



Who Stands to Lose?

The Effects of GSP+ Withdrawal on Sri Lanka's Exports and Labour Force



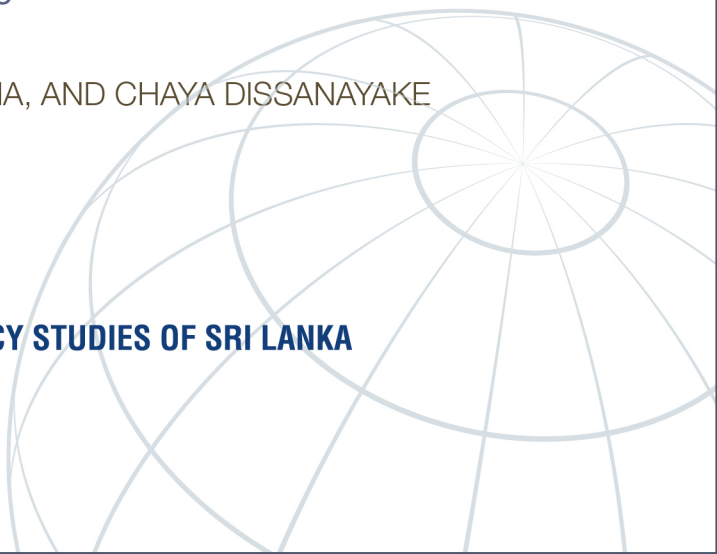
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Table of Contents

1. Introduction	8
2. Background: Exports of Sri Lanka to the EU-28 under GSP+ and Labour Force Dynamics	12
3. Methods and Data	21
4. Results and Discussion	26
5. Conclusion	34
References	35

List of Tables

Table 1: EU-28 Imports From Sri Lanka, Tariff Under GSP+, and MFN Tariff for the Top 10 HS Six-Digit Imports by EU-28 in 2019	18
Table 2: Key Labour Force Characteristics in the Top Three Exports From Sri Lanka to EU-28	20
Table 3: Share of Total Eligible Exports and Top 200 Exports From Total Exports to EU-28 in 2019	24
Table 4: EU-28 Imports From Sri Lanka Under Different Tariff Bands for Top 200 HS Codes Under MFN	25
Table 5: Trade-Weighted Average GSP+ and MFN Tariff Rates for 200 Products Mapped to ISICr4 Four-Digit Sectors	25
Table 6: Sectoral Export Losses for Sri Lanka Under a Scenario of GSP+ Loss: Selected Top 10 ISICr4 Four-Digit Sectors	27
Table 7: Change From GSP+ to MFN for HS Chapter 03 Products Exported by Sri Lanka	30
Table 8: Employment Vulnerability to GSP+ Withdrawal by ISICr4 Two-Digit Sectors	31
Table 9: Distribution of Labour Force Vulnerability Across Gender, Skill Groups, and ISICr4 Two-Digit Sectors	32
Table A. 1: Armington Elasticities for GTAP Categories	38
Table B. 1: Classification of Occupation Categories Into Skill Levels	41

List of Figures

Figure 1: Trade Balance Between Sri Lanka and the EU-28	13
Figure 2: Sri Lanka's Exports to the Combined Market of the EU and UK: 2023	13
Figure 3: Sri Lanka's Exports to the EU Under GSP+: 2019–2023	15
Figure 4: Composition of the Top 10 Sri Lankan Exports (HS Chapters) in the EU Market in 2023	16
Figure 5: Conceptual Framework	21
Figure 6: Export Loss of GSP+ Withdrawal at ISICr4 Four-Digit Sectors; Base Year 2019	26
Figure 7: Top 10 Products in the Wearing Apparel Sector by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019	28
Figure 8: Top 10 Products in Agricultural Exports by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019	28
Figure 9: Top 10 Products in Other Manufacturing Exports by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019	29
Figure 10: Spatial Distribution of Employment Vulnerability of a GSP+ Withdrawal	33
Figure A. 1: Preference Margin and Magnitude of Preference Erosion From Losing GSP+	39

Acronyms

CN	Combined Nomenclature
EBA	Everything but Arms
EU	European Union
GSP+	Generalised Scheme of Preferences Plus
GTAP	Global Trade Analysis Project
HS	Harmonised System
ILO	International Labour Organization
ISICr4	International Standard Industrial Classification Revision–Four
LDC	Least Developed Country
LFS	Labour Force Survey
MFN	Most Favoured Nation
NRTP	Non–reciprocal Trade Preference
PE	Partial Equilibrium
RMG	Ready–made Garment
ROO	Rules of Origin
USD	United States Dollar
WITS	World Integrated Trade Solutions

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Abstract

In the absence of Generalised Scheme of Preferences Plus (GSP+) tariff preference, Sri Lanka will face a tariff increase up to Most Favoured Nation (MFN) tariffs, likely resulting in export loss and associated negative labour market effects. This study estimates the export loss of Sri Lanka due to a hypothetical tariff increase from GSP+ rates to MFN rates. The labour force effect and distributional cost across diverse labour groups resulting from preference erosion are calculated in a second-stage simulation. Trade effects are weighted for the utilisation ratio as preference utilisation is below 100% and varies across sectors. The tariff hike in the EU-28 will cause an export loss of United States Dollars (USD) 1.23 billion (Bn) or 36.7% of EU-28 bound exports from the base year 2019 exports. Wearing apparel and processing fish sectors will be hit hard and face significant export losses. The fall in import demand from the EU-28 will make 4.99% of total industrial employees in Sri Lanka vulnerable to adverse labour market outcomes in line with the base year. This study also points to the differential effect of GSP+ preference erosion on women and low and medium-skilled workers, who account for 65.65% of vulnerable workers. The spatial distribution of vulnerable workforce shows a concentration of workers in rural areas with a high poverty headcount index.

Keywords: GSP+, non-reciprocal trade concessions, inclusive growth, gender and trade

1. Introduction

The Generalised System of Preferences Plus (GSP+) of the European Union (EU) is a non-reciprocal tariff concession given to low-or lower-middle-income countries, conditional upon the implementation of 27 international conventions related to labour and human rights, environmental and climate protection, and good governance. The GSP+ – one among different tariff preference modes under the Generalised System of Preferences (GSP),¹ – intends to positively affect exports, labour force, and economic growth of the eligible countries (European Commission, 2024). The EU uses the external trade policy through GSP+ to promote core labour standards by leveraging the GSP+ conditionality (Tortell, 2009). Sri Lanka has been eligible for GSP+ since 2005, though it was suspended in 2010 until reinstated in 2017 (European Commission, 2017; European Commission, 2023). Renewed concerns regarding compliance with the conventions arose in 2021, generating uncertainty on the continuity of GSP+ benefits (European Commission, 2021; European Commission, 2023). Amidst this background, this paper estimates the effect of tariff movement from GSP+ to Most Favoured Nation (MFN) rates on the EU-28 imports from Sri Lanka. In addition, the estimated trade effect is used to estimate the distribution of corresponding labour force effects geographically and across diverse labour groups, including female and low and medium-skilled workers.

The withdrawal of tariff preference will increase the border tariff to MFN tariffs, which are significantly higher than the GSP+ preferential tariffs. Increased trade costs reduce the EU demand for Sri Lanka's exports from the EU and divert trade to competitors. The effect of the latter is seen through trade diversion caused by relative price change.

The withdrawal of tariff preference will increase the border tariff to MFN tariffs, which are significantly higher than the GSP+ preferential tariffs. Increased trade costs reduce the EU demand for Sri Lanka's exports from the EU and divert trade to competitors. The effect of the latter is seen through trade diversion caused by relative price change. The reduced EU-28 imports make Sri Lanka's export sectors utilising GSP+ vulnerable to negative effects on wages and unemployment. The negative effects at the sectoral level have the potential to spillover exacerbating poverty and inequality (Bandara & Naranpanawa, 2015). Indeed, the adverse socio-economic effect of GSP+ withdrawal paradoxically undermines the goals of the GSP+ scheme aimed at promoting democracy and human rights (Basham 2010; Kelegama 2010).

A tariff hike will significantly affect exports and employment as the combined market of the EU and the United Kingdom (UK) –known as EU-28,² before Brexit,³ – is a major export destination of Sri Lanka. In 2023, Sri Lanka's exports to the EU-28 were United States

Dollars (USD) 3.63 billion (Bn), representing 30.08% of the total export revenue and spanning over 1,301 products classified under the Harmonised System (HS) six-digit codes.

The major exports include ready-made garments (RMG) under HS chapters 61 and 62, rubber products in HS chapter 40, coffee, tea, mate and spices in HS chapter 09, and fishery products in HS chapter 03. RMG alone constituted about 54.90% of Sri Lanka's total exports to the EU-28 in 2023. The RMG

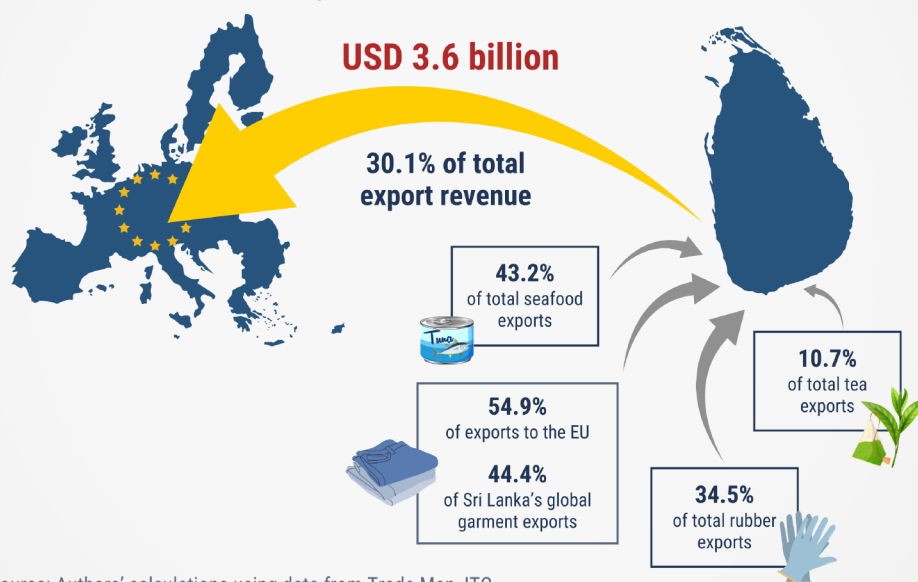
1 The GSP comprises standard GSP, GSP+, and Everything but Arms (EBA). The GSP+ tariff concessions are deeper compared to standard GSP. The EBA, as the term implies, provides tariff-free and quota-free access to all goods except arms for the beneficiaries which are the Least Developed Countries (LDCs).

2 The EU-28 is the European Union (EU) which consists of a group of 28 countries: Belgium, Bulgaria, Czech Republic, Denmark, Germany, Estonia, Ireland, Greece, Spain, France, Croatia, Italy, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Malta, Netherlands, Austria, Poland, Portugal, Romania, Slovenia, Slovakia, Finland, Sweden, and the United Kingdom (UK). Since the UK left the EU in 2020, The current EU consist of 27 countries excluding the UK. Since this study uses 2019 as the base year, the term 'combined market' of the EU and UK is used. In the paper, EU-28 is used for the combined market of EU-27 and the UK.

3 Brexit refers to the UK's withdrawal from the EU on 31 January 2020.

exports to the EU contributed to 44.42% of Sri Lanka's total RMG exports globally. The EU-28 is also the destination for 43.25% of total seafood exports, 34.54% of total rubber product exports, and 10.74% of total tea exports of Sri Lanka to the world in 2023. These sectors absorb a large number of workers in the domestic economy increasing the economic importance of the EU-28 GSP+ scheme to Sri Lanka.

Sri Lanka's Exports to the EU-28 in 2023: A Snapshot of Key Sectors



Source: Authors' calculations using data from Trade Map, ITC.

The recent literature provides evidence for the positive impact of Non-reciprocal Trade Preference (N RTP) on agricultural trade, food exports, export diversification in the extensive margin, and domestic food availability (Ridley and Shirin, 2025; Ritzel and Fiankor, 2024; UNCTAD, 2024). Importantly, Ridley and Shirin (2025) using a commodity level gravity model and subsequent counterfactual simulations show that NRTPs were responsible for around USD 833 million (Mn) in elevated annual exports from NRTP beneficiary countries to donor countries as of 2018. While gravity-based models provide a framework for estimating the export impact of NRTP, the simulations depend on average coefficients. However, structural models can factor in the commodity level differences in behavioural parameters like Armington elasticities.

The effect of GSP+ withdrawal can be estimated ex-ante and ex-post. The economic effect of the withdrawal was investigated ex-post in several studies in the aftermath of the GSP+ withdrawal in 2010. For example, a qualitative study by Abayasekara (2013) reported that RMG exporters faced challenges due to the loss of preferential tariffs, leading to increased trade costs, and reduced competitiveness in the EU market. Bandara and Naranpanawa (2015) extended a general equilibrium analysis to show the spillover effects of GSP+ withdrawal on poverty and income inequality. The urban and rural low-income groups were expected to suffer the most, with poverty indicators expected to worsen. The general equilibrium models provide valuable insights into the economy-wide effect of GSP+ withdrawal accounting for the input-output linkages. However, the analysis is done at the sectoral level using common aggregations such as Global Trade Analysis Project (GTAP) aggregations. An alternative product-level analysis in the partial equilibrium (PE) setting for trade effect produces more policy-relevant information, albeit the PE estimates do not capture the economy-wide effects.

With fresh concerns about the GSP+ aftermath of the resolution passed in the European Parliament in 2022,⁴ an ex-ante assessment at a disaggregated level is useful for identifying the affected products and the magnitude of export loss. Such analysis informs the policymakers and various stakeholders, of the potential export effect of the GSP+ withdrawal. In addition, identifying the associated labour market vulnerability is vital in understanding the magnitude of the socio-economic cost of the loss of GSP+ preference status. The primary objective of the study is to estimate the potential effect of GSP+ withdrawal on Sri Lanka's exports to the EU-28 and labour force. The specific objectives of the study are to estimate the product-level effect of GSP+ withdrawal to identify the most vulnerable products accounting for the utilisation ratio, simulate the distribution of the labour market effect of export loss geographically, and simulate the distribution of the labour market effect across different labour groups including female workers and low and medium-skilled workers.

Understanding the geographical distribution of the labour market effect resulting from the withdrawal of GSP+ is crucial for two reasons. First, the labour market effect of GSP+ withdrawal can be disproportionate for more vulnerable segments of the labour force. For example, more women and low and medium-skilled workers,⁵ are employed in the RMG sector, making them more vulnerable to the associated negative effects of a GSP+ withdrawal. Simulating the effect across diverse labour groups provides insights into the differential vulnerabilities within the labour force. This nuanced understanding is essential for designing inclusive policies that safeguard the livelihoods of vulnerable groups, minimising the socio-economic costs amidst economic shocks. Second, ex-ante knowledge of the distributional effect allows policymakers to target region-specific interventions, tailoring economic support measures to areas most affected by export losses. Geographical targeting can mitigate localised unemployment and associated socio-economic effects, fostering regional community resilience. The localised adverse labour market effects –unemployment and reduced wages– are associated with populist political responses, the disintegration of social networks, and community-level negative health outcomes like drug usage and suicides (Adda & Fawaz, 2020; Autor et al., 2014; Autor, Dorn, & Hanson, 2013; Autor, Dorn, & Hanson, 2016; Colantone & Stanig, 2018; Pierce & Schott, 2020).

This study contributes to the literature on the economic impact of NRTP like GSP+ providing a comprehensive ex-ante analysis of the effect of GSP+ withdrawal (Ridley & Shirin, 2025; Ritzel & Fiankor, 2024; UNCTAD, 2024). The major contribution of this study is estimating the export effect of GSP+ withdrawal using a PE framework at HS-six-digit disaggregation and extending the analysis to estimate the labour force vulnerability. Moreover, a gender-disaggregated analysis of the labour market impact contributes to the growing literature on gender and trade showing trade policy affecting men and women differently (WTO, 2020). In addition, this study provides evidence for the role of trade and export-oriented manufacturing in achieving inclusive growth by generating jobs for vulnerable social groups like women and low-skilled rural workers (Calvo, Duarte, & Sarasa, 2024; Rocha & Piermartini, 2023).

⁴ The resolution raised concerns about the country's compliance with human rights and governance standards, specifically citing issues such as the erosion of judicial independence, restrictions on freedom of expression, inadequate protection of minority rights, and ongoing violations of international labour standards (Delegation of European Union to Sri Lanka and Maldives, 2023).

⁵ The classification of workers into low, medium, and high-skilled groups was done using the International Labour Organization (ILO) standards (Table 1 in Appendix 2). The 'skill level' captures the complexity and variety of tasks associated with an occupation and the required level of education and experience. It does not reflect the degree of specialisation or how well an individual performs their job.

This study employs a PE analysis using the SMART tool,⁶ in the World Integrated Trade Solutions (WITS) (Amjadi et al., 2006). The top 200 GSP+ eligible products exported by Sri Lanka to the EU-28 in 2019 as the base year, were used for PE simulations. GTAP sector-specific Armington elasticities between the import sources were used for simulations to improve the accuracy of estimates (Amjadi et al., 2006; Wijesinghe & Rathnayake, 2023; Wijesinghe & Yogarajah, 2022). The estimated export losses at HS six-digits were mapped to the International Standard Industrial Classification Revision Four (ISICr4), two-digit sectors, after adjusting for the utilisation rate of GSP+, for the second-stage simulation for employment effects. The PE results estimate that under MFN tariffs, estimated exports to the EU-28 will be USD 2.12 Bn, a contraction of 36.7% or USD 1.23 Bn, from the base year 2019 exports of USD 3.35 Bn to the EU-28. The export losses are more concentrated in the wearing apparel and fisheries sectors. The associated labour force vulnerability will be 4.99% of industrial employment in 2019, where the majority is concentrated in the apparel industry. About 69% of vulnerable employees in the wearing apparel sector are female low and medium-skilled workers.

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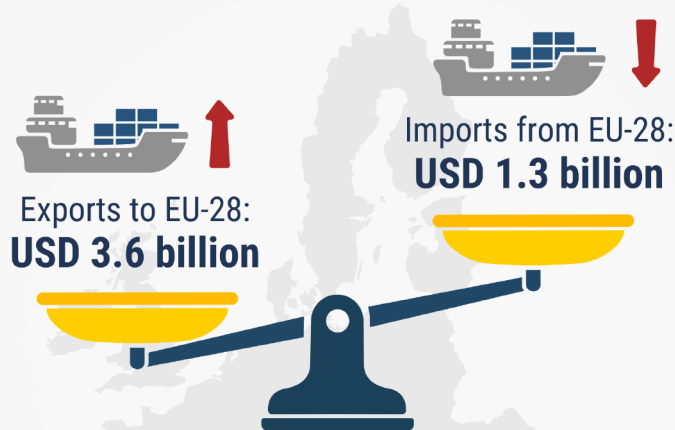
The paper is structured as follows: The second section provides a background detailing EU-28 and Sri Lanka bilateral trade, GSP+ preference status, utilisation rates, and labour force characteristics of sectors benefiting from the GSP+. The third section outlines the methodology and data detailing the PE model used in the study and subsequent simulations for labour force vulnerability. The fourth section presents the findings from the PE analysis and the potential labour market effects following a hypothetical withdrawal of GSP+ status. It is followed by a conclusion that provides policy implications derived from the study.

⁶ SMART is the partial equilibrium (PE) modelling tool in the WITS, which is used for market analysis. This simulates the PE impact of tariff changes on trade, consumer welfare, and tariff revenues in a single market.

2. Background: Exports of Sri Lanka to the EU-28 under GSP+ and Labour Force Dynamics

In 2023, Sri Lanka and EU-28 trade reached USD 4.95 Bn, whereas Sri Lanka exported USD 3.63 Bn. The persistent trade imbalance between Sri Lanka and EU-28 trade is in Sri Lanka's favour. Since the reinstatement of the GSP+ status in 2017, Sri Lanka's exports to the EU showed a positive trend, reaching a peak in 2021 at USD 4.21 Bn (see Figure 1). Notably, the positive trade balance with the EU-28 in 2023 was USD 2.04 Bn, close to the highest surplus recorded USD 2.53 Bn in 2022. As individual economies, the United Kingdom (UK), Italy and Germany are Sri Lanka's leading export destinations within the EU-28. In 2023, Sri Lanka exported USD 0.86 Bn to the UK, followed by exports to Italy –USD 0.68 Bn– and Germany –USD 0.60 Bn (Figure 2).

Positive Trade Balance with the EU



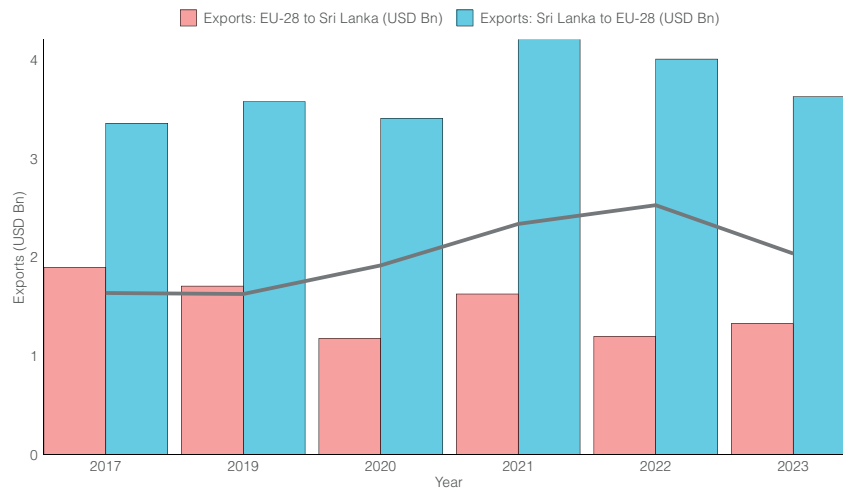
Trade Surplus: USD 2 billion In the year 2023



2017 (GSP+ reinstatement)
2021 (USD 4.2 billion worth exports, the peak year)
2023 (USD 3.6 billion worth exports)

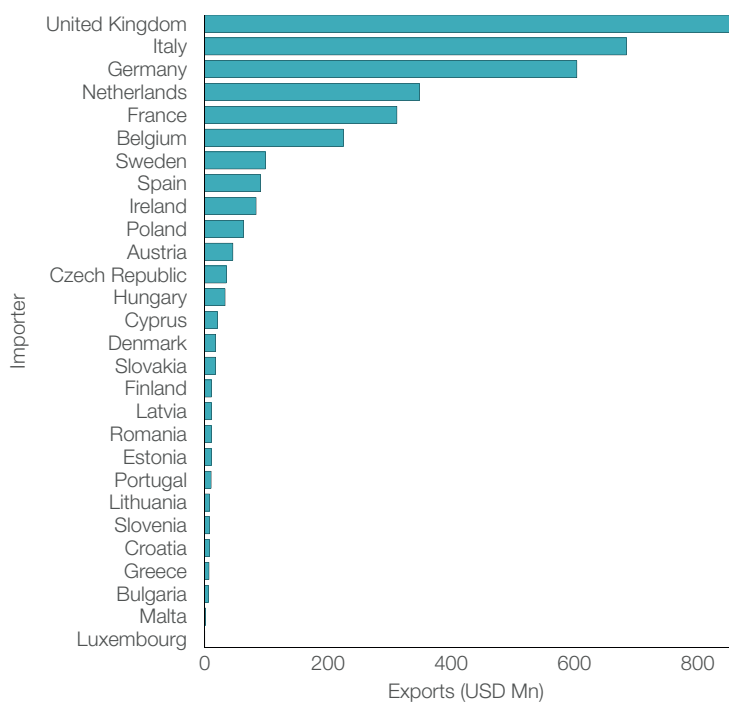
Source: Authors' calculations using data from Trade Map, ITC.

Figure 1: Trade Balance Between Sri Lanka and the EU-28



Source: Authors' illustration using data from Trade Map, ITC.

Figure 2: Sri Lanka's Exports to the Combined Market of the EU and UK: 2023



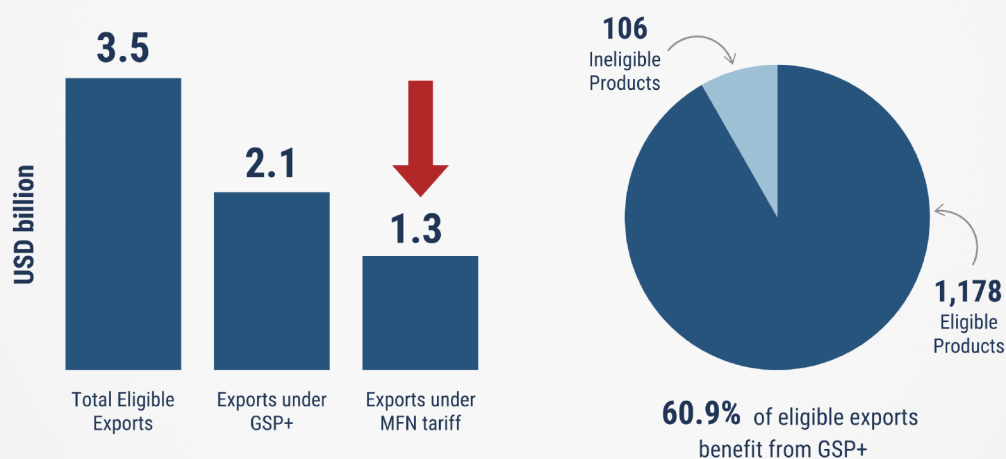
Source: Authors' illustration using data from Trade Map, ITC.

The non-utilisation of the GSP+ was due to the ineligibility for the GSP+ or the rules of origin (ROOs), which necessitate Sri Lanka to use domestic value-added to a preset percentage of the exported value to be eligible for GSP+.

Under the GSP+ scheme of the EU-28, 6,222 tariff lines are on reduced tariff, covering approximately 66% of tariff lines in the Combined Nomenclature (CN)⁷ (International Trade Centre and Department of Commerce, Sri Lanka 2017). Out of 1,284 products exported by Sri Lanka at HS six-digits in 2019,⁸ 1,178 products were eligible for the GSP+. Sri Lanka exported USD 2.15 Bn to the EU under GSP+ out of USD 3.53 Bn in total eligible exports in 2019 implying only a 60.90% utilisation rate. The non-utilisation of the GSP+ was due to the ineligibility for the GSP+ or the rules of origin (ROOs), which necessitate Sri Lanka to use domestic value-added to a preset percentage of the exported value to be eligible for GSP+. Notably, RMG exports, the major export of Sri Lanka to the EU-28 had a utilisation ratio of 52.30% in 2019. The RMG industry of Sri Lanka uses raw materials originating from countries that are not eligible for cumulation, lowering the utilisation of GSP+⁹. For example, Sri Lanka imported 37.56% of fabrics in 2022 under HS Chapter 60 from China which is not a country in the group Sri Lanka is allowed to cumulate. Similarly, 26.23% of cotton imports under HS Chapter 52 were from China.

GSP+ Utilisation by Sri Lanka in EU Exports

6,222 tariff lines are on reduced tariff, covering approximately **66%** of tariff lines in Combined Nomenclature



Source: Authors' calculations using data from Trade Map, ITC.

⁷ The Combined Nomenclature (CN) is the EU's eight-digit coding system, comprising the Harmonised System (HS) codes with further EU subdivisions.

⁸ As HS six-digit level utilisation ratios are available only for 2019, GSP+ utilisation and eligibility statistics are calculated using 2019.

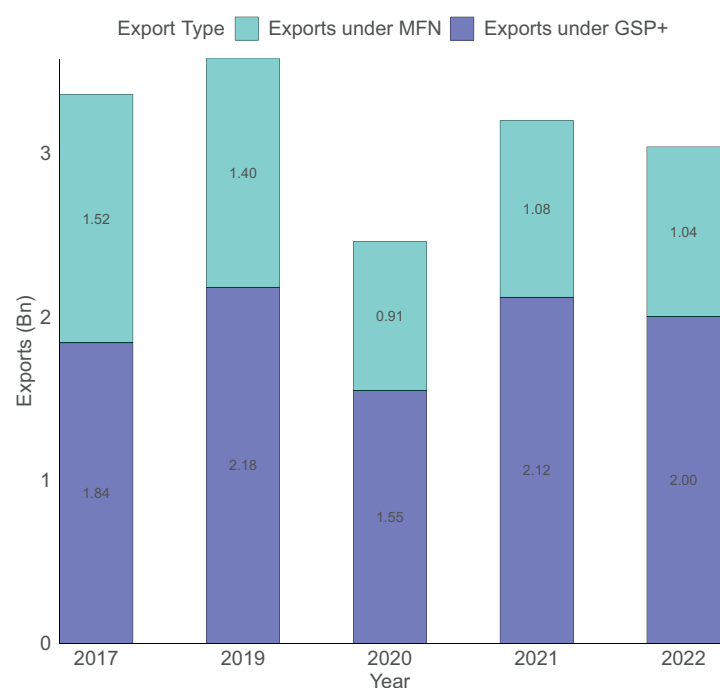
⁹ The EU allows regional and bilateral cumulation. In the bilateral cumulation materials originating from the EU can be integrated into products manufactured in a GSP country and then considered as originating in the respective GSP country. Similarly, Sri Lanka can cumulate regionally using materials originating from Bangladesh, Bhutan, India, Nepal, and Pakistan.

The utilisation ratio can be defined as the ratio between exports which use the preferential treatment and those covered by the scheme. The EU publishes data on the utilisation ratio at the HS chapter level. Accordingly, the chapter-level utilisation can be defined as in equation 1.

$$UR = \frac{\sum_{i=1}^n UR_i X_i}{\sum_{i=1}^n X_i} \quad (1)$$

where i is a product in chapter c with export value x_i , UR_i is the product level utilisation rate which is not available. The EU reports utilisation rates at the chapter level and the most recent data availability is for 2019. The utilisation rate of the GSP+ varies among the different export sectors of Sri Lanka, from 1.40% in optical, photographic, medical or surgical instruments to 99.90% in meat, fish or crustacean preparations. The variance in the utilisation rate necessitates weighting the estimated losses of exports from a GSP+ withdrawal for the utilisation rates.

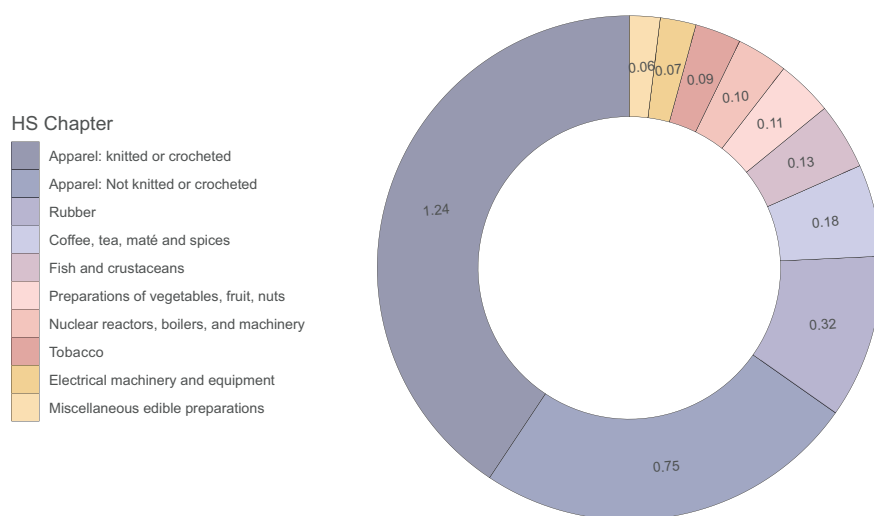
Figure 3: Sri Lanka's Exports to the EU Under GSP+: 2019–2023



Note: Since Brexit occurred in 2020, the Figure considered EU-28 for the years 2017 and 2019, following EU-27 for 2020, 2021 and 2022.

Source: Authors' illustration using data from Trade Map, ITC and European Commission's country report for the Democratic Socialist Republic of Sri Lanka.

Figure 4: Composition of the Top 10 Sri Lankan Exports (HS Chapters) in the EU Market in 2023



Source: Authors' illustration using data from Trade Map, ITC.

Even after the exports are weighted by the utilisation rate, Figure 3 shows that Sri Lanka exports a substantial amount to the EU-28 under GSP+. The negative effect of preference erosion will be distributed across diverse sectors as a function of the sectoral share of exports to the EU-28 from Sri Lanka and the sectoral utilisation rates. The sectoral employment vulnerability depends on the negative export effect after preference erosion and the sector's intensity of GSP+ utilisation. Sri Lanka exported a total of 1,301 different products at the HS six-digit level to the EU-28 in 2023 including 194 HS six-digit products under the RMGs, 44 seafood products, 35 products related to coffee, tea, mate and spices, 32 rubber products, and 18 products related to preparations of vegetables, fruits and nuts. However, as shown in Figure 4, exports are highly concentrated over RMGs with a share of 54.90%.

Given that the HS chapter-level utilisation rate data is available for 2019 only and simulations are done taking the same year as the base year, from this point on, this paper uses 2019 data to describe the tariff structure faced by Sri Lanka and the expected changes to the tariffs after a GSP+ withdrawal. As shown in Table 1, all the top 10 imports by the EU-28 from Sri Lanka, receive GSP+ preference at a zero-tariff rate. The corresponding MFN tariff rates range from 0% to 26%.¹⁰ For example, the RMG sector, which currently enjoys duty-free access, would face tariffs ranging from 6.3% to 12% for products at the HS six-digit level. Similarly, rubber products would be subjected to tariffs of up to 4.5%, and seafood products would face tariffs of up to 15%.

¹⁰ Calculated for 2019 as the base year considered for simulations was 2019.

Sri Lanka's Export Diversity to the EU in 2023 Across Key Product Categories



194 products under the
ready-made garments



35 products related to
coffee, tea, mate and spice



44 seafood products



32 rubber products

1,301
products at the
HS six-digit level



18 products related to preparations
of vegetables, fruits and nuts

Source: Authors' calculations using data from Trade Map, ITC.

High utilisation rates in key sectors like seafood, and rubber show that these sectors use GSP+ preference, effectively making them vulnerable to the adverse effect of GSP+ withdrawal. For example, the fisheries sector has a high utilisation rate of 99.5%. Conversely, the manufacture of measuring, testing, navigating and control equipment and the manufacturing of electronic components and boards have an extremely low utilisation rate of 1.4%. The manufacturing of electronics is deeply involved in global value chains using foreign value-added products widely reducing the utilisation of GSP+ preference. In contrast, agricultural products like fisheries products use more domestic value-added content increasing the utilisation rates. Notably, a high utilisation rate will not generate a high trade effect if the tariff differential is small. Gloves, mittens and mitts, of vulcanised rubber have a 96.4% utilisation rate but the tariff differential is just 2.7%.

Table 1: EU-28 Imports From Sri Lanka, Tariff Under GSP+, and MFN Tariff for the Top 10 HS Six-Digit Imports by EU-28 in 2019

HS Chapter	HS Code	Product Label	Utilisation Rate	EU-28 Imports from Sri Lanka in 2019 (USD Mn)	Current Simple Average Tariff (%)	MFN Tariff (%)
62	621210	Brassieres	52.3%	265.99	0	6.5
40	401290	Solid or cushion tyres	96.4%	171.99	0	3.0
61	611610	Gloves, mittens and mitts,	52.3%	168.89	0	8.5
61	610711	Men's or boys' underpants and briefs of cotton	52.3%	153.06	0	12.0
61	610910	T-shirts, singlets and other vests of cotton	52.3%	135.84	0	12.0
62	620342	Men's or boys' trousers, bib and brace overalls, breeches and shorts, of cotton	52.3%	124.57	0	12.0
61	611120	Babies' garments and clothing accessories of cotton,	52.3%	115.47	0	10.5
61	610821	Women's or girls' briefs and panties of cotton	52.3%	96.35	0	12.0
40	401519	Gloves, mittens and mitts, of vulcanised rubber	96.4%	51.90	0	2.7
20	200819	Preparations of vegetables and fruits	96.6%	5.27	0	10.0

Source: Authors' compilation using WITS and Trade Map data.

The labour force characteristics of the export sectors that depend more on the GSP+ would determine the distributional effect of the GSP+ withdrawal. The rubber manufacturing sector, with utilisation rates of 96.40%, employed 22,234 workers in 2019. The seafood sector, heavily reliant on GSP+ benefits with a utilisation rate of 99.50%, employed 6,582 workers and could face tariffs of up to 15% if GSP+ benefits are withdrawn (Table 2). The wearing apparel sector employed 463,736 workers and 327,809 or 70.69% of these workers are female according to the Labour Force Survey (LFS) 2019. Table 2 shows the distribution of workers by gender, rural–urban sector, and occupation type in three main export sectors that benefitted from GSP+. The workers in the wearing apparel sector are primarily engaged in low and medium–skilled categories like craft–related roles, totalling 223,003, followed by elementary occupations with 54,849 workers (LFS, 2019).

In the fish processing sector, the majority of the workers are craft–related workers, totalling 2,876, and elementary occupations with 1,450 workers. Similarly, the major employment roles in the rubber manufacturing sector include elementary occupations, with 9,536 workers. GSP+ beneficiary sectors also employ more rural workers. The share of rural workers in the total labour force employed in each sector, 79.11% in the wearing apparel sector, 74.43% in the fish processing sector, and 82.99% in the rubber manufacturing sector. More importantly, the wearing apparel sector and manufacturing rubber sector employ workers from the marginalised estate sector (Table 2). Data on sectoral labour force distribution show that, GSP+ benefits female, and low–skilled workers from rural and estate sectors, highlighting the inclusive developmental effect of GSP+. Consequently, a GSP+ preference erosion can amplify the vulnerability of these specific labour groups.

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Percentage of Rural Workers in Labour Sectors Driving Export-Oriented Industries



79.1%

in the
wearing apparel
sector



74.4%

in the fish
processing
sector



83%

in the rubber
manufacturing
sector

Source: Authors' calculations using Labor Force Survey Data, 2019.

Table 2: Key Labour Force Characteristics in the Top Three Exports From Sri Lanka to EU-28

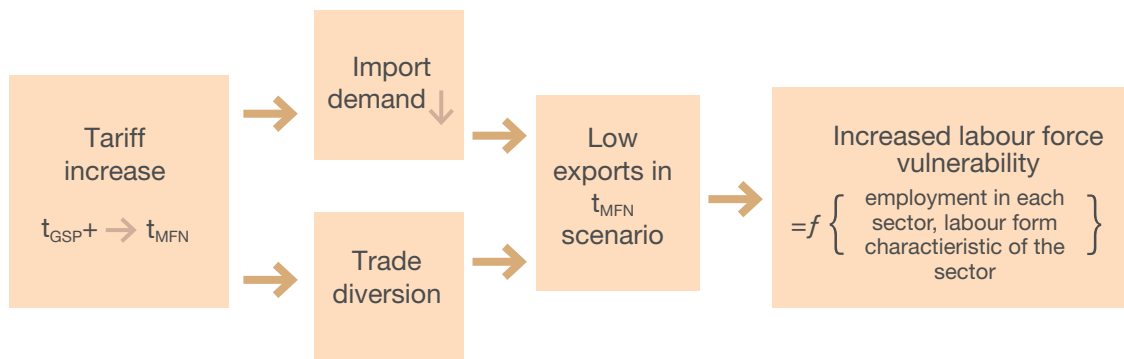
Characteristics		Manufacture of Wearing Apparel (Number of Workers)	Processing of Fish, Crustaceans and Molluscs (Number of Workers)	Manufacture of Rubber Products Including Tyres and Tubes (Number of Workers)
ISICr4 code		1410	1020	2211, 2219
Total number of workers	Male	135,927	3,169	16,790
	Female	327,809	3,413	5,444
	Total	463,736	6,582	22,234
Occupation type	Unclassified	620	91	0
	Senior officials and managers	16,341	667	301
	Professionals	4,450	0	589
	Technicians	63,863	0	3,224
	Clerks	10,541	568	910
	Service workers	4,243	0	0
	Skilled agricultural and fishery workers	0	670	1,239
	Craft and related workers	223,003	2,876	1,935
	Plant and machine operators	85,825	260	4,501
	Elementary occupations	54,849	1,450	9,536
Sector	Urban	84,949	1,683	1,329
	Rural	366,891	4,899	18,542
	Estate	11,896	0	2,363

Source: Authors' compilation using LFS 2019 data.

3. Methods and Data

An increase of GSP+ to MFN rates contracts import demand by the EU-28 for products exported by Sri Lanka. The associated export loss makes sectoral employment vulnerable affecting women, low and medium-skilled, and rural workers in Sri Lanka. The mechanism of the effect is visualised in the conceptual framework in Figure 5. The analytical framework of the study is based on this conceptualisation. Tariff rise from GSP+ preferential tariffs to MFN tariffs has two effects on the import value by the EU-28 (see Figure 5). First, the rise of the general price index decreases the demand for Sri Lanka's exports. Second, as the relative price of the exports by Sri Lanka is higher now, import demand by the EU is diverted to an exporter with a lower relative price, creating a trade diversion effect. For example, when the export price of Sri Lanka rises after the withdrawal of GSP+ status, the relative prices of Sri Lanka's exports rise too, creating a trade diversion to the competitors which utilise GSP preferences like GSP, GSP+, and Everything but Arms (EBA). Consequently, trade will be diverted away from Sri Lanka to countries which are more competitive under MFN tariffs.

Figure 5: Conceptual Framework



Source: Authors' illustration.

The choice of a PE model was motivated by a few reasons. First, PE models allow disaggregated impact assessment more importantly at HS six-digits level providing product level information. Although PE models do not capture the economy-wide effects as in Computable General Equilibrium (CGE) models, the latter estimate the models at the aggregated sector level. When the trade shock is introduced, it is applied for the sector irrespective of the GSP+ eligibility of the sector. Second, the utilisation ratios are available at the HS chapter level, limiting its applicability to aggregations like GTAP sectors. Third, estimating the impact at the product level allows aggregating them into ISICr4 sectors using a suitable mapping to calculate embedded employment. The industry output data is available at ISICr4 sectors. PE models also allow the quantification of both effects, trade diversion and trade creation. Thus, the PE estimates were conducted using SMART, an embedded estimation tool in the WITS (Amjadi et al., 2006; Jammes & Olarreaga, 2005; Laird & Yeats, 1986). The estimates in SMART require three elasticities: export supply elasticity, import elasticity, and Armington substitution elasticity. On the supply side, the paper assumes an infinite supply elasticity, so that the quantity adjusts to meet the increased demand without affecting prices. This assumption is plausible within the Armington framework, which models substitution between import sources in a way that prevents the producer with the lowest price from capturing the entire market (Bajzik et al., 2020; Blonigen & Wilson, 1999; Feenstra et al., 2018; McDaniel & Balistreri, 2003).

Within the Armington framework used in PE modelling, a representative agent optimises welfare in two stages on the demand side. Initially, the agent allocates expenditures to the composite good based on the import demand elasticity. In the second stage, the expenditure is distributed among dissimilar product varieties within the composite good, guided by the Armington substitution elasticity. Given the empirical variations of Armington elasticities, this study conducts simulations using sector-specific Armington elasticity values from the GTAP (Hertel & Mensbrugghe, 2016). These GTAP sectoral Armington elasticity values are considered methodologically superior to default values, enhancing accuracy (Wijesinghe & Rathnayake, 2023). Armington elasticities between sources are utilised for the simulations, aligning with the GTAP model's assumption of uniform agent behaviour across regions, with each region encountering the same substitution elasticity for a given sector (Hertel et al., 2007). The simulations were done at HS six-digit products using the corresponding GTAP sectoral Armington elasticity. The export effect was weighted by the utilisation rates using the below equation.

$$Effect_i = \delta X_i UR_c \quad (2)$$

where i stands for a product at HS six-digits in HS chapter c , δX_i is the estimated export effect from PE simulations and UR_c is the utilisation rate of the chapter which includes the HS six-digit product. By construction of equation 2, the export effect is a linear function of the utilisation ratio. Thus, the actual shock of GSP+ loss will be determined by the utilisation ratio at that time point. The estimated export effects at the product level are summed to get the export effect by ISICr4 sectors, as shown in equation 3. The HS codes were mapped to the relevant ISICr4 two-digit sector, using HS codes to ISICr4 two-digit sector concordance. The sectoral export effect was used for the second-stage simulation to quantify the workforce vulnerability.

$$Effect_s = \sum_i^s Effect_i \quad (3)$$

The sectoral labour force vulnerability at ISICr4 two-digit manufacturing sectors was estimated using the concept of embedded employment content of the exports. The embedded employment in the decreased imports by the EU-28 due to GSP+ withdrawal is calculated as a proxy for the labour market effect of GSP+ withdrawal, using a measure similar to “import trade intensity of the local labour market” in the economic literature (Partridge et al., 2017). Employment embedded in imports proxy the possible labour market effect, which is used to identify the products that are more vulnerable to import competition. The measure is calculated as below.

$$enx_{st} = nx_{st} * (elk_{st} / ylk_{st}) \quad (4)$$

where the right-hand side term in the parenthesis measures the employment per USD of output in industry s year t . The term nx_{st} is the decreased imports by the EU-28 from Sri Lanka in the aftermath of a GSP+ withdrawal as estimated by PE modelling. Accordingly, the left-hand term measures the vulnerability of the workers as the number of embedded workers decreased imports by the EU-28. The employment effect calculated at ISICr4 two-digit level as the sectoral output data calculated from the Annual Industry Survey of Sri Lanka, is reliable only up to two digits. The survey weights given are accurate for two-digit sectors. The estimated sectoral employment effect was decomposed using the labour shares by gender and skill groups using LFS survey data for 2019. However, a caveat exists due to the endogeneity of the GSP+ in labour market equilibrium. Assuming that the GSP+ loss is due to non-compliance with labour standards, the number of employees under such conditions can differ from those under GSP+ in 2019. Thus, the estimated labour effect can be an overestimate or an underestimate. As the effect of labour standards on the labour market equilibrium is unknown, the direction and the magnitude of this bias cannot be exactly predicted provided the parsimonious PE model employed in the paper.

The PE estimates, and the labour force effect estimates which use the former for calculations, should be interpreted with some caveats in mind. First, the estimates do not capture the input–output linkages. For example, loss of exports to the EU may have multiplier effects on the economy affecting the other sectors. A possible layoff of resources used in one sector can be absorbed by another sector increasing its output. Conversely, when a sector contracts its demand for goods produced by another sector also goes down. A household–level income effect also transmits through the economy by reduced demand for goods and services. However, the PE estimates take a product as stand–alone and ignore the multi–sectoral linkages. Second, industries may find new markets to cope with the export and labour market effect. Third, the loss of GSP+ may harm existing investments in the country and cause investment flight amplifying the effect. The PE estimates do not capture such chain effects. Fourth, the employment effect will be realised with a lag, as termination of the labour contracts is inflexible. Thus, the labour force effect estimated in this paper needs to be considered as an indicator of the vulnerability of the sectors to GSP+ withdrawal.

The export effect is more complex than estimated in PE models. For instance, lower compliance costs due to no ROO restrictions could compensate for the erosion of the margin of preference, potentially leading to minimal or even higher realised exports under no–GSP+ compared to GSP+. However, producers can export under MFN without adhering to ROOs if they find such cost advantages, even under the GSP+ programme. The high ratio of utilisation in certain sectors implies that there is no such cost advantage. Thus, the utilisation ratio can be considered a reasonable proxy for the existence of the cost advantage of non–compliance.

This study used Sri Lanka's top 200 GSP+ eligible products exported to the combined market of the EU and UK or the EU–28, for the PE simulations. As shown in Table 3, in 2019, Sri Lanka exported 1,284 product lines at HS six–digits to the EU–28. The top 200 accounted for 93.70% of total exports. The substantial coverage of total exports by the top 200 justifies the use of 200 products for simulations as simulating all product lines is a tedious task. In addition, the top 200 products accounted for 94.94% of the total GSP+ eligible exports in 2019, with a value of USD 3.35 Bn out of a total of USD 3.53 Bn in 2019. Individual simulations were done to use chapter–specific utilisation rate and sector–specific Armington elasticity to increase the accuracy of the estimates. The used Armington elasticities by sector are given in Appendix Table 1.

Table 3: Share of Total Eligible Exports and Top 200 Exports From Total Exports to EU-28 in 2019

Criteria	Number of Products	Value (USD Bn)	Percentage from Total Exports (%)
Total product lines exported to EU-28	1,284	3.58	100.00
GSP+ eligible products	1,178	3.53	98.69
GSP+ eligible products weighted by utilisation rates	1,178	2.15	60.17
Top 200 products	200	3.35	93.70
Top 200 weighted by utilisation rates	200	2.03	56.87

Source: Authors' compilation using Trade Map data and eligible product list from the EU.

Import data in the base year is embedded in the SMART tool of WITS. Whenever necessary, trade data is retrieved from WITS or Trade Map for analysis. The list of GSP+ eligible products was taken from the official journal of the European Union (European Union, 2012). The utilisation rates of GSP+ by chapter level were extracted from the European Commission's GSP Statistics (European Commission, 2020). The MFN tariff rates for 2019 were used as the new rate of tariff for simulations. These MFN values were obtained from the WITS database and the existing preferential tariff under GSP+ is embedded in SMART.¹¹

As shown in Table 4, a significant portion of EU-28 imports from Sri Lanka fall within the lower MFN tariff bands, with the majority facing MFN tariffs between 0% and 20%. Notably, USD 1.39 Bn imports by the EU-28 fall within the 0–10% MFN tariff band, including 85 products at HS six-digits, while USD 2.01 Bn imports fall within the 10–20% MFN tariff band, including 106 products. Only a small fraction of imports, USD 3.84 Mn, faces MFN tariffs in the range of 20–30%. Table 5 provides trade-weighted average GSP+ and MFN tariff rates for the 200 products mapped to ISICr4 four-digit sectors. Table 5 shows the ISICr4 four-digit sectoral tariffs at GSP+ and MFN rates.

¹¹ In certain cases, the MFN value exceeded the bound tariff (BND). Hence, the BND values were used as the new rate for the products with MFN values exceeding the BND.

Table 4: EU-28 Imports From Sri Lanka Under Different Tariff Bands for Top 200 HS Codes Under MFN

Tariff Band	Imports by the EU in 2019		Number of HS Codes	
	Value (USD Bn)	%	Number of Products (HS six-digits)	%
[0,10)	1.39	40.64	85	42.50
[10,20)	2.01	58.77	106	53.00
[20,30)	0.004	0.12	1	0.50
NA ^a	0.015	0.44	8	4.00
Total	3.42	100	200	100

Note: NA denotes not applicable.

a. This category includes the EU-28 imports from Sri Lanka, where MFN is not available in the WITS database.

Source: Authors' calculations.

Table 5: Trade-Weighted Average GSP+ and MFN Tariff Rates for 200 Products Mapped to ISICr4 Four-Digit Sectors

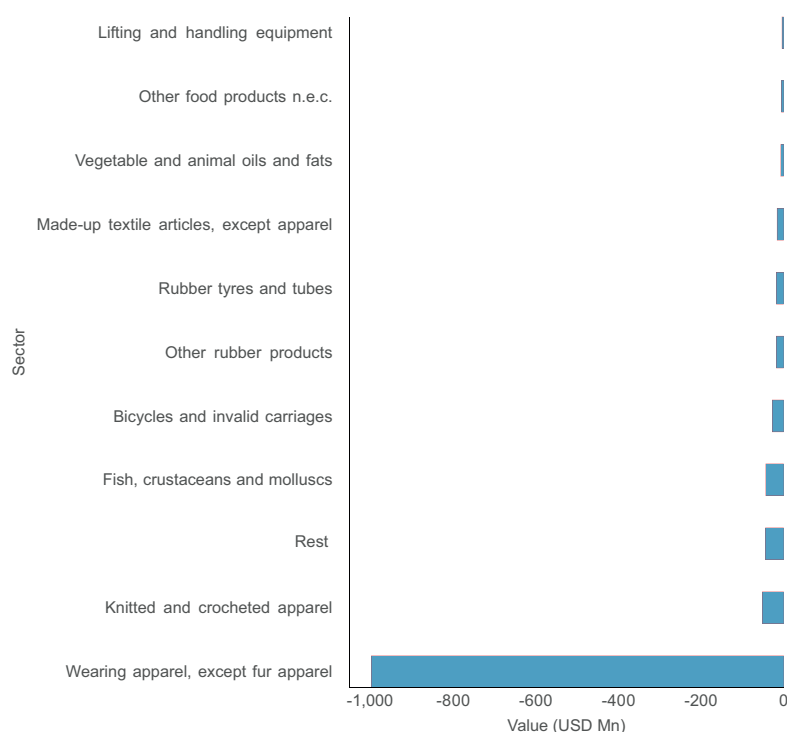
ISICr4 Code (Four-digits)	ISICr4 Description	Number of HS Codes	Weighted Average of GSP+ Tariff	Weighted Average of MFN Tariff	Exports by Sri Lanka to the EU (USD Mn)
1410	Manufacture of wearing apparel	91	0.00	10.78	2,232.73
2211	Manufacture of rubber tyres and tubes	6	0.00	3.05	180.54
2219	Manufacture of other rubber products	5	0.00	2.16	119.14
1079	Manufacture of other food products n.e.c.	4	0.00	1.33	110.00
1430	Manufacture of knitted and crocheted apparel	7	0.00	11.98	100.83
1020	Processing and preserving of fish, crustaceans and molluscs	6	0.09	12.58	82.57
1392	Manufacture of made-up textile articles, except apparel	7	0.00	8.52	47.93
3211	Manufacture of jewellery and related articles	2	0.00	0.00	47.24
0127	Growing of beverage crops	1	0.00	0.00	45.21
2710	Manufacture of electric motors, generators, transformers	4	0.00	1.23	34.55
		4	0.00	1.23	34.55

Source: Authors' calculations.

4. Results and Discussion

Overall, the movement of tariffs from GSP+ rates to MFN rates significantly reduces the EU-28 imports from Sri Lanka. After adjusting for the negative impact of the utilisation rates, the magnitude of the effect is reduced to a certain extent, albeit the negative effect of GSP+ withdrawal is still substantial. The cumulative import demand slump from the EU is estimated at USD 1.23 Bn when the product level export losses are adjusted for the utilisation rate. Under MFN tariffs, estimated exports to the EU will be USD 2.12 Bn, a contraction of 36.7% or USD 1.23 Bn, from the base year 2019 exports of USD 3.35 Bn. The magnitude of the negative effect of GSP+ withdrawal on the wearing apparel sector (Table 6) is USD 996.38 Mn or 44.63% contract from the base year.¹²

Figure 6: Export Loss of GSP+ Withdrawal at ISICr4 Four-Digit Sectors; Base Year 2019



Source: Authors' estimates.

Although the export loss for Sri Lanka is highest in the wearing apparel and knitted and crocheted apparel sectors by value (Figure 6), the percentage contraction will be the highest in exports of bicycles and invalid carriages, and will likely face a 96.20% contraction. Exports of processed and preserved fish, and vegetable and animal oils and fats are set to realise 52.42% and 38.29% contractions, respectively (Table 6). Varying degrees of export contraction is due to the differential tariff rise, difference between MFN and existing tariff, utilisation rate, and elasticity parameters. The wearing apparel products under GSP+ receive a tariff preference at 0% while the relevant MFN tariff is 10.78%. Thus, the relative increase of tariff after GSP+ withdrawal is much higher than the products like solid tyres, which have a three-percentage point tariff differential between MFN and GSP+ tariffs (Table 5). As Table 6 shows, the exports of rubber tyres and tubes will face only 9.93% export contraction.

¹² In 2019, the wearing apparel sector exports to the EU-28 was USD 2.23 Bn.

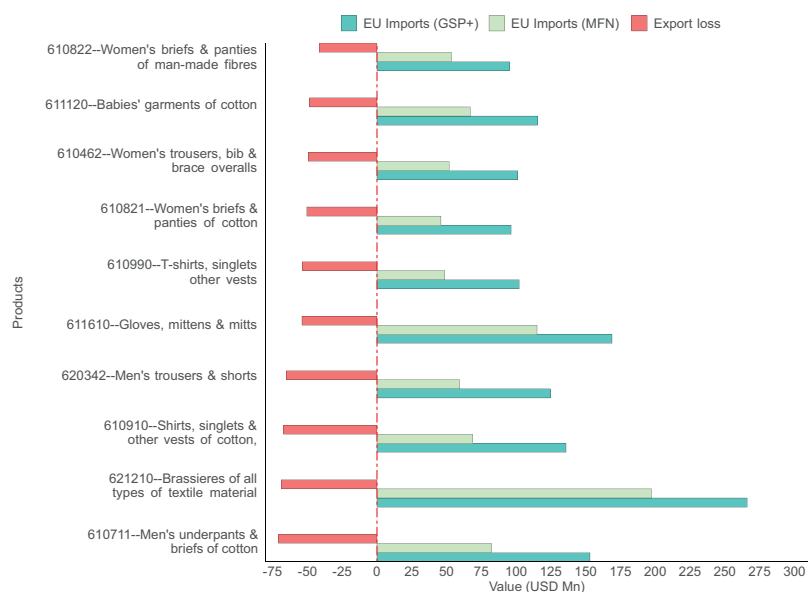
Table 6: Sectoral Export Losses for Sri Lanka Under a Scenario of GSP+ Loss: Selected Top 10 ISICr4 Four-Digit Sectors

ISICr4 Code	ISICr4 Sector	EU-28 Imports under GSP+ (USD Mn)	EU-28 Imports under MFN (USD Mn)	Fall in Imports (USD Mn)	Export Loss (%)
1410	Wearing apparel, except fur apparel	2,232.73	1,236.35	996.38	-44.63
1430	Knitted and crocheted apparel	100.83	49.45	51.38	-50.96
1020	Processed and preserved fish, crustaceans and molluscs	82.57	39.29	43.28	-52.42
3092	Bicycles and invalid carriages	28.96	1.10	27.86	-96.20
2219	Other rubber products	119.14	101.16	17.98	-15.09
2211	Rubber tyres and tubes; retreading and rebuilding of rubber tyres	180.54	162.62	17.92	-9.93
1392	Made-up textile articles, except apparel	47.93	31.90	16.03	-33.44
1040	Vegetable and animal oils and fats	18.36	11.33	7.03	-38.29
1079	Food products n.e.c.	110.00	105.01	4.98	-4.53
2816	Lifting and handling equipment	25.86	21.77	4.10	-15.84

Source: Authors' estimates.

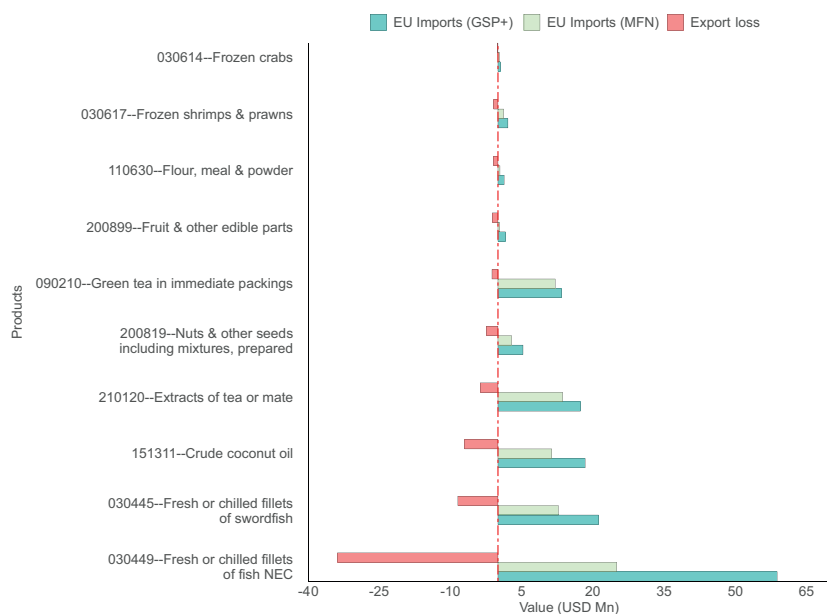
Figure 7 illustrates that men's underpants, brassieres, and shirts are among the highly vulnerable products for the negative effect of the GSP+ withdrawal. These products are among the top 10 exports from Sri Lanka to the EU. Within the affected agricultural products, fresh or chilled fillets of fish, crude coconut oil, tea products, and green tea packs are the mainly affected products by GSP+ withdrawal (Figure 8). Bicycles, solid or cushion tyres, gloves, and other rubber products are among the other manufacturing products that contract more due to GSP+ withdrawal (Figure 9). Importantly, electronic products like transformers will also realise a 10.5% or USD 1.31 Mn export contraction implying a negative impact on the growing electronics and electrical equipment exports sector.

Figure 7: Top 10 Products in the Wearing Apparel Sector by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019



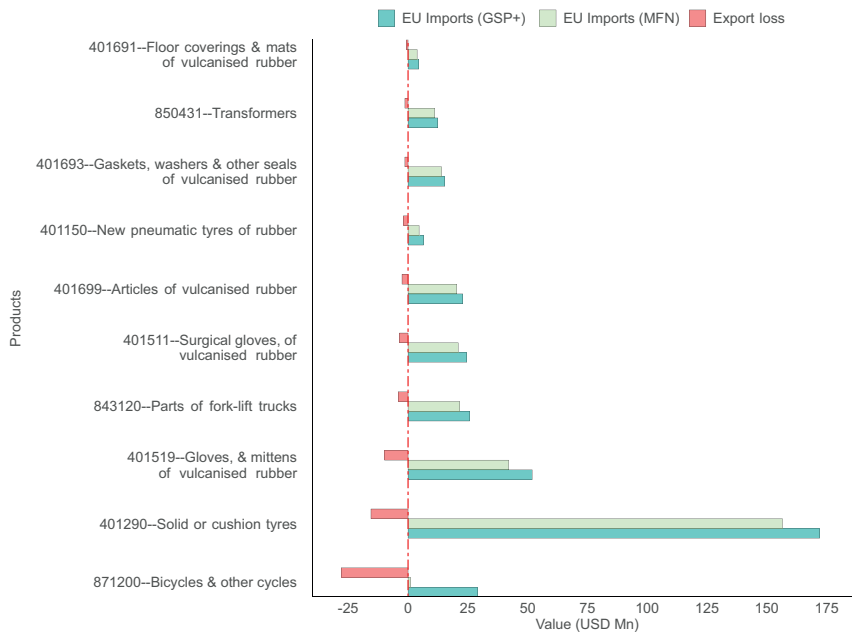
Source: Author's illustration using the PE estimates.

Figure 8: Top 10 Products in Agricultural Exports by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019



Source: Authors' illustration using PE estimates.

Figure 9: Top 10 Products in Other Manufacturing Exports by Value of Export Loss Due to GSP+ Withdrawal; Base Year 2019



Source: Authors' illustration using PE estimates.

All in all, GSP+ withdrawal is projected to affect major exports of Sri Lanka significantly. Although the wearing apparel sector does not utilise the GSP+ fully, the negative effect is large as the EU tariffs can go up by close to ten percentage points in a loss of GSP+ status. Similarly, Sri Lanka enjoys zero tariffs for most fish products exported under HS chapter 03, except for frozen shrimps and prawns (Table 6). The MFN tariffs in a post-GSP+ scenario under the MFN tariff regime will be considerably high. For example, the GSP+ tariff rate for fresh or chilled fillets of fish is zero, while the corresponding MFN tariff is 13% (Table 7).

The EU-28 is a major export destination for relatively high-technology products like transformers –HS 850431– accounting for 50% of Sri Lanka's exports to the world in 2019. The PE estimates show that after GSP+ withdrawal, Sri Lanka will lose about 10% of exports to the EU-28 in transformers.

The seafood and fish sector GSP+ utilisation is 99% and the EU-28 share of Sri Lanka's exports in HS chapter 03 –fish and crustaceans– is 46.75% in the recent period during 2021–2023. Thus, the withdrawal of GSP+ can create substantial losses to the seafood and fish industry. The EU-28 is a major export destination for relatively high-technology products like transformers –HS 850431– accounting for 50% of Sri Lanka's exports to the world in 2019. The PE estimates show that after GSP+ withdrawal, Sri Lanka will lose about 10% of exports to the EU-28 in transformers.

GSP+ withdrawal is projected to affect major exports of Sri Lanka significantly. Although the wearing apparel sector does not utilise the GSP+ fully, the negative effect is large as the EU tariffs can go up by close to ten percentage points in a loss of GSP+ status.

Table 7: Change From GSP+ to MFN for HS Chapter 03 Products Exported by Sri Lanka

HS Code (Six-digits)	Product Label	Exports (USD Mn) 2019	GSP+ Tariff Rate	MFN Tariff Rate
030111	Live ornamental freshwater fish	4.30	0	0
030119	Live ornamental fish (excl. freshwater)	1.04	0	4
030232	Fresh or chilled yellowfin tunas	13.14	0	11
030342	Frozen yellowfin tunas	0.00	0	11
030445	Fresh or chilled fillets of swordfish	21.17	0	13
030449	Fresh or chilled fillets of fish	58.81	0	13
030614	Frozen crabs	0.48	0	8
030617	Frozen shrimps and prawns	2.10	3	12

Source: Authors' compilation using data from Trade Map and WITS.

The reduced imports from the EU-28 under MFN tariffs will also make 73,574 workers vulnerable, as per the calculations of embedded employment in the imports by the EU-28. The wearing apparel sector accounts for 87.12% of the vulnerable employment or 64,102 vulnerable workers.

The reduced imports from the EU-28 under MFN tariffs will also make 73,574 workers vulnerable, as per the calculations of embedded employment in the imports by the EU-28. The wearing apparel sector accounts for 87.12% of the vulnerable employment or 64,102 vulnerable workers (Table 8). In addition, 2,172 workers in manufacturing food products and 1,850 workers in textiles production are estimated to be vulnerable to the import shortfall in the EU-28. The other manufacturing, the manufacture of rubber and plastic products, and the manufacture of machinery and equipment sectors also account for a substantial number of vulnerable workers. Overall, 4.99% of the employment in the affected sectors will be vulnerable to a tariff increase. In the wearing apparel sector, 13.47% of workers will be vulnerable (Table 8).

Table 8: Employment Vulnerability to GSP+ Withdrawal by ISICr4 Two-Digit Sectors

ISICr4 Code	ISICr4 Two-digit Description	Export Effect from Tariff Rise (USD Mn)	Number of Employees in Sector (LFS, 2019)	Embedded Employment Number in Reduced Exports	Share of Vulnerable Employees (% of Sectoral Employees)
10	Food products	59.78	315,811	2,172	0.69
12	Tobacco products	0.09	37,605	11	0.03
13	Textiles	20.69	98,228	1,850	1.88
14	Wearing apparel	1047.76	475,741	64,102	13.47
15	Leather and related products	3.08	28,100	698	2.49
20	Chemicals and chemical products	3.65	50,250	146	0.29
22	Rubber and plastic products	39.48	33,759	1,228	3.64
23	Other non-metallic mineral products	2.66	80,013	155	0.19
25	Fabricated metal products	0.39	45,957	34	0.07
26	Computers, electronics and optical products	0.02	5,603	2	0.04
27	Electrical equipment	2.59	12,662	66	0.52
28	Machinery and equipment n.e.c.	4.44	12,030	914	7.60
29	Motor vehicles, trailers and semi-trailers	0.05	7,188	3	0.04
30	Other transport equipment	27.86	4,750	681	14.34
31	Furniture	0.23	61,876	80	0.13
32	Other manufacturing	8.05	49,635	1,431	2.88
Total		1,220.83	1,473,457	73,574	4.99

Note: Total is the sum of the column statistics relevant to ISICr4 two-digit sectors, which are reported in the Annual Industry Survey of Sri Lanka. Some agricultural sectors like crop and animal production, forestry and logging, and fishing and aquaculture lack sectoral output data. The omission, however, does not reduce the ratio of accounted export loss as more than 99% of calculated export loss can be mapped to industrial sectors with output data. The total export loss accounted in the employment vulnerability calculation is USD 1,220.83 Mn while the total export loss is USD 1,230.99 Mn.

Source: Authors' estimates.

The disproportionate share of female and low and medium-skilled workers in the vulnerable sectors to the GSP+ withdrawal implies the associated distributional costs on the labour force. As shown in Table 9, 65.65% of total vulnerable employees are female low-skilled workers. In the wearing apparel sector, 69.28% of vulnerable employees are female. In the food products and textiles sectors, a substantial share of vulnerable workers are female low-skilled workers. Overall, 95.25% of workers vulnerable to GSP+ loss are low-skilled. Figure 10 depicts the spatial distribution of the vulnerable workers. Although,

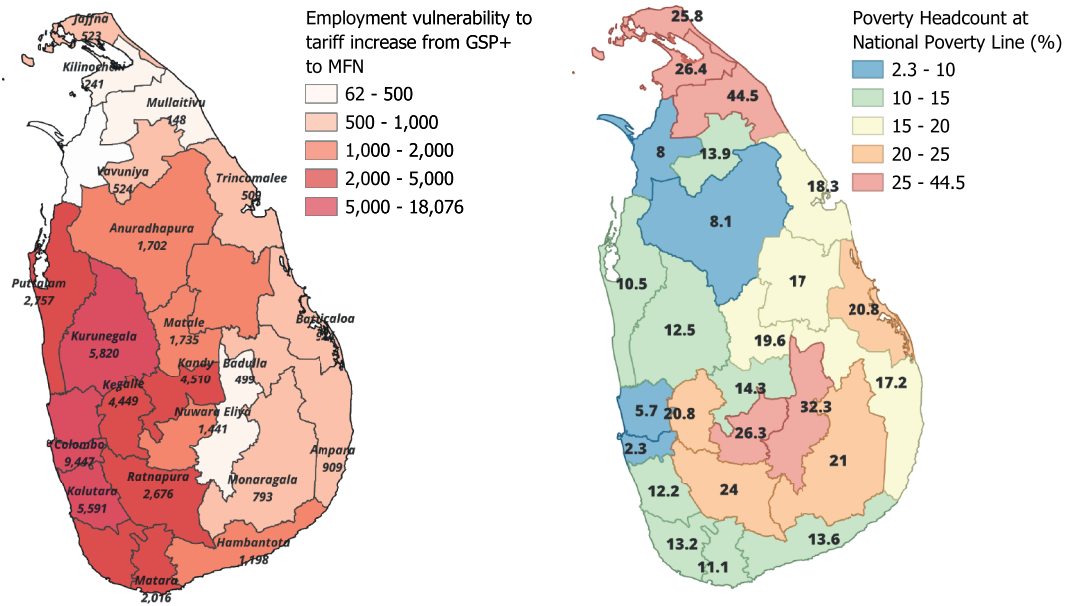
the Gampaha district, a relatively better-off district with a low poverty headcount index has the largest number of workers, districts like Kurunegala, Puttalam, Galle, and Matara with relatively high poverty headcount indices, collectively have more vulnerable workers. In addition, districts like Kegalle, Rathnapura, and Kandy districts with very high prevalence of poverty will be burdened by substantial employment vulnerability due to GSP+ loss. Thus, there is a high probability that the GSP+ preference erosion negatively affects the vulnerable segments like female workers, low and medium-skilled occupations, and poor households in Sri Lanka. This conclusion aligns with findings in the prior literature (Bandara & Narampanawa, 2015).

Table 9: Distribution of Labour Force Vulnerability Across Gender, Skill Groups, and ISICr4 Two-Digit Sectors

ISICr4 Code	ISICr4 Two-digit Description	High skilled-Male Employment Effect	Low and Medium-skilled Male Employment Effect	High skilled-Female Employment Effect	Low and Medium-skilled Female Employment Effect
10	Food products	93	1,019	42	1,018
12	Tobacco products	0	2	0	10
13	Textiles	7	548	48	1,247
14	Wearing apparel	2,074	16,815	799	44,414
15	Leather and related products	30	240	11	417
20	Chemicals and chemical products	13	78	4	52
22	Rubber and plastic products	44	838	19	326
23	Other non-metallic mineral products	8	101	1	45
25	Fabricated metal products	1	31	0	2
26	Computers, electronics and optical products	1	1	0	0
27	Electrical equipment	13	32	5	17
28	Machinery and equipment n.e.c.	61	589	27	237
29	Motor vehicles, trailers and semi-trailers	1	2	0	0
30	Transport equipment	65	585	0	31
31	Furniture	1	75	1	3
32	Other manufacturing	114	818	13	485
	Total	2,527	21,773	970	48,304

Source: Authors' estimates.

Figure 10: Spatial Distribution of Employment Vulnerability of a GSP+ Withdrawal



Source: Authors' calculations based on Department of Census and Statistics, 2019

5. Conclusion

The GSP+ preference erosion in the EU-28 market is worrying, with an estimated USD 1.23 Bn or 36.7% export loss of the base year export value for Sri Lanka. An average loss of preference margin by more than ten percentage points for key export sectors of Sri Lanka, like wearing apparel and processing fish, is heading for a significant export loss. The high negative impact is concentrated in the manufacturing sector, including rubber products, rubber tyres, and electric equipment like transformers. Thus, a potential GSP+ withdrawal will dwindle Sri Lanka's export value while impeding the diversification of Sri Lanka's export product basket towards products with high technology content.

The wearing apparel and processing of fish sectors –highly vulnerable sectors for import demand reduction by the EU employ a large number of low and medium-skilled workers and women predominantly from rural areas. The employment impact of GSP+ withdrawal is concentrated on the low-skilled and women workers. Out of 73,574 estimated employees who are vulnerable to the tariff shock, 44,414 or 60.36% are female low and medium-skilled workers in the wearing apparel sector. The spatial distribution of vulnerable workforce also shows a concentration of workers in rural areas with a high poverty headcount index. All in all, GSP+ withdrawal will shrink exports to the EU-28, paving the way for substantial socio-economic costs, and impeding the role of the NRTP of the EU-28 in promoting inclusive economic growth. The initial export loss and lagged effects of preference erosion through inhibiting product diversification into high-valued manufacturing may cause lingering effects on the economy and workforce.

Sri Lanka has a strong economic incentive to comply with the agreed-upon conventions, which is a conditionality of the tariff preference. Despite the variation in utilisation rates, the export effect of preference erosion will be substantial. Although Sri Lanka may lose the preference with gradual economic growth, at the current growth stage of Sri Lanka, GSP+ is an important tariff preference in promoting growth and generating jobs for women and low and medium-skilled workers in the formal manufacturing sector. The loss of GSP+ at a growth stage with higher average income is a much more manageable shock rather than a preference erosion at the current stage of growth. For the EU-28, investigating the effectiveness of withdrawing GSP+ as a punitive measure for non-compliance to conventions is apt to be revisited. This is because the negative effect of such a withdrawal is concentrated on the very segments in the labour force the GSP+ intends to increase the welfare.

One important caveat to the paper is that employed models do not capture the economy-wide effects and those stemming from input-output linkages. Although the employment of PE models can be justified if the economy-wide impacts are captured, the actual labour market impact can be dissimilar. Thus, extending the analysis to GTAP-based CGE models incorporated by a suitable disaggregation method is a future research area. Such studies will provide a holistic picture of the export and labour market effects of GSP+ withdrawal. Another shortcoming of the model employed in this study is the dependency on generally estimated behavioural parameters. The substitution elasticities can differ for country-pairs, indicating a deviation from the true effect. While incorporating pairwise and commodity-specific elasticities is unlikely, ex-post analysis using reduced-form methods to estimate the effect of GSP+ withdrawal in the past can be a possible future research area.

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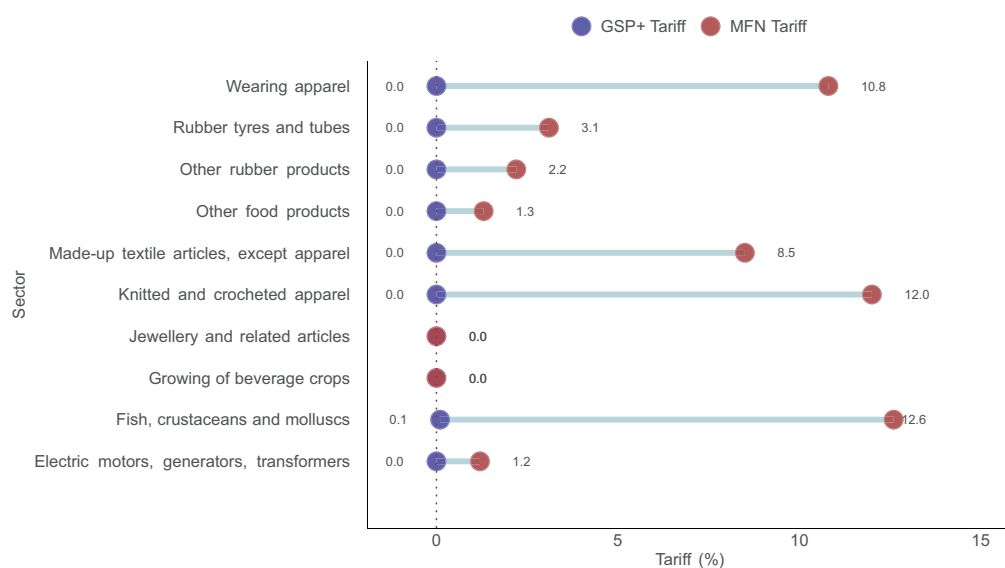
Appendix A

Table A. 1: Armington Elasticities for GTAP Categories

GTAP Category	Description	Number of HS Codes in Top 200 Products	Armington Elasticity
WAP	Wearing apparel	98	7.4
OFD	Food products n.e.c.	14	4.0
RPP	Rubber and plastic products	14	6.6
TEX	Textiles	12	7.5
OCR	Crops n.e.c.	8	6.5
OMF	Manufactures n.e.c.	7	7.5
EEQ	Electrical equipment	6	8.8
LEA	Leather products	5	8.1
OME	Machinery and equipment n.e.c.	5	8.1
OTN	Transport equipment n.e.c.	4	8.6
CHM	Chemical products	3	6.6
ELE	Electronic equipment	3	8.8
FSH	Fishing	3	2.5
NMM	Mineral products n.e.c.	3	5.8
B_T	Beverages and tobacco products	2	2.3
FMP	Metal products	2	7.5
MVH	Motor vehicles and parts	2	5.6
V_F	Vegetables, fruit, nuts	2	3.7
FRS	Forestry	1	5.0
LUM	Wood products	1	6.8
NFM	metals n.e.c.	1	8.4
OXT	Minerals nec	1	1.8
P_C	Petroleum, coal products	1	4.2
PFB	Plant-based fibres	1	5.0
VOL	Vegetable oils and fats	1	6.6
Total		200	

Source: Authors' estimates.

Figure A. 1: Preference Margin and Magnitude of Preference Erosion From Losing GSP+



Source: Authors' illustration using WITS tariff data.

Appendix B

The classification of workers into high, medium, and low-skilled groups was conducted following the International Labour Organization (ILO) standards (see Table 1). The LFS data provides the International Standard Classification of Occupations (ISCO-08) code for individual respondents, facilitating the estimation of the number of individuals in each skill category within the manufacturing industries. It is important to note that 'skill level' refers to the complexity and variety of tasks associated with an occupation and the required level of education and experience. However, it does not reflect the degree of specialisation or how well an individual performs their job.

Table B. 1: Classification of Occupation Categories Into Skill Levels

Skill Level	Aggregate	Occupations
High skill	Managers, professionals and technicians (ISCO levels 1,2 and 3)	Chief Executives, Senior Officials and Legislators
		Administrative and Commercial Managers
		Production and Specialised Services Managers
		Hospitality, Retail and Other Services Managers
		Science and Engineering Professionals
		Health Professionals
		Teaching Professionals
		Business and Administration Professionals
		Information and Communications Technology Professionals
		Legal, Social and Cultural Professionals
		Science and Engineering Associate Professionals
		Health Associate Professionals
		Business and Administration Associate Professionals
		Legal, Social, Cultural and Related Associate Professionals
		Information and Communications Technicians
Medium skill	Clerical, service and sales workers (ISCO levels 4–8)	General and Keyboard Clerks
		Customer Services Clerks
		Numerical and Material Recording Clerks
		Other Clerical Support Workers
		Personal Services Workers
		Sales Workers
		Personal Care Workers
		Protective Services Workers
		Market-oriented Skilled Agricultural Workers
		Market-oriented Skilled Forestry, Fishery and Hunting Workers
		Subsistence Farmers, Fishers, Hunters and Gatherers
		Building and Related Trades Workers (excluding Electricians)
		Metal, Machinery and Related Trades Workers
		Handicraft and Printing Workers
		Electrical and Electronics Trades Workers
		Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers
		Stationary Plant and Machine Operators
		Assemblers
		Drivers and Mobile Plant Operators
Low skill	Elementary occupations (ISCO level 9)	Cleaners and Helpers
		Agricultural, Forestry and Fishery Labourers
		Labourers in Mining, Construction, Manufacturing and Transport
		Food Preparation Assistants
		Street and Related Sales and Services Workers
		Refuse Workers and Other Elementary Workers

Source: ILO, 2012.



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