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Squeezing workers' rights in global supply chains: purchasing practices in the Bangladesh garment export sector in comparative perspective

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ABSTRACT

Workers' rights violations have been pervasive in many global supply chains. In the apparel sector, production workers often face precarious working conditions, including persistently low pay, excessive and often forced overtime, unsafe buildings, and repression of their right to form unions and bargain collectively. This article explores how purchasing practices of lead firms adversely affect working conditions and workers' rights in supplier factories. It attributes these trends to a price squeeze and a sourcing squeeze in which lead firms pay increasing lower prices to suppliers while also imposing short lead times and high order volatility. To test this argument, trade data of apparel imports to the United States and the European Union are explored. The article then turns to original surveys of Bangladesh supplier factories and workers carried out in 2016 and 2017. The final section of this paper examines the impact of the squeeze on working conditions and workers' rights using the Labour Rights Indicators.

KEYWORDS

Workers' rights; global supply chains; global value chains; purchasing practices; apparel; garments; Bangladesh; living wages; building safety; Rana Plaza

Introduction

The global value chain/production network literature assumes some degree of power asymmetry in supply chains (Dicken, 2015; Gereffi, Korzeniewicz, & Korzeniewicz, 1994). This imbalance is perhaps most noticeable in buyer-driven apparel global supply chains (GSCs), where retailers and brands ('buyers' or 'lead firms') consolidated their power through mergers, acquisitions and market concentration (Abernathy, Dunlop, Hammond, & Weil, 1999; Bonacich & Appelbaum, 2000). At the same time, there has been a dramatic dispersion of apparel suppliers across developing countries (Gereffi & Frederick, 2010). The combination of consolidated buyers and dispersed suppliers gives buyers an advantage when setting prices and other terms of production contracts. Yet, some scholars have argued that the shift from an assembly model of production through export processing

zones to full-package production in which suppliers source fabric and other inputs resulted in a decline in power imbalance (Gereffi, Humphrey, & Sturgeon, 2005).

In contrast, this article argues that in the apparel sector the power imbalance in GSCs has increased since the early 2000s. This is because state policies (including shifting trade regimes), technology and pressure created by growing capital markets (stock market and private equity firms) exacerbated power imbalances. The squeeze on supplier firms does not lessen because they have begun to source fabric rather than rely on buyers to source the fabric for them. Under conditions of supply chain oligopsony (lead firm power concentration), lead firms can also squeeze supplier firms on how, where and when they source their fabric and at what cost. All else equal, lead firms have been able to reduce the real dollar price paid for apparel made by suppliers. This 'price squeeze' impacts workers in the form of low wages and increased work intensity.

Brands compete for market share in order to maintain or grow their revenue. This includes pursuing continuous sales growth with low retail prices and ever-changing products and shorter fashion seasons. This 'fast fashion' marketing model requires increasingly shorter production lead times (Angelov, 2016; Taplin, 2014). Even non-fast fashion firms strive to increase their 'speed to market' in order to better manage product inventory; the shorter the period from product design to product sale, the better firms are able to judge consumer trends, which reduces the likelihood of unsold inventory and costly markdowns. Lead firms also can use their supply chain power to modify order volume and increase styles, which creates further stress on suppliers (Locke, 2013). This 'sourcing squeeze' on suppliers – which interacts with the pricing squeeze since lower prices help to increase inventory turnover – impacts workers in the form of chronic and forced overtime, and unauthorized outsourcing to unsafe factories. Indeed, three of the four worst factory disasters in the history of industrial garment production have taken place since 2012 (Nova & Wegemer, 2016).

To explore these arguments, this article employs mixed methods. It begins by analyzing prices paid for imported apparel by U.S. and European buyers. These findings are complemented by field research and an original survey of 223 factory owners in Bangladesh and 188 factory workers. The impact of sourcing practices on workers' rights also is explored using structured interviews with workers and the Labour Rights Indicators (LRIs). The findings provide support for my argument of a price and a sourcing squeeze, and they provide evidence that the buyer squeeze on suppliers contributes to a supplier squeeze on workers.

Sourcing squeeze and workers' rights

One of the original premises of the GSC¹ literature is that there are power imbalances across different nodes of chains (Gereffi et al., 1994; Henderson, Dicken, Hess, Coe, & Yeung, 2002). Bonacich and Appelbaum (2000) find that high levels of competitiveness among supplier factories and mergers among retailers increased the power of retailers over suppliers. Abernathy et al. (1999) come to similar conclusions about the trend toward retailer consolidation, but for different reasons. They argue that technology enables the largest firms to leverage lean manufacturing to grow their market share, and forecast a continued trend for apparel retail industry concentration. Hamilton and Petrovic (2011) document enormous consolidation

of power among major retailers, as does Lichtenstein (2009), who focuses on the rise of Wal-Mart. He argues that the power of this one corporation increased to the point that it was able, ‘to “legislate” key components of American social and industrial power’. Similarly, Phillips (2017) argues lead firms have consolidated not only economic power, but also social and political power.

International institutions and mainstream media are coming to similar conclusions. The International Labour Organization observes, ‘the sheer volume of its purchases grants [buyers] substantial bargaining power in an asymmetrical market relationship where a buyer can negotiate prices and specify, what, how, where, and by whom the goods it sells are purchased’ (ILO 2016, p. 11). The *Wall Street Journal* (WSJ) reports, ‘Declining enforcement of antitrust rules has led to bigger mergers, less competition and higher profits.’² Roni Michaely observes in the WSJ: ‘If you want to compete with Google or Amazon [...] you’ll have to invest not just billions, but tens of billions of dollars.’³ *The New York Times*, in reference to Amazon and other ‘superstar firms,’ finds: ‘Two of the most important economic facts of the last few decades are that more industries are being dominated by a handful of extraordinarily successful companies and that wages, inflation and growth have remained stubbornly low. Many of the world’s most powerful economic policymakers are now taking seriously the possibility that the first of those facts is a cause of the second.’⁴

There is a debate in the literature regarding the degree of this power imbalance and the direction of change. As Locke, Amengual, and Mangla (2009, p. 328) observe, ‘Power relations among the key actors in the supply chains are far from unidirectional or unambiguous.’ Gereffi, Humphrey, and Sturgeon (2005) argue power relations are linked to information complexity, codification of transactions and supplier capabilities. They develop five topologies of global value chains. For our purposes, two of these topologies are particularly relevant, ‘captive value chains’ and ‘relational value chains.’⁵ Captive value chains are characterized by low supplier competence in the face of complex products and specifications. As a result, in these chains we see the dominance of lead firms (Gereffi et al., 2005, p. 86). Captive value chains thus represent ‘buyer-driven global commodity chains’ in Gereffi’s (1994) original formation, with their high degree of power asymmetry.

In relational value chains, production specifications cannot be codified, transactions are complex, and supplier capabilities are high. This results in the need for the continuous exchange of complex information, and hence mutual dependence (Gereffi et al., 2005, p. 86). Due to this mutual dependence and high supplier capabilities, these scholars argue that in relational value chains power asymmetry is moderate. What is notable is that, in the global apparel industry, they specifically find, ‘the expansion and growing capabilities of its global supply-base have permitted it to move rapidly from captive to more complex relational value chains over the span of just a few decades’ (Gereffi et al., 2005, p. 91). That is, they see a decline in power asymmetry in apparel global value chains. This decline, they suggest, is the result of supplier factories moving from assembling garments through an export processing zone model to full package production, which involves greater capabilities on the part of supplier firms and more complex forms of coordination between suppliers and lead firms. Facilitating this process was the 1995–2004 phase out of the Multi-Fiber Arrangement (MFA) in accordance with the World Trade Organization’s Agreement on Textiles and Clothing. The MFA had relegated to

developing countries the apparel assembly function. Hence, no longer incumbered by the MFA, developing countries were free to develop other capabilities, such as interpreting designs, sourcing inputs (notably fabric) and coordinating logistics (Gereffi et al., 2005).

Having indicated that power imbalances were lessening in apparel GSCs opens the questions as to whether economic upgrading is conducive to social upgrading. For Barrientos, Gereffi, and Rossi (2011), economic upgrading is understood as moving to higher value-added activities. This may be done in one of four ways: through process upgrading in which changes in the production process result in greater efficiencies; product upgrading in which more advanced product types are introduced; functional upgrading where firms incorporate higher value-added tasks; and chain upgrading where firms move to new industries or product markets (Barrientos, Gereffi, & Rossi, pp. 323–24). Social upgrading draws on the International Labour Organization's definition of 'decent work,' which includes quality employment, fundamental freedoms and rights at work, social protection and social dialogue (ILO, 2008).

Barrientos et al. are careful to indicate that economic upgrading is not a sufficient condition for social upgrading. Indeed, even under the best of circumstances, only a sub-group of permanent workers at the bottom of supply chains may benefit from economic upgrading. To increase the likelihood of social upgrading, they suggest interventions by trade unions, states, multi-stakeholder codes of labor practices and multinational initiatives to promote both economic and social upgrading, a so-called 'win-win' scenario (Barrientos et al., 2011, pp. 336–337). I will argue that the dynamics of economic upgrading and social upgrading must be understood within the broader dynamics of international political economy and local institutional contexts. As Henderson and his collaborators (2002, p. 450) observe, power is not only exercised by lead firms, but also by state and inter-state institutions, which have the capacity to influence the investment and other decisions of lead companies and other firms integrated into GSCs.

The phase out of the MFA agreement is only one of several important developments over the last two decades in the global apparel industry. The entry of China and Vietnam into the WTO significantly increased cost competition among suppliers. And technological developments facilitated greater control by lead firms over their supply chain logistics. This has given market advantage to the largest of mass merchandizers and firms specializing in electronic commerce (Kotha & Basu, 2011). In addition, growing pressure from investors on lead firms to reduce costs and increase margins has created increased pressure on lead firms to squeeze their suppliers on costs. Given these dynamics of the international political economy of the apparel industry – as well as adverse domestic contexts (e.g. weak labor laws and/or poor enforcement) – I argue that there have been *increases* in power asymmetry in apparel GSCs both between lead firms and suppliers and between supplier factories and their workers over the past 20 years.

Following the establishment of permanent trade relations between the US and China in 2000, China entered the WTO on December 11, 2001. Vietnam entered the WTO on January 11, 2007. Thus, as the MFA phased out, two countries with very large workforces were now competing with traditional apparel exporting countries.⁶ This provided enormous leverage to lead firms, which could, with greater force than a decade earlier, leverage suppliers to come down in price or face the

risk of production moving elsewhere. Suppliers in some countries were not able to reduce production costs, and closed down, notably in Mexico and the Dominican Republic. Other countries squeezed down on costs and managed to grow their share of the global market. This includes India, Indonesia, Cambodia, and particularly Bangladesh, which, since 2009, has been the second largest apparel exporter in the world.

Technology also played a role. Mass merchandizers using bar codes and check-out scanning in their retail stores to track stock keeping units were able to process sales data and improve inventory management and supply chain logistics (Abernathy et al., 1999). When combined with high-quality software, faster computers and accurate computer-to-computer exchange of documents in a standard electronic format – a process known as electronic data interchange – it quickly became much more feasible for US retailers to manage supply chains in geographically dispersed locations. And companies based on electronic commerce, such as Amazon, began using digital technology to manage relations with an extremely broad, global range of suppliers and a system of ‘virtual inventory’ and two-day delivery times to dramatically capture market share (Kotha & Basu, 2011).

Finally, the growing role of finance capital has further contributed to supply chain power asymmetries (Weil, 2014). Since capital markets are so competitive, CEOs and managers in lead firms are under constant pressure to grow share values or risk being replaced. This pressure is present whether it is public or private capital. The rise of 401(k) accounts and individual retirement accounts inserted considerable capital into the market, mostly via mutual funds. Weil argues that money flowing into firms from these mutual funds is ‘impatient’ and moves frequently in search of better returns for a given level of risk’ (Weil, 2014, p. 46). Milberg also finds that ‘the financialization of non-financial corporations’ has encouraged restructuring of production through the growth of GSCs (Milberg, 2008). Private equity firms also play a role in squeezing not only firms but also workers (Appelbaum & Batt, 2014) as they leverage lead firms who, in turn, are pushed to demand increased margins from their GSCs (Weil, 2014). Those lead firms that do not deliver may be forced out of business. Those that remain consolidate their market share. In 2018, Amazon surpassed Walmart as the top apparel retailer in the U.S.⁷ For all products, its US 1 trillion market value made it roughly the same size as the next seven largest consumer companies put together.⁸

To summarize, trade rules, technology and financialization have contributed to growing power asymmetries in apparel GSCs. These current power imbalances in GSCs are engendering two mechanisms which have deleterious effects on workers: a price squeeze and a sourcing squeeze. The price squeeze refers to how much lead firms pay suppliers for the products they produce. If, as I suggest, the growth of the supplier base increased with the phase out of the MFA and the entry of China into the WTO, and if, as I also indicate, buyer consolidation grew over the past 20 years as a result of technological innovations and growing capital markets, then we can expect to see declining prices starting at some point in the mid to late 1990s and a continued decline afterwards. If, as I also suggest, power imbalance is increasing in apparel GSCs, then we can expect lead firms to use their leverage not only to reduce prices, the ‘price squeeze,’ but also to reduce lead times, shift order size and modify product specifications on short notice according to their needs. This is what I define as the ‘sourcing squeeze.’

The price squeeze reflects lead firms' interests in keeping production wages low. Historically, this was the case under the Export Processing Zone model of apparel assembly production, because wages were the most significant cost of production in this system. Thus, a squeeze down on prices by lead firms pushed supplier factories to keep down real wages, often by not raising wages during periods of inflation, by lobbying governments not to raise the minimum wage or by lobbying governments to have a lower minimum wage for apparel export workers relative to workers in other manufacturing sectors (Anner, 2011).

This is not the only potential impact of the price squeeze on workers. When it is not possible to keep real wages down, supplier firms can turn to a long-held practice in the sector: increasing work intensity by increasing worker production targets. For example, a worker might be told she needs to perform 90 operations per hour as opposed to the previous requirement of 80. It is important to note that this is not a traditional piece-rate system where wages are directly and solely tied to production. Such a system is most often not permitted due to minimum wage laws. However, employers can demand workers perform a number of operations per hour in order to keep their jobs. Under such a system, when lead firms lower prices and suppliers are not permitted to lower wages due to minimum wage laws, suppliers can demand workers work faster. In this way, a price squeeze often pushes suppliers to increase production quotas to remain economically viable, resulting in increased work intensity.

The sourcing squeeze includes a squeeze on lead times, the time given to supplier factories to design, source inputs, make and ship an item. Speed to market – manifest through shorter production lead times – has become part of a broader trend epitomized by 'fast-fashion' (Anguelov, 2016; Taplin, 2014). Shorter lead times allows buyers to better control inventory. This reduces the need to sell items at a markdown and thus can result in significant savings for firms. Another element of the sourcing squeeze is order size and number of styles. As argued by Locke, 'some persistent labor problems originate in various upstream business practices' (Locke, 2013, p. 153). These practices include small order volume combined with a greater variation of styles. Nike acknowledged as much, noting, 'Every time a factory has to change a style, it reduces productivity and overall efficiency, adding to the total number of hours of work requested' (Cited in Locke, 2013, p. 128).

Extreme order volume fluctuation can be expected to have three important impacts on working conditions. Since factory owners are unsure how large their orders will be month to month, they opt to hire a lower number of workers rather than risk having idle workers during downturns. As a result, when order volume increases, suppliers have workers put in overtime hours, often extensive and forced (Anner, Bair, & Blasi, 2013). Even when all workers are doing, for example, over 70 h a week, this still may not be enough hours of work to complete order spikes with short lead times. In these cases, factories may turn to sub-contracting whereby they outsource production to another factory, typically smaller, with more precarious working conditions, not inspected by building-safety or labor authorities, and perhaps not authorized by a lead-firm to produce its products (see [Figure 1](#), green arrows).

For all factories – authorized and unauthorized by lead firms – the incentive to use sub-standard buildings is a result not only of low prices, but also of fluctuations in order volume. As noted by Piore (1997), whereas working hours can vary

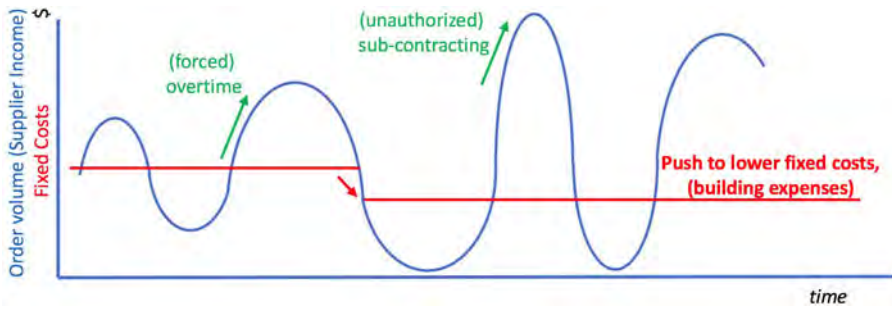


Figure 1. Order volume fluctuation, overtime, subcontracting and building safety.

with order volume, building expenses are a fixed cost. Hence, ‘to minimize that [building] cost, the employer will seek out cheap – that is, substandard – factory housing. [...] The attempt to reduce rent paid per worker is the chief cause of congestion in sweatshops, affecting the way in which material inventories, supplies, equipment and work-in-progress block aisles and exits. It is also the source of unhealthy and dangerous conditions (poor wiring and ventilation, unsanitary or nonexistent bathrooms, fire hazards) [...] (Piore, 1997, p. 137). What this suggests is that, to avoid losing money during down cycles, the supplier opts for sub-standard buildings to reduce fixed costs during low production periods, and this trend can be expected to accelerate due to increased order volatility (see Figure 1, red lines and arrow).

We can expect the price and the sourcing squeezes to adversely affect respect for workers’ rights. Workers’ rights are understood in accordance with ILO Committee of Expert interpretations of ILO Conventions 87 and 98 in terms of the rights of workers to form unions, bargain collectively and strike (Bellace, 2014). These rights are interconnected. The formation of a trade union would be of limited impact if unions were not able to bargain collectively to improve wages, benefits, and the conditions of work. And without the ability to threaten to withhold labor through the right to strike, employers would have little incentive to participate in meaningful negotiations (Hicks, 1932).

The price and sourcing squeezes create an incentive for employers to pursue union avoidance strategies, which may include violations of the law. This is because employers assumed that unions will create pressure to raise costs by bargaining to increase wages and benefits. Employers also assume that unions will strike and disrupt production, which could have profoundly negative consequences for suppliers with short lead time pressure. State representatives may fear that, were they to vigorously enforce their labor laws in the context of highly cost-competitive GSCs, investors will go elsewhere (Anner, 2011). In sum, GSCs create pressures on employers and states in producing countries to keep wages down and unions out in order to keep investors in.

My framework for understanding the price and sourcing squeezes and their impact on working conditions and workers’ rights is presented in Figure 2. The figure begins at the top where developed states and international institutions’ trade and investment policies facilitate the geographic dispersion of suppliers through shifting trade rules. Trade rules, technology and financial capital facilitate the consolidation of a few mass merchandizers and electronic commerce companies at the

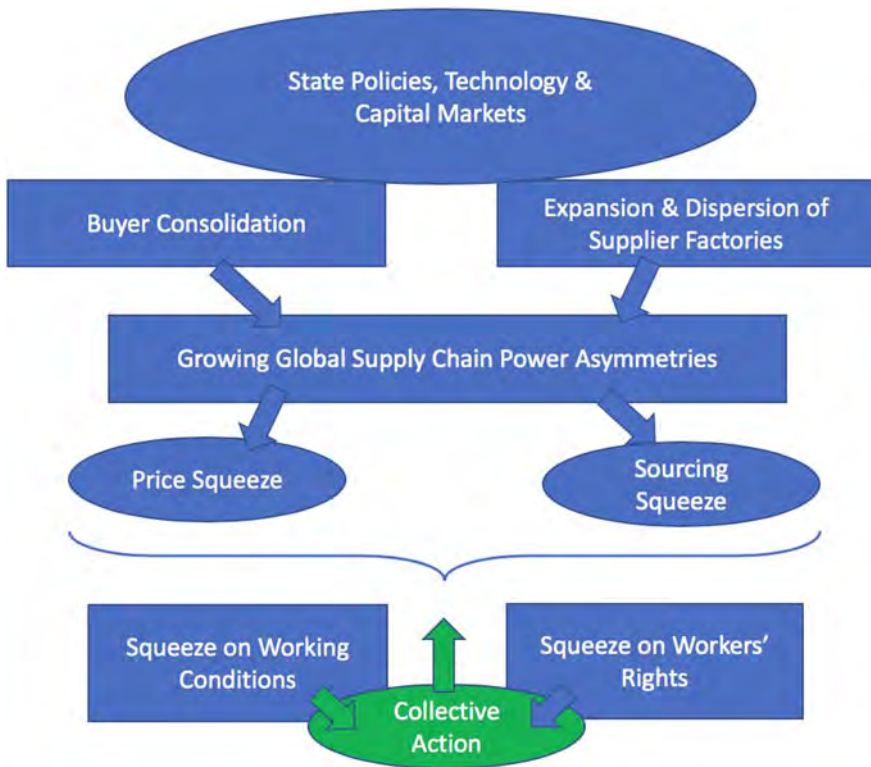


Figure 2. Price and sourcing squeeze and workers' rights.

expense of others. The result is depicted in the second tier of [Figure 2](#): buyer consolidation on the one hand, and the expansion and dispersion of suppliers on the other hand. The combination of these two trends – depicted in the third tier of the Figure – is growing power asymmetries in apparel GSCs. Buyers then use their leverage over suppliers through two mechanisms: the price squeeze and the sourcing squeeze. This, in turn, results in deleterious impacts on labor via a squeeze on wages and working conditions. Workers can be expected to respond to these pressures through some form of collective action, unionization or otherwise (Henderson et al., 2002), which, in turn, provokes employer efforts to suppress workers' rights in order to keep costs down (see [Figure 2](#), bottom tier, green).

Methods/data sources

To explore the arguments presented above, this article draws on mixed methods and two original data sources. The first section of the article examines sourcing and pricing dynamics using US government and European Union (EU) trade data. The US government provides data on apparel imports by country in US dollars and in square meters. This allows one to divide imports in dollars by imports measured in squared meters, which indicates dollars per square meter of imported apparel. It is also possible to measure price per unit. This is useful when tracing the same units (e.g. trousers) over time. It is less useful when tracking the price of

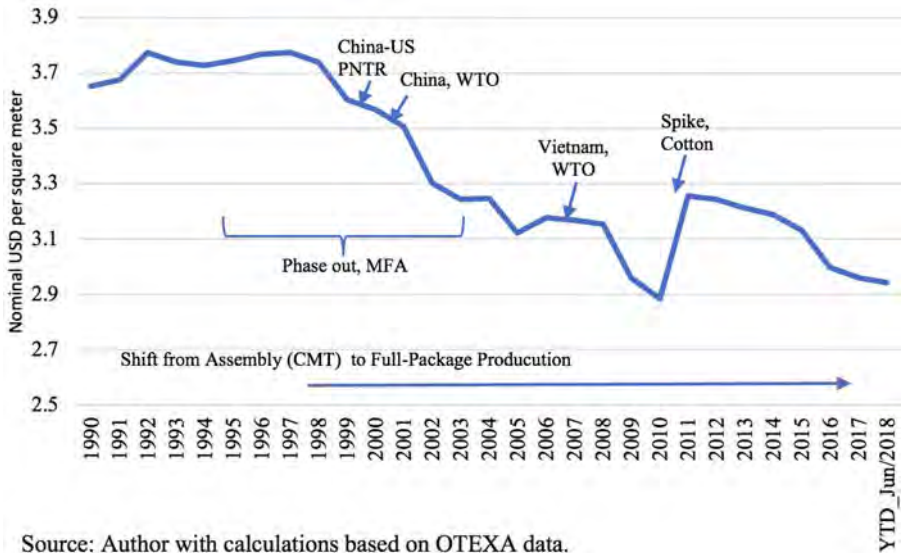
a bundle of goods because a shift in value may reflect a shift in products (for example, from dresses to socks). EU trade data is available in euros and kilograms. This allows one to measure euros per kilogram of exported clothing to the EU by country.

The second set of data is drawn from field research in Bangladesh between 2015 and 2017. The first trips to Bangladesh were used to conduct initial factory visits and interviews. Over 30 interviews were conducted with employers, government representatives, non-governmental organizations, trade unions, workers and local researchers. These interviews lasted from 1 h to over 3 h. These interviews served two purposes. First, they added rich contextualization and nuances to the quantitative data. Second, they helped asked to shape the questions asked in the surveys.

The first survey I conducted was of garment supplier factory owners and managers in Bangladesh between March 2016 and March 2017.⁹ Factory lists to begin the survey process were drawn from a random sample of factories taken from the government website focusing on the districts of Gazipur and Mirpur.¹⁰ To conduct the survey, I hired a local team of surveyors, who I trained and supervised. The survey focused on Gazipur and Mirpur to ensure variation in the sample of factories; Gazipur is known for relatively larger factories outside the city center, whereas Mirpur is known for smaller factories inside the city center. When the survey team exhausted the number of factories we could enter in those districts, it expanded into a few other areas. By the end of the process, the team collected 74 surveys in Gazipur, 61 surveys in Mirpur, 30 surveys in Savar, 36 surveys in Ashulia and 10 surveys in Sripur.¹¹ Each survey was based on factory visits that lasted anywhere from one to 3 h. After 13 months, the team managed to survey 223 factories.¹²

The mean number of production workers per factory surveyed was 1,128. For comparison, it is estimated that the average size of all apparel export factories in Bangladesh is 1,000 workers (Anner & Bair, 2016). The average size of the factories in the Accord program is 1,569.¹³ This places the survey sample within this range. Some 55% of factories in the sample produced directly for European brands. Some 13% produced directly for U.S. brands. And 26% produced via buying houses (third parties). The three most common items produced in these factories were T-shirts (28%), bottoms/trousers (25%), tops/shirts and blouses (24%) and sweaters (18%). The survey data allow for an exploration of the nuances of price dynamics, including by product and export market. The survey also provides data on non-price sourcing dynamics, such as lead times and order specifications.

The second survey I implemented was of factory workers.¹⁴ This survey was conducted in May and June 2017 in the Dakha region. A team of surveyors who I trained and supervised went to working class neighborhoods and interviewed 188 garment export workers in their homes. Most workers were between 22 and 30 years of age (64.89%) and 74% were female. The average years of schooling of the workers surveyed was 5 years. The average worker has been employed in her or his position for 3.26 years and worked in the apparel export sector of 4.87 years. These findings reflect other recent garment worker surveys in Bangladesh. For example, Kabeer, Haq, and Sulaiman (2019) found in their survey of 1,500 workers a mean worker age of 26.5 with an average of 5.9 years of schooling who had worked in their current factory for 3.6 years and worked in the industry for 5.6 years.¹⁵



Source: Author with calculations based on OTEXA data.

Figure 3. US Apparel Imports, USD/Sq. m.

The final section of the article turns to data from the LRIs.¹⁶ The LRIs are based on coding the findings of nine sources for 108 workers' rights violation types. The nine sources include reports of the ILO Committee of Experts on the Application of Conventions and Recommendations, reports of the ILO Conference Committee on the Application of Standards, Country baselines under the ILO Declaration Annual Review, Representations under Article 24 of the ILO Constitution, Complaints under Article 26 of the ILO Constitution, Reports of the ILO Committee on Freedom of Association, national legislation, the International Trade Union Confederation Survey of Violations of Trade Union Rights and U.S. Department of State's Country Reports on Human Rights Practices¹⁷ These data allow me to explore trends in pricing and workers' rights in practice.

Trade data findings: Pricing

I have argued that lead firms in apparel GSCs increased their leverage over supplier factories over the past 20 years as a result of shifting trade regimes, as well as technological developments and capital market dynamics. I have further suggested that the shift from the export processing zone model of assembly production to full-package production has not mitigated these power imbalances. What do the trade data indicate? Dividing the price of all apparel imports to the United States by the square meters of all apparel imports to the United States, there was a slight increase and otherwise relative stability in prices during the 1990s. Then there was a decline in price per square meter starting in 1998, 4 years after the MFA phase-out began.

This price decline became notably pronounced from 2000 to 2005, the 5 years following permanent normal trade relations between China and the United States and then China's entry into the WTO. The decline became even more dramatic following Vietnam's entry into the WTO in 2007. There was then a noticeable rise

in prices from 2010 to 2012. This can be attributed to a dramatic spike in world cotton prices (cotton prices rose between February 2010 and February 2011 by 164.94%¹⁸). As cotton prices stabilized, the price decline continued through to June 2018 (see [Figure 3](#)). It is important to note that these figures are presented in *nominal* US dollars. If we were to control for inflation and present the figures in real US dollars, the price decline would be more dramatic. Trade data thus provide support for the price-squeeze argument that changing trade rules resulted in supplier dispersion and increased power imbalances in GSCs that translated into downward pressure on prices.

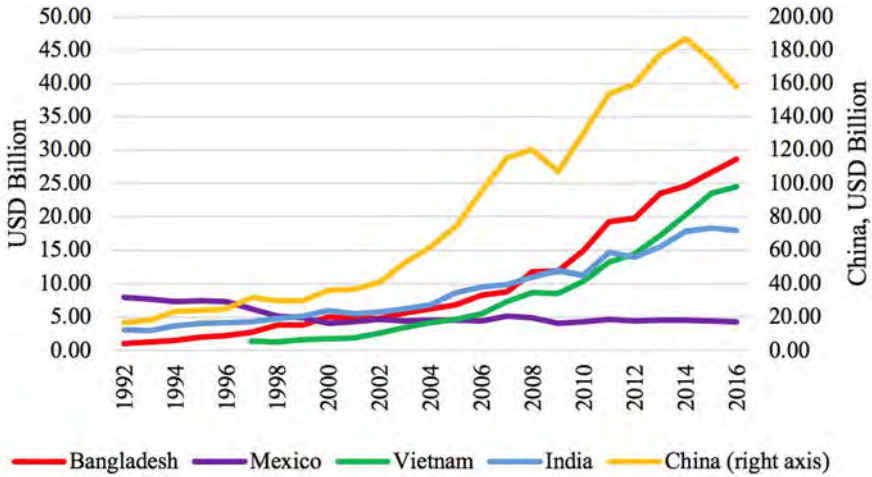
Bangladesh in comparative perspective

To further appreciate the pricing dynamic, it is helpful to compare country and product dynamics. Bangladesh offers an ideal case study because it is the second largest apparel exporter in the world, following China. Yet, unlike China where apparel exports have been in decline since 2014, apparel exports from Bangladesh continue to rise. China is also an exceptional case, because it has not competed primarily based on wages. Rather, it is the scale of production, the size and complexity of its locally-based supplier networks, and efficiency of its logistics that made China the largest apparel exporter in the world. All these factors help to bring down the costs per unit and, for a long time, compensated for its higher wages relative to other major apparel exporters. Indeed, precisely because China has excelled so markedly in terms of production scale, domestic supplier networks and logistics, the pressure on its competitors, who lacked these advantages, to gain market share to do so based on labor costs became more intense. During this time, exports from Bangladesh –which, at US 0.39 per hour, pays the lowest minimum wage among major apparel exporting countries– surpassed all competitors with the exception of China (see [Figure 4](#)).

Bangladesh is also an important case study because, unlike China, garment exports dominate the country's exports and have a profound impact on the domestic economy. In 2015, the sector accounted for 76.33% of its exports in goods and services and 13.64% of its Gross Domestic Product (GDP).¹⁹ Over 4,000 suppliers and 4 million direct workers make their living off the sector (Anner & Bair, 2016). And many millions more are indirect beneficiaries of the sector. Thus, the sustainability of the RMG sector has a profound impact on the overall economic conditions in the country and the well-being of millions of people.

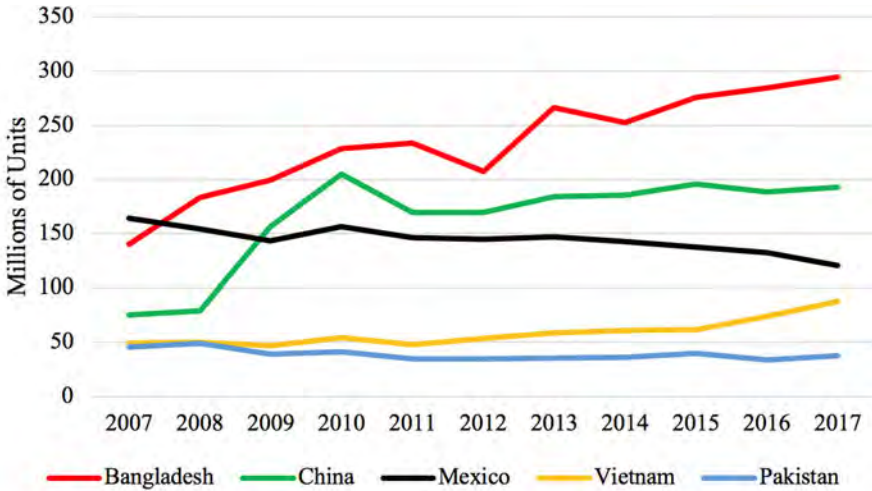
To understand Bangladesh's growth in the global garment export sector, it is helpful to look at its top export by product category to the United States, men's and boys' cotton trousers. The data indicate that Bangladesh is the main exporter of trousers to the United States, even exceeding the value of China's exports in this category. Mexico had been the top exporter of trousers in the 1990s, with a remarkable rise following the implementation of the North American Free Trade Agreement (NAFTA) in 1994. But after peaking in 2000, Mexico's market share dropped precipitously. Vietnam and Pakistan's trouser exports do not even amount to one third of Bangladesh's exports to the United States (see [Figure 5](#)).

How did Bangladesh surpass both China and Mexico to be the top exporter of trousers to the United States? The answer can be found by looking at price per unit. If one looks at these top apparel-exporting countries to the United States and



Source: WTO.

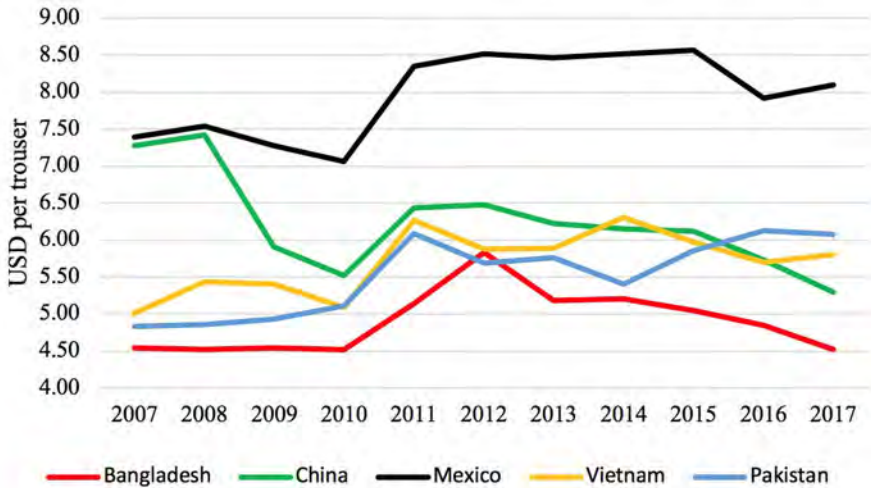
Figure 4. Garment exports, developing countries (USD Billions).



Source: Author's calculations based on OTEXA data.

Figure 5. Exports of trousers to the US (millions).

takes price paid per unit in US dollars, two trends can be seen. First, the price point comes down for the largest exporters, China and Bangladesh. Second, Bangladesh comes down to the lowest level, even lower than China. Mexico goes from being the number one exporter to a distant third and most likely will soon be displaced by Vietnam as it gets priced out of the market. As prices rise in Pakistan, it also starts to lose market share. What is noticeable is (with the exception of Mexico) how the discrepancy in prices is also reduced, suggesting that buyers are much more aware of price points among competitors across the global economy when they negotiate prices (see Figure 6). What is also noticeable is that these



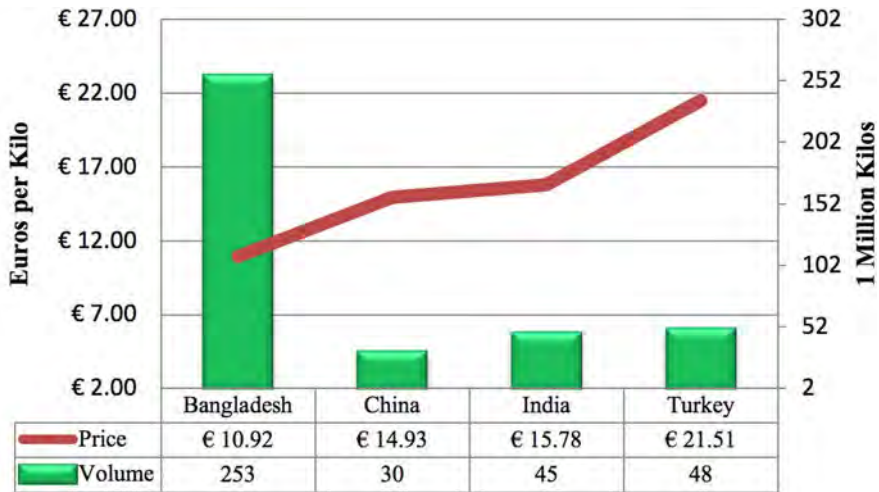
Source: Author's calculations based on OTEXA data.

Figure 6. USD per trouser, top exporters to US.

figures are presented in nominal US dollars. If we were to incorporate a deflator for inflation, the real dollar price decline per units would be far more significant.

A similar dynamic can be observed with respect to T-shirts and exports to the European Union. T-shirts account for the largest percentage of garment exports from Bangladesh to Europe (EU-28). In 2017, Bangladesh exported over 250 million kilograms of T-shirts per year to the EU, far exceeding the combined amount of T-shirts exports from the second, third and fourth top exporters (China, India and Turkey). As with trousers to the United States, Bangladesh came to dominate the T-shirt market by providing the lowest price point. While the price of T-shirts was 14.93 euros per kilogram in China, 15.78 euros in India and over 20 euros in Turkey, the price of a kilogram of imported T-shirts from Bangladesh was 10.92 euros per kilogram (see Figure 7).

When examining prices paid for products exported from Bangladesh to the U.S. and Europe, it is important to keep in mind the period from 2013 going forward, because this is the period following the Rana Plaza building collapse when international pressure was placed on Bangladesh to improve building safety, wages and workers' rights. On December 1, 2013, the Bangladeshi government increased the minimum wage by 77%, from USD 39 per month to USD 68 per month. Also, beginning in 2013, three building safety programs – the Accord, the Alliance and the National Initiative – inspected factories and determined the expenditures factories needed to make to improve the safety of their facilities. However, while building safety costs and wages were rising, what the data show is that, in general, prices continued to decline. One argument for this decline is that it coincided with the decline in the price of cotton. While the dramatic rise in cotton prices in 2011 can certainly explain the rise in garment prices in the 2011 and 2012 period, the relationship does not hold in the post-2013 period. Indeed, what is most striking is that, from 2015 to 2017, cotton prices *rose* by 22.13% while the price paid to Bangladesh exporters of cotton trousers *declined* by 10.24%.



Sources: Author's calculations based on Eurostat data, product code 610910

Figure 7. Price and Volume of T-shirts Exports to EU-28 (2017).

Bangladesh supplier factory survey findings

While international trade data provide support for my argument that lead firms in apparel GSCs are squeezing down on price, one limitation of relying exclusively on trade data is that such numbers include a range of costs that are added after a product leaves a factory. These include international shipping, freight insurance and duties. This is the difference between Free on Board (FOB) costs and Estimated Landed Costs (ELC) Cost, Insurance & Freight (CIF). International trade data reflect CIF. Yet, today most lead firms negotiate FOB prices with supplier factories. FOB costs are made up of the Cut-Make-Trim component (the traditional apparel assembly operations), as well as inputs, most notably fabric. Hence, to more fully appreciate pricing dynamics faced by suppliers, it is necessary to look at FOB prices.

Survey findings: price squeeze

As noted above, a core measure of price for a garment producer is the FOB price. As noted, this price includes the fabric, trims, embellishments, labor and local freight to port costs. What the survey results indicate is that the average FOB price was USD 4.64 in 2016, which is a 7.75% decline from the FOB price point of USD 5.03 in 2011. If we look at exports to the United States, the price point declined by 10.71%. For European buyers, the price point came down by 8.96%. Indeed, in all major product categories we find a decline in nominal prices paid per unit (see [Table 1](#)). Hence, not only is there a decline in CIF value as illustrated by the trade data, but there is also a decline in FOB prices as indicated by the survey data. As a result, the decline in prices cannot be mainly attributed to declines in international transportation costs, freight insurance or duties.

The survey allowed suppliers to answer an open-ended question on their concerns, insights and experiences. Of the 132 responses to the open-ended question, 82

Table 1. F.O.B. prices, 2011–2016.

Product	2011	2016	Percent change
All	\$5.03	\$4.64	−7.75%
U.S. Buyers	\$5.32	\$4.75	−10.71%
European Buyers	\$4.91	\$4.47	−8.96%
Trading Houses	\$4.90	\$4.63	−5.51%
Knit	\$3.80	\$3.40	−10.53%
Woven	\$6.48	\$6.05	−6.64%
Bottoms	\$6.43	\$6.10	−5.13%
Tops	\$5.01	\$4.58	−8.58%
T-Shirts	\$2.72	\$2.43	−10.66%

Source: Author's survey.

mentioned the declining-price issue. One supplier noted, ‘Though production cost is rising day by day, the price rate is not increasing. Rather the price rate is reducing.’ Another stated, ‘Factories have to take orders at a less price in fear of losing the order to someone else. We are not getting much profit, but we have to run our factory.’ This concern is reflected in an ILO report, which found that 46% of textile and clothing suppliers, ‘reported having accepted orders whose price did not allow them to cover their production costs’ (ILO, 2017, p. 8). In Bangladesh, the ILO survey indicated that 52% of the Bangladeshi respondent suppliers reported selling below cost, and that they did so under pressure from their buyers (ILO, 2017, p. 8).

We asked in our survey whether buyers increased the price they paid to suppliers to produce their products following the 2013 increase in the minimum wage. Some 13% of suppliers stated that their buyers did increase their prices whereas the majority, 87%, indicated that their buyers did not increase their prices following the increase in the minimum wage. Some suppliers who did receive a price increase following the increase in the minimum wage noted in interviews that this lasted for only one production cycle. With the following cycle, prices were lowered again. This provides support for the finding based on U.S. and E.U. trade data that most buyers continued to bring down prices even as the minimum wage increased.

Suppliers have been squeezed on costs in other ways, too. For example, we asked about payment times after shipment. As in any business operation, cash flow is a major concern. If a supplier makes a product and is not paid immediately, the supplier lacks resources to cover past expenses, which may limit its ability to start a new production cycle effectively. In some cases, a delay in payments by buyers to suppliers may result in a delay of salary payments. What the survey indicates is a 19.72% increase in payment time after shipment. In other words, lead firms were able to use their leverage to indicate to suppliers when they will pay, and they were increasingly deciding to pay later. Of course, when the lead firms pay late, it is often able to earn a financial return on those funds during the time it delays in paying its supplier. For the supplier firm, this is lost income. Indeed, the supplier firm may need to take out a costly loan in order to cover new business expenses as it waits to be paid by the lead firm for products already shipped.

Survey findings: sourcing squeeze

The push for shorter lead times – the time given to factories to make and ship a product – has received increased attention with the growth of fast fashion (Taplin, 2014). Many buyers are seeking to develop this model because, if they can get

consumers shopping for new styles with greater frequency, then they can sell more products each year and increase their revenue. However, even retailers that do not engage in a full fast-fashion model are looking for greater speed to market. This allows them to more effectively plan product development closer to the actual time in which consumers will be buying their products. The survey findings indicate from 2011 to 2016 there was a reduction in lead times of 8.14%, from 93.4 days to 85.83 days. Hence, we find some evidence for a sourcing squeeze in terms of lead times. This may contribute to excessive overtime and increased work intensity.

The concern about purchasing practices related to order volume was expressed by suppliers through the open-ended survey question. One supplier explained, 'The costs are increasing, while orders are decreasing and the price is less, too. There are not enough orders to survive.' For example, instead of getting an order for 50,000 units, they might get an order for 10,000 units. This is part of the fast-fashion model where buyers are no longer looking for a large order that sits on their retail shelves for a couple of months, but rather they want small orders that might only sit on the shelves for one month or even a couple of weeks. The problem for suppliers is that this makes it increasingly hard at times to find enough orders to keep a factory running at full capacity. And, since turning down the orders when they come in risks loss of business, it also leads to production spikes, when factories are trying to make more orders than they can handle. This may contribute to forced overtime and unauthorized outsourcing. One supplier noted, 'There is no order consistency. We do subcontract orders. We need regular orders and need a system of receiving orders.' Constant style changes also dramatically hurt productivity, because just as the factory is getting skilled at making a new style, it is time to terminate the order and start something new (Locke, 2013).

An additional sourcing concern explored through this survey is whether buyers changed order specifications once production starts. What is not possible to change once production starts is order volume, because that is related to prior raw material purchases. But changes such as lead times or even the style of buttons are an issue. Indeed, some 26% of suppliers surveyed report that buyers 'often' change order specifications after production starts, and 55% report that buyers 'sometimes' change order specifications after production starts. Only in 19% of the time do suppliers report that buyers do not change order specifications once production starts. This is a concern for suppliers because every change involves production reorganization and thus costs.

Order fluctuations and building safety

Of all the poor labor conditions and workers' rights violations, Bangladesh will always be remembered for Rana Plaza and the issue of building safety. Prices were an important cause of what happened, because suppliers who are squeezed on price tend to turn to less expensive buildings in order to lower costs. That is, many tier 1 factories have been shown to be unsafe. Order fluctuations associated with fast fashion and other factors associated with the drive for speed to market also contribute to sub-optimal buildings, resulting in unsafe working conditions. That is, because order volume is unstable, factory owners are inclined not to turn down orders for fear that their factory might be left idle at a later stage. As a result, they frequently take orders that are beyond their factory capacity. As a result, they may

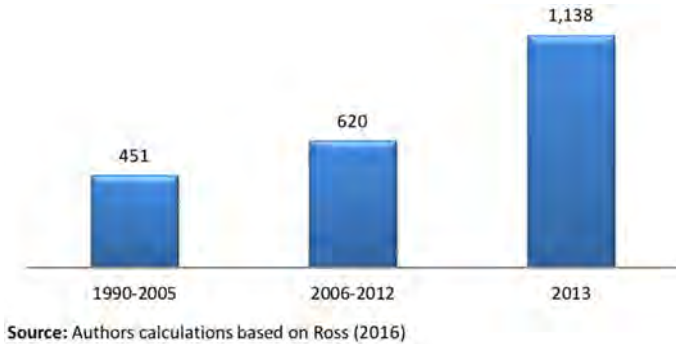


Figure 8. Factory deaths in Bangladesh.

meet production obligations by outsourcing part of a production order to unauthorized and potentially unsafe suppliers (see [Figure 1](#) above).

I have argued that the pricing and sourcing squeeze began to intensify in the early 2000s. What we know regarding life-threatening building safety is that three of the four worst factory disasters in the history of industrial garment production have taken place *since* 2012²⁰ (Nova & Wegemer, 2016). This includes the September 2012 Ali Enterprises factory in Pakistan in which over 250 workers died, the November 2012 Tazreem Fashions fire in Bangladesh in took the lives of 112 workers, and the 2013 Rana Plaza building collapse with the loss of 1,138 lives. Labor rights experts have found that, from 2005 to 2013, nearly 2,000 workers were killed in more than a dozen fires and building collapses (Nova & Wegemer, 2016). In the case of Bangladesh, in the 15-year period from 1990 to 2005 some 451 workers lost their lives in garment factory disasters, whereas in the 7-year period *after* 2005 and before 2013, some 620 workers lost their lives (Ross, 2016). Then, in 2013, the Rana Plaza building collapsed (see [Figure 8](#)). The data on factory fatalities indicate an increase in unsafe buildings since the sourcing squeeze intensified in the early 2000s.²¹

Price and sourcing squeezes impact on labor conditions

Trade data and our survey findings provide support for our argument of the price and sourcing squeezes. The question is how, given these squeezes, firms stay in business. One way is by lowering profit margins. Bangladesh garment employers were known in the 1980s and 1990s for having very high profit margins. For a long period of time, an acceptable profit margin for suppliers set by lead firms was 10% (O'Rourke Group Partners, 2011), and Bangladesh employers appeared to be well above that rate. In the early 2000s, as the price squeeze intensified, it appears some firms reduced their margins and remained economically viable (Staritz, 2011, p. 141). Our survey data provide support for this finding: the period of high profits for most companies is no longer the case. According to the survey results, profit margins decreased by 13.3% from 2011 to 2016, with a mean 2016 profit margin of 7.69%. As noted above, a significant number of suppliers will even accept orders at a loss in order to keep a factory running with the hope of getting more favorable contracts in the future.

Table 2. Bangladesh garment workers' wages and hours of work.

	Women (n = 139)	Men (n = 48)	t	Sig.
Monthly wages without overtime	\$77.34	\$92.94	6.022	0.008
Monthly wages (with O.T. & bonuses)	\$99.17	\$120.29	6.342	<.001
Average hours of work per week	63.24	64.2	0.848	0.466
Average hourly wage	\$0.37	\$0.44	6.342	<.001
Overtime hours are voluntary ('yes')	24.50%	12.20%	1.768	<.001

Source: Author's survey.

The impact of the price and sourcing squeeze are far more deleterious for workers. This is because, just as there is a power imbalance between lead firms and suppliers, so too is there a power imbalance between suppliers and their workers, most of whom are poor, young women from the countryside. As Raworth and Kidder (2009, p. 165) observe, 'suppliers transfer the pressure onto workers, who bear it in the form of precarious employment; workforces that are composed primarily of women and migrant workers endure insecure contracts, low wages, excessive hours and few benefits'.

To explore wage and hours of work, during the year we were conducting the supplier survey in Bangladesh we also conducted structured interviews with garment workers in the Dhaka region. What the survey findings indicate is that, for an average monthly wage, female workers earned USD 77.34 and male workers earned USD 92.94. For average monthly wages with overtime pay and bonuses, female workers reported earning USD 99.17 and male workers reported earning USD 120.29. This amounts to an hourly take-home wage of USD 0.37 for women and USD 0.44 for men (see Table 2). Some 12.2% of men and 4.3% of women indicated that their wages always covered their living expenses. What these data suggest is that the price squeeze has contributed to sub-poverty wages and that women workers face additional discrimination based on their gender. This provides support for the arguments of gender-based wage discrimination in GSCs (Barrientos, Dolan, & Tallotire, 2003).

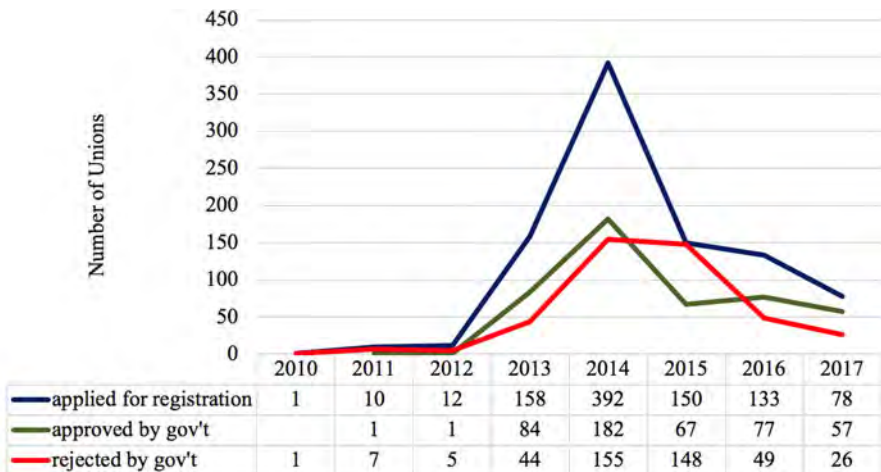
Workers also reported an average work week of 63.49 h, with some 31.4% of workers indicating they worked 72 h per week. Notably, there was no significant difference between the number of hours men and women worked per week. When asked whether overtime hours were voluntary or obligatory, some 77.2% of the respondents indicated that overtime hours were obligatory (see Table 2). This suggests support for the argument that short lead times and frequent adjustment to order specifications on short notice are conducive to long hours and forced overtime.²² Finally, we asked about work intensity. Specifically, we inquired whether their rate of production (production targets) had stayed the same, gotten faster or gotten a lot faster over the last 5 years. Some 47.8% stated that their rate had stayed the same, whereas 52.2% indicated the pace had gotten faster to a lot faster. However, these findings on work intensity are very tentative because only 23 of the 188 workers surveyed answered this question. Further research in this area is needed.

Price and sourcing squeezes and workers' rights

These findings on working conditions lead us to my second proposition: that the price and sourcing squeezes adversely affect respect for workers' rights, because

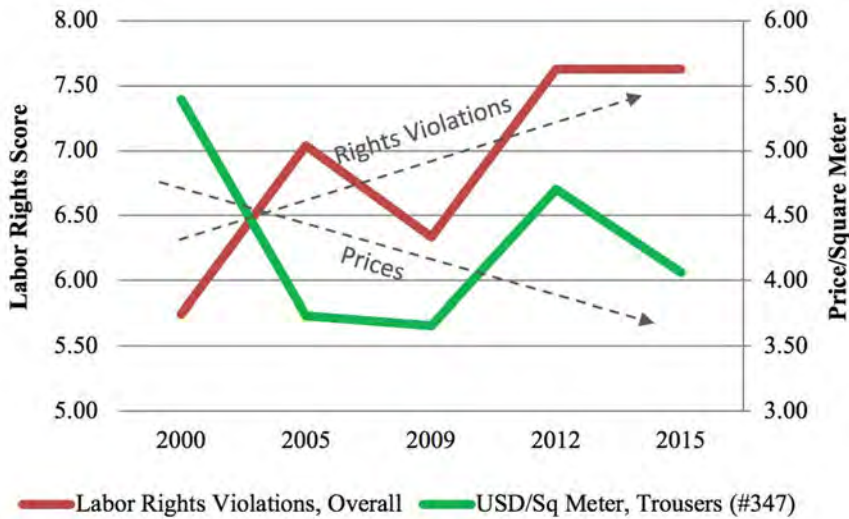
unions are presumed to push for better (e.g. costlier) terms of employment and because unions are expected to lessen firm flexibility in terms of imposing working hours and production targets. In the case of Bangladesh, there has been much discussion and debate regarding the issue of workers' rights. Bangladesh has been repeatedly notified by the International Labour Organization that its laws regarding freedom of association need to come into compliance with international standards, notably by allowing for unionization in export processing zones and facilitating the unionization process in the garment sector by removing bureaucratic obstacles, government discretionary authority and an unreasonably high membership threshold requirement.²³

Following Rana Plaza, strong international pressure contributed to labor law reforms that modestly facilitated union registration. Perhaps most importantly, in the year following Rana Plaza, workers, unions, employers and the government realized the country was being closely monitored by the EU, the United States and Canada (among others) and the International Labor Organization. This gave unions and the workers they represented the sense of protection they needed to increase their organizing drives while signaling to employers and governments the need to restrain from actions that could be perceived as anti-union. In this context, the number of unions applying for government recognition increased dramatically (from 12 applications in 2012 to 392 in 2014). And the number of government approvals also escalated. As of January 2018, there were 440 RMG factories with unionization, up from less than 100 prior to Rana Plaza.²⁴ However, the labor law reforms did not modify the requirement for a 30% threshold for unionization formation (share of workers in a given workplace supporting a union), and nor did it modify the exemption of Export Processing Zones from the labor law. As attention on Bangladesh waned, the government rejected more union registrations, anti-union repression intensified and union applications declined (see Figure 9).



Source: Solidarity Center, Bangladesh.

Figure 9. Trade unions in Bangladesh garment sector.



Sources: Author's calculations based on LRI and OTEXA data.

Figure 10. Prices (trousers USD/Sq. m) and workers' rights violations in Bangladesh.

What role might the price squeeze have on respect for workers' rights? Using the LRIs, we are able to observe trends over time. The LRI data are organized in three categories: violations in law, violations in practice and overall violations. Using these data for Bangladesh, the first observation we can make is the depth of workers' rights violations. Since 2012, Bangladesh has scored more than 7 on a 10-point scale in which 10 indicates a complete lack of labor rights. Excluding countries that received a default score of 10 for their lack of civil liberties, Bangladesh has the fourth worst labor rights score in the world. Moreover, since 2000, there has been an increase in the overall violation of workers' rights in Bangladesh and a general increase in law and in practice violations. To explore the relationship between workers' rights and pricing, it is possible to superimpose the price per square meter for men's and boys' cotton trousers exported from Bangladesh to the US over the figure worker rights violations. While there are some ups and downs in prices and worker violations, the overall trends are a decline in price and a rise in labor rights violations (see Figure 10).

As the price squeeze results in a squeeze on wages, the squeeze on wages can motivate worker collective action. There has been a long history of worker mobilization to increase wages in Bangladesh (Siddiqi, 2017). In response, employers have used their leverage over the state to suppress worker efforts to improve conditions, which is captured by the data presented in Figure 9. For example, in December 2016, some 1,600 garment workers were dismissed and 34 activists were arrested and detained after workers protested and demanded higher wages. National and international labor rights advocates demanded buyers doing business in Bangladesh take action.

On June 14, 2018, the European Parliament passed a resolution stating that Bangladesh needed to address the persecuting of trade union leaders and poor

working conditions, including long working hours, low wages and hazardous conditions.²⁵ The ILO Committee of Experts noted in 2016, ‘with concern the numerous allegations of anti-union discrimination and harassment of workers, including dismissals, blacklisting, transfers, arrests, detention, threats and false criminal charges combined with insufficient labor inspection, lack of remedy and redress and delays in judicial proceedings.’²⁶ The Committee, ‘urged the Government to investigate as a matter of urgency all acts of anti-union discrimination, ensure the reinstatement of those illegally dismissed and impose fines or criminal sanctions (particularly in cases of violence against trade unionists) according to the law.’²⁷ Yet, worker rights violations continued to escalate. In December 2018, when workers demanded a minimum wage of USD 188 per month, some 11,600 were dismissed (WRC, 2019).

Workers’ rights in comparative perspective

We have seen how workers’ rights violations tend to increase with a decline in prices in Bangladesh. And we have seen that, in general, there has been a significant decline in prices since 2000. How has this decline affected workers’ rights dynamics in the apparel export sector more broadly? In the case of Vietnam, as the real dollar price paid per blouse (a major garment export) shipped from Vietnam to the United States from 2005 to 2016 declined by 29.09 per cent, there is evidence for chronic worker violations there (Anner, 2018b). In a prior research project with Bair and Blasi, we showed that, this pricing squeeze has affected all of the twenty top apparel exporters to the United States, that this price squeeze intensified in the late 1990s and early 2000s, and that this price squeeze was associated with a decline respect for workers’ rights in major apparel exporters (Anner et al., 2013). The data used for that project was based on a single source workers’ rights database with a three-point scale, the Cingranelli and Richards Human Rights Dataset (CIRI).

A more developed workers rights database is the LRIs. Rather than one source, it codes nine sources. And in place of a three-point scale, it has 108 evaluation criteria representing different types of worker rights violations, including violations of fundamental civil liberties, workers’ right to establish and join organizations, rights concerning the internal functioning of these organizations, rights to collective bargaining and the right to strike. The database also provides a more recent picture of worker rights violations.

Using trade data to determine the ten top apparel exporters to the U.S. in 2000 and 2015 and their market shares, it can be seen that some of the worst workers’ rights violators became the largest exporters, and countries with slightly better scores became less prominent exporters. Furthermore, some countries, such as Bangladesh and Honduras, increased their level of violations as they increased their export share to the US. Defining top workers’ rights violations as countries with an overall score of 6.00 or higher, we see that 42.83% of exports to the US in 2005 came from top violators whereas in 2015, 70.84% of apparel came from top violators, a 65.39% increase (see Table 3). What this suggests is that the price and sourcing squeeze have increased workers’ rights violations not only in Bangladesh but also among top apparel exporters around the world.

Table 3. Top ten apparel exports to the United States and workers' right violations (2000; 2015) (Pink shaded areas: 'top violators').

Country	Sq. Meters (100 million)	Share of US imports	Labor Rights Violations Scores (1–10)		
			Total	In law	In practice
2005					
China	58.83	26.74%	10.00	10.00	10.00
Mexico	17.03	7.74%	4.75	3.10	4.43
Honduras	12.47	5.67%	3.91	3.17	3.03
Bangladesh	11.25	5.11%	7.04	6.62	4.52
El Salvador	8.66	3.94%	5.13	3.68	4.44
Indonesia	8.23	3.74%	7.43	5.25	6.52
Vietnam	8.01	3.64%	10.00	10.00	10.00
India	7.90	3.59%	8.41	6.36	6.96
Dominican Republic	7.15	3.25%	3.10	2.03	2.89
Cambodia	7.10	3.23%	5.66	2.61	6.35
Average			6.54	5.28	5.91
2005: Top Violators, Share of Total Imports: 42.83%					
2015					
China	113.84	41.85%	10.00	10.00	10.00
Vietnam	31.35	11.53%	10.00	10.00	10.00
Bangladesh	18.71	6.88%	7.63	6.37	5.71
Indonesia	12.65	4.65%	6.49	5.81	4.47
Honduras	11.14	4.10%	5.37	3.68	4.83
Cambodia	10.51	3.86%	5.56	3.14	5.66
India	10.23	3.76%	6.27	6.36	3.56
Mexico	8.99	3.31%	4.95	3.35	4.49
El Salvador	8.13	2.99%	4.95	3.98	3.86
Pakistan	5.92	2.18%	7.97	8.79	3.82
Average			6.92	6.15	5.64
2015: Top Violators, Share of Total Imports: 70.84%					

Source: Author's calculations based on the Labour Rights Indicators and OTEXA data.

Conclusions

This article has explored how buyer consolidation and supplier dispersion have contributed to a growth in power asymmetries in apparel GSCs since the late 1990s. This power asymmetry is expressed through two mechanisms: a price squeeze and a sourcing squeeze. Further, this article illustrated how these two mechanisms have had deleterious impacts on working conditions and workers' rights. What might be done to address these dynamics? Barrientos et al. (2011, pp. 336–337) argue that social upgrading can be facilitated with interventions by trade unions, states and multi-stakeholder codes of labor practices.

No doubt, the right interventions can go a long way to improving working conditions and respect for workers' rights in GSCs. The role of the state in establishing and enforcing labor standards and workers' rights is crucial (Seidman, 2007), particularly in the area of freedom of association rights (Anner, 2012; Locke et al., 2009). Private and state mechanisms, under the right circumstances, could complement each other (Amengual, 2010). And, as Bartley (2018) finds, there may be a positive impact when there is a 're-centering' of the state' as part of 'place-conscious transnational governance' that used domestic law as a point of reference and state-imposed penalties on violators.

This article also suggests that addressing poor working conditions and workers' rights violations involves addressing the price and the sourcing squeezes. The problem, for example, of inadequate wages is not simply a matter of finding the right combination of private and state mechanisms to ensure compliance with standards.

Rather, part of the problem in many cases is that state standards are so low. In Bangladesh, factories that pay garment workers USD 0.51 per hour (a rate which covers only a fraction of living expenses) are in full compliance with national law. The pressure to keep those rates low comes from the price and the sourcing squeezes across apparel export countries. For example, in 2018, the Cambodian Prime Minister Hun Sen told an assembly of workers: ‘Employers won’t stay if the price of labor is expensive. There’s no way they could endure to stay if the minimum wage continues to increase. Be reasonable for your employers because if they go bankrupt, they will move to another location.’²⁸ At the same time that Cambodian garment workers were paid USD 0.83 per hour, the largest apparel retailer in the world, Amazon, saw its stock valuation pass USD 1 trillion and Jeff Bezos, Amazon’s CEO, net worth reach USD 166 billion.²⁹

It was the beyond the scope of this paper to examine other economic sectors. However, extant literature suggests there are adverse impacts on labor of a sourcing squeeze in other GSCs, be that in the agriculture sector, such as bananas and cut flowers (Riisgaard & Hammer, 2011), or in electronics (Locke, 2013). Indeed, while some has pointed to the mega-supplier Foxconn as evidence that suppliers in the electronics can grow in size and scope and thus, in theory, gain power relative to their buyers (Locke et al., 2009), data on profits margins suggests even this mega-supplier has been no match for the power of the lead-firm, Apple. In 2011, Apple enjoyed a gross profit margin of 40.44% while Foxconn’s margins were only 1.98% (Locke, 2013), a power asymmetry that has increased over time (Chan, Pun, & Selden, 2016).

What these cases suggest is that achieving decent work requires addressing supply chain power asymmetries and to fundamentally alter lead firm sourcing practices. More stable orders allow suppliers to more adequately allocate human resources without resorting to unauthorized outsourcing or forced overtime. And stable orders allow suppliers to increase their efficiency on a given order (Locke, 2013). The challenge is to then ensure that workers benefit from such potential changes. These cases also suggest a need for mechanisms to address pricing practices. One such approach for doing that is reflected in the Bangladesh Accord, which required buyers to ‘negotiate commercial terms with their suppliers which ensure that it is financially feasible for the factories to maintain safe workplaces and comply with upgrade and remediation requirements’.³⁰ This holds retailers and brands responsible for ensuring, ‘ensure factories have the financial capacity to comply with remediation requirements’.³¹ This suggests that cost-sharing approaches should require lead firms to calculate the ‘total cost’ of socially sustainable production, from adequate wages to safe buildings (Hasan, 2019). In addition to the Bangladesh Accord, models of cost-sharing and shared responsibility are present in agriculture, transportation and construction, among other sectors (Blasi & Bair, 2019). And worker-driven initiatives have had an impact. For example, the Bangladesh Accord has addressed approximately 100,000 building safety issues (Anner, 2018a), and the Fair Food Program has resulted in adequate wages for thousands of farmworkers (Asbed & Hitov, 2017)

More broadly, the findings in this article also suggests the need to re-think the state policies and practices that have increased finance capital’s leverage over supply chains while also facilitating lead firm consolidation and supplier dispersion. The development strategy promoted by international agencies based on the assumption that every poor country can simultaneously export apparel and achieve

development needs to be revisited. Rather than promote development, the result has been a crisis of overcapacity. The retailer and brand response has been to keep production costs low through squeezing workers and while getting consumers to buy more and more low-priced garments. This approach is not sustainable for the environment or for workers.

Notes

1. The literature also uses the terms ‘global value chains,’ ‘global commodity chains,’ and ‘global production networks,’ and there is considerable debate over the meanings of these terms (Bair, 2009). I use the term ‘global supply chains’ as a more neutral term and one that has been adopted by the International Labour Organization. The ILO defines GSCs as, “the cross-border organization of the activities required to produce goods or services and bring them to consumers through inputs and various phases of development, production and delivery” (ILO, 2016, p. 1).
2. Jason Zweig, “The Disturbing New Facts about American Capitalism.” *The Wall Street Journal*, March 3, 2017.
3. Cited in Zweig, “The Disturbing New Facts about American Capitalism.” *The Wall Street Journal*, March 3, 2017.
4. Neil Irwin, “Are Superstar Firms and Amazon Effects Reshaping the Economy?” *The New York Times*, August 25, 2018.
5. See Lakhani, Kuruvilla, & Avgar (2013) for how this topology corresponds to employment relations practices.
6. According to World Bank data, China’s 787 million workers account for 22.81% of the world’s worker. See: <https://data.worldbank.org/indicator/SL.TLF.TOTL.IN> (accessed September 12, 2018).
7. CNBC, “Amazon’s 100 million Prime members will help it become the No. 1 apparel retailer in the US.” April 19, 2018. <https://www.cnbc.com/2018/04/19/amazon-to-be-the-no-1-apparel-retailer-in-the-us-morgan-stanley.html>
8. Laura Stevens and Amrith Ramkumar, “Amazon Hits \$1 Trillion Valuation.” *The Wall Street Journal*, September 4, 2018. See: <https://www.wsj.com/articles/amazon-hits-1-trillion-valuation-1536075734?mod=searchresults&page=1&pos=2>
9. A shorter, online version of this survey was developed with considerable input from Jeremy Blasi and Jennifer Bair, for which the author is very grateful.
10. See: <http://database.dife.gov.bd/>.
11. A handful of suppliers completed an online version of the survey, and some of these suppliers did not identify their sub-districts.
12. The sample size yields a confidence level of 90%, with a margin of error of 5.4%.
13. <http://bangladeshaccord.org/factories/list-factories/>
14. Due to financial and time restraints, this survey was more limited than the supplier survey.
15. For gender, Kabeer, Haq, and Sulaiman (2019) purposively selected their sample to be made up of 66% of women and 33% of men.
16. Center for Global Worker’s Rights. (2019). Labour Rights Indicators. Retrieved April 1, 2019, from <http://labour-rights-indicators.la.psu.edu/>
17. For more information and a full, detailed explanation of the methodology see Kucera & Sari (forthcoming).
18. See: <https://markets.businessinsider.com/commodities/historical-prices/cotton-price/>
19. In 2015, the year the WTO reported USD 26.60 billion in clothing exports from Bangladesh, the World Bank reported USD 34.85 billion in total exports of goods and services from Bangladesh and USD 195.07 billion in GDP.
20. The fourth disaster was the Triangle Shirtwaist factory fire of 1911 in which 146 garment workers in New York City lost their lives.
21. Of course, factory deaths are the most extreme, but not the only indication of unsafe buildings. Data gathered from factory inspections by the Bangladesh Accord indicate

- that, as of April 2019, the Accord had detected 21,799 structural violations, 46,932 fire safety violations, and 73,239 electrical safety violations in garment factories. The Accord covers 1,688 factories, which indicates that, on average, these garment factories had 84 violations per factory (see Bangladesh Accord, <https://bangladeshaccord.org/>, accessed April 29, 2019). Unfortunately, these data are not available for the 1990s, and thus do not allow for a comparison across time periods.
22. It may also be conducive to unauthorized sub-contracting, but we were not able to explore this possibility through our structured interview.
 23. See: http://www.ilo.org/wcmsp5/groups/public/—ed_norm/—relconf/documents/meetingdocument/wcms_543646.pdf
 24. Solidarity Center, Dhaka Office.
 25. See: <http://www.europarl.europa.eu/news/en/press-room/20170609IPR77025/bangladesh-should-do-more-for-its-textile-workers-meps-warn>.
 26. Observation (CEACR) – adopted 2016, published 106th ILC session (2017) Right to Organize and Collective Bargaining Convention, 1949 (No. 98) – Bangladesh (Ratification: 1972).
 27. Ibid.
 28. Cited in Leonie Barrie, September 11, 2018. “Overtime Up in Line with Garment Worker Pay in Cambodia.” *Just Style*.
 29. Wall Street Journal, September 4, 2018: <https://www.wsj.com/articles/amazon-hits-1-trillion-valuation-1536075734?mod=searchresults&page=1&pos=2>
 30. Clause 17 of the Bangladesh Transition Accord. The full clause states: “In order to induce factories to comply with upgrade and remediation requirements of the program, participating brands and retailers will negotiate commercial terms with their suppliers which ensure that it is financially feasible for the factories to maintain safe workplaces and comply with upgrade and remediation requirements. Each signatory company may, at its option, use alternative means to ensure factories have the financial capacity to comply with remediation requirements, including but not limited to joint investments, providing loans, accessing donor or government support, through offering business incentives or through paying for renovations directly.” <http://bangladeshaccord.org/wp-content/uploads/2018-Accord-full-text.pdf>.
 31. Ibid.

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Disclosure statement

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