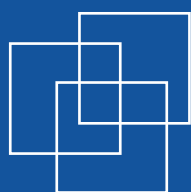




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1919-2019



Occupational Safety and Health in the Myanmar Garment Sector

EXECUTIVE SUMMARY

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The present case study was further elaborated with the support of Alizée Charbonneau (ILO) and Lou Tessier (ILO).





1 | Background and methodology

The Vision Zero Fund (VZF) was launched in 2015 as an effort of the Group of Seven (G7) countries to work towards eliminating the number of occupational accidents and diseases. Its efforts focus on sectors that are either currently or prospectively connected to Global Supply Chains (GSCs). The VZF aims to enhance prevention, protection and compensation of work-related injuries, diseases, and deaths in operating industries. In Myanmar, the VZF selected two sectors of operation: The Garment Sector and the Ginger Agro Sector.

The goal of this report is threefold. First, the report provides a mapping of Occupational Safety and Health (OSH) dynamics and stakeholders in the reviewed sectors. Secondly, it offers insights into key OSH hazards workers face within factories and into the types of OSH management and investments undertaken by manufacturers in Myanmar. Finally, the report showcases a set of business cases for nine OSH investments by presenting possible returns that can be obtained from either a business or risk reduction viewpoint.

This report, summarizing three separate studies conducted by the VZF since 2017, presents data and information from a variety of sources. The table below explains the methodology followed by each of the three studies:

#	Study	Methodology
1	An OSH mapping of the Myanmar garment sector.	The first study's methodology was based on a combination of a secondary literature review (laws, policy briefs, and publications) and interviews with key sector stakeholders.
2	An analysis of factory level OSH data and information.	<p>The report utilized secondary data from available, previous literature and used two databases to assess what information is currently available, on OSH, at the factory level. The methodology also includes primary observations conducted by the ILO research team on factory grounds. More specifically, the findings discussed in this research were based on:</p> <p>SMART Myanmar's Factory Assessments: within SMART's Social Compliance Academy programme, factories are assessed on a variety of components, including OSH.</p> <p>A Database of self-reported OSH information from suppliers of an international brand: this data was provided by a brand and provides information about OSH conditions in their suppliers' factories.</p> <p>Additionally, the ILO research team conducted primary observations in six, Yangon-based garment factories to verify findings from the literature review and the available data.</p>
3	An assessment of OSH business cases.	The study reviewed business cases and Cost Benefits Analyses (CBA,) conducted from around the world, to spotlight the need for, and benefits of, investing in specific OSH improvements within Myanmar's garment factories.



2 Occupational safety and health in the Myanmar garment industry

Legal framework

Until very recently, there was no single overarching piece of legislation regulating a national OSH system in Myanmar. The new OSH Law¹ was approved by Parliament and is expected to be enacted in the coming months. It will see the formation of a National OSH Council to coordinate the different components of its OSH system. Thus far, OSH, in Myanmar, was regulated by a plethora of laws, with complications arising from the lack of unified cohesion. In terms of workplace implications, the new OSH Law will regulate:

- The establishment of a Workplace Safety and Health Committee and the appointment of a workplace-based Safety and Health Officer.
- The employer/employee composition or a bipartite collaboration of such committees.
- The overall arrangement of cooperation on OSH, at the workplace level and in respect to guidance provided by the ILO Convention C187 on Promotional Framework for Occupational Safety and Health.²

Additionally, the new OSH Law sets specific non-compliance penalties for factory owners, managers, as well as workers and auditors. A set of directives, regulations and implementing guidelines will need to be developed to regulate the specific OSH requirements for each type of establishment and business.

¹ Source: MOLIP. 2018. "DRAFT OSH Law".

² Note: Convention C187 promotes the development and maintenance of a preventative safety and health culture and the application of a management systems approach to OSH at the workplace.

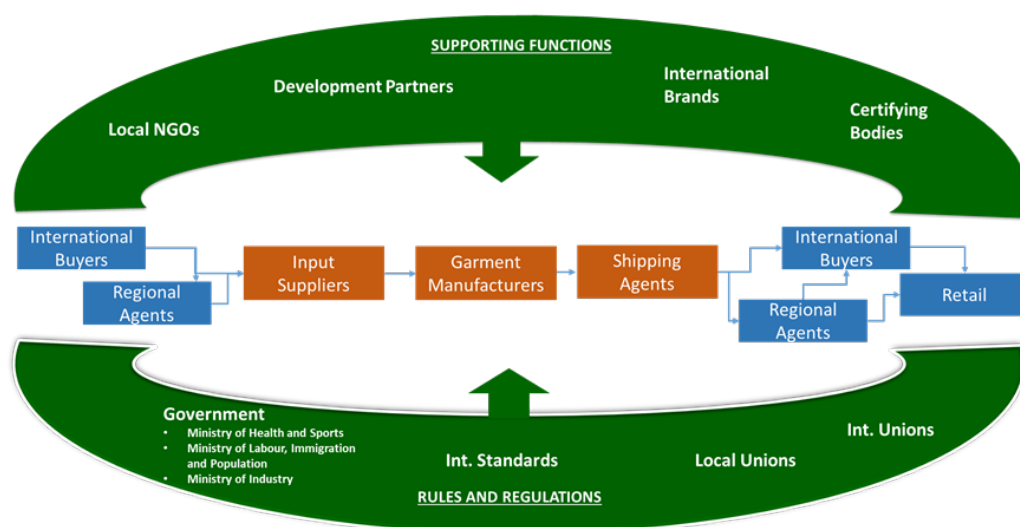
Table 1. OSH Legal Framework, Main Legal Texts

Legislation	Year	Coverage
Constitution	2008	Provides general statements about the right to safe work.
Factories Act	1951	Clarifies hours of work, safety and health across all factory facilities in Myanmar.
Leave and Holiday Act	1951	Regulates workers' right to have earned leave, casual leave, maternity leave, and medical leave.
Social Security Law	2012	Regulates sickness, maternity, death, employment injury, and invalidity benefits, as well as establishes various Social Security Schemes (11 schemes of which 7 are active).
Workman's Compensation Act	1923	Provides employment injury protection to workers not covered by the Social Security Law.
Employment and Skill Development Law	2013	Although not directly OSH related, it asks employers to make sure workers are aware of their rights (including OSH).

Institutional OSH stakeholders

OSH responsibilities, actions, and power to influence dynamics are currently spread across a number of private and public sector stakeholders.

Figure 1 - OSH Stakeholder Mapping



Government stakeholders

The key ministry in charge of OSH is the Ministry of Labour, Immigration and Population (MOLIP). **MOLIP** oversees factory inspections through the Factories and General Labour Laws Inspection Department (FGLLID) and secondly, it oversees administering health and compensation insurance schemes through the Social Security Board (SSB). There are no diagnostic criteria in Myanmar to guide doctors identifying **occupational diseases**. Three lists of occupational diseases are available from: The Workman's Compensation Act, the SSB, the Occupational and Environmental Health Division (OEHD).

Table 2 - OSH Institutional Stakeholders

Ministry	Department
Ministry of Labour, Immigration and Population	Factories and General Labour Laws Inspection Department
	Social Security Board
Ministry of Industry	Boiler and Electrical Inspection Departments
Ministry of Construction	Department of Public Work
Ministry of Health	Occupational and Environmental Health Division

The **FGLLID** is placed directly under the purview of the Minister and is comprised of two sub-departments: Factory Inspection (safety, health and welfare), and Labour Laws Inspection (overtime, wages). Each has its own directors, deputies and inspectors. The functions of the department include: Inspection, Investigation, Training, Awareness Raising, OSH Management System Implementation, Work Environment Measurement, and Cooperation with regional and international OSH agencies. The FGLLID is responsible for investigating and monitoring OSH conditions within factories but remains underfunded and understaffed.³ Previous research has also revealed that surprise inspections are often announced well in advance to factory owners who can then hide or correct hazardous situations before the inspectors arrive. When infractions are discovered, garment owners are given very low penalties; sometimes owners disregard the verdicts of the Arbitration Council altogether.⁴ As it stands, the department is not yet able to guarantee thorough inspections of garment factories to a standard acceptable to many international brands. FGLLID is also responsible for collecting information about the number of accidents which have occurred in the sector, report them, and to draw policy conclusions on the risk profiles of different sectors. FGLLID should then coordinate with the SSB to ensure that both bodies are aligned on the number of accidents as well as their consequences. In reality, this coordination does not often happen.

³ Source: SOMO. 2017. "The Myanmar Dilemma"

⁴ Source: SOMO. 2017. "The Myanmar Dilemma."

The **Social Security Board** was launched in 1956, shortly after the promulgation of the first Social Security Law (1954).⁵ Its responsibilities include ensuring workers' rights and protection, providing social security for workers, promoting labour productivity, and participating in international labour affairs. The board membership includes representatives of the government, workers and unions, as well as employers' organizations. The SSB is responsible for offering health services to workers across the sector. However, an assessment of SSB's operations conducted by the ILO⁶ has found the SSB to feature a set of weaknesses, including long wait times for delivery of cash benefits to beneficiaries, a limited network of facilities, and low quality services.

The Ministry of Health's **Occupational and Environmental Health Division** (OEHD) oversees occupational health prevention, standards and health surveillance services. Most of activities currently carried out by the OEHD are on state-owned enterprises, including textile factories.

The **Boiler and Electrical Inspection Departments**, under the Directorate of Industrial Supervision and Inspection (DISI) in the Ministry of Industry, is responsible for conducting inspections on business premises to check that boilers and electrical appliances are in accordance with the law and to issue licenses as a result of these inspections. Training services provided to boiler and electrical operators in the garment industry are often insufficient and curriculums are ad hoc, reflecting short-comings in the inspectors own training process.

International buyers and regional agents

International brands place their order to locally based manufacturers, either directly, or through regional buying agents (buying houses). Buyers are highly involved in the operations of locally based manufacturers, have a clear understanding of their production processes, costs and profitability, and have a strong degree of influence on them. This situation makes international buyers one of the strongest drivers of change in the Myanmar garment sector, both in terms of production capabilities and in terms of the social, environmental standards that the manufacturers are expected to adhere to within Myanmar and globally.

5 Source: ILO. 2014. "Evaluation of the operations of the Social Security Board, Ministry of Labour, Employment and Social Security of Myanmar."

6 Source: ILO. 2014. "Evaluation of the operations of the Social Security Board, Ministry of Labour, Employment and Social Security of Myanmar."

Workers and workers' organizations

As of 2011, trade unions can legally represent workers, but the concept of social dialogue is still very much in its infancy. The Confederation of Trade Unions of Myanmar (CTUM), founded in 1991, has a constituency of 763 trade unions in 2019, and a total of 65,002 members. Officially recognized by the government in 2015, CTUM has an OSH mandate to monitor and warn of hazardous conditions in the factories, ensure the use of protective equipment, and an overall mandate to make sure that safety measures are designed, and workers are trained. CTUM is believed to be the largest confederation of trade unions and includes the Industrial Workers Federation of Myanmar (IWFM) covering garment sector workers. The Myanmar Industries Craft and Services Unions Federation (MICS) is another important player in terms of labour organizations in the garment sector.

Business associations

The Myanmar Garment Manufacturers' Association (MGMA) is the leading business association representing the needs and interests of Myanmar garment manufacturers. All factories which manufacture garments in the country need to register with MGMA, as they are the organization that provides the CMP import certificate allowing businesses to claim tax incentives on import duties. While both locally and internationally owned manufacturers are registered as MGMA members, fully foreign owned are not allowed to sit on its board.



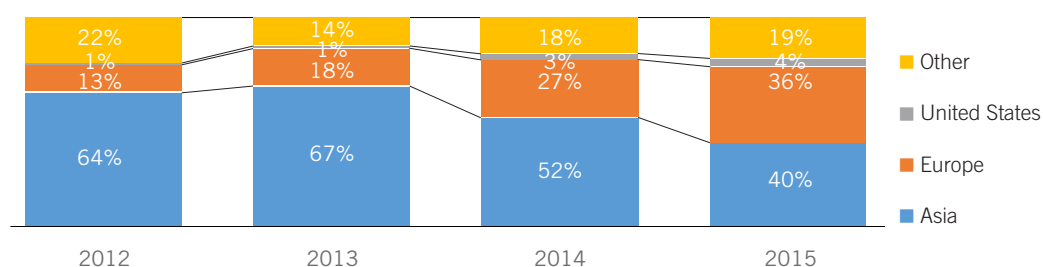
3 Garment market overview

After an earlier decade of stagnation and since the lifting of international sanctions began in 2012, the Myanmar garment sector has grown. The sector is now estimated to employ a range of between 350,000⁷ and 450,000⁸ workers, 90 per cent of whom are women. The latest list from MGMA indicates that 518 factories are currently operational in the country. Given this, growth in the number of garment factories published in the September 2018 MGMA list of factories, the broader estimate appears credible. While factories used to be predominantly locally owned, recent years has seen a strong growth in foreign investors. Only 36 per cent of all factories are now locally owned.

Table 3 - Key figures of the Myanmar Garment Sector

Key Figures of the Myanmar Garment Sector	518 ⁹ factories	78% of them employ less than 1,000 workers. Mostly located around Yangon. 36% are fully Myanmar owned.
	350,000 workers	90 % of whom are women. Expected to grow to 1.4 Million by 2024
	Export	Garment represents 18% of total exports.

Figure 2 - Export Destinations, Percentage of total Value¹⁰



7 Source: CBI, Supply Potential of the Garment Sector in Myanmar, <https://www.cbi.eu/market-information/studies-for-importers/apparel-myanmar/>

8 Source: Frontier Myanmar, 11 October 2018

9 Source: MGMA, Factory List, 30 September 2018

10 Source: Comtrade Database. 2017. Mirror import data from importing partners.

During the stagnation and recovery phases of the industry, exports to Japan and Korea accounted for most of Myanmar's garment exports. As of 2012, 38 per cent of Myanmar garments were exported to Japan and 26 per cent to Korea. This has changed in recent years. Japan and Korea accounted for approximately 38 per cent of garment exports (19 per cent each) in 2015, while exports to Europe grew consistently since 2011. For example, exports to Germany grew from 10 per cent in 2012 to 15 per cent in 2015, and six of the top ten garment importing countries from Myanmar are European. Exports to the US, due to the recent lifting of American sanctions, hovered at around 4 per cent in 2015, but are expected to grow considerably. The European Union has announced that it is considering removing Myanmar's Everything But Arms (EBA) privileges, which, in the view of many stakeholders, would be detrimental to the Myanmar garment sector since it would decrease incentives for investing in the sector, resulting in job losses and potentially halting progress on OSH.¹¹

Production system

Myanmar has mainly focused on producing garments that are simpler to make. International western brands have thus far placed orders for more complex products (i.e. sportswear, swimming suits, footwear) in countries with higher production capabilities, such as Vietnam and Bangladesh. However, Japanese brands appear to be producing a much wider range of both simple and complex products within Myanmar. Currently 80 per cent of Myanmar factories are registered as producing under a Cut, Make and Package (CMP) system (sometimes referred to as Cut-Make-Trim system). Under this production framework, which is usually the entry stage for manufacturers in the international supply chain, buyers (either directly or through regional agents), source all the necessary production inputs from input suppliers and have them shipped to the local manufacturers. International buyers also provide locally based manufacturers with all necessary designs and instructions to follow during the production process. The manufacturers assemble these inputs and ship them back to the final buyer. This is a low margin, low value added activity, as all the sourcing, procurement and design decisions are made outside of the country. Myanmar features a set of challenges in making the shift towards higher value Freight on Board (FOB) production. As shown in the table below, they include structural and management-related challenges, as well as a taxation policy incentivizing CMP over FOB.

¹¹ Source: <https://frontiermyanmar.net/en/everything-but-common-sense>

Figure 3 - Challenges and Incentives Leading to CMP Production

Production Challenges	Incentives towards CMP
<ul style="list-style-type: none"> ■ Lack of locally available quality inputs: cotton, zippers, buttons, etc. ■ Lack of access to capital: difficulty accessing cheap, working capital loans and letters of credit. ■ Low management systems: difficulty managing complex, long term orders from suppliers ■ Low skill sets: local workforce lacking skills needed for quality control, product design, and waste management. ■ Poor infrastructure: electricity provision and road conditions. ■ Turnover: between 3% and 30% of workers leave monthly. 	<ul style="list-style-type: none"> ■ A manufacturer can obtain a certification from MGMA (for MMK 5,000 or the equivalent of US\$ 3.3). This certification allows them to obtain tax exemption on imports value through customs.





4 OSH issues in the Myanmar garment sector

Methodology of the OSH risk assessment

Data from brand suppliers

All suppliers within the brand's supply chain undergo an assessment of their sustainability, measuring the sustainability of products, brands and facilities (manufacturers). Data for this tool is self-reported by the suppliers, which has been used by the ILO research team to conduct this study. It is, however, important to highlight that data collected, at the time of the study, had not yet been validated by the brand team through direct observations. The brand provided self-reported data for 38 factories within their supply chain in Myanmar.¹² The charts below show their composition in terms of ownership and number of workers. The database indicates that the vast majority (86 per cent) are foreign owned, receiving mostly Chinese Foreign Direct Investments (FDI), and 14 per cent are under a Joint Venture (JV) agreement. Factories in the brand's supply chain appear to be quite large; 43 per cent employ between 1,000 and 2,000 workers, 36 per cent between 500 and 1,000, and 11 per cent employ more than 2,000 and less than 500 each.

The SMART Myanmar database

SMART Myanmar is an European Union (EU) funded, four-year project, aiming to support sustainable production and production in the Myanmar garment and textile sectors. The programme runs a series of assessment, training and advisory services to factories in the country, and has an extensive amount of available data about their client's management, production, structural and OSH profiles. SMART Myanmar has shared data from 34 factories that are part of the Social Compliance programme. Most (65 per cent) factories in SMART's programme are foreign invested establishments, followed by locally owned factories (29 per cent), and only a few establishments exist under joint venture agreements (6 per cent).¹³ As shown in the chart below, locally owned factories are likely to be smaller in workforce, with roughly 50 per cent of these factories employing fewer than 500 workers. Foreign owned factories instead tend to employ a much larger workforce, with 32 per cent employing fewer than 2,000 and an additional 32 per cent employing 1,000 workers.

¹² Note: the brand's sample is not expected to be representative of the Myanmar reality, but instead falls among the top performers in the country.

¹³ Note: the SMART sample only includes two Joint Venture factories. Their results are shared, but the sample is too low to draw any conclusions about the category.⁹ Source: MGMA, Factory List, 30 September 2018

ILO research team's primary observations

After analyzing the secondary data available from SMART and the brand, the research team visited six garment factories situated around Yangon between the 23rd of August and the 7th of September 2018. the ILO Research team collected information in two ways:

- **Management Interviews:** these discussions with factory managers revolved around the factory's workforce, its composition, as well as the OSH management systems implemented in these factories.
- **Direct Observations:** the ILO team conducted observations on the factory floor to collect information on a series of categories that included: Circulation of Vehicles, Workers Movement, Noise Levels, Work Environment, Work Stations, Work at Height, Chemicals, Dust, Machine Safety, Electrical Safety, Fire Safety, and First Aid.

The ILO research team followed the methodology developed by the Vision Zero Fund Initiative, aiming to offer tools to development professionals wanting to improve OSH in global supply chains.¹⁴

Drivers of OSH compliance

Factory ownership strongly determines the importance given to OSH compliance in Myanmar. Research has shown that internationally owned factories are in newer, safer buildings, and more likely to provide acceptable working conditions to their workers. Locally owned factories, instead, tend to struggle with the OSH requirements of global buyers. These struggles can be due to lack of knowledge or a lack of access to financing, among other reasons.

Exporting factories are also more likely to have established OSH management systems, appointed safety staff, and to monitor and track accidents on the workplace.¹⁵ As described in the later sections, however, the workplace observations conducted for this research found little evidence of actual OSH management systems being implemented.

Factories exporting to Western buyers tend to be subjected to higher requirements than factories that export to regional foreign buyers from Korea and Japan.

Moreover, the type of production affects a manufacturer's risk profile. Factories where chemicals and dyes are used have the potential to expose workers to higher sets of risks than would be experienced within similar factories that Cut, Make and Package garments. With the growth of the sector, we can expect a move towards the use of on-site chemicals, and with that, greater risks.

¹⁴ Source : https://www.ilo.org/safework/projects/WCMS_635157/lang--en/index.htm

¹⁵ Source: C&A Foundation / Impact. 2016. From Boycott to Boom.

Table 4 - Factories' Segmentation by OSH Drivers¹⁶

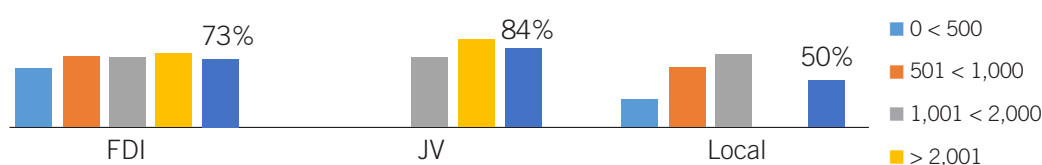
		Export		
		No	Western Buyers	Other (Japan, Korea)
Ownership	Locally Owned			
	Foreign Owned	n/a		

Emergency planning & fire safety

Most of the brand's factories self-reported satisfactorily in a variety of fire safety related indicators, including maintaining a fire alarm, conducting fire drills, placing appropriate fire extinguishers (and checking them regularly), and properly storing and segregating flammable chemicals. However, issues identified within the brand's factories included that 22 per cent of factories had not yet established and formalized an emergency response plan. In addition, only 57 per cent of its factories conduct an annual review of the emergency response plan to ensure appropriate responses to possible emergency situations.

SMART's observations indicate that there are four key issues within their factories: firefighting equipment, evacuation systems, fire safety teams, and fire safety trainings. **Firefighting equipment** is often of an insufficient quantity or is blocked by other materials, making it inaccessible in an emergency. Signage and installation are inadequate, and regular checks are not conducted. **Evacuation systems** appear lacking as well, with no proper evacuation routes designed or mapped, and without appropriate emergency lights. Exit routes are sometimes blocked by objects. **Fire safety** teams (including fighting, rescue or evacuation) have not been assigned or organized, and no **fire safety trainings** were properly conducted. As shown in the chart below, foreign invested and joint venture factories perform better than locally owned ones in this regard.

Figure 4 - SMART Fire Safety, Percentage of Satisfactory Items in Factory Inspections by factory size



Direct observations by the ILO research team confirmed some of these findings, showing that factories are investing time and resources in trainings and in detection systems. Management interviews indicated that fire safety is a main concern for garment factory owners and managers. However, issues remain, especially with alarm systems, extinguishers and evacuation routes. All six factories visited indicated having received **trainings** twice a year for their workers from the local fire department. The trainings were described to include basics such as how to use extinguishers and escape a fire and potential fire hazards. However, because factories experience a high and constant turnover, a large percentage of the factory's workers won't be trained or knowledgeable about fire safety issues. In one factory, observations found

¹⁶ Note: Traffic light color coding. From red, being the weakest likelihood of positive OSH performance, to dark green being the strongest likelihood of a positive OSH performance.

missing **fire extinguishers** in a few locations on the factory floor. In all other establishments the extinguishers were present and signalled. **Evacuation and escape routes** are an area of potential improvement for garment factories. The observations found instances where:

- Signage for emergency exit doors was either missing, not illuminated, or not written in Burmese language (posted only in English).
- Missing or badly placed fire extinguishers.
- Stairs which were not marked, were dark, or did not extend the full length of the doorway.
- Escape routes were blocked by various items (production materials, desks) or because of the architectural design of the building.
- Locked doors: In one factory, a large escape door was locked with a padlock.

Hazards

There are a variety of hazards that affect workers' safety and how well the factories are prepared for these situations. Sub-sections further clarify these hazards; Physical, Electrical, Machine, Chemical, Structural and Personal Safety.

Electrical safety

The brand's suppliers reported compliance with the two electrical safety requirements shown in the chart below: appropriateness of the electrical wiring to the local regulation, and whether it is maintained by qualified electricians. The 2014 Myanmar Electricity Law simply provides the definition of Authorized Person, as "a person who is permitted to perform electricity-related work". The term "qualified electrician" therefore, is subjective.

While factories rely on external professionals for their electrical installations, the skills and capabilities of electricians in Myanmar would likely need to be investigated. The ILO research team has identified several occasions in which the electrical wiring had been done in a way that could create hazards. The VZF team is working with the Electrical Inspection Department of the Ministry of Industry to strengthen their training curriculum for inspectors and operators.

Among SMART's factories, foreign invested ones complied with 81 per cent of electrical safety issues, while locally owned factories reported compliance at 47 per cent. SMART's assessments identified the following issues as raising their electrical risks:

- Lack of appropriate coverage for electric panels and switches.
- Lack of warning signs.
- Lack of fire proof lighting in the warehouses.¹⁷
- Raw and packaging materials left too close to lighting tubes (the vicinity is not clearly specified but left to the individual judgement of the person assessing the factory).

¹⁷ Note: lighting that does not constitute a fire risk, in proximity to fabrics and other materials that might catch fire easily.

Observations from the ILO research team found instances in which cables were wired in a way that could result in potential fire ignitions through sparks as well as shocks. Examples of this type of electrical hazards include:

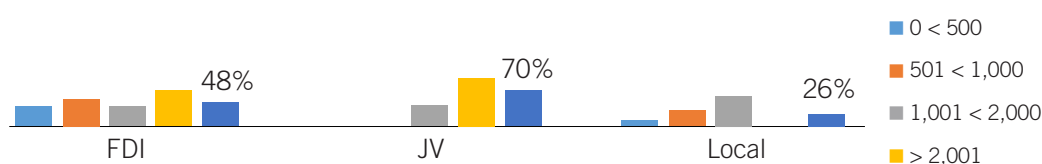
- Electric multiple plug sockets, designed for fixed circuits (i.e. on a wall) hanging from suspended wires.
- Wires were not protected and were exposed.

Machine safety

Nearly all (92 per cent) the brand's factories self-reported that machines with a pinching, puncturing or cutting risk have properly functioning safety guards, safety controls and/or emergency stops in place. Within the SMART's database foreign invested factories comply with an average of 48 per cent of machine safety issues, locally owned factories report compliance as low as 26 per cent. Within SMART's commentary, latent issues include a:

- Lack of safety guards (needle guard, eye guards, etc.), maintenance and inspection and provision of Protective Personal Equipment (PPE).
- No trainings and certification for operators of risky machines (forklift, air compressor, boiler, generator).
- No regular safety maintenance and inspections of machines conducted by third parties.
- No training or instructions on the correct handling of dangerous machines.¹⁸

Figure 5 - SMART Machine Safety, Percentage of Satisfactory Items in Factory Inspections by factory size



The most common risks are that workers might puncture themselves with a moving needle, that a needle might shatter and hurt their eyes, or that workers might hurt their hands if it were caught by a button press. Specific examples of issues identified during the factory visits include:

- In all but one single case, the ILO research team witnessed workers using PPE for the most hazardous activities, such as cutting fabric. In one case, however, a worker was found cutting fabric without a protective, metal glove.¹⁹
- While most machines, in most of the factories visited, were equipped with the appropriate guards, several machines were not, including some with moving parts.

¹⁸ Note: Loosely defined as machines with a higher potential risk to their users.

¹⁹ Picture provided by workers to the research team.

■ The ILO research team also identified positive examples in which custom-made guards were developed for certain machines that did not have them. However, even in these cases, these guards were missing from a few machines. This would seem to indicate a lack of oversight from supervisors and management.

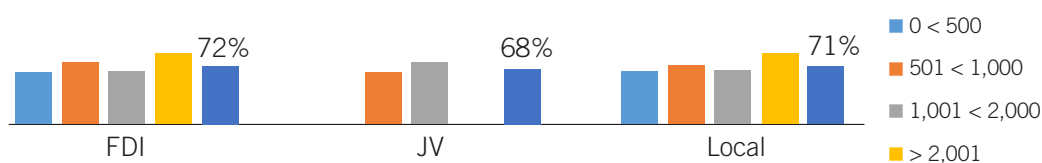
One largely recurring issue across all factories is that even when a guard is installed, workers avoid using it. Guards can make work slower or less efficient and workers, paid by the piece or unit, are therefore tempted to avoid using it to be more productive.



Chemical safety

The brand's factories reported an average overall 71 per cent score on chemical safety indicators, across all factory sizes and ownerships. As for other indicators, the largest factories (over 2,000 workers) performed better than smaller ones. Specific issues identified include that only 14 per cent of factories have a specific process to identify alternatives to hazardous chemicals, that 30 per cent of factories do not carry out monthly checks (of the chemicals used, processes applied, and maintenance of the correct Material Safety Data Sheet (MSDS) sheets), and in 19 per cent of factories there is no chemical hazards safety programme or job safety analysis (related to chemicals). It is, however, important to highlight that the current use of chemicals within Myanmar's garment industry is limited. Most factories produce under a CMP production model, meaning that the use of washing and dyeing chemicals is limited on site. However, the MGMA is hoping the industry grows towards a Freight on Board (FOB) model, and a few foreign invested factories have already started to vertically integrate to include their own washing and dyeing within their facilities. In the medium term, this sector growth and move towards FOB might bring a larger use of chemicals, and with it, additional safety risks.

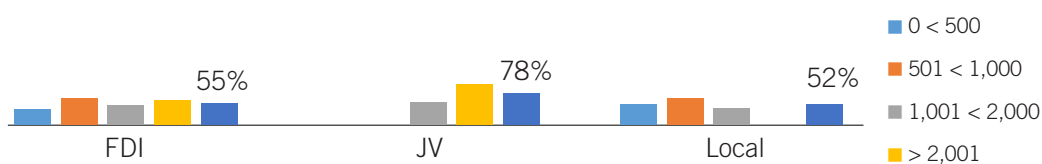
Figure 6 - Brand's Suppliers' Chemical Safety Scores, Percentage of total score obtained by factory size



Foreign invested factories in the SMART dataset comply with an average of 55 per cent of chemical safety items, only slightly higher than the 52 per cent scored by locally owned ones. Again, it is important to stress that these factories tend to not make a large use of chemicals. However, SMART's assessment highlighted the following issues:

- No Material Safety Data Sheet (MSDS) was used. Similarly, safety labels were not found on secondary containers for hazardous chemicals.
- Proper PPE was not provided and an occupational health check for chemical users was not done.
- No trainings on the use of chemicals or its management or storage were conducted. This was especially true for the few footwear producing factories in the sample.

Figure 7 - SMART Chemical Safety, Percentage of Satisfactory Items in Factory Inspections by factory size

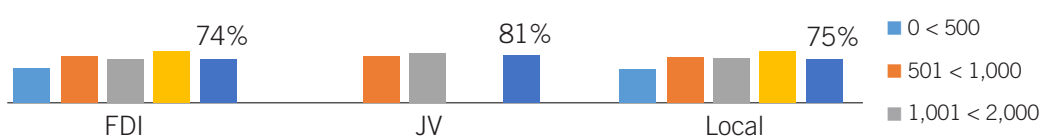


Direct observations in the factories confirmed what had been indicated by the brand's suppliers and by SMART's data. Only a few chemicals were used in the factories, which included stain remover sprays, glues and paints for leather products.

Structural safety

Overall, in structural safety, the brand's factories reported an average score of 75 per cent of the total possible compliance score. As in previous instances, larger factories tended to perform better than smaller ones, as shown in the figure below. It was also identified that 19 per cent of factories do not have their facilities audited by an independent third-party engineer, and that for 14 per cent of factories, no authentic construction certificate was initially made available. The brand has made it a requirement for all its suppliers to undergo a third-party engineering assessment.

Figure 8 - Brand's Structural Safety Scores, Percentage of total score obtained by factory size



While indicators specific to structural safety were not available from SMART's assessments, the SMART review indicated that no building safety checks and inspections were conducted.

Working environment

Temperature

From SMART's observations, the **temperature** within the factories does not appear to be regularly checked. SMART's assessments also identified that when the temperature is identified as being too hot for workers, no action seem to be taken to reduce it. The observations by the ILO research team differed somewhat from this finding. Temperatures in Myanmar factories can get quite high, especially during the pre-rainy season months (April to July), when outside temperatures go above 40°C. This is especially true in factories located inside warehouses with metal roofs. However, interviews with managers indicated that high temperatures were among their biggest concerns, often cited right after fire safety. Observations found that management, in nearly all the factories, had invested in ventilation systems to better air flow and lower inside temperature. In cases where the investment of a factory wide ventilation system had not been made, fans were present across the factory, some of which were equipped with water nebulizers.

Ergonomics and work stations

An issue witnessed by this research team across all visited factories and confirmed in workers' interviews was the set of hazards posed by working positions. Observations indicated several people working in positions that could cause musculoskeletal disorders. This term covers any injury, damage or disorder of the joints or other tissues in the upper/lower limbs or the back. Examples are varied, but include:

- In all visited factories, working stations were adjustable, but none had been adjusted for the height of the worker standing or sitting in it.
- Operators end up working in crouching positions that, in the long term, can be detrimental.
- In a few factories, workers carried out certain activities while sitting on the floor. This can also have long term consequences.
- Workers at various stations (cutting, quality control, etc.) were seen standing for long periods of time. Standing on the hard floor can be painful or uncomfortable. Several workers improvised solutions, such as standing on cardboard boxes or other materials.

Noise

While, in general, non-threatening levels of noise exist across most parts of the visited factories, there are exceptions. One key example is the noise level inside filling rooms equipped with automatic filling machines. On site noise measurements conducted by the ILO research team found a range between 80 and 85 decibels. Long term exposure at these levels can cause hearing loss. The worker using the filler was not wearing any ear protection. Additional noise was created in the room by a group of workers bashing the filled bags with cardboard and wooden tubes. Moreover, several other workers were in the same filling room carrying out activities that could have been done elsewhere.

Work at heights

Work at heights in Myanmar's ready-made garment (RMG) factories can be found in warehouses receiving production inputs (mainly fabric rolls). These inputs are usually stored on metal shelves that can be as high as two or three metres from the ground. Out of the six factories visited, only one provided movable ladders and platforms with a rail guard to protect from falls. In all other factories, workers were required to climb up the shelves and manually load and unload the materials. This constitutes an immediate hazard for the workers, who run the risk of falling from a height significant enough to cause injuries.

Dust

From visual observations, dust did not appear to be a significant risk factor. However, a few specific instances did stand out as being potentially harmful for workers. One such example was in a factory that featured an isolated filling room for jackets. Inside the room several airborne particles were visible. While the actual hazard posed to workers was not quantifiable by the ILO research team, managers should nevertheless pay more attention to and address these instances.

Drinking water

From SMART's observations, the **drinking water** provided to workers does not appear to be regularly tested for the presence of heavy metals or bacteria. Additionally, many workers share just a few cups, increasing the potential for bacterial transmission. Direct observations in the factories found that drinking stations are readily available and access to drinking water is largely un-restricted. However, including during our interviews with workers, there were instances when workers were only allowed to go to the water stations during breaks or after completing a set of tasks (complete x number of products). In the first case, this can create lines and waiting times for workers, while the second example constitutes a restriction of workers' access to drinking water.

Medical and sanitary services and facilities

Only 64 per cent of factories in the brand's sample reported using medical tests of prospective workers to assess fitness to work. Direct conversations with factory managers and workers indicate that only a few of them rely on the SSB clinics in case of accidents.²⁰ Additionally, most factories visited do not employ a full-time doctor but are more likely to employ certified or trained nurses. There appears to also be confusion regarding who conducts these medical check-ups. It was additionally identified that only 11 per cent of factories offer free, voluntary and confidential medical check-ups to employees.

Data shows that almost the entirety of factories studied provide both social insurance options and additional health service options (95 per cent respectively).²¹ Alternative, private medical insurance options are provided at a much lower extent, with 64 per cent of factories offering them to their workers.²² These options, reported in the brand's database as private insurance options, mean that some factory managers prefer sending their workers to local, non-SSB clinics, if and when accidents occur. According to the Social Security Law rules, using non-SSB clinics can jeopardize workers' access to the employment injury insurance scheme.

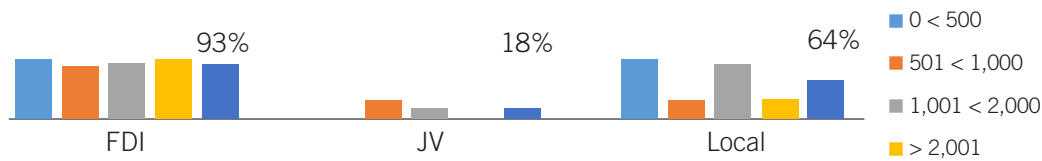
Additionally, child care services are provided free of cost in 14 per cent of the brand's factories. One of the most noticeable findings from the chart below is that none of the largest factories appears to be offering free childcare services on their facilities. The provision of free child care is not mandated by law but decided by the factory depending on workers' needs. At this moment, it is not clear how many women would need such services. The data also shows that 27 per cent of factories in the sample currently provide lactation room for new mothers. Provision of child care differs from the provision of lactation rooms since dedicated staff needs to be available to take care of the children on site while the mother is working.

²⁰ A survey on social security access and awareness (commissioned by the ILO to inform SSB's reform process and communication strategy) found similar results on access to health services.

²¹ Note: 95% of factories in the brand's sample specifically report providing Social Insurance and Health Service Options, while the data for two factories (5%) is unavailable. This does not necessarily imply that they do not. As the data is self-reported, it might be a reporting error that needs to be verified.

²² This is a surprising finding; a survey on social security access and awareness (commissioned by the ILO to inform SSB's reform process and communication strategy) found no single garment factory in the sample in Hlaing Tharyar, Pyi Gyi Tha Kone, and Bago offering private medical insurance. On the other hand, if understood as "expenses" on private medical services rather than private "insurance", the findings could align: most workers in the sample (79%) chose to go private clinics, though it is unclear if employers reimburse for these costs.

Figure 9 - Brand's Suppliers reporting to Provide Medical Services to Workers, Percentage of Factories by factory size



Finally, SMART's commentary of their assessments highlighted insufficient first aid preparedness. Even if all factories in the SMART sample are above the 200 people workforce size that would require them by law to provide a functioning clinic staffed by a doctor, no doctor was present. First aid boxes were scarcely available and often contained insufficient materials. Additionally, no trained personnel were found able to administer first aid. Direct observations largely confirmed these secondary findings. Clinics were found in all six visited factories, but none had a resident, full time doctor in charge of it. In two factories, a doctor visited the facility twice a week, while in all other factories, the clinic was managed by a nurse. Questions remain about the quality of these clinics. While the quality of the medical staff or the quality of the medicinal inventory within the clinics were not assessed as part of the research, visual observations found some of the medicines and equipment looked old and improperly maintained.

Breastfeeding rooms were only present in two out of the six visited factories. Further attention should be paid to this topic, as over 90 per cent of the garment workforce in Myanmar is female. While most of these female workers are young (18 to 21 years old predominantly), a case can be made for the need to ensure that workers are empowered to go back to work after childbirth.

Finally, first aid kits were available on the factory floor in five out of the six factories. In the remaining one, the management indicated that a first aid kit was available but housed in the clinic. In that case, the resident nurse is said to attend to anyone who might need first aid. It was noted that in one case the first aid kit was empty, and in two other factories, it appeared understocked.

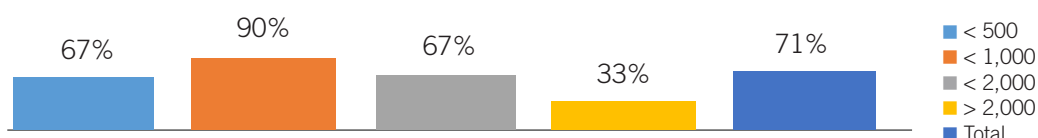
Management systems

The ILO guidelines²³ (2001) on establishment of an OSH management system, suggest several steps that should be taken to ensure effectiveness and inclusiveness. First, the employer, in consultation with workers and their representatives, should write an OSH policy that complies with relevant local and international laws and regulations. Secondly, workers should be consulted and encouraged to participate in all aspects of an OSH management system. And finally, the established OSH management system should be compatible with or integrated with other management systems in the organization. The overall system should contain elements of policy, organizing, planning and implementation, evaluation and action for improvement.

Workers' and safety committees

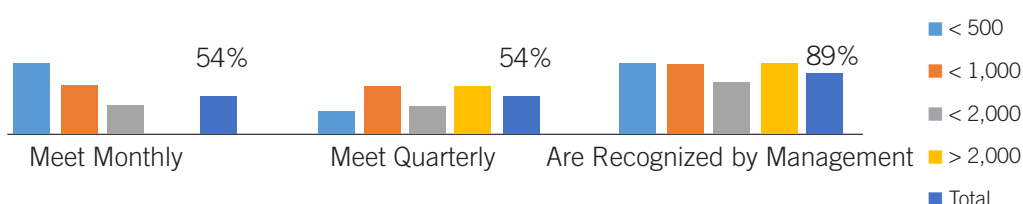
In Myanmar, businesses that employ more than 30 employees are mandated to establish a Worker Coordinating Committee (WCC). The WCC should be composed of at least two elected worker representatives and two employer representatives. The new OSH Law mandates factories to appoint “workplace OSH Personnel” and establish a “workplace Safety Committee,²⁴” built with the specific mandate of soliciting feedback from workers on safety and coordinating OSH efforts in the factory. Within the brand's factories, 29 per cent of factories reported not having a functioning workers' safety committee. This is especially true within the largest factories, where 67 per cent of factories do not have a safety committee. This finding is further confirmed by the SMART's assessments, indicating that such a committee - one charged to take responsibility for safety management systems - was often not in place.

Figure 10 - Brand's Suppliers reporting that a Health and Safety Worker Committee Exists, Percentage of Factories by factory size



Of the 71 per cent of factories that have such committees, in nearly all cases (89 per cent), workers took part in them, and their running was not left to management. However, dynamics relating to workers' committees tend to change depending on the factories' workforce size. While in almost all factories (89 per cent), committees tend to be recognized by management, committees in smaller factories tend to meet more regularly (at least monthly).

Figure 11 - Workers' Safety Committee Dynamics in brand's Factories, Percentage of Factories by factory size



23 Source: https://www.ilo.org/wcmsp5/groups/public/@ed_protect/@protrav/@safework/documents/normativeinstrument/wcms_107727.pdf

24 Source: MOLIP, 2018. “DRAFT OSH Law.”

A majority, or 84 per cent of factories, seem to have an active and functioning safety committee. However, the committee reviews safety issues and tracks corrective actions in only 62 per cent of them. Moreover, only 62 per cent of factories have a designated responsible safety manager. SMART's commentary also indicates that assessments rarely identify an appropriate record or analysis of accidents happening at the factories. Conversations between factory managers and the ILO Research team, as well as visual observations of the OSH issues on the factory floors confirm the findings above. They also show that, to a large extent, there is a lack of management related to OSH issues. The research indicated:

- No factory had evidence of an OSH investment or improvement plan. While investments in issues such as temperature and ventilation were observed, these were mostly ad hoc and not part of a coherent and participatory plan to improve OSH outcomes.
- No factory had evidence of a system to record and monitor inspections or maintenance.
- In all factories, the responsibility to coordinate OSH activities fell on the HR Manager (or similar roles), as a secondary mandate of that job.
- In most factories, there was no evidence of an established OSH committee. While this is not currently required by the law, it impedes feedback to managers from workers regarding their safety concerns.



5 | The business case for OSH in the garment sector

Globally, compliance with buyers' requirements has been the strongest driver for OSH improvements. As countries' legal and inspection frameworks become more robust, legal compliance is slowly becoming an additional driver of OSH improvement across manufacturing countries.²⁵ While not always easy to quantify, numerous studies have pointed to the benefits resulting from investment in occupational safety and health in microeconomic terms. For example, a recent study found that for every 1 EUR (or any other currency) per employee per year invested by companies in workplace prevention, companies can expect a potential economic return of 2.20 EUR (or any other currency).²⁶ This section will provide an overview of nine types of OSH investment relevant to Myanmar's Garment Sector. The section describes the rationale behind each intervention and the potential benefits that can be obtained. For each OSH investment, examples are provided from companies operating in other sectors and regions. It must be stressed that a key finding of this report is that more factory level data would be necessary in Myanmar to definitively prove the business case for each of these interventions.

²⁵ Source: European Commission. 2011. Socio-economic costs of accidents at work and work-related ill health.

²⁶ See ISSA. 2011. The Return on Prevention: Calculating the Costs and Benefits of Investments in Occupational Safety and Health in Companies, p.7.

The table below provides a summary of how each of the nine investments has been proven to impact a factory establishment, both from a risk reduction, as well as from a business, point of view.

Table 5 - Identified OSH Business Cases

Intervention	Risk Reduction			Business Dynamics				
	Accident Reduction	Fire and Explosions	Chemical Safety	Absenteeism	Turnover	Productivity	Energy Efficiency	Cost Savings
Boiler Upgrades								
Ventilation Systems								
Child Care Facilities								
Health Care Facilities								
Load Reducing Equipment								
OSH Trainings								
OSH Mangement Systems								
Ergonomics								
Data Collection								

The table below describes in detail each of these potential investments, the actions that manufacturers might consider taking, and how they can expect to benefit from these investments.

Table 6 - OSH Investments Cases

	Intervention	Description	Details	Benefits	Results from Previous Experience
1	Boiler Upgrades	A boiler is an enclosed vessel in which water is heated and circulated, either as hot water, steam, or superheated steam for the purpose of heating, powering, and/or producing electricity. In garment factories, the steam generated from a boiler is often used to iron new garments. In numerous factories globally, but especially in emerging markets, boilers are often old and inefficient. Myanmar is no exception, with SMART Myanmar reporting that boilers are often dirty and inefficient, using dirty coal, wood and diesel as their typical fuel sources. ²⁷	Employers can: <ul style="list-style-type: none"> - Replace old boilers or install and maintain better quality boilers. - Place boiler in a sensible location away from workers. - Hire boiler experts to recommend better quality boilers that suit the needs of an employer's given business. - Hire boiler experts to regularly maintain and check current boilers. - Assess energy efficiency of current boiler and determine if it is contributing to harmful air contaminants. - Examine fuel profile of boiler to see if better options are available, for example, switching from coal to wood or biofuel. - Consider new technologies such as solar thermal assist, fabric scrap boilers, steam condensate recovery systems.²⁸ 	Boiler upgrades can lead to: <ul style="list-style-type: none"> - Reduced likelihood of serious accidents such as boiler explosions. - Improved ability to maintain temperature and humidity at comfortable and productive levels; - Reduced greenhouse gas emissions . - The removal or dilution of airborne contaminants, and worker exposure to them; - Improved energy efficiency of the building in which it is installed; - Significant cost savings on electricity and fuel . 	An evaluation done by the V.A. Erie Medical Center in Erie, Pennsylvania showed that investing in upgraded boiler systems ²⁹ resulted in: <ul style="list-style-type: none"> 60% reduction in electricity demand from boiler plants 2-5% reduction in fuel demands Annual cost savings US\$ 62,500 in fuel costs

²⁷ Source: SMART Myanmar. 2019. Industry Observations from SMART Myanmar.

²⁸ Source: SMART Myanmar. 2019. Environmental impacts in the Myanmar Garment Industry.

²⁹ Source: Power Engineering. 2018. VA Hospitals Invest in Boiler System Upgrades for Money and Energy Savings.

	Intervention	Description	Details	Benefits	Results from Previous Experience
2	Ventilation Systems	AVentilation is used to control exposure to airborne contaminants and control temperatures. OSH investments into effective ventilation systems are particularly effective in the manufacturing sector - and particularly in factories with high numbers of workers. Effective ventilation systems can reduce exposure to harmful chemicals and airborne particles, manage factory temperatures, and can improve the overall health and productivity of the workforce.	Employers can: <ul style="list-style-type: none"> - Assess risk profile of chemicals / particles in use. - Invest in ventilation systems that facilitate air flow, such as an evaporative cooling system. - Ensure hot, stale air rises to the roof where it can be removed. - Invest in fans and water nebulizers. - Ensure air flow from fans is not blocked. - Consult workers to understand issues and find efficient ventilation systems. - Regularly inspect and maintain fans, ventilation systems and internal thermostats. 	Benefits include: ³⁰ <ul style="list-style-type: none"> - Maintaining temperature and humidity at comfortable and productive levels. - Reducing potential fire or explosion hazards. - Removing or dilute airborne contaminants, and worker exposure to them. - Improving worker morale. - Reducing absenteeism and turnover. - Preventing heat exhaustion and fainting. 	<p>A factory in Lithuania³¹ made an investment of EUR 49,483 in a new ventilation system, which created an average annual saving of EUR 37,769.</p> <p>A factory in Germany reported, against an investment of EUR 49,820³², annual savings of EUR 16,435 (due to productivity increases and reduced absenteeism), leading to a payback period of 3.4 years.</p>
3	Child Care Facilities	Women who want to enter the workforce often lack robust, affordable childcare infrastructure, and this might prevent them from returning to their job after child birth.	In the absence of child care services provided by or supported by the government, employers can offer: <ul style="list-style-type: none"> - On-site childcare facilities (rooms and staff). - Free transportation (commuting between work and home). - On-site breastfeeding facilities. 	Potential Benefits Include: <ul style="list-style-type: none"> - Reduced Absenteeism³³ - Reduced Turnover - Productivity Increases 	<p>A study conducted in India and Jordan showed that between 76% and 87% of women³⁴ returned to work after maternity leave in workplaces where child care was offered.</p> <p>It has been shown that up to 21% of workplace absences can be linked to family issues.³⁵</p>

30 Source: Canadian Centre for Occupational Health and Safety. 2019. OSH Answers Fact Sheets, Industrial Ventilation.

31 Source: EU-OSHA, European Agency for Safety and Health. 2018. Benefits of OSH for small businesses.

32 Source: EU-OSHA, European Agency for Safety and Health. 2018. Benefits of OSH for small businesses.

33 Source: IFC. 2013. Taking steps to reduce employee absenteeism, such as investing in childcare, can result in substantial cost savings for firms.

34 Source: IFC. 2017. Tackling Childcare: The Business Case for Employer-Supported Childcare, p. 163.

35 Source: Navarro and Bass. 2006.

	Intervention	Description	Details	Benefits	Results from Previous Experience
4	Health Care Facilities	In developing countries, health care services provided by private companies to their workers is a way to compensate for the inadequacy or lack of public services. By providing health care services and basic medicinal provision to their workers, factory establishments can increase workers' commitment, and decrease their turnover and absenteeism.	Employer can offer: <ul style="list-style-type: none"> - Free basic medical services (check-up, vaccinations, first aid, medicines); - Promote a preventive health culture in the company; - Develop partnerships with external health actors; - Encourage and promote physical activity and exercise; - Implement an OSH management system, with dedicated programmes and sufficient funding. 	Potential Benefits Include: <ul style="list-style-type: none"> - Enhanced productivity; - Improved capacity to recruit and retain workforce; - Reduced absenteeism and turnover rate; - Increased health and well-being of workers; - Improved corporate image and increased worker commitment. 	A study from the Alliance for Wellness found that enhancing healthcare initiative at work can provide high rate of return from US\$ 1:1 to US\$ 20:1. ³⁶ A pharmaceutical factory in Singapore, after investing in improved health services for workers experienced a 60% reduction in absenteeism rates and a 5% decrease in turnover. ³⁷
5	Load Reducing Equipment	Manual materials handling (MMH) means moving or handling things by lifting, lowering, pushing, pulling, carrying, holding, or restraining. MMH is also one of the most common causes of occupational fatigue, low back pain and lower back injuries. Purchasing and utilizing load reducing equipment can lower workers' exposure to MMH activities and in turn reduce cases of these issues occurring - often leading to simultaneous improvements in productivity.	Employers can: <ul style="list-style-type: none"> - Conduct simple risk assessments in response to workplace injuries; - Research and provide equipment that can reduce the physical load on workers. - Identify high-risk jobs or processes that involve high task repetition, forceful exertions, by lifting, lowering, pushing, pulling, carrying, holding, or restraining. - Provide training on proper body mechanics for high risk roles. 	Load reducing equipment can lead to: <ul style="list-style-type: none"> - Reduced occupational fatigue, low back pain and lower back injuries. - Reduced turnover, absenteeism. - Reduced incidence of costly musculoskeletal and cumulative trauma disorder (CTD) injuries; - Improved employee engagement. - Improves safety culture and betters productivity through more efficient processes. 	Factories in Austria, Greece and the Netherlands found ³⁸ that investment in load reducing equipment resulted in: <ul style="list-style-type: none"> - Increased productivity of specific departments of 30%. - Reduction in cases of back and muscle pains. - Reduced absenteeism in specific departments.

36 Source: Alliance for Wellness. ROI, Inc. 2008.

37 Source: World Economic Forum. 2013. The Workplace Wellness Alliance Making the Right Investment: Employee Health and the Power of Metrics, p. 32.

38 Source: EU-OSHA, European Agency for Safety and Health. 2014. The business case for safety and health at work: cost-benefit analyses.

	Intervention	Description	Details	Benefits	Results from Previous Experience
6	OSH Trainings	Training is a fundamental requirement for any workplace to achieve OSH goals and targets and reduce accidents. Trainings have the potential to greatly reduce accidents in the workplace.	Employers can offer combinations of: - Generic OSH Training. - Risk Specific OSH Training OSH skills and knowledge which is commonly required, e.g. induction training, risk management training, evacuation; - OSH training required for those persons conducting OSH verification activities, e.g. OHS committee training, first aid training.	Potential Benefits Include: - Accident Reduction. - Reduction in disruption of production lines. - Reduced Absenteeism. - Reduced Turnover.	A study ³⁹ conducted in Turkey found that investment in OSH training led to a reduction of 14.5% in the number of accidents and a reduction of 16% in the severity of those accidents.
7	OSH Management Systems	An OSH management system is a means of effectively managing hazards and risks at work. Key elements for its successful application include management's commitment and the active participation of workers in its joint implementation. The system should contain the main elements of policy, organizing, planning and implementation, evaluation and action for improvement.	Employers can: - Design OSH Policies, - Hire an OSH Manager, - Design a clear OSH Management System, with detailed responsibilities and functions. - Design clear communication channels on OSH topics, including between workers and supervisors.	Potential Benefits Include: - national OSH legislation (such as the Myanmar OSH Law). - Accident reduction, - Minimizing disruption to the production line due to accidents. - Optimizing prevention; - Improving OSH performance; - Reducing possible legal liabilities; - Reducing compensation costs.	A company in Australia, ⁴⁰ after implementing an effective OSH Management system, saw a 61% reduction in its insurance premiums. While not directly applicable to the Myanmar reality, benefits could translate in reduced health and compensation expenses to the workers. A study in Poland found that the implementation of OSH management systems in enterprises resulted in both tangible and intangible benefits, including reduced premiums for work accident insurance. ⁴¹

39 Source: Hesapro. 2013. *The Link between Productivity and Health and Safety at Work*, p. 19.

40 Source: Workplace Health and Safety Queensland. 2013. *Injury prevention and management case study: Stellar Asia Pacific*.

41 Jan Rzepecki. 2012. "Costs and Benefits of Implementing an Occupational Safety and Health Management System (OSH MS) in Enterprises in Poland", 18(2) *International Journal of Occupational Safety and Ergonomics*, pp. 181-193.

	Intervention	Description	Details	Benefits	Results from Previous Experience
					<p>A Factory in the UK⁴² implemented a musculoskeletal injury management system and obtained savings of GBP 192,000 per year in reduced time off and compensation payments.</p>
8	Ergonomics	<p>Manufacturing roles typically rely on the ability of workers to perform high frequency, repetitive tasks in a sustained position for long time periods. This makes them particularly vulnerable to musculoskeletal injuries, which can impact the lives of workers.</p>	<p>Employers can:</p> <ul style="list-style-type: none"> - Conduct simple ergonomic risk assessments in response to workplace injuries. - Establish administrative controls that reduce identified injury risks, such as job rotations, stretch breaks, work practise controls. - Provide training on proper body mechanics for high risk roles. - Establish engineering controls that reduce identified injury risks, particularly musculoskeletal injuries. 	<p>Potential Benefits Include:</p> <ul style="list-style-type: none"> - Improved productivity. - Improved workers' engagement. - Reduced turnover. - Reduced absenteeism. 	<p>A factory in the United States that invested in policies and programmes to reduce ergonomic risks reported⁴³ a 50% decrease in reportable cases of cumulative trauma disorder (CTD) injuries within 1-year period, and a 61% reduction over a 2-year period. It additionally reported a 41% drop in upper limb disorders.</p>

42 Source: British Safety Council. 2014. The business benefits of health and safety: A literature review.

43 Source: ergoweb. 1995. Ergonomics - Silicon Graphics Incorporated.

	Intervention	Description	Details	Benefits	Results from Previous Experience
9	Data Collection	It is necessary for companies to establish effective OSH data collection systems. Effective systems result in the collection of reliable documentation of occupational accidents and diseases which may be used to detect new and emerging hazards and risks, identify hazardous sectors, occupations, business models and practices, develop OSH management systems and set priorities and measure progress.	Employers can collect different data, including: <ul style="list-style-type: none"> - Indicators on occupational risk factors and staff health (exposure to chemical elements, accident rates, health and well-being work-related illnesses). - System indicators (human and financial resources for OSH, expertise of OSH trainers), - Procedure indicators (communication, risk assessment, introduction of standards). 	Potential Benefits Include: <ul style="list-style-type: none"> - Lower rates of absence; - Fewer accidents and diseases; - Higher productivity due to increased production time; - Identifying the most appropriate OHS management system for the company. 	Factories in Ghana, the United States and Canada identified that improvements in their OSH data collection systems resulted in: <ul style="list-style-type: none"> - Improved awareness across the workforce.⁴⁴ - Improved health levels of workers.⁴⁵ - Improved ability of management to tackle OSH issues.

Many of the cases studies referenced above illustrate that investment in OSH can have a positive impact on turnover and absenteeism. Specific investments such as improving ergonomics, or providing improved healthcare services, would be two affordable and cost effective ways to improve OSH performance in the Myanmar garment sector as a whole.

One of the key challenges of this research, and of any research trying to conduct a CBA for OSH investments, is the availability of factory level data. The MGMA would be perfectly placed to support garment factories as they begin collecting factory level data on the dynamics between OSH and productivity, turnover, absenteeism, among other organizational issues. Examples would include:

- Providing factories with a clear and simple way to collect accident data and a simple tool to estimate their impact on production and health related costs for the factory.
- Working with factories that have begun certain OSH related investments (i.e. ventilation systems), to help them monitor the productivity increases resulting from these investments.

Following positive examples is a key to moving forward with OSH system improvements. Launching small data collection pilots in selected factories, to illustrate the return on investment in OSH could be used to motivate other factories to engage in similar investments, ultimately benefitting the sector. One easily implementable pilot would be to collect data about productivity, rejection rates, absenteeism and turnover in factories that make simple ergonomics improvements (i.e. adjusting the sewing tables to match with workers' height), in order to verify its impacts on business dynamics. Such a small pilot would require little or no investment on the part of factories but represent a first step in improving OSH outcomes in all Myanmar factories.

44 Source: Benyakowa Attabra-Yartey. 2012. Assessing the Impact of Occupational Health and Safety Needs on the lives of Construction Workers. A Case Study at Abasa General Enterprise Limited-Kumasi.

45 Source: World Economic Forum. 2013. The Workplace Wellness Alliance Making the Right Investment: Employee Health and the Power of Metrics.



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