

The Impacts of Stakeholder Pressures on Workplace Compliance in the Bangladeshi
Apparel Industry

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This thesis titled
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Abstract

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The Impacts of Stakeholder Pressures on Workplace Compliance in the Bangladeshi
Apparel industry

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Textiles and apparel are the largest industrial sector in Bangladesh, which accounts for 83.49% of the country's total export and employs 4 million workers. Although the sector has made significant progress in the global market, it has also faced negative publicities due to notorious industrial incidents in 2012 and 2013. The disastrous incidents exposed long-term negligence of workers' safety in its manufacturing sites. Beginning with the attentions from human rights organizations, various groups, such as consumers, government, and retailers and brands, have shown their concerns and taken initiatives to improve unsafe working conditions. The apparel retailers and brands began requiring a workplace compliance certificate from the factories. To assure the safe workplace, Bangladesh government passed and enacted related laws for the industry. However, the effectiveness of these stakeholder forces in influencing the factories to be compliant still remains unanswered because, 1) the scientific research in the area has been scant, and 2) existing studies are limited to qualitative approaches. The primary goal of this study was to understand the importance and effectiveness of the stakeholders impacting the workplace safety issues in Bangladesh.

The purpose of this study was to examine the impacts of the pressures from various stakeholders regarding workplace compliance in the Bangladeshi apparel sector.

The stakeholder theory provided the framework for this study and identified the legitimate and influential stakeholders of the workplace compliance issue. It was hypothesized that the level of workplace compliance is positively related to the magnitude of pressures from buyers, workers, government, non-governmental organizations (NGOs), and competitors. On the other hand, due to a high cost in implementing initiatives, the level of compliance was hypothesized to be negatively related to the owner's pressure.

A dual data approach, matching a primary data set with a secondary, was used. The source of the secondary data was the Accord's open-source reports that specify the current compliance statuses of registered apparel factories (i.e., compliant, under remediation progress, and non-compliant). An online survey to the Bangladeshi apparel factories was conducted to collect the primary data set, which was combined with matching factories' compliance status for data analysis.

Responses from 43 compliant and 45 'in-progress' factories were analyzed using SPSS. The level of perceived pressures from the stakeholders were relatively high in general. A binary logistic regression test exhibited seemingly negative impacts of the pressures from NGOs, workers, and government on workplace compliance and positive impacts of the pressures from owners, buyers, and competitors. However, the relationships were statistically insignificant. A series of t-tests indicated that in-progress factories felt more pressure from workers than on the compliant factories. The government and NGOs also showed their significance in explaining workplace compliance.

This study was the first quantitative study investigating the factors of workplace compliance in Bangladesh. This study contributes to the field of textiles and apparel by addressing one of the imminent ethical issues in the apparel supply chain management. The findings of the study provided the interested parties insights and implications to effectively deliver messages related to workplace compliance and strengthen the participation of certain stakeholders.

Dedication

Bangladesh Women's National Cricket Team

Bangladesh Men's National Cricket Team

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Chapter 1: Introduction

The clothing industry accounts for US\$ 300.23 billion in global exports in 2017 (WTO, 2019). Despite being a geographically small country in the South Asian region, Bangladesh has become one of the top three apparel exporter countries. In Fiscal Year 2017-18, the total export of Bangladesh was US\$ 36.67 billion to which the apparel sector contributed US\$ 30.61 billion (BGMEA, 2019), accounting for 83.49% of its total export.

While the Bangladeshi apparel sector has made significant progress towards its position in the global trade, it has also faced negative publicities due to notorious violations of workers' safety in its manufacturing sites, such as the Rana Plaza collapse in the early 2010s (Mausumi & Rahman, 2018). A commercial building collapsed due to a structural failure in 2013 and killed 1,134 workers near Dhaka city of Bangladesh. Another incident known as the Tazreen fashion fire in 2012 killed approximately 117 people. Since these incidences that made headlines in the world news, non-governmental organizations (NGOs), government, trade unions, and even the retailers/buyers have expressed their concerns for the Bangladeshi apparel factories and their working environment (Kamal & Deegan, 2013). Buyers began paying attention to the media and public opinions related to the workers' safety issues in Bangladesh. One of the major initiatives was the establishment of the Accord by which western corporations agreed to act upon (Mausumi & Rahman, 2018). The apparel factories essentially need to satisfy the demands of these stakeholders and make the workplace safe (Kamal & Deegan, 2013).

The sweatshops and unfair labor practices in global trade have attracted a vast number of researchers for decades and many address the roles of stakeholders in business behaviors (e.g., Mausumi & Rahman, 2018; Hossain & Arefin, 2015, Park-Poaps & Rees, 2010). However, research related to worker's safety and other labor issues in Bangladesh has been scant. A few studies have found or investigated various stakeholders' concerns as the primary influential force for the industry to implement workplace safety initiatives (e.g., Mausumi & Rahman, 2018; Hossain & Arefin, 2015). For example, Hossain and Arefin (2015) assessed the roles of buyers in improving workplace environment in the apparel factories in Bangladesh. However, most studies have mainly been either discussions or qualitative studies that limit generalizability (e.g., Mausumi & Rahman, 2018; Ansary & Barua, 2015). The significance or effectiveness of various stakeholders in improving workplace safety has not yet studied comprehensively nor quantitatively assessed. Furthermore, gathering valid data regarding the issue is challenging, because of the reluctance of the owners and a lack of disclosure practices in Bangladeshi industries (Mausumi & Rahman, 2018). Therefore, there is a need for unbiased and reliable data.

The primary research question was whether and which stakeholders have significant impacts on the manufacturers' compliance with workplace safety standards. The stakeholder theory provided a framework for this study and identified salient stakeholders in the workplace compliance issue in the industry. Objectives of this study include:

1. Identify the key stakeholders and their roles in the Bangladeshi apparel industry.

2. Examine the impacts of the stakeholders' pressures on workplace compliance among Bangladeshi apparel factories.

Worker's rights cover a broad range of issues such as minimum wages, child labor, women issues, gender inequality, and environmental issues. In this study, only the workplace safety issue was focused on. In Bangladesh, the term, "compliance" is typically used by the apparel businesses to indicate meeting the workplace safety standards. Reflecting this norm in the field, the term, workplace compliance, was used in this study to indicate implementing initiatives and meeting the workplace safety standards.

This study evaluates the effectiveness of stakeholders' concerns and voices in managing workplace compliance. It contributes to the field of textiles and apparel by advancing our understanding of the roles and relative importance of various stakeholders in ensuring workplace safety. The results can also help Bangladeshi practitioners learn about the stakeholder concepts and their responsibilities to the stakeholders. The apparel manufacturers from other developing and underdeveloped countries that share similar socio-economic backgrounds with Bangladesh can also gain insights from this study in implementing workplace safety during their industrial development process.

Definitions

Workers. In this study, “workers” refer a laborer who directly takes part in the manufacturing process in the apparel industry (e.g., sewing machine operator, loader, cutting operator, quality inspection operator, maintenance labor, packaging line worker etc.). In Bangladeshi apparel factories, workers are hired by hourly minimum wages.

Workplace compliance. Workplace compliance can be defined as a state of being in accordance with established industry guidelines or specifications (Hossain & Arefin, 2015).

Buyers. “Buyers” such as brands, importers, and retailers (e.g., Nike, Gap, Gant, Levi’s, Walmart) in this study refer to the customers of the Bangladeshi apparel factories. The buyers are mostly from Europe and North America.

Chapter 2: Literature Review

Chapter 2 discusses the Bangladeshi apparel industry, the theoretical framework, and various stakeholders and their roles in the workplace compliance in the Bangladeshi apparel industry.

Bangladeshi Apparel Industry

Importance of the apparel industry in Bangladesh. Bangladesh is one of the most populous countries in Asia with 164.7 million population and \$1,470 Gross National Income per capita (The World Bank, 2019). Bangladesh's economic growth is mostly dependent on apparel exports. The apparel sector, apart from playing an essential role in export earnings of Bangladesh, also makes a significant contribution to the empowerment of women in the country (Mausumi & Rahman, 2018). According to the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), there are a total of 4,368 apparel factories in Bangladesh and approximately 4 million workers are employed in these factories (BGMEA, 2019). More than 80% of the apparel factory workers are women (Kabir, Maple, & Fatema, 2018). Ninety-five percent of all apparel factories in Bangladesh are locally owned and the rest are foreign-owned (Textile Intelligence, 2003).

Total export figures of Bangladesh apparel, from 1984 to 2018, are shown in Figure 1. The values of the export show remarkable growth over recent years. The volume of apparel exports has increased from less than US\$ 10 million to US\$ 25.2 billion over the 1983-2018 period (Mausumi & Rahman, 2018). Shirts, trousers, jackets, t-shirts, and sweaters are the main apparel items exported from Bangladesh (BGMEA, 2019a). The EU, Canada, the US and other smaller markets such as Australia, Brazil,

Chile, Japan, India, Korea, Mexico, Russia, Turkey, etc. are the major importers of Bangladeshi apparel products (BGMEA, 2019b). European Union (EU) has been the largest importer of Bangladeshi textile and apparel products followed by the United States (Curran & Nadvi, 2015). Walmart, H&M, GAP, Levi's, New Look, Li & Fung, Esprit, Target, Spring Field, YSL, Matalan, Max, Haggar, Marks & Spencer, Zara, Nike, Adidas, JC Penny, and Hugo Boss are the major apparel buyers or retailers of Bangladeshi apparel product.

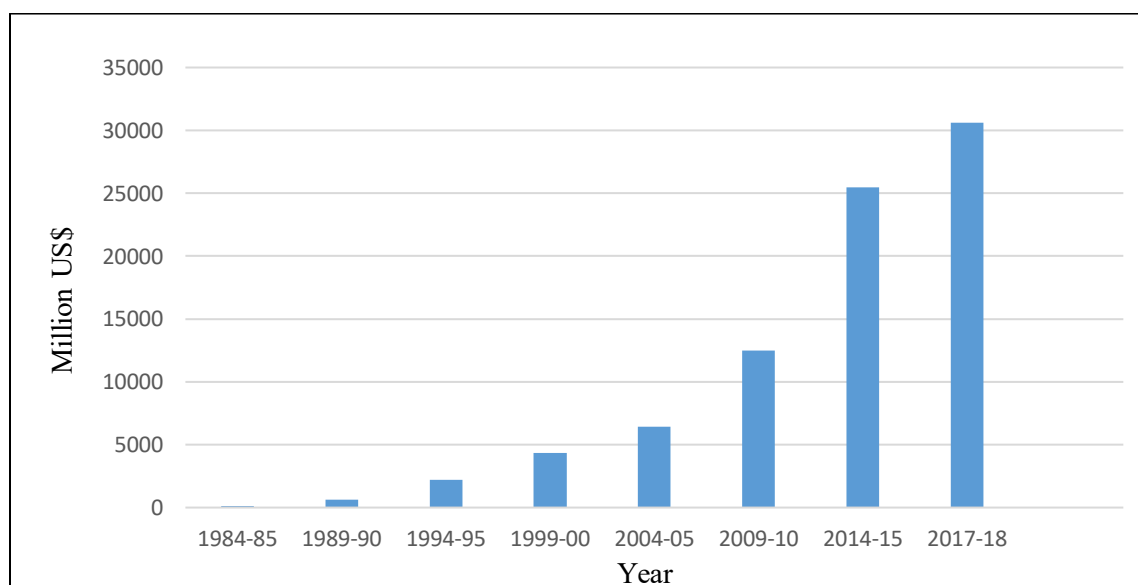


Figure 1. Total Bangladesh export of apparel in million US\$ (1984-2018). Data from BGMEA (2019c)

Apparel's share in Bangladeshi total export in 2018 was 83.5%, while 16% in 1985. Figure 2 shows the share figure change from 1984 to 2018 (BGMEA, 2019c). The sector, therefore, has become the primary source of foreign exchange earnings for Bangladesh.

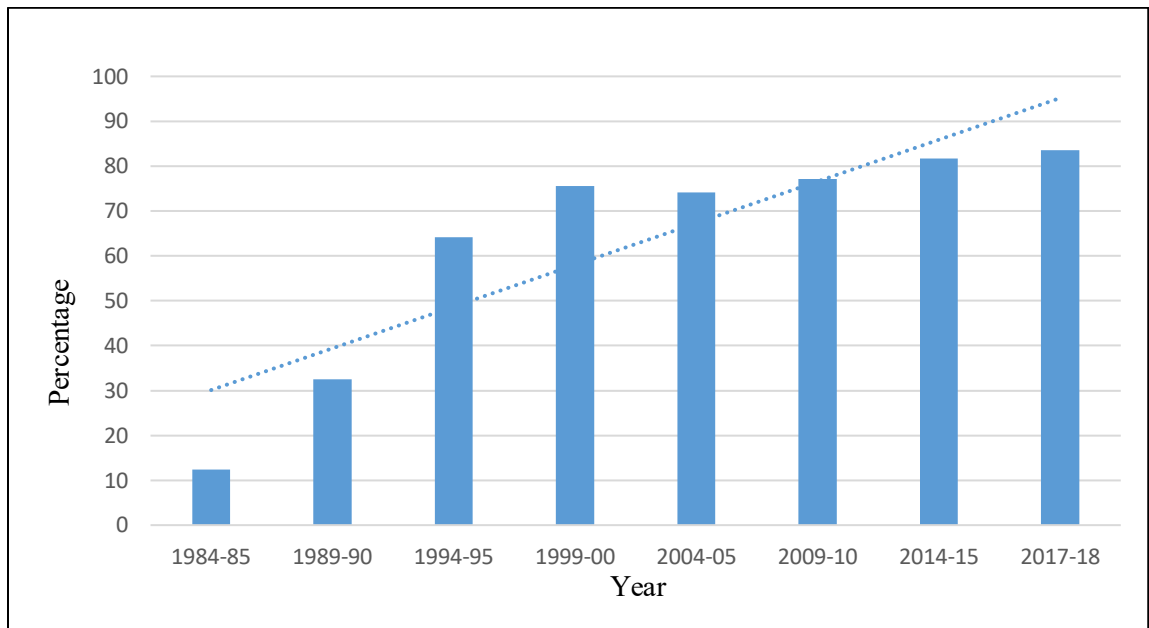


Figure 2. Apparel share in gross Bangladeshi export from 1984 to 2018. Data from BGMEA (2019c)

A brief history of the Bangladeshi apparel industry. The apparel industry in Bangladesh started its journey in late 1970 and continued to be the prominent driver of the country's economy. Although the Multi-Fiber Agreement (MFA) started to restrict the volume of imports from the major suppliers in the 70s, it also enabled the low labor-cost countries (e.g., Bangladesh) to launch export-oriented apparel production. These created opportunities for export earnings and employment in less developing countries (Berik & Rodgers, 2010). The MFA, which was in place from 1974 to 2005, guaranteed their unrestricted access to the world clothing market. The Bangladeshi apparel industry was favored by the importers during the MFA era due to the MFA. Table 1 shows the key development stages and challenges faced by the industry

Table 1

Important Stages of the Bangladeshi Apparel Industry

Year	Stage
1977-1980	Early period of growth
1982-1985	Boom days
1985	Imposed quota restrictions
1990s	Knitwear section developed significantly
1994-95	Child labor issues and solutions
2003	Withdrawal of Canadian quota restriction (MFA)
2005	Phase-out of export quota (MFA) system
2012	Fire incidents in Tazrin Fashion factory
2013	Minimum wage set at minimum \$65
2013	Rana Plaza collapsed
2014	Establishment of Accord on fire and building safety Alliance on workers' safety
January, 2019	Increased minimum wage to \$100 in the apparel industry
2019	A total of 227 factories completed the initial remediation inspected by Accord. The Government of Bangladesh and ILO led the inspection program of the National Action Plan (NAP) to ensure safety inspections.

In the early 1980s, the industry was mainly concentrating on woven apparel product (Haider, 2007). Knit apparel manufacturing and export began to expand during the early 1990s (Haider, 2007). However, by 2005, when the MFA was expired by a ten-year phase-out plan, Bangladesh would face a very competitive apparel market. Many predicted the MFA phase-out would have a negative impact on Bangladesh. However, as

seen in Figure 1, the country's export volume and export share in apparel have in fact increased even since 2005 (Mausumi & Rahman, 2018). According to Kamal and Deegan (2013), low labor costs, availability of resources, and skilled apparel workers assisted the industry to overcome the challenges.

In 2012 and 2013, the Bangladeshi apparel sector has been exposed to the media around the world due to two tragic incidents in apparel factories that killed more than 1,200 and injured over 2,500 people (Mausumi & Rahman, 2018). One of the incidents is known as the Rana Plaza Collapse. The Rana Plaza building initially got approval for commercial space from the local municipality of Savar, Dhaka but it was converted to an industrial building by placing heavy generators on the top floors for garments production, which was a serious violation of building codes (Ansary & Barua, 2015). After a thorough inspection, the industrial police recommended to close and suspend every business operation in the building. On the day of the accident, all the business offices were remained closed except the factories. The workers and officials of the factories involuntarily reported to work in the morning (Ansary & Barua, 2015). It was said that the owners and managers forced the apparel workers to come to work by threatening them with not paying salary for 3-days (Ansary & Barua, 2015). The other incident is known as Tazreen fashion fire. It was presumed that the fire started on the ground floor of the nine-stories factory that was caused by a short circuit. The presence of large storage of fabrics in the building made the fire spread very fast, and as a result, workers were trapped on the floors (Ethirajan, 2012).

The industry has also had multiple accidents other than these publicized accidents. In 2005, Spectrum factory collapsed which killed nearly 64 people. The

building was built on an improper field and was not approved by the building authorities (Arif, Mahmud, & Islam, 2017). A lack of evacuation plans killed 63 workers in another fire at the KTS textile factory in 2006 (Arif et al., 2017). The KTS did not have any fire safety equipment or fire drills in their production site. In investigating the causes and effects of the deadly industrial incidents in the Bangladeshi apparel sector, Arif et al., (2017) found that, from 1990 to 2016, almost 1,626 workers died, and 4,829 workers were seriously injured from a total of 69 industrial accidents. They also found that 94.2% of the incidents were fire related, 3% building collapse, and another 3% were other causes. In a study, Wadud, Huda, and Ahmed (2014) developed the fire risk index (FRI) to assess the level of fire risks in the 60 apparel factories in Dhaka, the capital city of Bangladesh. They found the mean score of FRI was 2.8 (on a 0-5 scale, higher FRI score means lower risk) and 67% of the factories scored less than 3. Many factories also performed very poorly in various safety parameters of their buildings.

Remedial efforts for worker's safety. International Labor Organization (ILO) monitors and guides most of the labor standards across borders (Berik & Rodgers, 2010). By framing and revising necessary labor laws, the ILO offers technical cooperation and advisory services to its member countries. The ILO outlines basic labor market norms to protect worker's rights from forced labor, non-discrimination, child labor and freedom to bargain. The ILO primarily uses moral persuasion and international public embarrassment to encourage compliance of the member countries (Berik & Rodgers, 2010). Bangladesh, as an ILO member, endorses six out of the eight ILO core conventions. Bangladeshi government has started setting up a national regulatory body to take care of the compliance inspection work of apparel factories (Siddiqui & Paul, 2018).

However, enforcement of the laws has been questionable (Berik & Rodgers, 2010). An amendment to the Bangladesh Labor Act showed improvements in the areas of freedom of association, collective bargaining, and workplace safety. According to an ILO report, by October 2015, 1,475 apparel factories were assessed by the government, which was supported by the ILO (ILO, 2015). Additional 2,185 factories have been inspected by the Accord and the Alliance (ILO, 2015).

The most critical labor issues in Bangladesh include child labor, low wage, worker safety concern, and worker abuse. According to Berik and Rodgers (2010), extremely low wages and poor working conditions in the apparel industry have persisted in Bangladesh. The Bangladeshi apparel industry has been known for being one of the lowest wage industries in the globe. Similar to most other apparel exporting countries, child labor is also common in the Bangladeshi apparel industry.

Some studies (e.g., Berik & Rodgers, 2010; Tania & Sultana, 2014) also indicated that poor working conditions in the apparel sector have persisted with very few improvements. Some of the employers often hire workers without providing any formal appointment document (Berik & Rodgers, 2010). Not providing proper employment documentation enables employers to hide real ages and ignore the basic rights of the workers. Ansary and Barua (2015) reviewed the initiatives by various authorities established since the Rana Plaza collapse, including the USTR (The United States Trade Representative) Bangladesh action plan, EU (European Union) Sustainability compact, and NTPA (National Tripartite Plan of Action). They found that substantial progress had been made in structural assessments of buildings used by apparel factories claimed that workplace safety required beyond structural assessment. Ansary and Barua (2015) also

claimed that, the stakeholders and their reluctance in addressing the problems in the Bangladeshi apparel industry were to blame for the severe safety violations.

Accord and Alliance. After the Rana Plaza and Tazreen fire, the Accord and the Alliance, two private regulatory programs (Mausumi & Rahman, 2018) were established by global buyers to ensure workplace safety in Bangladesh apparel industry. Their primary purpose was keeping the workers safe from possible fires, building collapses, or other accidents. These initiatives have already been in existence in developed and developing countries such as UK, Germany, India, Thailand, but the apparel industry in Bangladesh had not experienced these until the deadly incidents (Mausumi & Rahman, 2018). Both Accord and Alliance are similar in their functions, yet the Accord mainly represents European apparel retailers and trade unions, whereas Alliance represents American companies (Mausumi & Rahman, 2018). Buyers agreed to act on the audit reports of Accord and Alliance for ensuring workplace safety in Bangladesh (Mausumi & Rahman, 2018).

According to the Accord's website (<http://bangladeshaccord.org/>), it is an independent, yet legally binding agreement between brands and trade unions. It is governed by a committee composed of the signatory companies and trade unions, and the ILO appoints the chair of the committee. It has been signed by over 180 retailers and brands from the European and North American countries, trade unions, and NGOs (Mausumi & Rahman, 2018). All factories producing for the Accord's signatory companies must undergo independent inspections by the Accord on fire, electrical, and structural safety matters in their production facilities. The Accord Building Standards are largely based on the Bangladesh National Building Codes and the ILO standards

(Accord, 2014). Accord's inspection reports are publicly available on its website in English and Bengali along with pictures of its findings. It also updates the reports periodically on remedial progress for all factories it oversees.

The Alliance is a group of 28 major global retailers formed to develop and launch the Bangladesh Worker Safety Initiative and uses independent qualified assessments to provide factories with a technical understanding of the fire safety and structural concerns related to their facilities. It also offers action plans that aim to systematically and sustainably improve safety conditions for garment workers (Accord, 2014).

The Accord and Alliance, therefore, are considered leading the efforts to improve safety conditions in the factories in Bangladesh through inspections and remediations. To simplify the process and avoid duplicated processes, Alliance coordinates its inspection and certification processes with the Accord. That is, if any factory is inspected and certified by the Accord, the Alliance will accept and use the Accord's inspection report on the factory.

Stakeholder Theory

The theory was developed by Freeman in 1983 (Freeman & Reed, 1983) and has been extensively used in the business ethics field. According to the theory, an organization is responsible for responding to diverse claims of the stakeholders. Carroll (1991) originally proposed the stakeholders' influence on corporate social responsibility (CSR) in 1991. The stakeholder theory has been broadly studied in the business ethics literature (e.g., Helmig, Spraul, & Ingenhoff, 2016; Yu & Choi, 2016; Park-Poaps & Rees, 2010) and applied to various social and environmental issues in the apparel industry (e.g., Park-Poaps & Rees, 2010; Hossain & Arefin, 2015).

The stakeholder theory posits that a business is responsible for responding to the claims of its stakeholders. Though the stakeholder theory is frequently mentioned in business and other related fields, the definition of the theory can vary (Miles, 2012). A broad definition of stakeholders is “any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 1984, p. 46). On the other hand, a narrower can be a group of people without whose support an organization does not exist (Freeman, 2010). Similarly, Freeman and Reed (1983) defined stakeholder as a group of people who are responsible for the survival of an organization. The actions of stakeholders can directly or indirectly influence the performance of an organization. Some stakeholders, such as owners, can participate in the management decision-making process or influence the decision. Freeman and Reed (1983) have emphasized that stakeholders’ roles differ naturally by their importance and situation. Due to the limited resources, priority and importance of stakeholders will depend on the power, legitimacy, and urgency of the stakeholders and their claims (Agle, Mitchell, & Sonnenfeld, 1999). Stakeholder concept not only guides the companies to distinguish related parties but also provides a framework for a company in regard to accountable labor management (Park-Poaps & Rees, 2010). Some companies may prioritize certain stakeholders according to their influence and power.

The literature suggests that the concerns and voices of the stakeholders seem to be the primary driving forces in improving working conditions in the labor-intensive industry. Stakeholders’ pressures may be a necessary condition for the factories to implement workplace compliance in the apparel industry where remedial efforts present financial and structural challenges. On the other hand, the reluctance of any of the

stakeholders can also negatively impact workplace compliance. After assessing the structural safety of the factory buildings. These stakeholders can influence the survival or failure of apparel manufacturers and create pressures on a company to act to fulfill their interests.

Stakeholders' Pressures on Workplace Compliance

This section further discusses the stakeholders that have expressed their concerns over workplace issues in the Bangladeshi apparel industry and how the current status of workplace compliance has been developed. Some stakeholders could be more influential than others according to their nature and legitimate relationship with the company. In this study, owners, buyers, NGOs, workers, competitors, and government were identified as significant stakeholder forces and “influencers,” The discussions will generate the hypotheses for this study.

Owners. An owner(s) is the dominant part of a company mechanism and is the most prominent primary stakeholder of an organization (Freeman, 2010). The management of a factory gives priority to the owner. Owners could be identified as the most important stakeholder for their power of influence (Park-Poaps & Rees, 2010). Traditionally owners are viewed as the shareholders or stockholders of a company, who put their needs first by increasing their share or investment values (Freeman, 1984). Owners' necessities often shape the organizational strategy and the owner expects to get a return to the business with more action from others in the company. Owners of companies expect loyalty, partnership, better conditions for negotiations and production within the settled period (Severgnini, 2018). In most of the cases, owners make business decisions to run a company.

The Bangladeshi corporate sector, in particular, is predominantly controlled by owners (Farooque, Zijl, Dunstan, & Karim, 2007). Most of the companies are owned by a family, a group of families or a foreign owner. The controlling family, in most cases, selects executive directors, COOs, or the chairperson within the family. An owner also frequently acts as a CEO. Farooque et al. (2007) stated that it was not uncommon in Bangladesh that the most important business decisions took place in a family meeting and these decisions got approval from the board of directors. According to Farooque et al. (2007), such governance in family-controlled companies tends to lack ethical practices and disregards the laws. Studies (e.g., Farooque et al., 2007, Hossain & Arefin, 2015) suggest that most apparel factory owners in Bangladesh have paid very little attention to workplace-related labor laws and standards. In a study by Hossain and Arefin (2015), apparel factory owners found not much interested in being compliant to the workplace standards, because of high anticipated initial investment and running costs. The researchers interviewed owners from ten apparel factories located mainly in Dhaka, Ashulia, and Gazipur in Bangladesh, and found that the owners of the factories tended to consider workplace compliance as a loss of business profit. Nine owners out of ten, however, acknowledged the pressures they felt from buyers to improve workplace environment.

Because the factory owners seem to be reluctant to improve workplace safety, this may have a negative impact on workplace compliance related decision-making. Sometimes misaligned interests may arise in decision making in an organization when the decision makers and the owners are separate entities (Xue et al., 2018). The top-management or decision makers may consider succeeding in the changing business

environment as the primary goal, rather than following the owner's misguided wishes.

Such increased demand for establishing a safe workplace might affect how management disregards the owner's will. Nevertheless, due to the power the owners hold, their claims may influence strategic decision making of the factories.

H1: The level of workplace compliance is negatively associated with owners' pressure.

Customers/Buyers. Freeman (2010) recognized customers as one of the most important primary stakeholders. Customers expect the desirable products, that come at an attractive price (Severgnini, 2018). At the same time, they want decent product quality, agility in production and on-time delivery (Severgnini, 2018). For the Bangladeshi apparel manufacturers, clothing retailers are the customers, widely known as "the buyers" within the industry. Hossain and Arefin (2015) described buyers as the most powerful participant of the business deals in Bangladesh. If an apparel company fails to fulfill the buyers' requirements, it may face substantial financial losses. A retail giant can even get the factory out of the industry (Hossain & Arefin, 2015).

Customers, as a source of revenue, can be significant in any business. The multi-national clothing retailers had experienced their customers (e.g., consumers) expressing concerns for workplace conditions since the 90s when a series of labor violations were exposed (Park-Poaps & Rees, 2010). With the intense media coverage of online and offline (e.g., The Telegraph, BBC News, CNN world, The Guardian), activists and consumers protested after the Rana Plaza collapse in 2013. Intense public exposure of safety violations in apparel factories makes the buyers increasingly interested in safe workplace. The buyers became conscious about the working condition of apparel

manufacturing factories, especially in Bangladesh. Large retailers and other buyers started to put pressure on Bangladeshi apparel manufacturers to improve labor and working conditions. Most of the buyer companies have established their own requirements to do business with them along with codes of conduct and urged the manufacturers to implement them.

As buyers' decisions have significant power over apparel businesses by affecting their survival, apparel factories are eager to satisfy them. While manufacturers maintain their production process (i.e., assembly), raw materials procurement, and quality control, they are also expected to fulfill the buyers' requirement for workplace compliance (Hossain & Arefin, 2015). Hossain and Arefin (2015) analyzed the role of buyers in improving workplace environment of the apparel factories in Bangladesh. In the study, Hossain and Arefin (2015) defined the "compliance," as to obeying the guidelines, rules, and standards set by the buyers in the daily operations while producing apparel products for the buyers. Hossain and Arefin (2015, p. 205) pointed out the basic key standards of work environment and worker safety that the buyers require from the manufacturers: no child labor, no forced labor, transport facilities for employees, hours of work, voluntary overtime, intervals for rests, weekly holidays, annual leave, festival holidays and leave with bonus, maternity protection, workers welfare committee, mineral drinking water, sanitary facilities, first-aid box, canteen services, health care activities for the workers, and employing company doctor. The standards also include having a fire extinguisher on each floor and conducting a fire drill at least 12 times a year. Hossain and Arefin (2015) reported that 90% of the pressures for the remedial initiatives to improve workplace safety of the factories were created by the customers (i.e., retailers or buyers). The study

also reported that almost all the buyers visit the apparel factories in Bangladesh on an average of 3-5 times in a year to audit the workplace safety measures. It appears that retailers and other customers include workplace compliance as part of their business decisions.

H2: The level of workplace compliance is positively associated with buyers' pressure.

Workers. In Bangladesh, manufacturing industry workers are engaged in the labor-intensive manufacturing tasks. They often are excluded from the salary and benefit plans that are typically secured for managerial staffs in a factory. Though workers are fundamental to the success of the manufacturing industry, they are paid the least, primarily through hour-based wages (Akter, Maruf & Chowdhury, 2014). At the same time, workers of Bangladesh manufacturing factories are exposed to work-related occupational health and safety hazards (Akter et. al., 2014). Factory workers are essentially the drivers of the production process (Ansary & Barua, 2015). Although some studies considered workers as one of the prominent primary stakeholders of business (e.g., Buffa et al., 2010; Mausumi & Rahman, 2018), workers tend not to voice directly for their rights in developing countries (Vogt, 2017), resulting in being main casualties of industrial disasters. Work-related deaths are accounted for 5% of the total global deaths. About two-thirds of the global work-related mortality are from Asia, followed by Africa at 11.8% and Europe at 11.7% (Hämäläinen, Takala & Kiat, 2017).

Trade unions are typically the organizations that bring out the issues related to the workers' rights and safety (Kamal & Deegan, 2013). In Bangladesh, however, trade unions in the apparel industry are not well-established (Hossain & Arefin, 2015). They

are not composed of actual representatives of apparel workers, and thus most workers are not satisfied with the trade unions. According to Berik and Rodgers, (2010), in the mid-1990s, Bangladesh has weaker unions compared to other developing nations in Asia. The current scenario of trade unions has not improved much in the country.

The Accord and Alliance offer an opportunity for the workers to take part in the safety progress to some extent (Mausumi & Rahman, 2018). Mausumi and Rahman (2018) found that the Accord and Alliance could improve workplace safety but could not solve various challenges that workers face every day. The authors suggested workers' active participation in factory governance and strengthened roles of trade unions in the apparel sector to further address various labor issues that workers face. Since the Rana Plaza collapse, workers started to raise their voices and demand for workplace safety issues (Hossain & Arefin, 2015). Hossain and Arefin (2015) emphasized the capabilities of workers who have been concerned about their rights in the industry, which could significantly influence management decisions. A study assessed the relative importance of experts, management, and workers of apparel factories in addressing workers' safety issues and found that the workers were considered as one of the vital parts of the decision-making process regarding workplace safety (Wadud et al., 2014). These discussions suggest that factory workers could have become a significant influencer regarding workplace compliance in the sector.

H3: The level of workplace compliance is positively associated with workers' pressure.

Competitors. Freeman (2010) acknowledged competitors as one of the significant stakeholders for an organization. Competitors can act as a prominent

stakeholder in the manufacturing industry, especially in a mature industry like apparel. The factories within the same industry frequently compete by bidding to win production orders from the same buyers. Competitors are important parts of industry growth and stimulate the continuous improvement of the company (Severgnini, 2018). More than 4,000 factories compete in the Bangladeshi apparel industry. The presence of so many competitors pressures the factories to increase production quality and services and remain competitive. Matten and Moon (2008) stated that, in Europe, companies in a highly competitive industry often use their CSR initiatives to gain a better position in business (Barnett, 2007). Therefore, the competitive environment may put direct pressures on the factories to implement socially responsible business actions.

Factories have both competitive and cooperative relationships with their competitors (Helmig et al., 2016). Factories also collaborate with other factories, consumers, unions, and NGOs to improve workplace compliance in the apparel industry. The Apparel Industry Partnership was created in the mid-1990s and companies began voluntary activities by creating a partnership with industry peers as well as with consumers, unions, and NGOs in response to sweatshop scandals (Park-Poaps & Rees, 2010). Park-Poaps and Rees (2010) found that industry peer pressure had a significant impact on U.S. buyers' ethical labor management in the apparel supply chain. Thus, though there are no industry coalitions dealing with the workers' safety issues specifically, other factories in the sector may have an impact on the norms and practices in dealing with the compliance issue.

In the Bangladeshi apparel sector, most of the factories are registered under the umbrella of the BGMEA. Apparel factories could make a partnership with other BGMEA

member factories to respond to the workplace compliance demands of stakeholders. The Accord and Alliance also play a significant role in maintaining the safety standards for all factories and therefore meeting the standards could be competitive (Mausumi & Rahman, 2018). Thus, the factories need to adjust their standards to continue their business with the buyers. Therefore, the apparel factory competitors seem to have an impact on workplace compliance.

H4: The level of workplace compliance is positively associated with competitors' pressure.

Government. Government is the regulatory authority of any country.

Government has been a traditional force to govern different industries in a country. All the industries, to establish their legal entities, follow the regulations set by the government. The roles of government in establishing rights and intervention in different issues, make it as one of the prominent stakeholders. Severgnini (2018) listed government as a secondary stakeholder for a company by defining the secondary stakeholder as an external influencer who does not work for the survival of the company. On the other hand, Helmig et al., (2016) listed it as a primary stakeholder in their study. In this study, government was considered as a primary stakeholder for the factories.

Bangladeshi government deals with various industrial revolutions in the developing country. It has been seriously considering the global demand for safe workplace in its agenda (Hossain & Arefin 2015). Bangladeshi government made new regulations related to employment issues such as minimum wages, festival bonuses and vacations, pension after retirement from an investment fund, and the abolition of child

labor from the manufacturing industries. Especially, it established industrial police, labor ministry, and safety inspection board for the apparel factories after the incidents.

The ILO, however, indicates that government regulations and policies do not correspond with industrial policies and industrial policies are not adequately coordinated with different agencies of the government in developing countries (Milberg, Jiang & Gereffi, n.d.). As a result, policy implementation is likely to fail in many industries in developing and underdeveloped countries. Furthermore, Park-Poaps and Rees (2010) noted that the differences among labor laws across the countries and a lack of legal power to impose the regulations to international corporations limit the effectiveness of government regulations to control labor issues in developing countries. Sometimes government regulations do not work as a substitute for the values, entrustment, and active administration (Park-Poaps & Rees, 2010). Hence, the major reason why voluntary initiatives have been the primary method employed by corporations to deal with labor issues (Park-Poaps & Rees, 2010).

A study conducted by Hossain and Arefin (2015) revealed that the Bangladeshi government created only 10% of the pressure to implement workplace compliance, according to responses of 10 apparel factory owners. Further, Mausumi and Rahman (2018) speculated that the Bangladeshi government had ignored some of the issues related to working conditions and workers' rights before the two factory incidents in 2012 and 2013. However, it is notable that the Bangladeshi government has made significant improvements in the labor policies after the incidents (Ansary & Barua, 2015). Bangladeshi government took a major initiative to make workplace safe by combining the public and private entities (i.e. Accord, Alliance, NGOs, factories) to inspect apparel

factories, identify factories at risk, and take corrective actions (Ansary & Barua, 2015).

As a result, an amendment to the Bangladesh Labor Act 2006 was enacted in 2013. After the accidents, government's regulations appear to create pressure on the apparel factory policymakers. Bangladeshi government also started providing incentives to the apparel manufacturers to improve factory compliance (Ansary & Barua, 2015). Although there has been an indication that the government regulations were not influential for preventing unsafe working conditions in the apparel factories (Hossain & Arefin, 2015), the recent remedial efforts by the growing pressure from Bangladeshi government and compliance legislation could become the major influence in workplace compliance.

H5: The level of workplace compliance is positively associated with government's pressure.

NGOs. Non-governmental organizations (NGOs) are often defined as non-profit organizations that are not a part of any private or public sector, addressing social inequalities. Since 1990, NGOs are very active in raising voices against unfair labor practices. NGOs act as a vehicle for anyone or any organization to challenge existing socio-economical structures (Sobczak & Martins, 2010). Thus, the number of NGOs is on the rise mostly in developing countries (Haque, 2002). The voice of NGOs can influence the government, media, consumers and other stakeholders on different social issues (Kamal & Deegan, 2013). The roles of NGOs become more significant when government regulations lack enforcement (Park-Poaps & Rees, 2010). Having external sources of support, cooperation, and advocacy make NGOs powerful and influential in practice (Haque, 2002).

Kamal and Deegan (2013) identified NGOs as a powerful secondary stakeholder of the Bangladeshi apparel industry. According to the NGO Affairs Bureau, there were almost 2,643 NGOs actively working in Bangladesh in 2018, of which 2,380 were local, and 263 were foreign (NGO Affairs Bureau, 2018). The industry has always been targeted by the NGOs in different occasions and issues such as extensive workload, child labor, worker abuse, female worker safety, minimum wage, safe workplace, etc. Kamal and Deegan (2013) found that the legitimacy threat from local and as well as international NGOs are primary reasons why the apparel factories in Bangladesh were working towards CSR disclosure. Similarly, the Accord and Alliance's prominent power in the labor compliance area in Bangladesh is contributed to the local and international NGO signatories (Mausumi & Rahman, 2018). The factories seem to be responsive to the voices of NGOs because they were trusted by the local community (Deegan & Islam, 2014). Therefore, they seem to play vital roles in workplace compliance in the industry (Mausumi & Rahman, 2018). Figure 3 shows the conceptual model for this study and summarizes the hypotheses.

H6: The level of workplace compliance is positively associated with NGOs' pressure.

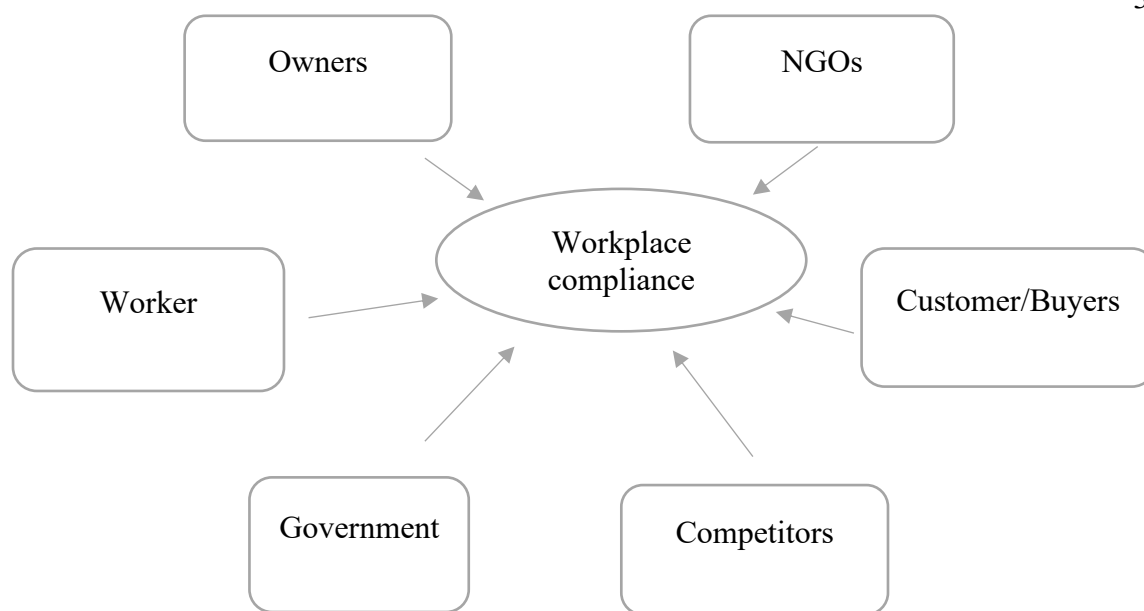


Figure 3. Hypothesized relationships among the variables

Chapter 3: Methodology

The purpose of this study was to assess the pressures from various stakeholders regarding workplace compliance issues in Bangladesh and examine their influences on apparel factories' compliance with workplace safety standards. The literature review identified six stakeholders that have exerted pressures on the issues: buyers, government, owner, competitors, workers, and NGOs. These six stakeholder pressures were the independent variables for this study. The dependent variable was workplace compliance.

Research Design

A quantitative approach was utilized in this study along with a qualitative, text analysis. In a quantitative approach, data are collected by which information can be quantified and subject to statistical analyses to support or disprove the stated knowledge (Creswell, 2003). One of the obstacles in researching workplace compliance issues lies in the difficulty in obtaining unbiased data. This study employed two data sets (primary and secondary) to overcome the obstacle. The data for workplace compliance were obtained from the Accord. The Accord has been suggested to be one of the most comprehensive workplace compliance measurement systems existing today (Mausumi & Rahman, 2018).

The Accord's inspection and progress reports of workplace compliance are available to the public through its website. The Accord provides a list of compliant factories, under remediation factories, and in-progress to the safety standards. According to Accord's provided remediation status, the factories are divided into four categories. They include: 1) initial CAP (corrective action plans) completed, 2) on-track, 3) behind schedule, and 4) ineligible. In this study, based on the Accord's factory profiles, the factories that successfully remedied all issues that had been identified in its initial

inspections (i.e., fire, electrical and structural safety) or exhibited 100% compliance were categorized as “compliant.” The rest were categorized as “non-compliant.”

The second set of data was collected from a survey among the apparel factories for the independent variables, stakeholder pressures. An online survey method was used to reach Bangladeshi factories and collect anonymous responses. The survey data were collected from March through May 2019. Online surveys enable researchers to access groups and individuals who would be difficult to reach through other routes (Wright, 2005). A factory was considered as a unit of analysis.

Sample

Because this study was designed to match the survey data to the secondary data, the sample frame came from the Accord’s list of inspected apparel factories in Bangladesh. A stratified sampling method was used to ensure proportionate representation of the three factory groups. In a stratified sampling method, the population is partitioned into subgroups and sampling is done from each of the subgroups (Hillson, 2015). First, the factories were partitioned into two subpopulation groups. Subsequently, 500 factories were randomly selected from each of the compliant and non-complaint groups. The email addresses of the prospective respondents in each factory were obtained from the Accord and Bangladesh Garments Manufacturing and Exporters Association (BGMEA) website. The potential email recipients included the production managers, merchandising managers and as well as compliance managers. As survey response rates for business participants have been known to be very low (Harzing, 1997), a chance to win one of 25 US \$20 (1,600 BDT) giftcards was offered to the survey participants.

Among 1,000 factories, 825 were successfully reached. A total of 116 completed responses were received, resulting in a response rate of 14.06%. After a careful review of the returned responses, 28 responses were determined unusable because of a significant number of missing values. Therefore, a total of 88 responses were included in the analysis. As the survey responses were collected online, it was impossible to determine the exact reason for these missing values. One of the possible reasons could be that the respondents were not familiar with the online survey procedures. Also, the survey was sent from the US, which could have caused a worry that the data collection could be related to their buyers.

At this stage, it was realized that most of the non-reachable factories were the factories that were categorized as ineligible for business with Accord signatory companies, possibly due to business closures. Those that responded among the initial non-compliant factories were in fact in the 2) on-track or 3) behind schedule categories in the Accord's compliance status reports. Consequently, the non-compliant group was renamed as "in-progress" group to reflect the true nature of compliant status. Therefore, among the 88 respondent factories, 43 factories (48.86%) were compliant and 45 (51.14%) were in-progress.

Sample Description

Table 2 summarizes the demographic profiles of the respondents. Among 88 respondents, 3 (3.41%) were female and 85 (96.59%) were male. Forty participants (45.45%) held a top-level position (e.g., a manager or a general manager) and 48 (54.55%) held a mid-level position (e.g., an assistant manager or a merchandiser) in their respective factories. Of the 88 responses, one (1.14%) respondent was a Sri Lankan

citizen, the rest of the participants (98.86%) were Bangladeshi citizens. Among them, 59 (67.05%) respondents had a Bachelor or equivalent degree and 26 (29.55%) respondents had a master's degree. Table 2 also provides information regarding their factories. The majority of the factories (89.77%) were owned by local companies. There were three foreign-owned factories from Hongkong, Netherlands, and the United Kingdom. Only one factory was jointly owned by an Indian company and a local company. More than half of the factories (53.41%) were located in Gazipur, a neighboring city of Dhaka. According to the Business and Human Rights Resource Center (BHRRC), the Gazipur district is where 1,494 apparel factories are concentrated (BHRRC, 2016). Other factories responded were located at Narayanganj, Chittagong, Norshindi, Mymensingh, Habiganj, and Dhaka city. Dhaka city, the capital city of Bangladesh, is located in the center of the country. Narayanganj, Norshindi, and Mymensingh are the neighboring cities of Dhaka. Chittagong is in the south-eastern coast area and Habiganj is in the north-eastern part of the country. The number of workers in the factories ranged from 200 to 50,000 and the average was 9,592 (SD = 10,363).

Table 2

Characteristics of the Respondents and Their Factories

Variable	Description	Frequency (n)	Percent
Sex	Female	3	3.41
	Male	85	96.59
	Total (N)	88	100.00
	18-25	5	5.68
Age	26-30	38	43.18
	31-35	30	34.09
	36-40	7	7.95
	41-45	6	6.81
	46-50	2	2.27
	Total (N)	88	100.00
Work experience	Less than 2 years	25	28.41
	2-5 years	37	42.05
	6-10 years	21	23.86
	11-15 Years	3	3.40
	More than 15 years	2	2.27
	Total (N)	88	100.00

Table 2: continued

Job Title	Assistant vice president	1	1.14
	General manager	8	9.09
	Director	3	3.40
	Manager	28	31.82
	Assistant manager	18	20.45
	Merchandiser	9	10.23
	Officer	21	23.86
	Total (N)	88	100.00
Ownership of the factories	Bangladeshi company-owned	79	89.77
	Foreign company-owned	3	3.40
	Joint ownership with foreign companies	1	1.13
	Other	5	5.68
	Total (N)	88	100.00
Establishment year of the factories	Before 1980	3	3.41
	1980-1990	13	14.77
	1991-2000	33	37.5
	2001-2009	26	29.55
	After 2009	13	14.77
	Total (N)	88	100.00
Location of the factories	Dhaka	15	17.05
	Gazipur	47	53.41
	Narayangan	14	15.91
	Chittagong	3	3.41
	Tangail	1	1.13
	Other	8	9.09
	Total (N)	88	100.00

Instrument

A structured survey questionnaire was used to collect the primary data. A consent letter was added at the beginning of the survey explaining the research purpose, procedure, and participation incentive. Participation in the survey was voluntary and participants were assured that their responses would be confidential. Each respondent provided his/her consent by pressing the “I consent” button on the survey website. Although the origins of the responses were tracked to match the two data sets (i.e., one primary and one secondary), the anonymity of the responses was assured by disposing of the identity information of the factories after data collection. This method was approved by the IRB (Institutional Review Board). The IRB approval is shown in the appendix.

Survey content. The main questionnaire had two primary sections. In the first section, the participants were asked to answer some demographic information about them such as age, education, and years of tenure with the factory and (see Table 2). In this section, they were also asked to provide information about their factories such as location, ownership, employees, and the number of years in business. The second part of the questionnaire included items to measure managerial perceptions of each stakeholder group’s pressures regarding workplace compliance. The pressure from each stakeholder group was measured by a multi-item scale. For owner pressure, a new scale consisting of six items was developed according to its concept and relevant literature (i.e., Helmig, et.al., 2016). Scale items for NGO pressure were adapted from Helmig, et.al. (2016). Scale items for workers’ pressure were adapted from two relevant studies in the coal mining sector (i.e., Wu, Yin, Wu, & Li, 2017) and the construction sector (i.e., Zhang, Lingard, & Nevin, 2015). The scale items for government, competitors, and buyers were

adapted from Park-Poaps and Rees (2010). The items in these previous studies were modified to fit into the context of this study. The participants were asked to indicate the level of their agreement to each statement (i.e., measurement items) on a seven-point Likert type scale. At the end of the survey, the respondents were asked to share any comments regarding workplace safety and compliance in an open-ended question. The appendix displays the scale items included in the questionnaire.

A pilot study was conducted to increase the face validity of the instrument and measurements. Emails were sent to the apparel professionals in Bangladesh and academic researchers in the field. They were asked to answer the questionnaire and provide their comments regarding the content and readability of the survey instrument. Further modifications were made according to the comments received. The procedure also helped reduce the respondents' confusions and misunderstandings during the survey.

The survey was developed in both English and local language (i.e., Bengali). The English version was initially translated into Bengali by the bilingual researcher. Another unbiased, bilingual translator who was in the field of textiles and apparel, translated it back to Bengali. This back-translation technique was used to ensure the accuracy of the translation. The translation and backward translation processes were repeated several times until the discrepancies among the two versions were resolved (Potaka & Cochrane, 2004). Out of the total 88 responses, 81 (92.05 %) respondents participated in the English version of the survey and 7 (7.95 %) in the Bengali version. Independent sample t-tests that were conducted on several key variables verified that the two language groups were not different in their responses. Hence, the two groups were combined for data analysis.

Reliabilities of the Constructs

The reliabilities of the multi-item constructs were assessed using the Cronbach's alpha coefficients. The initial results indicated that two out of the six independent variables achieved an alpha value greater than the suggested acceptable value of .70 (Premkumar, 2003). Cronbach's alphas for workers and NGOs were in the acceptable limit, respectively .73, and .83. Cronbach's alpha for owner, buyers, government, and alpha for competitor pressures was below the acceptable value, respectively .63 .62, .68, and .65 (Premkumar, 2003). After deleting the items that were exhibiting little convergence with other items in the scale, Cronbach alpha for owners was improved to .74, buyers to .71 and .70 for competitors. The Cronbach's alpha for government pressure was .68, which was slightly lower than the acceptable threshold. Premkumar (2003) stated that scale reliability measured with few items tends to attribute low coefficient and as a result the Cronbach's alpha being low. Usually, in these cases, the alpha values which are above .6 are considered acceptable (Premkumar, 2003). As government pressure scale consisted of four items, .68 was considered acceptable for this study. Table 3 reports the reliability coefficients for the measurements, means (M) and standard deviations (SD) of the constructs (i.e., independent variables).

Procedure

This study used emails to communicate with potential participants and collect the data online. The email system of the Qualtrics was used to send an email invitation to each selected factory. Each email was individualized to each factory. The initial email contained an invitation to the survey and a web link generated by Qualtrics to direct the recipient to the online questionnaire. One week after the initial e-mail, a reminder email

was sent. Two weeks after the initial e-mail, the final reminder email was sent. Each reminder email also contained the link to the survey. Individual phone calls were made to those who had not responded to the emails as a final attempt to invite their participation. This procedure was followed to maximize the response rate suggested by scholars (Brtnikova et al., 2018).

Table 3

Descriptive Statistics of the Variables and Measurement Items Included in the Questionnaire

Measurement item	M	SD	Reliability α
Our factory owner(s) voluntarily supports Workplace compliance	30.53	4.03	.74
Our factory owner takes an active part in workplace compliance			
Our factory owner cares about workers' safety			
Our factory owner encourages us to ensure we follow compliance regulations			
Our factory owner is hesitant to incorporate workplace compliance measurement issues*			
Workplace compliance is the main concern of our buyers			
Our buyers' order rate can change according to our company's workplace compliance conditions	39.62	6.42	.71
Our buyers will stop placing order if our factory does not comply with workplace compliance standards			
Buyers monitor our workplace compliance			
Buyers are the main reason why we pay attention to workplace compliance assurance			
Our buyers support workplace compliance			
Our buyers demand for the products that are made in safe working conditions			
Workers are the main reason why our factory tries to improve workplace compliance			
Workers in our factory are concerned over their safety in the factory	26.58	5.15	.73
Our workers do not care about the working condition or compliance*			
Workers take their views on workplace compliance to the NGOs and government			
We regularly receive workers' inputs or complaints regarding our workplace compliance practices			

Table 3: continued

Labor regulations by the government and international trade organizations have been intensified over the last few years			
Labor legislation can affect the growth of our factory	19.82	4.65	.68
Our industry is faced with stricter regulations regarding worker compliance issues			
Regulations related to working conditions immediately change our company's production strategies			
NGOs are the major agent that brings our factory's work compliance up to the standard			
Our partnership with NGOs is relevant for our factory's workplace compliance	23.23	7.74	.83
If NGOs campaign against our factory, it could hurt us			
NGOs have significant power over workplace compliance issues			
NGOs' factory compliance report can influence our business			
The efforts by all factories in the industry help improve workplace compliance issues	18.13	2.65	.70
Workplace compliance is an important factor in doing business in our industry			
It's important for us to fit in the industry by ensuring workers' safety			
Note. *Reversely coded			

Chapter 4: Analysis and Results

The purpose of this study was to examine the impacts of various stakeholder pressures on workplace compliance in the Bangladeshi apparel industry. This chapter reports data analyses and hypotheses testing. In addition, the open-ended comments received in the survey were also analyzed.

Hypotheses Testing

The average score of the stakeholder pressures showed that owners posed the highest pressure ($M = 6.1$, $SD = 1.03$), followed by the competitors pressure ($M = 6.0$, $SD = .94$), buyers pressure ($M = 5.66$, $SD = .90$), workers pressure ($M = 5.31$, $SD = 1.17$), government pressure ($M = 4.94$, $SD = 1.25$) and NGOs pressure ($M = 4.61$, $SD = 1.92$).

To test the hypotheses, a binary logistic regression analysis was conducted. Binary logistic regression is typically used when the dependent variable is categorical, and the independent variables are either continuous or categorical (Park, 2013). To run a logistic regression, the data set is required to meet some of the preliminary assumptions. In a logistic regression model, (a) the dependent variable should be measured on a dichotomous scale, (b) data should have one or more independent variables, which can be either continuous or categorical (Park, 2013). Therefore, a binary regression model was determined suitable for hypothesis testing for this study. The correlation matrix among six independent variables showed no signs of high intercorrelations (multicollinearity) among the independent variables. Tabachnick and Fidell (2012) suggested that, as long as the correlation coefficients among independent variables are less than .90, the data

assumption is met. Therefore, the data were determined as suited for the analysis. Table 4 shows the correlation matrix among six independent variables

Table 4

Correlations Among the Independent Variables

	Constant	Owner	Buyer	NGO	Worker	Government	Competitor
Constant	1.000						
Owner	-.529	1.000					
Buyer	-.307	.067	1.000				
NGO	-.204	.065	-.033	1.000			
Worker	.082	-.338	-.126	.025	1.000		
Government	-.116	.079	-.172	-.212	-.239	1.000	
Competitor	-.159	-.292	-.350	-.068	-.298	-.099	1.000

Extending the logic of the simple logistic regression to multiple predictors, Y is constructed as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2,$$

where the dependent variable is Y , α is the Y -intercept, β is regression coefficients, and X is a set of predictors.

The value of the coefficient β determines the direction of the relationship between X and the logit of Y . When β is greater than zero, larger (or smaller) X values are associated with larger (or smaller) logits of Y . Conversely, if β is less than zero, larger (or

smaller) X values are associated with smaller (or larger) logits of Y (Peng, Lee, & Ingersoll, 2010). Table 5 reports the logistic regression coefficient, Wald test, and the odds ratio for each of the independent variables.

Table 5

Results of Logistic Regression Analysis

Variables	β	S.E.	Wald	df	p	e^{β}
Owner	.00	.06	.00	1	.96	1.00
Buyer	.02	.04	.29	1	.58	1.02
NGO	-.04	.03	1.93	1	.16	.95
Worker	-.10	.06	2.69	1	.09	.90
Government	-.04	.05	.62	1	.42	.95
Competitor	.09	.11	.61	1	.43	1.09
Constant	1.75	2.10	.69	1	.40	5.77

Workplace compliance, the dependent variable, was binary: 1) compliant and 2) in-progress. Employing a .05 criterion of statistical significance, none of the independent variables was significant when regressed on the factory compliance status. Further, the odd of a factory being compliant showed a negative relation with the pressures from NGOs, workers, and government ($p > .05$) and positive relation with the pressures from owners, buyers, and competitors ($p > .05$). However, they were all insignificant. The classification table of the factory groups generated by SPSS showed that the validity of the predicted group probabilities by the regression model. The prediction for the non-

compliant factories (72.3%) was more accurate than that for the complaint factories (53.5%) (Peng et. al., 2010). The inferential goodness-of-fit test using the Hosmer-Lemeshow (H-L) test was also insignificant [$\chi^2 (8, N= 88) = 9.76, p > .05$] (Peng et. al., 2010). The goodness-of-fit statistics assess the fit of a logistic model against data.

Given that the logistic regression model failed to establish the multivariate relationships, a series of independent sample *t* tests were conducted to determine whether there were significant differences in pressures from the stakeholder groups between the two groups of factories. The tests in Table 6 indicated that only the levels of workers' pressure were significantly different between the two groups. The table also shows the mean (M) and standard deviation (SD) of the pressures from two compliance status groups. Interestingly, in-progress factories reported a higher level pressure from the workers (M = 5.52, SD = .95) than the compliant factories did (M = 5.09, SD = 1.32), [$t (86) = 1.98, p = .04$], somewhat contrary to the direction of the hypothesis. Government and NGOs also showed moderate significance, suggesting possible, although inconclusive, significances ($p < .10$). The level of on pressure from government perceived by the in-progress factories (M = 5.15, SD = 1.04) seems to be higher than complaint (M = 4.74, SD = 1.25) ($t (86) = 1.58, p = .09$). Similarly, the in-progress factories perceived more pressure from NGO (M = 4.90, SD = 1.78) than those who were compliant (M = 4.32, SD = 2.07) ($t (86) = 1.78, p = .07$).

Post-hoc Qualitative Text Analysis

A total of 62 text responses were recorded and coded in NVivo 12 to gain qualitative insights about workplace compliance in the Bangladeshi apparel industry. The contents were coded into four nodes based on the overall theme of the messages.

Table 6

Results of Independent Sample t tests Between the Factory Groups

Variables	df	t-value	Sig. (2-tailed)	Compliance status	N	M	SD
Owners	86	.59	.55	In-progress	45	6.15	.74
				Compliant	43	6.05	1.27
Buyers	86	.18	.85	In-progress	45	5.68	.88
				Compliant	43	5.64	.90
NGOs	86	1.78	.07**	In-progress	45	4.90	1.78
				Compliant	43	4.32	2.07
Workers	86	1.98	.04*	In-progress	45	5.52	.95
				Compliant	43	5.09	1.32
Government	86	1.58	.09**	In-progress	45	5.15	1.04
				Compliant	43	4.74	1.25
Competitors	86	.41	.68	In-progress	45	6.08	.81
				Compliant	43	6.00	1.08

*Significant ($p < .05$)

** Moderate significant ($p < .10$)

All comments and their association with nodes were then thoroughly reviewed and compared. Table 7 shows the nodes/themes and their descriptions used in NVivo. First, 17 out of 62 responses shared an overarching theme related to financial burden sharing in implementing compliance. Participants expressed their concerns about expenses for compliance practice and a lack of financial support from the buyers. The participants feared to lose their production orders to other low labor cost countries if the buyers do not increase the price for the produced apparel products. Some examples of the comments include, “for improvement of compliance factory owners have to spend lot of money. Though buyers are not increasing their price label. Buyers also have responsibility on compliance so they must need to increase certain price label for sustainability of factory as well,” “Buyers should make a commitment with the manufacturers that they will confirm compliance and for that they will help with both technically and financially,” and “Always customers are pushing for 100% worker safety and compliance but not increasing the price. It's really threatening for the Bangladeshi Apparel sector.”

At least 21 respondents of the 62 comments stated the continuous improvement of workplace compliance situation in the Bangladeshi apparel industry. The attempts to move the factories to a new direction that had not been previously pursued in compliance issues was further testified. Examples include, “day by day we improve our workplace safety and compliance for better future,” and “at present, Bangladesh is definitely improved remarkably regarding compliance issues.” One participant commented, “after some major incidents in Bangladesh like Rana plaza tragedy, fire hazards in Tazreen

fashion ltd, the working condition of apparel factory is really improved a lot and workplace is now safe compared to 5-10 years back.”

Table 7

Representative Themes Found and Their Descriptions

Themes (Nodes)	Description	Example Comment	Number of comments
Financial concern	Buyer’s demand for products made in the safe workplace is increasing, but without any financial assistance from the buyer.	“Customers are always pushing for 100% worker safety & compliance but not increasing the price. It's really threatening for Bangladesh Apparel sector.”	17
Corporate morality	A particular system of values and principles of conduct for Corporate Social Responsibility (CSR) is needed in the apparel industry.	“We should increase our morality regarding human rights.”	5
Overall improvement	Workplace compliance has been noticeably improved in the Bangladeshi apparel industry.	“Workplace safety & compliance in Bangladesh apparel sector has been improved much better since the last couple of years to create a better workplace for the workers.”	21
Auditing and reviewing	Providing all employees safety awareness and resources to communicate factory’s safety policies and guidelines is necessary.	“Need more awareness programs for mid-management and production staffs.”	19

Nineteen respondents share the theme related to awareness, auditing, and reviewing among the factory correspondents. One commented, “workplace safety is the vital issue which directly hits both of the human rights and business growth. So, there is no way to avoid the assurance of worker safety in the industry.” Five comments emphasized the importance of corporate social responsibility and corporate morality. One example reads, “Work safety should ensure by each & every factory in this industry.”

The NVivo Mindmap visualizes the words used in the comments. The map, shown in Figure 4, depicts prominent words associations among the comments. The map shows a similar pattern to the nodal structure illustrated above. The map and the examination of related comments demonstrated that certain stakeholders such as buyers and the government play a significant role in workplace compliance.

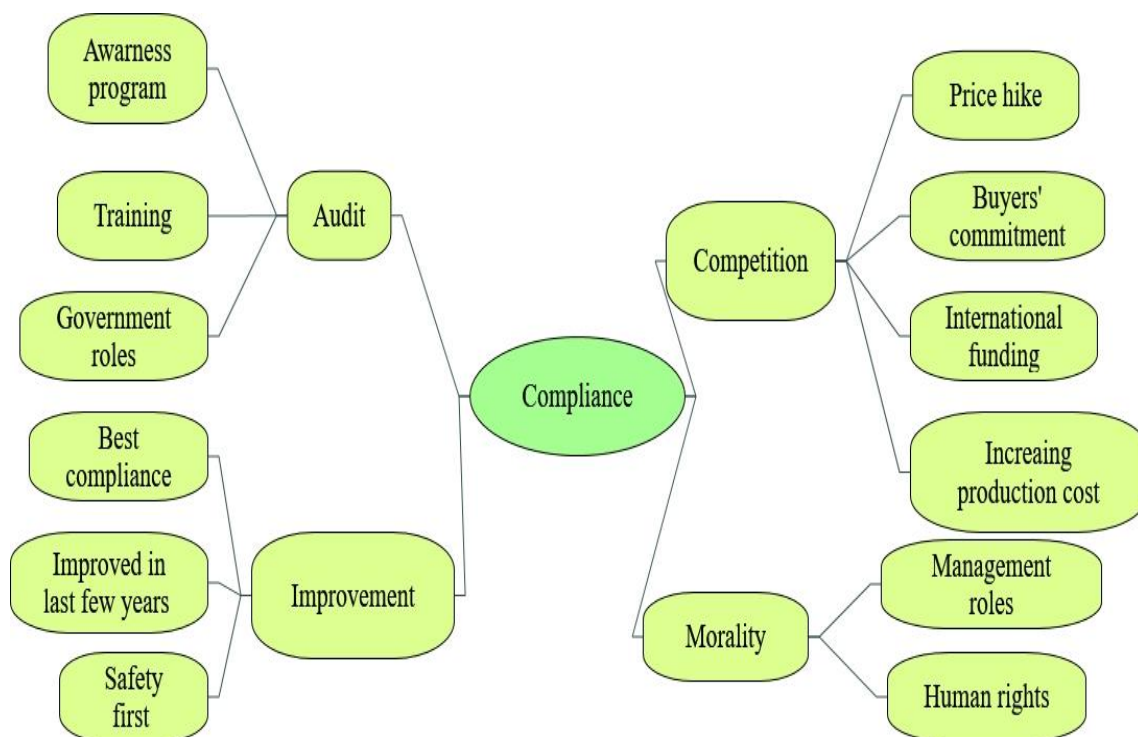


Figure 4: Visualization of text comments by Mindmap in NVivo

Chapter 5: Discussion

The purpose of this study was to investigate the effects of stakeholder pressures on workplace compliance among Bangladeshi apparel manufacturers. The pressures from buyers, owners, government, NGOs, competitors, and workers were examined. In this chapter, the implications of the results, contributions, and limitations of the study are discussed.

Findings and Implications

The results revealed that the compliance status of the factories was not found significantly related to any stakeholders when all variables were included in a multivariate model. The three stakeholder groups' pressures showed their significance: NGOs, workers, and government; yet, the direction of the relationships was opposite to what was hypothesized. In-progress factories reported more pressure from their workers than the compliant factories. This is an indication that workers of the manufacturing industries in the developing countries are becoming conscious about their rights. The factories that are behind in implementing safe workplace initiatives could have been under more pressure from their workers than from any other stakeholders.

The result also indicated that in-progress factories seemed to feel a higher level pressure from the government and NGOs than the compliant factories. It appears that these stakeholders seem to be influential especially when the factories undergo reviews and remediations which can decide their business survival. The Bangladeshi government has taken several initiatives to make the apparel manufacturing sites safe for the workers since the notorious factory incidences (Mausumi & Rahman, 2018). A study reported that

the government had taken stringent public and non-public disciplinary and enforcement actions for the in-progress factories (Mausumi & Rahman, 2018). Such reactions and policies could have cleared the government's affirmative position about the safe workplace issue, which in turn made it an influential stakeholder. NGOs and other non-profit organizations also play roles by raising voice for workplace safety and labor rights. It appears that the NGOs have an influence among the factories that are trying to improve safe workplace than those that are already compliant, which is consistent with the missions of the NGOs.

The in-progress factories and compliant factories, however, were found indifferent in their perceived pressures from buyers. Several studies (e.g., Mausumi & Rahman, 2018; Hossain & Arefin, 2015) discussed the impactful buyer pressure for compliance in Bangladesh. These studies indicated that buyers were the ones that created the most pressure on apparel manufacturers. The apparel industry is very much buyer driven. Fulfilling the buyer demand is the ultimate goal, hence the negotiation power of buyers is stronger than the manufacturers. As suggested in the open-ended comments from respondents, it appears that the pressures from the buyers could be universal, felt strongly by all factories.

It is important to note that the data did not include non-compliant factories. The factories that have been under the Accords' monitoring and remedial process (i.e., in-progress) seem to be intrinsically different from the factories that were determined ineligible to do business with the Accord brands (i.e., non-compliant). The latter factories failed to participate in the Accord program for one or more of the following reasons, 1) refused to temporarily evacuate the factory, 2) showed a lack of progress in corrective

action plans, 3) refused to meet worker complaints on compliance issues, and 4) did not cooperate with Accord inspection team (Accord, 2019). The in-progress group, however, mostly consisted of the factories that keep up the Accord's demand and program requirements. It is possible that the perceived pressures of workers, government, and NGOs, could have been elevated at the time of data collection.

The findings of this study that in-progress factories felt more pressure from some of the stakeholders than the compliant factories carries a significant implication. International brands and buyers are more likely to import clothes from the compliant factories (Mausumi & Rahman, 2018), hence not having compliance status in the Accord list could bring a detrimental impact on the factories. The initiations could have been from the pressures from the buyers, yet moving in the right direction could primarily depend on such internal factors as workers and the domestic forces that set standards in the industry. The industry participants and the government could consider encouraging and strengthening trade unions and internal mechanisms to activate and incorporate workers' concerns. Increased awareness and clear standards among stakeholders, especially the government and NGOs, are necessary to facilitate the factories' participation in workplace safety compliance.

More than ninety percent of the respondents had at least bachelor's degrees. The Bangladeshi apparel industry has made significant growth in textile and apparel education and seems to provide quality employment opportunities for the young generations. It is also apparent that female participation in management positions is limited. The number of female participants represented only roughly 3.4% in this study. It could be reflecting gender inequality in higher education in

Bangladesh. One study reported that female top-level professionals' participation in the apparel sector did not increase while more than 80% of the apparel workforce in Bangladesh is females (Akter, 2019). According to Ahad and Gunter (2017), women find it hard to break the social stigma because leadership positions are still preserved for men.

The analysis of the comments from the respondents indicated the importance of financial support for workplace safety implementation. However, according to Mausumi and Rahman (2018), buyers are unwilling to financially help the factories meet the workplace standards. Instead of forcing the factories to implement compliance, buyers could take a partnership approach and help them financially and technologically. Further, every stakeholder has importance and contributes to workplace safety. Though power and urgency of the stakeholders differ, partnership towards unified inspection standards as well as financing the remediation programs could establish transparent, accountable, and sustainable workplace safety systems.

Contribution of the Study

This study provides valuable information for the practitioners as well as academicians regarding workplace compliance. By examining pressures from different stakeholders and their impacts on workplace compliance, this study attempted to quantitatively examine workplace compliance mechanisms. Due to a lack of research in the subject especially in developing countries, this study adopted various measurement items from other manufacturing fields. Even with progressed globalization, workplace safety knowledge seems not extended to the global level. This study is the first of its kind.

The results and discussions of this study provide a clue how stakeholders play roles in workplace compliance issues in developing countries. Developing countries lag behind in terms of workers' rights or welfare. However, proactive management of the workplace safety issue could be an alternative, competitive strategy for the apparel factories. The results and the discussion provide various sectors insights on how to make encourage factories to participate in workplace compliant initiatives. Further, the concerns related to the lack of representation of non-compliant factories in this study and the explanations provide researchers insights on designing future studies in the subject.

Limitations and Future Research

The data collection process revealed that the non-compliant factories could have been forced to shut down or operate under the radar. Further, the participating factories that received an online survey invitation were limited to the factories enlisted by the Accord. The Accord and Alliance jointly cover a maximum of around 35% of apparel factories in Bangladesh (Mausumi & Rahman, 2018). Thus, there are many more factories that have not been inspected by the Accord and possibly continuing their apparel production as sub-contractors. This could have been one of the reasons that the data did not have enough variance in the independent variables.

Six prominent stakeholder forces of workplace compliance were examined in this study. Additional stakeholders could include international and national media. Social media could also be investigated as a means of influencing factory compliance. This study can also be extended to cover a wider range of compliance or pro-social actions including environmental and other social issues such as

living wage and unionization. Further, organizational or factory related variables and/or supply chain characteristics could influence compliance. Likewise, various external environmental forces, such as social, legal and technological changes, and the economic and political environment, may interact with the company or supply chain variables. As workplace compliance becomes more critical in the apparel industry, the financial performance of the factories by adopting compliance or a break-even analysis of the cost and benefits could be examined to assess the long-term benefits.

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Appendix

Questionnaire

Title of Research: Stakeholders' Roles in Workplace Compliance in the Bangladeshi Apparel Sector

Researcher: Zafar Waziha Sarker
 Advisor: Dr. Haesun Park-Poaps
 IRB number: 18-E-375

You are invited by an Ohio University researcher to participate in a survey. For you to participate in the survey, you should understand what the project is about, as well as the possible risks and benefits in order to make an informed decision. This process is known as informed consent. This form describes the purpose, procedures, possible benefits, and risks of the research project. It also explains how your personal information will be used and protected. Once you have read this form and your questions about the study are answered, you will be asked to participate in this study. You may print a copy of this document for your record.

- **Summary of Study:** This research project assesses roles of various stakeholders in workplace compliance in Bangladesh. This study will use an online survey to collect data from apparel factories in Bangladesh.
- **Explanation of the Study:** To participate in this study, you must be at least a manager in an apparel factory, 18 years or older, and agree to participate in this study. This survey has some questions about you (e.g., your age, education) and simple questions related to how "your factory" perceives various stakeholders' role in workplace compliance. It takes about 10 minutes for you to complete. Your participation in this study is voluntary. You may leave the study at any time; if you decide to stop participating in the study, there will be no penalty to you, and you will not lose any benefits to which you are otherwise entitled.
- **Benefits:** You may not benefit personally from participation in this research.
- **Compensation:** There is no compensation. However, as an appreciation for your time and effort, one in every five participants will get a \$20 (tk 1600) gift card.
- **Risks and Discomforts:** There are no physical or psychological risks to you if you participate in this research.
- **Confidentiality and Records:** Your responses will be kept confidential and your/company's identities will not be revealed. For your chance to win a gift card and protect your identity, you will be directed to another survey and asked to provide your name, address, and email address. This address/contact information will be stored separately from the survey data and may be shared with the Ohio University Finance Office to process the payments if you win the gift cards. Though the personal information may be provided to the Ohio University Finance Office to document that you received payment for research participation. However, study data will not be shared with Finance.
 For maximum confidentiality, please clear your browser history and close the browser before leaving the computer.
 Additionally, while every effort will be made to keep your study-related information confidential, there may be circumstances where this information must be shared with:
 - Federal agencies, for example the Office of Human Research Protections, whose responsibility is to protect human subjects in research;

By agreeing to participate in this study, you are agreeing that:

- you have read this consent form (or it has been read to you) and have been given the opportunity to ask questions and have them answered;
- you have been informed of potential risks and they have been explained to your satisfaction;
- you understand Ohio University has no funds set aside for any injuries you might receive as a result of participating in this study;
- you are 18 years of age or older;
- your participation in this research is completely voluntary;
- you may leave the study at any time; if you decide to stop participating in the study, there will be no penalty to you and you will not lose any benefits to which you are otherwise entitled.

Version date 3/06/2019

- ☐ I consent, begin the study
- ☐ I do not consent, I do not wish to participate

Your EDUCATION:

- ☐ Less than a high school degree
- ☐ High school or equivalent
- ☐ Diploma or equivalent
- ☐ Bachelor or equivalent
- ☐ Masters degree or above

Your nationality (please write down your answer in the box)

Your job title or position in this factory (please write down your answer in the box)

NUMBER OF YEARS you have been working in this factory:

- ☐ Less than 2 years
- ☐ 2-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ More than 15 years

The YEAR your factory was established:

- ☐ Before 1980
- ☐ 1980-1990
- ☐ 1991-2000
- ☐ 2001-2009
- ☐ After 2009

The AREA your factory is in:

- ☐ Dhaka
- ☐ Gazipur
- ☐ Narayangang
- ☐ Tangail
- ☐ Chittagong
- ☐ Other (please specify)

Ownership of your factory:

- ☐ Foreign company owned: name of the country (example: China, Korea)
- ☐ Bangladeshi company owned
- ☐ Joint partnership between government and a private party
- ☐ Joint ownership between Bangladeshi and foreign companies: Please name 'country' of the foreign partner company(ies)
- ☐ Others (please specify)

Approximate number of employees in your factory (example: 1000, 16,000 etc.): (please write down your answer in the box)

Please indicate the degree to which your factory as a whole agrees to the following statements:

Please indicate the degree to which your factory as a whole agrees to the following statements:

[illegible]

Please indicate the degree to which your factory as a whole agrees to the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
Labor regulations by government and international trade organizations have been intensified over the last few years	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Labor legislation can affect the growth of our factory	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our industry is faced with strict regulations regarding workplace compliance issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Regulations related to working conditions immediately change our factory's production strategies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please comment anything you would like to share regarding workplace safety and compliance in Bangladesh apparel sector:

IRB Approval Letter

Project Number	18-E-375
Project Status	APPROVED
Committee:	Office of Research Compliance
Compliance Contact:	Rochelle Reamy (reamy@ohio.edu)
Primary Investigator:	Zafar Waziha Sarker
Project Title:	The Impacts of Stakeholder Pressures on Workplace Compliance in the Bangladeshi Apparel Manufacturers
Level of Review:	EXEMPT

The Ohio University Office of Research Compliance reviewed and approved by exempt review the above referenced research. The Office of Research Compliance was able to provide exempt approval under 45 CFR 46.104(d) because the research meets the applicability criteria and one or more categories of research eligible for exempt review, as indicated below.

IRB Approval:	03/12/2019 09:46:04 AM
Review Category:	2

Waivers: A waiver of signature on the consent document is granted.

If applicable, informed consent (and HIPAA research authorization) must be obtained from subjects or their legally authorized representatives and documented prior to research involvement. In addition, FERPA, PPRA, and other authorizations / agreements must be obtained, if needed. The IRB-approved consent form and process must be used. Any changes in the research (e.g., recruitment procedures, advertisements, enrollment numbers, etc.) or informed consent process must be approved by the IRB before they are implemented (except where necessary to eliminate apparent immediate hazards to subjects).

It is the responsibility of all investigators and research staff to promptly report to the Office of Research Compliance / IRB any serious, unexpected and related adverse and potential unanticipated problems involving risks to subjects or others.

This approval is issued under the Ohio University OHRP Federalwide Assurance #00000095. Please feel free to contact the Office of Research Compliance staff contact listed above with any questions or concerns.



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