


Beyond the Tip of the Iceberg: Bangladesh's Forgotten Apparel Workers

SARAH LABOWITZ AND DOROTHÉE BAUMANN-PAULY



 NYU STERN

Center for Business
and Human Rights

DECEMBER 2015

"At NYU Stern, we develop people and ideas that transform the challenges of the 21st century into opportunities to create value for business and society. The Center for Business and Human Rights is the embodiment of that mission."

Peter Henry, Dean
NYU Stern School of Business

Launched in March 2013, the NYU Stern Center for Business and Human Rights is the first human rights center based at a business school. Led by Michael Posner and Sarah Labowitz, the Center is rising to meet one of today's most essential business questions: what is business' responsibility to the people and communities it touches in the most difficult corners of the planet?

The Center offers dedicated courses on business and human rights to MBA and undergraduate business students. In different business sectors, it undertakes projects that combine original research, convening stakeholders, and public advocacy. It seeks to make seemingly intractable problems accessible to business and create possibilities for action to improve human rights in the toughest business environments.

The Center is an independent academic endeavor of NYU Stern. It receives funding from NYU Stern, philanthropic foundations, and individuals.

More information at <http://bhr.stern.nyu.edu>.

Cover image: A young worker at her working station removes extra stitches from blue jeans in an informal factory in Dhaka. CLAUDIO MONTESANO CASILLAS

NYU Stern Center for Business and Human Rights
Leonard N. Stern School of Business
44 West 4th Street, Suite 800
New York, NY 10012

© 2015 NYU Stern Center for Business and Human Rights

All rights reserved. This work is licensed under the Creative Commons Attribution-NonCommercial 4.0 International License. To view a copy of the license, visit <http://creativecommons.org/licenses/by-nc/4.0/>.

“Where, after all, do universal human rights begin? In small places, close to home - so close and so small that they cannot be seen on any maps of the world. Yet they are the world of the individual person; the neighborhood he lives in; the school or college he attends; the factory, farm, or office where he works. Such are the places where every man, woman, and child seeks equal justice, equal opportunity, equal dignity without discrimination. Unless these rights have meaning there, they have little meaning anywhere. Without concerted citizen action to uphold them close to home, we shall look in vain for progress in the larger world.”

— Eleanor Roosevelt

Contents

| | |
|---|----|
| Acronyms and Organizations | 3 |
| Executive Summary | 4 |
| Recommendations | 6 |
| Introduction | 13 |
| Methodology | 16 |
| Findings: | 19 |
| 1 – Size of the Sector | 19 |
| 2 – Informal Subcontracting | 23 |
| 3 – Accord and Alliance | 26 |
| 4 – Fixing Factories | 28 |
| Appendix I – Field Survey Questions | 30 |
| Appendix II – Funding and Financing for the Garment Sector in Bangladesh | 31 |
| Endnotes | 34 |
| Acknowledgements | 38 |
| About the Authors | 39 |
| Summary of Key Data | 41 |

Acronyms and Organizations

Government of Bangladesh

Department of Inspections for Factories and Establishments DIFE

Trade Associations

Bangladesh Garment Manufacturers and Exporters Association BGMEA

Bangladesh Knitwear Manufacturers and Exporters Association BKMEA

Factory Safety Programs – Foreign Brands

Bangladesh Accord for Fire and Building Safety Accord

Alliance for Bangladesh Worker Safety Alliance

International Organizations

International Labor Organization ILO

International Finance Corporation IFC

Organisation for Economic Co-operation and Development OECD

Other Key Terms

Ready-Made Garments RMG

Utilization Declaration UD

Executive Summary

This report is the second study by the NYU Stern Center for Business and Human Rights on working conditions and the garment industry in Bangladesh. It is the result of a large-scale data analysis of factory data that the Center collected and analyzed from publicly available sources and a field survey conducted in June 2015. The Center's analysis sheds light on an important, but opaque part of the garment sector: indirect suppliers.

Indirect sourcing is key to Bangladesh's high-volume, low-cost model of garment production. Many workers are employed in factories that supply foreign brands indirectly through other, larger factories or agents. Indirect sourcing factories operate on very tight margins and with very little oversight, increasing the vulnerability of workers to safety violations and labor rights abuses.

Our research reveals five key findings:

1. **There are more than 7,000 factories producing for the export market in Bangladesh, divided between direct and indirect sourcing factories.** Previous estimates of the size of the sector accounted for 4,000 – 4,500 factories. The report shows that the universe of factories producing for export is much larger than previously understood, and that indirect sourcing factories are a significant driver of production and employment. From 2013 to 2015, while the number of direct exporters remained constant, total apparel export volumes fluctuated substantially. This can be explained in one of two ways: either each direct exporter is able to dramatically
2. **In a June 2015 survey of two sub-districts of Dhaka, 32% of the 479 factories surveyed were informal subcontractors. 91% of informal factories produced at least partly for export.** Informal factories are a subset of indirect suppliers. They do not register with the government, either of the two national trade associations of apparel manufacturers, or foreign brands. Workers in this part of the sector are especially vulnerable because they are invisible to regulators and their employers operate on such slim margins that they cannot invest in even basic safety equipment or procedures. This kind of subcontracting also artificially depresses prices because it does not account for the full cost of producing in accordance with minimum labor standards.
3. **The Bangladesh Accord for Fire and Building Safety (Accord) and the Alliance for Bangladesh Worker Safety (Alliance) – two factory safety programs initiated by more than 200 foreign brands – encompass only 27% of factories in Bangladesh.** The programs have received significant public attention and have announced a commitment to spend up to US\$100 million over five years to improve factory safety. But they are narrowly focused on a subset of direct suppliers. Almost three million workers are not covered by these programs.

increase and decrease its production in response to shifting demand, or the thousands of small factories that comprise the indirect sector enable direct exporters to accommodate significant shifts.

4. **Despite thousands of inspections, very few factories have actually been fixed.** Almost all direct exporting factories have been inspected by the Accord, the Alliance, or the government and the International Labor Organization (ILO). But of the 3,425 inspections that have taken place, only eight factories have passed final inspection. This report does not examine why factory remediation has been so slow, but it is clear that something does not add up.

5. **More than US\$280 million in commitments have been announced for the garment sector in Bangladesh since Rana Plaza.** While it is significant that foreign governments, development organizations, philanthropies, and foreign brands are announcing large commitments, it is not yet clear how many of these resources are being spent or if any of this money is being applied to remediate factories. It is clear that resources are not being directed towards

the thousands of indirect suppliers that remain in the shadows. There is not yet a clear understanding of what it will take to ensure that workers in these factories are safe and enjoy basic labor rights.



The Rana Plaza factory complex housed five garment factories, in addition to a bank and retail shops. It collapsed on the morning of April 24, 2013, killing almost 1,200 garment workers. The collapse resulted from a combination of poor infrastructure, weak oversight, and unscrupulous management practices. Rescue workers carry a garment worker who survived after being trapped under the rubble three days after the collapse, on April 26, 2013. REUTERS/ANDREW BIRAJ

Recommendations

1. Acknowledge the full scale and complexity of indirect sourcing

Achieving visibility over the full supply chain at a systemic level, rather than in the context of each individual foreign brand, is a precondition for more completely fulfilling the rights of all of Bangladesh's apparel workers.

- **To foreign brands:** Reverse the incentives for primary business partners away from a punitive system that punishes subcontracting to one that rewards transparency about the practice. Prioritize understanding where product actually is being produced.

Brands can play an important role in legitimizing indirect suppliers as an important source of productive capacity, but one that requires new approaches for oversight and compliance with labor standards. This does not mean that brands bear sole responsibility for remediating or even monitoring conditions in indirect suppliers. But brands can and should lead in setting a new tone about indirect sourcing that creates space for other stakeholders to take action.

- **To local manufacturers:** Increase transparency about the practice of indirect sourcing and its role in the production process.
- **To the government of Bangladesh and the trade associations:** Make information available about regulatory systems that apply to direct and indirect suppliers.
- **To foreign governments and international organizations:** Put indirect sourcing on the global agenda about supply chains, including the G-7 agenda, the ILO's meeting on supply chains in 2016, the World Economic Forum, and the OECD's guidance efforts for companies in the apparel and footwear sectors.¹

2. Identify the true size of Bangladesh's export garment sector

The mapping of 7,000 factories and the survey of two sub-districts in Dhaka presented in this report and the accompanying map are an important first step in identifying the full scale of garment production in Bangladesh. But more and better data is required to identify the full extent of the sector.

- **To the ILO, in cooperation with the trade associations, unions, and the government of Bangladesh:**

Conduct a comprehensive survey of direct and indirect sourcing in Dhaka and Chittagong.

The ILO should allocate personnel and financial resources under its existing RMG program to underwrite a comprehensive survey. The government and the trade associations should authorize and fully endorse the survey to encourage openness on the part of all factories, especially informal and indirect suppliers.

In our comprehensive survey of Tongi and Rampura, it took six surveyors three full days to identify almost 500 factories, working in three teams. With the same small team, it would take about 42 work days to identify all garment factories in Bangladesh, or just over two months.

- **To private philanthropies, in partnership with the MissingMaps² project and Bangladeshi civil society:** create a parcel map of Dhaka and Chittagong.

The creation of a parcel map of Dhaka would enable factory surveyors to associate their findings with individual parcels, including information such as factory names, conditions, and images with specific geographic areas.³ Such a map would: address the problem of poor availability of map information for Bangladesh; support a factory survey; and be useful in many other humanitarian and development contexts.

3. Regulate and create incentives to formalize indirect factories

A dynamic, sustainable garment sector would fairly distribute the costs of labor rights compliance across all firms in the sector, not just those that maintain direct relationships with foreign brands that demand compliance as part of the price of doing business.

- **To the government of Bangladesh:** Improve enforcement in the indirect exporting part of the sector.

Raising the odds of inspection and even prosecution for labor rights and safety violations (in addition to other regulatory obligations, such as taxation and business registration) among indirect suppliers would discourage firms from remaining informal and encourage factories to meet minimum standards of labor rights and worker protection.

- **To direct suppliers:** Help indirect exporters formalize through a “buddy system.”

Working through a buddy system, direct suppliers could transfer knowledge and potentially resources to help small- and medium-sized subcontracting factories achieve minimum standards for labor rights and safety compliance. Rubana Huq, managing director of Mohammadi Group, suggested such a system in a 2014 *Wall Street Journal* op-ed: “Every stronger factory should assume responsibility

for boosting the industry’s reputation by helping smaller factories comply with new standards. If 250 responsible manufacturers could each monitor and mentor 10 smaller factories on compliance issues, that would then alter the reality for 2,500 factories.⁴

- **To international financial institutions and the government of Bangladesh:** Undertake infrastructure development in electricity, transportation, and gas.

Indirect suppliers rely on the underdeveloped public infrastructure grid, leaving them especially vulnerable to electrical fires. Corruption at the highest levels of government prevented Bangladesh from receiving World Bank funding for a major bridge project in 2012.⁵ Since then, the World Bank has pulled back from funding the kind of large-scale infrastructure projects that would help lower costs across all factories in Bangladesh.

The government should investigate and prosecute corruption allegations to restore confidence among international lenders, in addition to fulfilling its commitment to spend fully wire residential electrical infrastructure.⁶ International lenders should reconsider policies that restrict financing for infrastructure projects.

- **To private-sector lenders and Bangladeshi banks:** Improve access to capital for small- and medium-sized enterprises.

Limited access to capital remains a significant barrier for indirect exporters to make necessary improvements, such as acquiring land for a purpose-built facility, investing in electrical and fire safety systems, or even simply meeting payroll on a regular basis. While significant loan

commitments have been made by international lenders and brands, these generally target direct exporters and are made available in dollars, not the local currency in which indirect exporters conduct business. Working together, international lenders and local banks should develop targeted financing facilities for indirect factories, including an expanded pool of loans available in Bangladeshi Taka.

- **To the ILO:** Expand the scope of existing RMG initiatives to include indirect factories and strategies for formalizing this part of the sector.



Informal factories are subject to almost no regulation or oversight and even basic standards of safety, health, and labor rights are not enforced. As profit margins tighten through repeated subcontracting, labor is the only flexible cost component. Machinery, electricity, gas, and rent are fixed costs; managers operating on hair-thin margins seek to reduce overall costs by squeezing workers through low wages and long hours, or by employing children. CLAUDIO MONTESANO CASILLAS

4. Make the case for continued investment in Bangladesh

Foreign brands made five-year commitments to stay in Bangladesh through the Accord and the Alliance in 2013. With the five-year mark on the horizon, coupled with a worsening security situation and slow progress on labor rights reforms, there is an urgent need for Bangladeshi leaders and factory owners to demonstrate that Bangladesh continues to be a good investment for the global fashion industry.⁷

- **To the government of Bangladesh:** Strengthen the climate for mature industrial relations, in which independent unions can thrive.

The government should lead in strengthening protections for trade unionists, including by investigating and prosecuting crimes against union organizers, and creating space for the union movement to advance.

- **To Bangladeshi leaders and factory owners:** Take ownership of an international effort organized around the concept of “shared responsibility” to realize a vision for a safe and sustainable garment sector.

A new model is emerging for tackling the most entrenched governance problems in global supply chains through a shared responsibility approach.⁸ Leaders within Bangladesh should embrace this model, generating a mandate to address labor and safety issues in all factories and inviting all relevant stakeholders to join the effort. Shared responsibility for improving the overall system of garment production is an ambitious objective; leaders should approach it as a matter of vital importance for the future viability of the industry and the country’s economic development.

Top 5 garment producing countries, 2014

| | | |
|-------------------|-----------------|--------------------|
| China 38.6% | Italy 5.1% | Bangladesh 5.1% |
| Hong Kong 4.2% | Germany 4.1% | Vietnam 4.0% |



Source: World Trade Organization

5. Convene a taskforce

Given the scale of the challenge presented by the large universe of indirect sourcing factories (in addition to well-known problems among direct sourcing factories), a new structure will be required to organize ambitious action among the key stakeholders.

- To private philanthropies and/or governments:** With a mandate from Bangladeshi leaders and buy-in from the international community, underwrite an entity or secretariat to organize a taskforce with a mission to develop a roadmap for a safe and sustainable garment sector in Bangladesh.

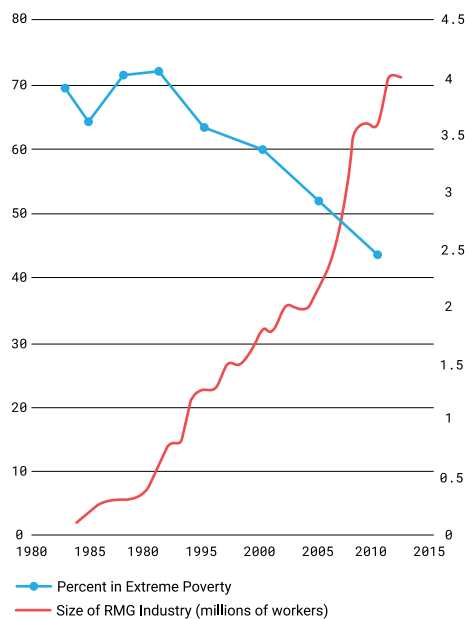
The taskforce will require senior leadership from within Bangladesh, as well as international stakeholders. It should work over the course of 12–18 months to develop a comprehensive and specific roadmap to

upgrade the entire export garment sector. The roadmap should include the wide-ranging set of policy tools, financial resources, and regulatory incentives that will be required to achieve a garment sector that delivers on the promise of expanded economic opportunity and the dignity of work for all workers. It should attach a cost to these improvements.

- To the taskforce secretariat:** Convene all actors with a stake in a more safe and sustainable garment sector, including foreign brands, local manufacturers (both direct and indirect suppliers), unions, governments, international financial institutions, and the Accord and the Alliance.

The taskforce must be supported by strong administrative functioning – regular meetings, transparent processes for considering and deciding on key issues, clear communication, and engaging appropriate experts.

Poverty and RMG growth



Sources: World Bank, BGMEA

6. Share costs and responsibilities

No single actor can underwrite the significant costs of upgrading Bangladesh’s garment sector.⁹ Local and international participants should share the costs. Detroit provides a useful model, in which the public-private Blight Removal Taskforce successfully surveyed the city’s problem with blighted structures, developed a blueprint for addressing it, and raised public and private funds to meet the US\$800 million price tag of clearing blighted structures.¹⁰

- **To brands, leading local manufacturers, the government of Bangladesh, foreign governments, development organizations, international financial institutions, private philanthropies, the Accord, the Alliance, the ILO, and unions:** Share responsibility for the costs of upgrading the garment sector to make it safe and sustainable for the long term.

In a shared responsibility model, there is no set approach that would dictate the size of each stakeholder’s financial responsibility. Working through the taskforce, all stakeholders should develop a formula for sharing costs that is fair and transparent. A formula is likely to result in proportional sharing of costs among stakeholder groups and individual actors. For example, governments of consuming countries may collectively assume responsibility for a portion of the total cost, which could be divided based on level of imports from Bangladesh. Of course, strict oversight will be required to ensure that funds are used for their intended purpose.

Product type by number of factories



Source: NYU Stern Center for Business and Human Rights factory list, available at <http://stern.nyu.edu/bangladesh-factory-map>

Introduction



Workers commute by boat from an island slum in the early morning, February 2014. BISHAWJIT DAS

It has been more than two years since almost 1,200 workers were killed in a single morning in the factory collapse at Rana Plaza in a suburb of Dhaka. The tragedy was a wake-up call to the global fashion industry and those who benefit from it: consumers in the United States and Europe who have never been able to buy more clothes more cheaply than they can today; the fashion brands that are some of the biggest compa-

nies in the world; and leaders within Bangladesh, whose economy is deeply dependent on the continued growth of garment manufacturing. Rana Plaza was a symbol of a larger uncomfortable truth about the global apparel supply chain: low-wage garment work can come at almost unimaginable costs.

The global economy is increasingly dependent on integrated networks of

suppliers across national borders to produce and deliver goods in all sectors. In many ways, Bangladesh's apparel sector represents the possibilities of global supply chains: over the last 30 years, the garment industry has helped fuel Bangladesh's economic growth and employment for millions of its citizens. The rate of extreme poverty has plummeted as the garment industry has grown.

This study is the product a comprehensive analysis of publicly available factory information in Bangladesh, as well as an on-the-ground survey of two sub-districts in Dhaka. It builds on our 2014 report on subcontracting in Bangladesh, *Business as Usual is Not an Option: Supply chains and sourcing after Rana Plaza*.

Its findings portray a widening gap between direct and indirect suppliers. Direct suppliers – those factories that global fashion brands acknowledge – are subject to increasing oversight of working conditions and elevated standards for fire and building safety. But these factories are just the tip of the iceberg. For every facility where labor conditions are improving, there are many more factories where workers toil in conditions that present risk of serious harm and abuse of labor rights. Factories that indirectly supply the export market operate below the surface. These factories are vital to Bangladesh's ability to produce high volumes of low-cost clothing in response to fluctuating seasonal demand. But they operate in the shadows.

In writing this report, we start from premise that the garment industry has been good for Bangladesh and its people, and that continued growth of the industry has the potential to generate shared prosperity for the long term. By making visible a previously unseen part of the sector, our objective is to encourage investment and innovation to elevate

standards for all workers, in both direct and indirect suppliers.

Progress in reforming the garment sector since Rana Plaza has been halting and there is a growing sense of fatigue about ensuring that even the best direct exporters meet high standards for safety. With the expiration of the Accord and the Alliance on the horizon in 2018, brands may be tempted to quietly pull up stakes, shifting production to less high-profile sourcing destinations.

The loss of the garment sector, or its dramatic reduction, would only compound the tragedy of Rana Plaza. In our view, this is a moment for action to seek sustainable ways of doing business that account for the full cost of labor rights compliance in both direct and indirect suppliers, while remaining fiercely competitive as a key sourcing destination. This will only be possible if buyers acknowledge the important role of indirect suppliers and create the space for a realistic discussion of the true cost of fast fashion. It also demands urgent leadership on the part local garment manufacturers in Bangladesh, especially the largest and most successful of these firms, to identify practical ways of formalizing and standardizing indirect production.

Achieving a safe and sustainable apparel supply chain in Bangladesh will require a shift in mindset about which entities are responsible for fixing factories. Since the mid-1990s, the international community's primary response to well-documented labor rights problems in the apparel supply chain has been to deputize private companies to ensure workers' rights. Bangladesh is a stark illustration of the limits of this model. On the one hand, private compliance efforts by individual companies have resulted in improvements in some factories. At the high end of the supply chain,

brand-sensitive multinationals work closely with their primary suppliers in relationships undergirded by standardized, professional business practices.

But most factories in Bangladesh are not this kind of modern, formal enterprise. Approximately half of the factories in Bangladesh are indirect suppliers that do not maintain relationships with foreign buyers. Because they operate on slim margins and often lack sophisticated business experience, they do not use modern business methods and are unfamiliar with international standards for labor rights. Factories that indirectly supply global brands are not touched by private compliance initiatives.

To be sure, brands have a responsibility towards workers in factories beyond their first tier suppliers. All brands benefit when subcontracting factories are in compliance with minimum standards. A systemic approach is needed that enlists a wider array of actors to elevate standards in this part of the sector.

Local unions also have an important role. The test of a garment sector that is truly sustainable over the long term will be its ability to accommodate worker voices and worker representatives as the sector grows.

The premise of globalization is that it benefits people in developed and developing countries alike. Consumers in developed countries enjoy wide availability of cheap goods, while workers and communities in developing countries gain access to economic opportunity and expanded realization of rights. Achieving minimum standards in all factories, including indirect suppliers, will require additional financial resources and commitments by brands, their primary suppliers, governments, development and financial organizations, unions, and private philanthropies.

INTRODUCTION

A “shared responsibility” model that draws on the capacities of each of these entities should be pursued in Bangladesh’s export garment sector.

The research contained in this report is an important step in gaining greater

understanding of the true size and complexity of the apparel supply chain in Bangladesh. It is incontrovertible that the supply chain is bigger, more complex, and contains greater risk for more workers than previously imagined. New ways of thinking and acting are needed

to ensure that all factories provide employment in safe conditions and with the dignity of work for all workers.



Landscape behind informal garment factories in Keraniganj (Dhaka), which hosts hundreds informal factories. CLAUDIO MONTESANO CASILLAS

Methodology

Prior to 2014, there was little publicly available, reliable information about the number of garment factories in Bangladesh.¹¹ Before Rana Plaza, most estimates put the number of factories at 4,000 – 4,500.¹² In the Center’s 2014 report, *Business as Usual is Not an Option: Supply chains and sourcing after Rana Plaza*, we argued that the number of factories actually was much higher because of the prevalence of indirect sourcing factories.¹³

Over the last two years, more data has become available about Bangladesh’s export garment sector. The government of Bangladesh launched its own factory database; the two trade associations updated their websites and factory registries; and the Accord and the Alliance began to publish monthly lists of factories that supply their members. These lists contain rich information about factory location, types of produc-

tion (sweaters, tops, children’s, etc.), annual production volume, number of sewing machines, and numbers of male and female workers. The five sources of data presented a unique opportunity to quantitatively analyze information about the factories and workers that comprise the country’s powerful garment sector.

In October and November 2014, we collected all of the data from the five source lists, which resulted in more than 11,000 factory records. Through a painstaking process of manual de-duplication, a team of Stern MBAs combined records that represented the same factory, eliminating more than 3,800 duplicates.¹⁴ The de-duplication was completed in August 2015.

We call the resulting list of 7,179 factories the “official list” of factories in Bangladesh because factories on these

Figure 1: Sources of factory data

| Data source | N° of factory records |
|---|-----------------------|
| Department of Inspections for Factories and Establishments (DIFE), Government of Bangladesh | 3,660 |
| Bangladesh Garment Manufacturers and Exporters Association (BGMEA) | 3,498 |
| Bangladesh Knitwear Manufacturers and Exporters Association (BKMEA) | 1,825 |
| Bangladesh Accord for Fire and Building Safety (Accord) | 1,611 |
| Alliance for Bangladesh Worker Safety (Alliance) | 652 |
| Total | 11,246 |

lists have registered with one of the five entities that maintain factory data. The cleaned up, comprehensive list is available on our website, <http://www.stern.nyu.edu/bangladesh-factory-map>, where it is accompanied by a factory map. The map presents the first comprehensive view of any country’s apparel manufacturing sector at a national level. It includes interactive information about the 7,000 factories on the official list, in addition to factory information in 65 neighborhoods.

As rich as the official data is, it does not tell a complete or accurate story of how garments are produced and the workers who are producing them. The official data contains only that – factories that are officially registered either with the government, one of the trade associations, or one of the foreign initiatives. Our earlier research indicates clearly that there is a wide network of informal factories that remain unregistered and where workers are invisible to regulators, inspectors, and buyers.

We also know that the official lists, particularly BGMEA and BKMEA, include factories that do not physically exist or exist in name only.¹⁵ This means that the official data is inflated by factories that do not exist and excludes factories that do exist.

To test the validity of the official list and the prevalence of informal factories, we conducted a comprehensive survey of two sub-districts in Dhaka – Tongi and Rampura – in June 2015. We used the

Figure 2: Sub-districts with the highest concentration of registered garment facilities (official list)

| Thana | Total Factories | Alliance and Accord Factories | Percentage |
|--------------------|-----------------|-------------------------------|------------|
| 1. Fatullah | 705 | 97 | 14% |
| 2. Gazipur | 656 | 254 | 39% |
| 3. Savar | 453 | 153 | 34% |
| 4. Ashulia | 416 | 157 | 38% |
| 5. Mirpur | 398 | 78 | 20% |
| 6. Tongi | 291 | 114 | 39% |
| 7. Kaliahoir | 161 | 57 | 35% |
| 8. Uttara | 142 | 19 | 13% |
| 9. Pallabi | 125 | 38 | 30% |
| 10. Double Mooring | 115 | 21 | 18% |
| 11. Narayanganj | 113 | 34 | 30% |
| 12. Rampura | 110 | 10 | 9% |

official list to determine the sub-districts with the highest concentration of garment facilities (see the top 12 list above) and selected Tongi (#6) and Rampura (#12) as survey areas.

The selected sub-districts are geographical hubs for garment production. Tongi and Rampura are not only areas of high factory concentration themselves, but they are also surrounded by other areas where subcontracting is prevalent. Tongi, for example, in the northern part of Dhaka City, borders Uttara (#8) and is close to Gazipur (#2). Rampura on the south-east part of the city is closer to the old town (Fatullah #1), where garment production originally started before production moved to the outskirts of Dhaka. While Tongi is one of the districts with the highest concentration of Accord/Alliance production (39%); Rampura is one of the districts with the smallest percentage (9%). The local assessment team also judged Tongi and Rampura as most suitable in terms of their accessibility and size.

Four assessment teams, each comprised of two local survey experts, walked every street in Tongi and Rampura over three full days in June 2015. Their objective was to identify every facility

involved in the garment business in these areas.¹⁶ The facilities they identified included larger factories that cut, sew and package finished products, but also facilities that produce accessories (zippers, buttons etc.), or only perform individual production steps, such as printing or washing.

The teams accessed over 90% of the garment facilities on the official list in the two areas. They surveyed management staff on a set of business-related questions, including information about current business challenges, as well as where the factory fits in the regulatory landscape (see Appendix I).

We were able to assess whether a factory was a direct exporter, a registered subcontractor, or an unregistered subcontractor by asking factory managers about their membership in the trade associations, whether they “take UD” (the formal import/export permit issued by the trade associations on behalf of the government), and whether they were producing for export.

A factory can be a member of the trade association, but not take UD (official subcontractor) or be an unregistered factory that produces for export (infor-

mal subcontractor). Informal subcontractors do not maintain direct relationships with foreign buyers, take UD, belong to a trade association, or register with a government entity.

The official list of approximately 7,000 factories coupled with data from the field survey formed the basis of the analysis for this report.

Figure 3: Typology of factories producing for export

| | Formal | Informal |
|----------|--|--|
| Direct | <ul style="list-style-type: none"> • Accord, Alliance factories • BGMEA, BKMEA members that “take UD” | X |
| Indirect | <ul style="list-style-type: none"> • BGMEA, BKMEA members that do not “take UD” and rely on subcontracts with other trade association members | <ul style="list-style-type: none"> • Unregistered factories that supply direct exporting factories through subcontracts |

Findings

1. Size of the sector

There are more than 7,000 factories producing for the export market, split between direct and indirect sourcing factories. Indirect suppliers are an important driver of overall production in Bangladesh and key to the sector's ability to respond to seasonal fluctuations in orders.

More than 7,000 Total Factories

Previous estimates of the size of the garment sector accounted for 4,000 – 4,500 factories.¹⁷ By collecting data from five publicly available datasets, we found more than 7,000 factories. This means that the universe of factories is more than 56% larger than previously understood. In addition, we found that the total number of factories is split approximately evenly between direct and indirect exporting factories.

Initially, we anticipated that there would be a significant degree of overlap among the five sources. However, analysis by Marc-Olivier Boldi from the Research Center for Statistics at the University of Geneva showed that while some lists are closely correlated, others are not.¹⁸ For example, out of 1,569 BGMEA factories, 1,314 also appear on the DIFE list. This is a large overlap and we assume that the government drew its data from the trade associations.

Between the BGMEA/BKMEA and Accord lists, in contrast, there is less overlap than expected. One thousand, one hundred and five factories are listed in the BGMEA and Accord lists; only 321 facilities are listed on the BKMEA and Accord lists. We had assumed that all of the 1,569 Accord factories also would be registered in either BGMEA or BKMEA lists. But, in fact, there are

261 Accord factories that appear on no other list (16%). The BGMEA list was compiled long before the Accord or the Alliance and it is possible that it simply was not up to date at the time we collected the data.

Why is the universe of factories so much bigger than previously understood? There is simply more and better data available as a result of demands for increased transparency from the international community beginning in 2013. Prior to Rana Plaza, only the trade associations published any information about the factory base in Bangladesh. The 2011-2012 BGMEA Members' Directory lists 3,411 factories in Dhaka and 769 in Chittagong.¹⁹ These numbers are likely inflated by the inclusion of factories that are no longer in operation but that remained on the list.²⁰ After Rana Plaza, foreign governments and the ILO pressured the government to publish its own data, which it did in a DIFE database launched in April 2014.²¹ Around the same time, the Accord and the Alliance began publishing monthly factory lists identifying their members' primary suppliers.

In short, previous estimates of the size of the sector were derived from data produced by the trade associations that was not completely reliable. The availability of more data from a wider variety of sources has brought more factories into the light.

For those interested in improving factory safety and workers' rights in Bangladesh, this means that the reach of these efforts must be considered in the context of a bigger universe of factories. For example, in November 2015, Srinivas B. Reddy, Bangladesh

FINDINGS

1. SIZE OF THE SECTOR

country director of the ILO, was quoted as saying, “Eighty percent of factories ... will require fire and electrical remediation.”²² In the absence of good information about the total size of the sector, there is a denominator problem – 80% of how many factories?

Similarly, in October 2015, the government of Bangladesh announced that it had inspected 1,475 factories with support from the ILO. The government asserted that 80% of factories have been found safe (very much at odds with the ILO’s conclusions around the same time).²³ Using 7,000 as the denominator, the government’s inspections covered only about 20% of the total number of garment factories producing for export in Bangladesh. The problems presented by an under-regulated and informal garment sector are much bigger than anyone has acknowledged up to this point.

Direct and Indirect Suppliers

Within the universe of 7,000 factories, there are both direct and indirect

suppliers.²⁴ The analysis in this Report is based on an understanding of the Bangladeshi permitting system for tracking duty-free import of materials, called the “Utilization Declaration” or “UD.” UD is required for every export order. For example, if a factory receives an order for 100,000 shirts, each of which requires three yards of fabric, the factory would receive UD from the trade association²⁵ to import exactly 300,000 yards of fabric duty-free. This means that UD is the marker of whether a factory is a direct export factory.

The trade associations each maintain a “UD list” of those factories, which, at some point during the year, have applied for and received UD.²⁶ This list is not publicly available, but BGMEA reported in an email interview that its list has remained stable over the past three years at 2,100 UD factories²⁷ and The Financial Express reports that the BKMEA’s list stands between 800 – 1,000 factories.²⁸ We use 3,200 as the total estimate of the size of the UD list.²⁹

The stability of the UD list is surprising, given that production volume is

so volatile. Between 2013 and 2014, total production volume fell dramatically, from 1.49 billion units³⁰ to 993 million units.³¹ In 2015, the sector came roaring back, growing 58% to 1.57 billion units.³² This means that the average number of units per direct exporting factory went from 465,625 down to 309,375 and then back up again to 490,625 within three years.

This can be explained in one of two ways: either each direct exporter is able to dramatically increase and decrease its production in response to shifting demand, or the thousands of small factories that comprise the indirect sector enable the direct exporters to accommodate substantial shifts. This data, coupled with our earlier research, points strongly to the latter scenario. Subcontracting allows bigger factories to accommodate demand swings by increasing capacity without additional capital investment.³³

While we do not have a list identifying which of the specific factories among the approximately 7,000 are direct export factories, it is significant to understand



FINDINGS

1. SIZE OF THE SECTOR

Figure 4: Apparel export volumes in relation to the number of direct exporting factories (2014 – 2015)

| | 2013 | 2014 | 2015 |
|---|--------------------|-------------------|--------------------|
| Total export volume, apparel products, Bangladesh | 1.49 billion units | 993 million units | 1.57 billion units |
| Number of direct exporting factories | ~3,200 | ~3,200 | ~3,200 |
| Average units per direct exporting factory | 465,625 | 309,375 | 490,625 |

that about half of the total is comprised of direct suppliers, while the other half is made up of indirect suppliers.

This also means that there are members of the trade associations that are not direct suppliers. These factories are formal, indirect factories that produce for export. Within BGMEA, there are about 1,000 factories in this category. As we identified in our earlier research, the trade association registers these subcontracts through a formal administrative process called the “interbond transfer license”³⁴ that tracks the movement of goods under the particular order’s UD number. For formal, indirect sourcing factories, the BGMEA offers protection for the factory in the event that an order goes wrong. As one such factory owner said, “It’s very risky not to go through BGMEA” for subcontracted orders.³⁵

There are key differences between direct and indirect suppliers. As we detailed in our earlier research, direct exporters are characterized by:

- Relationships with foreign brands.

- Relationships with foreign suppliers of inputs such as fabric, thread, packaging materials, and accessories (mostly from China).
- Credit-based orders through the “back-to-back L/C” (letter of credit) system, conducted in dollars.
- Access to export credits.

Direct exporters assume all responsibility for every aspect of production from procuring materials, to cutting, sewing, finishing, packaging, and transport. This requires significant investment of capital, sophisticated international relationships, and capacity to withstand production delays due to late delivery of materials or other factors. Suppliers that demonstrate the highest order and export volumes also have the greatest access to capital. This is because financing and export credits are made available on the basis of total order and export volume, not production capacity.³⁶

This kind of production requires a level of sophistication in business practices and exposure to international standards that are not found in indirect suppliers. Indirect suppliers specialize in low-skill

cut-and-sew production or discrete production processes such as washing and dyeing. They also conduct business in Bangladeshi Taka, without access to the credit-based financing facilities or export credits that are available to direct exporters.

If the indirect sourcing model was conducted within an effective regulatory framework and efficient markets, it could allocate and re-allocate production according to the competitive advantages of each actor in the supply chain. The absence of those conditions, however, has resulted in a supply chain driven by pursuit of the lowest nominal costs. This has undermined wages and working conditions, investment in technology and training, and improvements in productivity and quality.

Employment Data

Based on employment information from the official factory list, there are 5.1 million workers in the garment sector. The ILO estimates that there are 4.2 million workers.³⁷ Given that our research shows that the number of factories is significantly larger than previous estima-

FINDINGS

1. SIZE OF THE SECTOR

tes, it is not surprising to see that there also are almost a million more workers in the sector than previously understood.

Interestingly, the official data we compiled shows that just 56% percent of workers are women, while the ILO reports that 80% of garment workers are women. Not all factories in our dataset include a breakdown of employment along gender lines and we did not test the validity of employment data in our field study.

One of the key narratives about the garment sector in Bangladesh is that it has been empowering to women, who have driven the sector's phenomenal growth.³⁸ While it is certainly significant that women represent more than half the workforce in the garment sector, our data show a more even split between men and women than this narrative would suggest. In the course of our research, we spent significant time in garment factories of all sizes, where it is most common to see women operating sewing machines. But there are many

men also employed in the sector, often in jobs such as cutting and loading. Management positions are, perhaps unsurprisingly, dominated by men. It should be a subject of further research to better understand the reality of gender dynamics in the garment sector.³⁹



At the top of the sector, direct exporters can be sophisticated, modern operations that employ standard business practices. They employ qualified managers in areas such as human rights and corporate social responsibility. Workers at Square Textiles in Mohakhali, December 2014. NAYANTARA BANERJEE

2. Informal subcontracting

In our survey of two sub-districts in Dhaka, 32% of the 479 factories surveyed were informal subcontractors; 91% of these factories produce at least partly for the export market. Subcontracting without oversight increases workers' vulnerability to labor rights abuse and safety violations.

Prevalence of informal subcontracting

Informal factories are a subset of indirect suppliers. They do not register with the government, the trade associations, or foreign brands and rely on subcontracts with other, larger factories to fill their production lines. In our June 2015 survey of two sub-districts of Dhaka, 32% of the 479 factories surveyed were informal subcontractors producing at least partly for the export market.⁴⁰ They are characterized by their small size – on average, they employ 55 workers; among all factories on the official list, the average number of workers per factory is 650. Informal subcontractors tend to focus on a single production process, such as sewing, washing, dyeing, or printing. The top three barriers to enhanced productivity for informal factories were limited electricity, fluctuating order volumes, and political instability.

Workers in this part of the sector are especially vulnerable because they are invisible to regulators and their employers operate on such slim margins that they cannot invest in even basic safety equipment or procedures. Small, under-resourced factories must rely on labor-intensive production methods rather than making capital investments in machines and processes that improve efficiency. They also undercut larger, more compliant factories on price. Informal factories do not pay taxes, submit to regulation, or bear the costs of labor rights compliance.

The survey did not ask questions about working conditions, or even subcontracting explicitly. But anecdotally, the survey teams reported that they observed child labor in some informal factories. We did not seek to verify employees' ages, but the observation of potential child workers reinforces the lack of oversight and risks to workers in this part of the sector.⁴³ The survey teams' observations are reinforced by journalistic reporting on informal factories that highlight child labor in this part of sector. Informal subcontracting factories may serve as a pathway into employment in the formal sector, with young workers starting out in the least regulated fac-

Figure 5: Breakdown of factories producing for export: Tongi and Rampura factory survey, June 2015⁴¹

| | Formal | Informal |
|----------|--|--|
| Direct | 185 Members of BGMEA, BKMEA and take UD always or sometimes ⁴² | X |
| Indirect | 8 Members of BGMEA, BKMEA members; do not take UD | 153 Not members of BGMEA, BKMEA; do not take UD |

2. INFORMAL SUBCONTRACTING



In an October 2015 photo essay on informal subcontracting, Dhaka-based photojournalist Claudio Montesano Casillas presented photos of children working in informal factories. He identified embroidery work, cutting/trimming, cutting thread, printing, making labels/tags/stickers, packaging, machine cleaning, weaving, hand stitching, dyeing, decorative work, button stitching, knitting, washing, and button coloring as common activities for child workers in informal factories. CLAUDIO MONTESANO CASILLAS

tories where prohibitions against child labor are not regularly enforced.

We are not aware of any inspections of informal subcontracting factories and visibility into this part of the sector remains very limited. Our survey is the first attempt to begin a systemic assessment of informal subcontracting. But the combination of survey data, anecdotal reporting, and journalistic accounts reinforce a view of informal factories as being subject to almost no regulation or

oversight, where even basic standards of safety, health, and labor rights are not enforced. As profit margins tighten through repeated subcontracting, labor is the only flexible cost component. Machinery, electricity, gas, and rent are fixed costs; managers operating on hair-thin margins seek to reduce overall costs by squeezing workers through low wages and long hours, or by employing children.

Though some academics have disputed this view of informal subcontracting,⁴⁴ the growing body of research into the true nature of the apparel supply chain suggests that these factories are as, if not more, dangerous than the regulated factories at the top of the sector. Moreover, the survey results show that informal subcontracting continues to be a prominent mode of production, as almost a third of factories in the survey areas were informal subcontracting factories.

FINDINGS

2. INFORMAL SUBCONTRACTING

Informal factories produce for export

The survey also showed that 91% of informal factories produce at least partly for export. The most common scenario is for informal subcontracting factories to do mixed production for the domestic and export markets. All of

our research suggests that the boundaries between types of production are fluid; factories prefer to take the highest value-add orders available to them, but will take less desirable orders to fill their lines. For informal suppliers, export production is more valuable than domestic. But in the absence of

export subcontracts, they will fill their lines with domestic production. From the perspective of foreign brands, the risk of production ending up with an informal supplier is unpredictable.

Indirect sourcing model

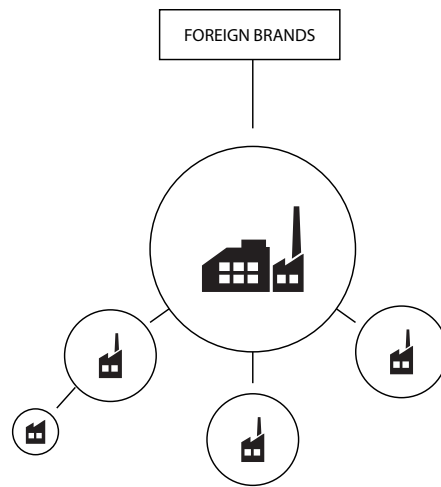


Figure 6: Indicators for informal, indirect subcontracting for the export and domestic markets

| | | Domestic market production | | | |
|---------|-------------|----------------------------|-----|--------|-------------|
| | | Only | No | Partly | No Response |
| Take UD | Never | 83 | 4 | 119 | 0 |
| | Sometimes | 1 ⁴⁵ | 1 | 29 | 0 |
| | Always | 1 ⁴⁶ | 158 | 42 | 0 |
| | No response | 2 | 2 | 2 | 35 |

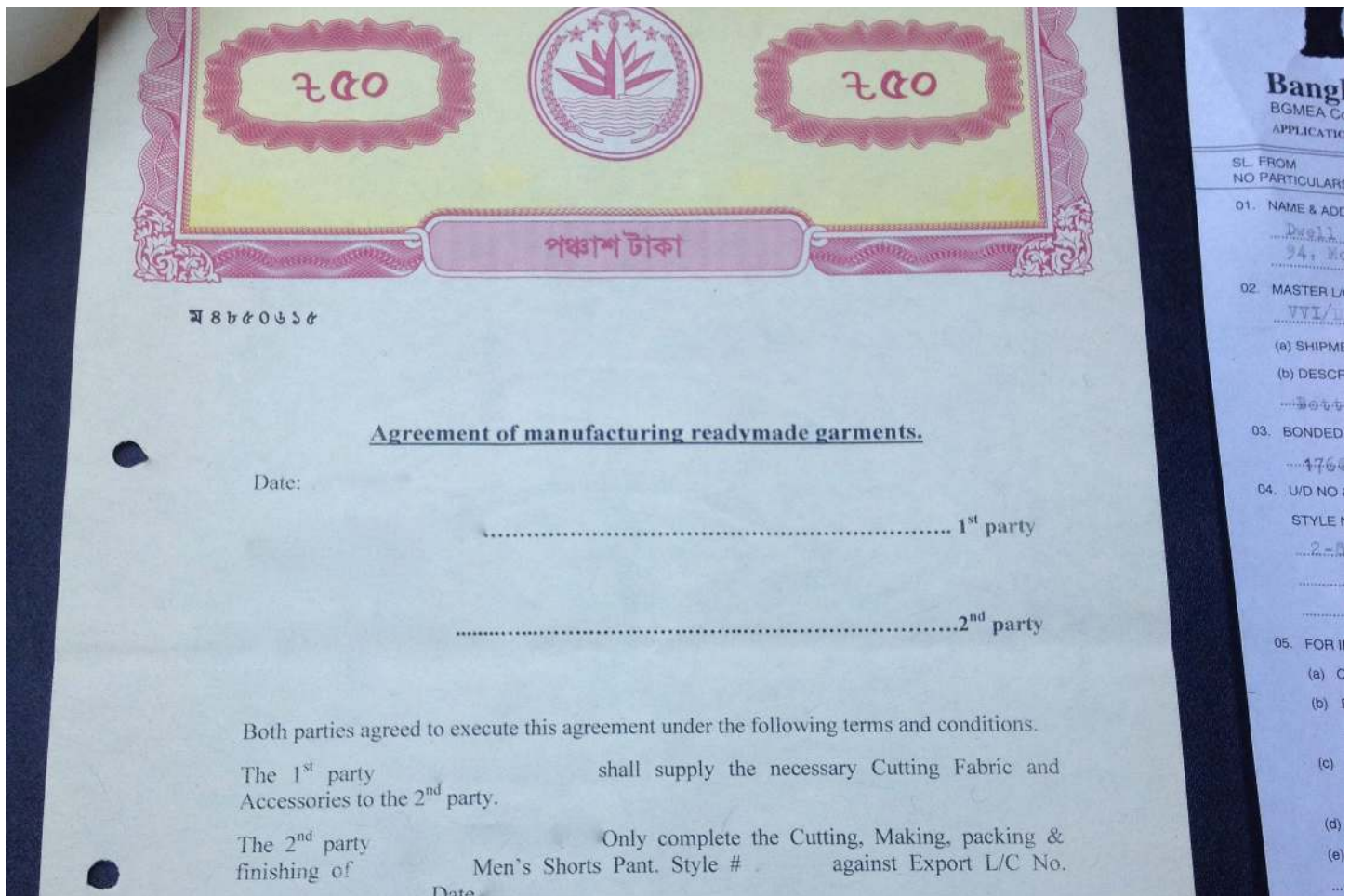
3. Accord and Alliance

The two factory safety programs initiated by foreign brands encompass only 27% of factories, which tend to be larger and better resourced than all other factories. Because they are in the largest factories, the two initiatives encompass 45% of workers, though more than three million workers remain outside their purview.

Accord and Alliance cover 27% of factories

While global fashion brands had been unwilling to take large-scale, collective

action on factory safety prior to April 2013, Rana Plaza was a catalyst for brands to come together to develop common standards and approaches to improve fire and building safety. The Accord includes global and local unions and more than 200 brands, while the Alliance encompasses 27 North American brands. The programs have received significant public attention and have committed to spend up to US\$100 million over five years to improve factory safety. But they are narrowly focused on a subset of direct suppliers.



Subcontracting among trade association members is tracked through several administrative processes. This is an example of a subcontract, which is a very simple, notarized contract. In addition, factories engaged in subcontracting will seek approval from the trade associations through the “interbond transfer license.” SARAH LABOWITZ

3. ACCORD AND ALLIANCE

The Accord and the Alliance encompass 1,900 factories, which represent 27% of the estimated 7,000 total factories in Bangladesh and about 60% of the 3,200 factories on the direct export “UD list.” Factories that do direct export but which are not covered by the Accord or the Alliance are likely supplying brands based in Turkey, Japan, Brazil, Russia, and South Africa,⁴⁷ as well as non-Accord/Alliance brands in North America and Europe.

Accord/Alliance brands are the most desirable buyers because of their order volumes, prices, modern business practices, and international prestige. Factories compete to supply these brands and to meet their high standards. But our earlier research indicates that subcontracting is happening even among this relatively elite group of factories.

It is impossible at this stage to track which Accord/Alliance factories are connected to factories in the wider universe of indirect suppliers. Even within the trade associations, many of the processes for tracking the movement of orders between factories are not computerized and are not made available to buyers or the public. At the same time, the boundary is permeable between the factories that Accord/Alliance brands acknowledge and all other factories. Given the widespread reliance on subcontracting, it is likely that workers in the wider universe of factories are producing clothing that ends up in the supply chains of Accord/Alliance brands.⁴⁸

Comparing the average size of Accord/Alliance factories to other factories

There are significant differences between Accord and Alliance factories and other factories. Accord/Alliance factories tend to be large, with a median factory size of 1,200 workers. Among all

factories on the official list, the median factory size is 650 workers, and in our survey, informal factories were even smaller, with a median size of 55 workers. On the whole, Accord and Alliance brands are concentrated in the largest factories, while outside of this top tier of the sector, factories are mostly small- and medium-sized enterprises.

As our earlier research identified, factories that are the primary suppliers of Accord and Alliance brands tend to have greater access to capital, standalone facilities not in mixed-use buildings, and more sophisticated foreign relationships with buyers and suppliers of key inputs (such as fabric, accessories, and packaging material). Developing such a large factory requires access to capital, relationships with foreign buyers and suppliers, dedicated land, and sufficient electricity to run many machines. These factories can be highly sophisticated, efficient, profitable, and even sustainable. For example, Viyellatex Group was recognized in 2013 as the recipient of PVH’s global sustainability award and is now going green in its operations.⁴⁹

The Accord and the Alliance are concentrated in factories that are the most well-resourced and which have the greatest exposure to international standards and expectations around labor rights and factory safety. Nevertheless, there are certainly risks for labor rights abuse and poor factory safety even in this part of the supply chain. As the Accord noted in an October 2014 op-ed, its inspectors found more than 80,000 violations in inspections of 1,100 factories.⁵⁰

But strategies for improving – and financing – factory safety repairs will necessarily be different depending on the characteristics of the factory. To date, there is not nearly enough attention on the unique needs of factories that are not direct exporters.

Comparing employment data in Accord and Alliance factories to other factories

While the Accord and the Alliance represent about a quarter of all factories, they encompass almost half the total workforce. Totaling all of the employment data in the official factory list, there are 5.1 million workers in the garment sector.⁵¹ Accord and Alliance factories account for 2.3 million of these workers.

This is not surprising given the concentration of Accord and Alliance brands in large factories. And it means that many workers are benefiting from the inspection and worker safety programs run by both initiatives. The Accord and the Alliance each maintain sizeable staffs in Dhaka, with dedicated personnel for inspections, capacity building, and fire safety.

For example, the Accord, which includes ten unions, is prioritizing worker participation, with the objective of including greater worker voice in inspections, monitoring, and implementing corrective action plans, in addition to empowering workers to refuse unsafe work if necessary.⁵² The Alliance operates the Amader Kotha Helpline, through which workers can report safety and other concerns via a free hotline.⁵³

While it is significant that almost half the workforce is covered by the extensive fire and building safety programs run by the Accord and the Alliance, the data show that 2.8 million workers do not enjoy these benefits. This means that there is a risk of a widening gap between those factories that maintain relationships with American and European brands and those that are either indirect suppliers or supply brands from other parts of the world. All workers in Bangladesh are entitled to minimum standards of safety and dignity at work.

4. Fixing Factories

While almost all direct exporters have been inspected as of October 2015, the test of the hundreds of millions of dollars committed to factory safety is remediation of the violations identified. Thus far, only eight factories have passed final inspection and no indirect exporters have been inspected.

Inspections

As of October 2015, 3,425 inspections have taken place through a combination of the Accord,⁵⁴ Alliance,⁵⁵ and DIFE/ILO.⁵⁶ It is unclear from the available reporting how much overlap there is among these inspections, but there is no doubt that a significant portion of direct exporters has been inspected. According to the ILO, its inspection program targets those factories that are not covered by the Accord or the Alliance, but that are on the UD list.⁵⁷ This means that almost all factories that have been inspected are direct exporters and that almost all of these factories have been inspected. This has not been accomplished without challenges, as evidenced by the ILO's letter to the BGMEA in October 2015 alleging that 88 factories were unwilling to submit to safety inspections.⁵⁸

Corrective Action

The Accord reported in November 2015 that of the 1,590 factories it had inspected, progress toward fixing violations identified through inspections was delayed in most factories. Only two Accord factories have successfully completed a "Corrective Action Plan."⁵⁹ As the November 2015 Quarterly Update says, "the majority of factories are currently behind schedule according to timelines agreed following each factory's initial inspection."⁶⁰ The Alliance reported in September 2015 that six factories had passed final inspection.

DIFE does not report that any factories have completed a Corrective Action Plan, meaning that the total number of direct export factories that have passed final inspection is eight (0.002%).

Why are so few factories successfully being fixed? There are two reasons. First, the most essential upgrades to make factories safer, such as electrical improvements and moving to purpose-built facilities, are expensive. The Alliance estimates that the average cost of remediation is US\$250,000 – \$350,000 per factory.⁶¹

Second, it appears that the position of the brands in the Accord and the Alliance is that the significant cost of factory repairs is the responsibility of their suppliers. By their own accounts, factory improvements have only been completed in a small percentage of Accord and Alliance factories. The situation is now at something of a stalemate over burden sharing for factory improvements. Factory owners apparently are not making the investments identified as necessary in Accord and Alliance inspections, and brands are unwilling to underwrite the costs themselves.

Worker Voice

To make any corrective actions sustainable, the Accord and Alliance focus on raising workers' voice through trainings and their integration in safety committees. Supporting workers' representation in safety committees that monitor the implementation of safety standards is an essential element for a sustainable garment sector over the long term. Even more so, the development of mature, healthy industrial relations with a thriving union movement that truly represents workers should be a goal for all stakeholders.

4. FIXING FACTORIES

As of August 2015, there are 464 trade unions in Bangladesh, of which 323 have been registered since Rana Plaza (70%).⁶² Syed Sultan Uddin Ahmed, assistant executive director of the Bangladesh Institute for Labor Studies, explained the rise in unionization in the Dhaka Tribune in August 2015: “The number of trade union registrations has increased due to international pressures including human rights organizations, global trade unions, consumer groups as well as retailers.”⁶³

However, Bangladeshi labor law requires that a third of a factory’s workforce be registered with the union as a precondition of government recognition. Amirul Haque, president of the National Garment Workers Federation, explained to *The Guardian* that registering unions in large factories is particularly challenging: “It is very hard because to start organizing in a workplace of 10,000 people, you must sign up 3,000 workers.”⁶⁴ As a result, most unions are registering in small facilities, where the threshold for organizing is a much lower number of workers. Given that the Accord and the Alliance are concentrated in large factories, increasing unionization in these factories will be difficult.

Currently, despite registration of many new unions, the climate for manage-

ment-labor relations remains strained. Bangladesh has a long history of violence targeting union leaders.⁶⁵ And Amirul Haque notes that even today, trade unionists regularly face harassment, violence and being fired.⁶⁶ Since 2007, the AFL-CIO has launched four complaints with the U.S. Trade Representative calling for suspension of Bangladesh’s preferential trade status on the basis of its failure to make “meaningful and consistent progress toward affording internationally recognized labor rights, including freedom of association...”⁶⁷

As Christy Hoffman, deputy general secretary of UNI Global Union, told *The Guardian*, “There is no such thing as a truly safe factory without informed and engaged workers on the factory floor with an independent voice to raise problems and enforce solutions.”⁶⁸ Achieving a safe and sustainable garment sector will require significant improvements in the climate for labor relations.

International funding and finance

Significant international attention after Rana Plaza resulted in announcements of big commitments of foreign assistance targeting the garment sector. A full index of the largest public and private funds is included in Appendix

II. Exclusive of the US\$12.9 million domestic factory inspection budget (2013–2016), the international community has announced commitments to spend up to US\$280 million for Bangladesh’s garment sector. Very little data is available about how much of this money has actually been spent. While money has been invested to conduct inspections and for the operational budgets of the Accord and Alliance, it is not clear how much, if any, money has been spent on factory remediation. Moreover, a comprehensive needs assessment is required to determine the true costs of upgrading the full garment sector, including indirect suppliers. The cost of fixing all factories is likely to be much higher than the funds committed thus far.

Appendix I – Field Survey Questions

- Is this facility producing for the RMG sector?
- Name (English and Bangla)
- Address
- Number of workers
- Membership in BGMEA/BKMEA
- Does the facility take UD (utilization declaration)?
 - Always/sometimes/never
- Production for the domestic market?
 - Yes/partly/no
- What are the factory's obstacles to increased production?
 - Fluctuations in orders
 - High labor turnover
 - High worker absenteeism
 - Low skill levels among workers
 - Old machines
 - Limited factory floorspace
 - Challenges accessing capital
 - Hartals, blockades, political instability
 - Unreliable electricity
 - Trade union activity
- Other comments/observations

Appendix II – Funding and Financing for the Garment Sector in Bangladesh

| Program | Amount (USD) | Source of Funding | Dates |
|---|--|---|---|
| Government of Bangladesh | | | |
| Bangladesh Government domestic factory inspection budget ⁶⁹ | \$12.9 million (\$900,000 in 2013-14; \$3m in 2014-15; \$9m for 2015-16) | Government of Bangladesh Department of Inspections of Factories and Establishments (DIFE) | 2013 - 2016 |
| Foreign Governments – RMG Industry | | | |
| Better Work Bangladesh ⁷⁰ including ILO joint program “Improving Working Conditions in the RMG Sector” ⁷¹ | \$31.4 million | Governments of the Netherlands, Switzerland, UK, Canada, and the United States | October 2013 - December 2016 |
| ILO program “Promoting Social Dialogue and Harmonious Industrial Relations in the Bangladesh Ready-Made Garment Industry” ⁷² | \$5.4 million | Government of Sweden | November 2015 - December 2020 |
| USAID Worker Empowerment Fund ⁷³ Grants to the AFL-CIO Solidarity Center ⁷⁴ “Improving Representation in the Workplace,” ⁷⁵ and “Promoting Rights and Interests in Targeted Garment Communities” ⁷⁶ | \$4 million | U.S. Government | June 2016 - 2018 |
| UKaid’s Responsible and Accountable Garment Sector Challenge Fund (RAGS) ⁷⁷ program grants including ActionAid Bangladesh | \$4.8 million | Government of UK | November 27, 2009 - March 31, 2014 |
| Foreign Governments – Export Industries (including but not limited to RMG) | | | |
| US Department of Labor Grants to the ILO for Better Work Programs in South Asia ⁷⁸ | \$7.8 million | U.S. Government | One-time grants on December 15, 2010 (\$5.3 million) and September 30, 2013 (\$2.5 million) |

APPENDIX II – FUNDING AND FINANCING FOR THE GARMENT SECTOR IN BANGLADESH

| | | | |
|--|----------------|----------------------|---------------------------------------|
| ILO program “Promoting Fundamental Rights and Labour Relations in Export Oriented Industries in Bangladesh” ⁷⁹ | \$2.5 million | Government of Norway | June 1, 2013 - May 31, 2014 |
| ILO program “Bangladesh Skills for Employment and Productivity Project (B-SEP)” ⁸⁰ | \$14.5 million | Government of Canada | March 27, 2013 - March 31 2018 |
| UKaid’s Trade in Global Value Chains Initiative (TGVCi) program grants including Better for Business and Workers and Her Project ⁸¹ | \$7.5 million | Government of UK | September 9, 2013 - September 8, 2016 |

Loans

| | | | |
|--|---|--|---|
| USAID Development Credit Authority’s Credit Guarantee Facility for bank loans to factories supplying Accord and Alliance member brands | \$22 million ⁸² (\$18m for Alliance factories; \$4m for Accord and Tripartite Action Plan factories) | U.S. Government, Prime Bank Limited, United Commercial Bank, the Alliance | Announced September 30, 2015; will provide long term USD and BD Taka loans to factories |
| IFC Funding ⁸³ | \$50 million in loans to fund RMG factory safety through the Accord and the Alliance | Accord, Alliance, VF*, and public and private donors * VF backs up to \$10 million of the IFC loans with lower rates to its own suppliers | Announced July 7, 2015; will provide 1-3 year loans to factories |

Foreign Brands

| | | | |
|---|--------------------------------------|---|---|
| Alliance for Bangladesh Worker Safety’s 5-year financial commitments to factory improvements plan | \$50 million ⁸⁴ committed | 27 North American companies ⁸⁵ | 2013 - 2018 |
| The Accord’s 5-year financial commitment to factory improvements plan | \$48 million ⁸⁶ committed | BRAC USA; Prime Minister’s Relief and Welfare Fund of Bangladesh; Primark; and other public and private brands, organizations, individuals, and anonymous donors. | Established September 13, 2013; first claim processed March 24, 2014; funding target reached September 18, 2015 |

Worker Compensation and Humanitarian Relief

| | | | |
|---|---|---|---|
| Rana Plaza Arrangement Donors Trust Fund | 30 million in compensation to victims and families of the Rana Plaza collapse ⁸⁷ | BRAC USA; Prime Minister's Relief and Welfare Fund of Bangladesh; Primark; and other public and private brands, organizations, individuals, and anonymous donors. | Established September 13, 2013; first claim processed March 24, 2014; funding target reached September 18, 2015 |
| BRAC USA's Bangladesh Humanitarian Fund ⁸⁸ | \$5.43 million (includes \$2.48 million directed toward the Rana Plaza Donors Trust Fund) | Donors including Walmart, Asda, The Children's Place, The Gap Foundation, and VF Foundation | Began on April 24, 2014; fundraising ongoing |

Total \$281 million in international funding and financing*

* Exclusive of Government of Bangladesh domestic factory inspection budget

1. Some steps are being taken in this direction. For example, in an op-ed marking the second anniversary of Rana Plaza, U.S. Ambassador to Bangladesh Marcia Bernicat acknowledged that some “factories remain not registered; their conditions are unknown.” Marcia Bernicat, “Rana Plaza two-year anniversary,” *bdnews24.com*, April 22, 2015, <http://opinion.bdnews24.com/2015/04/22/rana-plaza-two-year-anniversary/>. In a section on global supply chains in the June 2015 G-7 Leaders’ Declaration, the seven major advanced economies committed to “increase our support to help SMEs [small and medium sized enterprises] develop a common understanding of due diligence and responsible supply chain management.” “G-7 Leaders’ Declaration,” 8 June 2015, <https://www.whitehouse.gov/the-press-office/2015/06/08/g-7-leaders-declaration>. And in its draft Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector, the OECD includes several points of guidance for extending its due diligence framework to subcontractors and homeworkers, noting that “[u]n-authorized subcontracting increases the risk of poor working conditions, labour violations and human rights abuses.” See OECD, “Due Diligence Guidance for Responsible Supply Chains in the Garment and Footwear Sector,” (Draft for consultation, September 2015), p.57, <http://www.oecd.org/daf/inv/mne/Due-Diligence-Guidance-Responsible-Supply-Chains-Textiles-Footwear.pdf>. See also World Economic Forum Global Agenda Council on Human Rights, *Shared Responsibility: A New Paradigm for Supply Chains* (November 2015), <https://agenda.weforum.org/2015/11/why-human-rights-is-a-shared-responsibility/> (focusing extensively on the role of indirect sourcing in supply chains).
2. This MissingMaps project is a collaboration among the Red Cross, Humanitarian OpenStreetMap Team, and Medecins Sans Frontieres. It has begun to map parts of Dhaka. See OpenStreetMap, <http://www.openstreetmap.org/relation/184640#map=4/23.54/90.34>.
3. See, for example, the extensive parcel mapping efforts of Loveland, a technology company based in San Francisco and Detroit, which is endeavoring to create a parcel map of the entire United States: Loveland, <http://makeloveland.com>.
4. Rubana Huq, “Bangladesh Hunts for 29 Cents,” *The Wall Street Journal*, April 23, 2014, <http://www.wsj.com/articles/SB10001424052702303825604579518333605948014>.
5. World Bank, “World Bank Statement on Padma Bridge,” June 29, 2012, <http://www.worldbank.org/en/news/press-release/2012/06/29/world-bank-statement-padma-bridge>.
6. Pantho Ramahan, “Bangladesh aims to be world’s first solar nation,” *Reuters*, January 25, 2015, <http://in.reuters.com/article/bangladesh-solar-id1NKBNOKY00220150125>.
7. Sarah Labowitz, “A Tipping Point in Bangladesh?” *Council on Foreign Relations Development Channel*, December 8, 2015, <http://blogs.cfr.org/development-channel/2015/12/08/a-tipping-point-in-bangladesh/>.
8. World Economic Forum, *Shared Responsibility*, above n 1.
9. The framework for this recommendation is derived from World Economic Forum, *Shared Responsibility*, above n 1.
10. Detroit Blight Removal Taskforce, <http://www.timetoendblight.com>. See also Sarah Labowitz, “Bangladesh can look to this unlikely place to fix its garment sector,” *Atlantic Quartz*, July 25, 2014, <http://qz.com/240015/bangladesh-can-look-to-this-unlikely-place-to-fix-its-garment-sector/>.
11. This was not unusual for major garment exporting countries; Bangladesh’s competitors do not publish comprehensive data on their garment factories.
12. See, for example, James Melik, “The twist in the tale of rising cotton prices,” *BBC News*, December 5, 2010, <http://www.bbc.com/news/business-11865901> (“Bangladesh has 4,000 garment factories which export goods to companies such as Wal-Mart, Gap and Levi Strauss.”); Julfikar Ali Manik and Jim Yardley, “Bangladesh Finds Gross Negligence in Factory Fire,” *The New York Times*, December 17, 2012, <http://www.nytimes.com/2012/12/18/world/asia/bangladesh-factory-fire-caused-by-gross-negligence.html> (“Bangladesh has more than 4,500 garment factories, which employ more than four million workers”); Benjamin Powell, “Sweatshops In Bangladesh Improve The Lives Of Their Workers, And Boost Growth,” *Forbes*, May 2, 2013, <http://www.forbes.com/sites/realspin/2013/05/02/sweatshops-in-bangladesh-improve-the-lives-of-their-workers-and-boost-growth/> (“The same is true in Bangladesh, where some 4,500 garment factories employ approximately 4 million workers.”).
13. Sarah Labowitz and Dorothee Bauermann-Pauly, *Business as Usual is Not an Option: Supply Chains and Sourcing After Rana Plaza* (2014), p.23, https://www.stern.nyu.edu/sites/default/files/assets/documents/con_047408.pdf (“Business as Usual Report”).
14. We began by identifying all duplicate records based on similarities in factory name and address. Because the DIFE source list was the largest and is run by the government, we used it as the primary record when combining multiple records for the same factory (if a factory was not listed in DIFE, we used BGMEA, BKMEA, Alliance, and Accord as the source, in that order). The cleaned-up record identifies any additional source lists in which a factory is included, as well as all employment, product information, and production capacity numbers for the factory.
15. According to the Bangladeshi tax code, new industrial operations enjoy tax holidays in the first five to seven years of operation, depending on location, in textiles, pharmaceuticals, plastics, computer hardware, petrochemicals, agricultural equipment, and industrial machinery, among others. See United States Department of State, Bureau of Economic and Business Affairs, “2015 Investment Climate Statement – Bangladesh,” <http://www.state.gov/e/eb/rls/othr/ics/2015/241475.htm>. This means that there are incentives to open new factories or re-open factories under new names to enjoy tax benefits. There does not appear to be a good process for removing old factories from the BGMEA and BKMEA lists, resulting in some list inflation.
16. Other manufacturing industries are present in both survey areas, but were not included in the survey. The teams were comprised of experts in garment production and were able to easily exclude non-garment factories from the survey.
17. See above, n 12.
18. Marc-Olivier Boldi, *Estimating the number of garment factories in Bangladesh* (August 10, 2015), <http://archive-ouverte.unige.ch/unige:74963>.
19. BGMEA, *Members’ Directory 2011 – 2012*.
20. The Members’ Directory also serves as a voter roll for BGMEA leadership elections. Factory owners who no longer maintain operational factories could still wield political influence by maintaining those factories on the BGMEA’s list.
21. The database is available at Bangladesh Ministry of Labour and Employment, Department of Inspection for Factories and Establishments, <http://database.dife.gov.bd/>. It was launched on April 30, 2014: ILO, “Website of DIFE and RMG Sector Database Launched,” <http://www.ilo.org/dhaka/Wha>

- twedo/Eventsandmeetings/WCMS_240010/lang--en/index.htm.
22. Serajul Quadir, "ILO says most Bangladesh garment factories must improve fire safety," *Reuters*, 13 November 2011, <http://www.reuters.com/article/us-bangladesh-garments-ilo-idUSKCN0T20X220151113>.
 23. "Bangladesh Says 80% of Garment Factories Safe," *Reuters*, 10 November 2015, <http://www.ndtv.com/world-news/bangladesh-says-80-per-cent-of-garment-factories-safe-1241887>.
 24. Our list of 7,179 factories does not include information about a factory's status as a direct or indirect supplier. Given the list's size and the existence of the "UD list" that contains 3,200 direct exporters, we assume that our official list includes both kinds of suppliers. Research in this area would be greatly enhanced by the availability of more and better data.
 25. On its website, BGMEA identifies the issuance of "Utilization Declaration (UD) and Utilization Permission (UP) as Entrusted by the Government" as one of its activities under Trade Facilitation and Promotion. See BGMEA, "BGMEA's Activities," <http://www.bgmea.com.bd/home/pages/BGMEASACTIVITIES>.
 26. A factory on the UD list may only take UD a few times during the year because it can be both a direct and indirect exporter. To maintain steady production throughout the year, such factories take a mix of subcontracted orders and direct orders.
 27. Number of BGMEA UD factories: 2,169 (2013); 2,100 (2014); 2,079 (2015). Email to authors from BGMEA senior official, December 14, 2015 (on file with authors).
 28. Shah Alam Nur, "'Compliant' garment factories shining as orders roll in," *The Financial Express*, April 30, 2014, <http://old.thefinancialexpress-bd.com/2014/04/30/31499#sthash.H3jqZgIR.dpuf>.
 29. We use 1,000 as the total number of BKMEA UD factories. In-person author interview with ILO program manager, Readymade Garments Program, April 20, 2015 (Dhaka).
 30. A unit is one dozen pieces.
 31. Bangladesh Garment Manufacturers and Exporters Association, "Trade Information," <http://www.bgmea.com.bd/home/pages/tradeinformation>.
 32. Ibrahim Hossain Ovi, "RMG export shines in volume, pales in value," *Dhaka Tribune*, September 7, 2015, <http://www.dhakatribune.com/business/2015/sep/07/rmg-export-shines-volume-pales-value>.
 33. Business as Usual Report, above n 13, p. 26.
 34. *Ibid*, pp.21-22, 32, 50.
 35. *Ibid*, p.21.
 36. For a more complete explanation of the indirect sourcing model see *ibid*, pp.16-29.
 37. ILO, "Improving working conditions in the ready made garment industry: Progress and achievements," September 2015, http://www.ilo.org/dhaka/Whatwedo/Projects/WCMS_240343/lang--en/index.htm.
 38. See, for example, World Bank, "Empowering Women in Bangladesh," March 8, 2012, <http://www.worldbank.org/en/news/feature/2012/03/08/womens-day-2012-empowering-women-in-bangladesh>.
 39. For a nuanced discussion of the complex role of women in the garment sector see Sanchita Saxena, *Made in Bangladesh, Cambodia, and Sri Lanka: The Labor Behind the Global Garments and Textiles Industries* (2014, Cambria Press).
 40. Informal, indirect suppliers that produce for export are those that never or only sometimes take UD but do not, or only partly, produce for the domestic market. Given the uncertainty in the "partly produce for the domestic market and sometimes take UD" category (see Figure 5), the percentage of indirect, informal suppliers producing for export ranged between 26–32%. We cannot tell if these suppliers take UD systematically every time they produce for export (thereby only conducting domestic production when they do not take UD) or if they take UD sporadically throughout the year, but continue to take export subcontracts when they do not take UD. We use the higher number because export production is more valuable than domestic production and we assume that factories with the capacity to take UD even sometimes are more likely to produce for export when they produce indirectly.
 41. Of the 479 factories surveyed, 346 had sufficiently complete data to conduct this analysis.
 42. We include factories that sometimes take UD in the direct category because according to interviews with BGMEA officials (In-person author interview with senior BGMEA officials, April 19, 2015 (Dhaka)), the UD list maintained by the trade associations includes any factory that takes UD at some point during the year. The fact that 31 factories report that they sometimes take UD points to the fluidity between direct and indirect production; factories prefer direct export orders when they are available, but will take indirect orders to fill lines.
 43. See, for example, Claudio Montesano Casillas, "Beyond The Label," *Fashion Revolution*, November 10, 2015, <http://fashionrevolution.org/beyond-the-label/>; "Made in Bangladesh," *Al Jazeera*, August 26, 2013, <http://www.aljazeera.com/programmes/faultlines/2013/08/201382611617275364.html>.
 44. Letter from Richard P. Applebaum et al to Michael Posner, May 22, 2014, <http://business-humanrights.org/en/%E2%80%9Cbusiness-as-usual-is-not-an-option-supply-chains-and-sourcing-after-rana-plaza%E2%80%9D> (Indexed as "Letter from US-based labor and human rights faculty to NYU Stern Center for Business and Human Rights regarding the 'Business as Usual is Not an Option' report on Bangladesh garment industry").
 45. We assume that this is a false response, given that a factory that takes UD sometimes or always cannot only produce for the domestic market.
 46. *Ibid*.
 47. BKMEA, *Apparel Export Statistics of Bangladesh Fiscal Year 2010-11* (2011), http://bkmea.com/images/media/iART-pdf/Apparel_Export_Statistics_2011-12.pdf.
 48. For example, the *The Wall Street Journal's* coverage following the Rana Plaza collapse summarizes the role of indirect sourcing at the factories in the Rana Plaza complex, using Benetton as an example: "At first, [Benetton] denied having any relationship at all with New Wave Style. That initial confusion exposes the complexities of a global supply chain in which retailers assemble sprawling networks of contractors and middlemen ... The tangled networks also make it difficult to assess blame when something goes wrong." Syed Zain Al-Mahmood, Christina Passariello, and Preetika Rana, "The Global Garment Trail: From Bangladesh to a Mall Near You," *The Wall Street Journal*, May 3, 2013, <http://online.wsj.com/news/articles/SB10001424127887324766604578460833869722240>.
 49. Viyellatex Group, "Awards and Achievements," http://viyellatexgroup.com/index.php?option=com_k2&view=item&layout=item&id=6&Itemid=47.
 50. Alan Roberts, "The Bangladesh Accord factory audits finds more than 80,000 safety hazards,"

- The Guardian*, October 15, 2014, <http://www.theguardian.com/sustainable-business/2014/oct/15/bangladesh-accord-factory-hazards-protect-worker-safety-fashion>.
51. The official factory list is likely to be a low estimate of employment because data often is entered in the BGMEA or BKMEA list when a factory begins operation and is not necessarily updated as the factory grows.
 52. Bangladesh Accord on Fire and Building Safety, "Worker Participation & Training," <http://bangladeshaccord.org/worker-participation-training/>.
 53. Alliance for Bangladesh Worker Safety, "Our Voice: Amader Kotha Monthly Brief," November 2015, http://www.bangladeshworkersafety.org/files/newsletters/AK_Brief_November2015.pdf.
 54. Bangladesh Accord on Fire and Building Safety, *Quarterly Aggregate Report on remediation progress at RMG factories covered by the Accord*, November 5, 2015, p.5, <http://bangladeshaccord.org/wp-content/uploads/Quarterly-Aggregate-Report-5-November-2015.pdf>.
 55. Alliance for Bangladesh Worker Safety, "Accomplishments at a Glance," September 2015, p.1, http://www.bangladeshworkersafety.org/files/Alliance%202015%20AR_Accomplishments.pdf.
 56. Bangladesh Ministry of Labour and Employment, Department of Inspections for Factories and Establishments, "Status of Building Assessment 31 October 2015," November 8, 2015, <http://database.dife.gov.bd/8-reports/10-status-of-building-assessment-30-oct-2016>.
 57. ILO, "Improving working conditions in the ready made garment industry," above n 37.
 58. Ibrahim Hossain Ovi, "ILO: 88 BGMEA-listed factories unwilling to safety inspection," *Dhaka Tribune*, October 14, 2014, <http://www.dhakatribune.com/business/2015/oct/14/ilo-88-bgmea-listed-factories-unwilling-safety-inspection#sthash.MDOKLldY.dpuf>.
 59. Bangladesh Accord on Fire and Building Safety, "Progress Overview," <http://bangladeshaccord.org/progress/>.
 60. Bangladesh Accord on Fire and Building Safety, "Quarterly Update November 2015," <http://bangladeshaccord.org/2015/11/quarterly-update-november-2015/>.
 61. Alliance for Bangladesh Worker Safety, "Remediation," <http://www.bangladeshworkersafety.org/en/what-we-do/remediation>.
 62. Ibrahim Hossain Ovi, "Trade union registration boosts after Rana Plaza tragedy," *Dhaka Tribune*, August 31, 2015, <http://www.dhakatribune.com/business/2015/aug/31/trade-union-registration-boosts-after-rana-plaza-tragedy#sthash.xYAjovuU.dpuf>.
 63. Ibid.
 64. Tansy Hoskins, "Building trade unions in Bangladesh will help prevent another Rana Plaza," *The Guardian*, May 6, 2014, <http://www.theguardian.com/sustainable-business/sustainable-fashion-blog/trade-unions-bangladesh-prevent-another-rana-plaza>.
 65. Julfikar Ali Manik and Vikas Bajaj, "Killing of Bangladeshi Labor Organizer Signals an Escalation in Violence," April 9, 2012, *The New York Times*, <http://www.nytimes.com/2012/04/10/world/asia/bangladeshi-labor-organizer-is-found-killed.html>.
 66. Hoskins, above n 64.
 67. AFL-CIO, "Update of the AFL-CIO's 2007, 2011, and 2012 Petitions to Remove Bangladesh from the List of Eligible Beneficiary Developing Countries under the Generalized System of Preferences (GSP)," October 2014, <http://www.aflcio.org/content/download/144121/3721111/GSP+Bangladesh+Update+2014.pdf>.
 68. Hoskins, above n 64.
 69. ILO, *Rana Plaza Two Years On* (April 2015), p.11, http://www.ilo.org/wcmsp5/groups/public/-/asia/-/ro-bangkok/-/ilo-dhaka/documents/publication/wcms_317816.pdf.
 70. Better Work, "Better Work to Launch Programme in Bangladesh," <http://betterwork.org/global/?p=3694>.
 71. ILO, "Improving working conditions in the ready made garment industry," above n 37.
 72. Mizan Rahman, "ILO launches initiative to improve rights of Bangladesh garment sector," *Gulf Times*, September 28, 2015, <http://www.gulf-times.com/bangladesh/245/details/456678/ilo-launches-initiative-to-improve-rights-of-bangladesh-garment-sector>.
 73. USAID, "USAID Announces New Program to Empower Workers in Bangladesh," April 24, 2015, <https://www.usaid.gov/news-information/press-releases/apr-24-2015-usaid-announces-new-program-empower-workers-bangladesh>.
 74. United States Senate, Committee on Foreign Relations Majority Staff Report, *Worker Safety and Labor Rights in Bangladesh's Garment Sector*, 113th Congress, 1st sess., November 22, 2013, p.11, <http://www.foreign.senate.gov/imo/media/doc/85633.pdf>.
 75. NGO Aid Map, "Bangladesh: USAID's Workers' Empowerment Program: Improving Representation in the Workplace," <http://www.ngoaidmap.org/projects/14182>.
 76. Ibid.
 77. Development Tracker, "Responsible and Accountable Garments Sector (Rags) to Improve Working Conditions in Garment Sector in Poor Countries [GB-1-200634]," <http://dev-tracker.dfid.gov.uk/projects/GB-1-200634/>.
 78. United States, Department of Labor, "US Labor Department to fund projects to improve fire and building safety in Bangladesh" (Release No. 13-1171-NAT), June 13, 2013, <http://www.dol.gov/opa/media/press/ilab/ILAB20131171.htm>; United States, Department of Labor, "US Department of Labor Announces a grant of more than \$5 million for Better Work Program in Bangladesh, Cambodia and Vietnam" (Release No. 10-1718-NAT), December 15, 2010, <http://www.dol.gov/opa/media/press/ilab/ILAB20101718.htm>.
 79. Norway, "Norwegian Minister of International Development Heikki Eidsvoll Holmås visits Bangladesh 3-5 June" (Press release, June 6, 2013) http://www.norway.org.bd/News_and_events/press/Norwegian-Minister-of-International-Development-Heikki-Eidsvoll-Holmas-visits-Bangladesh-3--5-June/#.Vl8kqnrSWg. See also Agreement between The Norwegian Ministry of Foreign Affairs and The International Labor Organization, "Promoting Fundamental Rights and Labour Relations in Export Oriented Industries in Bangladesh," BGD/13/05/NOR, June 6, 2013, [http://www.norway.org.bd/Documents/Agreement%20between%20MFA%20and%20ILO%20\(scanned\).pdf?epslanguage=en](http://www.norway.org.bd/Documents/Agreement%20between%20MFA%20and%20ILO%20(scanned).pdf?epslanguage=en).
 80. ILO, "Bangladesh Skills for Employment and Productivity (B-SEP)," http://www.ilo.org/dhaka/Whatwedo/Projects/WCMS_243174/lang-en/index.htm; brochure available at http://www.ilo.org/wcmsp5/groups/public/-/asia/-/ro-bangkok/-/ilo-dhaka/documents/publication/wcms_243179.pdf.
 81. Development Tracker, "Trade in global value chains initiative [GB-1-203535]," <http://dev-tracker.dfid.gov.uk/projects/GB-1-203535>.
 82. USAID, "USAID Mobilizes Financing for Safe-

- ty Improvements in Bangladesh Ready-Made Garment Industry," September 30, 2015, <https://www.usaid.gov/bangladesh/press-releases/sep-30-2015-usaid-mobilizes-financing-safety-improvements-bangladesh>.
83. John McNally, "IFC Teams Up With Leading Banks, Buyers, to Improve Safety in Bangladesh Garment Factories," International Finance Corporation, July 7, 2015, <http://ifcextapps.ifc.org/ifcext%5CPressroom%5CIFCPressRoom.nsf%5C0%5C511BAE-10B2E5B2C785257E7B006B6CD0>.
84. Alliance for Bangladesh Worker Safety, *Protecting and Empowering Bangladesh's Garment Workers* (Second Annual Report, September 2015), pp.2, 14, <http://www.bangladeshworkersafety.org/files/Alliance%20Second%20Annual%20Report.%20Sept.%202015.pdf>.
85. Alliance for Bangladesh Worker Safety, "Membership", <http://www.bangladeshworkersafety.org/who-we-are/membership>.
86. Michelle Russell, "Sourcing: Bangladesh Accord Calls on firms for more funding," *Just Style*, July 25, 2014, http://www.just-style.com/analysis/bangladesh-accord-calls-on-firms-for-more-funding_id122423.aspx.
87. Rana Plaza Coordination Committee, "Update: RPCC announce that sufficient funds now available to complete payments under the Rana Plaza arrangement," June 8, 2015, <http://www.ranaplazaarrangement.org/>.
88. BRAC, "BRAC USA calls on donors to close Rana Plaza victims' funding gap," April 24, 2015, <https://www.brac.net/latest-news/item/704-brac-usa-calls-on-donors-to-close-rana-plaza-victims-funding-gap>.

Acknowledgments

Three NYU graduate students played a sustained and substantial role in the collection, analysis, and presentation of the data contained in this report. **Nayantara Banerjee** (Gallatin '15) conducted the preliminary cleaning and geocoding of the five datasets. She also participated in the Center's December 2014 trip to Dhaka. **Sarah Manning** (Stern '16) managed the process to scrape the online data during the fall semester 2014, organized a team of MBAs to de-duplicate the data during summer 2015, and ran many, many reports. **Anneka Goss** (Tandon '17) took the data and put it on a map, painstakingly drawing individual districts when the mapping software proved inadequate. Her visualization abilities gave the data new meaning and life.

Marc Olivier-Boldi, Scientific Collaborator at the University of Geneva Research Center for Statistics, helped translate principles of data science to the context of the garment sector. **Selima Akhtar** and her team of talented and good-spirited surveyors moved mountains to complete the field survey before the start of Ramadan in June 2015. **Bishawjit Das** provided invaluable insight and friendship in Dhaka. His purchase of historical copies of the BGMEA Member Directory from the used book market in Dhaka in the summer of 2014 was the spark for this report. Drawing on his work for Fashion Revolution, **Claudio Montesano Casillas** graciously allowed us to use his haunting photos of informal factories throughout the report.

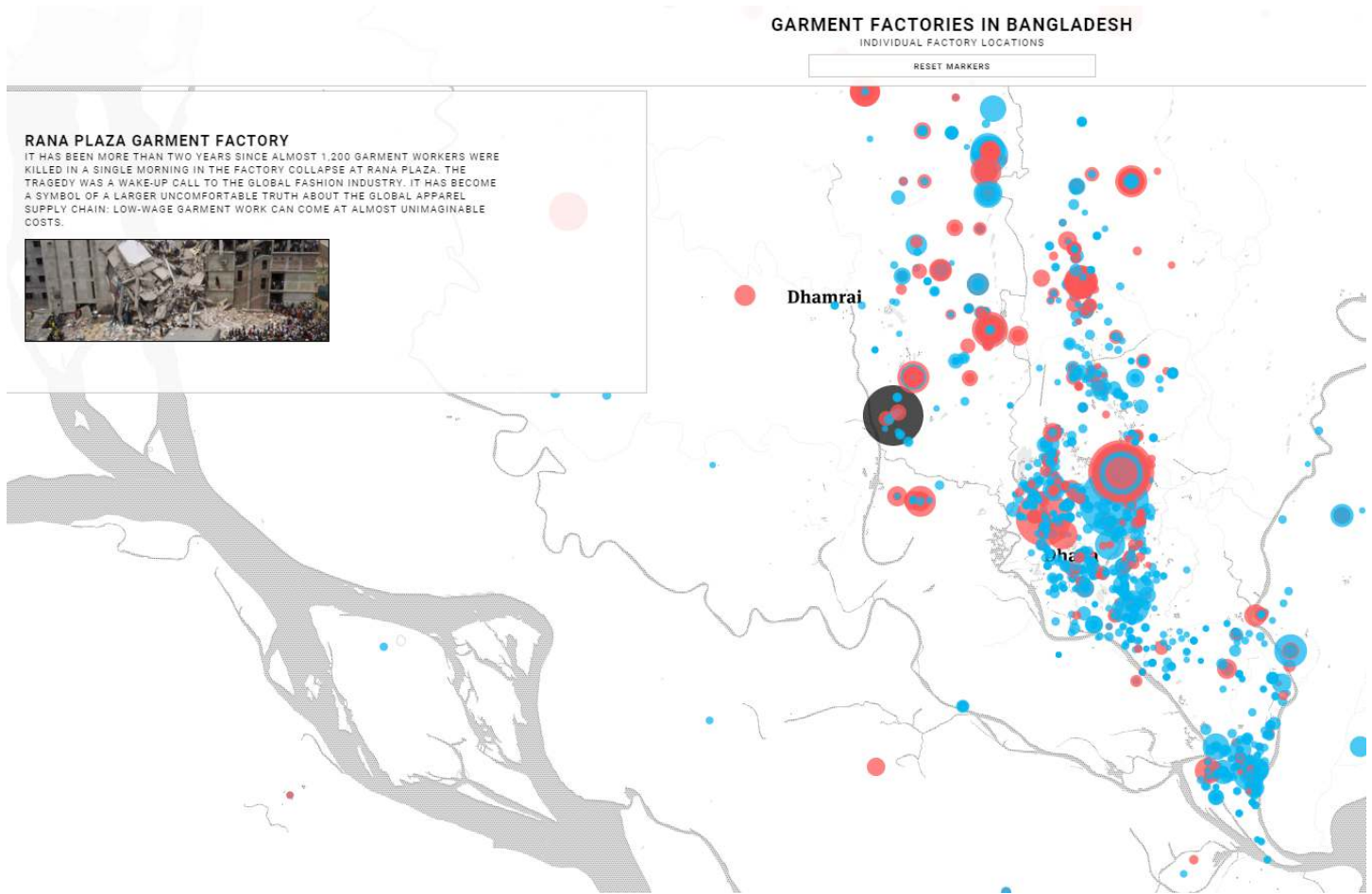
April Gu managed contracts, student employment, and finance to get the map and the survey done. **Tara Wadhwa**, **Rika Nazem**, and **Steve Mau** figured out how to host the map on Stern's website. **Nate Stein** provided research assistance in the final stages of drafting. **Mark Pauly** provided additional assistance in analyzing the data. **Luke Taylor** copy edited the report. **Paloma Avila Pino** is our graphic and web designer. **Meredith MacKenzie**, **Samantha Kupferman**, and **Natalie Butz** of West End Strategy Team are our communications gurus.

We are grateful for ongoing guidance, advice, and insight from our longtime collaborators, **Auret van Heerden** and **Justine Nolan**. **Michael Posner's** vision and ambition has shaped our work on the apparel sector from the beginning.

About the Authors

Sarah Labowitz is the Co-Director of the Center for Business and Human Rights and Research Scholar in Business and Society at NYU Stern. She has worked on business and human rights from within leading NGOs, the U.S. government, a company, and now in academia. She traveled to Bangladesh five times to conduct the research that formed the basis for this report. She holds degrees from Grinnell College and the Fletcher School of Law and Diplomacy at Tufts University. She is a fellow of the Truman National Security Project and a term member of the Council on Foreign Relations.

Dorothee Baumann-Pauly is the Center's Research Director. She is the author of *Managing Corporate Legitimacy – A Toolbox* (Greenleaf Publishing, 2013) and co-editor of the forthcoming textbook, *Business and Human Rights: From Principles to Practice* (Routledge, Taylor & Francis Group, 2016). She holds a PhD in Economics from the University of Zurich (Switzerland) and Master degrees in political science from the University of Constance (Germany) and Rutgers University. She has worked on issues of business and human rights in manufacturing supply chains from within the UN, NGOs, consulting firms, and academia. She served as the Country Program Manager for the MFA Forum in Dhaka in 2009 and 2010.



A comprehensive factory map accompanies this report, at <http://www.stern.nyu.edu/bangladesh-factory-map>. It includes the locations of the approximately 7,000 garment factories identified on five factory lists. Red dots represent Accord and Alliance factories; blue dots represent factories registered with either the trade associations or the government. The NYU Stern Center for Business and Human Rights collected, cleaned, and analyzed this data in 2014 and 2015. The research shows that there are 56% more garment factories and 21% more garment workers than previously understood.

BANGLADESH AND THE GARMENT SECTOR

\$24 BILLION
VALUE OF THE GARMENT SECTOR, 2014

80%
GARMENTS AS A PERCENTAGE OF EXPORTS, 2014

5.1 MILLION
TOTAL NUMBER OF WORKERS

56%
OF WORKERS WHO ARE FEMALE

ESTIMATED NUMBER OF FACTORIES

3,200
DIRECT EXPORTERS

3,800
INDIRECT SUPPLIERS

7,000
TOTAL FACTORIES

27%
OF FACTORIES ARE COVERED BY THE ALLIANCE/ACCORD

MEDIAN FACTORY SIZE

1,200 WORKERS
ACCORD, ALLIANCE FACTORIES

650 WORKERS
ALL FACTORY DATA

55 WORKERS
INFORMAL SUBCONTRACTING FACTORIES (SURVEY OF TONGI AND RAMPURA, JUNE 2015)

FACTORY INSPECTIONS AS OF OCTOBER 2015

1,475
GOVERNMENT OF BANGLADESH, ILO

1,289
ACCORD

661
ALLIANCE

3,425
TOTAL INSPECTIONS

8
FACTORIES THAT HAVE BEEN FIXED

INFORMAL SUBCONTRACTING SURVEY OF TONGI AND RAMPURA (JUNE 2015)

479
FACTORIES SURVEYED

32%
OF FACTORIES ENGAGED IN INFORMAL SUBCONTRACTING

91%
OF INFORMAL SUBCONTRACTING FACTORIES PRODUCED AT LEAST PARTLY FOR EXPORT

TRADE UNIONS

464
TOTAL NUMBER OF TRADE UNIONS

70%
OF UNIONS HAVE BEEN REGISTERED SINCE RANA PLAZA