



SOUTHERN VOICE

Southern perspectives. Global debates.

OCCASIONAL
PAPER
SERIES
N°

70

Recovery of the apparels sectors of Bangladesh and Sri Lanka from the COVID-19 crisis: Is a value chain based solution possible?

Khondaker Golam Moazzem
Fahmida Khatun
Kithmina Hewage

Tamim Ahmed
Anjana Pathirana

OCCASIONAL
PAPER
SERIES
N°

70

**Recovery of the apparels sectors of
Bangladesh and Sri Lanka
from the COVID-19 crisis: Is a value
chain based solution possible?**

Khondaker Golam Moazzem

Fahmida Khatun

Kithmina Hewage

Tamim Ahmed

Anjana Pathirana

Publisher

Southern Voice

Website: www.southernvoice.org

E-mail: info@southernvoice.org

First Published April 2021

© Southern Voice

Disclaimer: The views expressed in this study are those of the authors alone and do not necessarily reflect the views of Southern Voice or any other organisation(s) with which the authors are affiliated.

ISSN 2307-9827 (Online)

ISSN 2307-681X (Print)

Preface

COVID-19 has reshaped the world and radically changed the way people, institutions and systems function. Pre-existing economic, social and institutional vulnerabilities have aggravated the impacts of the crisis, especially on less developed and emerging economies and on their vulnerable populations.

Southern Voice has partnered with both member and non-member think tanks across the Global South to generate evidence of the pandemic's impact in distinct contexts. Through this research programme, teams have produced evidence-based analyses that embody perspectives of the Global South.

Three core themes guided this research initiative: social impact, economic and fiscal recovery, and accountable and inclusive institutions. It puts forth evidence-based policy solutions and recommendations to mitigate the middle and long-term challenges of the crisis and to inform a better and sustainable recovery.

The present study focuses on the impact of COVID-19 on the apparel sectors of Bangladesh and Sri Lanka. It explores a value chain-based solution to help both countries' garment industries and workers out of the crisis. We hope that this joint publication by Southern Voice, the Centre for Policy Dialogue (CPD), and the Institute for Policy Studies (IPS) will be useful in crafting appropriate responses to confront the medium-to-long-term challenges presented by the pandemic.

Debapriya Bhattacharya, PhD

Chair, Southern Voice

and

Distinguished Fellow, Centre for Policy Dialogue (CPD)

Acknowledgement

The authors express their deep appreciation to Dr. Debapriya Bhattacharya and Professor Mustafizur Rahman, distinguished fellows of the Centre for Policy Dialogue, for their valuable feedback, comments, and suggestions throughout the study period.

Abstract

The COVID-19 pandemic has caused a major disruption to the global apparel value chain and has delayed its recovery in the medium term. Innovative strategies and tools that address medium-term challenges are needed to tackle prolonged periods of demand slump. This study explored a value chain based solution for Bangladesh and Sri Lanka in which the major market players adopt responsible business practices (RBPs) for sustainable recovery. It found that during the pandemic period major sourcing countries either reshored or over-concentrated on a limited number of sourcing countries. The major market players took too few initiatives to address the medium-term challenges or to retain the suppliers of major sourcing countries and a 'world of work' in uncertainty. A major shift in the distribution of buyers' export orders during the COVID-19 period (January to June 2020) deprived several major supplying countries of market share, including Bangladesh and Sri Lanka. The analysis showed that if the pre-COVID market share of export orders could be maintained in the case of the largest supplying country, China, an additional USD 2 billion worth of orders could be redistributed to supplying countries. This study suggests that in the case of a major global crisis, a redistributive approach should be taken to ensure that export orders remain at least at the pre-crisis levels, particularly for countries that have fiscal constraints and weak social support programmes for their suppliers and workers.

Authors

Khondaker Golam Moazzem is an industrial economist and research director of the Centre for Policy Dialogue (CPD). His major area of interests includes among others the global value chains particularly related to apparel value chain, entrepreneurship development, FDI and trade-related issues. He is a member of different public and private sector advisory committees including that under the Ministry of Finance. He can be reached at moazzem@cpd.org.bd

Fahmida Khatun is the executive director of the Centre for Policy Dialogue (CPD). Her areas of interest include among others gender and development, macroeconomic policy and management, future of work, climate change, SDGs and interests of Least Developed Countries. Fahmida is a member of the panel of economists for the Eighth Five Year Plan under the Planning Commission of Bangladesh. She can be reached at fahmida@cpd.org.bd

Kithmina Hewage is a research economist at the Institute of Policy Studies of Sri Lanka (IPS) with expertise in political-economy and private sector competitiveness. Kithmina sits on several government policy committees, consults for international organizations, and is widely published in domestic and international outlets. He can be reached at kithmina@ips.lk

Tamim Ahmed, an inspired young researcher, working as a research associate at Centre for Policy Dialogue (CPD). His research interest includes the areas of industrial, and development economics. He can be reached at tamim@cpd.org.bd

Anjana Pathirana was a Project Intern at the Institute of Policy Studies of Sri Lanka (IPS) working in the macroeconomics, trade, and competitiveness unit. She is currently an undergraduate specializing in Economics at the University of Colombo, Sri Lanka. She can be reached at anjana@ips.lk

Content

Preface	iv
Acknowledgement.....	v
Abstract.....	vi
Content.....	viii
List of figures.....	ix
List of tables	ix
Acronyms and abbreviations	x
Introduction.....	11
Methodology of the study	20
Key findings of the study.....	21
Conclusion	43
References	46



List of figures

Figure 1. Domino effect in the global apparel industry due to COVID-19	21
Figure 2. Perception of job-related uncertainty among Bangladeshi and Sri Lankan Workers	23
Figure 3. Month-on-month changes (%) in the RMG exports of Bangladesh and Sri Lanka (in 2020).....	26
Figure 4. Market share of knit and woven products among the major supplying countries during the pre- and post-COVID periods	33
Figure 5. Proposed framework for cooperation in the global apparel value chain	35



List of tables

Table 1. Strategic adaptations of businesses and the world of work during crisis periods.....	18
Table 2. Import of apparel from Bangladesh, Sri Lanka, China, and Vietnam.....	23
Table 3. Month-wise fired/retrenched workers (based on the DIFE Report).....	27

Acronyms and abbreviations

DIFE	Department of Inspection for Factories and Establishments
ILO	International Labour Organization
PPE	Personal Protective Equipment
RBP_s	Responsible Business Practices
SDG_s	Sustainable Development Goals
RMG	Ready Made Garments

Recovery of the apparels sectors of Bangladesh and Sri Lanka from the COVID-19 crisis: Is a value chain based solution possible?

*Khondaker Golam Moazzem
Fahmida Khatun
Kithmina Hewage
Tamim Ahmed
Anjana Pathirana*

Introduction

Rationale for the study

The global apparel value chain has experienced unprecedented disruption from the COVID-19 pandemic. Unlike earlier crises, all kinds of activities across the value chain have collapsed, adversely affecting its up- and down-streams, upsetting apparel suppliers, employees/workers, raw material suppliers, brands/retailers/buyers, and consumers (International Labour Organisation [ILO], 2020). Failure to ensure the apparel value chain's early and sustainable recovery could have a significant negative impact on the ability of many apparel supplying countries to achieve the major milestones of the Sustainable Development Goals (SDGs): "SDG 1 (no poverty)," "SDG 2 (zero hunger)," "SDG 5 (gender equality)," "SDG 8 (decent work and economic growth)," and "SDG 9 (industry, innovation, and infrastructure)" (UNDESA, 2020).

Countries have implemented various measures at the national level to address their immediate- and short-term crises and to cope with the risks and vulnerabilities associated with them. Apart from that, country-level initiatives have been carried out to address the spread of the virus among people, including the workers employed in the apparels sector. Unfortunately, the measures targeting the short-term crises have been inadequate to overcome them (Moazzem, Ahmed, Shibly, & Taznur, 2020). The fiscal constraints of many developing countries, including apparel supplying countries, have been a major impediment to providing adequate support to suppliers and workers in the value chain (Gupta & Liu, 2020).

The medium-term recovery of the apparel value chain is likely to be more challenging. Unlike short-term crises, medium-term recoveries require the market players to develop innovative strategies, approaches, and tools to tackle prolonged demand slumps in

the retail market. With the second wave of the COVID-19 pandemic, the challenges to the major markets have intensified, forcing partial or full closures of retail business operations, especially during the Christmas season. Nonetheless, despite the widespread and ongoing pandemic, the global apparel value chain is likely to enter a recovery phase (Rhee & Thomsen, 2020). Any uncertainty over the recovery period could affect consumers' purchasing practices, brands and buyers' sourcing strategies, and suppliers' apparel production. Such uncertainty could have prolonged adverse effects on the 'world of work' in the apparel value chain. Therefore, the most important question posed to the market players is how uncertainty in the value chain can be reduced to ensure a sustained recovery.

Market players across the value chain have instituted various measures to address their individual vulnerabilities and risks. In most cases, these measures have targeted the buyers' end, focusing on retail markets by taking actions such as cancelling or deferring orders to reduce inventory pressure; reshoring orders; and using alternate sources to adjust to immediate market responses. These downstream based strategies and measures have adversely impacted the upstream players such as the suppliers and the workers employed by the supply companies (ILO, 2020). Thus, they are likely to have only a limited positive effect across the value chain and little merit in terms of value chain based solutions that can significantly contribute to both the upstream and downstream, including the brands, buyers, and suppliers.

Against this backdrop, this study explores a value chain based solution for the apparel industry in which both the up- and downstream market players work to produce a sustainable recovery over the medium term. Based on the analysis, a framework for participation and cooperation is developed for the major market players in the apparel value chain. The ultimate objective is to determine how to facilitate the recovery process across the chain.

Because Bangladesh and Sri Lanka are two important apparel supplying countries in Asia, in this study, the issues are examined in the context of their apparel value chains. In both countries, the apparel sector is a major contributor to their gross domestic product (GDP) (9% and 5% respectively in 2019), manufacturing output (40% and 18% respectively), exports (85% and 47% respectively), employment (7% and 5% respectively), women's empowerment, and overall poverty alleviation¹.

1 For Bangladesh, the authors' calculations are based on the Bangladesh Bureau of Statistics and Bangladesh Garment Manufacturers and Exporters Association reports; for Sri Lanka, the Central Bank of Sri Lanka Annual Report 2019 is relied on.

An evidence-based policy analysis, taking a multi-disciplinary approach, is used in this study. The information and data relied on include, i) evidence on global value chain related issues; (ii) evidence on policy evaluation and policy options; and (iii) evidence on gender and marginalisation issues.

The results show that despite the various initiatives undertaken at the national level to address their immediate and short-term crises and challenges, the Bangladeshi and Sri Lankan apparel value chains have lacked initiatives at both the national and international levels that address their medium-term recovery challenges. The initiatives taken by the brands and their alliances and suppliers, together with the supplying and sourcing countries, have contributed to the sector. However, they have had limited effectiveness in addressing medium-term uncertainties, particularly at the suppliers' end.

This study proposes an alternate framework of cooperation under which the buyers, suppliers, and both the sourcing and supplying countries share the responsibility for ensuring a sustainable recovery over the medium term.



The global apparel value chain has experienced unprecedented disruption from the COVID-19 pandemic.

Objectives of the study and key research questions

This study aims to develop value chain-based solutions for the medium-term recovery of the apparel sector in supplying countries. Its objectives are as follows:

- Identify the short- and medium-term challenges facing the Bangladeshi and Sri Lankan apparel value chains pertaining to, a) consumer demand, b) the price offered by buyers, c) retention of the existing workforce, d) payment of workers' wages, e) occupational safety and health, and f) assessing the need for support measures.
- Review the ongoing local and global initiatives that support the apparel sector, especially their scope and coverage, modalities of implementation, and their progress to date.
- Explore cross-country evidence pertaining to sourcing and supplying countries, brands, and suppliers, to ensure that the world of work is sustained in the supplying countries.

- Put forward a value chain based solution that can facilitate both buyer and suppliers' recovery under a framework of a buyer-driven apparel value chain.

Literature review

Global crises disrupt businesses and economies through their value chains, and these disruptions are complex and multidimensional. This has been evident in previous crises, such as the Asian financial crisis of 1996-1997, and the global financial crisis of 2008-2009. The market players in value chains are both directly and indirectly involved in the upstream and downstream of the chains. However, different countries confront the adverse effects from these chains at disparate levels. Coping with the crisis, then the rebound and recovery of businesses in the value chain are generally managed at the enterprise level with partial government support.

Global apparel value chains and their connection to global crises

Firms that are part of global value chains are quickly affected by major economic disruptions. However, they also recover quickly compared to firms operating outside of value chains (Organisation for Economic Co-operation and Development [OECD], 2020). This can be explained by the strong inter-linkage between the different networks operating within a value chain. It causes a 'bullwhip effect' in the case of disruptions and a quick market response in the case of recovery. A firm's level of disruption and pace of recovery depends on, among other things, the segment or network they operate within and on the relationship, they have with firms in other segments of the value chain. These include the following: a) its raw material network; b) component network; c) product network; d) export network; and e) marketing network. The export-oriented apparel sectors in Bangladesh and Sri Lanka are largely concentrated in the product network and, to a lesser extent, in the component network. In both Bangladesh and Sri Lanka, the remaining components of the apparel value chain's upstream and downstream, including the raw material network and the marketing network, largely operate outside of these countries. Thus, any type of disruption to either the raw material or marketing network resulting from a global level crisis, such as the COVID-19 pandemic, directly impacts the product and component networks of supplying countries such as Bangladesh and Sri Lanka.

Within the production network, over the past forty years, the apparel industry in both Bangladesh and Sri Lanka has become more competitive by gradually upgrading from outward processing traffic to original equipment manufacturing (Rahman et al., 2008). However, this competitiveness has not continued to the next level, particularly in original brand manufacturing and original design manufacturing. In other words, the industry has only upgraded at the process level of the value chain. This segment is largely characterised

by low value-added activities and is driven by the volume of production. When a major disruption occurs in such production networks, the countries involved experience major adverse impacts on the inventory management of raw materials, financial management related to cash flow, and labour management. In the absence of business contingency and business continuity plans, such challenges are difficult to manage.

Firms participating in global value chains are generally prepared for short-term uncertainties and risks. However, in the case of the long-term risks and vulnerabilities associated with COVID-19, they have often been unable to manage them alone. One positive outcome of short-term risk is that although a global crisis may quickly disrupt production networks, the recovery rate is fast. Some successful risk management strategies at the firm level include an "emphasis on risk awareness, greater transparency in the value chain, and promoting agility" (Organisation for Economic Co-operation and Development [OECD], 2020, p. 2). However, such mechanisms of resilience development at the enterprise level have often been criticised for their lack of efficiency. At the same time, it has been argued that efficiency and resilience in global value chains may be at odds in the short term, although convergence may be possible in the long term (Gölgeci et al., 2020).

Key features of value chain disruptions during crisis periods

Global crises usually produce both demand and supply-side shocks. Altomonte et al. (2012) found that during a crisis, businesses commonly encounter forecasting errors. These result in demand volatility, which has a consequent adverse effect across the supply chain. Retailers in the supply chain routinely experience less shock than intermediaries, particularly those working at the suppliers' end. The wide variation in trade elasticity across the value chain results in different levels of reactions in the process of adjusting the stocks of intermediate inputs (Lüdeke-Freund, 2009). The different levels of reactions across the value chain are referred to as the bullwhip effect. The shock intensifies as it moves from the downstream to the upstream of a value chain. In the case of a bullwhip effect, the usual approach is to pass on the burden of stock inventories at the lower level, from retailers to suppliers and from suppliers to intermediate and raw material producers.

Unfortunately, the bullwhip effect does not capture the impact and implications of the pandemic on employment-related issues. Evidence has shown that during major events, such as a global financial crisis, employment losses are immediate and profound (Eichhorst et al., 2020). Unemployment levels rise dramatically. More importantly, structural unemployment increases. However, country-specific variations have been observed in the case of labour market impacts, depending on the crisis and its impact on the broader economy. Labour market impacts occur on both the supply-side (production of goods and services) and demand-side (consumption and investment). The impact on employment

extends beyond quantity; the quality of employment also deteriorates. Vulnerability in the labour market affects workers' livelihood. Vulnerable groups in the labour market, including youth and women, are disproportionately and adversely affected. Under such conditions, enterprise-level measures fail to effectively contribute to worker well-being during the recovery process.

Ensuring the resilience and recovery of the value chain, and addressing its vulnerabilities, takes place at two levels: (a) the supply chain level, and (b) the enterprise level. At the supply chain level, resilience is reinforced by various mediums, including reshoring, diversification, regionalisation, and replication. During crisis and post-crisis periods, the global apparel value chain is likely to experience many of these at different levels. Among them, the diversification of sources is expected to be the most widely used in actual practice, followed by reshoring, regionalisation, and replication (Zhan et al., 2020). However, such alternate location strategies have been questioned on the ground that they represent a divergent strategy from international diversification. The literature in support of the alternate location strategy has highlighted issues related to building redundancy in suppliers, 'just in case' management, and domestic supply chains (Miroudot, 2020). Having said that, Miroudot (2020) found that the reshoring and regionalisation of supply chains does not lead to resilience. Rather, in the current context, the strategy for reshoring or diversifying away from China, for example, could be linked more with a political-economic policy agenda than a risk management perspective (Evenett, 2020). Further, an alternate location strategy demands a different form of governance overseeing the value chain. Overall, evidence of an efficient value chain solution has been missing.

The alternate location strategies in the global value chain have generally not considered the implications for suppliers, workers, and other market players, who are viewed as redundant when there are changes in location. A more 'local to local' format, and supply chains that are closer to retail markets, harm the enterprises and workers of traditional supplying countries that are in trouble when there is less demand for exports. Such alternate location strategies also adversely affect the market players' (especially buyers), social commitments, particularly those pertaining to responsible business practices (RBPs) in the value chain. Hence, there is a need to explore a solution that ensures value chain resilience, efficiency, and equity. Overall, the existing value chain based strategy only partially addresses the challenges that suppliers, workers, and buyers face when they are working in a value chain during a crisis.

At the enterprise level, a major value chain strategy relates to demand and inventory smoothing across the supply chain. Cannella et al. (2013) explained that an inventory strategy should be evenly distributed across the value chain. Higher levels of smoothing can generally improve intermediaries' performance when working upstream in the supply chain. The smoothing measures, however, must be adjusted in line with the bullwhip

effect. A smoothing replenishment policy can resolve the detrimental consequences resulting from adopting the classical 'order up to' policy. It has been widely recognised that an order up to policy can lead to the bullwhip effect (Dejonckheere et al., 2003; Disney & Towill, 2003; Wei et al., 2012). Smoothing replenishment rules not only increase the flexibility for decision-making, they also allow managers to balance their inventory-cost targets and address production fluctuations (Wei et al., 2012).

Most studies have reported the effects of smoothing replenishment rules only in terms of demand amplification and inventory instability, measured by two quantitative metrics: order rate variance ratio (Chen et al., 2000) and inventory variance ratio (Towill & Disney, 2002). In contrast, Cagnazzo et al. (2010) argued that performance metrics should not only assess internal process efficiency but also effectiveness in terms of the impact on customers (Cannella et al., 2013). Other studies have analysed the impact of the smoothing replenishment rule, not only as related to the bullwhip effect, but also to the level of customer service (see, e.g., Dejonckheere et al., 2003; Disney et al., 2007; Disney & Lambrecht, 2008).

Intermediaries working upstream in the supply chain face additional constraints during periods of crisis. Contracts between buyers and suppliers guide the suppliers' supply. When there are structured contracts between partners, if a retailer receives an order after its due date, the supplier could be subjected to a penalty (Elimam & Dodin, 2013). The cost of late-delivered and cancelled orders, owing to stock out, has been commonly observed in practice and it is sometimes considered in the cost model (Lu et al., 2012; Miranda & Garrido, 2009). One major question, however, is how the rule will be applied in a major global crisis when the supply chain experiences major disruptions in the production, delivery, and marketing of products.

During recessions, the market players in the value chain adopt business strategies that are different from those they rely on when conditions are normal. During crisis periods, business strategies depend on contingent factors, such as the business's resources and its relations with market players such as customers, suppliers, the government, and partners. In contrast, addressing issues related to the world of work varies among countries, based on several factors. These include the size of stimulus packages targeting workers; the structure of the economy comprising the vulnerable segment of the population; and the capacity of labour market institutions, including employment protection legislation, wage setting, unemployment benefits, and active labour market policies that could accommodate and absorb shocks. The strategies the market players adopt to salvage businesses during recessions and to address the issues related to the world of work, are shown in Table 1.

Table 1. Strategic adaptations of businesses and the world of work during crisis periods.

Strategic adaptations for businesses	Low income countries (LIC)
<ul style="list-style-type: none"> • Emerging with new ideas, technologies, and products • Entrance of new firms • Willingness to undertake necessary changes and innovate because the opportunity cost of not undertaking such actions is lower than it is in more buoyant times ('pit-stop' theory) • Businesses need to overcome their dilemma on whether to cut costs to conserve resources or to invest in new products and processes to exploit their competitors' weaknesses (Kitching et al., 2009) • Cutting operating costs and divesting of non-core assets, particularly in the short term. This includes divestment of businesses; closure of establishments; reduction in employment; expenditure cuts on a wide range of activities, including R&D, marketing, and employee training; focusing on innovation and market diversification • Implementing an 'ambidextrous' strategy, which combines retrenchment and investment simultaneously 	<ul style="list-style-type: none"> • External numerical flexibility (possibility of adapting the number of employees to the economic situation) • Internal numerical flexibility (achieving without variations in the number of staff) • External functional flexibility (requiring a skilled labour force adaptable to structural changes) • Internal functional flexibility (ability to respond to changing demand with a flexible reorganisation of the production process) • Adjusting wages is an element of flexibility

Source: Atkinson (1984); Kitching et al. (2009)

Value chain based solution

The existing initiatives have failed to address the medium-term risks across the value chain, and they would be unlikely to ensure the recovery of market agents. In extreme cases, such initiatives have facilitated the recovery of some agents in the value chain at the cost of others. However, it would be unwise to characterise these initiatives as value chain based solutions, given their limited level of segmented impact.

A value chain based solution suggests that the market players, particularly buyers, suppliers, and other key value chain stakeholders, explore solutions in which the key stakeholders together cope with the crisis; rebound; recover; and are resilient. Unlike individual actions, these solutions consider the interests of others. Collective actions and efforts are a better way to address vulnerabilities and achieve better medium-term recoveries. The existing models of value chain efficiency and resilience, based on alternate

location strategies, lack a clear overlap with the interests of both buyers and suppliers. Accordingly, a sustainable and more comprehensive value chain based solution should be explored.

There is a dearth of literature on how buyers and suppliers jointly address crises through shared responsibilities and initiatives. However, one such initiative has been the ILO led 'global call to action,' in which Europe based brands, buyers, and international workers' organisations, and the ILO, have come together to support workers in the value chain. Understanding this initiative is important because it shows how smooth conditions in the world of work can be ensured and how market players in the up- and downstream of the value chain can help to secure decent employment in the value chain during times of crisis.

The states of supplying countries have a definite role to play in addressing crises and extending support to their suppliers and workers during periods of recovery. In the past, governments across the world have extended different types of fiscal and monetary policy support during times of crisis, specifically targeting the businesses and enterprises operating in both domestic and international markets. Social support measures have also been extended to the workers and those who have been marginalised. Social insurance schemes have been an effective instrument to support low-income people, including workers (ILO, 2014). However, the governments of developing countries, even when conducting business as usual, have not enjoyed a similar level of fiscal space to support their businesses and workers. These governments have experienced major fiscal stress due to COVID related crises. In turn, this has put additional pressure on their ability to support their businesses and workers, including those involved with global value chains. In this context, the governments of sourcing and supplying countries, together with buyers and suppliers, should initiate a joint effort to address the challenges. A value chain based solution is expected, particularly from supplying countries, with the active participation of their brands, buyers, and sourcing countries.



Governments of developing countries

**have experienced
major fiscal stress
due to COVID
related crises.**

Methodology of the study

In this study, an evidence-based policy analysis was carried out, taking a multi-disciplinary approach. Such an approach calls for a) evidence on value chain related issues; b) evidence on policy measures; and c) evidence on gender and worker related issues. Both primary and secondary data were used in the analysis. Secondary data were relied on to gauge the extent of disruption caused by COVID-19 on both Bangladesh and Sri Lanka. Specifically, they were used to examine each country's exports and imports related to the apparel sector, state of employment, safety measures undertaken by factories, and implications for protecting workers from the disease. The various support measures taken by the sourcing and supplying countries were compiled to understand the extent of their coverage in view of their stakeholders' requirements. A major thrust of the exploration was to identify whether the existing measures, including those undertaken as part of RBPs, were meritorious enough to be regarded as value chain based solutions. Equally important were the positive contributions of the key players operating both upstream and downstream in the value chain.

The primary data and information were collected through two different methods; a) key informant interviews with selected important stakeholders, and b) sample surveys administered to workers. The interviews were conducted on 33 representatives of different stakeholders mainly through telephone and digital platforms such as Zoom. The participants of the interview include ten suppliers, six brands/buyers, six trade union leaders/workers' representatives, six government officials, and five officials from sourcing countries with facilities in both Bangladesh and Sri Lanka. The study included a sample survey given to apparel factory workers in Bangladesh and Sri Lanka during the COVID-19 period. A total of 50 workers in Bangladesh and 40 workers in Sri Lanka responded to the survey, The respondents were selected from a nationally representative sample data set identified in an earlier study conducted in Bangladesh (Centre for Policy Dialogue, 2018), although the sample size is not representative. The main purpose of the survey was to identify the issues of concern in the world of work to understand the demand for value chain based initiatives aimed at workers. The key issues highlighted in the survey included basic family information; contractual arrangements for jobs; wages; work periods during different months of the pandemic; COVID related impacts; the measures followed in the workplace to avoid contamination; the financial and non-financial support received from owners, trade bodies, the government, or other sources; distress selling of household assets; incidents of workplace harassment; perception of future job security; and the workers' participation in any scheme of unemployment insurance.

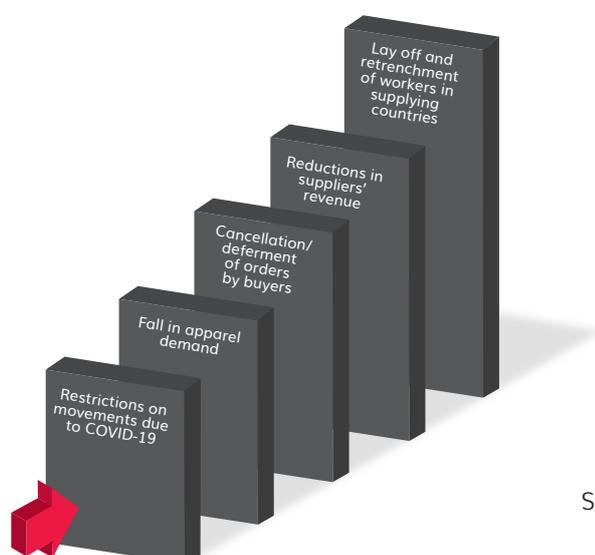
Apparel-related trade data from the International Trade Centre trade map were compiled for global apparel imports and major apparel sourcing countries from January to September 2020 (the period when the COVID-19 pandemic passed the first wave and entered the second wave). Disaggregated import data were collected for major supplying countries, including Bangladesh, Sri Lanka, China, and Vietnam, considered to be the major Asian suppliers and competitors. A unit value analysis of Bangladeshi and Sri Lankan apparel exports was included to show the 'price effect' during the crisis and the 'quantity effect' of the global demand shock on the apparel industry. Secondary data were also collected from published official documents and rapid survey reports on various issues related to the world of work, such as the status of employment in the sector with a focus on women, wages, and occupational safety and health.

Key findings of the study

During the COVID-19 crisis, lack of preparation and limited resilience intensified the suppliers' challenges

The COVID-19 outbreak has negatively impacted the global demand for apparel. The sudden massive fall in the demand for global apparel has engendered a 'domino effect,' with multiple consequences across the value chain (Figure 1). It began with restrictions on the movement of goods and services, followed by a drop in apparel demand, the cancellation and deferment of orders, the reduction of suppliers' revenue, and then the laying off workers in the supplying countries.

Figure 1. Domino effect in the global apparel industry due to COVID-19



Source: Authors' illustration

Apparel buyers' retail sales fell enormously within a short period of time after March 2020. In the United States alone, the sales of clothing stores declined by 79% in April 2020 compared to March 2020². Due to excess inventory at the retailers' end, both buyers and brands had to cancel their ongoing and future orders while applying the contract clause of 'force majeure.' At the same time, many buyers faced bankruptcy, and payments to suppliers were severely delayed.

In the case of suppliers, the crisis was multidimensional. According to the Better Buying Special Report (April 2020), 76% of global suppliers were faced with reducing their export orders³. The highest proportion of order reductions took place in Bangladesh (93%), Vietnam (80%), China (74%), and India (61%). Importantly, 70% of the suppliers reported cancellations of orders by brands/buyers, and 66% reported reductions in their order volume. The cancellation and deferment of orders from the slump in global apparel demand resulted in a significant drop in product imports from sourcing countries, including Bangladesh and Sri Lanka. Both countries experienced a drastic decline in their apparel exports. Global⁴ apparel imports from Bangladesh decreased by 23% from January to July 2020, whereas imports from Sri Lanka decreased by 31% from January to August 2020 (Table 2). Notably, this reduction was much less than it had been during the initial period of the pandemic (March to May 2020). Some orders that had initially been cancelled were reinstated at different levels through repeated engagement with brands/buyers⁵. This included about 90% of the total cancelled orders of the Bangladesh Garment Manufacturers and Exporters Association members and 55% of the total cancelled orders of the Bangladesh Knitwear Manufacturers and Exporters Association members.

Factory closures made it difficult for Bangladeshi suppliers to pay their workers. In addition, many buyers faced bankruptcy and/or their payments had been halted or were late. Many local suppliers were adversely affected, receiving little support from banks during the initial period. Because most export orders (55%) were handled without a Letter of Credit (open LC), and had no export guarantees, at the request of the suppliers,

2 See: <https://apnews.com/article/e95a6d2d0a721fcffb4efb9435b84f4f>

3 The suppliers' crisis started to emerge at the initial phase of the COVID outbreak, when only China was affected by the virus. The suppliers, particularly those that were accustomed to relying primarily on China to source their raw materials, had to face a shortage of such materials after China's outbreak. The suppliers also had to face an immediate drop in export orders due to the pandemic.

4 This primarily includes the countries that import from Bangladesh.

5 A few leading brands working in Bangladesh took positive steps to ensure that RBPs were followed, with a view to creating evidence of their good example and influencing other brands and buyers to follow.

the Central Bank of Bangladesh introduced a credit risk guarantee for open LCs. Similarly, Sri Lankan suppliers faced harsh order cancellations and pushbacks, reductions in volume, and extended payment terms. For instance, payment terms that were usually settled within 30–45 days were extended to as many as 150 days, severely affecting stakeholders' liquidity across the value chain, especially the small and medium-sized enterprises that historically retain only limited reserves.

Table 2. Import of apparel from Bangladesh, Sri Lanka, China, and Vietnam

Export to	Bangladesh	Sri Lanka	China	Vietnam
	% Change between 2019 & 2020			
World	-23 ^a	-31 ^h	-18 ^g	-14 ^a
EU (27)	-21 ^b	-23 ^h	-15 ^b	-12 ^b
USA	-13 ^c	-	15 ^c	-7 ^c
Canada	-27 ^d	-	7 ^d	-17 ^d
Australia	-16 ^e	-	-8 ^e	-5 ^e
Japan	-12 ^f	-	-18 ^f	-7 ^f
China	-39 ^g	-	-	-20 ^g

Source: Authors' calculation based on the International Trade Centre trade map (2020)

Note: ^{a-b} Jan–Jul, ^{c-f} Jan–Sep, ^g Mar–Jul, ^h Jan–August

It is hypothesised that a demand shock during a time of crisis has a greater adverse impact on quantity than a demand shock on the price of products. In other words, the 'price effect' is relatively lower than the 'quantity effect' during the crisis period. Analysis of the unit value of apparel imported from Bangladesh and Sri Lanka from January to July 2020 generated mixed results. In Bangladesh, the basic to medium-end products

produced experienced a moderate adverse impact in the major markets due to their relatively less elastic demand⁶. Bangladesh experienced both adverse price effects and volume effects in different markets. In contrast, Sri Lanka experienced high negative price and volume effects. The higher negative impact on the price of Sri Lankan apparel could have been related to the concentration of medium- to high-value products with elastic demand.

Overall, both Bangladeshi and Sri Lankan suppliers were ill-prepared to handle a crisis like COVID-19. Comparatively, however, Bangladeshi suppliers were less prepared to address the vulnerabilities and risks accompanying immediate and short-term crises than their Sri Lankan counterparts. Better inventory management, flexibility in the sourcing of raw material supplies, flexible supply chain management, innovative approaches, and better use of digital infrastructure, helped Sri Lankan suppliers manage the crisis better. This was partly due to the medium- and high-end product market segment of the apparel value chain where Sri Lanka primarily resides, and the smaller scale of supply orders. Bangladesh's lack of planning and practices aimed at minimising vulnerability and risk, placed its suppliers under greater pressure.

The domestic capacity needed to support the apparel sector was squeezed due to fiscal constraints; the sourcing countries' initiatives were inadequate

In Bangladesh, the government responded to the pandemic's economic fallout by instituting immediate support measures. It first focused on the ready-made garment (RMG) industry in the form of a support package. The package was worth Tk 5,000 crore (USD 588 million) in subsidised credit to RMG enterprises and it could only be disbursed in the form of workers' wages. Subsequently, at the behest of RMG owners, the package was extended once, and the total size of the fund reached USD 1.2 billion. The Central Bank of Bangladesh also introduced several immediate measures⁷, a major function of which was to provide relief to factories that had cash constraints.

6 Bangladesh's top 10 knit products include 610910, 611020, 611030, 610462, 610510, 611120, 610990, 610711, 610342, and 610442. Its top 10 woven products include 620342, 620462, 620520, 620343, 620193, 621210, 620640, 620293, 620469, and 620463.

7 These included an extension of LC usance, reduction in the repo rate, increase in the transaction limit of credit and debit cards and mobile financial services, the waiving of charges for credit and debit transactions, a reduction in the liquidity ratio requirement, a reduction in the cash reserve requirement, a waiver of interest on loans, an increase in the export development fund, and the temporary deferment of loan payments. The National Board of Revenue, the country's official tax authority, also announced a few incentives in this regard, and received government approval for its drafted legislation to extend taxpayers' time to file their tax returns.

According to Khatun and Moazzem (2020), subsidised credit support was not received by all factories. Specifically omitted were a part of member factories and all non-member export-oriented factories. In addition, the credit support only covered 65% of the gross wages of workers who were in jobs. Laid off or retrenched workers (about 0.36 million as of October 2020) did not enjoy the benefit of this support. Nonetheless, such cash support enabled factories to mitigate their cash constraints and to continue operating. Further, this credit support was paid directly to the workers' banks or mobile financial service accounts, which is a good example of inclusive banking.

In Sri Lanka, due to its high debt burden and narrow fiscal space, the government responded to the COVID crisis largely through monetary policy mechanisms. For instance, a debt moratorium of six months (April to October 2020) on interest and capital was introduced, targeting tourism, plantations, the Internet technology and apparel sectors and their related logistics providers, and small and medium enterprises. The existing tenure on loans eligible for the debt moratorium was also extended. Similarly, through a partial loan guarantee facility, the Central Bank of Sri Lanka reduced interest rates and allowed commercial banks and other formal lending institutions to approve short-term working capital loans (either two months working capital or Rs25 million, equivalent to USD 134,372, whichever was higher) at 4% interest. Most factories availed themselves of these working capital loans made feasible by the government⁸.

No specific fiscal stimulus was passed in Sri Lanka, either at a macroeconomic level or at the level specifically catering to the apparel sector. Several suppliers have reported that the economic relief initiatives were inadequate. The small suppliers particularly struggled to access loans, and they were forced to rely heavily on their pre-established banking relationships.

Meanwhile, sourcing countries made substantial cuts to their respective development budgets, which reduced their capacity to support the apparel supplying countries. For example, the flagship project of the ILO and the Department of Inspection for Factories and Establishments (DIFE) in Bangladesh aimed at improving working conditions was phased out. Similarly, the Netherlands, which is a major apparel sourcing country in the EU, cut its development budget, and the resources were reallocated to support domestic economic activities⁹. Although the Netherlands' budget cut for Bangladesh was not substantial, no new project was initiated during the COVID period.

8 One small firm interviewed did not apply for a loan because it did not want to increase the debt burden on the company.

9 According to anecdotal information, in the first 38 weeks of 2020, 2,511 companies (both RMG and non-RMG related companies) filed for bankruptcy in the Netherlands.

In the case of Sri Lanka, sourcing countries did not initiate any short-term measures explicitly directed at the apparel sector. Nonetheless, some primary export market nations, such as the US, and some countries in the EU, provided support to public health capacity development to supplying countries' governments. In addition, some brands/customers of Sri Lankan suppliers availed themselves of temporary financial relief packages granted by their home states.

Overall, the fiscal constraints on supplying countries impeded their ability to directly support the employers and workers in the apparel value chain. The credit-led support mechanism at the domestic level helped factories overcome their short-term liquidity constraints. The contributions of sourcing countries (in the form of development budgets) to support the sector were modest. Thus, the sector did not benefit at a level that could ensure its sustained recovery in the medium-term.

The limited efforts of governments and suppliers could not lessen the dismal state of the world of work

When its factories closed due to COVID, the world of work in the Bangladeshi apparel sector experienced immediate- and short-term adverse effects. During this period, the workers were only partially employed, with large numbers being furloughed and others being partly laid off. As of October 2020, more than 0.36 million workers in the Bangladesh RMG industry had lost their jobs (Centre for Entrepreneur Development, 2021), and about 58,000 workers had been laid-off (Centre for Entrepreneur Development, 2021).

According to the trade representatives interviewed for this study, the suffering of fired and retrenched workers was compounded by employers who offered little compensation or support. In a 2021 survey by the Centre for Entrepreneur Development, only 14% of the laid-off/retrenched workers received their dues as required by the 2015 labour rules. Although most of the suppliers denied that workers had been fired or laid off, particularly in recent months, the monthly average data indicate that a significant number of workers were fired between June and September 2020, and the number of laid-off workers increased as well (Table 3).



When factories closed due to COVID, the workers were only partially employed, with large numbers being furloughed and others being partly laid off.

Table 3. Month-wise fired/retrenched workers (based on the DIFE Report)

Months in 2020	Average No. of workers fired	Average No. of workers laid off	Average No. of workers with wages due
June	21023	12083	399251
July	24534	15782	272008
August	23582	19831	93998
September	23660	22978	108629

Source: Authors' calculations based on the DIFE (2020)

In Bangladesh, the suppliers agreed with the government and trade unions that the workers should not be laid off or retrenched. Instead, the workers were paid at a reduced wage from April to June 2020 (60% to 65% of their gross wages). According to certain trade union representatives and the workers surveyed for this study, pressure from the government, brands, trade unions, and international organisations, meant that some Bangladeshi suppliers fired and laid off workers covertly. The ongoing crisis also forced a few Bangladeshi suppliers into bankruptcy, which led to a further loss of jobs among RMG workers. Nevertheless, some of these workers were subsequently reemployed. Roughly 37% of the factories that retrenched workers rehired them later (Moazzem et al., 2021). This suggests that there was a late decrease in worker suffering in terms of retrenchment, coinciding with buyers beginning to reinstate orders and suppliers starting to re-employ workers¹⁰.

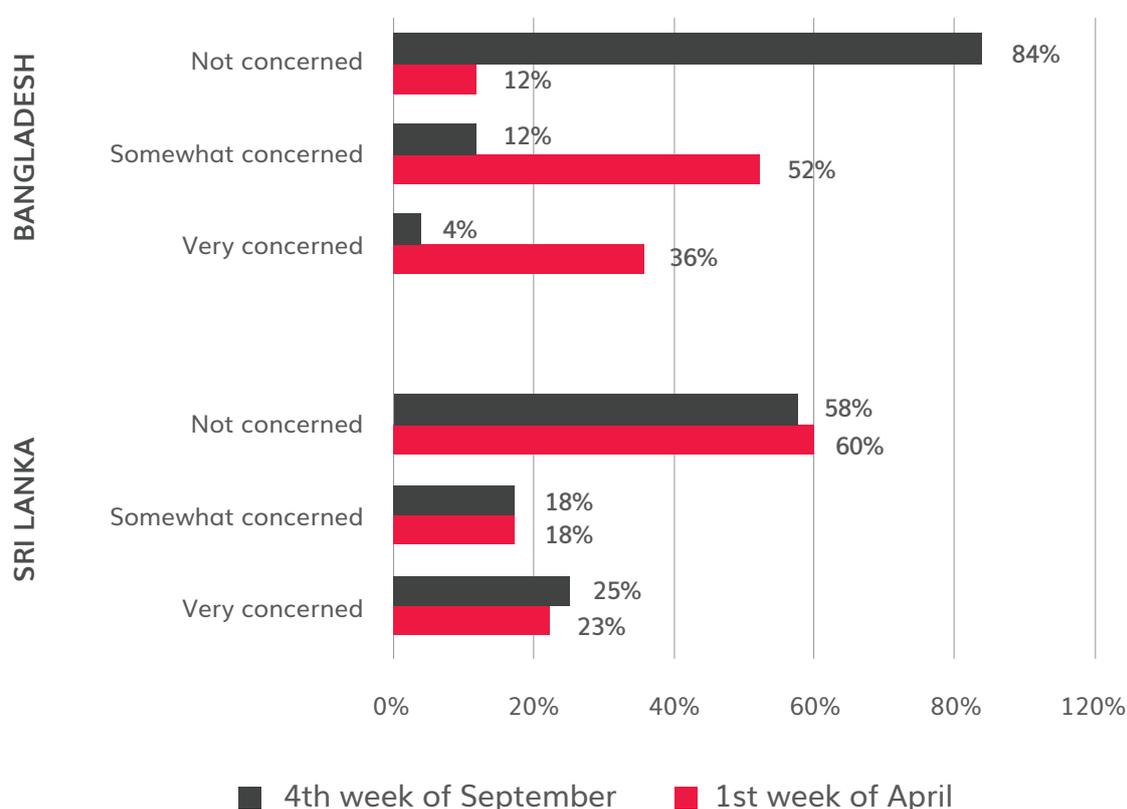
The drop in worker earnings resulted in additional negative consequences. Between December 2019 and September 2020, workers' average earnings declined by 8%. This was, however, less of a drop than they experienced in the earlier months of COVID-19 (April, May, and June 2020). Critically, worker income decreased concurrent with an increase in the price of essential commodities, burdening these individuals even more. As a result, 58% of the Bangladeshi RMG workers participating in the survey said that they had more financial difficulties than they had before the pandemic. Worse, 82% of the surveyed workers had experienced the deterioration of their food intake. Most were unable to overcome this, given that only 12% received some support for their household

¹⁰ Given that some workers had already migrated from their workplace to survive the crisis, some suppliers had to issue new job circulars to fill in the worker gap.

needs. Ensuring that workers have jobs, even at reduced salaries, would help to relieve their suffering.

A sharp contrast was found between Bangladeshi and Sri Lankan workers in terms of job uncertainty. In September 2020, Bangladeshi workers said they were less concerned about job security than they were in April 2020 (Figure 2). Grade-wise analysis of the workers' survey data shows that workers at Grades 1 and 3 were the most financially burdened and uncertain about their job security. In Sri Lanka, the level of uncertainty remained the same in September 2020 and April 2020. This could be attributed to the second wave of COVID-19 cases in Sri Lanka that led to new lockdowns in different areas around the country, and growing uncertainty over operations within factories.

Figure 1. Domino effect in the global apparel industry due to COVID-19



Source: Based on workers' perceptions survey (2020).

The workers' experiences with COVID-19 health hazards were different in Bangladesh and Sri Lanka. In Bangladesh, although the government decreed several precautionary measures for factories to take, the evidence suggests that they were not strictly followed. In October 2020, DIFE prepared a guideline for factories addressing health-related issues related to factory premises. Technical support was also provided by the ILO. However, the

survey conducted on the workers found that 18% of the workers did not go for a test even after having COVID related symptoms¹¹.

The world of work experienced other challenges. About 17% of the workers surveyed reported an increase in work-related harassment due to the immense pressure from buyers to complete reinstated orders within a short period of time. The workers recalled how the work burden had increased within the same working hours. Given the uncertainty resulting from the second wave of COVID-19, suppliers developed a preference for recruiting workers on a contract basis rather than offering them permanent positions. Because their job security remained uncertain, speaking out through trade union activities also diminished. The workers were left with no other option but to cope with lower levels of income.

In Sri Lanka, the world of work was also highly susceptible to medium-term uncertainty caused by the pandemic. For instance, among the 40 workers surveyed, approximately 70% of whom were machine operators, disruptive shocks to the supply chain had substantially impacted their income and livelihood. During the first lockdown in Sri Lanka (March to June 2020), 67% of the workers surveyed said they had been temporarily retrenched, leading to the collapse of their income. This had placed a disproportionate burden on low-income workers. Among the interviewed workers, 64% reported an increase in their debt obligations in September 2020, compared to December 2019. Seventy-nine percent of the female workers and 66% of the male workers had been forced to sell their assets or spend their savings to survive during this period. Among the measures they took was pawning jewellery.

 **During the first lockdown in Sri Lanka, 67% of the workers surveyed said they had been temporarily retrenched, leading to the collapse of their income.**

During the retrenchment period, only a few of those surveyed responded that they had received financial or non-financial relief. Relief came in the form of non-financial packages from employers or disbursements of a proportion of the workers' salary. The monetary support was approximately Rs5000 per month, (about USD 27, and similar to the government's temporary support). The non-monetary support generally consisted

¹¹ Among the workers and suppliers, there has been a tendency to hide COVID symptoms and to avoid going for testing.

of grocery packages. The adequacy of these non-monetary goods packages varied from employer to employer. Having said that, such measures were unlikely to be sustainable over the medium-term or to overcome the impact of COVID-19 on the most vulnerable stakeholders in the value chain. This is especially troubling because only 15% of those surveyed belonged to a social protection programme. Most of the workers had no effective safety net. It was revealed that some preliminary discussions had taken place between the Ministry of Skills Development, Employment, and Labour Relations, and the ILO aimed at establishing a social and employment protection programme. However, this policy had not been implemented.

The impact of COVID-19 on the world of work also had a keen gender dimension, with the negative impacts described above disproportionately affecting female workers. Among those surveyed, 90% of the female workers expressed heightened concerns over job security, whereas no male workers shared similar sentiments. It should be noted, however, that the sample of male workers was much smaller and included workers at a higher grade of work than most of the female workers.

The pandemic has highlighted a gap in Sri Lanka's legislation that could potentially undermine its medium-term response to the world of work. In general, violations of working conditions and other labour-related issues have been investigated under the authority given to the Department of Labour through the Factories Ordinance and the Shop and Office Act. However, since the pandemic began, all of the regulations and requirements pertaining to the world of work have been issued by the National COVID-19 Taskforce and the Ministry of Health. Looking forward, the government must find a balance and an effective and efficient solution for the medium term by aligning and improving inter-agency coordination between the Department of Labour and the Ministry of Health.

Similarly, following COVID-19, for the medium- to long-term it is vital that the Sri Lankan authorities revisit the country's legislation and update it to cater to the rapidly changing world of work. For example, Sri Lanka's current legislation does not allow companies to reduce employee salaries, even if the employees are unable to work due to an event like a lockdown. However, given the unprecedented nature of the COVID situation, the Sri Lankan government made a cabinet decision to grant companies an exemption. These kinds of issues will need to be considered in the future.

Medium-term recovery challenges will continue during the second wave of the COVID-19 pandemic

During 2020, most countries experienced an initial wave of cases between February and September, and a second wave of cases after October. New daily confirmed cases

have continued to rise in many countries around the world. Different restrictions have been imposed on the movements of people and economic activities. These have affected retail businesses and stymied any potential for a quick recovery, originally anticipated for the end of 2020 or early 2021. Given this uncertainty, brands/buyers have begun to reduce the volume of their purchases for the coming months.

The 2021 outlook for the world economy is not very promising. Even though it is expected to grow from (-) 4.4% in 2020 to (+) 5.2% in 2021, the positive shift will not ensure a return to pre-pandemic employment levels. Unemployment levels may marginally decline in 2021. However, high unemployment will continue to affect consumer behaviour and will not improve the dampening effect caused by the high rise in consumer demand in the post-COVID period.

The consumer confidence index for the major markets, which started to fall after March 2020, has been gradually improving since June 2020. However, the level of improvement is much lower compared to 2019, and it may take a significant amount of time before conditions return to pre-pandemic levels.

Crucially, the second wave of COVID-19 significantly reduced the 2020 Christmas season demand in prominent markets such as the US, UK, and EU. This is a lucrative period for the apparel sector. Thus, to compensate for the reduction in retail shopping, brands and buyers are beginning to focus more on their online sales.

The brands operating in Bangladesh have indicated that it is too early to project any future recovery, given the continuation of the second wave. Despite the uncertainty, they have expressed confidence that Bangladesh will remain a major source for apparel in the coming months. Some key market buyers have predicted that Bangladesh's position will not change in terms of its market share.

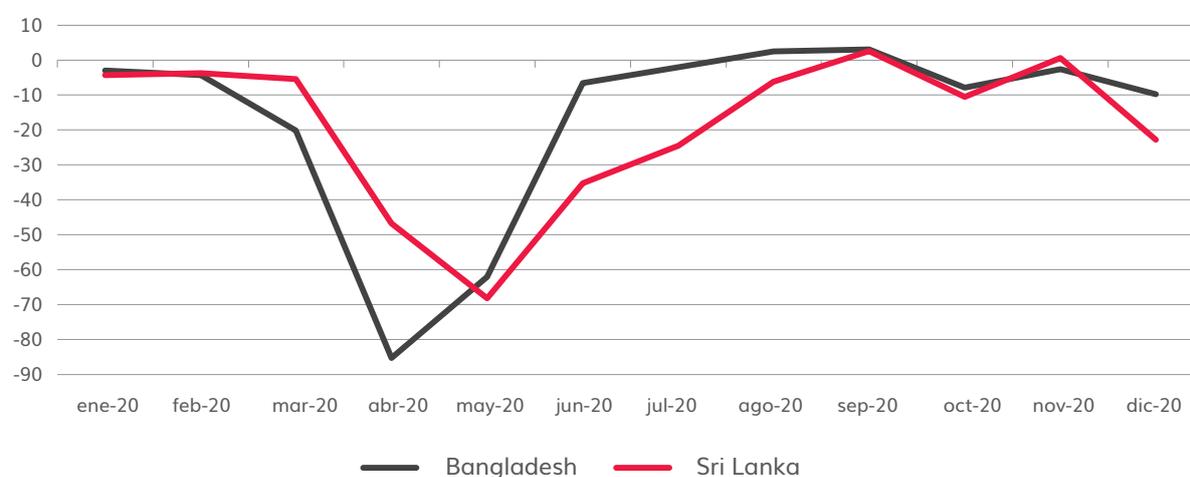
Concurrently, the brands/retailers working in Sri Lanka have indicated that the most significant challenge in the medium term is continued uncertainty over the pandemic and its effects. Given that the landscape continues to change almost daily, the brands have displayed caution when it comes to making significant medium-term predictions. Uncertainty has also led to a paucity of medium-term order commitments by brands, retailers, and buyers. These concerns have been exacerbated by the slow rate of economic recovery in the major markets and the continued furloughs and layoffs in the key industries. A decline in disposable income, therefore, poses a considerable medium-term challenge.

Fashion brands face greater challenges because their stock tends to be seasonal. They expect to see the return of demand only by the spring and summer of 2021.

These brands are also experiencing a slowdown in new product design and development because factories are working at a lower capacity. If consumer demand continues to remain low, such brands and retailers are likely to initiate further wage cuts and layoffs by closing retail stores.

Bangladesh's apparel exports, which significantly dropped after the initial outbreak of COVID-19, recovered in the subsequent months (Figure 3). However, this fragile recovery came to a halt in October 2020, when it experienced negative growth of (-) 7.78%. The latest negative trend during December 2020 reflects the impact of the second wave of COVID-19 across the major global apparel markets. The upward trend in month-on-month export growth (from April to September 2020) did not explain the full recovery status of the RMG industry. Buyers were reluctant to place new orders mainly because they were expecting a second wave of COVID. Sri Lanka was hit the hardest in May 2020, when its export growth was (-) 67%. After that, the negative growth started to weaken (Figure 3). The recovery of the Bangladeshi and Sri Lankan apparel sectors will largely depend on containing the virus and the opening-up of economic activities in the major sourcing countries.

Figure 3. Month-on-month changes (%) in the RMG exports of Bangladesh and Sri Lanka (in 2020)



Source: For Bangladesh, (Export Promotion Bureau, 2020) and for Sri Lanka, the authors' calculations (based on International Trade Centre, 2020)

In Sri Lanka, the respondents indicated that orders would be unlikely to return to pre-COVID levels until at least the winter 2021 season. Accordingly, suppliers may have to contend with lost revenue while managing their costs and viability. The RMG sector could see more layoffs in the medium term as the suppliers try to adapt to the lack of demand for their products.

Sri Lanka's primary macroeconomic medium-term challenge is addressing its high debt burden while simultaneously attempting to stimulate its economic recovery within a narrow fiscal space. Domestic economic activity has largely recovered due to the country successfully managing the community spread of COVID during the first wave. However, its borders remain closed to most tourists, and the second wave of cases has disrupted its initial progress. Under these conditions, Sri Lanka will need to rely heavily on export revenue-generating sectors such as apparel.

Overall, experience has been lacking among buyers, suppliers, and the governments of supplier countries in their efforts to manage the medium-term challenges of supply-side issues. Such inexperience is likely to be even more challenging for these stakeholders if the high unemployment rate persists.

Limited initiatives undertaken across the value chain would delay the recovery process

The brands operating in Bangladesh have undertaken several initiatives targeting RBPs in the apparel sector value chain. Many initiatives were set in motion even before the COVID-19 crisis. For example, several brands/retailers formed an alliance called 'action, collaboration, and transformation' and made a commitment to providing a living wage for RMG workers in supplying countries¹². Twenty-two brands pledged that they would not negotiate the cost of labour so that labour would receive a decent wage¹³. These 22 brands also committed to rolling out RBPs until December 2021. However, the commitment has not yet been implemented, and without the participation of a significant number of buyers, the targeted outcome may not be achieved. The brands are further supporting suppliers by helping them access financing through banks, acting as informal guarantors, and through guaranteed payments and order commitments.

In Sri Lanka, large brands, buyers, and retailers have initiated structural reforms to their supply chain management by allocating more responsibility to the relevant country teams and reducing dependence on the large central teams at their headquarters. Brands are also exploring the closure of more retail outlets and are allocating more resources to the expansion of their online platforms and sales. Due to changes in consumer behaviour (e.g., lack of formal physical interaction), and thus consumer demand, some fashion

12 Workers' representatives can negotiate their wages for three years based on a company's collective bargaining agreement. The buyers have agreed that if any country maintains this programme, it will be given first preference for orders. This initiative had already been in place two years before COVID.

13 These 22 brands hold 30-35% of the total market share.

brands are shifting away from formal wear and moving more towards casual wear and loungewear, at least in the medium term. Based on the interviews and surveys conducted for this study, brands have not made any specific commitments to support their supply chains because they are facing an uncertain future themselves.

After the first wave of COVID-19, some suppliers in Bangladesh considered diversifying their product basket. However, diversification has become more challenging under the current uncertain circumstances. The survival of suppliers, particularly medium-sized suppliers, will be more challenging if the second wave of COVID batters the industry again in a way that is similar to the first wave.

Some Bangladeshi suppliers are now searching for new markets to sustain themselves if a similar crisis occurs in the future, including another wave of COVID-19. Government diplomacy could help with the expansion of the export market for Bangladeshi suppliers, particularly given the possibility that Bangladesh may be dropped from the list of least developed countries, eliminating the 'preferential access' of its apparel industry in many countries.

The restrictions on movement owing to the pandemic have raised new prospects for Bangladeshi suppliers' online-based businesses. Although some suppliers have considered shifting their business to online-based platforms, most are not positioned to do so because additional investment is required. Due to COVID-19, most of the suppliers in Bangladesh are currently focused on backing up their resources so they can survive another wave of the virus. This uncertainty is preventing many of them from relocating their business to the Internet.

Sri Lankan suppliers have learned from the COVID-19 pandemic and subsequent disruptions that there is immense value in diversifying the supply chain. Diversification measures have taken shape in several ways. Brands/buyers have placed greater trust in companies that have factories in multiple locations, both within one country and across multiple countries. Certain large apparel suppliers have benefitted from outward investments in other countries and regions outside of Sri Lanka. These suppliers have been more successful in moving production across their web of factories, depending on the ground situation in the other countries. Several other companies are now considering opening factories in countries such as Vietnam, which is currently developing a network of free trade agreements with the EU, the Association of Southeast Asian Nations (ASEAN), and the US.

Location diversification is also a critical factor within Sri Lanka. A large proportion of Sri Lankan apparel factories are concentrated in free trade and export processing zones

in the Gampaha District. Because of this, when the second wave of COVID infiltrated this region, the entire sector suffered from a regional lockdown. Meanwhile, companies in other areas of the country were less affected. In response to this, companies began to consider decentralising their business operations and diversifying the geographic spread of their factories around the country. This could ultimately become a vital cog in addressing regional income inequality and supporting the government's efforts to achieve SDG 10 (reduced inequalities). However, the government would need to facilitate relocation to under-developed areas, make complementary investments in infrastructure, and undertake other policy measures.

Another aspect of Sri Lankan diversification has been diversifying the basket of products produced there¹⁴. In the short-term, some suppliers have moved away from office wear and designer clothing towards more core products such as home wear and children's or baby clothes, which are viewed as essential. However, once the pandemic subsides and demand recovers in the medium- to long-term, the sector is likely to revert to its usual operations. In response to the pandemic, some suppliers have also modified their operating procedures to produce and export Personal Protective Equipment (PPE). Some Sri Lankan companies have been successful in recovering a portion of their losses from reduced demand by producing non-medical PPE products. Unfortunately, the industry overall has been unable to tap into the high demand for medical PPE because it has not received the required standardisation certifications. To overcome that, a few large companies have invested significant amounts of money to gain the required approvals to produce medical PPE.

In response to the current situation, some suppliers have focused on developing their brands for local markets in the medium term. This strategy was especially profitable in Sri Lanka following the first wave of COVID-19. The country's relative success in managing the pandemic has meant that its economic activity has recovered faster than many other countries. Nevertheless, the second wave of COVID cases has disrupted these plans.

Similar to the larger brands, suppliers with the required capacity have been taking measures to digitise their supply chains through the use of technologies such as 3D modelling, remote access coordination, and inventory updates. However, whereas many

14 The second aspect of diversification is the verticality of the supply chain. Currently, Sri Lanka's 'value added' in the supply chain is 52%. The industry hopes to increase this to 60–65% over the next few years and insulate the sector from potentially similar disruptions to its global supply chain. One major boon towards achieving this goal has been the government's recent approval of a proposal to establish a fabric processing park in Eravur, a city in the Eastern Province of Sri Lanka, in its 2021 budget. This step will reduce the sector's reliance on imported fabric, especially from China, and provide a viable alternative if there are future disruptions.

of the larger companies, (accounting for approximately 80% of the sector's revenue), are able to make these changes, others are less capable, largely because of resource constraints.

Beyond the direct COVID-19 related impacts, the imposition of import restrictions to alleviate currency pressures in Sri Lanka has placed a considerable burden on small-scale suppliers. In contrast, medium- and large-scale suppliers are not directly affected by the current import restrictions. An exemption has been granted for the import of raw materials and the intermediate goods of export industries.

According to the interviewed representative of development partners, a major focus should be placed on ensuring that suppliers do not ignore small buyers, given that small buyers tend to be less resilient. Further, the issue with workers' health and safety might become less important in supplier countries in the future due to concerns over the survival of RMG suppliers. Given that online selling has been growing faster than retail sales, promoting health and safety will be important in the future to ensure that workers receive the fastest possible coverage under online-based trading.

In Bangladesh, the ILO has extended support to DIFE to develop a safety protocol and guidelines to be maintained at the factory level. Use and awareness of the safety guideline have been much weaker in the non-RMG sectors. Notwithstanding its efforts, DIFE appears to have placed insufficient pressure on the factories to comply with the monitoring guidelines. Since the pre-COVID period, *Deutsche Gesellschaft für Internationale Zusammenarbeit* has also been working with the Bangladesh government and the ILO on Employment Injury Insurance as part of establishing a national insurance scheme for industrial workers. A pilot project was planned for selected RMG factories; however, due to COVID-19, it was postponed. It is expected to be revived soon. There is a demand for an unemployment insurance scheme for industrial workers to address the challenges they face during long-term crises. The ILO has been working with the Ministry of Labour and Employment to initiate a project on industrial safety beyond the RMG sector. It would cover other important and sensitive sectors, which would be likely to include leather, textiles, plastics, chemicals, ceramics, and construction. The government of Denmark has expressed an interest in supporting nutrition programmes for industrial workers, including RMG workers. In addition, the EU has pledged support by distributing BDT3,000 (around USD 36) to the one million employees who were laid off due to COVID. A grant was supposed to be paid in June 2020 through the Mobile Financial Services. However, the initiative has not been implemented, mainly due to the unavailability of a list of workers who lost their jobs, lack of a proper work plan, and other logistical difficulties¹⁵.

15 See: <https://www.textiletoday.com.bd/eus-e117-mn-aid-jobless-rmg-workers-stalled/>

In Sri Lanka, the initiatives taken by its apparel sector stakeholders to promote engagement between sourcing countries and international organisations can broadly be divided into two parts: sourcing initiatives and capacity development initiatives. Sourcing countries and other development partners have introduced a series of capacity development programmes aimed at Sri Lankan companies, including those in the apparel sector. These initiatives have included webinars and other workshops on continuing to open trade lines, responding to the new market realities, and helping Sri Lanka's small and medium-sized enterprises expand during the pandemic. In addition, some countries and multilateral development partners, in partnership with the Joint Apparel Association Forum have introduced online platforms to support connections between the Sri Lankan apparel manufacturers and potential customers.

In terms of other-directed multilateral initiatives (e.g., the ILO call to action), Sri Lanka has faced challenges in accessing and leveraging its benefits as a middle-income country, given that many of the proposed initiatives have been directed at low-income countries. Notably, many of Sri Lanka's market competitors in the apparel sector fall into this latter group of nations.

In the medium term, the government of Bangladesh has so far undertaken a few initiatives. The timeline for repaying the first instalment on subsidised credit was extended until December 2020. However, almost all of the interviewed suppliers said they had argued for similar government support during the second wave of COVID-19. The suppliers also said they wanted the government to play a more active role in securing delayed payments from buyers.

In contrast, due to its high debt burden and narrow fiscal space, Sri Lanka's government has responded to the current crisis mainly through monetary policy mechanisms. The vast majority of apparel sector-specific initiatives are currently taking place at the departmental and agency levels. Government institutions, such as the Board of Investment, the Export Development Board, and the Department of Commerce, in partnership with different Chambers of Commerce and the Joint Apparel Association Forum have introduced several initiatives to facilitate both continuous exports with few disruptions and capacity development programmes¹⁶.

Overall, many promises have been made targeting the long-term upgrading of the Bangladeshi and Sri Lankan apparel value chains. However, only a few noticeable

16 For instance, the Department of Commerce has introduced an online mechanism in which documents can be submitted for approval. Meanwhile, the government has given permission to export industries to continue operations, even during lockdown periods.

measures have been announced and are being implemented. These are likely to make only a limited contribution to ensuring the effective recovery of the major market players across the value chain. Thus, there is a need to explore alternate measures.

Identifying a value chain based solution: a framework of cooperation between stakeholders in the value chain to address the medium-term recovery challenges

The medium-term recovery will depend on how effectively the period of COVID-19 related contamination can be mitigated throughout the world through the use of the new vaccines. Even in a best-case scenario, it will take more than a year for most of the world to become vaccinated¹⁷. Therefore, the recovery period can be expected to exceed a year. The strategies, approaches, and tools needed to address the recovery must be innovative, effective, and time-sensitive to address the challenges of the recovery period. This section explores an alternate approach to recovery in combination with initiatives at both the value chain level and the national level.

At the value chain level, the initiatives suggest that a better distribution of orders between supplying countries would contribute more to the recovery process of the supplying firms in different countries. In this study, changes in the distribution of the market share of knit (HS code 61) and woven (HS code 62) products were analysed for the major supplying countries during the pre- and post-COVID periods. Among the top 20 apparel supplying countries, market shares underwent significant change between the pre-COVID (December 2019) and post-COVID (June 2020) periods (Figure 4). China, the leading apparel exporter in the world, achieved the highest rise in market share, followed by Vietnam, Germany, Italy, Turkey, the Netherlands, Belgium, and France. Specifically, during the COVID period, China's share of knit products increased from 34% in December 2019 (pre-COVID period) to 39% in June 2020 (during the COVID period). Its share of woven products increased from 36% to 45% during the same periods. In other words, brands and buyers over-focused on either a few large supplying countries or on reshoring the production orders within their own regions. Consequently, the other major supplying countries such as Bangladesh and Sri Lanka lost their share during the COVID-19 period (based on International Trade Centre, 2020).

During this time, Bangladesh's share of knit products fell by 2% and its woven products fell by 1%. In contrast, Sri Lanka's share of knit and woven products declined by less than 1%. The alternate strategies followed by buyers in placing orders adversely

17 See: <https://www.unicef.org/coronavirus/what-you-need-to-know-covid-vaccine>

affected the poor developing countries, preventing them from maintaining their normal market share. If buyers and brands had maintained their market share of export orders with the largest supplier, China, an additional USD 2 billion worth of orders could have been distributed to other traditional supplying countries during the COVID-19 pandemic. A major consideration for buyers is whether the supplying countries have the capacity to fulfil their orders based on their specifications unless they have prior experience with the production and supply of such products. A product-wise analysis of Bangladesh and Sri Lanka showed that such a distribution of orders is feasible even within the product baskets of the supplying countries, and further, that Bangladesh and Sri Lanka would simultaneously benefit from this.

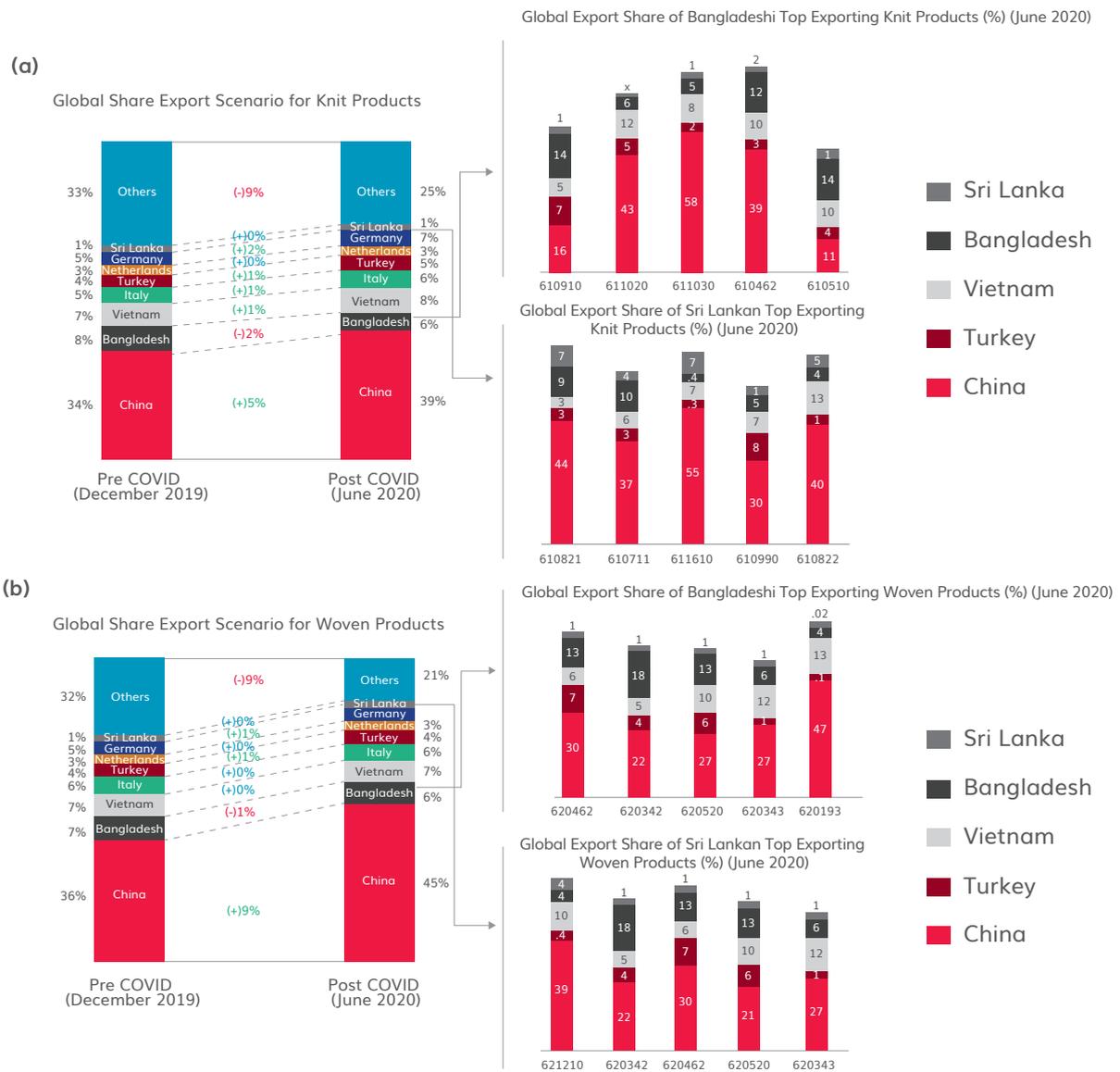


Countries such as Bangladesh and Sri Lanka lost their woven share during the COVID-19 period.

Under such an alternative, the brands and buyers based in Europe, the US, and other major sourcing countries, could make a joint commitment to ensure there is a gradual return to the pre-COVID market share of import orders for the traditional supplying countries. The major buyers could make official notifications on how they intend to implement the redistribution of orders. The EU based buyers' platform could take the lead in facilitating this process. The sourcing countries' governments could encourage their brands and buyers to comply with the redistribution of orders pursuant to their RBPs.

Analysis confirms that both Bangladesh and Sri Lanka have the capacity to supply the products that are currently being supplied by China. Figure 4 shows Bangladesh and Sri Lanka's share of the global imports of different woven and knit products. Both countries produce a considerable share of the global imports, along with China, of their top five products. According to data from June 2020, Bangladesh and Sri Lanka enjoyed a substantial market share in each of the products. Thus, they are likely to have the capacity to produce such products in greater amounts if orders must be shifted from other major suppliers such as China.

Figure 4. Market share of knit and woven products among the major supplying countries during the pre- and post-COVID periods



Source: Authors' calculations and illustration (based on International Trade Centre, 2020)

The developed and developing country suppliers that received a greater share of export orders during this period benefitted from the additional orders. The point is that these countries are well-positioned to support their industries and workers under their social support and other schemes. In contrast, there are countries in the supply chain that would benefit more from fulfilling these additional export orders, particularly when they are facing fiscal constraints and have weak social support schemes for their industries and workers.

Most of the apparel supplying countries in the developed and developing country categories have strong social support schemes underpinning their enterprises and workers. Given the ongoing crisis in the global labour market, including in the apparel sector, these social protection schemes have played a vital role in these countries¹⁸. Social protection schemes vary by country. For instance, in China, support for the workers who lost their jobs during the pandemic was extended through social protection schemes. Concurrently, China issued guidelines for subsidising unemployed workers who were ineligible for the existing unemployment insurance scheme (ILO, 2020 b). Vietnam has also made significant positive changes to its social protection scheme. The budget allocation for Vietnam's social safety net has increased over the years (Dzung & Vinh, n.d.). In addition, Vietnam passed the Social Insurance Labour Law in 2006, amending it in 2014, to bring public and private employees under the social protection umbrella on a compulsory basis in the event of disability, sickness, maternity, work injury, unemployment, and old age (ILO, n.d.). The fund for social insurance is generated by contributions from the government, employers, and employees (ILO, 2014 a).

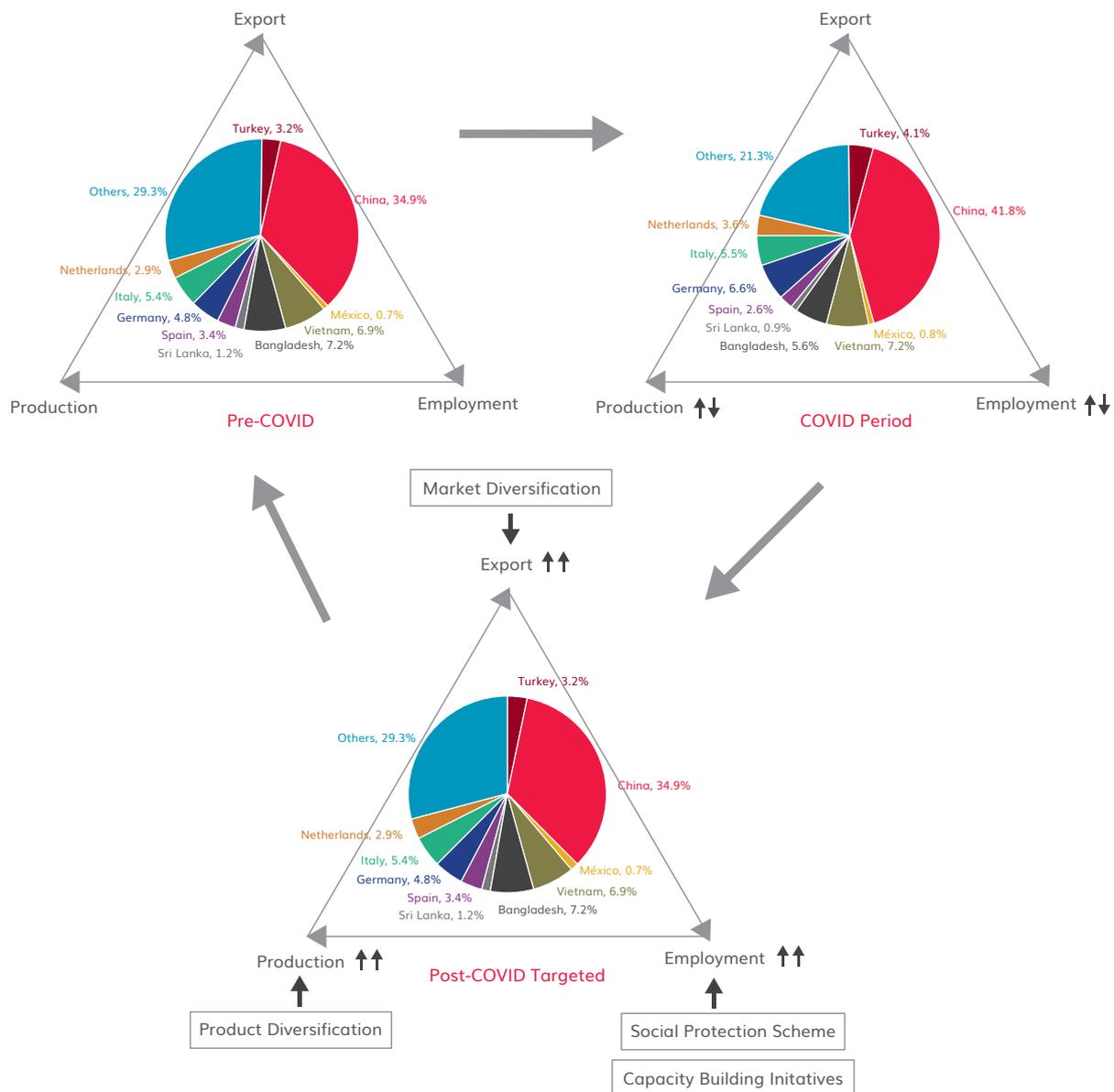
In terms of its public social protection expenditures (excluding health) on people of working age, Bangladesh has been ahead of Vietnam, India, Sri Lanka, and China¹⁹ (ILO, 2019). However, there has been no dedicated social protection policy or insurance scheme for RMG workers in the country²⁰. As a result, even after a recent wage increase, workers in this industry, among whom 54% are female, have remained vulnerable to big economic shocks or crises. The fiscal constraints of the government have continued because the total domestic resource mobilisation during July and August 2020 (the first two months of the fiscal year, FY2021) was (-) 0.66%, lower than the same months in the previous year. Further, government budget financing (domestic and external borrowing) was (-) 21.3% lower in July and August 2020 compared to the previous year. Overall, the fiscal constraints at the local level have also continued, thereby diminishing the government's ability to initiate any medium-term support measures for the industry.

18 The United Nations Research Institute for Social Development defines social protection as a concern that deals with preventing, managing, and overcoming situations that negatively impact people's well-being (United Nations Research Institute for Social Development, 2010). Social protection aims to reduce poverty by diminishing vulnerability and social risks, including unemployment and disability (World Bank, 2001).

19 The expenditures are as follows: Bangladesh 0.7%, Sri Lanka 0%, China 0.4%, India 0.6%, and Vietnam 0.5% (percentage of GDP).

20 See: <https://thefinancialexpress.com.bd/views/opinions/social-insurance-for-rmg-workers-1547827995>

Figure 5. Proposed framework for cooperation in the global apparel value chain



Source: Authors' illustration.

Sri Lanka has established several social protection programmes designed to provide relief to low-income and vulnerable groups. However, there is no specific social protection programme targeting the RMG sector. Any assistance the apparel sector workers receive is due to their family members qualifying for other existing programmes. Among those surveyed for this study, the low number who received government support through social protection programmes could be attributed to this. In response to the COVID-19 pandemic, the Sri Lankan government introduced a relief package designed to help individuals and

families affected by the pandemic. This relief primarily took the form of a monthly cash transfer of Rs5000 (around USD 27) in April and May 2020. It was distributed to those who were already enrolled in existing schemes and to a limited number of specifically identified individuals and households who were assessed as having been affected by the pandemic at the Grama Niladari division level (the smallest level of local governance). During the second wave of cases, a monthly cash transfer of Rs5000, or an in-kind relief package of similar value, was provided to selected households in the lockdown areas. The fiscal constraints of the Sri Lankan government continued throughout the COVID period. Its total revenue and grants declined by 26% between January and July 2020 compared to the previous year. In contrast, its public borrowing between January and July 2020 was 28% higher than the previous year. Thus, the government has had a limited capacity to undertake measures in support of the medium-term recovery of the apparel sector.

Conclusions

Disruptions in the global value chain owing to the COVID-19 pandemic have adversely affected the major market players, including the brands, buyers, suppliers, raw material producers, and workers. Bangladesh and Sri Lanka, as two important apparel-supplying countries in Asia, have been among the worst affected by these disruptions. Although the two countries operate in two different categories of the products market (Bangladesh specialises in low-value mass-scale products, whereas Sri Lanka specialises in medium-end products), the level of adversity in both countries has been similar. Analysis showed that neither the buyers nor the suppliers were prepared for the COVID shock. Hence, each of them experienced multidimensional challenges, including the closing of retail stores, retail chain bankruptcies, the cancellation of orders based on force-majeure, the deferment of orders, cash crunches at the suppliers' end, difficulty paying workers' wages, and the retrenchment of workers. To address those challenges, enterprises across the supply chain looked to their governments for support. The governments' fiscal and monetary policy support measures helped the enterprises and workers address their vulnerabilities and risks in the short term. However, this support was limited in scope when addressing the medium-term challenges (i.e., when recovery is slow paced and extends across a long period of time). Given the fiscal constraints, particularly among the supplying countries, a value chain based solution is highly favoured to complement national-level initiatives. These initiatives, in turn, will contribute to enterprises across the value chain during the recovery process.

The analysis presented in this study showed that most of the measures that have been undertaken have been either short-term with a limited focus on medium-term

challenges or have targeted individual level challenges. Inventory smoothing, reshoring, and alternate sourcing might be useful to individual buyers or buying countries; however, supplying countries and suppliers would benefit less. Brands/buyers extended their support by supplying medical equipment to workers and arranging training. Several value chain based initiatives were identified, such as the ILO's global call to action to support brands, buyers, and international trade unions, and the Europe-based brand and buyers' platforms for responsible business practices (such as ACT). These initiatives could function well if the brands and buyers could commit to and participate in a joint initiative. Unfortunately, only a few such noticeable measures have been announced and are being implemented. Thus, they are likely to make only a limited contribution to ensuring the effective recovery of the major market players across the value chain. There is a need to explore alternate measures.

Against this backdrop, this study presented a value chain based solution, which could more effectively protect the interests of buyers, suppliers, and workers. This solution suggests that market players in the global apparel value chain should consider a distributive approach. This would ensure that the minimum required amount of orders and income are sourced from suppliers where their respective governments have limited financial capacity to intervene during a crisis through social support schemes and public borrowing. The principle underpinning the distribution of orders is to maintain a benchmark, or baseline level, of orders that supplying countries can rely on, while maintaining strong social support programmes at the pre-crisis level. The total number of monthly export orders would be redistributed among countries that need more orders. The major brands and buyers, through their appliances and forums, would decide how the orders should be redistributed to the different supplying countries. This redistribution could be further extended to suppliers within a targeted country where the more vulnerable factories would receive a higher share of orders during the crisis period. Such a redistribution would effectively keep factories operating and ensure workers' well-being for longer periods of time. Notably, this redistribution is currently possible in the product basket countries without compromising the quality and standard of the products produced.

Such an initiative would be an extension of what is currently being implemented under the buyers' platform and the ILO-led global call to action. Specifically, this initiative would become part of RBPs, and thus, would ensure worker well-being. It is expected that by ensuring the effective redistribution of orders by the buyers targeting supplying countries, a better outcome would result and enterprises would be helped in their recovery process.

Given the fiscal stress on many supplying countries, including Bangladesh and Sri Lanka, their governments may be unable to extend their support for long periods of time. An important feature of these countries' previous support measures is that they have

primarily consisted of monetary policy instruments such as subsidised credit for short periods of time. The fiscal policy instruments have been applied only marginally. Critically, the apparel sector workers in both countries have not been covered by national social insurance schemes. This is in sharp contrast to countries such as China where import orders have been reshored and have increased regionally. It is also below the standards of many European countries that have offered fiscal policy support and extended social support under their respective social insurance schemes. Hence, a redistribution of orders, as proposed, would not have an adverse impact on the world of work in the major developing and developed supplying countries. However, it would have a huge positive impact on the other supplying countries that are relatively less developed. A market-based redistribution of orders would be more equipped to manage the challenges associated with longer periods of recovery, as discussed above.

This proposed redistribution would be an extension of the existing initiatives undertaken by major brands, buyers, and sourcing countries. Under the framework of RBPs, the brands and buyers could implement redistribution programmes accompanied by a commitment to return their share of import orders to the traditional sourcing countries at the pre-COVID level. Different buyer-led platforms could take the lead to facilitate the process. They could inform the global stakeholders on how the member brands/buyers intend to honour their commitment. Brands and buyers could share possible projected targets for buying from key supplying countries, including Bangladesh and Sri Lanka. Further, the governments of the sourcing countries and the brands and buyers, could extend their long-term support to developing the social insurance schemes of the supplying countries, targeting apparel sector workers. A social insurance scheme initiative is currently being implemented in Bangladesh on a limited scale with the support of the EU and German government. Such initiatives could gradually become broad-based with the participation of suppliers, buyers, brands, workers, and the governments of the supplying countries. Several brands and buyers have expressed an interest in contributing to the newly created social protection scheme for RMG workers. Because the proposed redistribution framework is still in the early stages of development, there is an opportunity for further research with a view to its applicability to the RMG value chain.

References

- Altomonte, C., di Mauro, F., Ottaviano, G. I., Rungi, A., & Vicard, V. (2012, January 13). Global value chains during the great trade collapse: A bullwhip effect? [ECB Working Paper No. 1412] Retrieved from SSRN, Social Science Research Network: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1973497
- Atkinson, J. (1984) Manpower Strategies for Flexible Organisations. *Personnel Management*, 16, 28–31.
- Better Buying. (2020, April 2). Guidelines for "better" purchasing practices amidst the coronavirus crisis and recovery. [Special Report] Retrieved from <https://betterbuying.org/wp-content/uploads/2020/04/Better-Buying-Special-Report-COVID-19-Guidance-for-Brands-and-Retailers.pdf>
- Cagnazzo, L., Taticchi, P., & Brun, A. (2010, January). The role of performance measurement systems to support quality improvement initiatives at supply chain level. *International Journal of Productivity and Performance Management*, 59(2), 163–185. DOI:10.1108/17410401011014249
- Cannella, S., Ashayeri, J., Miranda, P. A., & Bruccoleri, M. (2013). Current economic downturn and supply chain: The significance of demand and inventory smoothing. *International Journal of Computer Integrated Manufacturing*, 27(3), 201–212. DOI:10.1080/0951192X.2013.812801
- Centre for Policy Dialogue. (2018, September 1). *CPD RMG Study 2018, concluded with recommendations for sustainability of the RMG sector*. [Featured Post from the conference, Transformation in the RMG Sector in Post-Rana Plaza Period: Findings from CPD Survey, 30 August 2018 at Khazana Gardenia Grand Hall, Dhaka, Bangladesh]. Retrieved from <https://cpd.org.bd/cpd-rmg-study-2018-concluded-with-recommendations-for-sustainability-of-the-rmg-sector/>
- Centre for Entrepreneurship Development. (2020, July). *Status of the export oriented RMG factories in Bangladesh during Covid- 19 Pandemic*. (Mapped in Bangladesh Rapid Survey, Phase 2 research brief). Retrieved from MiB Rapid Survey 2 Phase 4: <http://ced.bracu.ac.bd/wp-content/uploads/2020/08/MiB-Rapid-Survey-Phase-2-Research-Brief.pdf>
- Centre for Entrepreneurship Development. (2021, January 23). *Vulnerability. Resilience and recovery in the RMG sector in view of COVID pandemic: Findings from the Field Survey*. [CPD-MiB Webinar: PowerPoint slides]. Retrieved from <https://cpd.org.bd/wp-content/uploads/2021/01/Presentation-on-Vulnerabilities-Resilience-and-Recovery-in-the-RMG-Enterpsies-.pdf>
- Chen, F., Ryan, J. K., & Simchi-Levi, D. (2000, April 6). The impact of exponential smoothing forecasts on the bullwhip effect. *Naval Research Logistics* 47, 269–286, 2000. [https://doi.org/10.1002/\(SICI\)1520-6750\(200006\)47:4<269::AID-NAV1>3.0.CO;2-Q](https://doi.org/10.1002/(SICI)1520-6750(200006)47:4<269::AID-NAV1>3.0.CO;2-Q)

- Dejonckheere, J., Disney, S., Lambrecht, M., & Towill, D. (2003). Measuring and avoiding the bullwhip effect: A control theoretic approach. *European Journal of Operational Research*, 147(3), 567–590. DOI:10.1016/S0377-2217(02)00369-7
- Disney, S. M., & Lambrecht, M. R. (2008). On replenishment rules, forecasting, and the bullwhip effect in supply chains. *Foundations and Trends in Technology, Information and Operations Management*, 2(1), 1–80. DOI: 10.1561/02000000010
- Disney, S. M., & Towill, D. R. (2003). On the bullwhip and inventory variance produced by an ordering policy. *Omega*, 31(3), 157–167. DOI:10.1016/S0305-0483(03)00028-8
- Disney, S. M., Farasyn, I., Lambrecht, M. R., Towill, D. R., & Velde, W. V. (2007). Controlling bullwhip and inventory variability with the golden smoothing rule. *European Journal of Industrial Engineering*, 1(3), 241–265. <https://www.inderscienceonline.com/doi/abs/10.1504/EJIE.2007.014686>
- Dzung, N. H., & Vinh, D. Q. (n.d). Social protection in Vietnam. Retrieved from <https://library.fes.de/pdf-files/iez/01443010.pdf>
- Eichhorst, W., Marx, P. & Rinne, U. (2020). Manoeuvring through the crisis: Labour market and social policies during the COVID-19 pandemic. *Intereconomics*, 55(6), 375–380.
- Elimam, A., & Dodin, B. (2013). Project scheduling in optimising integrated supply chain operations. *European Journal of Operational Research*, 224(3), 530–541. <https://doi.org/10.1016/j.ejor.2012.09.007>
- Export Promotion Bureau, Government of the People's Republic of Bangladesh. (2020). *Export data* [Data file]. Retrieved from http://epb.gov.bd/site/view/epb_export_data/
- Evenett, S. J. (2020). Chinese whispers: COVID-19, global supply chains in essential goods, and public policy. *Journal of International Business Policy* 3, 408–429. <https://doi.org/10.1057/s42214-020-00075-5>
- Gölgeci, I., Yildiz, H. E., & Andersson, U. (2020). The rising tensions between efficiency and resilience in global value chains in the post-COVID-19 world. *Transnational Corporations*, 27(2), 127–141. DOI:10.18356/99b1410f-en
- Gupta, S., & Liu, J. (2020). *The COVID-19 crisis and fiscal reform in low-income countries* (Report for the Center for Global Development). Retrieved from CDG Notes: <https://www.cgdev.org/publication/covid-19-crisis-and-fiscal-reform-low-income-countries>
- International Labour Organization. (2014). Social Insurance Enhancing social security right for everyone. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-hanoi/documents/publication/wcms_428970.pdf
- International Labour Organisation. (2014 a). Law on Social Insurance Retrieved from ILO: <https://www.ilo.org/dyn/natlex/docs/ELECTRONIC/99775/126463/F-1921723198/VNM99775%20Eng.pdf>
- International Labour Organisation. (2019). *World social protection report 2017–19: Universal social protection to achieve the Sustainable Development Goals* (Report). Retrieved from ILO: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_604882.pdf

- economists.] Retrieved from VOX EU, CEPR: <https://voxeu.org/article/resilience-versus-robustness-global-value-chains>
- Moazzem, K. G., Ahmed, T., Shibly, A. S., & Taznur, T. (2020, April 24). *The crisis in the world of work in view of COVID-19: Is the partnership across the RMG value chain in reverse order?* (CPD-FES Policy brief for the 7th anniversary of the Rana Plaza tragedy.) Retrieved from the Center for Policy Dialogue: <https://think-asia.org/handle/11540/12314>
- Mustafizur, R., Bhattacharya, D., Moazzem, K. G., & Centre for Policy Dialogue (Bangladesh). (2008). *Bangladesh apparel sector in post MFA era: A study on the ongoing restructuring process*. Dhaka: Centre for Policy Dialogue.
- Organisation for Economic Co-operation and Development. (2020, June 3). *COVID-19 and global value chains: Policy options to build more resilient production networks* (OECD Policy Response to COVID-19). Retrieved from OECD: <http://www.oecd.org/coronavirus/policy-responses/covid-19-and-global-value-chains-policy-options-to-build-more-resilient-production-networks-04934ef4/>
- Rhee, C., & Thomsen, P. M. (2020, May 12). *Emerging from the great lockdown in Asia and Europe* (IMF Blog). Retrieved from IMF Blog, Insights and analysis on economics and finance: <https://blogs.imf.org/2020/05/12/emerging-from-the-great-lockdown-in-asia-and-europe/>
- Towill, D., & Disney, S. (2002). A procedure for the optimisation of the dynamic response of a Vendor Managed Inventory system. *Computer and Industrial Engineering*, 43(s1–2), 27–58. DOI:10.1016/S0360-8352(02)00061-X
- United Nations Department of Economic and Social Affairs (UNDESA). (2020, August). 'Impact of COVID-19 on SDG progress: a statistical perspective', *UN/DESA Policy Brief #81*. Available at: https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/PB_81.pdf
- United Nations Research Institute for Social Development. (2010). *Combating poverty and inequality: Structural change, social policy, and politics* (Report on combating poverty and inequality). Retrieved from United Nations Research Institute for Social Development: [https://www.unrisd.org/unrisd/website/document.nsf/\(httpAuxPages\)/92B1D5057F43149CC125779600434441?OpenDocument&panel=additional](https://www.unrisd.org/unrisd/website/document.nsf/(httpAuxPages)/92B1D5057F43149CC125779600434441?OpenDocument&panel=additional)
- Wei, Y., Wang, H., & Qi, C. (2012). On the stability and bullwhip effect of a production and inventory control system. *International Journal for Production Research*, 51(1), 154–171. <https://doi.org/10.1080/00207543.2011.653836>
- World Bank. (2001, January). *Social protection sector strategy: From safety net to springboard* (World Bank Group report, 21643.) Retrieved from World Bank Group Human Development Network: <http://documents.worldbank.org/curated/en/299921468765558913/Social-protection-sector-strategy-from-safety-net-to-springboard>

Zhan, J., Bolwijn, R., Casella, B., & Santos-Paulino, A. U. (2020, August). Global value chain transformation to 2030: Overall direction and policy implications. [Column: Research-based policy analysis and commentary from leading economists.] Retrieved from VOX EU, CEPR: <https://voxeu.org/article/global-value-chain-transformation-decade-ahead>



southernvoice.org



[SVoice2030](https://www.facebook.com/SVoice2030)



[@SVoice2030](https://twitter.com/SVoice2030)