (0.0222)  | (413.4)    | (3.032)   |
| Observations | 6,204      | 6,204     | 6,204      | 6,204     |
| R-squared    | 0.051      | 0.113     | 0.203      | 0.079     |

Standard errors clustered by factory in parentheses. \*\*\* p<.01, \*\* p<.05, \* p<.1

Appendix Table A4: Socially irresponsible employment practices (count) and performance, OLS models (Table breaks across two pages)

|                         | (1)<br>Quality        | (2)<br>On-time<br>delivery | (3)<br>Revenue<br>(thou USD) | (4)<br>Revenue /<br>employee |
|-------------------------|-----------------------|----------------------------|------------------------------|------------------------------|
| Socially Irresponsible  | -0.00681***           | -0.0111***                 | -203.8***                    | -0.333                       |
| Empl. Practices (count) | (0.00101)             | (0.00172)                  | (26.49)                      | (0.223)                      |
| WORKFORCE               |                       |                            |                              |                              |
| Employees               | 4.17e-06**            | 8.27e-06**                 | 1.506***                     | -0.00358***                  |
|                         | (1.72e-06)            | (3.76e-06)                 | (0.192)                      | (0.000379)                   |
| % immigrant             | 0.0229                | 0.218***                   | 3,975**                      | -5.350                       |
|                         | (0.0170)              | (0.0550)                   | (1,642)                      | (4.850)                      |
| YEAR                    |                       |                            |                              |                              |
| 2011                    | 0.00321               | 0.0267***                  | 112.2                        | 0.856                        |
|                         | (0.00563)             | (0.00964)                  | (122.9)                      | (0.580)                      |
| 2012                    | 0.0116**<br>(0.00530) | 0.0317*** (0.00938)        | 641.4***<br>(130.6)          | 3.740***<br>(0.674)          |
| PRODUCTS                | ,                     | ,                          | , ,                          | ` ,                          |
| Clothing                | -0.00149              | -0.0369***                 | 2,625***                     | 9.624***                     |
| Cookware                | (0.00496)             | (0.00943)                  | (153.9)                      | (1.008)                      |
|                         | -0.0132*              | 0.00590                    | -47.20                       | 0.788                        |
| Footwear                | (0.00687)             | (0.0118)                   | (140.7)                      | (1.183)                      |
|                         | 0.0280**              | -0.0637***                 | 968.3**                      | 4.051                        |
|                         | (0.0109)              | (0.0216)                   | (487.4)                      | (2.467)                      |
| Furniture               | -0.0115               | -0.00282                   | 286.1                        | 3.366**                      |
|                         | (0.00829)             | (0.0139)                   | (178.5)                      | (1.672)                      |
| Home Décor              | -0.000752             | 0.0114                     | 395.1***                     | 5.982***                     |
|                         | (0.00623)             | (0.0110)                   | (145.1)                      | (1.088)                      |
| Jewelry                 | 0.0175**              | -0.00922                   | -743.7***                    | 6.783*                       |
| Stationery              | (0.00835)             | (0.0262)                   | (280.9)                      | (3.474)                      |
|                         | 0.00868               | -0.0256                    | -68.07                       | 1.334                        |
|                         | (0.00791)             | (0.0177)                   | (161.5)                      | (1.644)                      |
| Toys                    | 0.0328*** (0.00558)   | 0.0783***<br>(0.0101)      | -536.6***<br>(140.1)         | 2.718***<br>(1.041)          |

(continued, next page)

|              | (1)        | (2)       | (3)        | (4)       |
|--------------|------------|-----------|------------|-----------|
|              | Quality    | On-time   | Revenue    | Revenue / |
|              | Quality    | delivery  | (thou USD) | employee  |
| FACTORY      |            |           |            |           |
| LOCATION     |            |           |            |           |
| Bangladesh   | -0.0224**  | 0.00110   | -1,579***  | -8.473**  |
|              | (0.00945)  | (0.0255)  | (530.3)    | (3.531)   |
| Cambodia     | -0.0597*** | 0.210***  | 1,705      | -7.254**  |
|              | (0.0223)   | (0.0299)  | (1,313)    | (3.294)   |
| China        | -0.0521*** | 0.143***  | 876.4**    | -2.484    |
|              | (0.00703)  | (0.0196)  | (398.6)    | (3.667)   |
| India        | -0.0128    | -0.0599** | -1,165***  | -7.750**  |
|              | (0.00780)  | (0.0233)  | (417.4)    | (3.490)   |
| Indonesia    | 0.0387***  | 0.139***  | 108.3      | -3.952    |
|              | (0.00765)  | (0.0263)  | (502.4)    | (3.740)   |
| Philippines  | 0.0199**   | 0.00767   | 545.5      | 0.153     |
|              | (0.00851)  | (0.0400)  | (611.5)    | (4.805)   |
| Vietnam      | -0.00274   | 0.127***  | 1,587**    | -6.019*   |
|              | (0.00864)  | (0.0246)  | (626.8)    | (3.399)   |
| Taiwan       | 0.0125     | 0.150***  | -297.1     | 27.70***  |
|              | (0.0145)   | (0.0324)  | (481.7)    | (9.300)   |
| Thailand     | -0.00921   | 0.0407    | -706.1     | -6.866**  |
|              | (0.00995)  | (0.0312)  | (465.0)    | (3.329)   |
| Turkey       | -0.0308**  | 0.0198    | 643.0      | 4.850     |
|              | (0.0151)   | (0.0294)  | (629.0)    | (4.966)   |
| Constant     | 0.951***   | 0.611***  | 91.06      | 6.931**   |
|              | (0.00836)  | (0.0220)  | (405.5)    | (2.989)   |
| Observations | 6,204      | 6,204     | 6,204      | 6,204     |
| R-squared    | 0.057      | 0.116     | 0.205      | 0.079     |

Standard errors clustered by factory in parentheses. \*\*\* p<.01, \*\* p<.05, \* p<.1