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The Bulk of the Iceberg: A Critique of the Stern Center's Report on Worker Safety in Bangladesh

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Executive Summary

The Stern Center for Business and Human Rights at New York University released a report in December 2015, "Beyond the Tip of the Iceberg: Bangladesh's Forgotten Apparel Workers." It argues that the factory inspection programs developed after the Rana Plaza disaster to address worker safety in Bangladesh exclude the majority of workers and are therefore reaching only the "tip of the iceberg." We have carefully reviewed the Stern researchers' methodology and data, and come to the opposite conclusion. Contrary to Stern's assertions, more than 70% of garment workers in Bangladesh are covered by the Accord and the Alliance, and if we include workers employed in factories inspected by the ILO-advised National Initiative, the percentage of covered workers reaches 89%. We also find that Stern, due to a series of errors in data collection and analysis, greatly overestimated the number of formal factories and the size of the workforce.

Summary of our findings

- The database compiled by Stern of current export factories includes a large number of closed factories, including the five factories destroyed in the Rana Plaza building collapse of April 2013. (See Figure 1.)
- The database also includes a substantial number of duplicate records. (See Figure 2.)
- One of the sources that Stern used to compile its database of export factories includes many factories that produce only for the domestic market.
- Based on the inclusion of closed, duplicate, and domestic market-oriented factories, we estimate that Stern's database of 7,165 export factories is inflated by at least two thousand factories.

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- When Stern researchers attempted to validate its official factory list via field research in two sub-districts of Dhaka, they could not find *the majority* of the factories in these areas, which further indicates that Stern’s database includes many faulty entries.
- The Report’s claim that there are 5.1 million garment workers in Bangladesh is unreliable because the Stern Researchers based this estimate on the flawed factory database. Additionally, a data entry mistake erroneously added more than 335,000 workers to this total. (See Figure 3.)
- The Report emphasized the prevalence of small, unregistered subcontract factories in the export sector, suggesting that this phenomenon is of great importance for evaluating current efforts to secure the rights and safety of garment workers. But Stern’s own estimate of the average size of such facilities (55 workers) suggests that unregistered, informal factories employ a very small percentage (*approximately less than 2%*) of workers producing garments for export.
- Stern researchers failed to properly categorize several hundred factories, including dozens of the largest factories, as Accord and Alliance suppliers, resulting in an underestimate of the number of workers covered by these initiatives. (See Appendix.) By properly categorizing these factories, we find that 2.75 million workers are covered by the Accord and the Alliance, not the 2.3 million posited by Stern. Using what we believe to be a more accurate employment estimate of 3.85 million workers, we conclude that the Accord and the Alliance initiatives cover 71.4% of workers in the sector. (See Figure 4.)
- The Report fails to consider workers covered by the National Initiative, the ILO-advised government factory inspection program.
- Taken together, the Accord, Alliance and National Initiative cover nearly 3.43 million workers. This represents 89.1% of all workers—a percentage that is more correctly described as the bulk, rather than the tip, of the iceberg. (See Figure 4.)

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April 24, 2016 will mark the third anniversary of the Rana Plaza collapse that killed more than 1,100 garment workers in Bangladesh. In the aftermath of this disaster, a wide-ranging program to improve worker health and safety in the Bangladesh Ready-Made Garment (RMG) sector was developed and implemented. At the core of the program are three large-scale, factory inspection and remediation efforts: the Accord on Fire and Building Safety in Bangladesh (Accord), the Alliance for Bangladesh Worker Safety (Alliance), and the National Initiative (NI). While these initiatives vary in multiple ways, they all share the goal of avoiding another mass-fatality workplace incident like Rana Plaza, and more generally of improving conditions for Bangladesh's garment workers.

In December 2015, researchers at New York University's Stern Center for Business and Human Rights released a report (hereafter Stern Report or the Report) claiming that these factory inspection programs are falling far short of their mark. The gist of their analysis is aptly summed up by the title of the report, "Beyond the Tip of the Iceberg: Bangladesh's Forgotten Apparel Workers."² In it, the Stern researchers make two central claims:

- 1) The size of the industry in Bangladesh is much greater than previously understood. There are more than 7,000 factories and 5.1 million garment workers involved in the production of apparel for export.
- 2) More than half (2.8 million) of garment workers in Bangladesh work in facilities that are not covered by the two private sector factory safety programs, the Accord and Alliance.

The accuracy of the Stern Report's claims are significant because, if correct, they would imply that there needs

to be a fundamental rethinking of existing efforts, and a reallocation of resources to address the massive number of workers that the Report claims are not covered by any existing safety program. On the other hand, if these claims are not substantiated, they run the risk of diverting attention away from ongoing efforts to advance worker safety in Bangladesh by strengthening and more fully implementing the initiatives that are already well underway.

Given the importance of these issues, we examined the factory database compiled by Stern, as well as the Report itself, in considerable detail. The upshot of our analysis is that there are a number of mistakes or inaccuracies in the factory database that Stern compiled, and in the researchers' calculation of the percentage of workers covered by the Accord and Alliance. Our overall conclusion is that the data presented in the Stern Report do not substantiate the authors' claims about the number of factories, the size of the RMG workforce, and the scope of the existing inspection programs.

We feel that it is essential to point out these problems with the Report's central empirical claims because they bear directly on the authors' overall conclusion that the Accord and Alliance inspection and remediation programs are reaching only the "tip of the iceberg." To the contrary, we find that these two programs are reaching the majority (71%) of RMG workers. In what follows, we elaborate our critique of Stern's methods and findings regarding the number of factories, the size of the workforce, and the coverage of the existing factory inspection programs.

The number of factories

The Stern team set out to try to answer a very difficult question: how many factories are producing garments

²Labowitz, S. and D. Baumann-Pauly (2015) "Beyond the Tip of the Iceberg: Bangladesh's Forgotten Apparel Workers." New York: NYU Stern Center for Business and Human Rights. The files containing the Stern Report and the factory database can both be accessed via dropbox (<https://www.dropbox.com/sh/1dgl5tfeouv0va/AADXiOywX4qW3AXpVEkbLhJWa?dl=0>) or via a link at the Stern Center website (<http://www.stern.nyu.edu/experience-stern/faculty-research/cbhr-bangladesh-mapping-project>).

for export in Bangladesh? The answer they arrive at—7,165 factories—is a sharply higher number than existing estimates, which range between 3,500 and 5,000 factories. How did they arrive at this number?

The Stern team identified five factory lists, each of which was compiled by a different source. These include the list compiled by the Bangladesh government’s Department of Inspection for Factories and Establishments (DIFE); the list of supplier factories maintained by the Accord; the list of supplier factories maintained by the Alliance; the membership list of the major industry association for manufacturers of woven garments, the Bangladesh Garment Manufacturers and Exporters Association (BGMEA); and the membership list of the industry association for manufacturers of knit garments, the Bangladesh Knit Manufacturers and Exporters Association (BKMEA). Stern’s researchers combined each of these five source lists into a master list, which included well over 11,000 factories. The Stern team then went through this master list and attempted to remove all duplicates (factories that appeared on more than one source list). Once the duplicates were removed, there were 7,165 factories remaining in the database, which the Stern researchers present as the number of formal, registered export factories in the RMG sector.³

The Stern researchers used the largest of the five lists, the DIFE list, as its base document in compiling the factory database, adding new entries as these appeared in the four other source lists. An analysis of the factory database commissioned by the Stern Center and completed by Dr. Marc-Olivier Boldi at the University of Geneva provides valuable insight into the composition of this data.⁴ Specifically, it reveals how many entries come from each of the five source lists, as well as the degree of overlap among them:

- DIFE: 3,622 factories (including most Accord and Alliance factories).
- Accord: 227 additional factories that do not appear on any other list.
- Alliance: 98 additional factories that do not appear on any other list.
- BGMEA: 1,569 additional factories that do not appear on any other list.
- BKMEA: 1,170 additional factories that do not appear on any other list.

It is worth emphasizing that the DIFE list is supposed to be a comprehensive list of all factories in the RMG sector. A relatively small number of factories appear on the Accord and Alliance lists, but not on the DIFE list. These are likely factories located in Export-Processing Zones (EPZs). Though EPZ factories are now being added to the DIFE list, EPZs fall under the jurisdiction of a different government agency and may not have been included on the DIFE list in fall 2014 when the Stern team compiled its database. What we want to emphasize, however, is that a sharply higher number of factories—2,813 to be precise—are *only* found on the BGMEA or BKMEA lists.⁵

Why are so many factories that appear on the BGMEA and BKMEA lists not found on the ostensibly comprehensive DIFE list? It is important to understand that the DIFE, Accord and Alliance factory lists were compiled after Rana Plaza, and the goal of these lists was to document the population of facilities for future inspection efforts.

In contrast, the BGMEA and BKMEA lists have been compiled over many years, and they are not regularly maintained or updated. According to our conversations with BGMEA officials, there is no regular or standardized procedure for removing inactive factories. This almost surely compromises the accuracy of the list; as in

³The Stern Report claims that its official list includes 7,179 factories. However, the factory database that Stern has made publicly available includes 7,165 factories, which is the number we use here. The Excel file containing the official factory list compiled by Stern can be accessed via dropbox at the link provided in footnote 2, or directly at http://people.stern.nyu.edu/twadhwa/bangladesh/maps_data_start.html.

⁴Boldi, M.-O. (2015) “Estimating the number of garment factories in Bangladesh.” [Mandate from:] The Center for Business and Human Rights (NYU – STERN). Geneva: The Center for Business and Human Rights (NYU – STERN); Available at <https://archive-ouverte.unige.ch/unige:74963> (accessed January 12, 2016).

⁵This number includes 1,569 factories that appear only on the BGMEA list; 1,170 factories that appear only on the BKMEA list; and 74 factories that appear on both the BGMEA and BKMEA lists, but not on the DIFE, Accord or Alliance lists.

virtually every other country in the world, the garment sector is highly volatile in Bangladesh, and factories routinely go out of business. Moreover, the post-Rana Plaza period was a particularly turbulent time because many foreign brands and the local industry associations became more vigilant about policing the supply chain, making it more difficult—though certainly not impossible—for smaller factories engaged in unauthorized subcontracting to survive.

The Stern researchers themselves acknowledge that the BGMEA and BKMEA data are likely to be the least reliable of the source documents they used to compile their factory database. For example, they write, “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” (p. 19). Elsewhere, they observe, “There does not appear to be a good process for removing old factories from the

BGMEA and BKMEA lists, resulting in some list inflation” (p. 34, footnote 5). And they provide an explanation for why these lists are not updated. They note, “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 list” (p. 34, footnote 20).

Yet while the Stern researchers are aware that the factory lists compiled by the industry associations are most likely inflated, they fail to fully consider the implication of this fact for their estimate of how many factories exist, and therefore their conclusion about how many factories and workers are not covered by the existing inspection programs. *In short, our view is that many of the 2,800-plus factories that only appear on the BGMEA and BKMEA lists do not appear on the other lists precisely because they are no longer operational.*

Figure 1: Inclusion of Rana Plaza factories in Stern Database

Stern Factory Database					
Unique ID	Factory Name	Address (Building No./ Major Street)	Thana LEVEL 2	District LEVEL 3	Source
2167	Ether Tex Ltd.	Rana Plaza (5th Floor)	Savar	Dhaka	BGMEA website
4960	New Wave Bottoms Ltd.	Rana Plaza (2nd Floor)	Savar	Dhaka	BGMEA website
4961	New Wave Style Ltd.	Rana Plaza(6th-8th Floor)	Savar	Dhaka	BGMEA website
5462	Phantom Apparels Ltd.	Rana Plaza (4th Floor)	Savar	Dhaka	BGMEA website
5463	Phantom Tac Ltd.	Rana Plaza (3rd Floor)	Savar	Dhaka	BGMEA website

One macabre piece of evidence supporting this view is the fact that the garment factories that were located in Rana Plaza are included in Stern’s official list of current factories. These are New Wave Style, New Wave Bottoms, Phantom Apparels, Phantom Tac and Ether Tex. (See Figure 1.) The inclusion of these facilities is clearly an error, since each of the factories at Rana Plaza was completely destroyed by the deadly collapse in April 2013.

In compiling the official list, Stern researchers recorded, for each entry, the primary source list from which that factory’s information was recorded. Although they are only five data points, the fact that the Stern researchers cite the BGMEA as the source list for each of the Rana Plaza factories is consistent with our hypothesis that the industry association lists include many factories that are no longer producing garments for export.

Moreover, in a review of Stern’s factory database, we identified redundant entries that appear to reference the same factory. Because Stern used five different source lists, they anticipated many duplicate factories, and through a de-duplication effort, they were able to eliminate about 4,000 of these. However, dozens and possibly hundreds of duplicates escaped this effort. Among the reasons that additional duplicates were missed are small discrepancies in the spelling or recording of factory names and addresses. (See Figure 2.)

Finally, one of the source lists that Stern used to compile its database—the DIFE list—includes both export factories as well as factories that only produce for the domestic market.⁶ It is unclear how many non-exporting factories were included in the DIFE list when the Stern team compiled its database in fall 2014, but it is likely that some of the 620 factories that *only* appeared on the DIFE list are factories producing exclusively for the domestic market.⁷ These factories should have been excluded from Stern’s database, which purports to be a list of factories producing either directly or indirectly for export, though it is unclear how researchers would have been able to distinguish the domestic market-only factories in the DIFE database.

Given the inclusion of domestic, duplicate and destroyed factories on Stern’s official list, and the likely inclusion of many factories that are no longer operational, how should we assess Stern’s estimate that there

are 7,000+ formal export factories in the RMG sector today? To be clear, we understand that the Stern researchers could have not verified the operational status of 7,165 factories! However, they did complete a field survey in June 2015 of two sub-districts in Dhaka, Tongi and Rampura, which could shed some light on this question.

The researchers recognized that “because the official data is inflated by factories that do not exist and excludes factories that do exist,” field research provided a valuable opportunity to “test the validity of the official list and [determine] the prevalence of informal factories” (p. 17). This field research consisted of “[f]our assessment teams, each comprised of two local survey experts, [who] 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” (p. 18).

What were the results of the field survey? Stern researchers reported finding a total of 479 factories, of which 153 were identified as “informal, indirect” export factories—that is, factories that are not affiliated with one of the trade associations and that do not possess a “UD” or utilization declaration (the formal license required to export).⁸ However, the Report provides no clear answer to the critical question, how many factories from the *official list* were the researchers able to identify?⁹ Specifically, of the 377 factories that Stern’s

⁶ The fact that the DIFE list includes factories that do not produce for export was confirmed via correspondence with two different officials at the ILO, including Tuomo Poutiainen, program manager of the International Labor Organization in Dhaka. The ILO has assisted the Bangladesh government in compiling the DIFE factory list.

⁷ According to one ILO source in Dhaka, as of January 2016, 1,097 of the 4,605 factories on the DFE list were domestic market-oriented factories.

⁸ These 479 factories 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” (p. 18). Although the Report provides no specific details regarding the composition of this group, this description makes clear that not all of the facilities researchers identified can be classified as garment factories—i.e. factories cutting and sewing apparel. It is also unclear how many, if any, of these non-garment factories are included among the 153 “informal, indirect suppliers,” but to the best of our knowledge, supporting facilities such as industrial laundries or factories producing accessories for apparel do not need UD and would not necessarily be members of the BGMEA, even if they are part of the RMG supply chain. Also included in the 479 factories are 83 facilities that reported only producing for the domestic market, which also do not require UD since they do not export.

⁹ According to the Report, the “teams accessed over 90% of the garment facilities on the official list in the two areas” (p. 18). Initially, we interpreted this to mean that the teams were able to locate over 90% of the factories on the official list, though we were somewhat confused by the use of the term “access.” In an email exchange with one of the Report’s authors, this statement was clarified to mean that the research team was able to access a manager and complete a short survey at over 90% of *all* facilities identified. In other words, the referent of the 90% statistic is not, as the Report suggests, “formal” factories on the official list, but rather the total set of factories the research teams identified. Therefore, this 90% statistic sheds no light on the question of how many factories on the official list were identified via the field research.

Figure 2: Examples of Duplicate Factory Entries in Stern Database

Stern Factory Database				
Unique ID	Factory Name	Address (Building No./ Major Street)	Thana LEVEL 2	Source
21	A & A Trousers Ltd.	Haribari Tak	Sadar	BGMEA website
54	A & A Trousers Ltd.	Haribari Tak, Pubail Collage Gate, Pubail, Gazipur, Sadar, Gazipur		ACCORD PDF
25	A B G Sweaters	Teknagpara, Chandana Chowrasta	Gaizpur Sadar	DIFE website
136	ABG Sweaters Ltd.	TecNegpara	Gaizpur Sadar	DIFE website
31	A J Fashions Ltd.	234/4, Kachukhet	Cantonment	BGMEA website
261	AJ Fashions Ltd.	234/4 Kouchukhet	Cantonment	DIFE website
74	A.B.M. Apparels Ltd.	177, Dakhin Khan	Uttara	BGMEA website
151	ABM Apparels Limited	177, Dokkhin Khan, Dhaka	Dakkhin Khan	DIFE website
76	A.B.S. GARMENTS LTD.	BAMOIL BAZAR, Sharulis	DEMRA	BKMEA website
162	ABS Garments	Bamoil Bazar	Demra	DIFE website
80	A.G. Dresses Limited	Plot #9, Block - C, Tongi I/A	Tongi	BGMEA website
233	AG Dresses Ltd.	Plot-9, Block-C, Himardighi	Tongi	DIFE website
3324	J,K,K Apparels Limited	468/1, D,I,T Road, Malibag, Dhaka	Rampura	DIFE website
3482	JKK Apparels	468/1, D.I.T Road, Malibagh	Rampura	DIFE website
6203	S. S Sweater	124, Darail, 27 Road	Tongi	DIFE website
6260	S.S. Sweater Ltd.	124, Darail, 27 Road	Tongi	DIFE website
7062	Stich Right Ltd.	Plot-B5, BISIC Industrial Estate, I/A, Tongi, Gazipur, 1710	Tongi	DIFE website
7066	Stitch Right Ltd.	Plot-B5, BISIC Industrial Estate, I/A, Tongi, Gazipur, 1710	Tongi	DIFE website

factory database identified as located in Rampura and Tongi, what percentage were found and/or verified as operational?¹⁰

Through email correspondence with the authors of the Report, we learned that *the teams were not able to find 237 of the 377 factories on the official list*—that is, the field researchers could only identify 140 (37%) of the factories located in these two sub-districts. This finding is consistent with our hypothesis that the official list includes a very considerable number of closed and duplicate factories.

That said, some caution is warranted in interpreting Stern’s field survey results. For example, we do not believe it is possible to extrapolate this 37% finding to arrive at an estimate for the number of formal export factories at the national level, because it is highly possible that surveyors inaccurately reported factory names and/or missed other factories on the official list as they walked the streets of Rampura and Tongi. However, we do believe that the findings from the field survey strongly support our conclusion that Stern’s database of 7,165 factories seriously overestimates the number of formal, registered factories in Bangladesh’s export sector.

It is important to emphasize that the factory database Stern compiled also contains information regarding employment at the factory level. Thus, in addition to being the source that the Stern researchers used to generate an estimate of the total number of *factories* in the RMG sector, it was also the foundation of the Report’s estimate of the total number of *workers* in the sector. This means that whatever problems beset the factory database likewise affect the Report’s conclusions about total garment sector employment, to which we now turn.

The number of workers

As explained above, the Stern researchers used five different source lists in compiling its factory database. As a result some factories have multiple entries under employment, and in many cases, these numbers vary across sources, sometimes substantially. In such cases, Stern had to decide which number to use in calculating employment. Reasoning that the Accord and Alliance data is more recent and therefore more reliable, researchers used these numbers whenever available. However, if using employment data from one of the other three sources—the DIFE, BGMEA and BKMEA lists—the Stern researchers made what we consider a questionable decision to use the largest of the alternative numbers. We recalculated employment totals using the Accord and Alliance data when available and then, for the remaining factories, we took the average of multiple employment figures instead of the largest of such entries. We found that Stern’s decision to use the highest available employment figure added 124,000 workers to the total.

Moreover, in the course of researching duplicate factories we uncovered an error in data entry that inflates Stern’s employment estimate by well over a quarter of a million workers. Specifically, we discovered that several columns in the Excel file containing the factory database were hidden. One of these was a column titled “Tier 1 or Tier 2 factories,” which was placed in the center of the employment columns. The column had four entries: 120,000 for a factory called Farnoor Sweaters; 60,000 for Hossain Apparels Ltd; 80,000 for SIMS Apparel; and 75,000 for The Rose International Ltd. This is clearly a mistake, since no factory in Bangladesh employs 60,000 workers, let alone 120,000. Our efforts to duplicate Stern’s findings confirmed that the inclusion of these entries in the employment calculation added another 335,000 workers to the total estimate of 5.1 million.¹¹ (See Figure 3.)

¹⁰ Figure 2 (p. 17) of the Stern Report provides the number of factories in each sub-district of Dhaka, according to the official list. This Figure shows that there are 291 factories in Tongi and 110 in Rampura, for a total of 401 factories in the two sub-districts that the Stern team surveyed. However, there is an inconsistency between the number of Tongi and Rampura factories listed in Figure 2 and the number of factories in these two districts found on Stern’s official list. The factory database compiled by Stern contains 377 factories located in Tongi and Rampura, not 401.

¹¹ Since we were unsure if these entries were, in fact, included in Stern’s reported total, we attempted to replicate the Stern researchers’ employment calculation using the method described to us by one of the Report’s authors. When doing so, we were unable to reproduce the 5.1 million total without including these erroneous entries.

Figure 3: Factories with Unreasonably High Employment Levels in Stern Database

Stern Factory Database												
Unique ID	Factory Name	Address (Bldg./ Major Street)	Columns Included in Stern Count of Workers									
			Female	Male	Unspecified	Tier 1 or 2 factory	Number of active members	BGMEA Employment	BKMEA Female	BKMEA Male	Alliance Employment	Accord Employment
2398	Fairnoor Sweaters Ltd.	25/2, DIT Road				120,000						
3110	Hossain Apparels Ltd.	154, Kazi Nazrul Islam Rd.				60,000		330				
6783	SIM Apparels Ltd.	Takubari, Masudabad				80,000						
7476	The Rose Garments Intl. (Pvt.) Ltd.	63/A, Bara Mogh Bazar				75,000						

So far, we have reviewed a number of problems with the methods the Stern researchers used to calculate employment, which we believe have the effect of inflating the total. However, we also want to acknowledge that there are issues of undercounting that should be taken into account in developing a more accurate estimate. There is a sizable number of factories in the database—some 790 factories (or 11% of the dataset)—that lack employment data from any source.¹² In such cases, the Stern researchers did not impute a number, meaning that workers in these factories are excluded from the 5.1 million estimate. Clearly, including employment figures for these factories would add more workers to the total. Yet, at the same time, we do not know how many closed or duplicate factories are included in Stern’s database. The fact that the survey team could only verify 37% of the factories in the two Dhaka sub-districts leads us to believe there are far more factories on the official list (over two thousand) that are not operational than there are factories on the official list for which there are no employment figures (790 factories).

Finally, there is the important question of workers employed in unregistered factories. Through the field survey carried out in Tongi and Rampura, Stern’s research teams identified a sizable number of informal factories. According to Figure 5 (p. 23) in the Report, researchers found 153 factories in Tongi and Rampura that report doing some production for export, but are not members of the BGMEA or BKMEA, and did not report receiving the UD required for authorized export. These factories are small, employing, on average, 55 workers. The implication that Stern draws is that these factories are indirect exporters, working as unauthorized subcontractors for the larger, direct exporters that populate the top layer of a vast but stratified RMG industry.

The discovery of informal factories producing for export is an important one; it is also consistent with findings from many other studies that have documented the problem of unauthorized subcontracting, and not just in Bangladesh.¹³ Moreover, Stern’s observations regarding the prevalence of subcontracting have been

¹² Since some of these factories are also Accord and Alliance suppliers, these omissions also understate how many workers are covered by these programs.

¹³ Esbenshade, J. (2004) *Monitoring Sweatshops: Workers, Consumers and the Global Apparel Industry*. Philadelphia: Temple University Press; Ross, R. (2004) *Slaves to Fashion: Poverty and Abuse in the New Sweatshops*. Ann Arbor: University of Michigan Press.

echoed by other scholars, who similarly find a link between subcontracting—whether authorized or unauthorized—and the sourcing practices of importing brands; these include low, and in some case declining prices, as well as short lead times.¹⁴ We concur with Stern’s observations on this topic: All garment workers deserve safe workplaces, whether they are employed in factories that export directly, do subcontract work for export, or produce for the domestic market.

In the end, then, what does all of this mean for the number of workers in the Bangladesh garment industry? We are hesitant to offer our own employment total in place of Stern’s 5.1 million, precisely because we are skeptical that such a number can be reached with any precision. However, we do not find Stern’s estimate of 5.1 million formal sector garment workers credible because it is based on the same problematic data that was used to compile its official factory list. If, as we have shown, the database of 7,000+ export factories is compromised by the inclusion of inactive and duplicate factories, then the employment figure derived from this list will be similarly problematic.

Until there is a better alternative approach for counting workers, we believe that the best available estimate is 3.85 million workers. This is an average of the lowest and highest figures provided by several different sources, including the government of Bangladesh (3.5 million),¹⁵ Bangladesh trade unions (3.5 million),¹⁶ the BGMEA (4 million)¹⁷ and the ILO (4.2 million).¹⁸ One caveat is that these estimates likely exclude employment in the kind of informal factories that Stern’s research teams identified in Rampura and Tongi. However, even if one were to assume that there are 1,000 informal factories that produce, at least occasionally,

for export, Stern’s finding that these establishments employed an average of 55 workers per factory in Rampura and Tongi indicate that this workforce would amount to 55,000 workers, or 1.3% of total estimated employment of 3.85 million.

Clearly, identifying the best available employment estimate is critical for addressing what is arguably the most important question when evaluating developments in the post-Rana Plaza RMG sector, and the one to which we now turn: how many garment workers in Bangladesh are employed in unsafe factories?

Coverage of factory inspection programs

There are currently three factory inspection programs operating in Bangladesh. The Stern researchers, however, largely focus on the better-resourced private sector initiatives, the Accord and Alliance. According to the Report (p. 26), these programs cover only 27% of the country’s export garment factories, and 45% of workers.

The evidence suggests that this estimate is flawed in multiple ways. First, it assumes a total of 7,165 official factories. For reasons outlined above, we believe that the actual number of export factories operating in the RMG sector today is considerably lower. But more importantly and less speculatively, the Stern researchers misclassified a significant number of factories that appear on the Accord and Alliance supplier lists, but were not designated as such in the database compiled by Stern. The Stern researchers identified a total of 1,900 factories that were covered by the Accord and/or Alliance inspection programs. *This number excludes more than 300 factories that were supplying Accord and/or Alliance brands at the time of Stern’s analysis.*

¹⁴ Plank, L., A. Rossi and C. Staritz (2014) “What Does Fast Fashion Mean for Workers?” Apparel Production in Morocco and Romania.” Pp. 127-147 in *Towards Better Work: Understanding Labour in Apparel Global Value Chains*. Geneva: ILO; Anner, M., J. Bair, and J. Blasi (2013) “Towards Joint Liability in Global Supply Chains: Addressing the Root Causes of Labor Violations in International Subcontracting Networks.” *Comparative Labor Law and Policy Journal* 35, 1: 1-43.

¹⁵ Newsnext, February 8, 2016. “Biometric database for RMG workers”; Available at <http://newsnextbd.com/biometric-database-for-rmg-workers/> (accessed February 8, 2016).

¹⁶ Amirul Haque Amin, cited in bdnews24.com, “MINIMUM WAGE: Many RMG factories not complying it”; Available at <http://bdnews24.com/bangladesh/2011/02/13/minimum-wage-many-rmg-factories-not-complying-it> (accessed February 8, 2016).

¹⁷ BGMEA “Trade Information”; Available at <http://www.bgmea.com.bd/home/pages/tradeinformation> (accessed February 6, 2016).

¹⁸ ILO, September 2015, “Garment worker’s rights and voice in Bangladesh given boost”; Available at http://www.ilo.org/newyork/news/WCMS_408360/lang-en/index.htm (accessed February 8, 2016).

This misclassification error is significant because factories on the Accord and Alliance supplier lists tend to be among the largest in terms of employment. The Stern Report observes that Accord and Alliance factories employ, on average, 1,200 workers. Among just the 100 largest factories in the Stern database that were not designated as Accord or Alliance suppliers, we found 52 misclassified factories—that is, factories that appeared on the Accord and Alliance supplier lists when Stern compiled its database, but were mistakenly not identified as Accord and Alliance suppliers in Stern’s database. (See Appendix for examples of this error.)

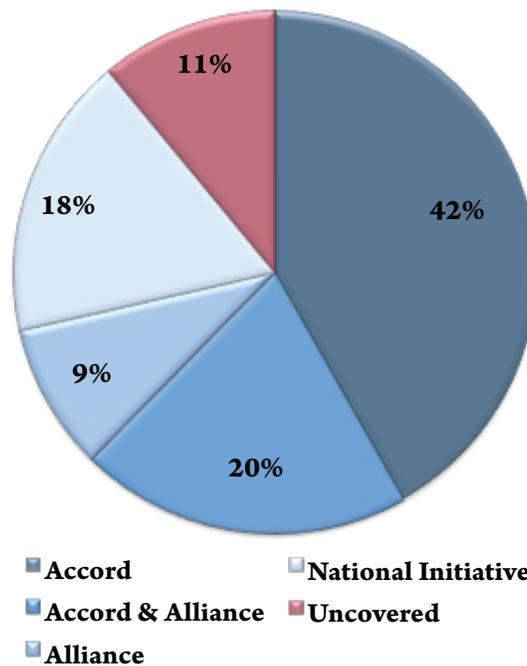
The effect of this misclassification error and the consequent undercounting of Accord and Alliance factories is significant. According to the Stern Report, there are a total of 2.3 million workers employed in factories covered by the Accord and Alliance, leaving 2.8 million, or 55%, uncovered by either initiative. However, this total excludes hundreds of thousands of additional workers who were employed in the misclassified factories, all of whom should have been included in Stern’s calculation of covered workers. To get the more precise figure, we used the Accord and Alliance supplier lists from November–December 2014, which revealed a total of 2.75 million workers covered by these two initiatives. Thus, when all Alliance and Accord supplier factories are identified correctly, the proportion of covered and non-covered workers is nearly reversed; even if the Stern estimate of

5.1 million formal sector garment workers were correct, this would mean that there are 2.75 million workers in Accord and/or Alliance supplier factories, and accordingly that there are 2.4 million, or 47% not “covered by the extensive fire and building safety programs run by the Accord and the Alliance” (p. 27).

However, we believe that even this “corrected” percentage of covered workers understates the true scope of the Accord and Alliance programs. Again, the reliability of the calculation is undermined by the inflated employment estimate of 5.1 million workers. Using what we believe is a more accurate estimate of 3.85 million workers, we arrive at quite different conclusions regarding the extent of coverage achieved by the Alliance and Accord. We find that 71.4% of garment workers in Bangladesh are employed in factories covered by the Accord and Alliance. The Accord alone covers one-third of total workers (see Figure 4.). Moreover, when the National Initiative (NI)—a joint inspection effort by the government of Bangladesh and the

International Labour Organization (ILO)—is added to the calculation of covered factories, the percentage is even higher. Together, the Accord, Alliance, and National Initiative have inspected factories employing approximately 3.43 million workers—89% of the total estimated workforce of 3.85 million.¹⁹ This leaves 11% of workers uncovered. These workers may be in factories on the DIFE list that were not yet inspected.²⁰

Figure 4: Share of Workers Covered by Three Factory Inspection Programs



¹⁹To estimate the number of workers covered by the National Initiative, we first calculated the average number of workers at factories on the DIFE list that do not also appear on the Accord and/or Alliance list, excluding the factories for which no employment information was provided. We then multiplied this number (459) by the number of factories inspected by the NI, as reported in the Stern Report (1,475 factories), yielding a total of 677,000 workers. Consequently, the number of workers covered by the three initiatives is 2.75 million for the Accord and Alliance and .677 million for the NAP, resulting in 3,427,000 workers.

²⁰According to ILO staff in Dhaka, there are 968 factories in the DIFE database that are not Accord and/or Alliance suppliers, and that have also not been inspected by the National Initiative. Presumably, these factories are among the ones employing the 11% of “uncovered” workers in Figure 4. Some of these may be factories producing for the domestic market.

The bottom line

Since the Rana Plaza collapse in April 2013, Bangladesh has become the center of an unprecedented effort to address worker health and safety in the global garment industry. The Stern researchers are right to underscore the amount of resources—financial, material, and human—that are being dedicated to this effort. Precisely because the stakes are so high, there is an urgent need for research that sheds light on what is and isn't working, and what needs to be done to improve the situation.

Such research is a challenging undertaking to be sure. We recognize the considerable difficulties that all researchers, including the Stern team, confront in compiling complete and accurate information about the size of the RMG sector. And we acknowledge that the Stern Report touches on many issues that are critical for understanding the complexity of the industry environment in Bangladesh. In particular, we appreciate the Stern researchers' efforts to raise concerns about informal factories.

Yet it is fundamentally unclear to us what the value-added is of Stern's effort to compile an official factory database from several existing, but potentially out of date, factory lists. The bottom line is that because the factory database is the foundation for the Report's analysis, its flaws undermine Stern's fundamental conclusions. And in the end, it is simply not correct to claim that the Alliance and Accord are reaching the "tip of the iceberg"; even accepting Stern's own (almost certainly inflated) employment number of 5.1 million workers, these two initiatives, which reach 2.75 million workers, would still cover more than half of that workforce.

In this report, as in their previous study,²¹ the Stern researchers emphasize that formal factories producing for foreign brands often use subcontractors, and that some of this subcontracting is unauthorized, involving informal facilities that escape regulatory oversight and inspection. This is certainly an issue worthy of attention and an effective policy response. Yet, even if 1,000 informal factories exist, with an average of only 55 workers per factory, this workforce of 55,000 would account for less than 1.5% of total employment. Such a percentage is inconsistent with the iceberg metaphor employed by Stern, which suggests a hulking body whose mass is mostly hidden beneath the surface of formal inspection efforts.

Moreover, the Stern researchers simply exclude the National Initiative (NI) when discussing the coverage of existing inspection efforts. While we concur that the NI has been under-resourced and has demonstrated less progress relative to its private sector counterparts,²² more than 1,450 factories have been inspected by the NI. These inspectors are using the same standard employed by the Accord and Alliance, and they have recourse to the same procedure for recommending critical closures of factories where conditions pose an imminent threat to worker safety.²³ These efforts merit recognition.

There has been significant progress in addressing factory safety, but much work remains ahead. Unions and NGOs, including signatories to the Accord, have challenged brands on the slow pace of remediation, in one case using information publicly disclosed by the Accord to provide a detailed assessment of remediation

²¹ Labowitz, S. and D. Baumann-Pauly (2014) "Business as Usual is Not an Option: Supply Chains and Sourcing after Rana Plaza." New York: NYU Stern Center for Business and Human Rights. The Report can be accessed via a link at <http://www.stern.nyu.edu/experience-stern/about/departments-centers-initiatives/centers-of-research/business-human-rights/activities/supply-chains-sourcing-after-rana-plaza>.

²² One significant limitation of the NI is that there is no involvement of foreign buyers analogous to the role played by member brands in the Accord and Alliance. The lack of buyer pressure undermines the ability of the NI to compel factories to remediate and to ensure they have the resources to do so.

²³ As of October 2015, inspections carried out by the three safety initiatives identified 136 factories that posed a degree of imminent risk to worker safety. These cases were referred to a review panel that determines whether such factories must be closed immediately. Of the 136 cases referred to the panel, 37 were ordered completely closed and 36 were ordered partially closed. See "The Labour Inspection System in Bangladesh: Developments, Achievements and Challenges, May 2013-October 2015," Department of Inspection for Factories and Establishments, Ministry of Labour and Employment, Government of Bangladesh; Available at <https://drive.google.com/file/d/0B2uAU5rkRwVKZQxYkNFWGRyVDA/view?pref=2&pli=1> (accessed February 2, 2016).

delays in H&M's supply base.²⁴ The Stern Report also notes the slow pace of remediation, but focuses on a sole criterion: the number of factories (eight) that have been “fixed”—meaning that they have been verified by Accord and/or Alliance inspectors as having successfully addressed all the items listed in the factory's corrective action plan.

As these researchers are no doubt aware, the remediation process is complex. In many factories, it involves major repairs and retrofits, including the construction of fire exits, and in some cases, installation of costly sprinkler systems. While it is frustrating that so few have completed renovations, data from the Accord also shows that work is underway at most factories and that tens of thousands of renovations have been completed—from construction of fire exits, to removal of lockable doors, to repair of faulty electrical wiring—reducing risks for many workers.²⁵ Our view is that the safety initiatives are progressing, but too slowly, and in this regard, we share the concerns of the labor rights community. Indeed, we believe that more attention should be focused on why these delays are happening and how the rate of progress can be accelerated.

As we were completing work on this document, we learned of a garment factory fire that occurred in Bangladesh on February 2, 2016. As was the case with Rana Plaza and numerous other deadly workplace incidents over the past decade, the factory in question was not a small informal factory or an unauthorized subcontractor; rather, Matrix Sweaters is a direct exporter with 6,000 workers that counts major U.S. and European brands among its clients, and it appears on both the Accord and Alliance supplier lists. In fact, Matrix Sweaters had been inspected by the Alliance in May 2014, and its corrective action plan detailed a number of high

priority repairs and retrofits, including the installation of fire doors and adequate fire exits. Remediation of these problems should have been completed within six months, but this deadline was not met, and a number of issues identified in the initial inspection report remained unaddressed at the time of the fire, which resulted in several injured workers. Though the Stern Report recommends the creation of a new taskforce to address sustainability issues in the RMG sector (p. 11)—one based on a “shared responsibility” approach (p. 12)—what the Matrix Sweater factory fire underscores, in our view, is the need for continued vigilance to ensure that stakeholders fulfill the commitments that have already been made.

Three years after Rana Plaza, we are at a critical juncture in an unprecedented effort to fix serious safety hazards in the factories that employ the vast majority of Bangladesh's garment workers. The private sector factory inspection programs include many major European and American brands and retailers, but not all foreign buyers sourcing from Bangladesh have signed on to the Accord or Alliance. Increasing the number of signatories is one clear way to expand the scope of these initiatives.

Will the factory inspection programs reach every workplace and protect every worker? Almost certainly, no. Is it taking too long to address the problems identified via the inspection process? Absolutely, yes. But suggesting, as the Stern Report does, that the post-Rana Plaza efforts have been so ineffective, and/or so limited in scope, as to be barely touching the “tip of the iceberg” is inaccurate and misleading, especially at a time when clear-eyed assessments of where current efforts are falling short, and how they can be strengthened, are urgently needed. ■

²⁴ Clean Clothes Campaign, International Labor Rights Forum, Maquila Solidarity Network, and Worker Rights Consortium (2015). “Evaluation of H&M Compliance with Safety Action Plans for Strategic Suppliers in Bangladesh.” Available at: <http://www.cleanclothes.org/resources/publications/hm-bangladesh-september-2015.pdf> (accessed November 15, 2015).

²⁵ According to the Accord's Status of Safety Findings, as of February 9, 2016, the Accord has verified the correction of 11,987 electrical hazards, 5,935 fire safety hazards and 1,894 structural hazards. See: <http://bangladeshaccord.org/progress/> (accessed February 9, 2016). The Alliance does not release data regarding specific hazards that have been remediated. Both the Alliance and Accord make the inspection reports and corrective action plans for every factory available online. For the Accord, see: <http://accord.fairfactories.org/ffcweb/Web/ManageSuppliers/InspectionReportsEnglish.aspx>. For the Alliance, see: <http://www.bangladeshworkersafety.org/factory/factory-cap-completion>. The Accord also shows, for each factory, whether a financing plan for the cost of remediation has been approved, and whether the remediation process is on track, behind schedule, or completed.

Appendix

Examples of Accord Factories that Stern did not Record as Accord Factories

Stern Factory Database							
Unique ID	Factory Name	Address (Building No./Major Street/ Locality) LEVEL 1	Member of Alliance	Member of Accord	Female	Male	Unspecified
82	A.J. Super Garments Ltd.	Goshbagh (1st - 6th Floor)					2633
295	Al Islam Textile Industry Ltd.	9 Karnapara, Savar , 1340					2500
407	Aman Tex Limited	Boiragirchala, Sreepur , 1740					3400
1425	Chun Ji Knit Ltd.	Plot # 81-82, Shaturkul Road					2800
1711	DADA DHAKA LTD.	Holding # 40, Joymot Khan Road, Pagar, Munnu Nagar, Tongi, Gazipur-1710, Bangladesh. , 1230					2362
1768	DEBONAIR GROUP	Girat,Sarker market road,Ashulia,Dhaka-					2600
1777	DEKKO APPARELS (Ashulia unit)	62, Kathgora, Amtola, Ashulia, Savar, Dhaka , 1341					3100
2346	Fakruddin Textile Ltd	Ghargharia Master bari, Kewa, sreepur, gazipur, Dhaka.Bangladesh , 1740					4045
2659	G H Haewae Co. Ltd.	Plot No. 19-24, Sector 8, Chittagong EPZ, 4223					3200
2749	Global Fashion Wear Ltd. (Azim Group)	89, Berulia Road, Tati, Savar, Dhaka , 1340					5500
3102	HONG KONG DENIM (PVT) LTD.	PLOT#9-14,21-26 SECTOR #3, Karnaphuli Export Processing Zone(KEPZ), Chittagong, 4204					2870
3246	Int'l Knitwear & Apparels Ltd. (U-2)	Beximco Inds. Park					2515

Left blank, incorrectly indicating that they are not Accord members. See membership below.



ACCORD
on Fire and Building Safety in Bangladesh

The Bangladesh Accord Foundation has provided the information on this signatory supplier list as of 1 December 2014 "as is" without any representations or warranties, express or implied.

Approximate Total number of Factories: 1613

Account Name	Address	District	Number of workers employed by factory (all buildings)
A J Super Garments Ltd.	Goshbag, Post- Zirabo, Thana - Savar	Dhaka	2700
Al Islam Textile Industry Ltd.	9 Karnapara, Savar	Dhaka	2500
Aman Tex Limited	Boiragirchala, Sreepur	Gazipur	3400
Chunji Knit Ltd.	Satarkul Road, North Badda Plot No. 81-82	Dhaka	1800
DADA DHAKA LTD.	Holding # 40, Joymot Khan Road, Pagar, Munnu Nagar, Tongi, Gazipur-1710, Bangladesh.	Dhaka	2362
DEBONAIR GROUP	Girat,Sarker market road,Ashulia,Dhaka-1341	Ashulia	2600
Dekko Apparels Ltd.	M/4, road 7, section 7 mirpur, Dhaka	Dhaka	1631
Fakruddin Textile Ltd	Ghargharia Master bari, Kewa, sreepur, gazipur, Dhaka.Bangladesh	Gazipur	4045
GH Haewae Co.,Ltd	Sector-8,Plot-19-24,CEPZ,Chittagong.	Chittagong	3500
Global Fashion Wear Ltd. (Azim Group)	89, Berulia Road, Tati, Savar, Dhaka	Savar	5500
Hongkong Denim Ltd	Plot # 9-14 , 21-26,Sector 03, Karnafuly Export Processing Zone	Chittagong	3300
INTERNATIONAL KNITWEAR & APPARELS LIMITED (UNIT-1)	Beximco Industrial Park, Sarabo, Kashimpur, Gazipur	Gazipur	1893