



Neelan Tiruchelvam Trust

Macroeconomic Policy and Socioeconomic Rights in Sri Lanka



A compilation of policy papers by five emerging economists
on accountability deficit, trade reforms, spatial inequality,
labour markets, and tax reform in Sri Lanka



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Published by the **Neelan Tiruchelvam Trust**, 2026

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Published in 2026

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Cover design: **Yaseen Djor**

Layout: **Softwave Holdings (Pvt) Ltd**

CONTENTS

	Foreword	1
	Introduction	2
1	Do Higher Taxes Reduce Work? A Difference-in-Differences Analysis of Sri Lanka's 2022 Tax Reform Kanishka Werawella	3
2	Assessing the Effects of Trade Policy on Informal Employment in Manufacturing Industries of Sri Lanka Nilupulee Rathnayake	32
3	A Historical Analysis of Employment and Exports in Sri Lanka: A Deep Dive into the Manufacturing Sector Thisuri Rojje Ekanayake	69
4	Sri Lanka's Spatially Skewed Growth Through Middle-Income Transition - A Deep Dive Umesh Moramudali	94
5	Sri Lanka's Accountability Deficit Yolani Fernando	124

FOREWORD

The grave Sri Lankan crises of the early 2020s were exceedingly difficult for the unemployed and working poor, pensioners and farmers, women and members of the care economy, conflict survivors and other marginalised communities, as well as households outside the economically dynamic Western Province. There were rapid multiple blows, including high inflation, particularly in food; unemployment, with a falling labour force participation rate and a rise in informal jobs; and disruptions in access to health and nutrition. This led to a major political upheaval and resulted in the adoption of select reform measures for macroeconomic stabilisation, with a particular focus on external debt.

The massive political changes were built on a groundswell of popular uprising. Economic reform measures and policies however, did not generate a similar liveliness in popular discourse around their cause and impact. Civil society organisations, particularly the ones working with marginalised communities and those seeking to advance civil and political rights, have been slow in joining deliberations on economic policy, leaving key decisions to be taken by political leaders and technocrats. The Neelan Tiruchelvam Trust initiated a Fellowship as an initial step towards stimulating a discourse on the economic situation among civil society leaders.

An important goal of this initiative is to support young scholars in conducting relevant and rigorous research on key economic challenges confronting marginalised communities, especially those rooted in macroeconomic policy. The economic crisis was in the making for decades, fuelled by large-scale, debt-funded infrastructure investments of dubious economic value; rising borrowings from external private creditors and high debt service obligations; stagnant or declining direct tax revenue and diminishing quality of public expenditure, centralised decisions on economic policy and limited public debate; and regional inequality and the absence of a cogent industrial policy. While the triggers of the recent crisis occurred in 2019–21, their impact is best understood against this structural and historical background.

Critical scholarship on the Sri Lankan economic structure and history is an important element of civil society discourse. The recent past has prompted such scholarships across the world, necessitated by repeated global or regional economic crises in the past three decades, including disruption in the Asian financial markets, the US subprime mortgage crisis, rising inequality, stagnant growth in most of the Global North and, lately, geopolitical considerations leading to disturbances in global trade. These have demanded a more incisive examination of economic orthodox theory, conventional fiscal trade, and monetary policies, as well as the relevance of political economy and structural factors in shaping economic trends.

As part of the Fellowships offered by NTT, five young scholars were supported to research a fascinating set of economic issues, including the impact of exports and direct tax reforms on employment and the labour market, regionally skewed distribution of growth and employment gains, and the politics of decision-making on economic policy. These studies offer interesting insights and set up an agenda for further critical enquiry. The studies will contribute to strengthening the much-needed discourse among civil society leaders on economic issues. We also expect them to generate interest within academia and stimulate more critical research on key economic issues of relevance to marginalised communities in Sri Lanka.

INTRODUCTION

I am pleased to introduce a collection of five papers produced as part of the Neelan Tiruchelvam Trust's Macroeconomic and Socioeconomic Rights Fellowship Programme. These papers are the products of months of rigorous research, reflection, and engagement by a cohort of emerging Sri Lankan scholars: Thisuri Rojie Ekanayake, Yolani Fernando, Umesh Moramudali, Nilupulee Rathnayake and Kanishika Werawella.

During the year of the 25th anniversary of the Neelan Tiruchelvam Trust, the Fellowship was established to honour the interests and aspirations of Dr. Neelan Tiruchelvam who adopted an intersectional and interdisciplinary lens in his work socioeconomic issues. Dr. Tiruchelvam believed strongly in the value of research that is independent, critical, and connected to the lived experiences of communities, which is demonstrated by the two institutions he founded. He understood that scholarship must serve the public good, and that ideas must be tested not only in academic debate but also in the arenas of governance, policy, and civic life.

The Fellowship was established due to the paucity of research in Sri Lanka on macroeconomic policy that is studied through a human rights lens. This collection, which is anchored in evidence and asks critical questions, will hopefully contribute to igniting conversations on issues of national importance. Their scholarship speaks not only to our country's present realities but also maps the pathways towards a more just, equitable, and democratic society.

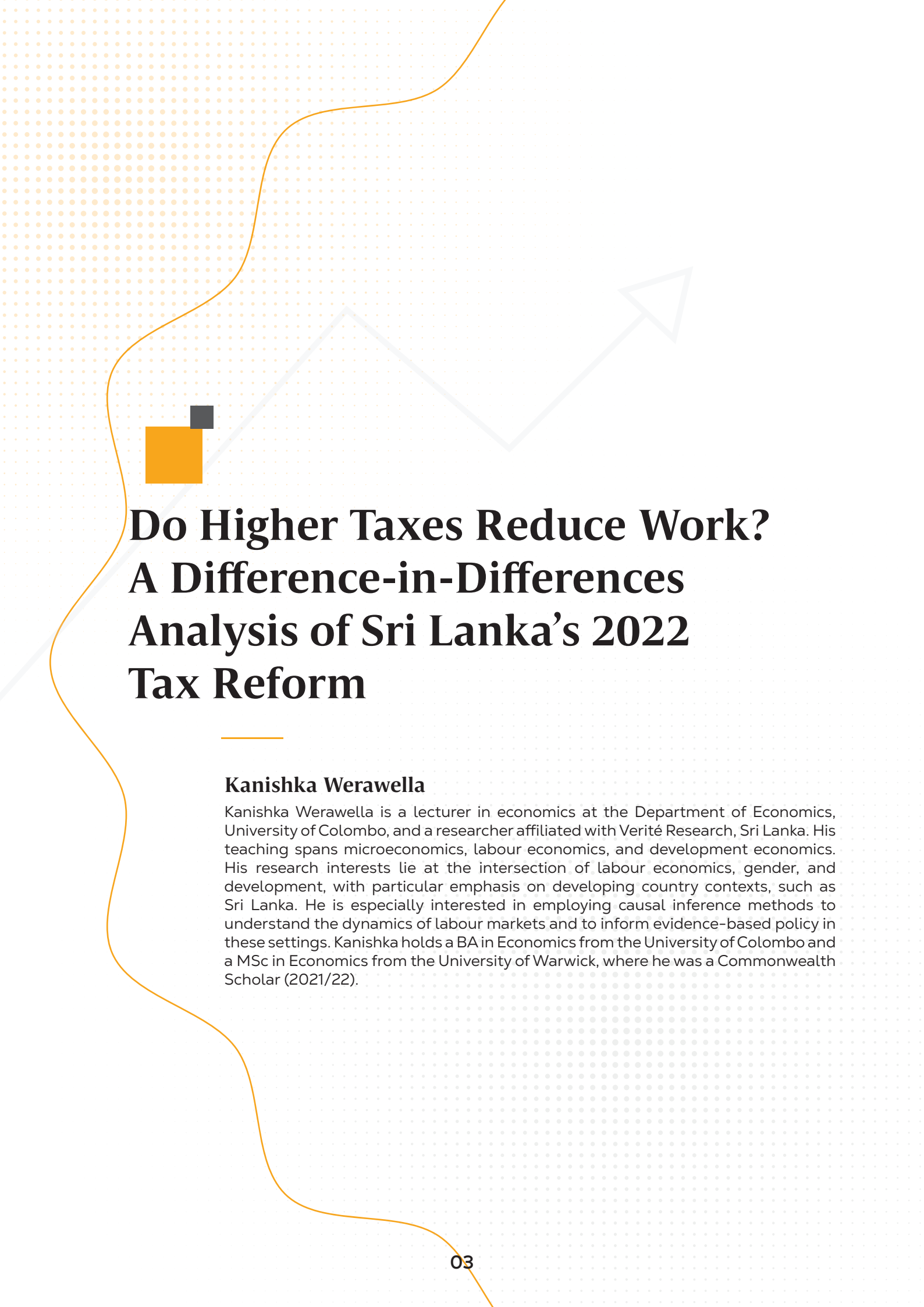
The five papers in this collection explore the complex interplay of policy, governance, and the human impact of public policies in the wake of Sri Lanka's recent economic crisis. They examine structural shortcomings in our governance and accountability structures and economic policymaking, and their role in mitigating or exacerbating existing inequities. While diverse in terms of the themes and methodology, the studies are united by a shared commitment to understanding and addressing the structural and systemic challenges that hold back progress.

By supporting and publishing this research, the Trust reaffirms its mission to nurture independent scholarship and amplify voices that can guide informed public decision-making. We hope this volume will inspire debate, deepen understanding, and spark the kind of critical engagement that Dr. Tiruchelvam championed throughout his life. Supporting rigorous, independent scholarship is an integral part of advancing our broader social justice mission. Our work with community-based organisations has demonstrated that sustainable change depends on both grassroots action, and the generation of context-specific evidence and knowledge to support advocacy efforts. Meaningful credible research deepens the understanding of policymakers and the public about the structural forces—economic, political, and social—that shape the realities faced by communities, especially those at the margins.

By fostering such scholarship, the Trust seeks to help bridge the gap between policy analysis and community action, ensuring that the voices and needs of the most vulnerable are not only heard but also incorporated in the design of solutions.

On behalf of the Trust, I extend heartfelt congratulations to the Fellows and thank everyone who made this programme possible, especially Srinivasan Iyer, mentor to the programme, without whose commitment, guidance and patience it would not have come to fruition.

Ambika Satkunanathan
Chairperson
Neelan Tiruchelvam Trust



Do Higher Taxes Reduce Work?

A Difference-in-Differences Analysis of Sri Lanka's 2022 Tax Reform

Kanishka Werawella

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Abstract

This study investigates the labour market impacts of Sri Lanka's January 2023 income tax reform, which substantially lowered the monthly personal income tax exemption threshold from LKR250,000 to LKR100,000. Using a Difference-in-Differences (DiD) approach and data from the Sri Lanka Labour Force Survey, the analysis estimates the causal effects of this policy shock on individual labour supply decisions at both the intensive and extensive margins. The results reveal a decline in hours worked among formal sector employees newly subject to taxation, consistent with substitution effects predicted by standard labour-leisure models. Simultaneously, a significant rise in employment participation suggests that households responded to reduced disposable income by mobilising secondary earners, such as spouses or youth. However, a gender-disaggregated analysis reveals that female labour supply was less responsive to the tax change. This muted response among women is not due to a lack of incentive but stems from structural constraints such as unpaid care responsibilities, occupational inflexibility, and entrenched social norms that limit their ability to adjust labour market participation. The study also finds increased movement between formal and informal employment, aligning with dual labour market theories. These dynamics underscore the complex and heterogeneous effects of tax policy in developing economies and call for complementary measures—such as targeted transfers, childcare subsidies, and gender-sensitive labour market reforms—to mitigate unintended regressive outcomes and to promote inclusive labour market responses.

1. Introduction

Tax policy is fundamental for revenue generation and fiscal stability, yet it inevitably introduces frictions into economic decision-making. One of the core concerns in the fields of labour economics and public economics is how taxation influences labour supply decisions. By altering the marginal returns to work, increased taxation can shift the balance between labour and leisure, potentially discouraging participation in the workforce and lowering overall economic output (Piketty and Saez, 2013). This effect becomes particularly salient in contexts where tax hikes significantly increase marginal tax rates faced by individuals and firms, prompting a revaluation of labour-leisure trade-offs and leading to potentially suboptimal economic outcomes (Feldstein, 1995; Saez et al., 2012).

Consequently, understanding the responsiveness of labour supply to tax changes—often measured through labour supply elasticities—has become a central focus in the literature. While most existing studies emphasise the behavioural response to overall tax rate changes, this study shifts the focus to a specific policy instrument: the adjustment of the tax-free threshold. In particular, it investigates how such adjustments affect labour supply along both the extensive margin and the intensive margin¹.

Income tax was pivotal in Sri Lanka's economic policy discourse in recent years, driven primarily by the nation's persistent fiscal challenges². Successive political administrations have frequently recalibrated the tax system, particularly income tax policies, often with an eye toward political expediency (Lakshman, 2017). This tendency to prioritise short-term fiscal goals over long-term economic stability is not unique to Sri Lanka, as political cycles often influence tax policy (Alesina and Tabellini, 1990). However, it can be stated that this focus on immediate fiscal relief has frequently overshadowed the potential microeconomic ramifications of such adjustments. While tax revisions are often framed as necessary responses to urgent fiscal shortfalls, their potential negative consequences, such as disruptions to labour market dynamics, have received comparatively little attention in Sri Lankan policymaking. This neglect of microeconomic impacts, including potential disincentives to work and invest, underscores a critical gap in the policy-making process. This highlights the need for a more comprehensive assessment of tax policy that balances fiscal imperatives with the preservation of long-term economic stability and labour market efficiency.

¹ The extensive margin refers to individuals' decisions about whether to participate in the labour force at all, while the intensive margin concerns the number of hours worked by those already employed.

² A detailed discussion of the recent tax reforms in Sri Lanka can be found in Section 1.1.

The labour supply effects of income tax have been extensively debated across theoretical and empirical traditions, with critical implications for developing economies like Sri Lanka. Classical and neoclassical models posit that thresholds create kinked budget constraints, inducing bunching behaviour as workers adjust labour supply to avoid crossing tax brackets (Saez, 2001). This substitution effect dominates at lower income levels, incentivising labour force participation, while income effects may reduce effort for those near thresholds (Chetty et al., 2011). However, Keynesian critiques emphasise liquidity constraints and social norms, particularly for women, who often prioritise immediate income needs over tax optimisation (Mortenson and Whitten, 2020). In Sri Lanka's context, where informality spans 60% of employment, these dynamics intersect with institutional enforcement capacity, complicating labour supply predictions (Bussolo and Sharma, 2023).

In developing economies like Sri Lanka, gendered labour market responses to taxation are shaped not only by income and substitution effects but also by institutional and cultural constraints. Prevailing social norms often assign unpaid caregiving responsibilities—such as childcare and eldercare—primarily to women, which limits their time availability and spatial mobility. These constraints reduce their ability to adjust labour supply in response to changes in disposable income. As a result, even when tax incentives or disincentives exist, female employment patterns may remain static, not due to lack of economic responsiveness but due to structural barriers that limit their flexibility.

Empirical studies in OECD countries reveal asymmetric responses to threshold adjustments. A 1% increase in the tax wedge reduces employment by 0.43 percentage points, with women's participation elasticities 2–3 times higher than men's due to caregiving responsibilities (Kleven and Kreiner, 2005). The U.S. Earned Income Tax Credit (EITC) expansions increased single mothers' labour force participation by 7–9%, driven by substitution effects at extensive margins (Micheltore and Pilkauskas, 2021). Conversely, Nordic tax reforms demonstrated that threshold decreases triggered hours reductions rather than exits, highlighting income effects' role for higher earners (Bastani and Selin, 2014). These findings underscore the importance of reform direction and target demographics.

A further central concern in evaluating tax policy effectiveness in developing economies is the high prevalence of informality, which significantly weakens the intended impact of such reforms. As highlighted by Bergolo et al. (2020), only 25% of informal workers in Latin America adjust their labour supply in response to tax changes, compared to 60% of formal sector workers, underscoring the limited reach of tax policy among informal populations. Similar dynamics are observed in India, where adjustments to the GST registration thresholds increased formalisation among men but had no discernible effect on women in informal employment, whose responsiveness was constrained by both low compliance and entrenched social norms (Ghosh, 2022). In Brazil, the SIMPLES reform illustrated threshold-driven informality: workers earning near the tax threshold increasingly migrated to informal jobs to avoid compliance costs. This shift disproportionately impacted women, who often balanced caregiving responsibilities and were therefore more susceptible to informal sector pressures (Fajnzylber et al., 2011). These empirical patterns align with Kleven's dual labour market model, which emphasises that formal sector thresholds primarily influence workers with enforceable contracts, while leaving informal sector participants largely unaffected (Kleven and Waseem, 2013).

Gender-specific responses further complicate tax policy design, especially in economies characterised by rigid caregiving norms. Evidence suggests that liquidity-constrained women tend to exhibit stronger participation elasticities but weaker adjustments in hours worked. For instance, expansions of the Earned Income Tax Credit (EITC) in the United States increased employment among low-income mothers by 12–15%, yet a substantial portion of earnings gains—approximately 19%—was offset by childcare costs, thereby dampening overall welfare improvements (Micheltore and Pilkauskas, 2021). Such heterogeneity in labour supply responses underscores the necessity of incorporating gender-disaggregated analysis into tax policy design, particularly in contexts where caregiving burdens and informality intersect to shape economic behaviour.

Given the broader context of heterogeneity in responsiveness, it is important to note that the effect of income taxation on labour supply in Sri Lanka remains empirically unexplored. This represents a critical gap in both academic and policy discourse, particularly in light of the mixed findings in the international literature and Sri Lanka's labour market characteristics, which are influenced by high informality and rigid caregiving norms. To address this gap, the present study investigates the causal impact of the income tax revision introduced under the Inland Revenue (Amendment) Act, No. 45 of 2022, on labour supply behaviour in Sri Lanka. Leveraging a quasi-natural experimental design, the study employs a Difference-in-Differences (DiD) approach, utilising policy-induced variation in the income tax thresholds. By comparing labour supply outcomes before (2022 and earlier) and after (2023) the reform, the analysis isolates the treatment effect by contrasting individuals directly affected by the revised tax thresholds (treatment group) with those who remained unaffected (control group). To enhance classification accuracy and mitigate potential biases, treatment and control groups are precisely defined based on the revised tax-free threshold of LKR100,000 monthly income, with a $\pm 30\%$ bandwidth applied. This

empirical strategy provides robust estimates of the tax policy's impact, offering a credible assessment of how tax reforms influence labour market behaviour.

Furthermore, this analysis goes beyond standard DiD framework by incorporating a Difference-in-Differences (DDD) model as a robustness check. By including both formal and informal sectors, I create a secondary control group (informal sector workers with comparable wages), which helps isolate the effect of the tax policy from broader macroeconomic factors. This approach allows for a more nuanced assessment of the differential impact of the tax threshold change on formal sector workers relative to their informal sector counterparts. Additionally, the study employs a quasi-experimental design using a pseudo-panel and continuous treatment to examine the impact of the income tax revision on the extensive margin of labour supply, accounting for variations in age and education. This comprehensive strategy ensures a thorough analysis of how the income tax adjustment influences labour supply across multiple dimensions in Sri Lanka.

While this study examines a rationally relevant tax reform, it is important to note two scope-related caveats. First, the analysis focuses specifically on formal sector employees earning between LKR70,000 and LKR130,000 per month; findings should therefore be interpreted within the context of this income segment. Second, the study period coincided with substantial exogenous macroeconomic shocks—most notably the 2022–2023 economic crisis—which, although addressed through the econometric framework (including DiD and DDD approaches), represent factors largely outside the boundaries of the underlying model.

1.1 Recent Income Tax Reforms in Sri Lanka (2016–2023)

Over the past decade, Sri Lanka has undergone several income tax amendments due to various internal and external factors. The 2017 tax reform, enacted through the Inland Revenue, Act No. 24 of 2017, marked a significant change in Sri Lanka's tax system. This reform aimed to support the government's revenue mobilisation efforts by simplifying and rationalising the income tax structure, broadening the direct tax base, and strengthening administrative powers while incorporating international best practices into the tax system (Central Bank of Sri Lanka, 2019).

As part of the reform, the annual tax-free threshold for employment income was increased from LKR750,000 to LKR1,200,000, whereas the tax-free threshold for personal income tax remained at LKR 500,000. Additionally, tax slabs for personal income tax, including employment income, were widened by LKR100,000 to LKR600,000 per bracket, and the highest marginal tax rate increased from 16% to 24% (Table 1). Since tax is deducted at the time of earning remuneration, this system is referred to as the Pay-As-You-Earn (PAYE) system. As the Central Bank of Sri Lanka (2019) states, these changes were introduced to enhance the progressivity of the income tax regime, potentially improving equity in tax collection. Furthermore, the reform sought to expand the tax base by reducing exemptions and preferential treatments previously available to specific sectors. The overall objectives included strengthening tax compliance, increasing government revenue, and promoting long-term fiscal stability.

However, the Inland Revenue Act, No. 24 of 2017, underwent amendments in May 2021, incorporating tax revisions initially announced in November 2019. As declared by the Inland Revenue Department in late 2019, these tax revisions were implemented effective from 01 January 2020, pending parliamentary approval (Central Bank of Sri Lanka, 2021). Effective as of 01 April 2020, the Advance Personal Income Tax (APIT) was introduced as an alternative to the PAYE tax on an optional basis. As specified in Table 1, under this scheme, employees earning an annual income exceeding LKR3 million are subject to APIT at progressive rates. The tax rate is 6% for annual income between LKR 3 million and LKR 6 million, 12% for income between LKR 6 million and LKR 9 million, and 18% for income above LKR 9 million.

As the Central Bank of Sri Lanka (2021) further states, for resident employees, APIT is deducted from remuneration with their consent. However, those who opt out of APIT must pay personal income tax based on the applicable tax slabs and rates. Conversely, for non-resident employees, APIT is mandatorily deducted from their remuneration by their respective employers, regardless of the employees' consent, as stipulated in the Inland Revenue Department public notice PN/APIT/2020-01.

Table 1: Income tax rates under 2017, 2020, and 2022 tax reforms

2017 Tax Reform		2022 Tax Reform		2022 Tax Reform	
Annual Taxable		Annual Taxable		Annual Taxable	
Income	Tax Rates	Income	Tax Rates	Income	Tax Rates
Up to 1.2 mn*	0%	Up to 3 mn	0%	Up to 1.2 mn	0%
Next 0.6 mn	4%	Next 3 mn	6%	Next 0.5 mn	6%
Next 0.6 mn	8%	Next 3 mn	12%	Next 0.5 mn	12%
Next 0.6 mn	12%	On the balance	18%	Next 0.5 mn	18%
Next 0.6 mn	16%			Next 0.5 mn	24%
Next 0.6 mn	20%			Next 0.5 mn	30%
On the balance	24%			On the balance	36%

Note:*The threshold for employment income is LKR1.2 million per annum. For personal income, a different threshold of LKR500,000 per annum applies.

Source: Central Bank of Sri Lanka (2021, 2023)

The fiscal sector imbalances in Sri Lanka, which had been accumulating over several decades, reached a critical juncture in 2022, resulting in profound socioeconomic stresses and significant political ramifications. These imbalances were primarily driven by unsustainable public debt levels, stemming from chronic budget deficits and fiscal slippages over the years. The COVID-19 pandemic and a series of policy missteps exacerbated the situation. The persistent decline in government revenue, coupled with increasing debt service obligations, made the country highly vulnerable to both domestic and global economic shocks. This vulnerability was further amplified by a series of sovereign credit rating downgrades that began in January 2020 and escalated throughout 2021 and into early 2022. These downgrades hindered the government's ability to secure the necessary foreign financing required to service its foreign debt. The depletion of usable official reserves to near-zero levels by early 2022 compounded the crisis, effectively crippling the government's capacity to meet foreign debt obligations. In response to these mounting pressures, the government announced on 12 April 2022 a temporary suspension of selected foreign debt service payments (Central Bank of Sri Lanka, 2023).

Amidst these fiscal challenges, the government sought assistance from the International Monetary Fund (IMF) for an Extended Fund Facility (EFF) in March 2022. This request for external support, along with the government's own efforts, resulted in the initiation of significant reforms in 2022 aimed at achieving fiscal consolidation and ensuring debt sustainability. These reforms were implemented as part of the broader budget support programme facilitated by the IMF EFF, and they included a series of revenue-enhancing measures designed to reverse the declining trend in tax revenue and address longstanding structural weaknesses in government revenue collection. Among the key measures introduced was the Inland Revenue (Amendment) Act, No. 45 of 2022, which was enacted on 19 December 2022. This amendment sought to address critical gaps in the tax system by introducing a range of significant changes.

With effect from 1 January 2023, one of the most notable changes was the revision of the tax-free threshold for personal income tax, which was reduced from LKR3 million to LKR1.2 million per annum (Table 1). This adjustment significantly broadened the tax base, increasing the number of individuals who would be subject to income tax. Alongside this, the tax slabs for personal income tax were also revised, with the lowest taxable threshold now set at LKR0.5 million, down from LKR3 million. This reduction aimed to capture more taxable income and increase revenue from a wider group of taxpayers. Furthermore, the amendment eliminated the expenditure relief of LKR1.2 million per annum, which had previously been allowed for calculating taxable income under personal income tax. The tax rate range for personal income tax was also significantly altered, expanding from a range of 6 percent to 18 percent to a new range of 6 percent to 36 percent, imposing higher rates on individuals with greater earnings.

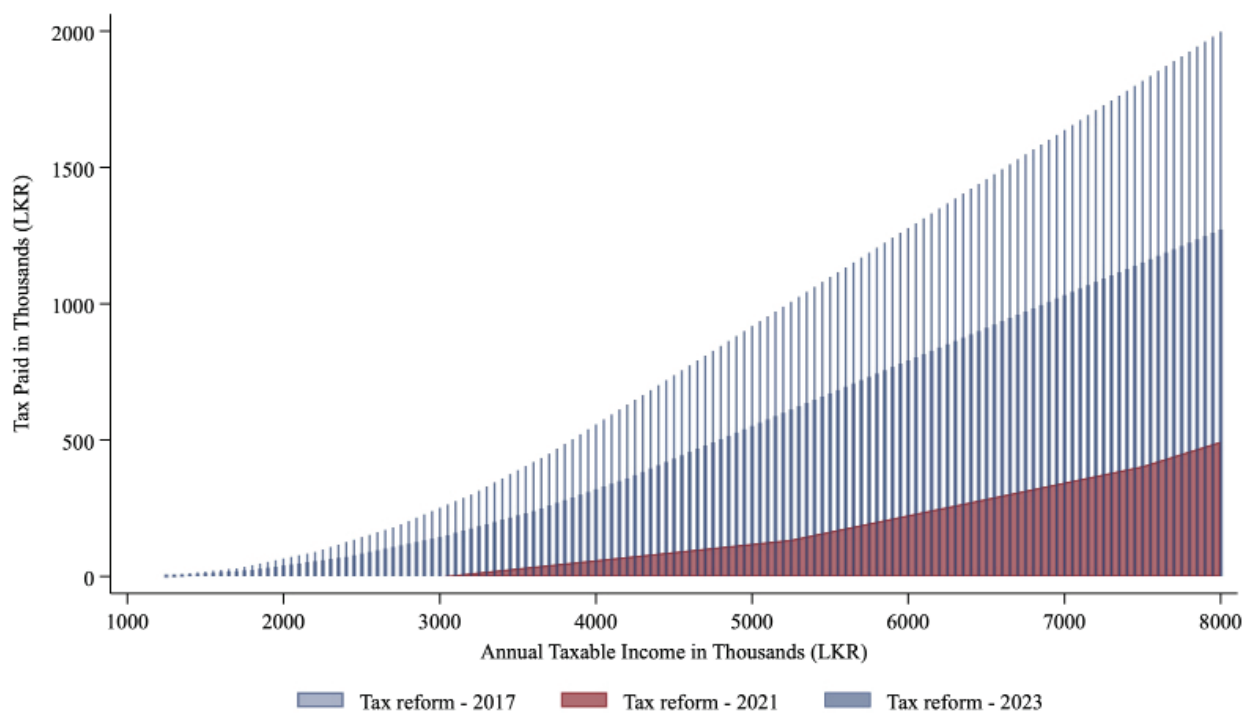


Figure 1: Income tax rates under 2017, 2020, and 2022 tax reforms

In contrast to the 2020 tax reform, the amendment introduced a mandate requiring employers to deduct APIT from employee wages, regardless of the employee's consent, starting from 01 January 2023. This measure aimed to streamline tax collection. Thus ensure greater compliance, increasing government revenue (Central Bank of Sri Lanka, 2023). By making APIT deductions mandatory, the government hoped to reduce tax evasion and ensure that individuals contributed to the tax system in a more systematic and predictable manner.

These tax reforms were implemented primarily in response to the macroeconomic fiscal challenges faced by the economy during their respective periods. As shown in Figure 1, the 2021 tax reform likely had the least impact on individuals, given its lower tax ratios, narrower tax base, and high tax exemptions. In contrast, the 2017 reform was more progressive, as it imposed a higher tax burden on high-income earners, thus targeting wealthier individuals to enhance equity in the tax system. The 2022 reform can be viewed as a middle ground, as it expanded the tax base and increased tax revenue while improving the progressivity of taxes compared to the 2020 reform. However, across all these reforms, there has been limited consideration of the microeconomic impacts, particularly how these changes may influence individual labour supply decisions, personal wellbeing, and, consequently, the broader economy. Addressing these micro-level effects could provide a more comprehensive understanding of the reforms' true economic implications.

2. Data and Methods

2.1 Data and Variable Development

This analysis mainly relies on secondary data from the Labour Force Survey (LFS) conducted by the Department of Census and Statistics of Sri Lanka. Surveys from 2020 to 2023 were used and LFS data from 2017 and 2018 were also used to conduct placebo tests. The LFS is a household survey conducted quarterly and released annually, providing information on demographics, living conditions, and labour market outcomes at both the household and individual levels.

Labour supply, the primary dependent variable of interest in this analysis, is measured using two methods: the number of employed individuals and the average number of weekly hours worked. Both measures are estimated separately for total employment, as well as for formal and informal employment, as required. Further, these two measures are transformed into natural logs and first differences of natural logs. The DCS categorises employment status into four distinct groups: employee, employer, own account worker, and unpaid family worker. Since APIT is a mandated requirement for employees, deducted directly from their salaries, only monthly wage-earning employees were considered for this study.

For the DiD analysis conducted using the pseudo-panel, nominal wages are used to estimate the “share of affected workers” by the tax adjustment. However, to develop kernel density functions in the descriptive analysis, the log of real monthly wages is used, with nominal figures transformed into natural logs and deflated using the Colombo Consumer Price Index (CCPI), based on the 2013 base year.

Since formal and informal employment play a crucial role in this study, it is important to describe how this disaggregation was developed. Broadly, informal employment refers to the portion of the labour force engaged in economic activities that are outside the legal coverage of the government. These activities are either not governed by legislation, or, where there is legislation, it is not enforced due to various factors, such as wilful avoidance or the state’s inability to monitor and enforce compliance (Gunatilaka, 2008). The DCS of Sri Lanka defines informal sector employment based on the following four criteria, in line with the conceptual framework established by the 17th International Conference of Labour Statisticians (CLS):

- 1 All unpaid family workers.
- 2 All employers and own account workers in the informal sector³.
- 3 All paid employees who do not have a permanent employer.
- 4 All paid employees whose employers are not contributing to a pension scheme or provident fund on their behalf.

2.2. Identification Strategy

This study adopts a quasi-natural experiment approach, utilising the Difference-in-Differences (DiD) method to examine the impact of an income tax increase on both the extensive and intensive margins of labour supply. To achieve this, two distinct analytical approaches are employed. The impact on the intensive margin is estimated at the individual level using the full microdata, while the impact on the extensive margin is estimated using a pseudo-panel constructed from grouped data by age and education categories⁴. The study defines the pre-period as 2022 and earlier, and the post-period as 2023, following the implementation of the Inland Revenue (Amendment) Act, No. 45 of 2022, which came into effect on January 1, 2023.

To estimate the impact of the tax increase on the intensive margins of labour supply, the DiD model follows the framework proposed by Card and Krueger (1994) in their study on the effects of minimum wages on employment. In their analysis, New Jersey, where the minimum wage was increased, served as the treatment group, while Pennsylvania, where the minimum wage remained unchanged, acted as the control group. The authors leveraged this regional variation in policy implementation to construct their DiD approach. Building on this seminal work, numerous researchers have employed similar methods to identify policy effects based on regional differences in implementation. Additionally, Card and Krueger (1994) tested the validity of their regional control group by conducting a secondary DiD analysis within New Jersey, comparing low-wage stores to high-wage stores. In this setup, individuals earning below a specified wage threshold (\$5) were designated as the treatment group, while those earning above it served as the control group.

³ Estimates for the informal sector are also based on the three factors outlined by the Department of Census and Statistics (2024), in accordance with the guidelines provided by the 17th ICLS.

⁴ Pseudo-panel methods are not used to estimate the intensive margin effects, as they would obscure within-group variation in hours worked, which is critical to capture individual-level adjustments to the policy change.

According to the Inland Revenue Act (2020 Amendment), the annual tax exemption threshold was set at LKR30,000,000, which is equivalent to LKR2,500,000 per month. However, the Inland Revenue (Amendment) Act, No. 45 of 2022, revised this threshold to LKR1,200,000 annually, equivalent to LKR100,000 per month. This policy change provides a natural setting for a DiD analysts, where formal sector employees earning above LKR100,000 per month are identified as the treatment group, while those earning below this threshold serve as the control group.

A central challenge in identifying the cause effect of the tax reform is the contemporaneous onset of Sri Lanka's economic crisis in 2022–2023, which introduced macroeconomic shocks such as inflation, currency depreciation, and job loss across the entire labour market. While these factors could effect labour outcomes irrespective of the tax reform, the DiD strategy assumes that both the treatment and control group's defined narrowly around the LKR100,000 threshold would have been similarly exposed to these broader shocks in the absence of the reform. That is, any common crisis-related effect on labour supply is differenced out, allowing us to isolate the effect of the tax reform. We further strengthen this design through the DDD approach, leveraging informal sector workers as an unaffected baseline group. Since informal sector workers are largely exempt from direct income taxation but are still subject to macroeconomic conditions, the strategy enables us to net out broader crisis-induced labour effects, isolating the reform's specific impact on formal sector labour supply.

To enhance classification accuracy and minimise bias, the treatment group in this study is defined as formal sector employees earning between LKR100,000 and 130,000 per month—those directly affected by the January 2023 income tax threshold reduction. The control group comprises individuals earning between LKR130,000 and 250,000, who remained unaffected by this policy change. This range reflects a symmetric $\pm 30\%$ bandwidth around the LKR130,000 post-policy threshold, allowing for a precise comparison while minimising distortions from extreme income values. Importantly, the income reported in the Labour Force Survey reflects gross (pre-tax) monthly earnings, which aligns directly with the income tax threshold policy. As a robustness check, both narrower and broader bandwidths are used, and the corresponding results are presented in Section 3.2.5. The analysis focuses on formal sector monthly wage earners, as informal sector workers are typically outside the tax net due to the nature of their employment. For clarity, the empirical strategy is divided into two subsections: one examining intensive margin effects (changes in hours worked among those already employed) and the other focusing on extensive margin effects (changes in the likelihood of employment).

However, to further validate the findings, the study extends the standard DiD model to a DDD framework by incorporating both formal and informal segments of the economy. This extension serves as an additional robustness check, leveraging the inapplicability of direct taxation to the informal sector to better isolate the causal effect of the tax policy on formal sector labour outcomes. Since both formal and informal sectors were affected by the economic crisis, but only the formal sector was subject to the tax reform, the DDD strategy helps control for macroeconomic confounders—such as inflation, job loss, or migration pressures—that could bias a simple DiD estimate. This allows for a cleaner identification of the treatment effect by accounting for economy-wide disruptions common to both groups. The final model thus assesses the differential effect of the tax threshold change on formal sector workers relative to their informal counterparts, offering a more comprehensive understanding of how tax policy influences labour market dynamics.

This study also examines the impact of an income tax increase on the extensive margins of labour supply, which cannot be analysed using the previously discussed DiD and DDD frameworks, as they rely on average weekly hours worked as the dependent variable—an outcome measurable only for employed individuals. To address this limitation, the study employs a DiD approach using a pseudo-panel and a continuous treatment.

Given the availability of repeated cross-sectional data for Sri Lanka, a pseudo-panel dataset is constructed by aggregating the data based on two criteria. Lemos (2009) first introduced this method to analyse the effects of minimum wage changes in Brazil, forming subsets based on regional and time variations. Similarly, Garloff (2019) applied this approach using sex, age groups, and labour market regions, while Holtemöller and Pohle (2020) utilised industry and regional classifications to construct pseudo-panels.

This study adopts a similar methodology, defining population subsets based on age categories (12)⁵ and education levels (5)⁶. Additionally, it utilises quarterly data spanning from the 1st quarter of 2020 to the 4th quarter of 2023, covering 16 periods. This approach yields a panel dataset with 960 observations [12 (age categories) x 5 (education levels) x 16 (periods)], which forms the basis for the final analysis.

⁵ 15–19, 20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55–59, 60–64, 65–69, and over 70.

⁶ No education, primary incomplete, primary complete, G.C.E. (O/L), and G.C.E. (A/L) & higher.

2.3 Bite of the Income tax

To estimate the impact of income tax imposition on extensive labour supply, I construct a continuous treatment variable called the Share of Affected Workers (SAW), which captures the proportion of individuals subject to the tax. This measure quantifies the extent to which income tax enforcement affects workers within a given subset, as defined above. This approach follows the methodologies of Caliendo and Wittbrodt (2022) and Holtemöller and Pohle (2020), who used similar measures to estimate the impact of minimum wage policies.

In this study, the SAW is defined as the fraction of workers within a given subset who earned above the tax exemption threshold of LKR100,000 per month (as specified by the 2022 tax revision) and below LKR 250,000 per month (as specified by the 2020 tax revision) in the quarter immediately preceding the tax implementation (i.e., the 4th quarter of 2022). The SAW thus provides an indicator of the proportion of individuals affected by the tax revision within each subset. Following the approach of Holtemöller and Pohle (2020), this study constructs SAW variables, as detailed below.

2.3.1 Number of Affected Workers

The number of affected workers represents individuals who are impacted by the income tax revision, as they were not subjected to taxes under the 2020 tax revision but are subjected to income tax under the 2022 tax revision. In the following notation, subscripts i , j , and k correspond to individual workers, age categories, and education level, respectively. A formal sector employee with a monthly wage W_i exceeding LKR100,000 and below LKR250,000 is considered an affected worker. Each constructed subset consists of N_{ijk} workers, and the number of affected workers in each subset, A_{ijk} , is specified as follows:

$$A_{jkt} = \sum_{i=1}^{N_{jkt}} \mathbb{I}(100,000 < W_i \leq 250,000) \quad (1)$$

where A_{ijk} represents the number of affected workers in the ijk th subset (defined by age category and education level k), and W_i is the monthly wage of the i th worker. The function $\mathbb{I}(100,000 < W_i \leq 250,000)$ is an indicator function that equals 1 if the i th worker's monthly wage W_i is between LKR100,000 and LKR250,000, and 0 otherwise. N_{ijk} denotes the total number of workers in the ijk th subset.

2.3.2 Share of Affected Workers (SAW)

Having already determined the number of affected workers in each subset [Equation (1)], SAW is calculated by dividing this figure by the total number of workers in the respective subset, denoted as N_{ijk}

$$SAW_{jkt} = \frac{A_{jkt}}{N_{jkt}} \quad (2)$$

This formulation ensures a systematic approach to quantifying the extent of tax imposition across different worker subsets, enabling a robust analysis of the policy's impact on labour supply.

2.4 Econometric Specification

The DiD method estimates the Average Treatment Effect on the Treated (ATET) by calculating the difference in the average outcome for both the treatment and control groups before and after the income tax revision. The method effectively removes unobservable, time-invariant group characteristics that may bias the ATET. However, addressing only time-invariant characteristics is insufficient to identify a causal effect, as time-varying unobservable factors could also influence the treatment group.

To overcome this limitation, DiD incorporates a control group exposed to the same time-varying confounders as the treatment group. This setup enables the consistent estimation of the ATET by taking the difference in the average outcome for both groups over time. By comparing the pre-and post-treatment periods (2022 and 2023, respectively) for both groups, the method eliminates both time invariant unobservable characteristics and the time-varying unobservable effects common to both groups. This ensures that the estimated impact of the income tax revision on labour supply is not biased by confounding variables that affect both groups similarly during the study period.

To estimate the impact of the income tax increase on the intensive margin of labour supply, the analysis employs the following regression equation:

$$Y_{i,t} = \alpha + \beta_1 Post_t + \beta_2 Tax_i^{Treat} + \beta_3 (Post_t \times Tax_i^{Treat}) + X'_{i,t} \gamma + \varepsilon_{i,t} \quad (3)$$

where $Y_{i,t}$ represents the labour supply variables of interest, $Post_t$ is a dummy variable indicating the post-policy period (2023), and Tax_i^{Treat} is a treatment dummy variable identifying individuals whose monthly earnings fall between LKR100,000 and LKR130,000 (130% of LKR100,000), $X_{i,t}$ is a vector of individual level controls, including age, education, gender, occupation, and industry. The coefficient β_3 on the interaction term ($Post_{2023} \times Tax_i^{Treat}$) is the key parameter of interest, as it captures the causal effect of the tax amendment on the treatment group.

To enhance identification, the analysis extends the DiD model to a DDD framework by incorporating informal sector workers as an additional control group. The DDD approach strengthens causal inference by accounting for unobservable interactions between group and time-specific characteristics that a standard DiD model may not fully capture. Since informal sector workers are not directly subject to formal income taxation, they serve as a useful benchmark, helping to control for macroeconomic factors that influence wages and employment trends across both sectors. However, potential spillover effects between the formal and informal sectors should be considered in the analysis. The DDD regression equation is formulated as follows:

$$\begin{aligned} Y_{i,t} = & \alpha + \beta_1 Post_t + \beta_2 Tax_i^{Treat} + \beta_3 Foremp_i + \beta_4 (Post_t \times Tax_i^{Treat}) \\ & + \beta_5 (Post_t \times Foremp_i) + \beta_6 (Tax_i^{Treat} \times Foremp_i) \\ & + \beta_7 (Post_t \times Tax_i^{Treat} \times Foremp_i) + X'_{i,t} \gamma + \varepsilon_{i,t} \end{aligned} \quad (4)$$

where $Foremp_i$ is an indicator variable for formal sector employment. The co-efficient of interest, β_7 , represents the additional impact of the tax amendment on formal sector employees relative to their informal counterparts, isolating the pure tax policy effect.

To capture the response of the extensive margin of labour supply to the tax increase, the specification developed by Card and Krueger (1994) has been extended to incorporate age-education subsets, following Garloff (2019) and Holtemöller and Pohle (2020). Additionally, a time dimension has been introduced by utilising quarterly observations rather than annual data, with fixed effects and quarter-specific dummies included. With the Inclusion of fixed effects, time-invariant variables are omitted from the estimated equation. The resulting model is a two-way fixed effects specification:

$$Y_{lt} = \gamma D_t^{Tax} SAW_{lt} + \lambda_t + \lambda_l + \epsilon_{lt} \quad (5)$$

In this specification, observation units are denoted by the subscript i representing subsets developed based on age categories and education levels. Quarterly time observations are indicated by t , reflecting the panel structure. The measure SAW_{jt} represents the share of affected workers in the fourth quarter of 2022 who were earning between LKR100,000 and LKR250,000 per month, just above the exemption threshold, prior to its implementation on January 1, 2023. The key parameter of interest, γ , captures the relationship between SAW_{jt} after the tax revision and employment outcomes. The treatment indicator D_t^{Tax} takes the value of 1 for the four quarters of 2023 (the post-treatment period) and 0, otherwise. Notably, this parameter remains constant across time from the first quarter of 2023 onward. Aggregate time-specific effects for each quarter in the analysis are captured by λ_t , while unit fixed effects, λ_j , are incorporated to account for cell-specific linear employment trends over the observed period. Finally, strict exogeneity is assumed for the error terms ϵ_{it} implying that its conditional expectation, given all explanatory variables—including fixed effects—is zero for all t .

2.4.1 Transformation effect with formal and informal employment

Based on the extensive margin labour supply response to the tax revision, it is crucial to examine the direction of the resulting employment and disemployment effects. This is particularly important in the context of Sri Lanka, where a sizeable informal employment sector provides an alternative to formal employment. A potential adjustment mechanism may involve workers transitioning from formal to

informal employment or vice versa. To analyse these dynamics, I employ the following specifications to estimate the transformation effects in both directions: from formal to informal employment, and from informal to formal employment.

$$\Delta \ln(For)_{jt} = \beta_1 \times \text{Lag1}\{\Delta \ln(Infor)_{jt}\} + \gamma \times D_t^{Tax} \times SAW_{jt} + \beta_2 \times D_t^{Tax} \times SAW_{jt} \times \text{Lag1}\{\Delta \ln(Infor)_{jt}\} + \lambda_t + \lambda_j + \epsilon_{jt} \quad (6)$$

$$\Delta \ln(Infor)_{jt} = \beta_1 \times \text{Lag1}\{\Delta \ln(For)_{jt}\} + \gamma \times D_t^{Tax} \times SAW_{jt} + \beta_2 \times D_t^{Tax} \times SAW_{jt} \times \text{Lag1}\{\Delta \ln(For)_{jt}\} + \lambda_t + \lambda_j + \epsilon_{jt} \quad (7)$$

Here, *For* and *Infor* represent the logarithm of formal and informal employment, respectively. The coefficient β_1 , captures the relationship between formal and informal employment, providing insight into whether these two sectors function as substitutes or complements.

The primary focus of this specification is on the parameter β_2 , which reflects the impact of the income tax increase in January 2023 on the relationship between formal and informal employment. Specifically, it indicates how changes in one sector influence employment in the other following the tax revision. As in the previous specifications, γ represents the effect of the tax increase on the log of formal and informal employment.

2.4.2 Methodological Robustness

Given that the baseline DiD model of this study focuses on formal sector employees whose monthly earnings fall between LKR70,000 and LKR130,000, a potential econometric concern arises with respect to sample selection bias. Specifically, the estimation is conditional on observed labour force participation and formal employment, which may not be random. If unobserved factors—such as individual motivation, access to networks, or preferences for formal sector employment—jointly influence both the likelihood of being employed in the formal sector and the intensity of labour supply, then the DiD estimates may be biased and inconsistent (Heckman, 1979).

To address this concern, I employ the Heckman two-step correction method, which explicitly models the selection process into formal employment using a probit selection equation in the first stage, followed by the outcome equation (hours worked) in the second stage, incorporating the inverse Mills ratio (IMR) to correct for potential selection bias. This approach enables a more accurate estimation of the causal impact of the tax reform on the intensive margin of labour supply by accounting for non-random selection into formal sector employment (Wooldridge, 2002). The correction is particularly important in the Sri Lankan context, where labour markets exhibit substantial segmentation between formal and informal sectors, and access to formal employment may depend on structural and institutional factors.

In the DiD framework, drawing valid causal inferences hinges on the conditional independence assumption, which itself rests on the credibility of the parallel trends assumption and the absence of major spillover effects. In this analysis, a key question is whether, after controlling for observable characteristics, the earnings trajectories of the treated group, defined as workers earning roughly 30% above the LKR100,000 monthly threshold, would have mirrored those of the control group, had the income tax threshold not been adjusted.

To assess the validity of the parallel trends assumption, a placebo test is conducted by assigning a fictitious policy implementation date prior to the actual tax reform. Using data from the 2017 and 2018 waves of the LFS, the DiD model is re-estimated under the assumption that the tax increase occurred on January 1, 2018. If the estimated coefficient on the placebo treatment is statistically insignificant, it suggests that there were no preexisting differential trends between the treatment and control groups. This supports the credibility of the parallel trends assumption, indicating that, in the absence of the actual policy change, the groups would likely have followed similar trajectories.

While the placebo test helps support the parallel trends assumption in the pretreatment period, a further threat to identification arises from the possibility that the treatment group (LKR100,000–130,000) may have responded differently to the economic crisis than the control group (LKR70,000–99,999), due to differential occupational exposure, migration incentives, or layoffs. To address this, we examine whether the treatment, and control groups differ significantly in their sectoral composition, educational attainment, and pre-crisis earnings growth trends. Descriptive statistics (available in Appendix X)

suggest that these two groups are broadly similar in observable characteristics, supporting the idea that both were exposed to similar macroeconomic risks. Moreover, our DDD framework incorporates informal sector workers—who experienced the economic crisis but not the tax reform—providing an additional layer of control for broader labour market shocks.

When considered alongside supporting evidence from DDD estimations and other robustness checks, the placebo test enhances the argument for a causal link between the policy change and the observed shifts in both marginal and regular employment.

A further challenge to the credibility of the DiD approach is the potential breach of the Stable Unit Treatment Value Assumption (SUTVA), especially through spillover effects. In the case of Sri Lanka's 2023 income tax threshold revision, several possible spillover channels merit attention.

One concern is the possibility of wage spillovers, where changes in the labour supply behaviour of workers directly impacted by the tax reform might prompt employers to adjust wages or work conditions more broadly, even for employees earning well below the LKR100,000 threshold. However, such effects are expected to be minimal given the narrowly focused nature of the tax policy and the presence of considerable wage stickiness in the Sri Lankan labour market.

Another potential channel involves substitution effects. Firms might respond by shifting employment preferences towards workers in lower wage brackets in an effort to contain tax-related labour costs. Yet, due to the short observation period and inherent frictions in reallocating labour across wage tiers, large-scale substitution across income groups is unlikely to have occurred during the period under review.

Lastly, broader effects on firm behaviour—such as downsizing or reducing labour demand in response to increased tax burdens—could indirectly impact workers outside the targeted income group. Still, if these effects remain within firms that employ both treated and untreated workers, the DiD estimation would continue to reflect the overall treatment impact accurately.

In summary, while spillover effects and macroeconomic confounders are valid concerns, our identification strategy incorporates multiple safeguards—including a narrow income bandwidth to ensure comparability, placebo tests to verify parallel trends, the use of a DDD framework incorporating informal sector comparisons, and controls for selection into formal employment—to isolate the policy's impact. These methodological steps collectively strengthen the causal interpretation of our results and mitigate the potential biases arising from concurrent macroeconomic shocks or labour market frictions during the analysis period.

3. Results and Discussion

3.1 Descriptive Analysis

This section begins by presenting descriptive statistics to provide a general overview of the data before moving on to the empirical results. It is important to clarify that these figures should not be interpreted as indicating causal relationships. Table 2 shows key changes in labour supply following the increase in income tax, particularly in relation to labour force participation, employment rates, wage levels, and hours worked. The statistics are reported for both the full sample and the sub-sample used in the DiD and DDD analyses with intensive labour supply. These will be referred to as the total sample and sub-sample, respectively, and cover the years 2022 (prior to the policy change) and 2023 (after the policy change).

The overall Labour Force Participation Rate (LFPR) declined for both men and women between 2022 and 2023, suggesting a contraction in labour supply at the extensive margin. This decline was more pronounced among younger workers, where male LFPR dropped from 66.8% to 63.9%, and female LFPR fell from 32.5% to 31.5%. The reduction in participation is also evident across different education levels, with those having lower educational attainment experiencing a steeper decline. This suggests that the tax policy change may have influenced decisions about labour market entry and exit, particularly for groups with more elastic labour supply responses.

Despite the decline in labour force participation, employment rates remained relatively stable, indicating that those who remained in the labour force were able to find or retain jobs. Among men, the overall employment rate even showed a marginal increase from 96.3% to 96.4%, while for women, it declined slightly from 93.3% to 92.9%. The stability in employment rates suggests that the tax increase may not have led to significant job losses, but rather, it might have discouraged some individuals from participating in the labour market altogether. When looking at the sub-sample, there is a clear rise in employment rates across different genders, education, and age groups, except for females under the age of 40. One possible explanation for this trend is the income effect following the tax revision. As higher taxes reduce take-home income, people may choose to work more hours or re-enter the workforce to maintain their standard of living. This increase in labour supply can help explain the overall rise in employment. Another contributing factor may be a shift within the labour market, where individuals move from formal to informal jobs in response to higher taxes. Since informal work is not taxed under the revised system, it may have become a more appealing option, encouraging more people to take up or switch to such jobs, thereby increasing total employment.

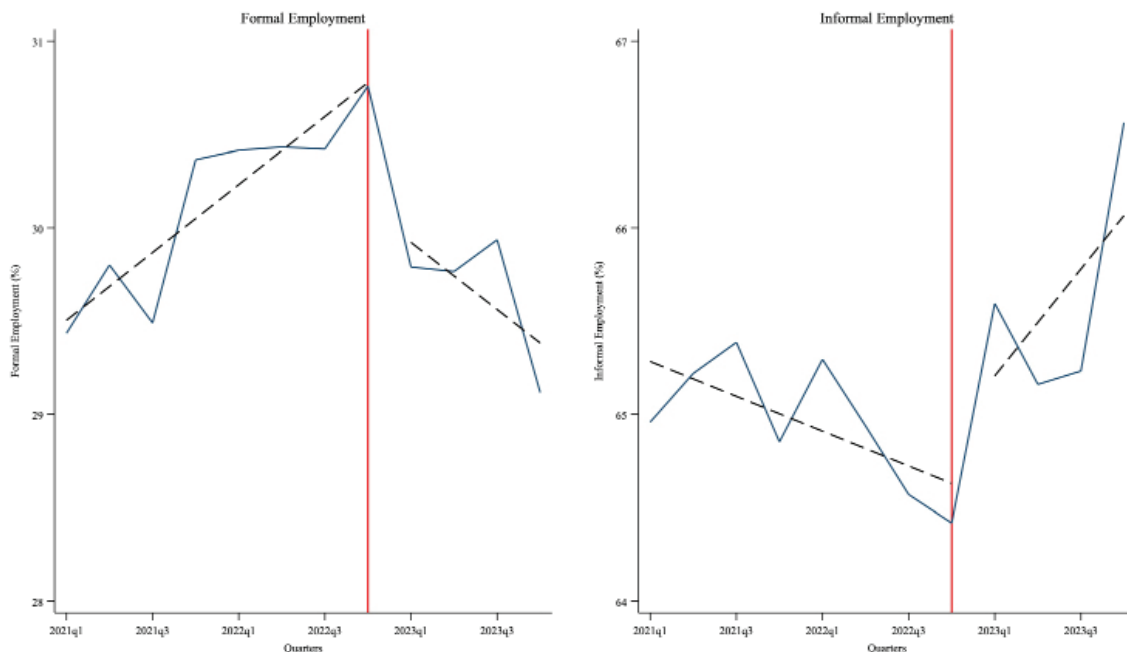


Figure 2: Quarterly formal and informal sector employment rate (2021 - 2023)

Note: The author's compilation is based on the LFS of DCS data. The red vertical line indicates the implementation of the new tax revision on January 1, 2023, while the black dashed lines represent the trends.

To better understand the sectoral reallocation argument, I further investigate formal and informal employment rates. Formal employment rates show a slight downward trend for both men and women, with the share of workers in formal jobs declining from 36.7% to 36.1% for men, and from 51.1% to 50.1% for women. The decline in formal employment is also evident across both younger and older age groups, as well as across different educational levels. This trend is illustrated in Figure 2, which shows a decrease in formal employment and a corresponding increase in informal employment during the post-tax revision period. This suggests that some individuals who remained in the labour market may have transitioned to informal employment.

Table 2: Descriptive statistics

	Total sample				Sub-sample*			
	2022		2023		2022		2023	
	Male	Female	Male	Female	Male	Female	Male	Female
Labour force participation rate (%)								
Total	70.4	31.7	68.6	30.7	-	-	-	-
Age below 40	66.8	32.5	63.9	31.5	-	-	-	-
Age above 40	73.3	31.1	72.1	30.2	-	-	-	-
Below G.C.E. (A/L)	69.4	26.3	67.4	25.4	-	-	-	-
G.C.E. (A/L) & above	74.9	50.6	73.8	49.6	-	-	-	-
Employment rate (%)								
Total	96.3	93.3	96.4	92.9	2.8	3.1	3.1	3.5
Age below 40	92.6	86.9	92.5	85.6	3.2	2.7	3.1	3.2
Age above 40	99.2	98.4	99.1	98.3	2.4	3.4	3.1	3.8
Below G.C.E. (A/L)	96.8	95.4	97.1	94.9	0.6	0.2	0.8	0.4
G.C.E. (A/L) & above	94.3	89.5	94.1	89.4	12.1	8.5	12.1	9.3
Formal employment rate (%)								
Total	36.7	51.1	36.1	50.1	2.8	3.4	3.1	3.8
Age below 40	44.5	67.6	43.9	66.1	3.5	3.1	3.3	3.8
Age above 40	31.3	39.5	31.0	39.9	2.5	3.5	3.1	3.9
Below G.C.E. (A/L)	28.5	35.7	27.4	34.5	0.6	0.2	0.9	0.4
G.C.E. (A/L) & above	73.9	80.6	73.0	79.5	12.7	9.4	12.9	10.3
Mean hourly wage - LKR (formal)								
Total	229.3	218.5	258.9	238.1	413.2	464.2	443.9	507.1
Age below 40	215.7	207.3	247.2	230.6	398.1	433.9	447.9	507.1
Age above 40	244.2	232.5	270.7	246.4	427.7	483.3	441.2	507.2
Below G.C.E. (A/L)	169.2	132.9	188.1	144.7	360.5	409.6	396.5	517.7
G.C.E. (A/L) & above	327.3	288.2	367.4	311.5	424.6	466.9	457.9	506.3
Mean hourly wage - LKR (informal)								
Total	149.3	95.7	167.8	109.1	355.8	427.4	592.3	543.3
Age below 40	151.8	105.8	167.0	118.3	350.1	427.4	684.1	536.9
Age above 40	147.1	91.4	168.5	105.2	362.2	-	446.9	545.9
Below G.C.E. (A/L)	147.5	93.7	167.4	106.7	289.6	-	477.6	553.7
G.C.E. (A/L) & above	190.1	115.2	175.2	130.1	415.8	427.4	714.5	536.3
Mean hours of work (formal)								
Total	223.4	194.9	218.9	191.7	224.6	189.6	214.8	186.6
Age below 40	223.9	198.1	217.9	193.5	232.4	211.1	219.3	194.2
Age above 40	223.1	191.8	219.9	189.9	216.9	176.1	211.7	181.9
Below G.C.E. (A/L)	229.7	205.1	225.5	203.3	256.3	209.9	243.8	203.4
G.C.E. (A/L) & above	212.9	186.2	208.3	182.3	217.6	188.6	206.2	185.3
Mean hours of work (informal)								
Total	201.8	157.0	194.5	152.9	269.3	223.1	218.4	160.8
Age below 40	209.9	161.1	201.4	154.0	274.7	223.1	202.8	159.3
Age above 40	197.4	155.4	190.9	152.5	263.2	-	242.9	161.4
Below G.C.E. (A/L)	202.0	156.6	194.6	153.9	276.8	-	223.5	157.5
G.C.E. (A/L) & above	200.4	159.2	193.6	146.5	262.3	223.1	212.9	162.9

Note: *This sample includes only individuals considered for the intensive labour supply effect of a tax increase, specifically formal employees earning within $\pm 30\%$ LKR100,000 (tax exception threshold) of a monthly wage.

Real hourly wages declined across all groups except for informal employment in the sub-sample. The decline in formal sector wages is expected: with the income tax threshold reduced to LKR100,000 from January 2023, many workers faced a new tax burden. If nominal wages remained unchanged, a common outcome given wage rigidity, real wages would fall, especially amid Sri Lanka's high inflation in 2023. Employers may have absorbed macroeconomic uncertainty by holding wages constant, effectively shifting the burden onto workers.

In the informal sector, the overall sample indicates a decline in real wages. This decrease may be driven by an influx of workers leaving the formal sector to avoid taxation. Such a shift in labour supply, particularly from lower-skilled workers, can put downward pressure on wages in the informal sector. Additionally, informal jobs typically lack wage indexation, which means that real wages can erode rapidly during inflationary periods. However, within the sub-sample, there is an unexpected increase in real informal wages. This may reflect selective transitions, where higher-earning or more skilled workers from the formal sector—particularly those near the tax threshold—move to informal employment while maintaining their higher wage expectations. This upward trend could suggest a growing preference for informal work, potentially driven by the desire to avoid the tax burdens associated with formal employment. Moreover, this shift could indicate the use of tax avoidance strategies or an increased demand for the flexibility offered by informal work in response to rising taxation.

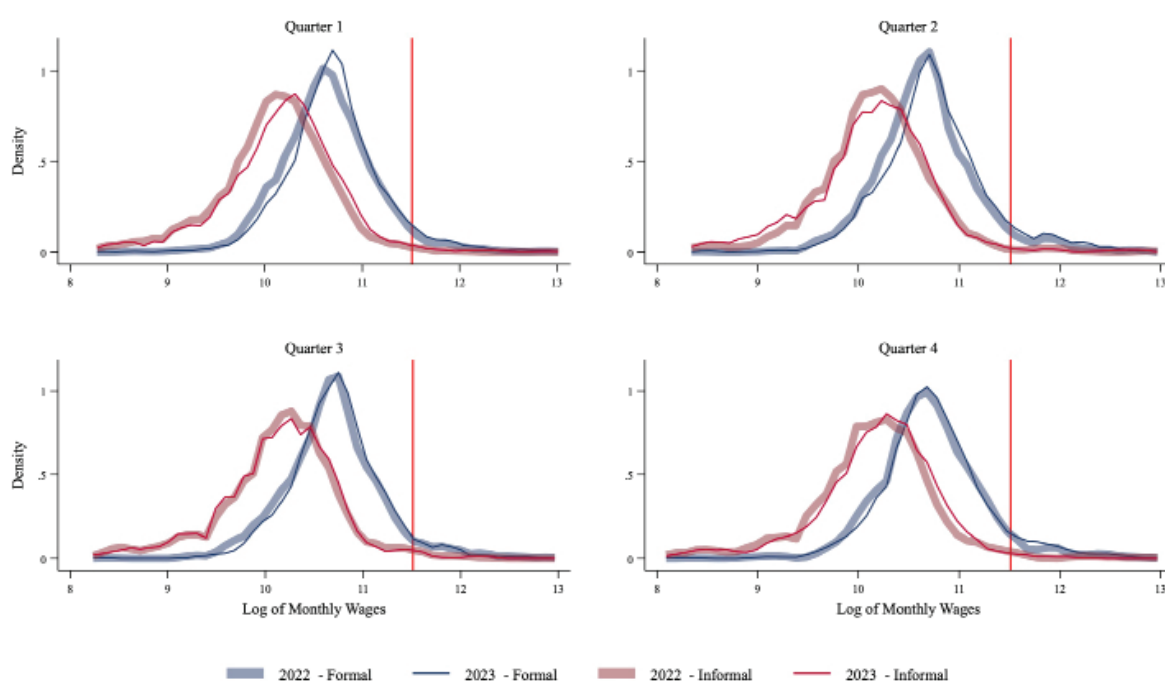


Figure 3: Quarterly wage distribution - 2022 & 2023

Note: Author's compilation based on LFS data from the DCS. The red vertical line represents the income tax exemption threshold of LKR100,000. Each sub-figure corresponds to a specific quarter and depicts kernel density estimates of the log of monthly wages for employees in both the formal and informal sectors. While the informal sector is largely non-compliant with this tax revision, its inclusion offers valuable insights into potential spillover effects arising from changes in the formal labour market.

While Table 2 highlights average trends across groups, kernel density estimates, illustrated in Figure 3, offer a more nuanced view of the entire wage distribution. The figure presents the distribution of log monthly wages in both formal and informal sectors, segmented by quarter and year (2022 vs. 2023). A red vertical line at approximately 11.5 on the log scale represents the LKR100,000 tax exemption threshold. By analysing changes in the density curves around this threshold, I can assess the impact of the tax policy introduced in January 2023. Comparing wage distributions between 2022 and 2023 for each quarter helps isolate the policy's effects while accounting for seasonal variations.

The modest rightward shift in the formal sector's wage distribution (blue lines), despite a fall in mean real wages, suggests that while some workers may have received nominal wage increases, these were not widespread or large enough to offset inflation and tax burdens for most. The flattening of the density

curve around the LKR100,000 mark further indicates strategic wage adjustments bunching near the new tax threshold. In contrast, the more pronounced rightward shift in the informal sector's distribution (red lines), especially among men, complements the observed increase in mean real wages within the sub-sample. This suggests that the wage gains were not only driven by a few outliers but also reflect broader upward movement within parts of the informal sector. The broader distribution also supports the idea of greater heterogeneity and wage flexibility in informal employment, where compositional shifts (e.g., higher-skilled workers entering informality) can meaningfully affect the distribution.

An interesting deviation emerges when comparing gender wage patterns across the total sample and the sub-sample. In the total sample, a persistent gender wage gap is evident in both 2022 and 2023, with men earning higher real wages than women across both formal and informal sectors. However, in the sub-sample—which includes individuals clustered around the LKR100,000 income threshold—this pattern is reversed, with women earning higher average real wages than men in both years and across both sectors. This reversal is unlikely to reflect a policy-induced effect, since it exists even before the tax adjustment. Rather, it likely arises from compositional differences: the sub-sample may disproportionately capture higher-earning, urban, or skilled women, while men in this income range may include a greater share of informal or lower-wage workers. Additionally, lower-earning women may be less likely to appear in the sub-sample due to labour force withdrawal, especially in response to caregiving burdens or labour market segmentation.

Kernel density estimates based on the total sample further support the persistence of the traditional gender wage gap. As shown in Figure A1 (Appendix A), the wage distributions for men consistently lie to the right of those for women in both formal and informal sectors across both years. While both male and female distributions shift rightward from 2022 to 2023—suggesting nominal wage growth—the male shift is more pronounced, particularly in the informal sector, where wage dispersion among men also increases. These results highlight the importance of sample composition and structural labour market differences in interpreting gendered wage outcomes.

Table 2 reveals a notable decline in average monthly hours worked among formal wage earners in the sub-sample earning within $\pm 30\%$ of the LKR100,000 tax exemption threshold. From 2022 to 2023, male workers in this group saw a reduction from 224.6 to 214.8 hours, while female workers experienced a smaller drop from 189.6 to 186.6 hours. Disaggregating further, the decline in hours is more pronounced among younger workers (under 40) and those with lower educational attainment (below G.C.E. A/L). This suggests that these groups—who may face fewer contractual constraints and possess greater labour market flexibility—were more responsive to the tax policy change, potentially adjusting their labour supply by reducing hours or shifting to informal work.

In contrast, older males showed a smaller reduction in work hours (from 216.9 to 211.7), and older females slightly increased their hours (from 176.1 to 181.9), possibly to maintain income levels amidst the higher tax burden. Workers with higher education (A/L and above), particularly females, also exhibited more stable working hours, indicating relatively lower labour supply elasticity. These patterns are consistent with the idea that lower-skilled or younger workers are more likely to adjust formal sector labour supply in response to taxation, either by reducing effort or transitioning to more flexible, potentially untaxed, informal employment.

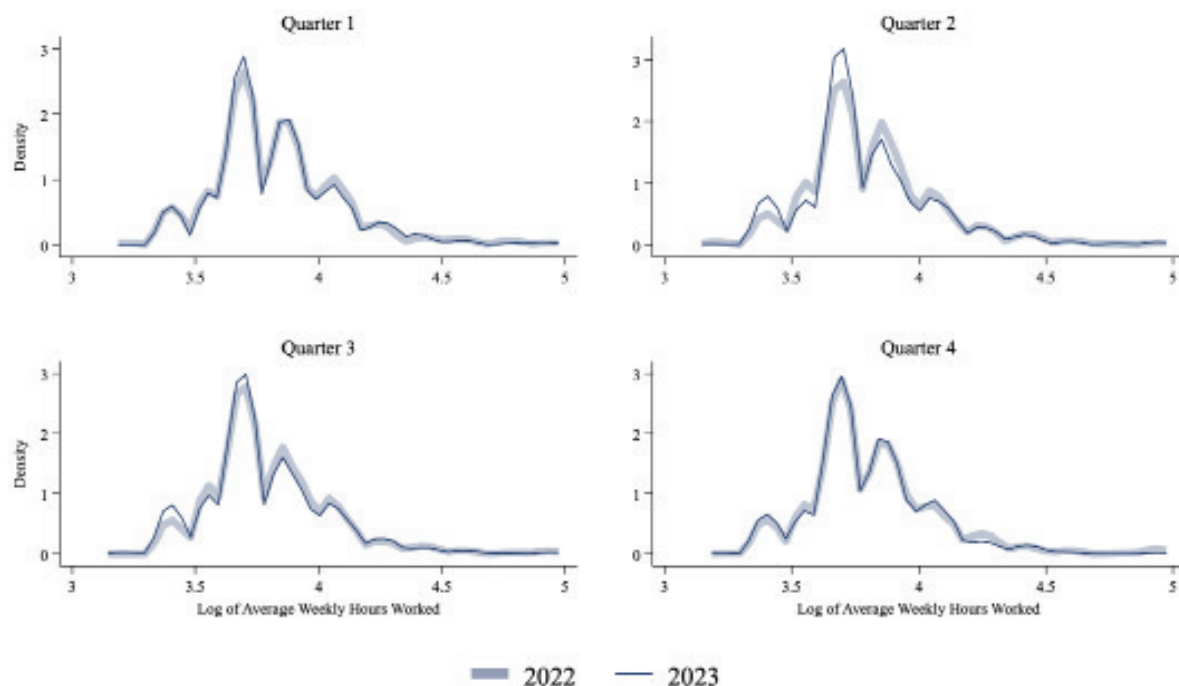


Figure 4: Quarterly work hour distribution of formal sector employment - 2022 & 2023

Note: Author's compilation based on the LFS of DCS data.

Similarly, the informal labour market exhibits notable declines in work hours, particularly among women. Male informal workers in the sub-sample saw a sharp drop in hours from 269.3 to 218.4, while female workers experienced an even more dramatic reduction, from 223.1 to 160.8. This may be due to the higher derived demand for the informal sector as a result of the tax impact on the formal sector. The sharp decline in informal work raises concerns about the potential unintended consequences of the tax increase, particularly if workers are shifting away from taxable employment to avoid additional financial burdens.

The kernel density estimates of the log of average weekly hours worked in Figure 4, shown across four quarters for 2022 and 2023, provide insights into the trends within the formal sector. While the overall distribution remains relatively stable between the two years, there is evidence of a slight leftward shift, particularly in quarter 2 and quarter 3. This suggests a decline in the average hours worked within the formal sector, potentially linked to the tax policy changes that increased financial burdens on formal employment. Given the notable decline in informal sector work hours discussed earlier, the observed pattern in the formal sector may indicate a spillover effect, where reduced formal sector demand leads to shifts in labour allocation. However, the persistence of density peaks across quarters suggests that the overall structure of formal sector employment remained largely intact, with the primary adjustment occurring in the total number of hours worked rather than a fundamental redistribution of work across different segments of the labour force.

Additionally, Figure A2 (Appendix A) illustrates the gender specific distributional responses in the log of average weekly hours worked following the tax policy change. For males in the formal sector, a slight rightward shift in the 2023 distribution suggests a marginal increase in working hours, potentially indicating an attempt to maintain pre-tax income levels. In contrast, females in the formal sector show minimal changes in working hours, suggesting they are less able to be responsive to the tax policy in terms of adjusting their time allocation.

3.2 Empirical Analysis

3.2.1 Baseline DiD and DDD Estimates

Table 3 presents the baseline estimates for the effect of the income tax policy adjustment, implemented in January 2023, on the intensive margin of labour supply. I employ both DiD and DDD methodologies to assess the impact. In the DiD models (Models 1 and 2), I compare changes in hours worked before and after the tax reform between individuals earning LKR100,000 to 130,000 (the treatment group) and those earning LKR70,000 to 100,000 (the control group). The DDD models (Models 3 and 4) extend this by incorporating an additional control group of informal employees, aiming to strengthen the robustness of our findings. Models 1 and 3 use hours of work as the dependent variable, while Models 2 and 4 use the natural logarithm of hours of work, allowing us to interpret the effects in percentage terms.

Table 3: Baseline DiD and DDD estimates

	Model 1	Model 2	Model 3	Model 4
ATET	-3.027**	-0.036**	-27.811**	-0.524**
	(-14.14)	(-14.39)	(-19.31)	(-22.54)

Note: Models 1 and 2 are estimated using a Difference-in-Differences (DiD) approach, while Models 3 and 4 employ a Difference-in-Differences-in-Differences (DDD) approach. In Models 1 and 3, the dependent variable is hours of work, whereas in Models 2 and 4, the dependent variable is the log of hours of work. t statistics are reported in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

The DiD estimates reveal a statistically significant negative effect of the tax increase on hours of work. Model 1, with hours of work as the dependent variable, indicates an Average Treatment Effect on the Treated (ATET) of approximately -3.027 hours. This suggests that individuals in the treatment group reduced their working hours by roughly 3 hours per period following the tax reform, compared to the control group. In Model 2, using the log of hours of work, the ATET is -0.036, implying a reduction of approximately 3.6% in working hours. Both coefficients are statistically significant at the 5% level, indicating a robust negative impact of the tax increase on labour supply among formal monthly wage earners.

Moving to the DDD models, the estimated impact of the tax increase on hours worked is substantially larger. Model 3 reports an ATET of -27.811 hours, while Model 4 shows a 52.4% reduction in hours (ATET = -0.524), with both coefficients statistically significant at the 5% level. Informal sector employees—largely unaffected by the tax reform—are used as a counterfactual, enhancing the robustness of the estimates. The larger effect sizes in the DDD models suggest that the DiD estimates may have understated the true impact, likely due to unobserved factors not fully captured in the simpler specification. By accounting for shared time trends across formal and informal workers, the DDD approach isolates the policy's effect more precisely. These results imply that the tax increase had a more pronounced negative effect on the intensive margin of labour supply than initially indicated.

This consideration is particularly important given the study period, during which Sri Lanka was experiencing a severe economic crisis and sovereign default. In this context, the DDD approach provides a more robust identification strategy by controlling for confounding macroeconomic trends—such as general economic growth or labour market shocks—that could simultaneously affect both treatment and control groups. Relying solely on a standard DiD framework, without accounting for these concurrent shocks, risks underestimating the true effect of the tax reform, as part of the observed changes may be driven by broader economic improvements rather than the policy itself (Piketty et al, 2014). By using the informal sector as a control group to capture general labour market dynamics, the DDD approach enhances causal inference, especially in labour markets where formal-informal substitution is a plausible behavioural response (De Laiglesia, 2008).

3.2.2 Gender-Specific Effects

Section 3.1 highlights a disparity in labour supply responses to income tax changes between males and females. To examine this heterogeneity, Table 4 presents DiD estimates of the impact of the January 2023 income tax reform on weekly hours worked. Models 1, 3, 5, and 7 use mean weekly hours as the outcome, while Models 2, 4, 6, and 8 employ the natural logarithm, allowing for percentage-based interpretations. Interaction terms, particularly with the “female” indicator, capture gender-specific effects. Additionally, certain models incorporate control variables such as age, education, marital status, industry, and sector, as specified in the table.

Table 4: Difference-in-Differences estimates: gender-specific effects

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
ATET	-2.510** (-19.24)	-0.0256** (-26.12)	-1.948** (-14.88)	-0.0127** (-15.10)	-4.301* (-10.15)	-0.0573* (-8.84)	-3.106* (-12.12)	-0.0302* (-10.05)
Female (base=male)	-7.224 (-6.11)	-0.148* (-6.80)	-5.527* (-9.46)	-0.114* (-11.45)	-7.599** (-13.04)	-0.154** (-13.82)	-5.778** (-33.14)	-0.118** (-30.61)
ATET ##female	-	-	-	-	4.703* (7.17)	0.0832* (6.71)	3.039* (11.82)	0.0457* (9.98)
Constant	51.32** (54.63)	3.898*** (307.80)	86.88** (15.87)	4.605** (52.09)	51.45*** (71.65)	3.900*** (444.82)	86.67** (14.97)	4.602** (49.43)
Control variables	No	No	Yes	Yes	No	No	Yes	Yes
N	1847	1847	1847	1847	1847	1847	1847	1847

Note: All models are estimated using a Difference-in-Differences (DiD) approach. Models 1, 3, 5, and 7 use the mean weekly hours worked as the dependent variable, while Models 2, 4, 6, and 8 use the log of mean weekly hours worked as the dependent variable. Control variables used are age, education, marital status, industry, and sector. The statistics are reported in parentheses. $p < 0.10$, $**p < 0.05$, $***p < 0.01$.

The statistically significant and consistently negative ATET coefficients observed in all models provide a robustness check, substantiating the baseline results which indicate a reduction in weekly hours worked as a consequence of the tax increase. In the mean weekly hours worked models (1, 3, 5, 7), the ATET ranges from -1.948 to -4.301 hours, while in the log of weekly hours worked models (2, 4, 6, 8), the ATET ranges from -0.0127 to 0.0573, corresponding to a 1.27% to 5.7% decrease in working hours. The “female” coefficient is consistently negative and statistically significant in all the models, showing that females work significantly fewer hours than males. This difference is substantial, with females working approximately 5.5 to 7.5 fewer hours per week or 11.4% to 15.4% less. This baseline difference highlights preexisting disparities in labour supply between genders.

To further examine the gender-specific effects of the tax increase, an interaction term between ATET and female is introduced in Models 5 through 8. The coefficient on this interaction term is positive and statistically significant, indicating that the negative impact of the tax increase on labour supply was less severe for female workers compared to their male counterparts. In other words, the positive interaction partially offsets the overall negative ATET for women, suggesting that men experienced a stronger reduction in intensive labour supply in response to the reform. Importantly, the inclusion of control variables (age, education, marital status, industry, and sector) in Models 3, 4, 7, and 8 provides a robustness check for the baseline findings. The consistent significance and direction of the ATET and gender-related coefficients across models with and without controls suggest that the observed effects are not driven by these observable characteristics. This increases the confidence in the causal interpretation of the DiD estimates.

3.2.3 Share of Affected Workers and the Labour Supply

Table 5 presents the impact of the Share of Affected Workers (SAW) on labour supply, using a DiD framework. The analysis is divided into three panels: overall employment, formal employment, and informal employment. Each panel analyses four distinct models, each using a different dependent variable: employment, the first difference of employment, the logarithm of employment, and the first difference of the logarithm of employment. The key variable of interest is SAW, which represents the share of workers in a given education level-age group subset who were earning between LKR100,000 and LKR250,000 prior to the tax change.

Table 5: Share of affected workers and labour supply

Panel A: overall employment				
	Model 1	Model 2	Model 3	Model 4
$D_t^{\text{tax}} \times \text{SAW}$	3.167*	-1.714**	0.014	-0.008*
	(1.83)	(-2.14)	(1.59)	(-1.87)
Panel B: formal employment				
	Model 1	Model 2	Model 3	Model 4
$D_t^{\text{tax}} \times \text{SAW}$	0.651	-1.653***	0.021**	-0.016*
	(0.57)	(-3.78)	(2.10)	(-1.90)
Panel C: informal employment				
	Model 1	Model 2	Model 3	Model 4
$D_t^{\text{tax}} \times \text{SAW}$	2.516***	-0.061	0.032***	-0.003
	(2.96)	(-0.15)	(3.08)	(-0.45)

Note: In Panel A, the dependent variables in Models 1 to 4 are the employment, the first difference of the employment, the log of employment, and the first difference of the log of employment, respectively. In Panel B, the dependent variables in Models 1 to 4 are the formal employment, the first difference of the formal employment, the log of formal employment, and the first difference of the log of formal employment, respectively. In Panel C, the dependent variables in Models 1 to 4 are the Informal employment, the first difference of the informal employment, the log of informal employment, and the first difference of the log of informal employment, respectively. t statistics are reported in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

It should be noted that when the SAW is used as a continuous treatment variable with a logarithmic dependent variable, the coefficient indicates the percentage change in the outcome when moving from a workplace with no affected workers (SAW=0) to one where all workers are affected (SAW=1). When the dependent variable is in levels, the coefficient reflects the absolute change in the outcome associated with the treatment—that is, the unit change in the outcome variable as SAW increases from 0 to 1. If the dependent variable is the first difference of the logarithm, it represents the growth rate of the outcome. In this case, coefficients should be interpreted as percentage point changes in the growth rate. By contrast, if the dependent variable is the first difference of a level outcome, the coefficient reflects the change in the level of the outcome between periods attributable to the treatment.

The analysis of employment levels (Models 1 and 3) reveals a statistically significant positive correlation between the SAW—those impacted by the tax policy adjustment—and employment in overall, formal, and informal sectors. This suggests that a higher proportion of workers affected by the tax change within a specific education-age group is associated with higher absolute employment levels. For example, transitioning from a workplace with no affected workers to one where all are affected is linked to a statistically significant increase of 3.167 units in overall employment and 2.516 units in informal employment (Model 1). Similarly, this shift correlates with a 2.1% increase in formal employment and a 3.2% increase in informal employment (Model 3). However, it's important to note that these observed increases in employment levels are relatively small.

In contrast to these modest positive static associations, the analysis of employment dynamics (Models 2 and 4) indicates a negative influence of SAW on employment changes and growth rates. For overall

employment, a higher SAW is associated with a statistically significant decrease in both the change in employment level (Model 2: -1.74 units) and the growth rate of employment (Model 4: -0.8 percentage points). A similar pattern emerges for formal employment, where a higher SAW predicts a statistically significant negative change in the employment level (Model 2: -1.653 units) and a deceleration in the growth rate (Model 4: -1.5 percentage points). This implies that even if the level of overall and formal employment has marginally increased in workplaces with a higher share of affected workers, the rate at which this employment is growing has significantly reduced. Interestingly, while static models show a positive correlation between SAW and informal employment, the models analysing changes and growth rates of informal employment do not show statistically significant relationships. This suggests that because the informal sector is largely outside the formal taxation framework, the proportion of workers affected by this specific tax policy within formal employment does not significantly influence the dynamics (changes or growth rate) of informal employment, even if it might be correlated with the overall size of the informal sector due to other indirect economic factors.

3.2.4 Transformation Effect

Following the descriptive patterns and earlier empirical evidence of a labour supply response to the January 2023 income tax revision, Table 6 investigates the transformation effects between the formal and informal sectors. These regressions aim to uncover whether workers responded to the policy by reallocating between formal and informal employment channels, with a particular focus on subsets more exposed to the tax policy shock, as captured by the variable SAW.

Table 6: Transformation effect

	Δ Formal emp.	Δ Informal emp.
SAW	-0.017** (-2.16)	-0.004 (-0.73)
Lag-1 Δ Informal emp.	-0.384** (-2.31)	-
SAW#Lag-1 Δ Informal emp.	0.191*** (3.47)	-
Lag-1 Δ Formal emp.	-	-0.006 (-0.23)
SAW#Lag-1 Δ Formal emp.	-	-0.038** (-2.11)

Note: t statistics are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

In both models, the effect of SAW on the respective dependent variables is negative; however, it is statistically significant at the 5% level only in the model where the dependent variable is the change in the log of formal employment. This aligns with previous findings and can be viewed as a robustness check. Both models yield negative coefficients on the lagged employment changes of the other sector, indicating a substitution relationship between formal and informal employment. However, only the coefficient on the lagged change in informal employment (0.384) is statistically significant, while the reverse is not. Despite consistent signs, this asymmetry reinforces the substitution pattern but suggests a stronger response from formal employment to changes in informal employment.

In Column 1, the interaction term between SAW and lagged informal employment—the variable of interest—is positive and highly significant (0.191). This suggests that in areas more exposed to the tax hike, the previously negative association between past informal employment growth and current formal employment was weakened or even reversed. In other words, following the tax policy change, formal and informal employment became less substitutive in these high-exposure regions. This may indicate a

diminished capacity of the formal sector to absorb labour as it did before, or a shift in incentives disrupting typical labour reallocation patterns. In contrast, Column 2 shows that the interaction between SAW and lagged formal employment change is negative and statistically significant (0.038). This implies that in high-SAW regions, growth in formal employment was more likely to be followed by a contraction in informal employment after the tax reform. This result supports a strengthened substitution effect from formal to informal employment in these areas, pointing to a potential reallocation of labour toward informality in response to reduced formal job opportunities caused by the tax policy.

3.2.5 Robustness Check

To address potential selection bias in treatment assignment, we re-estimated the main DiD and DDD models by incorporating the inverse Mills ratio derived from a first-stage probit selection model. The selection equation included relationship to household head, sex, age, marital status, years of education, province of residence, and labour force participation status, factors likely to influence the probability of being in formal employment. The results from the selection-corrected models (Table 7) are broadly consistent with the baseline estimates (Table 3), with all treatment effects remaining statistically significant with negative coefficients and of similar magnitude. Notably, while some estimates slightly decrease or increase in size, the overall pattern and direction of effects are preserved, suggesting that the observed policy impact on labour supply is robust to concerns of endogenous selection into formal employment.

Table 7: DiD & DDD regressions controlling for selection bias

	Model 1	Model 2	Model 3	Model 4
ATET	-3.391*	-0.042**	-24.192**	-0.462**
	(-11.40)	(-11.29)	(-50.87)	(-56.21)

Note: Models 1 and 2 are estimated using a Difference-in-Differences (DiD) approach, while Models 3 and 4 employ a Difference-in-Differences-in-Differences (DDD) approach. In Models 1 and 3, the dependent variable is hours of work, whereas in Models 2 and 4, the dependent variable is the log of hours of work. *t* statistics are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

To evaluate the validity of the parallel trends assumption underpinning the DiD and DDD models, I conducted a placebo test using pre-policy data. The core identification in DiD and DDD frameworks relies on the assumption that, in the absence of treatment, treated and control units would have followed similar trends over time. Testing this assumption is crucial for establishing causal inference. To this end, I artificially assigned the policy intervention to January 1, 2018, treating 2017 as the pretreatment period and 2018 as the pseudo post-treatment period. This placebo test serves as an indirect check on whether the treated and control groups exhibited divergent trends prior to the actual policy change. If the parallel trends assumption holds, the estimated treatment effects in this pseudo-post-treatment period should be statistically insignificant, reflecting the absence of any real policy-induced behavioural change. The results, presented in Table 8, show that the estimated treatment effects are both small in magnitude and statistically insignificant across all model specifications. This lack of significant pretreatment trends supports the credibility of the parallel trends assumption and reinforces the validity of the causal interpretation of the main findings.

Table 8: Placebo DiD & DDD regressions: testing for pre-trends

	Model 1	Model 2	Model 3	Model 4
ATET	-0.380	-0.003	-6.599	-0.215
	(-2.30)	(-1.52)	(-3.78)	(-5.52)

Note: Models 1 and 2 are estimated using a Difference-in-Differences (DiD) approach, while Models 3 and 4 employ a Difference-in-Differences-in-Differences (DDD) approach. In Models 2 and 3, the dependent variable is hours of work, whereas in Models 2 and 4, the dependent variable is the log of hours of work. *t* statistics are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

To further assess the robustness of the main results, I conducted additional checks by rerunning the primary regressions with alternative income bands. The first check used a narrower income band ranging from LKR80,000 to LKR120,000 (+20% of LKR100,000), while the second check considered a broader range, spanning from LKR60,000 to LKR140,000 (+40% of LKR100,000). These alternative specifications test whether the results are sensitive to the chosen income thresholds, which is crucial for ensuring that the findings are not driven by arbitrary cutoffs. The results presented in Tables B1 and B2 (Appendix B) demonstrate that the treatment effect estimates remain consistent across both narrower and broader income bands. This consistency suggests that the main conclusions are not contingent on a specific choice of income ranges, reinforcing the robustness of the results.

In conclusion, the robustness checks, including selection bias correction, the placebo test, and the use of alternative income bands, provide strong support for the validity of the main findings. The results remain consistent across different specifications, reinforcing the credibility of the observed policy impact on labour supply. These additional tests address potential sources of bias and further confirm that the conclusions drawn are reliable and not sensitive to the methodological choices made.

4. Conclusion

This study examined the causal effects of a major tax policy reform introduced in Sri Lanka on 1 January 2023, on individual labour supply decisions, focusing on both the intensive margin (hours worked) and the extensive margin (employment status). The Inland Revenue (Amendment) Act, No. 45 of 2022, significantly reduced the monthly personal income exemption threshold from LKR250,000 to LKR100,000, thereby imposing tax liability on a previously untaxed segment of wage earners. Unlike much of the existing literature that concentrates on marginal tax changes within progressive tax systems, this study investigates a sharp and discrete shift in tax burden, enabling a quasi-experimental evaluation of labour market responses. To estimate the policy's impact, two complementary DiD approaches were employed. The intensive margin analysis used a treatment group defined by incomes between LKR100,000 and LKR130,000—those directly affected by the new tax threshold—and a control group earning between LKR70,000 and LKR100,000. For extensive margin, a pseudo-panel was constructed based on age and education cohorts, using the SAW as a continuous treatment indicator. The empirical results reveal a decline in hours worked, suggesting a negative response at the intensive margin, coupled with a rise in employment participation, indicating a positive response at the extensive margin. These contrasting findings highlight the nuanced and multifaceted nature of labour supply responses to sudden fiscal shocks in developing country contexts.

The observed decline in hours worked following the adjustment of the tax-free threshold is consistent with predictions from the standard labour-leisure model (Blundell and Macurdy, 1999). According to this model an increase in marginal tax rates reduces the after-tax wage, thereby lowering the opportunity cost of leisure and encouraging individuals to substitute away from work—a phenomenon known as the substitution effect. While the income effect might be expected to operate in the opposite direction, prompting individuals to work more to maintain their standard of living, the empirical literature generally finds that substitution effect tends to dominate, particularly among higher earners and prime-age workers (Saez et al., 2012; Meghir and Phillips, 2010). Empirical evidence from advanced economies supports this outcome. For instance, in the U.S., Gruber and Saiz (2002) show that upper-income individuals reduce their taxable income, including hours worked, in response to tax increases. Similarly, in Germany, Krebs and Scheffel (2013) document significant reductions in work hours among mid- and high-income earners following increases in marginal tax rates. Although Sri Lanka's labour market differs in structure, the findings of this study suggest comparable behavioural elasticities at the intensive margin among the newly taxed middle-income group.

In contrast to the reduction in hours worked, the study finds a statistically significant increase in employment in both the formal and informal sectors. This seemingly paradoxical finding can be better understood through the lens of household labour supply models (Blundell et al., 2007). According to the collective model of the household (Chiappori, 1992), individuals within households make joint decisions to maximise overall utility, taking into account income shocks, reservation wages, and intra-household bargaining power. The reform likely triggered a negative income shock for many households by reducing disposable income, thereby prompting secondary earners—such as spouses, youth, or elderly dependents—to enter the labour force in order to maintain household consumption levels. This is consistent with findings by Bargain et al. (2014), who show that labour supply among secondary earners, especially women, is highly elastic in response to changes in net household income.

A related concept is the reservation wage, the minimum wage at which an individual is willing work. Theoretical models suggest that financial shocks reduce reservation wages, thereby increasing individuals likelihood of entering the labour market (Mortensen, 1986, Lise et al., 2004). Empirical evidence from Latin America shows that women's labour force participation tends to rise during economic crises, often as a coping mechanism (Bhalotra and Umana-Aponte, 2010). Similarly, in the UK, Brewer et al. (2012) find that benefit reforms that reduce household income lead to increased female labour force participation. In Sri Lanka's context, this response is particularly plausible given the limited availability of unemployment insurance, and relatively low social protection coverage (World Bank, 2021). Consequently, households likely responded to the increased tax burden by mobilising additional labour resources—especially in informal or precarious work, which remains prevalent in Sri Lanka's labour market (Kim et al., 2020).

In addition to the increase in employment rate, the study also examines how workers transitioned between formal and informal sectors in response to the January 2023 income tax revision. To analyse this, a transformation model was employed, revealing patterns that align with theoretical expectations from dual labour market models. These models posit that workers move between formal and informal employment in response to changes in relative net returns and institutional constraints (Perry, 2007). As formal sector wages were effectively compressed by higher income taxes, incentive to shift toward informal employment increased, especially in a context like Sri Lanka, where informal work remains widespread and relatively easy to access.

Empirical evidence from other developing countries supports this substitution mechanism. For instance, Bosch and Maloney (2010) find that in Latin America, workers frequently move between formal and informal jobs in response to policy shocks and economic incentives. Likewise, Levy (2010) notes that a heavy tax and regulatory burden in the formal sector can unintentionally encourage informality. The study's findings of asymmetric substitution patterns—where formal employment becomes more responsive to lagged conditions in the informal sector in high-tax exposure regions—mirror these insights. Furthermore, the observed weakening of the traditional real location channel from informal to formal employment in high-SAW regions suggests emerging frictions or a declining capacity of the formal sector to absorb labour. This aligns with the findings of Kugler and Kugler (2009), who show that payroll taxes can depress formal employment without significantly enhancing hiring elasticity. Together, these labour market shifts reinforce the interpretation that tax-induced distortions in net income and employer incentives have meaningfully disrupted typical flows between formal and informal employment.

While the overall decline in hours worked reflects a general adjustment to the income shock induced by the tax reform, a closer look at gender-disaggregated results reveals an asymmetric response. Notably, the reduction in hours worked among women was relatively modest, suggesting that female labour supply in Sri Lanka is less elastic than global patterns would predict. This diverges from the commonly observed trend in the labour economics literature, where women—particularly married women—typically exhibit higher labour supply elasticities than men (Blundell and Macurdy, 1999; Erosa et al., 2017). Several factors may help explain in this deviation.

First, occupational segregation and the disproportionate burden of unpaid care responsibilities restrict women's ability to substitute between market and non-market work. In Sri Lanka, women undertake a significant share of unpaid household and care work, which directly limits their time and flexibility to respond to labour market incentives or policy changes (Gunawardana, 2024). This caregiving burden acts as a binding constraint on their labour supply elasticity. Second, entrenched cultural and social norms—particularly in more conservative regions—further reinforce these patterns by limiting women's mobility and occupational choices, thereby dampening their responsiveness to wage or tax reforms (Chowdhury, 2013). Third, many women are concentrated in either formal public sector roles or informal care-related occupations (e.g., domestic work, elder care), which typically offer limited flexibility in hours or scheduling. This restricts their capacity to make marginal adjustments in labour supply in response to policy changes. Finally, from a theoretical standpoint, intrahousehold bargaining models emphasise that women's labour supply decisions are shaped not only by individual wage offers but also by their relative bargaining power—power that is affected by their access to non-labour income, prevailing social norms, and household structure (Lundberg and Pollak, 1996).

Taken together, these constraints imply that female labour supply in Sri Lanka is shaped more by deep-rooted structural and institutional factors than by marginal tax incentives. This contrasts with the observed responsiveness of secondary earners and intersectoral labour mobility, underscoring the need for gender-sensitive policy responses that go beyond tax design to address broader barriers to women's economic participation.

4.1 Policy Implications

The findings of this study underscore that tax reforms in developing economies can generate complex and heterogeneous labour market responses. The observed decline in hours worked among middle-income earners points to possible negative effects on productivity and aggregate output. At the same time, the rise in employment, largely among secondary earners and in informal jobs, reflects short-term household coping strategies that may inadvertently increase economic vulnerability by pushing individuals into low-quality or precarious work.

These dynamics carry several important policy implications. First, tax policy should be crafted with an understanding of labour market frictions and intrahousehold decision-making, particularly in contexts where informal employment is widespread and social protection systems remain underdeveloped. Second, complementary support measures—such as earned income credits, subsidised childcare, and targeted cash transfers—can play a vital role in preserving work incentives and cushioning vulnerable groups from the regressive effects of taxation, especially women who face structural barriers to labour market participation (Coelho et al., 2024). Third, the use of disaggregated labour market data, by gender, sector, and household role, is essential for assessing the real-world distributional impacts of fiscal reforms and for guiding responsive, inclusive policy making.

Two scope-related caveats should be noted when interpreting these findings. First, the analysis focuses exclusively on formal sector employees earning between LKR70,000 and LKR130,000 per month; results may not generalise to workers outside this income segment. Second, the study period overlapped with substantial exogenous macroeconomic shocks—most notably the 2022–2023 economic crisis—which, although addressed through the DiD and DDD frameworks, represents forces largely outside the boundaries of the underlying models.

In conclusion, Sri Lanka's 2023 income tax reform offers a valuable natural experiment to examine how workers and households adapt to fiscal shocks. The dual response—a reduction in labour effort among newly taxed individuals and a compensatory increase in labour market participation by others—reveals the intricate interplay between individual incentives, household behaviour, and structural constraints. Future research should leverage longitudinal household-level data and structural modelling approaches to more precisely identify these channels and to inform the design of equitable, growth-compatible tax policies in similar settings.

Acknowledgment

I acknowledge the use of AI tools to enhance the readability and clarity of this article. All interpretations, conclusions, and arguments presented remain my own.

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A. Appendix

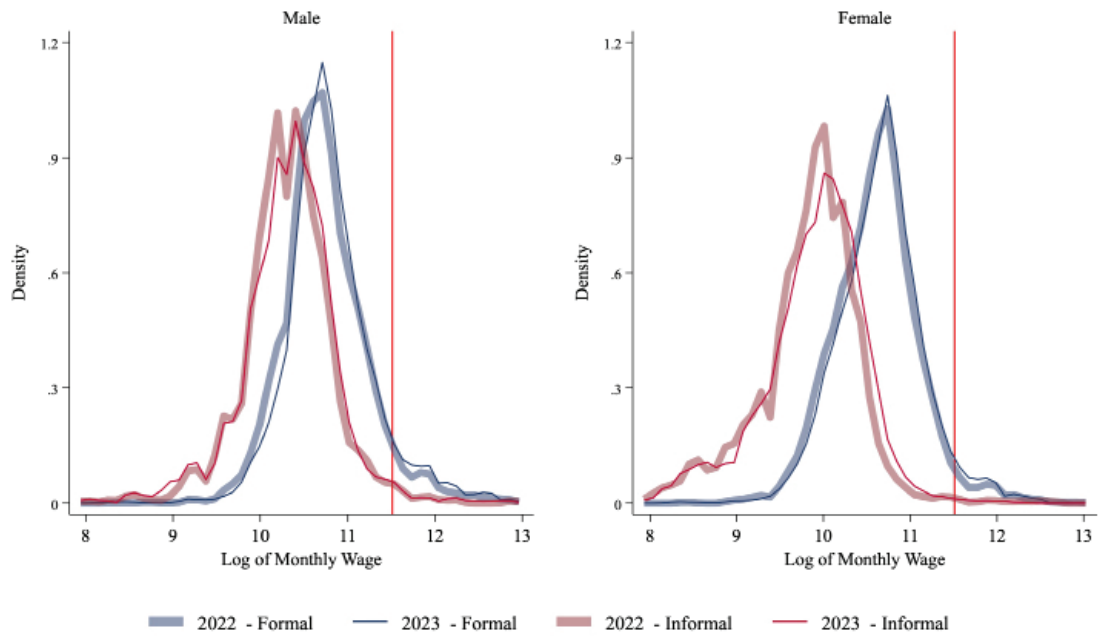


Figure A1: Quarterly wage distribution by gender - 2022 & 2023

Note: Author's compilation based on the LFS of DCS data.

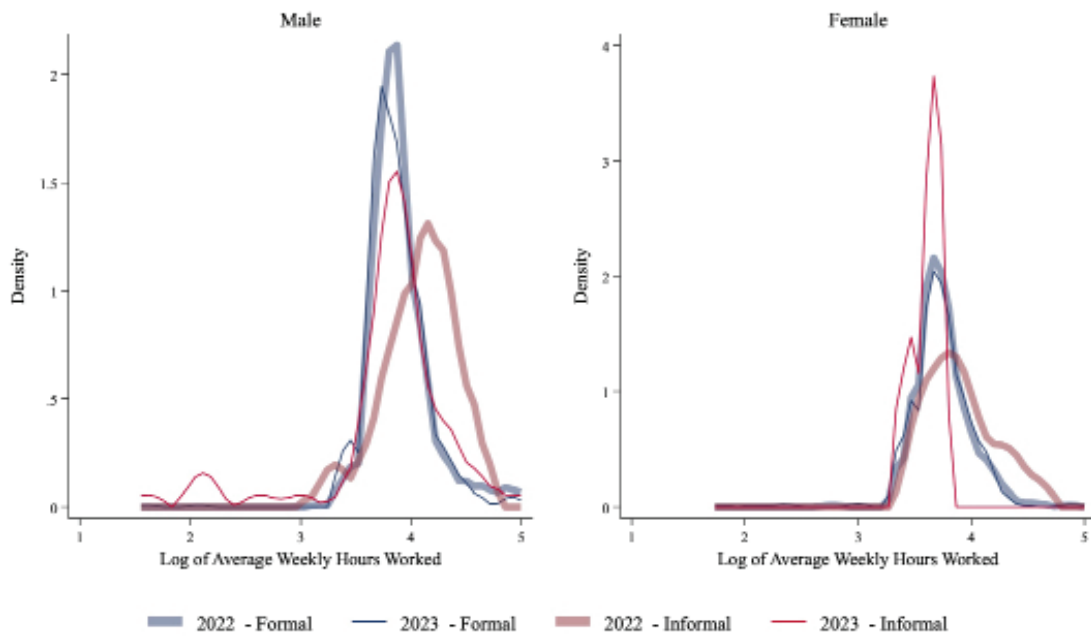


Figure A2: Quarterly work hour distribution by gender - 2022 & 2023

Note: Author's compilation based on the LFS of DCS data.

B. Appendix

Table B1: DiD & DDD regressions with narrower income band ($\pm 20\%$ of LKR100,000)

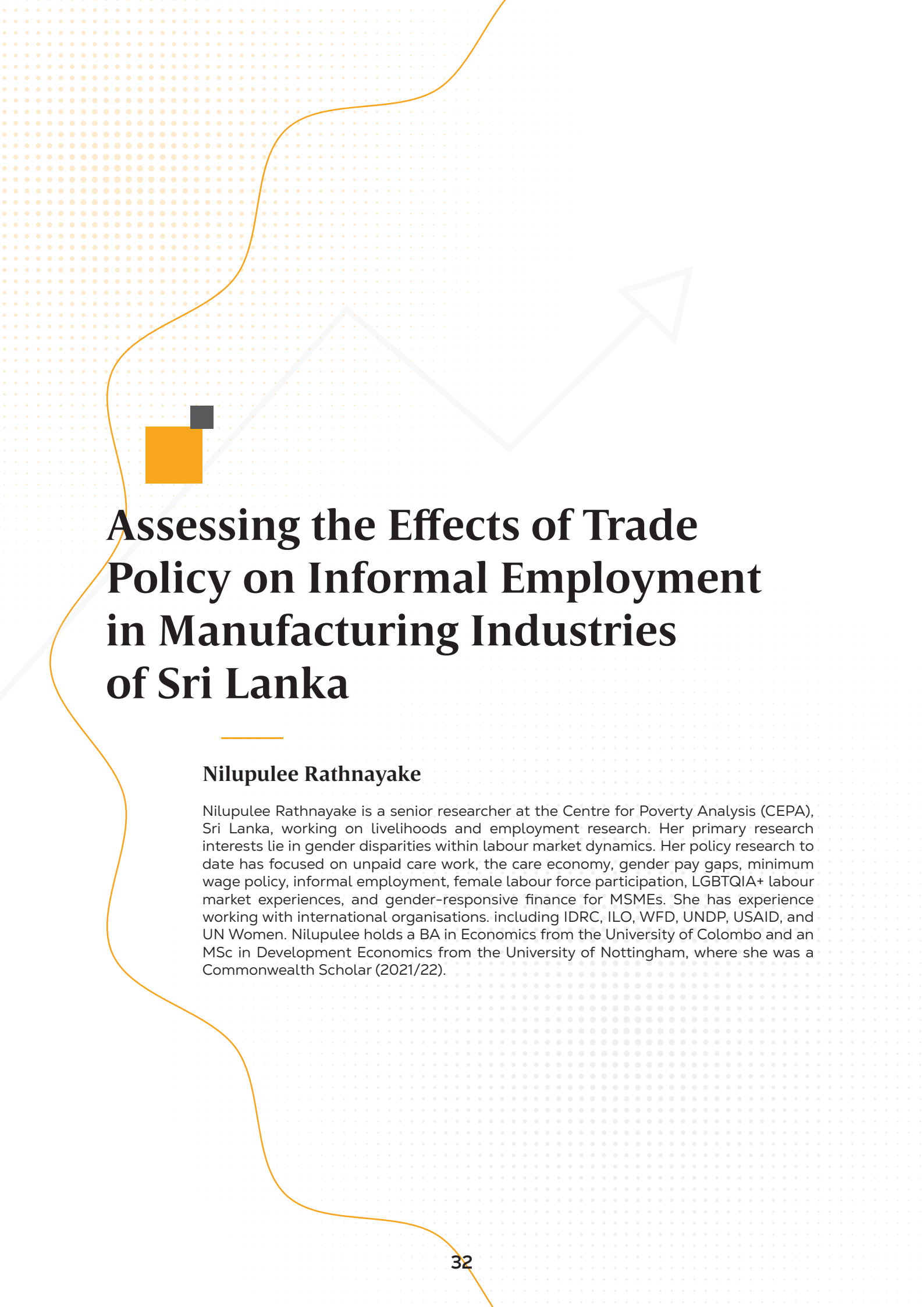
	Model 1	Model 2	Model 3	Model 4
ATET	-2.581*	-0.024	-45.995***	-0.746***
	(-6.44)	(-4.59)	(-198.30)	(-644.72)

Note: Models 1 and 2 are estimated using a Difference-in-Differences (DiD) approach, while Models 3 and 4 employ a Difference-in-Differences-in-Differences (DDD) approach. In Models 1 and 3, the dependent variable is hours of work, whereas in Models 2 and 4, the dependent variable is the log of hours of work. *t* statistics are reported in parentheses, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Table B2: DiD & DDD regressions with broader income band ($\pm 40\%$ of LKR100,000)

	Model 1	Model 2	Model 3	Model 4
ATET	-1.957***	-0.011*	-22.402**	-0.382***
	(-16.43)	(-6.60)	(-32.31)	(-36.36)

Note: Models 1 and 2 are estimated using a Difference-in-Differences (DiD) approach, while Models 3 and 4 employ a Difference-in-Differences-in-Differences (DDD) approach. In Models 1 and 3, the dependent variable is hours of work, whereas in Models 2 and 4, the dependent variable is the log of hours of work. *t* statistics are reported in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.



Assessing the Effects of Trade Policy on Informal Employment in Manufacturing Industries of Sri Lanka

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Abstract

This study examines the relationship between trade liberalisation and informal employment in Sri Lanka's manufacturing sector. While classical trade theories assume full employment and do not differentiate between formal and informal labour, this distinction is crucial in lower-middle-income economies like Sri Lanka, where informality remains pervasive, particularly in labour-intensive, low-tech manufacturing industries. Drawing on the theoretical framework of Goldberg and Pavcnik (2003), who model firms' dual use of formal and informal labour under trade shocks, this study applies a two-step estimation strategy to evaluate how trade policy affects informality. First, individual-level probabilities of informal employment are estimated using Sri Lanka Labour Force Survey (LFS) data from 2014 to 2021, controlling for demographic, household, and regional characteristics. These predicted probabilities are then regressed on industry-level trade indicators such as average tariffs and trade flows (imports and exports) to capture the impact of trade policy on informal labour. To address potential endogeneity from reverse causality between tariffs and informal employment, as well as measurement gaps, particularly due to the exclusion of non-tariff barriers (NTBs), trade volumes are included as proxies for trade exposure, and lagged tariff and lagged trade variables are used to account for timing mismatches between trade reforms and labour market responses. Estimation is conducted using both Ordinary Least Squares (OLS) and Variance-Weighted Least Squares (VWLS), with year and industry fixed effects to control for unobserved heterogeneity. The results provide strong evidence that lower tariffs are associated with lower informal employment, consistent across models and worker groups. However, the pandemic years (2020–2021) exhibit opposite tariff-informality relationships, underscoring crisis-specific dynamics. High imports appear to reduce informality, likely due to productivity pressures, while high exports are linked to increased informality in contrast to the general trend observed globally, highlighting sectoral dependence on low-cost labour through subcontractors and weak enforcement mechanisms. Aggregation at the 2-digit industry level may partly explain this divergence. These asymmetric effects underscore the importance of structural and institutional contexts. The findings stress that trade policy and liberalisation alone are not sufficient to ensure formalisation; complementary labour policies are essential for trade reforms to translate into inclusive and decent employment outcomes, especially during crises.

Keywords: informal employment; manufacturing industries; trade policy; two-step estimation strategy

1. Introduction

The relationship between international trade and informal employment remains a critical yet debated issue in development economics. Classical trade theories, which typically assume full employment without making a distinction between formal and informal employment, fail to adequately account for the dynamics between trade liberalisation and informality in labour markets. Yet in many lower-middle-income countries, including Sri Lanka, informal employment constitutes a substantial share of the labour force, particularly in manufacturing industries characterised by low technological adoption and high labour intensity. The question of whether trade liberalisation exacerbates or mitigates informality is thus central to both academic enquiry and policy design.

This study builds on the theoretical framework developed by Goldberg and Pavcnik (2003), who provide a model grounded in efficiency wage theory to explain why firms simultaneously employ formal and informal labour. Their model suggests that trade liberalisation, conceptualised as a permanent shift in price distribution due to increased foreign competition, reduces firms' expected output prices and raises uncertainty. In such an environment, firms adjust their cost structures by reducing formal employment—subject to regulatory burdens and dismissal costs—and increasing reliance on informal labour, which acts as a flexible buffer.

Despite this theoretical clarity, the empirical evidence on trade liberalisation and informal employment remains mixed. Some studies show that trade openness reduces informality by raising productivity, expanding export opportunities, and integrating firms into global value chains (Aleman-Castilla, 2006; Selwaness and Zaki, 2015), while others demonstrate that, in contexts with rigid labour markets, weak institutions, and a large informal base, liberalisation can increase informal employment as firms resort to cost-cutting measures to survive (Cruces et al., 2018; Acosta and Montes-Rojas, 2014; Wang et al., 2021). A growing body of literature emphasises the role of mediating factors, such as sectoral composition, labour regulation, and institutional quality, in determining whether trade reforms lead to formalisation or informalisation.

In Sri Lanka, this question is particularly salient. Following a wave of tariff reforms beginning in 1977 and accelerating after the end of the civil conflict in 2009, the country pursued trade openness alongside

structural transformation goals. Tariff reductions, removal of para-tariff charges, and export promotion initiatives marked the 2010s as a period of liberalisation. However, these trends reversed in the aftermath of Sri Lanka's multiple crises beginning in 2019, as tariff and para-tariff protections were reinstated to address revenue shortfalls and balance-of-payment pressures. Meanwhile, informality continues to dominate the labour market, with approximately around 70% of workers informally employed, particularly in small-scale manufacturing at the margins of global value chains.

Despite this policy volatility and high informality, there is no empirical research examining whether and how trade policy has influenced informal employment in Sri Lanka, leaving a significant gap in the literature. Understanding this relationship is crucial not only for evaluating the distributive consequences of trade reforms but also for designing trade and labour policies that can jointly promote inclusive growth and decent work.

This paper attempts to address this gap by investigating the effects of trade reforms on informal employment in Sri Lanka's manufacturing industries from 2014 to 2021. Using a two-step estimation strategy, where the probability of being informally employed is first estimated from microdata, then regressed on industry-level tariff and trade flow variables, this study provides the first empirical evidence of its kind in the Sri Lankan context. The analysis draws on the theoretical insights of Goldberg and Pavcnik (2003), while incorporating both current and lagged tariff measures, as well as imports and exports, to capture the effects of trade policy. In doing so, the study contributes to a growing literature on trade and labour markets and offers policy-relevant insights into how trade reforms can be structured to reduce informality and promote formal employment expansion.

2. Literature Review

2.1 Theoretical Background

This study builds on the theoretical framework proposed by Goldberg and Pavcnik (2003), which investigates the relationship between trade liberalisation and informality. According to Goldberg and Pavcnik, the common argument regarding the link between trade liberalisation and rising informality is based on the logic: trade reforms tend to increase foreign competition, putting pressure on firms to reduce labour costs. In response, firms may cut employee benefits, replace permanent workers with part-time or temporary staff, or subcontract work to informal, home-based, or self-employed microentrepreneurs. Additionally, increased competition can lead to layoffs, pushing displaced workers into the informal sector due to limited formal employment opportunities. However, the authors raise an important theoretical concern here: If relying on informal labour is indeed more cost-effective, why did profit-maximising firms not adopt such strategies even before the implementation of trade reforms? To address this question, they develop a theoretical model that draws from the efficiency wage frameworks of Shapiro and Stiglitz (1984) and Bulow and Summers (1986), and the dynamic extensions of these models discussed in Saint-Paul (1996). Their model aims to demonstrate that trade liberalisation can indeed lead to a rise in informal employment as a theoretically consistent outcome.

Goldberg and Pavcnik (2003) construct a dynamic model in which firms operate under demand uncertainty over an infinite horizon and employ two types of labour: formal and informal workers. Formal workers are subject to labour regulations. To discourage shirking, firms are required to pay efficiency wages to formal workers, making this form of labour more expensive. In contrast, informal workers are not protected by labour laws, are paid their reservation wage, and can be perfectly monitored at a marginal cost. This difference in labour costs explains why firms may not exclusively prefer informal workers, despite their apparent cost advantage. The model shows that it is optimal for firms to employ both formal and informal workers, simultaneously. Firms hire formal labour up to a cost-efficient threshold, after which they rely on informal labour to meet fluctuating or increased demand as a flexible adjustment margin. In response to negative economic shocks, firms are more likely to lay off informal workers first, underscoring their role as a buffer. This coexistence of formal and informal labour emerges not from a simple desire to evade regulations, but from a rational response to varying cost structures and uncertainty.

In this framework, trade liberalisation is modelled as a permanent shift in the price distribution, where the new cumulative price distribution dominates the old one for all price levels. This represents a scenario where firms face increased competition and lower expected output prices. As a result, the expected returns to production decline, leading firms to reduce their optimal level of formal employment. Consequently, they increase their reliance on informal labour to stay flexible and cost-efficient in an environment of heightened price volatility and competitive pressure. As a result, informality rises, not as a temporary

adjustment, but as a structural outcome of trade reforms. The model emphasises that, the higher the dismissal costs or the cost of maintaining formal labour, the greater the firm's incentive to shift toward informal employment following liberalisation. Informal labour thus serves as a strategic buffer against regulatory and market uncertainties.

An important implication of the model is that it provides a theoretical foundation to the argument that trade reforms can lead to higher informality. While this is one plausible explanation, Goldberg and Pavcnik acknowledge that theirs is not the only possible theoretical framework. They suggest that alternative models could lead to different, or even opposite, conclusions about the relationship between trade reforms and informal employment. Nevertheless, their goal is not to prove their model superior to others, but to show that the observed increase in informality following trade reforms can be theoretically justified.

Finally, drawing on the insights from Goldberg and Pavcnik's model, I consider both the increase and decrease of trade barriers such as tariff changes as having potential implications for informal employment in Sri Lanka. While much of the literature focuses on how tariff reductions may lead to increased informality through heightened foreign competition, it is also possible that tariff reductions may influence firm behaviour in ways that reduce informality.

2.2 Empirical Evidence

The empirical literature examining the impact of trade liberalisation on informal employment presents mixed findings. Some studies argue that trade liberalisation contributes to a decrease in informality by encouraging firms to enter the formal sector and by raising productivity. In contrast, other studies demonstrate that trade liberalisation may increase informality, particularly in settings characterised by labour market rigidities, a large share of small and low-productivity firms, or weak institutional capacity. Still others report mixed or context-dependent effects, highlighting the importance of sectoral, institutional and regional heterogeneity. This section reviews empirical studies grouped according to whether they report a decreased, increased or mixed effects of trade liberalisation on informal employment.

Trade Liberalisation Leading to a Decrease in Informality

A number of empirical studies provide evidence that trade liberalisation can reduce informal employment, especially when supported by conducive economic structures or complementary reforms. Aleman-Castilla (2006) explored the impact of NAFTA on informality and real wages in Mexico using a dynamic industry model with firm heterogeneity. By linking Mexican and U.S. import tariff data to the Mexican National Survey of Urban Labour (ENEU), the study found that reductions in Mexican import tariffs were significantly associated with reductions in the likelihood of informality in tradable industries. It explained that trade liberalisation made formalisation more profitable for some firms, pushed less productive, informal firms out of the market, and enabled the most productive, formal firms to participate in international trade. Furthermore, the study highlighted that informality decreased more in industries that were relatively export-oriented, while it declined less in industries with high import penetration.

Similar results were found by Selwaness and Zaki (2015) who examined the Egyptian context by combining Egyptian Labour Market Panel Survey data with tariff data to investigate the effect of trade liberalisation on informal workers. This was the first empirical effort to explore this relationship in Egypt. The authors found that trade reforms were associated with a reduction in informal employment. The findings held up across various robustness checks and revealed a persistent negative link between tariff reductions and informality.

Paz (2012), analysing the effects of Brazil's trade liberalisation episode between 1989 and 2001, observed that a decrease in export tariffs reduced the share of informal workers. Although the study found only mild evidence that decreases in import tariffs increased informality, the overall results suggested that the effect of export liberalisation was stronger and statistically more significant than that of import liberalisation. The findings provide support for the view that trade openness can encourage formal employment, especially through export channels.

Sarra and Bombarda (2018), focusing on Mexico, investigated how trade liberalisation affects formal employment across genders using detailed data over the period from 1993 to 2001. Their analysis revealed that tariff cuts increased the probability of formal employment for both men and women in 4-digit manufacturing industries. By constructing a regional tariff exposure measure, they showed that regions with higher exposure to trade liberalisation experienced a greater increase in the probability of working formally, particularly in the manufacturing sector, with the effect being stronger for men.

In India, Shembavrekar (2015) examined how the regional labour market flexibility influenced the impact of tariff liberalisation on manufacturing firm employment during the period from 1990 to 2001. The study found that in states with more flexible labour markets, formal employment increased by 9 percent following tariff reductions. Meanwhile, informal employment declined significantly by nearly 36 percent among informal firms in these flexible regions. In contrast, in states with inflexible labour markets, there was no statistically significant change in informal employment, and formal employment actually declined by as much as 17 percent. This pointed to the importance of labour market conditions in mediating the effects of trade reforms on informality.

Trade Liberalisation Leading to an Increase in Informality

Contrary to the above findings, another group of studies argues that trade liberalisation may increase informal employment under certain conditions, such as weak enforcement of labour regulations, high labour costs, or the dominance of small firms.

Cruces et al. (2018) conducted an in-depth study of Argentina during the 1980–2001 period, exploring the relationship between trade reforms and labour informality through both cross-section and time-series industry-level mechanisms. They found that reductions in industry-specific tariffs were associated with an increase in informality, particularly in sectors with a high concentration of small-sized firms. The authors suggested that trade-induced competitive pressures may have encouraged firms to reduce costs by hiring informally, especially where formal employment regulation was burdensome.

Acosta and Montes-Rojas (2014) also analysed Argentina using manufacturing industry-level data from 1992 to 2003. Their results supported the idea that more intense trade liberalisation led to a significant increase in informality. The econometric analysis showed that a 1 percent reduction in average tariffs resulted in a 0.6 percent increase in informality rates. These results confirmed that the liberalisation process exacerbated informal employment in the manufacturing sector.

Similarly, Wang et al. (2021) studied China using three waves of household survey data between 1995 and 2007 to examine the effects of trade liberalisation-induced labour demand shocks on informal employment. They found that workers in regions that experienced larger tariff cuts were more likely to be employed informally. The use of firm-level data further confirmed that tariff reductions increased the share of informal workers within firms, with the effects being particularly pronounced among smaller and less productive firms.

In the case of Pakistan, Wu et al. (2019) examined the labour market effects of the country's major trade reforms in the late 1980s. They found that trade openness led to an increase in informal sector employment, both overall and within the manufacturing sector. The authors concluded that while trade liberalisation can generate employment, it may also push a greater share of that employment into informal arrangements unless accompanied by labour market reforms. They argued that only a coordinated combination of trade and labour reforms could ensure inclusive labour market outcomes.

Rattanawich (2014), using new datasets for Thailand, assessed the impact of trade liberalisation and found that a one percentage point reduction in Thailand's import tariffs led to a roughly equivalent one percentage point increase in informal employment. Interestingly, the study also found that a reduction in China's import tariffs was associated with a decrease in informal employment in Thailand, indicating that regional trade dynamics and competitiveness also influenced domestic informality patterns.

Boulaabi and Bellakhal (2022) analysed the effect of trade liberalisation in Tunisia using the Tunisia Labour Market Panel Survey (TLMPS) and trade data. Their study found a significant association between tariff reductions and increased likelihood of working in the informal sector. They further observed that industries which were most protected prior to liberalisation had a higher probability of informal employment. Additionally, the study highlighted that men and high-skilled individuals experienced greater reductions in informality following trade liberalisation, indicating a gender and skill-based asymmetry in outcomes.

In the context of Botswana, McMillan and McCaig (2019) analysed labour force surveys over a decade and found that trade liberalisation did not significantly change the relative size of industries in terms of employment but did influence employment composition within industries. Specifically, the prevalence of informal firm employment and self-employment increased after trade reforms, although the evidence on unemployment was mixed.

Mixed or Context-Dependent Effects

A number of studies find that the relationship between trade liberalisation and informality depends on contextual factors such as the type of trade reform, existing labour market structures, and the way informality is measured.

Khanna (2021) conducted a panel data analysis on the BRICS countries: Brazil, Russia, India, China, and South Africa, covering the period from 1996 to 2015. The study found that higher trade volumes were associated with higher levels of informality, yet the direct impact of trade liberalisation (measured through policy changes) was statistically insignificant. This distinction emphasised that, while trade expansion may correlate with informalisation, trade policy reform alone may not be the determining factor.

Fugazza and Fless (2010) provided further complexity in the relationship by using three different measures of informality (from household surveys and macro-level output data) and four trade liberalisation indicators. Their study found that macro-founded data suggested trade liberalisation led to increases in informal output, while micro-founded data showed a decline in informal employment. These mixed findings underscored the importance of measurement choices and data sources in shaping observed outcomes.

Akbulut and Egen (2021) analysed Turkey's experience using a Computable General Equilibrium (CGE) model based on nonlinear simultaneous equations. They found that, at the aggregate level, there was a positive relationship between import tariffs and formal employment and a negative relationship between tariffs and informal employment, suggesting that trade liberalisation overall reduced informality. However, when disaggregating by sector, they observed that formal employment declined in mining and industry sectors following an increase in import tariffs. Thus, while the general equilibrium effects pointed to formalisation, sector-specific dynamics told a more nuanced story.

Bosch et al. (2012) studying Brazil between 1983 and 2002, examined both trade and constitutional reforms. They found that trade liberalisation explained roughly 1 percent of the increase in informality, whereas constitutional reforms accounted for 40 to 50 percent. Although the effect of trade liberalisation was modest in comparison, the study suggested that liberalisation did contribute to rising informality in Brazil, although it was not the primary driver.

The empirical literature on trade liberalisation and informal employment provides a wide range of findings, often shaped by country-specific contexts, sectoral dynamics, labour market institutions and measurement approaches. While some studies emphasise that trade liberalisation fosters formalisation by increasing productivity and reducing entry barriers for formal firms, others highlight that without supporting labour reforms or social protections, trade reforms may push firms toward informal labour arrangements to remain competitive. Importantly, even within the same country, different industries or regions may experience divergent outcomes, suggesting that the relationship is far from uniform and must be understood in a broader institutional and economic context.

3. Methods

As described in Section 2 under the theoretical background subsection, this study employs the two-step estimation procedure introduced by Goldberg and Pavcnik (2003), which has been widely adopted in other country contexts to empirically assess the impact of trade on labour market informality (Aleman-Castilla, 2006; Boulaabi & Bellakhal, 2022; Selwaness & Zaki, 2015; Wu et al., 2019). In the first step, individual-level probabilities of informal employment are estimated based on observable covariates. These predicted probabilities are then used as the dependent variable in a second-stage regression, where the explanatory variables consist of industry-level trade policy indicators. This approach allows for the identification of structural relationships between trade exposure and informality.

3.1 Data

This study combines micro-level labour force data with macro-level trade policy data to examine the impact of trade liberalisation on informal employment across Sri Lanka's manufacturing industries.

Micro-Level Data: Labour Force Survey (LFS)

The individual-level data are drawn from the Sri Lanka LFS conducted quarterly by the Department of Census and Statistics (DCS). The LFS provides nationally representative data on labour market outcomes, including employment status, employment industry and occupation, demographic characteristics, household composition, and geographic location. It covers both formal and informal workers, allowing for consistent measurement of informality across years and industries.

Informal employment is defined according to the DCS classification based on the ILO definition, which considers a combination of employment conditions. According to the DCS, it encompasses people in employment who, by law or in practice, are not subject to national labour legislation or income tax, and who are not entitled to social protection or employment benefits. Informal employment can exist in both the informal and formal sectors of the economy. In simple terms, workers are considered informal if they do not have a formal employment contract, are not entitled to social security (such as Employees' Provident Fund/Employees' Trust Fund), and are not employed in enterprises registered with regulatory authorities. Additionally, all unpaid family workers, employers and own-account workers in the informal sector, and all paid employees who do not have a permanent employer, are included in this category, as per the DCS. This definition aligns with international standards (ILO, 2018) and ensures comparability over time. The study focuses on the employed population aged 15 and above, and separate subsamples are analysed for all workers and for wage workers, only to assess heterogeneity.

Macro-Level Data: Trade and Tariffs

The study focuses on the manufacturing industries, which was the most targeted sector for trade liberalisation in Sri Lanka in 1977. Industries are defined at the 2-digit ISIC Rev.4 level, allowing for meaningful sectoral comparisons¹.

The macroeconomic trade policy variables—tariffs, imports, and exports—are obtained from the World Integrated Trade Solution (WITS) database, harmonised at the ISIC Rev.3 and then converted into ISIC Rev.4 at the 2-digit industry level to match with the LFS industry classifications, which are on ISIC Rev.4 from 2013 onwards. Tariff data represent effectively applied average ad valorem tariffs at the industry level. Trade flow variables (imports and exports) are measured in nominal values and converted to natural logs before inclusion in regression models.

This study uses 2-digit industry-level data, which is common in trade-labour literature due to its consistency and availability. While many industries both import and export (such as importing raw materials and exporting finished goods), this dual activity can create mixed effects on labour, especially informal employment. Although this overlap may seem to blur trade impacts, the approach remains robust. Industry fixed effects help control for unchanging sector-specific traits, and using separate lagged values for imports and exports helps capture their distinct influences. More detailed data would offer deeper insights, but this level of analysis still aligns with established methods and effectively reveals broader patterns between trade and informality.

The analysis covers the period from 2014 to 2021. This timeframe is selected based on two considerations. First, the consistent availability of harmonised LFS and tariff data at the ISIC Rev.4 level begins from 2013 onwards. Second, 2021 is the most recent year available at the time of study, including years with highlighted macroeconomic instability (COVID-19, 2020–2021), which may influence informal employment dynamics. Tariff data for Sri Lanka were not available for the year 2016, and trade data were unavailable for the year 2018 in the WITS database.

However, it is important to note that the selected period of analysis, 2014 to 2021, captures a dynamic phase in Sri Lanka's trade and labour market landscape, characterised by both external and internal shocks. Key among these were the global COVID-19 pandemic, which disrupted international trade flows and labour markets, and domestic fiscal and policy shifts. While such volatility could raise concerns regarding endogeneity or confounding influences, this period is particularly relevant for examining structural shifts in informality as it reflects how trade policy interacts with broader economic resilience under conditions of uncertainty, thus offering insights that are both timely and policy-relevant as several methodological decisions have been made to ensure the robustness and validity of the estimated effects as follows.

¹ Due to data issues, two manufacturing industries—tobacco (ISICr4: 12 at 2-digit level) and petroleum (ISICr4: 19 at 2-digit level)—are excluded from the analysis. These sectors exhibit either very low employment levels or doubtful reporting in tariff data, which would compromise the reliability of estimates. Additionally, the food industry was used as the reference category in industry fixed effects specifications for the second-stage regressions. In total, the final sample includes 21 manufacturing industries, offering substantial variation in trade exposure and informality to support robust empirical analysis.

3.2 Estimation Strategy

In the first step, a probit model is estimated to determine the probability of working as an informal employee, controlling for individual and household characteristics, as well as regional and industry fixed effects. The first-stage regressions are estimated separately for each year in the sample, as shown in Equation 1 below.

$$Informal_{ijt} = \beta_0 + \beta_1 X_{ijt} + \beta_2 H_{ijt} + \beta_3 R_{ijt} + \beta_4 IP_{ijt} + \varepsilon_{ijt} \quad (1)$$

The binary dependent variable takes the value of 1 if individual i , employed in industry, j at time t , is working as an informal employee, and 0 otherwise. X_{ijt} is a vector of regressors which includes individual characteristics, such as gender (a dummy for being female), age squared, marital status (a dummy for being married), and education level (a dummy for having completed GCE A/L or above). Similarly, H_{ijt} includes household characteristics captured through variables such as household size, a dummy for being the head of household, the share of dependents aged 0-14 or over 65 in the household, and the share of individuals of working age (15-64 years). R_{ijt} is for provincial dummies which are included to account for regional differences. Finally, IP_{ijt} denotes industry indicators which were added to control for unobserved industry-specific characteristics. The coefficient of the industry dummy is interpreted as the "informality premium," reflecting the portion of variation in the probability of being informally employed that is not explained by individual, household or regional characteristics, but rather by industry affiliation. ε_{ijt} denotes the error term.

In the second step, the industry coefficients (β_4) from Equation 1 at the first-stage regressions are regressed on tariff rates separately for each year first, and pooled over time, and then regressed on tariff rates in the pooled regression. These coefficients, which reflect the industry informality differentials as described by Goldberg and Pavcnik (2003), are obtained after filtering out the effects of observable worker characteristics. As such, they capture the portion of variation in the probability of informality attributable to a worker's industry affiliation. By regressing these informality differentials on tariffs, this methodology allows for an examination of the extent to which trade policy (tariffs) explains changes in informality across industries, as represented in Equation 2 below for the pooled regression, using year and time fixed effects. The inclusion of industry and time fixed effects controls for unobserved heterogeneity that may vary across industries or over time. Time fixed effects absorb common shocks such as COVID-19 or national-level policy changes that affect all industries simultaneously, while industry fixed effects control for time-invariant characteristics specific to each sector that might influence informal employment levels.

$$IP_{jt} = \gamma_0 + \gamma_1 Tariff_{jt} + \gamma_2 D_j + \gamma_3 D_t + \varepsilon_{jt} \quad (2)$$

Several robustness checks are conducted to validate the empirical results. First, the second-stage regressions are estimated using both Ordinary Least Squares (OLS) and Variance-Weighted Least Squares (VWLS). The VWLS addresses heteroskedasticity arising from differences in sample sizes and precision across industries, thereby yielding more efficient and unbiased estimates. Following Goldberg and Pavcnik (2003), this approach assigns greater weight to industry-year observations estimated with higher precision (typically those with larger sample sizes) and reduces the influence of noisier estimates, thereby improving efficiency and ensuring valid inference. Presenting results from both OLS and VWLS allows for robustness checks against potential weighting bias and helps confirm the stability of the coefficients under different assumptions about the error structure.

Second, the analysis distinguishes between all employed workers and wage workers only, enabling an assessment of heterogeneity in trade-labour linkages across different types of employment. Regressions are run separately for each year and for the pooled sample. In the pooled regressions, both year and industry dummies are included to control for fixed effects.

Third, the analysis incorporates lagged tariffs to account for potential delayed labour market responses and to address endogeneity concerns related to reverse causality, namely, whether trade influences informality or vice versa. By lagging these variables, the model accounts for the fact that changes in trade policy are unlikely to affect informal employment instantaneously and help address endogeneity concerns. The use of lagged trade flows mitigates this issue, as trade flows in period $t-1$ are less likely to be simultaneously determined with informal employment outcomes in period t , as shown in Equation 3 below.

$$IP_{jt} = \gamma_0 + \gamma_1 Tariff_{Lag_{jt-1}} + \gamma_2 D_j + \gamma_3 D_t + \varepsilon_{jt} \quad (3)$$

Despite these measures, non-tariff barriers (NTBs) are not explicitly captured in the regressions due to data limitations. However, the inclusion of import values can partially account for changes in NTBs, as rising imports may reflect trade facilitation beyond tariff reductions, as described by Goldberg and Pavcnik (2003). Therefore, the logarithms of import and export values are included alongside tariffs in the estimation, as shown in Equation 4 below.

$$IP_{jt} = \gamma_0 + \gamma_1 Tariff_{jt} + \gamma_2 IM_{jt} + \gamma_3 EX_{jt} + \gamma_4 D_j + \gamma_5 D_t + \varepsilon_{jt} \quad (4)$$

As explained in the case of Equation 3 above, while exports and imports are important indicators of trade exposure, they can introduce endogeneity bias if included contemporaneously, since trade flows are themselves influenced by tariff policy. For example, a reduction in tariffs may lead to increased imports or exports, making it difficult to disentangle the independent effect of trade flows on informal employment. To address this, lagged values of tariffs, exports, and imports are included in the regression, following Goldberg and Pavcnik (2003). This strategy mitigates simultaneity concerns by ensuring that trade flows used in the model are predetermined relative to the current period's labour market outcomes. Thus, lagging these variables allows for a more credible estimation of the effect of trade policy and trade exposure on informality. Finally, lagged trade flows are considered alongside lagged average tariffs, as specified in Equation 5 below.

$$IP_{jt} = \gamma_0 + \gamma_1 Tariff_{Lag_{jt-1}} + \gamma_2 IM_{Lag_{jt-1}} + \gamma_3 EX_{Lag_{jt-1}} + \gamma_4 D_j + \gamma_5 D_t + \varepsilon_{jt} \quad (5)$$

Together, these design choices—lagged trade variables and two-way fixed effects—enhance the credibility of the causal interpretation of the results. However, as a final step, and as an additional solution to potential bias arising from the selection of the time period—which includes crisis years, particularly the impact of the pandemic—this concern was explicitly addressed as follows.

Crisis periods may generate shocks that affect informality through channels not fully captured by standard year fixed effects, thereby altering the usual relationship between tariffs and informality. These unique conditions could lead to changes in firms' behaviour, labour market dynamics, or policy responses, potentially causing the tariff-informality relationship to vary during crisis years compared to more stable periods.

To account for this possibility, interaction terms between lagged average tariff rates and year dummy variables were introduced, as in Equation 6 below. This approach allows the effect of tariffs on informality to differ by year, enabling the model to capture any dynamic changes in tariff impacts that occurred during the crisis years.

$$IP_{jt} = \gamma_0 + \gamma_1 Tariff_{Lag_{jt-1}} + \gamma_2 IM_{Lag_{jt-1}} + \gamma_3 EX_{Lag_{jt-1}} + \gamma_4 (Tariff_{Lag_{jt-1}} * Year_t) + \gamma_5 D_j + \gamma_6 D_t + \varepsilon_{jt} \quad (6)$$

4. Trade, Tariffs and Informal Employment in the Sri Lankan Context

Sri Lanka's journey toward trade liberalisation began in 1977, marking a decisive departure from the country's earlier import substitution industrialisation (ISI) policies. The shift was driven by the failure of a rigidly regulated economic model, a desire to replicate the export-led success of Newly Industrialised Countries (NICs), and the prospect of international support and aid (Jayawardena, 2011). The liberalisation reforms launched in 1977 and sustained over the subsequent decades profoundly reshaped the economy, particularly by reorienting the trade structure toward export-oriented manufacturing (Athukorala, 2017). Trade policy reforms were centred on dismantling quantitative restrictions, reducing tariffs, and creating incentives for export expansion, one of the key objectives of liberalisation (Herath et al., 2013). These reforms contributed to a dramatic shift in Sri Lanka's export base from land-intensive plantation commodities such as tea, rubber, and coconut to labour-intensive manufactured goods, positioning manufacturing as the leading source of employment growth in the liberalised economy (Athukorala, 2017).

Currently, the manufacturing sector plays a central role in both industrial output and international trade. According to the most recent Annual Industry Survey by the Department of Census and Statistics (2019), manufacturing accounts for 83.9% of all industrial establishments and employs 94.5% of the industrial

workforce, It also contributes 93.0% of industrial output, 92.2% of intermediate consumption, and 94.4% of the total value added to the economy from industrial output. Key manufacturing export segments, particularly apparel and textiles, rubber and rubber products, and processed food, have become vital components of the country's global trade integration. Understanding the effects of trade and tariff policies is crucial for assessing how liberalisation has influenced labour market outcomes, including the prevalence of informal employment within Sri Lanka's manufacturing sector. This is especially important in the post-conflict era, where trade barriers imposed after the early 2000s contrast with the trade liberalisation efforts of 1977. The trade regimes continued to evolve after 2010, with significant changes occurring post-2015.

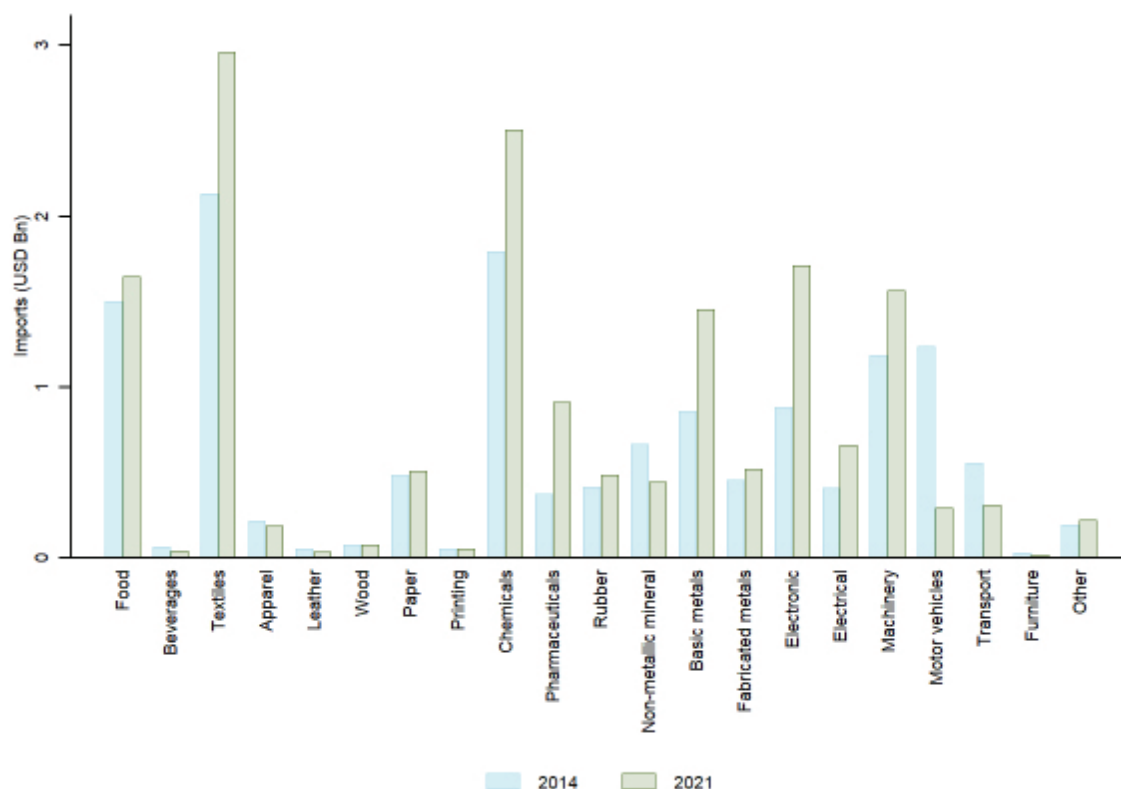


Figure 1: Import values by manufacturing industry in 2014 and 2021

Note: Author's illustration using UN Comtrade data from WITS. Manufacturing industries are at a 2-digit level as in ISICr4 Tobacco (ISICr4: 12 at 2-digit level) and petroleum (ISICr4: 19 at 2-digit level) were not considered due to data issues.

Figure 1 displays the import values across Sri Lanka's manufacturing industries for the years 2014 and 2021, based on UN Comtrade data categorised at the ISIC Rev.4 2-digit level. The chart reveals substantial variation in the level and growth of imports across industries, illustrating the evolving exposure of different manufacturing sectors to international trade. Between 2014 and 2021, import values increased markedly in industries such as chemicals, textiles, pharmaceuticals, basic metal, electronics, and machinery, suggesting deepening trade integration or rising reliance on imported intermediate goods. In contrast, industries like motor vehicles, non-metallic mineral transport, apparel and beverages show declining or stagnant import values, which may reflect shifting policy priorities, crisis-induced import restrictions, or weakening domestic demand. These sectoral differences in import exposure are central to understanding the uneven effects of trade policy on labour markets. Industries more exposed to international trade may face greater competitive pressures, which could influence firm behaviour regarding labour costs and employment formality. This figure therefore sets the stage for analysing how trade reforms—manifested through changing import intensities—affect informal employment in Sri Lanka's manufacturing sector.

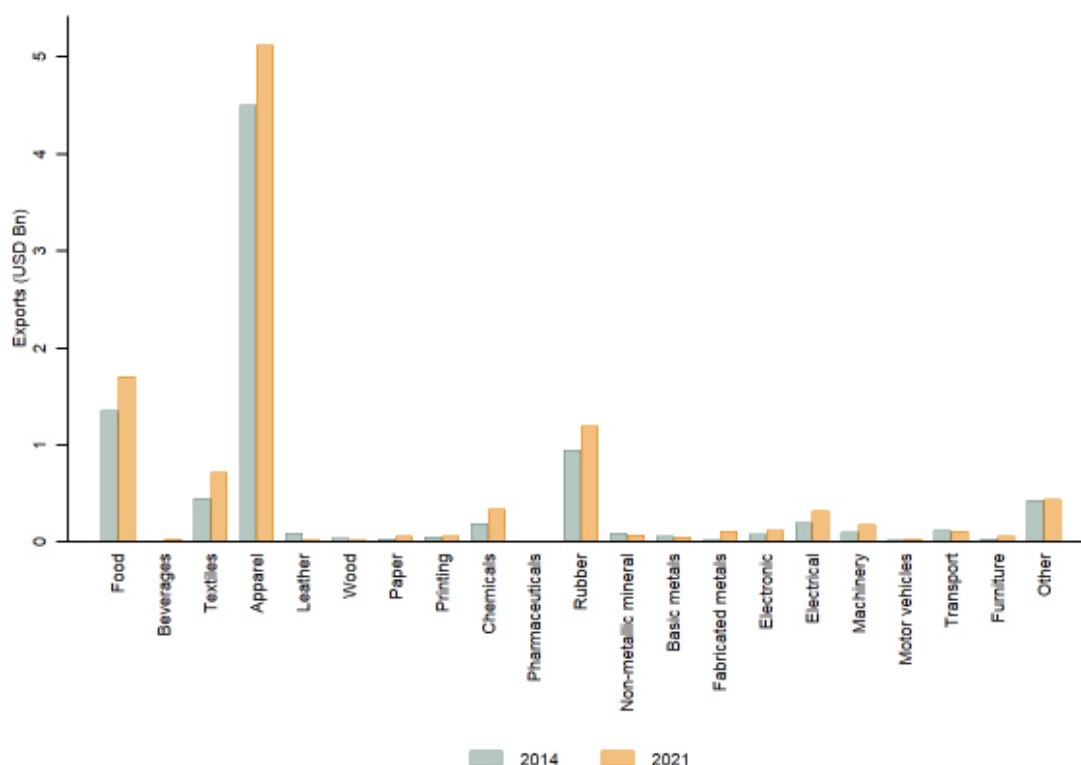


Figure 2: Export values by manufacturing industry in 2014 and 2021

Note: Author's illustration using UN Comtrade data from WITS Manufacturing industries are at a 2-digit level as in ISICr4. Tobacco (ISICr4: 12 at 2-digit level) and petroleum (ISICr4: 19 at 2-digit level) were not considered due to data issues.

Figure 2 illustrates the export values of Sri Lanka's manufacturing industries in 2014 and 2021, categorised by ISIC Rev.4 2-digit industry codes, using data from UN Comtrade. The figure shows that the apparel industry continues to dominate manufacturing exports, with its export value rising from just under USD5 billion in 2014 to over USD5 billion in 2021. This indicates the sustained importance of apparel as Sri Lanka's leading export sector and its deep integration into global value chains. Other industries such as food, textiles, rubber, chemicals, electricals, electronics and machinery also show modest increases in export values over the period, suggesting some diversification in export activity. Almost all the other sectors show consistently low export levels, indicating limited global competitiveness or capacity constraints. These export patterns reflect sectoral differences in trade orientation and exposure to international markets, factors that are central to understanding labour market responses to trade reforms. In particular, industries with rising exports are more likely to face international compliance pressures, which may incentivise formalisation, while non-exporting or import-competing sectors may be less affected. Thus, this figure provides important context for interpreting how trade reforms may translate into differential impacts on informal employment across Sri Lanka's manufacturing sector.



Figure 3: Average tariff levels by manufacturing industry from 2014-2021

Note: Author's illustration using WITS data. Manufacturing industries are at a 2-digit level as in ISICr4. Tobacco (ISICr4:12 at 2-digit level) and petroleum (ISICr4: 19 st 2-digit level) were not considered due to data issues. Tariff data were not available for the year 2016 and were therefore excluded from the above illustrations and the analysis.

Figure 3 presents the average tariff rates across a set of Sri Lankan manufacturing industries from 2014 to 2021, using ISIC Rev.4 2-digit industry classifications. The data reveal a general trend of tariff reductions across most sectors by 2021, consistent with the country's broader trade liberalisation agenda pursued during the post-conflict economic reform period. Notably, sectors such as textiles, apparel, leather, and rubber show significant decreases in average tariffs, with textiles falling from over 8 percent in 2014 to below 2 percent by 2021, and apparel declining from around 17 percent to under 10 percent. This reflects deliberate efforts to reduce input costs and improve global competitiveness, particularly in export-oriented industries. Meanwhile, food, which has historically been afforded higher protection due to its role in domestic consumption and food security, continues to maintain relatively high tariffs, though some reduction is observed in 2021.

Other sectors exhibit different patterns. The pharmaceutical and chemical industries show relatively low but gradually increasing tariffs through 2020, likely reflecting growing national health sector priorities, followed by declines in 2021. Likewise, industries such as printing, paper, and wood products experienced moderate levels of protection, with some softening in the final year. The furniture industry remained one of the most heavily protected throughout the period, with tariffs exceeding 30 percent in 2019 and 2020, before dropping sharply to just over 15 percent in 2021. Similarly, the non-metallic mineral and motor vehicle sectors maintained tariffs above 15 percent for most of the period before experiencing significant reductions in the final year. In contrast, industries such as electronics, machinery, basic metal, fabricated metal and electricals were consistently characterised by lower tariff rates, generally below 12 percent, reflecting their strategic role as intermediate inputs and their integration into global value chains,

While these trends point to a broad-based reduction in tariff protection by 2021, it is important to note that Sri Lanka's trade policy became increasingly reliant on para-tariffs and non-tariff barriers (NTBs) after 2020, particularly in response to the country's escalating economic crisis. Facing severe fiscal and external account pressures, the government began using tools such as the Ports and Airports Development Levy (PAL), Cess, import licence restrictions and quantity controls to manage trade flows and protect foreign exchange reserves. These instruments allowed for more targeted protection without altering statutory tariff rates. As a result, even as average tariffs declined on paper, the overall restrictiveness of trade policy may have increased in practice, particularly in sectors deemed sensitive or essential during the crisis period.

The combination of formal tariff liberalisation and crisis-driven para-tariff escalation provides essential context for assessing how firms have responded to changing trade protection regimes. In particular, industries that experienced sharp reductions in average tariffs may have faced heightened competitive pressure and cost constraints, prompting firms to reconsider labour strategies including greater reliance on informal employment. At the same time, sectors shielded through NTBs or para-tariffs may have preserved more space for protection-driven cost structures. Together, these patterns underscore the complex and evolving nature of trade policy in Sri Lanka and provide a vital foundation for analysing the sector-specific impacts of trade reforms on informal employment.



Figure 4: The informal share of workers by manufacturing industry from 2014–2021

Note: Author's illustration using LFS data from DCS. Manufacturing industries are at a 2-digit level as in ISICr4. Tobacco (ISICr4:12 at 2-digit level) and petroleum (ISICr4: 19 at 2-digit lava) were not considered due to data issues.

Informal employment accounts for a substantial portion of employment in many developing countries (DCS, 2023). Informal employment has been persistent in the Sri Lankan labour market, with nearly 70 percent of workers employed in such arrangements (Kim et al., 2020). In 2021, according to the Department of Census and Statistics (2021), informal employment stood at 67.5%. This figure highlights the ongoing prominence of informal work, especially in industries that are heavily reliant on low-skill, labour-intensive tasks.

Figure 4 illustrates the trends in the informal share of workers across Sri Lankan manufacturing industries at the 2-digit level from 2014 to 2021, using ISIC Rev.4 industry classifications. The data reveals mixed trends in the informal share of employment across different sectors. While some industries saw a rise in informal employment, others experienced a reduction. Notably, industries that underwent tariff reductions such as apparel, rubber, and electronics exhibit a shift in their informal labour dynamics. In these sectors, informal employment displays a decrease from 2014 to 2021. This trend could be linked to the broader economic context, where firms, particularly in export-oriented Industries, increasingly moved toward formalising employment structures in response to changing trade policies and economic pressures, particularly post-2020.

Pharmaceuticals, electricals and motor vehicles, in particular, show a significant reduction in informal employment by 2021. These sectors, which have faced less reliance on informal labour, may have responded to the crisis by formalising their workforce to ensure compliance with stricter regulations and to improve operational stability during a period of economic uncertainty. The shift away from informal employment in these industries could also be a strategic response to the increasing use of para-tariffs and NTBs, which may have encouraged firms to adopt more formal employment practices to mitigate risks and secure better access to resources and markets.

Overall, the trends in informal employment across Sri Lanka's manufacturing sectors might have a complex interplay between trade policy changes, economic pressures, and labour market dynamics. The reduction in informal labour in some industries might reflect the shifting landscape of Sri Lanka's trade policy and its impact on labour practices, while other industries might continue to rely on informal employment due to protective measures or sector-specific characteristics.

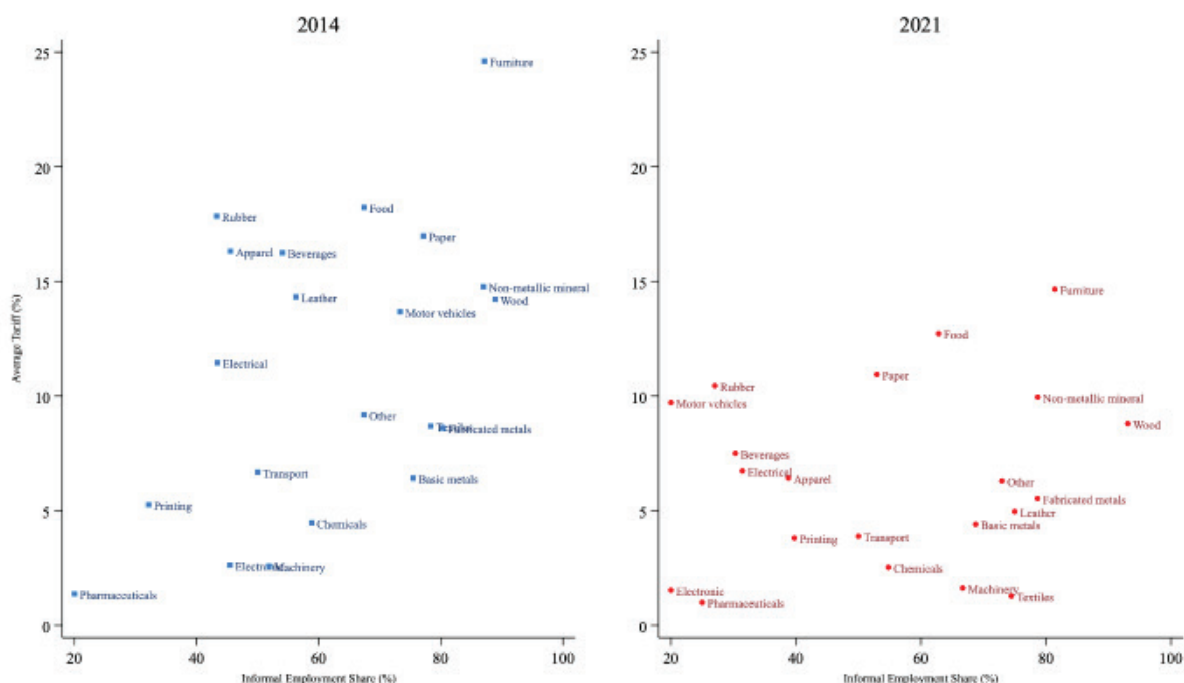


Figure 5: The relationship between average tariffs and informal share of workers by manufacturing industry in 2014 and 2021

Note: Author's illustration using LFS data from DCS and WITS data. Manufacturing industries are at a 2 digit level as in ISICr4. Tobacco (12) and petroleum (19) were not considered due to data issues.

Finally, building on the broader context of tariff policy and informal labour dynamics in Sri Lanka's manufacturing sector, a preliminary visual analysis was conducted to examine the correlation between average tariff rates and the share of informal workers across industries for the years 2014 and 2021 (Figure 5). This comparison aims to identify whether a relationship between tariff protection and informal employment is observable over time. The graph suggests a positive correlation in both years that industries with higher tariffs tend to have higher informal employment shares, but the slope of this relationship appears to have declined from 2014 to 2021, indicating a weakening association. At the same time, when looking at individual industries, the response to tariff reductions is mixed: some industries experienced a decline in informal employment, while others saw an increase.

These findings offer preliminary insights into how changes in trade protection may be linked to shifts in informal labour reliance within manufacturing. However, to determine the existence, direction, and strength of this relationship with greater certainty, it is necessary to empirically assess the impact of trade policy on informality across industries using more rigorous econometric analysis which is conducted using the methods outlined in section 3 and the results discussed in section 5 below.

5. Results and Discussion

5.1 First Step Estimation – Probability of Being Informally Employed

Table A1 and Table A2 in the Annexure present the first-stage estimation results of the two-step analysis for being informally employed, reported separately for all workers and for wage workers in manufacturing industries across the years considered. Explanatory variables used include mainly the individual, household and regional characteristics as well as industry dummies. The reference category is male, not married, who are below G.C.E. A/L, not head of household, living in Western Province and working in food production.

Across all years, female workers are consistently more likely to be informally employed than their male counterparts, with statistically significant and positive coefficients. Age has a non-linear effect, with the linear term being negative and the squared term positive and significant across most years, suggesting a U-shaped relationship between age and informality. Education is strongly protective against informal employment. Individuals with G.C.E. A/L or higher qualifications are considerably less likely to be informal workers, all significant at the 1% level. There is significant regional variation in informality. Compared to the Western Province, workers in provinces such as Eastern, Northern, Uva and North-Central face a significantly higher probability of informal employment. At the household level, being the household head generally reduces the likelihood of informal employment, while larger household size and higher proportions of children (under 15) are associated with increased informality. Conversely, a higher share of elderly dependents is negatively associated with informality. With respect to industry effects, certain industries such as wood, furniture, non-metallic minerals and fabricated metals have significantly higher levels of informality relative to the food industry, whereas Industries like apparel and rubber consistently show lower informality rates. These patterns underscore the sector-specific nature of informal employment risk.

5.2 Second Step Estimation – Impact of Trade Policy on Informal Employment

In the second step of the estimation procedure, the predicted probabilities of informal employment obtained from the first step regression are regressed on industry-level trade policy variables beginning with average tariffs, and later incorporating lagged tariffs and trade flows to assess robustness and dynamic responses. Since the first-step regressions control for individual worker characteristics, the second-stage results are not driven by differences in worker composition across sectors. The second-stage regressions were estimated separately for each year and then pooled across all years. In the pooled models, year dummies were first included to capture time effects, and then both year and industry dummies were added to account for fixed effects at the industry level. The inclusion of these controls helps to mitigate potential estimation biases arising from unobserved, time-specific or industry-specific factors as discussed in section 3.

The results are presented using both OLS and VWLS estimation techniques. While OLS provides a straightforward linear fit, the VWLS method is employed to account for heteroskedasticity across industry sectors, where the variance of the dependent variable—the probability of informal employment—may differ due to structural characteristics or sample sizes within each industry. By applying weights inversely proportional to the variance of residuals, VWLS helps to produce more efficient and reliable coefficient

estimates, particularly when pooling across sectors with varying levels of informality or data quality. The consistency of results across both estimation strategies reinforces the robustness of the findings and strengthens the validity of the empirical conclusions.

The analysis begins with average tariffs reported in Tables 1 and 2. The results consistently show that higher tariffs are associated with higher levels of informal employment. For all manufacturing workers (Table 1), the average tariff coefficients are statistically significant and positive in 2014, 2015, 2017, 2019 and 2020 under the OLS specification. Similar results are observed under the VWLS specification. However, in the pooled regressions with year and industry fixed effects, the coefficient remains at 0.0385 in both OLS and VWLS models but is statistically significant only in the VWLS specification. This positive and statistically significant result under the VWLS specification suggests that sectors protected by higher tariffs tend to exhibit higher informal employment. This may be because firms in such sectors face fewer pressures to adopt advanced technologies, improve labour standards, or enhance competitiveness. In the absence of external competitive forces, these firms may rely on informal employment to minimise costs. The positive relationship can also be interpreted to mean that lower tariffs are associated with lower informality, indicating that trade openness may encourage formalisation by pushing firms to modernise and comply with formal labour regulations.

Table 1: Two-step analysis results for all workers with average tariff

	2014	2015	2017	2018	2019	2020	2021	All	All
OLS									
Average tariff	0.104*** (3.69)	0.0852*** (3.46)	0.0684* (1.73)	0.000172 (0.01)	0.0386*** (3.19)	0.0652*** (4.13)	0.0547 (1.06)	0.0385 (1.26)	0.0385 (1.26)
Constant	-0.624*** (-4.96)	-0.568*** (-5.05)	-0.515*** (-3.00)	0.218 (1.64)	-0.158** (-2.61)	-0.452*** (-5.49)	0.0883 (0.64)	-0.595 (-0.75)	-0.595 (-0.75)
VWLS									
Average tariff	0.104*** (12.17)	0.0852*** (7.80)	0.0684*** (8.84)	0.000172 (0.02)	0.0386*** (4.79)	0.0652*** (8.97)	0.0547*** (2.71)	0.0385*** (3.45)	0.0385*** (3.45)
Constant	-0.624*** (-16.36)	-0.568*** (-11.36)	-0.515*** (-15.30)	0.218*** (5.13)	-0.158*** (-3.92)	-0.452*** (-11.90)	0.0883* (1.65)	-0.595** (-2.05)	-0.595** (-2.05)
Industry dummy	No	No	No	No	No	No	No	No	Yes
Year dummy	No	No	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	21	21	147	147

Note: *Statistically significant at the 10% level ($P < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev. 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 for Sri Lanka in WITS.

Table 2 shows similar effects for wage workers, although the magnitudes are slightly larger. In 2014, 2015, 2017, 2019, and 2020, the results are statistically significant under the OLS specification. Under the VWLS specification, the results are even more robust, showing significant and positive coefficients for all years except 2018. In the pooled OLS specification, the results are not statistically significant similar to the case for all workers. However, the VWLS specification reports a statistically significant result at the 1% level, with a coefficient of 0.0487, which is larger in magnitude compared to the case for all workers. These findings suggest that even among wage earners, higher tariff protection is associated with a greater likelihood of informal employment, which can also be interpreted as lower tariffs appear to be linked with reduced informality.

Table 2: Two-step analysis results for wage workers with average tariff

	2014	2015	2017	2018	2019	2020	2021	All	All
OLS									
Average tariff	0.0719*** (4.09)	0.0972*** (3.33)	0.0697* (1.96)	0.00330 (0.11)	0.0684*** (3.93)	0.0414*** (2.88)	0.0469 (0.86)	0.0487 (1.45)	0.0487 (1.45)
Constant	-0.228*** (-2.90)	-0.541*** (-4.05)	-0.431** (-2.79)	0.337** (2.17)	-0.328*** (-3.77)	-0.00586 (-0.08)	0.312** (2.17)	-0.571 (-0.66)	-0.571 (-0.66)
VWLS									
Average tariff	0.0719*** (7.66)	0.0972*** (8.34)	0.0697*** (8.67)	0.00330 (0.35)	0.0684*** (7.66)	0.0414*** (4.74)	0.0469** (2.36)	0.0487*** (3.98)	0.0487*** (3.98)
Constant	-0.228*** (-5.43)	-0.541*** (-10.14)	-0.431*** (-12.34)	0.337*** (7.13)	-0.328*** (-7.35)	-0.00586 (-0.13)	0.312*** (5.92)	-0.571* (-1.80)	-0.571* (-1.80)
Industry dummy	No	No	No	No	No	No	No	No	Yes
Year dummy	No	No	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	21	21	147	147

Note: *Statistically significant at the 10% level ($P < 0.1$), **Statistically significant at the 5% level ($p < 0.05$), ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev. 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 for Sri Lanka in WITS.

5.2.1 Robustness

To test the robustness of these findings and to account for potential endogeneity issues as discussed in Section 3, the analysis uses lagged average tariffs, following Goldberg and Pavcnick (2003), defined as the previous year's tariff levels in Tables 3 and 4. This approach is motivated by the idea that firms may not immediately adjust their labour structure in response to trade reforms. Labour market decisions such as hiring, firing or transitioning workers into formal contracts often involve adjustment costs and planning. Therefore, introducing lagged tariffs helps capture the dynamic effects of trade liberalisation and verifies whether the results persist over time. The results confirm the robustness of the earlier findings. However, in the pooled models, statistically significant results are observed only when including year dummies for all workers, under both OLS and VWLS specifications. This suggests that, while the relationship between tariffs and informality appears positive, there is insufficient statistically significant evidence to support the claim that lagged tariffs are significantly associated with informality. In both specifications, when including both industry and year fixed effects, the coefficient remains at 0.0315, consistent with earlier estimates. However, statistically significant results are only observed with year dummies, with a coefficient of 0.0398 in both specifications. These findings suggest that tariff protection continues to sustain informal employment even with a time lag, reinforcing the view that industries insulated from international competition are less likely to formalise their labour force. The inclusion of industry dummies, however, renders the results insignificant in both OLS and VWLS estimations.

Table 3: Two-step analysis results for all workers with average tariff lag

	2015	2018	2019	2020	2021	All	All
OLS							
Lag (average tariff)	0.0842*** (3.40)	-0.00937 (-0.35)	0.0386*** (3.18)	0.0598*** (3.86)	0.0229 (0.77)	0.0398*** (3.79)	0.0315 (0.51)
Constant	-0.559*** (-5.03)	0.295** (2.55)	-0.154** (-2.55)	-0.406*** (-5.24)	0.138 (0.89)	-0.420*** (-5.28)	-0.658 (-0.45)
VWLS							
Lag (average tariff)	0.0842*** (7.94)	-0.00937 (-1.12)	0.0386*** (4.78)	0.0598*** (8.42)	0.0229** (2.05)	0.0398*** (9.84)	0.0315 (1.24)
Constant	-0.559*** (-11.75)	0.295*** (8.13)	-0.154*** (-3.83)	-0.406*** (-11.42)	0.138** (2.36)	-0.420*** (-13.71)	-0.658 (-1.10)
Industry dummy	No	No	No	No	No	No	Yes
Year dummy	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	105	105

Note: *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$) ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 for Sri Lanka in WITS. As 2016 data are not available, the 2017 results could not be generated.

Similar effects are found for wage workers (Table 4). However, in contrast to the case of all workers explained previously, under the VWLS specification with a pooled sample, including both industry and time fixed effects, the result is positive and statistically significant at the 5% level. This confirms the robustness of the results, even with the lagged tariffs for wage workers, with a coefficient of 0.0619, which is slightly larger in magnitude. These findings also suggest that tariff reductions may gradually encourage formalisation, as firms adjust their workforce structure in response to changing trade incentives.

Table 4: Two-step analysis results for wage workers with average tariff lag

	2015	2018	2019	2020	2021	All	All
OLS							
Lag (average tariff)	0.0968*** (3.28)	-0.00236 (-0.08)	0.0683*** (3.91)	0.0397** (2.82)	0.0190 (0.55)	0.0452*** (3.70)	0.0619 (0.83)
Constant	-0.532*** (-4.02)	0.381** (2.83)	-0.322*** (-3.69)	0.0107 (0.15)	0.369* (2.03)	-0.371*** (-4.01)	-1.230 (-0.70)
VWLS							
Lag (average tariff)	0.0968*** (8.52)	-0.00236 (-0.25)	0.0683*** (7.63)	0.0397*** (4.66)	0.0190* (1.74)	0.0452*** (10.27)	0.0619** (2.24)
Constant	-0.532*** (-10.45)	0.381*** (9.39)	-0.322*** (-7.21)	0.0107 (0.25)	0.369*** (6.47)	-0.371*** (-11.14)	-1.230* (-1.89)
Industry dummy	No	No	No	No	No	No	Yes

Year dummy	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	105	105

Note: (p<0.05) *statistically significant at the 1% level (p<0.1). **Statistically significant at the 5% level (p<0.05) ***Statistically significant at the 1% level (p<0.01). Two industries under the manufacturing sector according to ISIC Rev. 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 for Sri Lanka in WITS.

To further refine the analysis, Tables 5 to 8 incorporate import and export values, recognising that tariffs alone may not fully capture trade exposure. While this study does not directly include NTBs due to data complexities, import values are included because they may partially reflect changes in NTBs, such as shifts in administrative requirements, technical standards, or border procedures. The rationale is that rising imports can signal not only tariff liberalisation but also the easing of NTBs, thereby providing a broader picture of trade-induced sectoral changes.

The inclusion of current imports and exports in Tables 5 and 6 (rather than lagged values) continues to support the main conclusions as the coefficient for tariffs, even with the inclusion under the VWLS specification, remains positive and statistically significant at the 1% level with fixed effects at 0.0477 for all workers and at 0.0533 for wage workers. However, noncompliance arises with the coefficients from exports and imports and how they are associated with informality. For all workers, export coefficients remain positive and significant in the pooled model at 0.562 under the VWLS specification, which does not align with the global trend where export intensity is generally associated with a decrease in informality. Instead, this suggests the opposite—that higher exports are linked to higher informality. Among wage workers (Table 6), the situation is similar, with the pooled export coefficient at 0.332, inconsistent with the trend of formalising labour forces in globally integrated industries with high exports. This could reflect sectoral differences, as some export-oriented industries in Sri Lanka may still rely on informal labour or have not advanced enough to formalise employment. The results for imports are the opposite of those for exports, suggesting that higher imports are associated with less informality. However, the important point here is that even after controlling for imports and exports, the coefficient for the average tariff remains unchanged, meaning the relationship between trade policy and informality remains robust despite controlling for these variables.

Table 5: Two-step analysis results for all workers with average tariff and imports and exports

	2014	2015	2017	2019	2020	2021	All	All
OLS								
Average tariff	0.0552** (2.29)	0.0551 (1.63)	0.0283 (0.84)	0.0440** (2.41)	0.0680*** (2.99)	0.0188 (0.28)	0.0447*** (3.17)	0.0477 (1.56)
Log of imports	0.143 (1.47)	-0.0275 (-0.21)	-0.0312 (-0.20)	0.00291 (0.04)	0.0122 (0.13)	-0.0246 (-0.18)	0.0177 (0.37)	-0.226 (-1.35)
Log of exports	0.179*** (3.28)	0.100 (1.39)	0.245*** (3.48)	-0.0271 (-0.60)	-0.0113 (-0.22)	0.139** (2.27)	0.129*** (5.25)	0.562*** (3.66)
Constant	-4.139*** (-4.02)	-1.092 (-0.76)	-2.630 (-1.57)	0.0736 (0.09)	-0.504 (-0.46)	-1.059 (-0.64)	-1.962*** (-3.63)	-5.398** (-2.36)
VWLS								
Average tariff	0.0552*** (4.60)	0.0551*** (3.61)	0.0283*** (2.67)	0.0440*** (3.76)	0.0680*** (6.86)	0.0188 (0.63)	0.0447*** (9.06)	0.0477*** (3.57)
Log of imports	0.143*** (2.96)	-0.0275 (-0.47)	-0.0312 (-0.63)	0.00291 (0.06)	0.0122 (0.30)	-0.0246 (-0.39)	0.0177 (1.04)	-0.226*** (-3.09)
Log of exports	0.179*** (6.58)	0.100*** (3.08)	0.245*** (11.11)	-0.0271 (-0.94)	-0.0113 (-0.51)	0.139*** (5.03)	0.129*** (14.98)	0.562*** (8.36)
Constant	-4.139*** (-8.06)	-1.092* (-1.69)	-2.630*** (-5.01)	0.0736 (0.14)	-0.504 (-1.06)	-1.059 (-1.43)	-1.962*** (-10.36)	-5.398*** (-5.39)

Industry dummy	No	No	No	No	No	No	No	Yes
Year dummy	No	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	21	126	126

Note: *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev. 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 and UN Comtrade data were not available for the year 2018 for Sri Lanka in WITS.

Table 6: Two-step analysis results for wage workers with average tariff and imports and exports

	2014	2015	2017	2019	2020	2021	All	All
OLS								
Average tariff	0.0605** (2.84)	0.0426 (1.15)	0.0421 (1.11)	0.0435** (2.12)	0.0485** (2.38)	0.0490 (0.58)	0.0569*** (3.64)	0.0553 (1.52)
Log of imports	0.122 (1.42)	-0.0853 (-0.60)	-0.00480 (-0.03)	-0.00584 (-0.07)	0.0292 (0.35)	0.0254 (0.15)	0.0423 (0.79)	-0.0669 (-0.34)
Log of exports	0.0485 (1.01)	0.178** (2.27)	0.179** (2.25)	0.129** (2.55)	-0.0311 (-0.68)	0.0253 (0.33)	0.0671** (2.46)	0.332* (1.81)
Constant	-2.286** (-2.51)	-0.988 (-0.63)	-2.221 (-1.18)	-1.536 (-1.62)	-0.0908 (-0.09)	-0.331 (-0.16)	-1.406** (-2.35)	-4.335 (-1.59)
VWLS								
Average tariff	0.0605*** (4.57)	0.0426*** (2.61)	0.0421*** (3.83)	0.0435*** (3.35)	0.0485*** (4.08)	0.0490* (1.66)	0.0569*** (10.55)	0.0553*** (3.79)
Log of imports	0.122** (2.29)	-0.0853 (-1.37)	-0.00480 (-0.09)	-0.00584 (-0.10)	0.0292 (0.60)	0.0254 (0.41)	0.0423** (2.28)	-0.0669 (-0.84)
Log of exports	0.0485 (1.62)	0.178*** (5.14)	0.179*** (7.79)	0.129*** (4.02)	-0.0311 (-1.16)	0.0253 (0.93)	0.0671*** (7.12)	0.332*** (4.53)
Constant	-2.286*** (-4.04)	-0.988 (-1.43)	-2.221*** (-4.08)	-1.536** (-2.56)	-0.0908 (-0.16)	-0.331 (-0.45)	-1.406*** (-6.80)	-4.335*** (-3.97)
Industry dummy	No	No	No	No	No	No	No	Yes
Year dummy	No	No	No	No	No	No	Yes	Yes
N	21	21	21	21	21	21	126	126

Note: *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev.4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 and UN Comtrade data were not available for the year 2018 for Sri Lanka in WITS.

However, to account for potential endogeneity when using current export and import values alongside current tariffs, as discussed in Section 3, lagged values were incorporated in the next step, following Goldberg and Pavcnik (2003). The inclusion of lagged imports and exports reinforces the earlier findings on trade flows but notably changes the sign of the lagged tariff coefficient to negative when both year and industry fixed effects are included—though this effect is statistically insignificant (see Table 7). Given the lack of significance, this sign change should be interpreted with caution and does not imply a robust negative tariff effect on informality. This pattern is observed only for the pooled sample of all workers. For wage workers, as shown in Table 8, the results resemble previous findings, with the lagged tariff coefficient remaining positive and statistically significant under similar model specifications.

Consistent with prior results using year-specific trade data, lagged exports maintain a significant and positive association with informal employment in the pooled model, with a coefficient of 0.233. This indicates that export-oriented sectors are associated with higher informality. One possible explanation is that some export industries in Sri Lanka may still rely on informal labour, lacking the capacity to transition to more formal employment structures. Although export competitiveness is often associated with improved labour standards and formality, in contexts like Sri Lanka, rising exports may also drive increased informal employment due to the flexibility and lower cost of informal labour, especially when meeting sudden increases in demand.

Table 7: Two-step analysis results for all workers with average tariff lag and lagged imports and exports

	2015	2020	2021	All	All
OLS					
Lag (average tariff)	0.0473 (1.41)	0.0638** (2.70)	0.0102 (0.26)	0.0391** (2.07)	-0.0329 (-0.30)
Lag (Log of imports)	-0.0501 (-0.37)	0.00143 (0.01)	0.00924 (0.06)	-0.0129 (-0.16)	-0.423 (-0.94)
Lag (Log of exports)	0.126 (1.65)	-0.0204 (-0.35)	0.119 (1.33)	0.0859* (1.95)	0.233 (0.70)
Constant	-1.038 (-0.72)	-0.223 (-0.20)	-1.225 (-0.64)	-1.107 (-1.31)	3.515 (0.68)
VWLS					
Lag (average tariff)	0.0473*** (3.16)	0.0638*** (6.19)	0.0102 (0.67)	0.0391*** (5.06)	-0.0329 (-0.71)
Lag (Log of imports)	-0.0501 (-0.83)	0.00143 (0.03)	0.00924 (0.15)	-0.0129 (-0.40)	-0.423** (-2.20)
Lag (Log of exports)	0.126*** (3.71)	-0.0204 (-0.80)	0.119*** (3.48)	0.0859*** (4.77)	0.233* (1.65)
Constant	-1.038 (-1.62)	-0.223 (-0.47)	-1.225* (-1.68)	-1.107*** (-3.21)	3.515 (1.60)
Industry dummy	No	No	No	No	Yes
Year dummy	No	No	No	Yes	Yes
N	21	21	21	63	63

Note: *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two Industries under the manufacturing sector, according to ISIC Rev. 4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 and UN Comtrade data were not available for the year 2018 for Sri Lanka in WITS.

Table 8: Two-step analysis results for wage workers with average tariff lag and lagged imports and exports

	2015	2020	2021	All	All
OLS					
Lag (average tariff)	0.0374 (1.01)	0.0512** (2.44)	0.0301 (0.60)	0.0421* (1.88)	0.0503 (0.38)
Lag (Log of imports)	-0.103 (-0.69)	0.0349 (0.38)	0.0756 (0.37)	0.0116 (0.13)	-0.0634 (-0.11)
Lag (Log of exports)	0.200** (2.40)	-0.0470 (-0.91)	-0.0165 (-0.15)	0.0636 (1.22)	0.150 (0.36)
Constant	-0.994 (-0.63)	-0.00194 (-0.00)	-0.516 (-0.22)	-1.156 (-1.16)	-2.064 (-0.32)
VWLS					
Lag (average tariff)	0.0374** (2.33)	0.0512*** (4.14)	0.0301** (2.02)	0.0421*** (5.11)	0.0503 (1.03)
Lag (Log of imports)	-0.103 (-1.59)	0.0349 (0.65)	0.0756 (1.24)	0.0116 (0.34)	-0.0634 (-0.31)
Lag (Log of exports)	0.200*** (5.52)	-0.0470 (-1.54)	-0.0165 (-0.50)	0.0636*** (3.31)	0.150 (0.99)
Constant	-0.994 (-1.45)	-0.00194 (-0.00)	-0.516 (-0.73)	-1.156*** (-3.14)	-2.064 (-0.88)
Industry dummy	No	No	No	No	Yes
Year dummy	No	No	No	Yes	Yes
N	21	21	21	63	63

Note: *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev.4—tobacco and petroleum—were excluded due to data issues. Tariff data were not available for the year 2016 and UN Comtrade data were not available for the year 2018 for Sri Lanka in WITS.

However, when year interaction terms with tariffs are introduced in the next step, the coefficient returns to being positive and significant. The inclusion of lagged imports, exports and industry fixed effects captures important industry-specific trade exposure and structural differences, which can absorb or offset the direct effect of tariffs, sometimes reversing its sign and reducing statistical significance. This pattern is observed primarily for the pooled sample of all workers, which includes informal and non—wage labour segments that may respond differently to tariff changes compared to formal wage employees. Informal workers are often concentrated in sectors with more volatile trade patterns, making their response to tariffs more sensitive to detailed trade flows and industry characteristics. In contrast, wage workers—typically employed in more formalised and stable sectors—exhibit a consistent positive and statistically significant tariff effect, reflecting different labour market dynamics across worker categories. However, these models assume the tariff effect is constant over time, potentially masking important temporal variations. By introducing interaction terms between tariffs and year dummies, the model allows the effect to vary across different years, revealing that economic shocks or crisis periods—such as those during 2020 and 2021—significantly influence how tariffs impact informal employment. Together, these findings emphasise that understanding the tariff-informality relationship requires accounting for both heterogeneity across worker groups and time-varying economic conditions.

The results from the model with lagged tariff-year interaction terms for wage workers (Table A3 in the Appendix) reveal negative and statistically significant coefficients for the 2020 and 2021 interactions in the VWLS estimation, relative to the base year 2015, while controlling for both industry and year fixed effects. This suggests that during these crisis years, the effect of tariffs on informal employment changed compared to the pre-crisis period. One possible explanation is that other reforms or macroeconomic changes during 2020 and 2021 modified how tariffs influenced informality, for example, by exacerbating

vulnerabilities in labour markets or affecting firm formalisation incentives differently under crisis conditions.

Specifically, the negative coefficients indicate that tariff reductions during these years were associated with an increase in informal employment, implying that the tariff-informality relationship was unstable over time and influenced by the exceptional economic conditions of the crisis. When considering all workers (see Table A4 in Appendix), the results are broadly consistent, though the significance of the 2020 interaction in the VWLS model is somewhat weaker compared to the wage worker subsample, while the 2021 Interaction remains strongly negative and statistically significant after accounting for both year and industry fixed effects.

5.3 Discussion

In sum, the analysis provides strong and robust evidence that trade liberalisation, especially through tariff reductions, is associated with lower levels of informal employment in Sri Lanka's manufacturing sector. These effects are most evident in the all-worker samples and are also confirmed among wage workers. The relationship remains consistent even when accounting for lagged tariff effects and trade volumes. These results align with a strand of empirical literature suggesting that trade reforms can reduce informality by incentivising productivity upgrades, enhancing firm competitiveness, and integrating producers into global value chains (Aleman-Castilla, 2006; Selwaness and Zaki, 2015; Paz, 2012; Sarra and Bombarda, 2018). Notably, the findings underscore the relevance of time-lagged effects, echoing studies such as Shembavnekar (2015), which emphasise the gradual adjustment of labour markets following trade policy shifts.

However, the impact of tariffs on informal employment was significantly altered during the crisis years of 2020 and 2021, reflecting the unique economic disruptions experienced in Sri Lanka during this period. The COVID-19 pandemic and associated lockdowns severely affected labour markets and firm operations, intensifying vulnerabilities among workers and businesses. These conditions likely shifted how trade protection influenced informality, with tariff reductions coinciding with increases in informal employment. This instability suggests that the usual mechanisms linking tariffs to formality were disrupted by crisis-driven factors such as supply chain interruptions, reduced demand, and constrained formalisation incentives. Consequently, the tariff-informality relationship during these years cannot be fully captured by average year effects alone, underscoring the importance of accounting for crisis-specific dynamics in policy assessments.

Further, in contrast to the general trend observed globally (where greater export intensity is often linked to reduced informality, particularly in economies where export-oriented industries are integrated into global value chains and comply with formal labour standards), the findings for exports show a positive association with informality, indicating that increased export intensity is linked to greater informal employment in Sri Lanka. This highlights the importance of labour structures and country-specific industrial characteristics in shaping employment outcomes.

It suggests that formalisation cannot rely solely on trade policy reforms; rather, it also depends on firm capacity, internal labour dynamics and institutional enforcement. Therefore, consistent and complementary labour reforms are essential alongside trade liberalisation to ensure that economic openness translates into decent and formal employment. On the other hand, import coefficients show the opposite trend, where greater import penetration is associated with lower informal employment, aligning more closely with expected outcomes. One plausible explanation is that exposure to imports, especially intermediate goods or competitive finished products, may pressure domestic firms to increase productivity and improve working conditions, thereby encouraging formalisation.

The contrast between the export and import effects reveals a dual character of trade exposure in Sri Lanka. While imports may foster formalisation through competition and efficiency gains, exports appear to drive informality due to sectoral reliance on low-cost labour and insufficient institutional mechanisms to promote formal standards. This pattern underscores the asymmetric effects of trade: not all forms of openness yield the same labour market outcomes, and context matters greatly.

Further, this divergence may be partly attributable to the choice of measurement. In this study, export values reflect the absolute size of a sector's exports but do not account for the scale of domestic production. Consequently, large industries such as apparel—Sri Lanka's dominant exporter—heavily influence the estimates. If such industries remain reliant on informal or precarious labour, the resulting coefficient may capture these sector-specific characteristics rather than a generalisable export-informality relationship.

By contrast, export orientation—calculated as exports divided by total industry output—normalises for sector size and provides a measure of an industry's relative dependence on foreign markets consistent with approaches used in other international studies, including Goldberg and Pavcnik (2003). This ratio is less likely to be dominated by large sectors and better reflects the degree to which a sector's competitiveness and labour practices are shaped by export demand. International studies that use export orientation often find a negative association with informality, as higher orientation typically requires compliance with export-market standards and formal labour practices. As with exports, the use of import values instead of a more precise measure—such as import penetration²—may influence the results.

Two additional data-related limitations may also contribute to this result. First, the analysis is conducted at the 2-digit ISIC level, which can mask substantial within-sector heterogeneity (aggregation bias). In Sri Lanka, export-oriented industries such as apparel combine large, formal enterprises with extensive informal sub-contracting networks. At this level of aggregation, the presence of high informality within some export sectors can overshadow more formal operations in other export-oriented sectors. Second, some industries act as both significant exporters and importers of intermediate goods (dual trade role). Without explicitly distinguishing these roles, the estimated export coefficient may conflate the effects of export market participation with exposure to import competition.

However, applying export orientation or import penetration in the Sri Lankan case is constrained by data availability. The most comprehensive source for industry output—the Annual Industry Survey—is outdated, with the most recent available figures dating to 2019. This lack of recent and consistent industry-level output data limits the ability to construct a robust export orientation variable for the full study period, making export values the more feasible proxy for trade exposure in the present analysis.

The reliance on trade flow values in this context, therefore, offers one possible explanation for the positive relationship between exports and informality observed. In the Sri Lankan context, dominant trading industries may not have transitioned fully to formal employment structures despite substantial integration into global trade. Future research could address these limitations by 1) using more disaggregated industry data to reduce aggregation bias, 2) differentiating between industries' export and import roles, and 3) replacing export and import values with export orientation and import penetration measures once recent industry output data become available. Addressing these issues may yield findings more consistent with international evidence that export intensity is associated with greater formalisation.

Although the current findings still highlight the relevance of trade policy in shaping employment outcomes, they challenge the assumption that openness uniformly promotes decent work. The persistence of significant positive coefficients on tariffs even after controlling for trade volumes indicates that trade protection tends to sustain informality, possibly because protected sectors face fewer competitive pressures to modernise or comply with labour regulations.

Importantly, these results emphasise the insufficiency of trade liberalisation alone to reduce informality in contexts like Sri Lanka. Complementary measures such as labour law reforms, productivity enhancement, social protection and institutional support are critical to ensure that the gains from trade do not come at the expense of decent employment.

Overall, Sri Lanka's case contributes to the broader literature by demonstrating that the labour market impacts of trade are not uniform. Instead, they are shaped by sectoral composition, institutional strength and the nature of trade exposure, highlighting the need for integrated trade and labour market strategies that address the root causes of informality while leveraging the benefits of globalisation (Bosch et al., 2010; Akbulut and Egen, 2021; Fugazza and Fiess, 2010).

² Import penetration refers to the proportion of a country's domestic demand for a particular good or industry that is satisfied through imports rather than domestic production.

5.4 Limitations and Future Research

While this study provides novel evidence on the relationship between trade liberalisation and informal employment in Sri Lanka's manufacturing industries, several limitations must be acknowledged.

Importantly, due to data complexities, the study did not incorporate NTBs, which are increasingly important in shaping trade flows and firm competitiveness in the context of Sri Lanka. While import values are included to partially account for the effects of NTBs, they are an imperfect proxy and may not reflect regulatory or administrative constraints that influence firm behaviour and labour practices.

Also, in the Sri Lankan context another concern is the exclusion of para-tariffs from the analysis. While the study uses average applied tariffs to measure trade policy, Sri Lanka has long relied on a range of para-tariffs such as the Cess, Ports and Airports Development Levy (PAL), and Special Commodity Levy which are not captured in standard tariff datasets. These charges, often imposed on top of regular import duties, can substantially increase the effective rate of protection, particularly in selected manufacturing sub-sectors. The omission of para-tariffs is again due to data complexities when obtaining at industry-level given the capacity of this study. This is a particularly relevant concern for the later years of the analysis, as para-tariffs increased significantly after 2020 in response to Sri Lanka's balance-of-payments and fiscal crises. As a result, the use of official average tariff rates may underestimate the actual trade protection faced by domestic industries, especially in the post-crisis period. This limitation introduces potential measurement error in the trade exposure variable and may partially obscure the full relationship between protectionism and informal employment. Although the inclusion of import values helps to absorb some variation in trade restrictiveness, the inability to directly account for para-tariffs remains a key constraint on the precision of the analysis.

This study uses lagged values of tariffs and trade flows to mitigate potential endogeneity concerns, on the assumption that past trade policy changes and trade volumes are less likely to be simultaneously determined with current informal employment outcomes. While this approach reduces the risk of reverse causality, it does not fully eliminate endogeneity arising from omitted variables or persistent unobserved shocks that affect both trade policy and labour market structures over time. A more rigorous strategy would involve the use of valid external instruments—variables correlated with trade policy but exogenous to domestic labour market outcomes—to identify causal effects more cleanly. Potential instruments could include pre-determined global tariff schedules, trading partner policy changes, or world price shocks unrelated to Sri Lanka's domestic conditions. However, such instruments were not incorporated in the present analysis due to data constraints, representing a promising direction for future research.

As discussed within the previous section on results and discussion, the analysis is conducted at the 2-digit ISIC industry level, which can mask substantial within-sector heterogeneity. Many manufacturing industries in Sri Lanka perform a dual role, both exporting finished goods and importing intermediate inputs. At this level of aggregation, it is not possible to disentangle the distinct effects of export market participation from those of import competition, nor to identify variation in formality across sub-sectors within the same industry. This aggregation bias may lead to estimated coefficients that reflect the net outcome of offsetting forces, rather than the pure effect of either export orientation or import penetration. Also, for instance, in industries like apparel, export growth may coincide with informal subcontracting, possibly explaining the unexpected positive association. Future research using 4-digit or firm-level data is recommended to unpack this dynamic and to separate industries into finer categories based on trade role, allowing for a clearer assessment of how different forms of trade integration influence informality.

While moving from 2-digit to 4-digit ISIC classifications would reduce aggregation bias, it would also create small-sample reliability concerns given the structure of Sri Lanka's LFS. At more disaggregated levels, many industry-year cells contain fewer than 50 observations, resulting in imprecise estimates of informality rates in the first stage. Even when VWLS is applied in the second stage to down-weight such noisy estimates, the loss of precision remains a limitation. Future research could address this by either setting a minimum sample-size threshold for inclusion, pooling multiple years for smaller industries, or using 3-digit classifications as a balance between sectoral detail and statistical reliability.

Despite the limitations noted, this study makes an important contribution by empirically analysing the link between trade liberalisation and informal employment using a two-step econometric approach grounded in individual-level labour market outcomes and industry-level, trade exposure.

However, to address the more complex and structural limitations, such as the exclusion of para-tariffs, sectoral spillovers and potential endogeneity, future research should consider applying Computable General Equilibrium (CGE) modeling frameworks. CGE models offer the advantage of capturing the

intersectoral linkages between manufacturing, services and agriculture, which is especially important in a country like Sri Lanka where informality is widespread across the entire economy. By simulating economy-wide responses to trade policy changes, CGE models can account for the general equilibrium effects of tariff reductions and para-tariff adjustments, including their impact on labour demand, wages and sectoral shifts in employment: both formal and informal.

Crucially, CGE frameworks also provide a structural approach to addressing endogeneity, as trade policy variables are modelled as exogenous shocks, and their effects on labour markets are traced through modelled behavioural responses and market-clearing conditions. This overcomes one of the key challenges in reduced-form econometric approaches, where policy endogeneity such as tariffs being adjusted in response to labour market pressures can bias estimates.

While a CGE modelling approach could offer a more comprehensive framework for analysing the economy-wide effects of trade liberalisation on informal employment, implementing such a model was beyond the scope of this study due to significant data and methodological constraints. A CGE model requires a detailed Social Accounting Matrix (SAM) or input-output tables that disaggregate production, consumption, labour markets (including informal and formal labour) and trade flows across all sectors of the economy. This process is technically complex and time-intensive, often requiring purpose-built models, specialised software and interdisciplinary modeling expertise. Given these constraints, this study adopts a reduced-form econometric strategy that leverages available micro and sectoral data, while acknowledging that CGE-based simulations represent an important future direction. Such models could capture intersectoral spillovers, general equilibrium effects, and feedback loops between trade policy and labour markets, providing a more holistic view of how trade reforms affect informality across the entire economy.

6. Policy Implications and Recommendations

This study offers important insights for shaping Sri Lanka's trade and labour market policies. The empirical findings suggest that trade liberalisation—particularly lower tariff protection—is associated with a reduction in informal employment in the manufacturing sector. However, the positive correlation between export intensity and informality, which diverges from global trends, signals deeper structural and institutional issues within Sri Lanka's export-oriented industries. Together, these findings indicate that, while trade openness can support formalisation, its potential remains constrained by weaknesses in labour regulation, enforcement, and industrial upgrading.

Trade liberalisation should not be pursued in isolation. Lowering tariffs—especially on intermediate goods—can enhance firm productivity and competitiveness but must be coupled with policies that incentivise formal job creation. For example, Sri Lanka can condition export incentives on measurable improvements in labour formalisation.

The positive link between exports and informality suggests that many export-oriented firms may be relying on informal labour through subcontracting or home-based production. This is especially relevant in sectors like apparel and rubber. Strengthening labour inspection systems, especially down the supply chain, and enforcing decent work standards aligned with international trade partners, are critical to ensuring that export growth translates into formal, decent work.

Many small and medium enterprises (SMEs), even in exporting sectors, remain informal due to regulatory burdens or lack of capacity. Policy tools such as tax breaks, access to credit or export facilitation should be targeted specifically at SMEs that formalise their workforce. These support mechanisms can be designed under public-private partnership frameworks and coordinated with trade and labour ministries.

A key constraint identified in this study is the lack of disaggregated data on firm size, export concentration, and labour practices. Sri Lanka should invest in integrating firm-level trade data with employment registries to better monitor the distributional impact of trade reforms on workers. Such data systems can inform adaptive policies and improve the targeting of labour market programmes.

Rather than viewing trade policy as an isolated economic lever, Sri Lanka should position it as a central instrument of inclusive development. This means designing trade reforms that explicitly consider their employment and equity implications. A coherent policy approach would link trade, industrial upgrading, labour regulation and social protection in ways that promote formal, productive and gender-equitable employment.

Further, the results indicate that during the crisis years of 2020 and 2021, the effect of tariff reductions on informal employment in Sri Lanka intensified, leading to an increase in informality. This suggests that economic shocks, such as those caused by the COVID-19 pandemic, can disrupt the typical relationship between trade policies and labour market outcomes, exacerbating vulnerabilities in informal sectors. In light of these findings, policymakers should recognise that trade liberalisation during crisis periods may unintentionally increase informal employment unless accompanied by targeted interventions. To mitigate these adverse effects, complementary policies are essential, including strengthening social protection systems for informal workers, promoting formalisation through incentives and enhancing labour market resilience. Furthermore, trade policy decisions should be made in coordination with labour and social policies to ensure that the benefits of openness do not disproportionately burden vulnerable workers during economic crises.

In summary, the findings underscore that trade liberalisation alone is not sufficient to reduce informality or improve employment quality. To translate trade openness into decent work, Sri Lanka must adopt complementary labour and industrial policies that address structural informality and create enabling conditions for firms to formalise. The challenge lies, not in choosing between openness and protectionism, but in designing a trade regime that advances inclusive, rights-based development outcomes,

7. Conclusion

This study sets out to examine the relationship between trade liberalisation and informal employment in Sri Lanka's manufacturing sector, with the objective of understanding whether trade policy affects the level of informality in the labour market. The motivation arises from the dual challenges faced by developing economies like Sri Lanka: the need to enhance competitiveness through trade policy, and the persistent prevalence of informal employment, particularly in labour-intensive industries.

To address this research problem, a two-step empirical strategy was employed. The first step involved estimating individual-level probabilities of informal employment using microdata from the Sri Lanka LFS, controlling for a wide range of demographic, household and regional characteristics. In the second step, these predicted probabilities were regressed on industry-level trade variables namely average tariffs, lagged tariffs and trade flow data (imports and exports) using both OLS and VWLS estimators. Year and industry fixed effects were included in pooled models to control for time-specific and sector-specific unobserved heterogeneity.

This study finds strong and consistent evidence that trade liberalisation, particularly through tariff reductions, is associated with lower levels of informal employment in Sri Lanka's manufacturing sector. The relationship holds across different model specifications and is evident among both all workers and wage earners. However, the contrasting effects of trade volumes reveal important nuances: while high imports are linked to reduced informality, possibly due to productivity pressures and competitive discipline, export intensity is unexpectedly associated with higher informality, likely reflecting sectoral reliance on low-cost, flexible labour and limited regulatory enforcement. These findings highlight that trade openness alone does not uniformly lead to formalisation. Instead, the outcomes depend on the structure of trade exposure and the strength of accompanying institutions. Therefore, to translate trade reforms into inclusive and decent employment, Sri Lanka must adopt complementary labour market policies such as stronger labour law enforcement, skills development and social protection alongside its trade liberalisation efforts. Further, the negative and significant tariff-year interaction effects during the 2020-2021 crisis period indicate that tariff reductions were associated with increased informal employment under exceptional economic conditions, highlighting the need for trade policies to be complemented by targeted labour market and social protection measures during crises to mitigate informal sector vulnerabilities.

In conclusion, while trade liberalisation holds the potential to improve labour market outcomes in Sri Lanka, its success in promoting decent and formal work depends on coordinated reforms across trade, labour and industrial policy domains. Future research, particularly using economy-wide tools such as CGE models, should aim to capture the full set of intersectoral effects and policy complementarities required to sustain inclusive transformation.

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Annexure

Table A 1: First-stage estimates for the probability of being an informal employee (all workers in the manufacturing industries)

	2014	2015	2017	2018	2019	2020	2021
Gender (Base = Male)							
Female	0.177*** (3.56)	0.398*** (7.73)	0.253*** (5.36)	0.260*** (5.12)	0.182*** (3.69)	0.273*** (5.08)	0.368*** (6.59)
Marital Status (Base = Not Married)							
Married	-0.0808 (-1.56)	-0.0254 (-0.48)	0.0390 (0.79)	-0.0435 (-0.81)	-0.167*** (-3.18)	-0.0388 (-0.69)	0.00859 (0.15)
Age variables							
Age	-0.00423 (-0.42)	-0.0190* (-1.89)	-0.0188** (-2.00)	-0.0189* (-1.88)	-0.0116 (-1.19)	-0.0215** (-2.06)	-0.0356*** (-3.16)
Age square	0.000335*** (2.81)	0.000520*** (4.36)	0.000563*** (5.10)	0.000522*** (4.43)	0.000484*** (4.26)	0.000539*** (4.43)	0.000739*** (5.62)
Education (Base = Below G.C.E (A/L))							
G.C.E (A/L) & above	-0.490*** (-8.58)	-0.438*** (-7.62)	-0.412*** (-8.12)	-0.446*** (-8.14)	-0.421*** (-7.99)	-0.455*** (-8.04)	-0.441*** (-7.88)
Province (Base = Western Province)							
Central	0.0510 (0.80)	0.192*** (2.73)	-0.0372 (-0.57)	-0.299*** (-4.67)	-0.337*** (-5.38)	-0.0455 (-0.65)	0.124* (1.79)
Southern	0.314*** (5.15)	0.248*** (3.85)	0.458*** (7.45)	0.475*** (7.00)	0.494*** (7.43)	0.361*** (5.19)	0.449*** (6.32)
Northern	0.676*** (5.97)	0.793*** (6.82)	0.602*** (6.87)	0.564*** (6.32)	0.578*** (6.38)	0.718*** (7.61)	0.570*** (5.80)
Eastern	0.964*** (9.12)	0.887*** (7.91)	1.112*** (9.83)	1.088*** (9.66)	0.675*** (6.78)	0.724*** (6.88)	0.901*** (8.12)
North-Western	0.490*** (7.43)	0.371*** (5.89)	0.368*** (6.08)	0.357*** (5.58)	0.303*** (4.68)	0.328*** (4.82)	0.321*** (4.73)
North-Central	0.492*** (3.93)	0.446*** (4.15)	0.555*** (5.20)	0.665*** (6.22)	0.345*** (3.22)	0.476*** (4.22)	0.314*** (2.81)
Uva	0.638*** (4.32)	0.466*** (3.30)	0.351*** (2.95)	0.595*** (4.58)	0.237* (1.95)	0.300** (2.54)	0.251** (2.04)
Sabaragamuwa	-0.0587 (-0.87)	0.00925 (0.14)	-0.0843 (-1.34)	0.0110 (0.16)	-0.0714 (-1.07)	-0.0315 (-0.43)	-0.0277 (-0.36)

Household Variables							
Household head	-0.131**	-0.181***	-0.227***	-0.153***	-0.254***	-0.108*	-0.163***
(Base = Not HH head)	(-2.33)	(-3.09)	(-4.20)	(-2.68)	(-4.47)	(-1.81)	(-2.64)
Household size	-0.0134	-0.0151	-0.0186	-0.0480***	-0.0269*	-0.0212	-0.0346**
	(-0.98)	(-1.00)	(-1.30)	(-3.04)	(-1.79)	(-1.29)	(-1.99)
% working age individuals	-0.00394***	-0.00285**	-0.00346***	-0.00111	-0.00327***	-0.00201	-0.00239*
	(-3.28)	(-2.36)	(-3.01)	(-0.93)	(-2.77)	(-1.61)	(-1.89)
% dependents (>65)	-0.00259*	-0.00340**	-0.00332***	-0.000734	-0.00387***	-0.00142	-0.00566***
	(-1.69)	(-2.28)	(-2.58)	(-0.52)	(-3.00)	(-1.02)	(-3.90)
% dependents (<15)	0.00398***	0.00403***	0.00576***	0.00752***	0.00777***	0.00514***	0.00328**
	(3.08)	(3.02)	(4.62)	(5.61)	(5.87)	(3.59)	(2.19)
Industry (Base = Food)							
Beverages	-0.182	-0.812***	-0.239	0.0166	-0.568***	-0.000722	-0.715***
	(-0.80)	(-3.45)	(-1.33)	(0.09)	(-2.87)	(-0.00)	(-2.77)
Textiles	0.117	0.195**	0.0158	0.226**	0.0193	0.0733	0.200**
	(1.25)	(2.12)	(0.19)	(2.50)	(0.23)	(0.76)	(1.99)
Apparel	-0.459***	-0.545***	-0.569***	-0.365***	-0.455***	-0.598***	-0.611***
	(-8.08)	(-9.19)	(-10.66)	(-6.47)	(-8.38)	(-10.02)	(-9.97)
Leather	-0.119	0.177	0.108	-0.0598	0.161	-0.161	0.417**
	(-0.85)	(1.19)	(0.76)	(-0.43)	(1.16)	(-1.06)	(2.25)
Wood	0.844***	1.306***	0.970***	1.176***	1.119***	1.275***	1.301***
	(8.57)	(11.79)	(9.36)	(11.15)	(9.97)	(10.62)	(10.71)
Paper	0.391	-0.157	0.122	-0.00185	0.111	0.293	-0.269
	(1.56)	(-0.83)	(0.56)	(-0.01)	(0.52)	(1.16)	(-1.15)
Printing	-0.498***	-0.185	-0.177	-0.265*	-0.0768	-0.186	-0.151
	(-3.23)	(-1.31)	(-1.36)	(-1.95)	(-0.58)	(-1.16)	(-0.98)
Chemicals	0.0456	-0.377***	-0.478***	-0.0637	-0.152	-0.216*	-0.0763
	(0.35)	(-3.18)	(-4.43)	(-0.54)	(-1.39)	(-1.92)	(-0.66)
Pharmaceuticals	-1.042**	-0.876*	-1.248***	0.407	-0.268	-0.550*	-0.505
	(-2.17)	(-1.93)	(-2.59)	(1.38)	(-0.88)	(-1.69)	(-1.38)
Rubber	-0.442***	-0.475***	-0.647***	-0.542***	-0.461***	-0.498***	-0.594***
	(-3.90)	(-4.58)	(-5.92)	(-4.09)	(-3.59)	(-3.59)	(-4.17)
Non-metallic minerals	0.698***	0.570***	0.576***	0.634***	0.579***	0.546***	0.605***
	(6.68)	(6.02)	(6.25)	(6.55)	(6.08)	(5.21)	(6.08)
Basic metals	0.385*	0.505**	0.140	0.801**	0.150	-0.330	0.532
	(1.94)	(2.42)	(0.69)	(2.50)	(0.68)	(-1.36)	(1.54)

Fabricated metals	0.634*** (4.41)	0.711*** (5.80)	0.427*** (3.73)	0.594*** (5.07)	0.498*** (4.32)	0.488*** (4.35)	0.761*** (6.48)
Electronic	-0.0768 (-0.20)	-0.0431 (-0.15)	-0.123 (-0.42)	-0.0700 (-0.25)	-0.508* (-1.65)	-0.623* (-1.82)	-0.554 (-1.46)
Electrical	-0.192 (-1.02)	-0.496** (-2.15)	-0.437** (-2.36)	-0.0632 (-0.31)	-0.185 (-0.95)	-0.467** (-2.09)	-0.386* (-1.66)
Machinery	-0.238 (-0.92)	-0.755** (-2.39)	-0.853*** (-3.25)	-0.502** (-2.14)	-0.258 (-1.30)	-0.827*** (-2.58)	0.413 (0.78)
Motor vehicles	0.647* (1.82)	-0.0960 (-0.31)	-0.670** (-2.41)	-0.258 (-0.83)	-0.0757 (-0.28)	-0.0938 (-0.29)	-0.830** (-2.20)
Transport	-0.347 (-0.52)	-0.794 (-1.44)	-0.732** (-1.99)	-0.449 (-1.36)	-0.105 (-0.34)	-0.586* (-1.68)	-0.300 (-0.87)
Furniture	0.843*** (7.35)	0.926*** (7.63)	0.628*** (6.06)	0.863*** (8.19)	1.129*** (8.89)	0.740*** (6.66)	0.781*** (7.05)
Other	0.138 (1.11)	0.291** (2.20)	0.108 (0.87)	0.450*** (3.49)	0.266** (2.35)	0.228* (1.76)	0.342** (2.48)
Constant	-0.0570 (-0.28)	0.111 (0.54)	0.0957 (0.49)	0.00256 (0.01)	-0.00720 (-0.04)	0.110 (0.50)	0.337 (1.46)
N	5133	5188	5808	5102	5171	4564	4473

Note: Robust standard errors between brackets (clustered by industry, 2-digit, ISICr4). *Statistically significant at the 10% level ($p < 0.1$), **Statistically significant at the 5% level ($p < 0.05$) ***Statistically significant at the 1% level ($p < 0.01$) Two industries under manufacturing sector, according to ISIC Rev 4—and petroleum—were excluded due to data issues.

Table A2: First-stage estimates for the probability of being an informal employee (wage workers in the manufacturing industries)

	2014	2015	2017	2018	2019	2020	2021
Gender (Base = Male)							
Female	-0.0244 (-0.41)	0.160** (2.53)	0.00347 (0.06)	0.0199 (0.32)	-0.0874 (-1.48)	0.0991 (1.53)	0.187*** (2.73)
Marital Status (Base = Not Married)							
Married	-0.145** (-2.29)	-0.218*** (-3.35)	0.0116 (0.19)	-0.0931 (-1.40)	-0.272*** (-4.23)	-0.113* (-1.65)	-0.00203 (-0.03)
Age variables							
Age	-0.0440*** (-3.45)	-0.0667*** (-5.04)	-0.0502*** (-4.29)	-0.0630*** (-4.77)	-0.0342*** (-2.74)	-0.0582*** (-4.28)	-0.0787*** (-5.33)
Age square	0.000716*** (4.58)	0.00104*** (6.40)	0.000858*** (6.12)	0.000966*** (6.04)	0.000676*** (4.57)	0.000848*** (5.18)	0.00117*** (6.57)

Education (Base = Below G.C.E (A/L))							
G.C.E (A/L) & above	-0.649*** (-8.69)	-0.549*** (-7.27)	-0.578*** (-8.60)	-0.625*** (-8.49)	-0.627*** (-8.80)	-0.756*** (-9.72)	-0.687*** (-8.85)
Province (Base = Western Province)							
Central	0.0528 (0.67)	0.147 (1.62)	-0.194** (-2.31)	-0.449*** (-5.47)	-0.389*** (-4.93)	-0.0828 (-0.92)	0.0892 (1.01)
Southern	0.286*** (3.81)	0.186** (2.29)	0.430*** (5.61)	0.426*** (5.04)	0.436*** (5.33)	0.317*** (3.66)	0.498*** (5.59)
Northern	0.795*** (4.83)	0.621*** (3.92)	0.567*** (4.87)	0.464*** (3.86)	0.461*** (3.92)	0.601*** (5.04)	0.537*** (4.25)
Eastern	0.929*** (6.83)	0.965*** (6.14)	1.266*** (7.90)	1.101*** (7.58)	0.774*** (5.82)	0.528*** (3.88)	0.952*** (6.76)
North-Western	0.558*** (6.77)	0.429*** (5.46)	0.304*** (4.03)	0.284*** (3.53)	0.213*** (2.65)	0.228*** (2.69)	0.334*** (3.94)
North-Central	0.227 (1.35)	0.442*** (3.21)	0.436*** (3.00)	0.507*** (3.70)	0.173 (1.23)	0.519*** (3.64)	0.289** (1.96)
Uva	0.420** (2.19)	0.131 (0.69)	-0.158 (-0.95)	0.479*** (2.89)	0.0790 (0.48)	0.0531 (0.35)	0.0654 (0.41)
Sabaragamuwa	-0.207** (-2.42)	-0.106 (-1.28)	-0.108 (-1.40)	0.0125 (0.15)	-0.246*** (-2.89)	-0.105 (-1.14)	-0.128 (-1.31)
Household Variables							
Household head	-0.0543 (-0.76)	-0.112 (-1.46)	-0.185*** (-2.69)	-0.181** (-2.45)	-0.293*** (-4.01)	-0.0237 (-0.31)	-0.0789 (-0.99)
Household size	0.000336 (0.02)	-0.00789 (-0.42)	-0.0105 (-0.59)	-0.0506** (-2.57)	-0.0230 (-1.22)	-0.0133 (-0.65)	-0.0234 (-1.09)
% working age individuals	-0.00139 (-0.93)	-0.000375 (-0.25)	-0.000463 (-0.32)	0.00139 (0.94)	-0.000762 (-0.53)	-0.000709 (-0.46)	-0.00144 (-0.92)
% dependents (>65)	-0.00175 (-0.88)	-0.00431** (-2.21)	-0.00143 (-0.86)	-0.000532 (-0.28)	-0.00346** (-2.06)	-0.000358 (-0.19)	-0.00356* (-1.86)
% dependents (<15)	0.00190 (1.16)	0.00375** (2.18)	0.00410** (2.57)	0.00657*** (3.82)	0.00700*** (4.14)	0.00222 (1.21)	0.000512 (0.27)
Industry (Base = Food)							
Beverages	-0.171 (-0.68)	-0.842** (-2.45)	-0.0328 (-0.16)	0.128 (0.59)	-0.568** (-2.35)	0.0945 (0.37)	-0.699** (-2.14)
Textiles	0.00292 (0.02)	-0.0146 (-0.12)	-0.0898 (-0.81)	0.00764 (0.07)	-0.0477 (-0.44)	0.00848 (0.07)	0.0658 (0.49)

Apparel	-0.585***	-0.664***	-0.597***	-0.639***	-0.494***	-0.796***	-0.729***
	(-8.21)	(-8.62)	(-8.61)	(-8.83)	(-7.13)	(-10.55)	(-9.34)
Leather	-0.308*	0.160	0.0418	-0.276	0.248	-0.287	0.422*
	(-1.68)	(0.88)	(0.24)	(-1.53)	(1.55)	(-1.49)	(1.72)
Wood	1.281***	1.636***	1.310***	1.237***	1.461***	1.806***	1.615***
	(9.36)	(10.93)	(10.01)	(9.26)	(9.78)	(9.01)	(9.66)
Paper	0.314	-0.402	-0.0300	-0.234	0.167	0.501	-0.0983
	(1.01)	(-1.61)	(-0.11)	(-0.95)	(0.64)	(1.51)	(-0.34)
Printing	-0.338*	-0.0907	-0.192	-0.277*	-0.0710	-0.166	-0.0849
	(-1.95)	(-0.54)	(-1.19)	(-1.73)	(-0.46)	(-0.91)	(-0.47)
Chemicals	0.148	-0.384***	-0.297**	0.0703	-0.101	-0.110	0.0993
	(1.00)	(-2.66)	(-2.34)	(0.52)	(-0.76)	(-0.85)	(0.74)
Pharmaceuticals	-0.649	-1.040*	-1.070*	0.409	-0.717	-0.361	-0.171
	(-1.28)	(-1.77)	(-1.88)	(1.14)	(-1.64)	(-0.98)	(-0.46)
Rubber	-0.350***	-0.423***	-0.580***	-0.560***	-0.344**	-0.433***	-0.587***
	(-2.72)	(-3.50)	(-4.51)	(-3.67)	(-2.38)	(-2.70)	(-3.56)
Non-metallic minerals	0.586***	0.435***	0.681***	0.616***	0.686***	0.470***	0.585***
	(4.41)	(3.40)	(6.13)	(5.01)	(5.45)	(3.67)	(4.74)
Basic metals	0.386	0.527**	0.212	1.083*	0.187	-0.251	0.890*
	(1.61)	(2.16)	(0.83)	(1.95)	(0.73)	(-0.82)	(1.93)
Fabricated metals	0.700***	0.723***	0.644***	0.600***	0.642***	0.482***	0.814***
	(3.46)	(4.42)	(4.33)	(4.07)	(4.02)	(3.18)	(5.37)
Electronic	-0.222	0.0358	-0.0292	-0.352	-0.310	-0.614	-0.820
	(-0.44)	(0.11)	(-0.09)	(-1.05)	(-0.93)	(-1.57)	(-1.61)
Electrical	-0.431*	-0.390	-0.380*	-0.287	-0.0128	-0.527**	-0.234
	(-1.73)	(-1.56)	(-1.75)	(-1.12)	(-0.05)	(-2.05)	(-0.94)
Machinery	-0.293	-0.779**	-0.962***	-0.551*	-0.192	-0.358	0.554
	(-0.96)	(-2.12)	(-2.89)	(-1.95)	(-0.81)	(-1.04)	(1.03)
Motor vehicles	0.726*	-0.368	-0.252	-0.265	0.0906	-0.416	-0.273
	(1.94)	(-0.86)	(-0.79)	(-0.69)	(0.26)	(-0.95)	(-0.66)
Transport	-0.248	-0.542	-0.872*	-0.421	0.0527	-0.304	-0.134
	(-0.26)	(-0.98)	(-1.86)	(-1.26)	(0.16)	(-0.84)	(-0.34)

Furniture	0.962*** (6.68)	1.009*** (6.60)	0.736*** (5.70)	0.834*** (6.68)	1.338*** (8.63)	0.861*** (6.34)	0.917*** (6.43)
Other	0.00433 (0.03)	0.119 (0.66)	0.104 (0.63)	0.462*** (2.81)	0.247* (1.73)	-0.116 (-0.64)	-0.0211 (-0.11)
Constant	0.616** (2.44)	0.960*** (3.63)	0.545** (2.29)	0.943*** (3.57)	0.422* (1.67)	0.921*** (3.32)	1.057*** (3.61)
N	3329	3202	3659	3322	3418	3004	2976

Note: Robust standard errors between brackets (clustered by industry, 2-digit, ISICr4). *Statistically significant at the 10% level ($p < 0.1$) **Statistically significant at the 5% level ($p < 0.05$) ***Statistically significant at the 1% level ($p < 0.01$) Two industries under the manufacturing sector, according to ISIC Rev.4—tobacco and petroleum—were excluded due to data issues.

Table A3: Two-step analysis results for wage workers with average tariff lag with year interaction terms

	2015	2020	2021	All	All
OLS					
Lag (average tariff)	0.0374 (1.01)	0.0512** (2.44)	0.0301 (0.60)	0.0804** (2.61)	0.145 (1.05)
Lag (log of imports)	-0.103 (-0.69)	0.0349 (0.38)	0.0756 (0.37)	-0.00314 (-0.03)	-0.672 (-1.07)
Lag (log of exports)	0.200** (2.40)	-0.0470 (-0.91)	-0.0165 (-0.15)	0.0569 (1.10)	0.168 (0.42)
2020 year*lag (average tariff)				-0.0518 (-1.35)	-0.0646 (-1.59)
2021 year*lag (average tariff)				-0.0684* (-1.73)	-0.0930* (-1.95)
Constant	-0.994 (-0.63)	-0.00194 (-0.00)	-0.516 (-0.22)	-1.014 (-1.02)	5.133 (0.71)
VWLS					
Lag (average tariff)	0.0374** (2.33)	0.0512*** (4.14)	0.0301** (2.02)	0.0804*** (7.00)	0.145*** (2.77)
Lag (log of imports)	-0.103 (-1.59)	0.0349 (0.65)	0.0756 (1.24)	-0.00314 (-0.09)	-0.672*** (-2.84)
Lag (log of exports)	0.200*** (5.52)	-0.0470 (-1.54)	-0.0165 (-0.50)	0.0569*** (2.95)	0.168 (1.11)
2020 year*lag (average tariff)				-0.0518*** (-3.61)	-0.0646*** (-4.21)
2021 year*lag (average tariff)				-0.0684*** (-4.63)	-0.0930*** (-5.15)
Constant	-0.994 (-1.45)	-0.00194 (-0.00)	-0.516 (-0.73)	-1.014*** (-2.74)	5.133* (1.88)

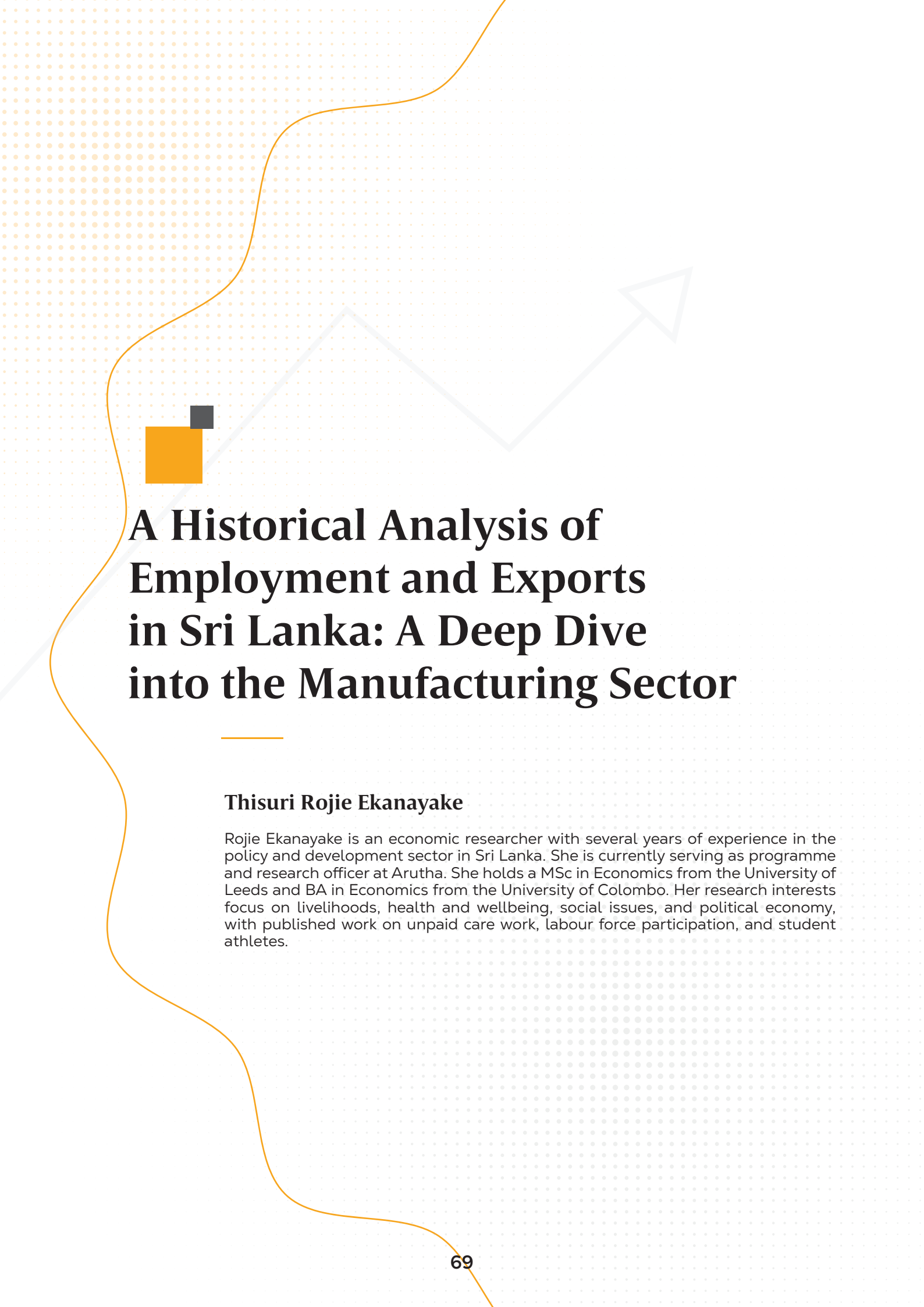
Industry dummy	No	No	No	No	Yes
Year dummy	No	No	No	Yes	Yes
N	21	21	21	63	63

Note: Robust standard errors between brackets (clustered by industry, 2-digit, ISICr4). *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev.4—tobacco and petroleum—were excluded due to data issues.

Table A4: Two-step analysis results for all workers with average tariff lag with year interaction terms

	2015	2020	2021	All	All
OLS					
Lag (average tariff)	0.0473 (1.41)	0.0638** (2.70)	0.0102 (0.26)	0.0604** (2.30)	0.0413 (0.38)
Lag (log of imports)	-0.0501 (-0.37)	0.00143 (0.01)	0.00924 (0.06)	-0.0237 (-0.30)	-1.018** (-2.05)
Lag (log of exports)	0.126 (1.65)	-0.0204 (-0.35)	0.119 (1.33)	0.0815* (1.85)	0.269 (0.85)
2020 year*lag (average tariff)				-0.0179 (-0.55)	-0.0356 (-1.11)
2021 year*lag (average tariff)				-0.0499 (-1.48)	-0.0900** (-2.37)
Constant	-1.038 (-0.72)	-0.223 (-0.20)	-1.225 (-0.64)	-0.987 (-1.17)	10.50* (1.83)
VWLS					
Lag (average tariff)	0.0473*** (3.16)	0.0638*** (6.19)	0.0102 (0.67)	0.0604*** (5.61)	0.0413 (0.84)
Lag (log of imports)	-0.0501 (-0.83)	0.00143 (0.03)	0.00924 (0.15)	-0.0237 (-0.74)	-1.018*** (-4.58)
Lag (log of exports)	0.126*** (3.71)	-0.0204 (-0.80)	0.119*** (3.48)	0.0815*** (4.51)	0.269* (1.90)
2020 year*lag (average tariff)				-0.0179 (-1.33)	-0.0356** (-2.48)
2021 year*lag (average tariff)				-0.0499*** (-3.60)	-0.0900*** (-5.32)
Constant	-1.038 (-1.62)	-0.223 (-0.47)	-1.225* (-1.68)	-0.987*** (-2.85)	10.50*** (4.10)
Industry dummy	No	No	No	No	Yes
Year dummy	No	No	No	Yes	Yes
N	21	21	21	63	63

Note: Robust standard errors between brackets (clustered by industry, 2-digit, ISICr4). *Statistically significant at the 10% level ($p < 0.1$). **Statistically significant at the 5% level ($p < 0.05$). ***Statistically significant at the 1% level ($p < 0.01$). Two industries under the manufacturing sector, according to ISIC Rev.4—tobacco and petroleum—were excluded due to data issues.



A Historical Analysis of Employment and Exports in Sri Lanka: A Deep Dive into the Manufacturing Sector

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Abstract

Export growth—conventionally lauded as a strategy for poorer countries to achieve rapid growth—is also increasingly seen as a means of providing employment opportunities. This study is a historical analysis of how exports may have influenced jobs in Sri Lanka in the post-liberalisation era. It uses both macroeconomic and microeconomic analyses and aims to understand overall trends in unemployment and labour force participation following Sri Lanka's attempts at liberalisation, as well as the quality of jobs created in the manufacturing export sector. The macro analysis, conducted using time series data, finds that the expansion of exports coincided with improvements in employment indicators in the short term, particularly for women. However, long-term relationships, especially when controlling for other factors, remained weak. The micro analysis suggests that manufacturing exports have played a notable role in generating formal employment opportunities, especially for previously marginalised groups such as women and youth. Nonetheless, the study underscores persistent challenges, including wage stagnation and inequalities, limited career advancement, and gender-based occupational segregation within export-oriented light manufacturing industries. The paper concludes with a recommendation that future trade policies not only pursue growth but also prioritise strategies that promote employment outcomes that are inclusive, secure and sustainable.

Keywords: Export promotion, unemployment, labour force participation

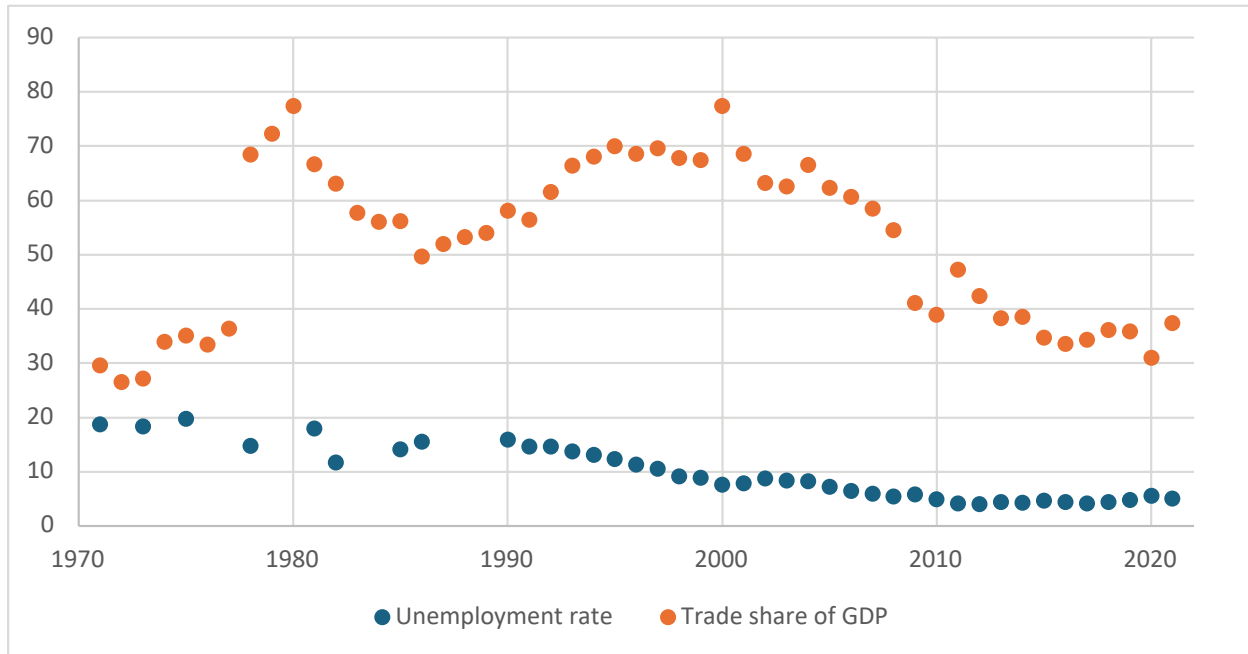
1. Introduction

Boosting exports and employment creation are widely regarded as economically and socially desirable goals. Export-oriented employment is considered a means to achieve these aspirations simultaneously. It links overall economic prosperity to livelihood gains and is therefore in alignment with concepts such as the inclusive growth framework, which emphasises the benefits of economic growth being shared across segments of the population (Kireyev and Chen, 2017). Achieving such a goal nevertheless remains challenging, both due to the imprecise relationship between trade and employment, as well as varying views, or the lack thereof, regarding the most effective policy interventions.

Since gaining independence, Sri Lanka has experimented with a range of trade and investment policies. Notable among these are the inward-oriented policies of the 1960s and early 1970s and subsequent liberalisation measures (Ganeshamoorthy, 2002). Liberalisation efforts can be considered as having taken place broadly in two waves, beginning around 1977 and 1989, respectively. The initial series of reforms in 1977–78 included major changes to existing policies. They introduced tariffs in place of quantitative restrictions, created Free Trade Zones (FTZ) to incentivise foreign investment, supported private sector growth and also reformed the banking and financial sectors. Although the momentum for liberalisation flagged in the early 1980s, the 'second wave' commenced in the early 1990s, with redoubled efforts. This involved further encouragement of the private sector through a privatisation drive, simplification and reduction of tariffs, removal of certain exchange controls and revamping of foreign investment policies (Athukorala and Jayasuriya, 2004; Dunham and Kelegama, 1994). Nevertheless, the subsequent decades were marked by policy inconsistencies and a stagnation of the momentum for further liberalisation and trade expansion. This was associated with limited political will, social unrest and a decades-long civil conflict (Athukorala, 2021).

Although data from the early years remain scarce, Sri Lanka saw significant improvements in employment indicators beginning with the era of trade and investment expansion (Figure 1). Indeed, the employment boom during the post-reform period is largely owed to the growth of manufacturing exports that expanded by over threefold from 1978 to the late 1990s (Athukorala and Jayasuriya, 2004).

Figure 1: Unemployment rate and trade share of GDP in Sri Lanka: 1971-2021



Sources: Department of Census and Statistics, CBSL Annual Reports and WDI

Note: Unemployment data from the Labour Force Survey (LFS) statistics are only available from 1990 onwards. Census estimates have been used for previous years.

In later years, the momentum for trade growth stalled, and the trade share of GDP fell, as shown in Figure 1. Furthermore, imports outpaced the country's exports, leading to major macroeconomic issues (Kelegama, 2013). Concurrently, employment indicators plateaued, following modest improvements, up to a point, suggesting that the relationship between trade and employment may not hold steady across time. Today, despite overall unemployment remaining low, persistent challenges remain among specific groups, including young people and women (International Labour Organisation, 2024). And although the export manufacturing sector continues to function as a major source of employment, particularly for those with lower technical skills, contentions have emerged. Real wage growth has stagnated, and relative poverty has risen, with employers benefiting over employees over time (Athukorala and Jayasuriya, 2004).

The evolution of Sri Lanka's export-oriented employment policies, therefore, warrants deeper examination given the implications for economic growth and equity. An analysis of trends provides evidence on the relationship between these policies and employment outcomes. Additionally, an in-depth exploration of the export manufacturing sector will produce insights into the nature and quality of the employment created following trade and investment liberalisation policies. This will engender a clearer understanding of whether Sri Lanka's trade-related economic growth has benefited the wider population in line with the inclusive growth framework.

This paper, therefore, aims to address the following questions:

- What is the relationship between trade and employment indicators in post-liberalisation Sri Lanka, with a focus on exports?
- What is the nature and quality of jobs created from the expansion of export manufacturing in Sri Lanka, following the implementation of liberalisation policies?

2. Literature Review

A wide range of views exists on the relationship between trade and investment liberalisation policies and employment. Most proponents of rapid liberalisation suggest that reducing restrictions on trade and investment naturally produces employment opportunities as the volume of trade grows. The earliest models that support this notion include the Ricardian and Heckscher-Ohlin-Samuelson (HOS) models

based on the idea of comparative advantage (Abbey, et al., 2017). Broadly, these imply that removing barriers to free trade allows countries to access more goods and services at lower prices. It is seen as especially useful for countries with a surplus of low-skilled labour, given that they would benefit by exporting labour-intensive goods and services, generating employment and reducing inequalities (Lee, 2005). While short-term adjustment costs are expected as domestic producers are exposed to global markets, in labour-intensive developing countries, in particular, it is expected that employment would improve in the long term, especially in manufacturing (Tarr and Steven J, 2005).

Greater consensus exists on the specific impact of manufacturing exports on employment across developed and developing countries. A bulk of the research applies standard regression-type analyses and calculations based on Input-Output (I-O) tables. These suggest that growth in exports tends to enhance employment across many industries (Kiyota 2014; Feenstra and Hong, 2007; Abbey, et al 2017). However, in some cases, given the depth of reforms and level of integration into global value chains, the impact can be marginal or insignificant (Tillian, et al, 2023).

Historically, the drive towards liberalisation gained traction with the failure of closed economic policies in the aftermath of the Cold War. It should be noted, however, that even among proponents of liberalisation theories, the employment impacts of trade were not viewed entirely positively, as domestic industries that failed to keep pace with international competitors would experience losses (Abbey, et al., 2017). Overall, these theories advocated for liberalisation as a means to achieving growth and employment creation, albeit with a short-term adjustment cost,

The swift economic advancement of several East Asian nations beginning in the late 1960s renewed policy debates (Artuc et al., 2019). In terms of employment impacts, the manufacturing sector in particular saw a rise in job creation, expediting the decline in widespread poverty in many affected regions (Quibria, 2002; K.S. et al., 2006). While initially framed as merits of rapid liberalisation, some scholars have since attributed much of the success to export-oriented industrialisation policies. Such approaches propose that a sudden and uncontrolled opening up of economies to global markets yields negative consequences, including loss of employment in conventional sectors and poor working conditions, especially in the short term (Abbey, Gyese-Dako, Oduro, Turkson & Baffour, 2017). This gave rise to concepts such as strategic protectionism and activist trade policies (Krugman et al, 2012).

Empirical studies reveal a range of outcomes, indicating that the impact of trade on employment can vary depending on the nature of the economy and the global conditions under which it operates. Trade in advanced economies at times yielded little in terms of employment impacts, particularly in recent decades (Tuhin, 2015; Ghose, 2000). In developing countries, the effects are more beneficial. In early studies, significant positive impacts on employment and wages were observed in developing economies that focused on exporting manufactured goods to advanced economies, although regional disparities were also evident (Jenkins and Sen, 2007; Ghose, 2000). Later studies take a more nuanced approach to the topic, suggesting that the relationship between trade and employment varies with the labour market conditions or firm size (Hazera-Tun-Nessa et al., 2021, Ha and Tran, 2017).

Scholars have also increasingly recognised the need to expand inquiry beyond the number of jobs created from exports to also assessing the quality of jobs. Flanagan and Khor (2013) suggest that this should encompass both financial benefits and also matters of working conditions, job choices and inequalities in industries. Maliszewska and Winkler (2024), for instance, show that wages and productivity may grow with increased trade due to the formalisation of employment and exposure to new technologies. However, it is unclear whether this is universally applicable.

Since liberalisation efforts began in the late 1970s, Sri Lanka's economy has been reliant on global trade, although there has been a gradual decline in the share of trade in relation to the economy due to stagnant policies (Artuc et al, 2019). Nevertheless, industries such as the manufacture of garments and textiles, largely for export, have contributed to job creation with greater opportunities for women to participate in the workforce. One estimate suggests that between the 1990s and 2000s, two-thirds of all newly created employment was in the export manufacturing sector (Byiers et al., 2015). The Board of Investment (BOI) has boasted that 28% of the country's manufacturing and ICT labour force were employed either directly or indirectly through the BOI (Board of Investment, 2022)¹. Contrary to expectations, the adjustment cost of liberalisation in terms of job loss was limited. This was linked to the rapid job creation in the manufacturing sector and the dampened international competition, given the tariffs on imports and exchange rate depreciation (Athukorala, 2021).

¹Refer to Annex A

In the subsequent decades, other industries, including agriculture, mining, and chemicals, also contributed towards employment, particularly with the establishment of export processing zones (Artuc et al., 2019). This is confirmed by Herath, Liang and Yongbing (2013), who suggest that export intensity in Sri Lanka improves employment. However, they found that imports result in negative impacts.

Considering the impacts of the employment created, Naranpanawa, Bandara and Selvanathan (2011) further indicate that the employment and wage effects of tariff elimination would reduce poverty in Sri Lanka, although the impacts would be moderated when considering the budgetary outcome of reduced revenue. The outcome of wage impacts is mixed, with some suggesting a worsening of inequality and others holding a more optimistic outlook where rising exports improve wages for high-skilled workers and reduce informality of the economy (Karunarathne, 2007; Artuc et al, 2019). However, many of these studies relied on relatively small sample sizes and covered limited time periods. Additionally, non-wage indicators of job quality were often underexplored, highlighting the need for further research in this area.

3. Methodology

This study aims to conduct a historical analysis of the link between trade, particularly exports, and employment creation in Sri Lanka. The methodology consists of two major components: a macroeconomic and a microeconomic analysis. The research question on the overall employment effects of exports will be examined through macro analysis. It will present an overview of the short-and long-term trends in trade and employment indicators. However, since this provides limited information on the quality of employment created, the second research question will be through a micro analysis, investigating the quality of jobs in the export manufacturing sector, which is recognised as having benefited the most in terms of employment creation following liberalisation efforts. It will examine aspects such as wage growth and inequalities, potential mismatches in skills and education and occupational segregation.

3.1 Macro Analysis

This analysis attempts to examine the relationship between exports and employment levels as well as labour force participation, which are the most widely available data series considering historical data in Sri Lanka. Existing studies focus predominantly on the period following the 1990s since the prominent source of labour data, the Sri Lanka Labour Force Survey (LFS), commenced from that year. To analyse the prior period, data from the national census have been used in this study. As they are less frequent, missing values have been interpolated, given that the variables evolve gradually over time. Additionally, this study assesses the influence of trade on employment by gender, due to the possible gendered implications suggested in the literature. The remaining macroeconomic data are sourced from annual reports published by the Central Bank of Sri Lanka (CBSL).

The analysis is carried out using the Auto-Regressive Distributed Lag (ARDL) model. This is commonly employed to gauge short- and long-term relationships between macroeconomic variables. It has been used in evaluating the relationships between exports, foreign direct investment (FDI), economic growth and employment in countries across Asia and Africa. The advantage of this model is its ability to capture relationships between variables that may present dissimilar orders of integration (Gonese et al, 2023; Sultanuzzaman et al., 2018; Miah and Majumder, 2022; Tarek Tawfik Yousef et al., 2017).

Nevertheless, due to the relatively small sample size ($t=52$), this focuses on short-run dynamics. Equation (1) indicates the basic form of the model for the relationship between trade and the employment indicator (Y_t). Separate models will be constructed where Y_t represents the unemployment rate and the labour force participation rate in the current period. X_t represents the trade variables given as exports as a percentage of GDP and imports as a percentage of GDP, while Z_t is a vector of control variables that contains the log of real GDP and the inflation rate.

$$Y_t = \beta_0 + \beta_1 Y_{t-1} + \beta_2 X_t + \dots + \sum \beta_k X_{t-j} + \beta_n Z_t + \dots + \sum \beta_m Z_{t-p} + \varepsilon_t \quad (1)$$

Several key steps will be followed before the interpretation of the results obtained from the final estimated model. First, these series must be assessed for stationarity, and suitable transformations and lag lengths must be applied. This will be followed by estimating the ARDL model, assessing cointegration, estimating the long-and short-run relationships, and diagnostic tests.

3.2 Micro Analysis

Given that the macro analysis only provides an overview of the employment impact, this portion of the study focuses on the nature and quality of jobs generated by exports, particularly the manufacturing sector.

This data was obtained from the LFS by the Department of Census and Statistics (DCS) and is limited to the period 2002–2012 due to data constraints². Additionally, the classification of industries utilised at the time (ISIC 03) combines several key product groups and presented challenges in isolating export industries. These issues raised concerns regarding its suitability for more sophisticated modelling, which tends to be sensitive to restrictive assumptions. As such, an extensive descriptive analysis has been conducted.

This involves presenting socioeconomic features by export industry groups and cross-tabulations of characteristics to present aspects such as gender implications and skills-education mismatches. Given that wages can be considered an indicator of job quality, an analysis of wages will also be conducted.

3.3 Limitations

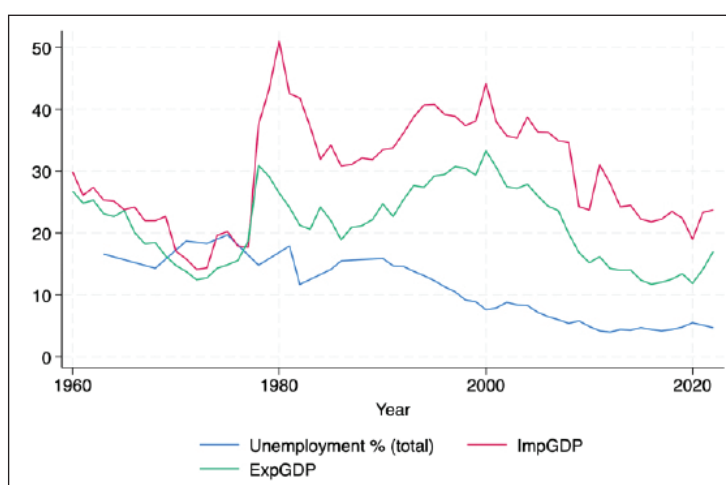
The most evident limitation of the current study is that it does not establish a causal relationship between trade and employment. Rather, it presents the co-occurrence of these variables, which suggests an underlying relationship when other factors are controlled. With the use of additional observations, such as quarterly data, which is available in later years, it may be possible to establish a more robust long-run relationship based on the predictive power of the series. Furthermore, the presence of more accurate and granular microeconomic data in later years will allow researchers to examine the contemporary employment conditions of export industries utilising sophisticated estimation techniques.

4. Results

4.1 Macroeconomic Analysis

This analysis focuses on the relationship between trade and labour market indicators over time in Sri Lanka. It considers data from 1960 to 2022. Before conducting the econometric estimation, it is necessary to carry out a descriptive analysis³ as it provides some preliminary evidence on the relationship that is to be tested and indicates the suitability of the data for further analysis.

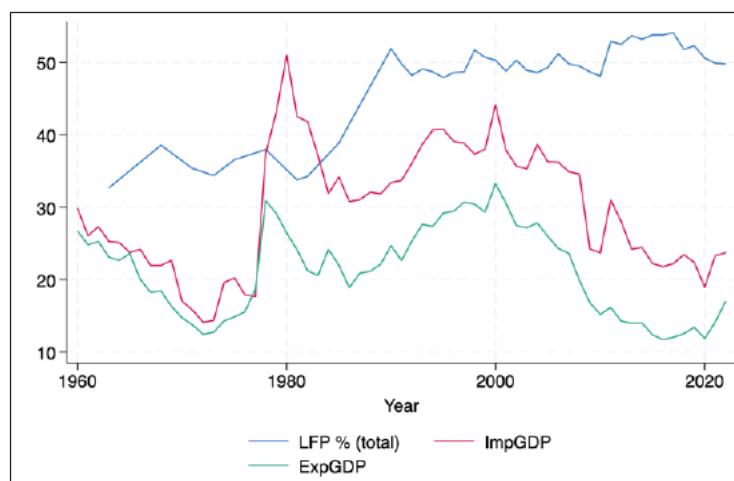
Figure 02: Unemployment and trade over time 1960–2022



²An extensive explanation on the methodological challenges of the LFS data 1992–2012 is mentioned in the Annex B.

³The summary statistics can be found in the Annex C.

Figure 03: Labour force participation and trade over time 1960-2022



As seen in Figures 02 and 03 above, in the long run, the unemployment rate generally reflects a downward trend, whereas labour force participation rises. Trade share fluctuates across the decades. The short-term dynamics vary significantly. In the late 1970s to early 1980s, also known as the first wave of liberalisation, there is a clear upsurge in trade. While unemployment appears to fall during this period, labour force participation also declines. Later, these trends subside until the early 1990s, or the second wave of liberalisation, when there is yet another hike in trade indicators lasting until the mid-2000s. This is accompanied by a marked fall in unemployment and, unlike the previous period, a growth in labour force participation. By the end of the decade, however, the trade share falls significantly, while the employment indicators appear unaffected. As such, the labour market and trade variables move concurrently in the short run during certain periods but are less closely associated in other periods. This is confirmed by the scatter plots of the labour market variables against the trade indicators in Figures 04, 05, 06 and 07.

Figure 04: Labour force participation vs exports 1960-2022

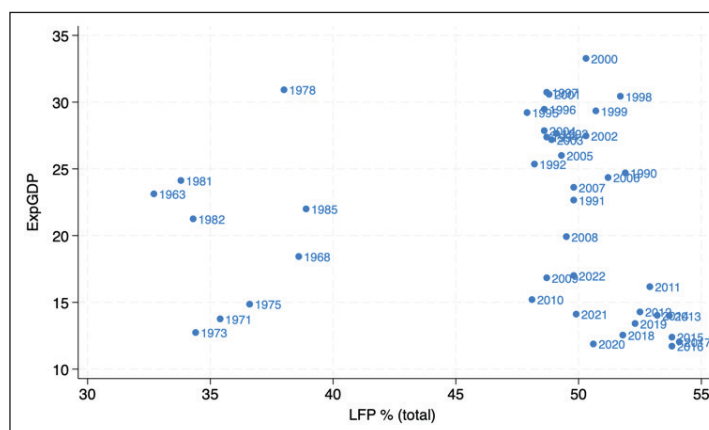


Figure 05: Labour force participation vs import share 1960-2022

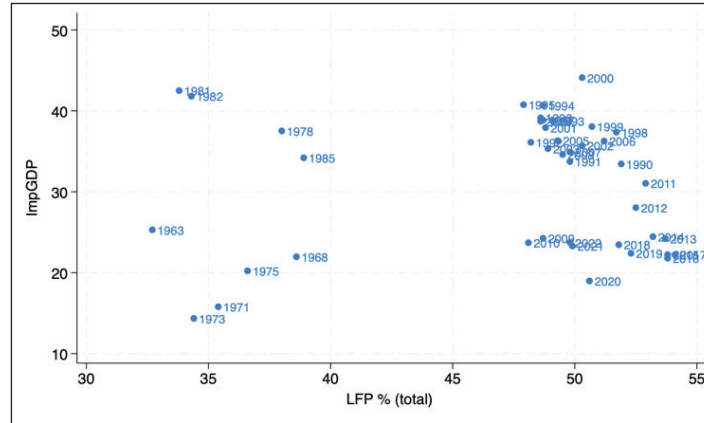


Figure 06: Unemployment vs export share 1960-2022

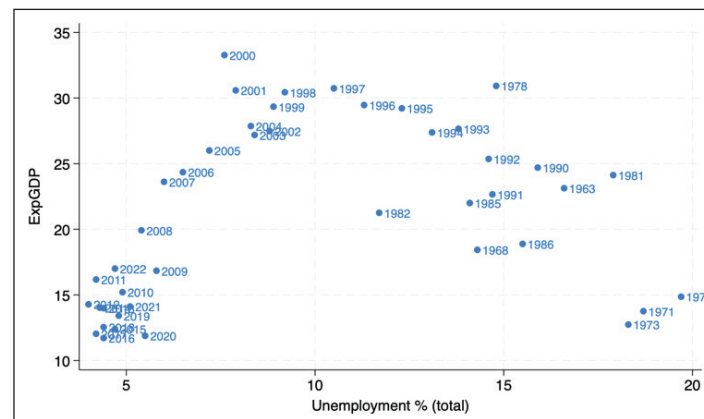
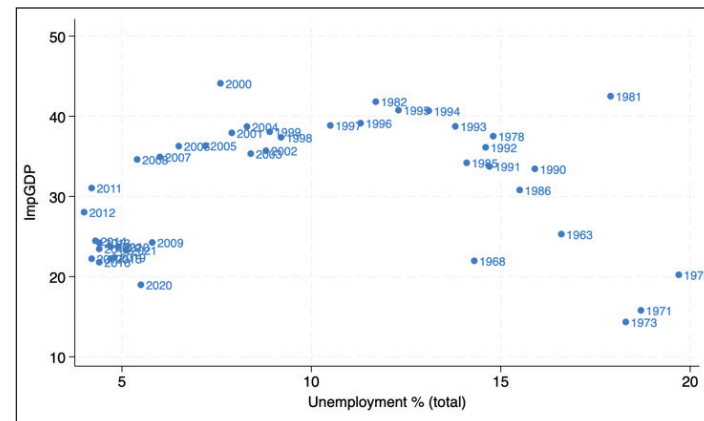


Figure 07: Unemployment vs import share 1960-2022



Diagnostics and Stationarity Check

As the ARDL utilises time series data, the stationarity of the series needs to be ensured. The autocorrelation and partial autocorrelation functions of the series were initially used to assess the stationarity and lag length required, and the Augmented-Dickey-Fuller test was used to confirm the results. All variables except the inflation rate indicated a unit root at the level form and needed to be transformed into the first difference. To account for the autoregressive nature, lags of inflation and log real GDP were used in the estimation.

Following this, OLS properties were assessed. Akaike and Bayesian information criteria were used to ensure that the variables included were relevant to the model. To ensure the assumption of homoscedasticity is intact, the Breusch-Pagan-Godfrey Test was conducted, and the null hypothesis of constant variance was violated. To address this, robust standard errors were used. The Variance Inflation Factor (VIF) showed

no concerning level of multicollinearity. In terms of endogeneity, the concern was evident in the possible reverse causality between macroeconomic variables. As such, lagged terms are used for explanatory variables. The Durbin-Watson test for autocorrelation did not show a concerning level of autocorrelation (d statistic = 1.9). Although the bounds test of the ARDL model suggested the presence of a long-run relationship, given the relatively small sample size, the analysis will focus on the short- to medium-term dynamics.

4.2 Econometric Estimation

Several models were estimated with respect to unemployment and labour force participation. Overall unemployment is given by Model (1), and overall labour force participation is given by Model (4). As the literature indicated potential differences by sex, separate models were estimated for male and female labour market outcomes. Models (2) and (5) show female unemployment and labour force participation, respectively, while Models (3) and (6) indicate the same for males. To test the robustness of the results, alternative measures for trade variables, including the sum of exports and imports as a share of GDP, as well as inflation-adjusted exports and imports, were used. The results did not indicate significant changes in the outcome.

Table 01: Regression estimates of unemployment and labour force participation with trade indicators – 1960 to 2022

Variable	Model (1)	Model (2)	Model (3)	Model (4)	Model (5)	Model (6)
L1.DiUnemp_tot	0.16					
	(0.13)					
L1.DiUnemp_fem		0.13				
		(0.13)				
L1.DiUnemp_male			0.06			
			(0.15)			
L1.DiLFP_tot				0.02		
				(0.21)		
L1.DiLFP_fem					-0.2	
					(0.15)	
L1.DiLFP_male						0.13
						(0.2)
L1.DExpGDP	-0.13*	-0.24**	-0.1	-0.05	0	-0.07
	(0.07)	(0.12)	(0.07)	(0.1)	(0.11)	(0.13)
L2.DExpGDP	0.16*	0.26	0.11	0.12	0.14	0.07
	(0.1)	(0.16)	(0.09)	(0.11)	(0.12)	(0.13)
L1.DImpGDP	0.08*	0.17**	0.08*	-0.08	-0.18***	-0.02
	(0.04)	(0.07)	(0.04)	(0.05)	(0.06)	(0.06)
L2.DImpGDP	-0.14**	-0.21**	-0.1	-0.07	-0.08	-0.06
	(0.07)	(0.11)	(0.06)	(0.07)	(0.07)	(0.09)
L1.DlogRealGDP	-4.38	-5.44	-4.31	9	8.28**	10.5
	(3.14)	(5.75)	(2.84)	(5.56)	(3.57)	(8.15)
L2.DlogRealGDP	4.95	7.26	4.67	-4.92	-2.78	-5.58
	(3.33)	(7.98)	(2.92)	(6.67)	(5.85)	(7.84)
L1. Infl	0.04	0.07	0.04	-0.01	-0.01	-0.02
	(0.03)	(0.06)	(0.03)	(0.05)	(0.06)	(0.06)

L2. Infl	-0.06	-0.1	-0.06	-0.01	0.01	0
	(0.04)	(0.08)	(0.04)	(0.06)	(0.07)	(0.06)
break	-0.07	-0.71	0.23	0.11	-0.63	0.65
	(0.42)	(1.14)	(0.37)	(0.47)	(0.45)	(0.67)
_cons	0.06	0.49	-0.27	0.13	0.62	-0.26
	(0.47)	(1.11)	(0.44)	(0.65)	(0.5)	(0.89)
N	58	58	58	58	58	58
r2	0.37	0.32	0.36	0.15	0.28	0.13
ll	-80.3	-119.41	-76.77	-108.43	-110.58	-115.3

Note: Robust standard errors are in parentheses *, **, *** indicates significance at 10%, 5%, 1% level. Source: Author's Calculations.

4.3 Unemployment

The results show that when GDP and inflation are held constant, trade and unemployment present a relationship in the short run. The models on unemployment showed an overall explanatory power ranging from 32% to 37%. In Model (1), consisting of the combined unemployment for men and women, the coefficient of the first lag of export share was statistically significant at the 10% level, showing the presence of a negative relationship. Specifically, a 1% increase in the first difference of exports as a share of GDP in the previous period is associated with a 0.13% decrease in the first difference of unemployment in the current period, when other relevant factors remain unchanged. Regarding imports, the first lag of import share showed a positive association at the 10% level. As such, a 1% increase in the first difference of imports as a share of GDP in the previous period would increase the first difference of unemployment by 0.08% in the current period. The second lags of both these variables indicated significant coefficients as well, but with opposing signs, showing that the relationship could be complex with delayed impacts. The gendered implications can be seen from Models (2) and (3). The impact of a change in both export and import share on the unemployment for women is significant, at the 5% level and higher than for men.

4.4 Labour Force Participation

The models on labour force participation show a much weaker relationship with trade. The overall model and the model for males indicate a lower explanatory power, ranging from 13% to 15%, and do not point to a statistically significant relationship with export or import share of GDP. However, in the model for women, the variable import share was significant at the 1% level and is negatively associated with female labour force participation. Accordingly, an increase in the first difference of imports as a share of GDP by 1% in the previous period would lower the first difference of female labour force participation by 0.18% in the current period. Furthermore, participation in the labour force was also sensitive to the growth of the economy overall, as seen by the significant positive coefficient of the GDP variable.

On the whole, the results of this section suggest that the relationship between trade and labour market indicators is complex. While exports, in particular, showed potential for a reduction in unemployment, the magnitude of impact is lower than expected. While there is also a statistically significant difference in the results for men and women, the size of the effect remains minor in both cases. Visually, the trend analysis confirms that, while short-term correlations are apparent, the relationship between trade indicators and employment varies over the long term. This is especially clear in the later decades, where it appears that other shifts in the economic structure and policies have impacted labour market indicators to a much greater extent.

4.5 Microeconomic Analysis

This analysis aims to assess the quality of employment in the export sector. It consists of LFS data ranging from 2002 to 2012, which were grouped according to the ISCI 03 industrial classification. Once classified, it was necessary to identify industries that could be considered export sector industries. This was based predominantly on their contribution to the composition of Sri Lanka's exports⁴. As certain industries could not be isolated, given the categorisation of the ISCI 03 classification and the absence of certain industries from the sample due to data limitations⁵, only three manufacturing industries that contributed to exports were identified. These were the textile and garments industry, the petroleum products industry, and the rubber manufacturing industry. As such, this analysis focuses on these three manufacturing exports.

⁴ Refer to Annex D

⁵ Refer to Annex B

4.6 Overall export industries vs employment in other industries

Table 02: Summary statistics of total employment in samples

	Export industries			Other industries
	Textile & garments	Petroleum products	Manufacture of rubber	
Tot. Employed	16,571	203	417	251,221
% of Employment	6.17	0.08	0.16	93.60

Of the total sample of workers from 2002 to 2012, the selected export industries collectively accounted for around 6%, with the labour-intensive textile and garment industry making up a much higher share than others (Table 02). In fact, given that the petroleum industry is highly reliant on crude oil imports and is not labour-intensive, it is less representative of net job creation due to exports in relation to other industries. In sum, considering the absence of data on other manufacturing exports, it is likely that the total share of employment attributed to the sector in this study is an underestimation.

Table 03: Share of worker characteristics across industries

Worker characteristics		Export industries			Other industries
		Textile & garments	Petroleum products	Manufacture of rubber	
Sex (%)	Male	28.1	87.2	81.1	69.5
	Female	71.9	12.8	18.9	30.5
Sector (%)	Urban	15.5	24.1	10.1	14.3
	Rural	81.4	75.9	82.0	78.3
	Estate	3.1	0.0	7.9	7.4
Ethnicity (%)	Sinhala	89.6	92.1	91.6	79.0
	Sri Lankan Tamil	4.0	3.0	3.4	8.6
	Indian Tamil	2.6	0.0	3.4	5.6
	Sri Lankan Moor	3.6	3.9	1.4	6.5
	Other	0.3	1.0	0.2	0.4
Age Group (%)	Youth (15-25 years)	32.5	5.4	20.1	12.4
	Prime age (26-55 years)	62.7	86.2	73.4	74.0
	Older workers (56+ years)	4.8	8.4	6.5	13.6
Schooling (%)	No schooling	1.0	0.0	2.2	4.8
	Primary	5.9	2.5	10.3	20.6
	Secondary	91.9	93.1	85.4	71.2
	Degree & above	1.1	4.4	2.2	3.3

The textile and garments industry is highly feminised, with over two-thirds of the workforce being women, while the opposite is the case in the petroleum and rubber manufacturing industries. Overall, the export manufacturing industries largely cater to a rural worker base, followed by urban, with limited opportunities for those residing in the estate sector, particularly in the textile and garment and petroleum industries. The textile and garment, as well as rubber manufacturing industries, employ significantly more young people aged 15-25 compared to other industries. However, work opportunities for older workers are much fewer than in other sectors across the export industries examined. As for educational levels, there are a greater number of jobs available to those with secondary education in the selected export industries than in the non-export sector. This is likely due to Sri Lanka being more dependent on light industrial goods as opposed to those that require a high level of education and specialisation.

To gain a deeper understanding of the interactions between these characteristics, pie charts of the education levels and occupations disaggregated by gender have been used.

Figure 08: Education by sex - other industries

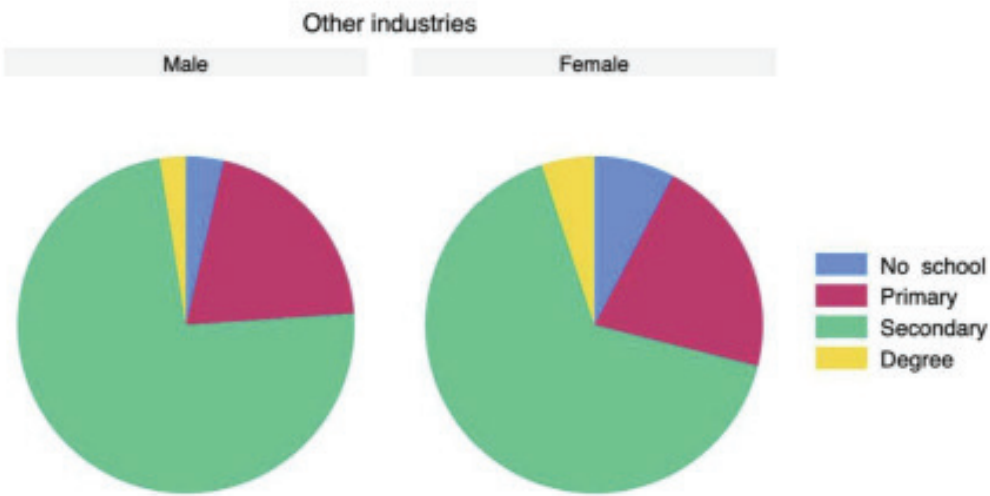
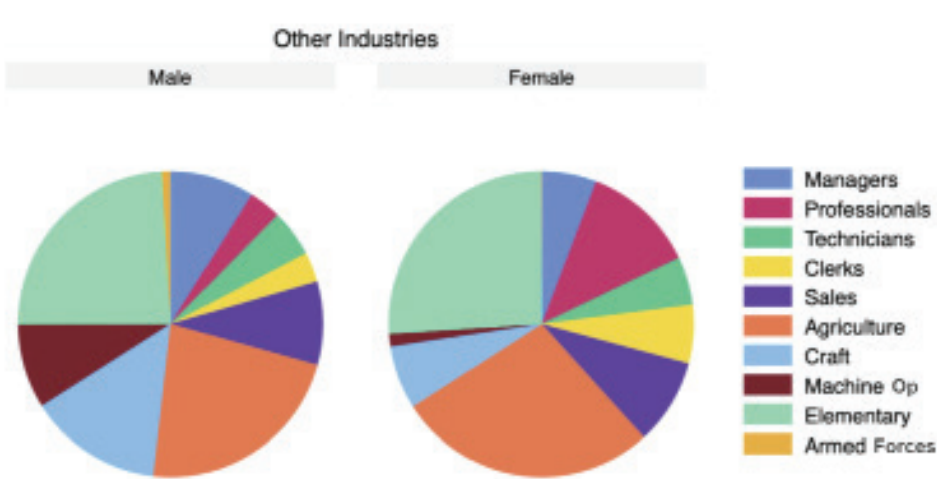


Figure 09: Occupation by sex - other industries



Figures 08 and 09 present the average conditions for the industries, other than the selected export industries, for comparison.

Figure 10: Education by sex–textile and garment industry

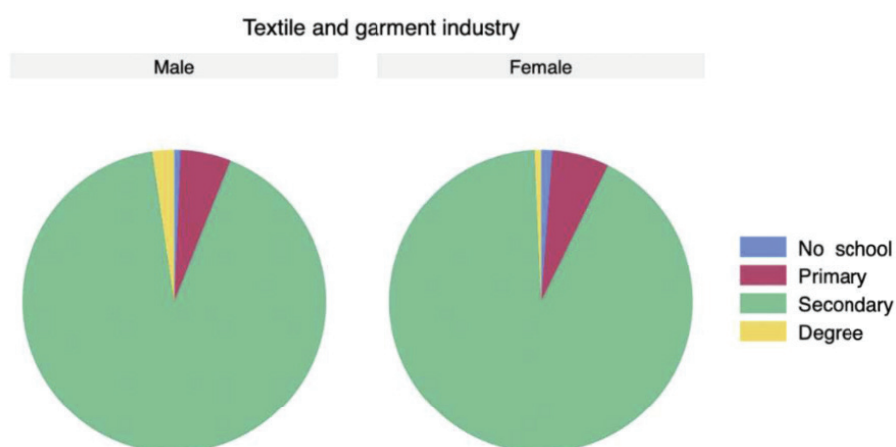
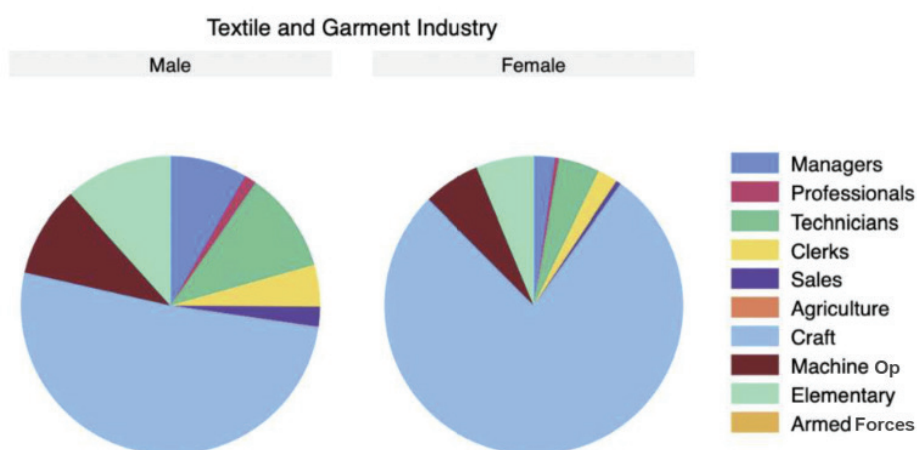


Figure 11: Occupation by sex – textile and garment industry



In the textile and garment industry, those whose highest qualification is secondary education in both male and female populations are overrepresented in relation to the other industries. Additionally, while the male share of degree-holders is on par with other industries, that of women is notably lower. In terms of occupation, the proportion of craft and related workers is much higher in the textile and garment industry, especially among women. Interestingly, occupational disparities are more severe than educational ones, pointing to potential occupational segregation.

Figure12: Education by sex in the petroleum industry

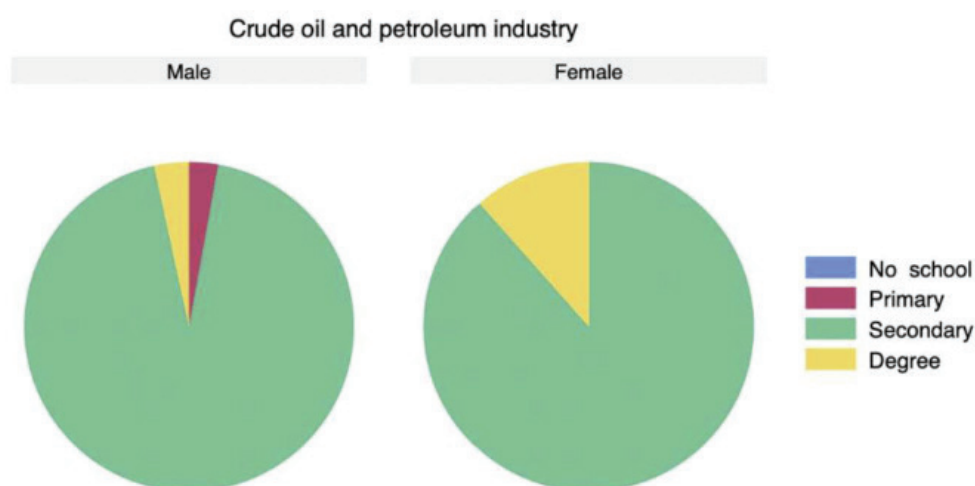
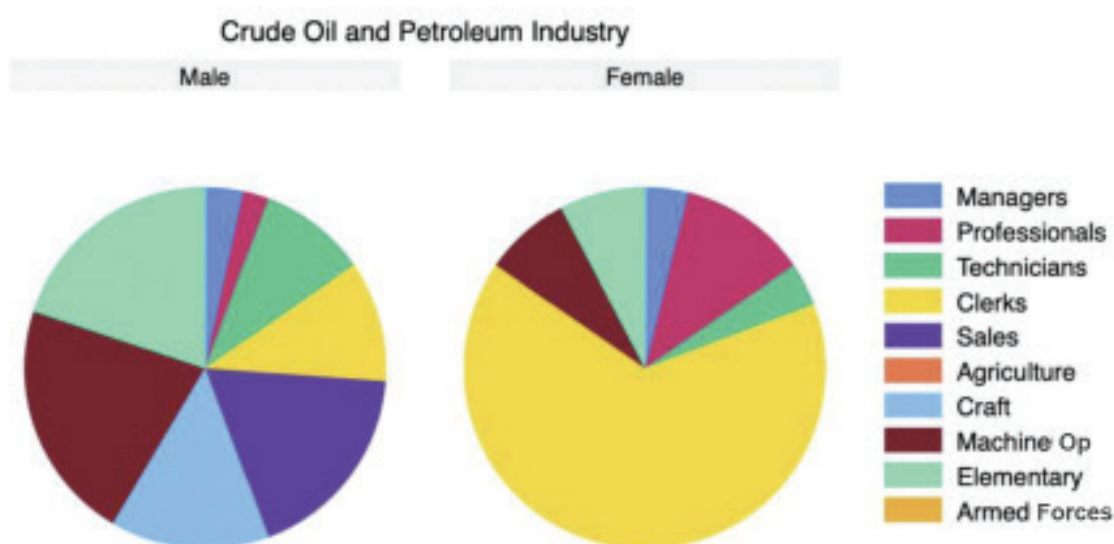


Figure 13: Occupation by sex in the petroleum industry



Workers in the petroleum industry show an overall higher level of education than those in the non-export sector or other export industries. The occupational distribution shows a stark contrast between genders. Among male workers, there is a significant representation of a variety of occupations, including service and sales workers, craft and related employees, machine operators, elementary occupation-holders and technicians. Among women, clerical jobs make up a majority of the employment. Compared to males, there is also a higher representation of profession.

Figure 14: Education by sex in the rubber manufacturing sector

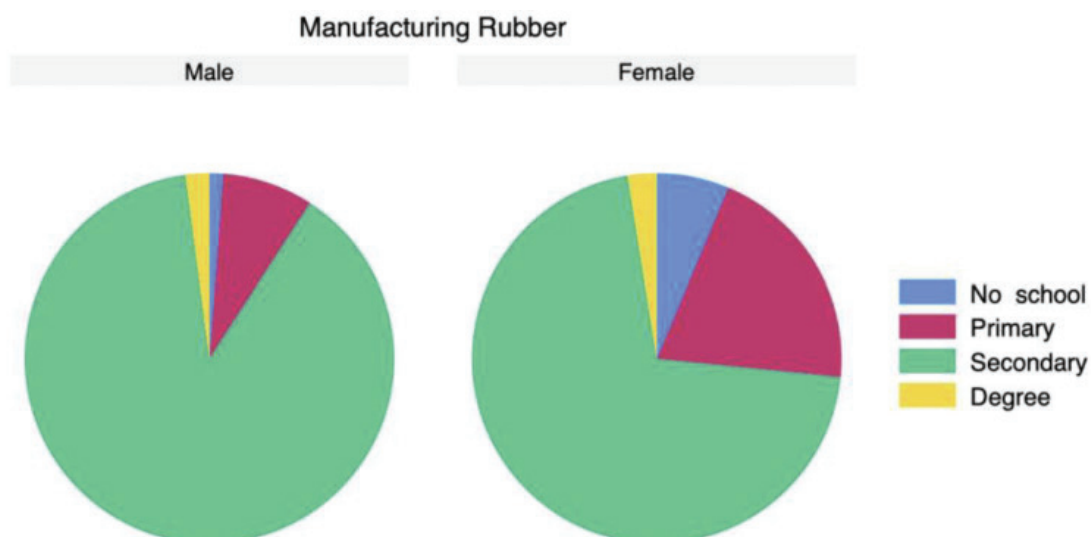
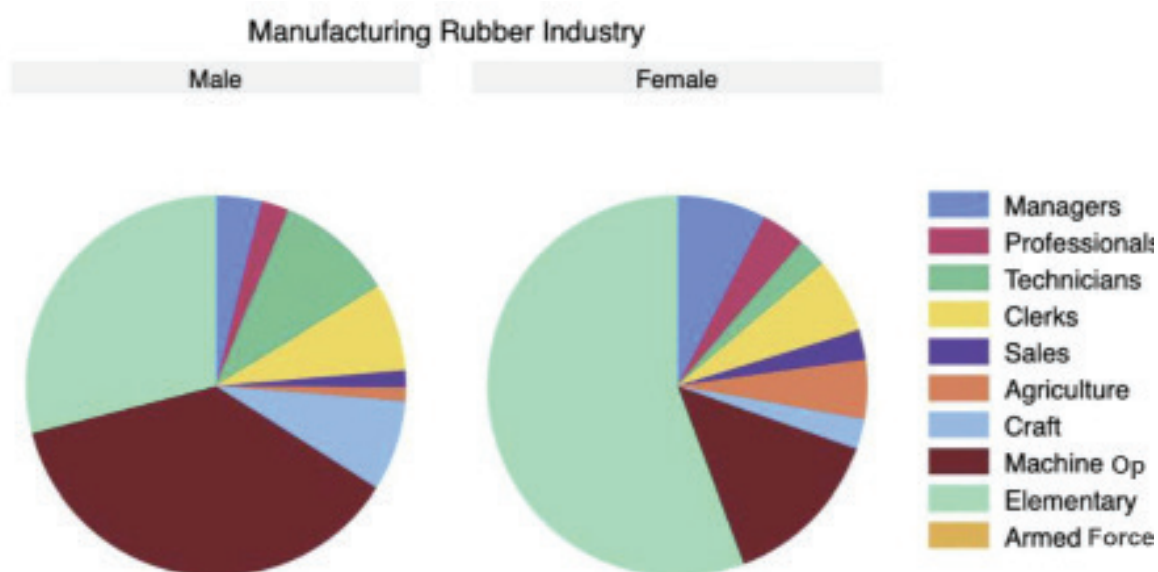


Figure 15: Occupation by sex in the rubber manufacturing sector

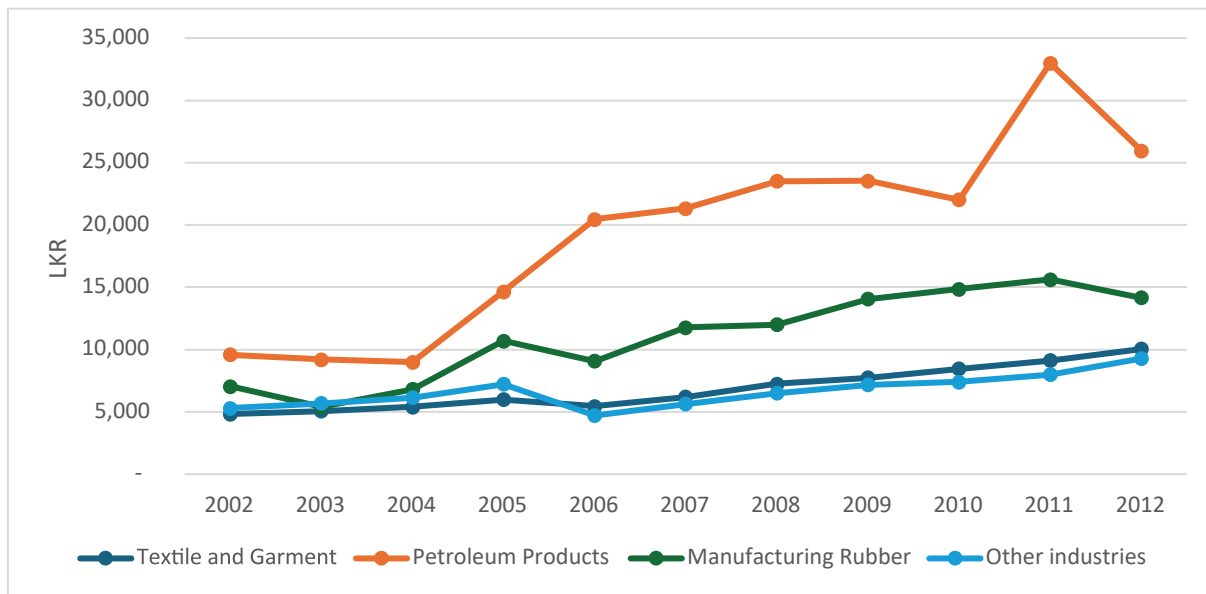


Educational levels in the rubber manufacturing industry more closely resemble those of other industries beyond the export sector. In terms of occupations, elementary occupations and machine operators collectively constitute a higher proportion in the industry, overall. For women, the ratio of elementary occupation workers is notably higher than for men.

This suggests that the export manufacturing industries during the period of 2002–2012 presented more job opportunities for young women. Employment opportunities appeared to be highest in relation to other industries for those with secondary education. However, there is evidence to suggest that issues such as occupational segregation and skill–education mismatches existed.

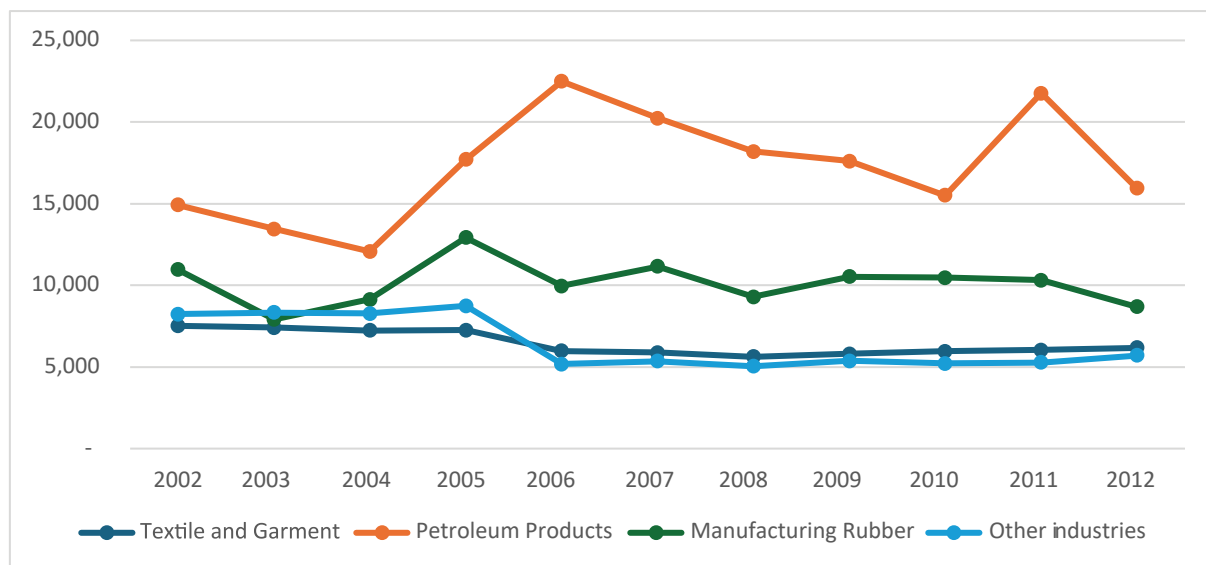
4.7 Wage Analysis

Figure 16: Average nominal wage growth 2002-2012



While there is variation in wages across export industries, the overall wages of the manufacturing export sector are, on average, higher than those of other industries. This could be partially due to the export manufacturing industries being considered formal employment, adhering to certain regulations. There is also a clear growth of nominal wages over the years.

Figure 17: Average real wage growth 2002-2012 (CCPI=2006/7)



Nevertheless, real wages have largely remained stagnant and, in some cases, fallen towards the end of the period. Given the smaller sample sizes and high standard errors among the wages of petroleum production and rubber manufacturing workers, the mean should be interpreted with caution when considering conditions across the industry.

It is worth mentioning that the collective average wages in the export sector can be misleading, given the differences in contributions to employment by each industry. As shown in Figures 17 and 18, the labour-intensive textile and garment sector, which contributes far more to job creation, has significantly lower wages.

4.8 Wages by Occupation and Industry

Wage differences across industries can occur due to a variety of factors, including differences in the occupational composition of each industry. As such, an analysis was conducted on wages by occupational category.

Table 04: Average earnings across industries (2002–2012)

Occupation	Wages in export industries (LKR)			Wage in other industries (LKR)
	Textile	Petroleum	Rubber	
Legislators, senior officials, managers	15,400.58	33,895.00	26,082.93	5,610.13
Professionals	24,231.00	30,053.38	23,314.68	14,128.74
Technicians and associate professionals	11,353.70	20,332.17	14,280.09	12,674.11
Clerks	10,258.74	15,605.11	14,046.41	11,058.82
Service, shop and market sales	7,558.64	16,183.34	10,880.18	5,781.36
Craft and related	4,964.78	24,056.16	10,006.43	5,841.32
Plant and machine operators and assemblers	7,323.99	11,514.39	9,249.515	6,356.18
Elementary occupations	5,954.20	13,166.09	6,568.33	5,245.77

Table 04 shows that, apart from certain occupations in the textile and garment industry, average wages in the export industry are generally higher than in other industries. This is particularly true of categories such as managers and professionals, whereas the difference is small or, at times, negative, in other categories, implying higher-than-expected intra-industry inequality in certain export industries.

As the means do not fully account for the nature of the wage distribution, an analysis was done to statistically test the inflation-adjusted wages of various occupational categories in each export industry, in relation to other industries. The null and alternative hypotheses are arranged as such:

H_0 : There is no difference in the average real wages of export industry 'x' in relation to other industries

H_{a1} : The average real wage of export industry 'x' is higher in relation to other industries

H_{a2} : The average real wage of export industry 'x' is lower in relation to other industries

A standard t-test was employed, which does not require a minimum sample size. Nevertheless, given that certain occupations consisted of a small number of observations, the representativeness of the result should be considered with caution.

The results indicated that, across the three export industries selected, for the occupational categories of managers and senior officials, professionals, service and sales employees, and plant and machine operators, as well as elementary occupation holders, the average wage was statistically higher than for workers in the same occupational categories in other industries. However, there was some variation by industry among other categories. For technical and associate professionals, the average wage was lower in the textile and garment industry and higher in the petroleum industry, while there was no statistical difference in the rubber manufacturing industry. Clerks, as well as craft and related workers, also faced lower average wages in the textile and garment industry but higher in the remaining export industries.

5. Discussion

5.1 Macroeconomic Analysis

Given the complex and context-specific nature of trade impacts, there is currently no clear consensus on their precise effect on employment. This study adds to the ongoing discussion on this relationship by assessing the historical case of Sri Lanka, focusing on the post-economic liberalisation period. A cursory view of the macroeconomic data from 1960 to 2022 shows that there are notable improvements in indicators such as unemployment and labour force participation at the end of the period, in comparison to the pre-liberalisation era. However, this link appears to fade with time, and there is no clear nexus between trade and employment in the long term. The short-term dynamics indicate that, under certain circumstances, trade is likely to have played a key role in lowering unemployment and encouraging labour force participation, up to a certain level.

Further inspection through time series modelling suggests that there was a significant impact of trade on employment, particularly by exports. Indeed, the historical context supports the existence of a sizable increase in manufacturing-related employment in the immediate aftermath of the liberalisation reforms lasting into the early 2000s (Athukorala, 2021). This was attributed not only to the relaxation of trade restrictions but also to a plethora of complementary policies that were executed during this period (Byiers et al., 2015). These reforms took the form of encouraging private investment, tax reforms and a reduction in exchange rate controls from the 1980s onwards. Efforts were made to incentivise FDI and export manufacturing through Export Processing Zones (EPZs) set up in the first wave and expanded in the second wave with the establishment of the BOI. These measures provided foreign companies with business ownership rights, tax exemptions and flexible financing opportunities (Athukorala and Jayasuriya, 2004). This supports the finding that the impact of exports on the employment indicators was small in magnitude when other factors were controlled for. Additionally, complexities in the short- and medium-term impacts suggest that employment indicators were likely affected by non-trade developments.

A previous study on Sri Lanka's liberalisation efforts indicates results that are broadly in line with the outcomes of the current study (Herath, Liang and Yongbing, 2013). This, too, shows that the export share in the economy is linked with reduced unemployment, possibly through job creation in export-oriented production, while imports generated the opposite impact. The effect size is, however, much larger, likely due to the shorter period under examination.

The stagnation of exports and, by extension, employment, in this sector in subsequent decades can also be understood in the context of the historical circumstances. Athukorala (2021) suggests that the country failed to sufficiently connect to global manufacturing value chains in electronics and electrical industries, unlike East Asian countries, resulting in its inability to continue its export and employment growth momentum. According to the study, domestic instabilities were linked with the exodus of early foreign investors in these industries. Moving forward, liberalisation alone appears unlikely to reverse course. Rather, growth in exports and employment in the sector is more likely to be achieved through carefully planned incentives for FDI. Additionally, as exports become increasingly dependent on imported raw materials, the relationship between imports and employment should be re-examined with a focus on import composition.

Globally, the results are mixed, even among developing economies, which are theoretically more likely to experience employment gains. While trade was linked with positive effects on employment outcomes in certain developing countries such as Bangladesh, Vietnam and several Arab nations (Jenkins and Sen, 2007; Awad-Warrad, 2018), most studies indicate that the impacts differed by factors such as firm size, industry type and the size of the domestic market (Babatunde et al., 2012; Feenstra and Hong, 2007; Ha and Tran, 2017).

The macroeconomic analysis also pointed to the existence of gender dynamics. This was reflected in many emerging and developing economies, where light industries, predominantly clothing, provided employment opportunities for women (International Trade Centre, 2018; Otobe, 2015). Nevertheless, the conditions of their employment have garnered criticisms. In the Sri Lankan case, the impacts of trade share were more significantly linked to reductions in unemployment of women in relation to men and also affected them at a higher magnitude. Even then, the levels of female unemployment remain at around twice that of men, suggesting that trade in itself is insufficient to address other structural issues. Interestingly, labour force participation rates were much less affected, with women's participation continuing to remain at a far lower rate than that of men. This shows that women who were looking for work but could not find it benefitted, whereas women outside the workforce were not significantly drawn into paid work due to enhanced trade.

5.2 Microeconomic Analysis

Given the link between exports and employment, the current study also examines the quality of export manufacturing jobs in the post-liberalisation decade of 2002-2012 through a microeconomic perspective. The employment created in the manufacturing exports sector was largely within the garment and textile industry, initially at over 35%. In later years, opportunities were also present in other industries such as rubber products, ceramics and travel goods (Athukorala, 2021).

Among those most likely to find employment in this sector were groups such as young people and women who may otherwise have faced difficulties in securing paid employment. Opportunities in labour-intensive light industries were most abundant for those with education at the secondary level or lower, rather than highly educated individuals. Additionally, Athukorala (2021) identifies that most workers employed in the sector at the time were from low-income households. This suggests that these jobs would have benefitted those who may have otherwise had difficulty obtaining employment in the formal economic system. Nevertheless, it also implies that these roles may be associated with low pay and demanding working conditions, as illustrated in the global literature (International Trade Centre, 2018; Otobe, 2015).

Gender-based occupational segregation was another notable feature, being even more stark than educational differences between men and women. Most women were likely to be in low- to mid-skilled occupations and few held leadership positions or conventionally masculine roles, such as machine operators and technicians. Chandana and Abayasekara (2013), however, find that despite such segregation, women gained some financial independence from the ability to engage in paid work.

In terms of pay, wages of the manufacturing export sector are, on average, higher than in other industries collectively, showcasing the sector's potential. Yet, as pointed out in Sivananthiran (2009), while EPZs tend to provide wages that are above average, it is still questionable whether efforts are compensated fairly and if the pay is a 'living wage'. This is especially the case for labour-intensive industries such as textile and garments, showing much lower wages than other industries. Kelegama (2004) noted that it was during the initiation of the 200 Garment Factories Programme in 1992 that a minimum wage for the sector was first implemented. Until this time, Athukorala and Rajapatirana (2000) find that the annual average increase in manufacturing real wage was one of the lowest among competitors in Asia, such as Thailand, Malaysia and Indonesia. This was also associated with the prevailing severe stance of the government against unions, given the local political climate. In later years, wages were more regulated but continued to be largely influenced by the power dynamics within the industry. This was especially the case until 2016, when national minimum wage regulations were introduced. Overall, Prasanna and Kuruppuge (2013) find that the real wages in this industry failed to keep pace with the rise in the cost of living.

It should also be noted that the average wage of this sector is not reflective of the earnings across all occupations. Workers in less skilled employment, for instance, earn wages that tend to be lower in relation to similarly employed persons in other sectors. This can be considered a negative aspect of global trade, as the pressure to remain competitive can result in low wages to minimise costs. As workers in highly skilled roles in the export sector earn higher-than-average incomes, this leads to a high intra-industry wage inequality. Artuc, et al. (2019) reiterate the finding that export-oriented industrialisation can increase wages in Sri Lanka on average, but it may also intensify inequality, requiring countermeasures.

Ultimately, this study shows that trade has the potential to improve labour market outcomes, such as employment levels and wages, in Sri Lanka. However, this relationship is complex and can include negative outcomes for certain groups, which should be mitigated.

6. Conclusion and Recommendations

The present study confirms that, while the relationship between trade and employment in Sri Lanka has not been consistent, it has influenced labour market outcomes in certain periods, especially when unemployment was high and labour force participation was low. Manufacturing exports, in particular, have enabled groups that have been looking for work but may not have otherwise been employed, access formal, paid employment. Nevertheless, issues in working conditions and the adequacy of compensation persist.

These gains have manifested within the context of other complementary policies that involve investment promotion through incentive systems, infrastructure and institutional support, as well as broader economic reforms. Evidence suggests that trade liberalisation in isolation may not result in such major changes, especially at lower levels of unemployment and higher average educational attainments.

Another vital aspect is issues in the export sector, like occupational segregation, unfairness in compensation and working conditions. Closer attention must be paid to groups such as young people and women who are likely to face these conditions, and regulatory systems should be strictly enforced against discriminatory or unlawful practices. Providing opportunities for upskilling and career progression can also support such individuals. As governments create policies to boost trade to achieve economic growth and accumulate foreign currency, it is necessary to also pay adequate attention to the resulting employment impacts.

A final note on this study is that it presents a historical perspective. Applications to the present era should be made with caution, given the developments in global trade and technology.

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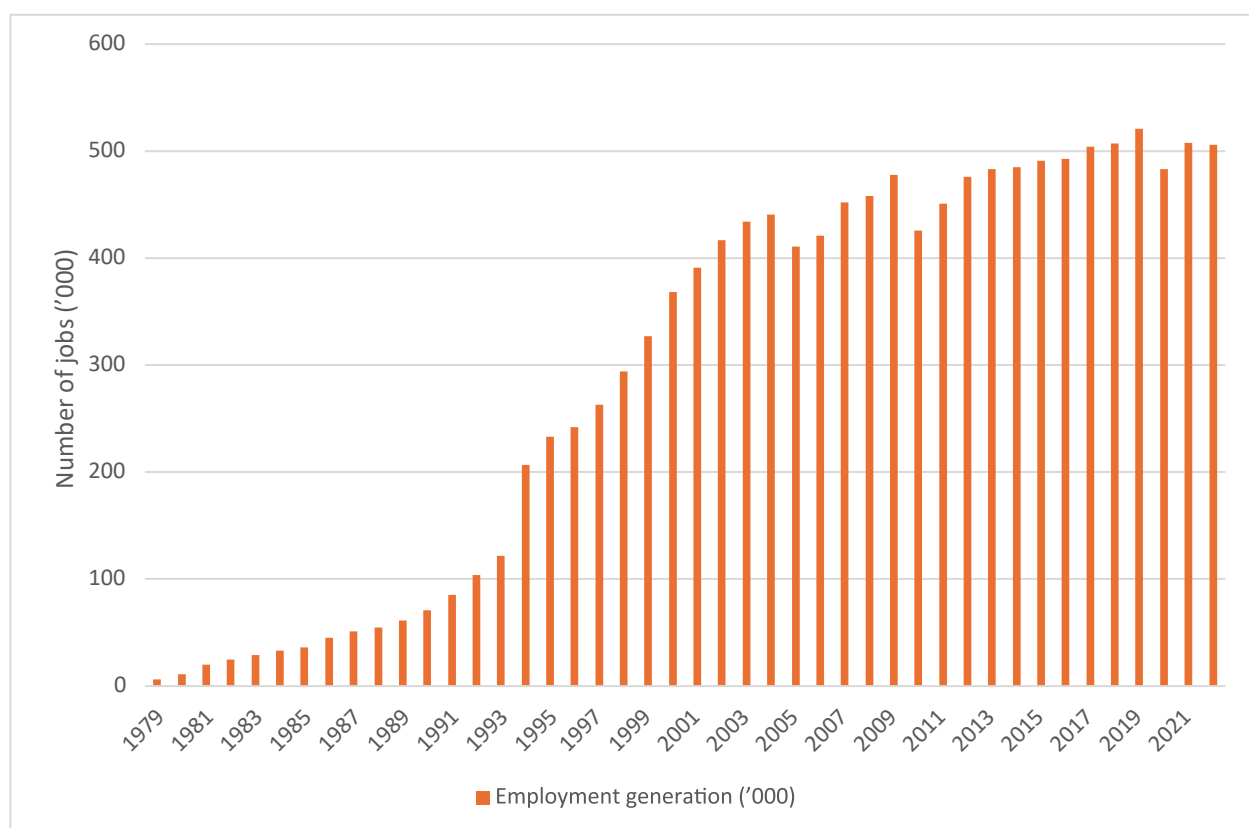
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Annex A: Employment generation through the Board of Investment



Source: BOI 2022 annual report

Annex B: Methodological Challenges

The initial sample included data from 1992, given that it is the earliest year for which LFS data can be obtained. However, as mentioned in Artuc et al. (2019), there is no clear indication of the industrial classification used for the datasets before 2002. Therefore, the sample was restricted to 2002-2012, for which ISIC 03 was used. Despite this restriction, extrapolation of the sample to the population remained infeasible due to two major concerns.

1. Major inconsistencies in the sample size over the years

Year	Sample size	% Change of sample size
2002	58,681	32%
2003	67,037	14%
2004	90,177	35%
2005	20,329	-77%
2006	68,930	239%
2007	68,197	-1%
2008	73,459	8%
2009	72,802	-1%
2010	69,203	-5%
2011	56,192	-19%
2012	62,299	11%

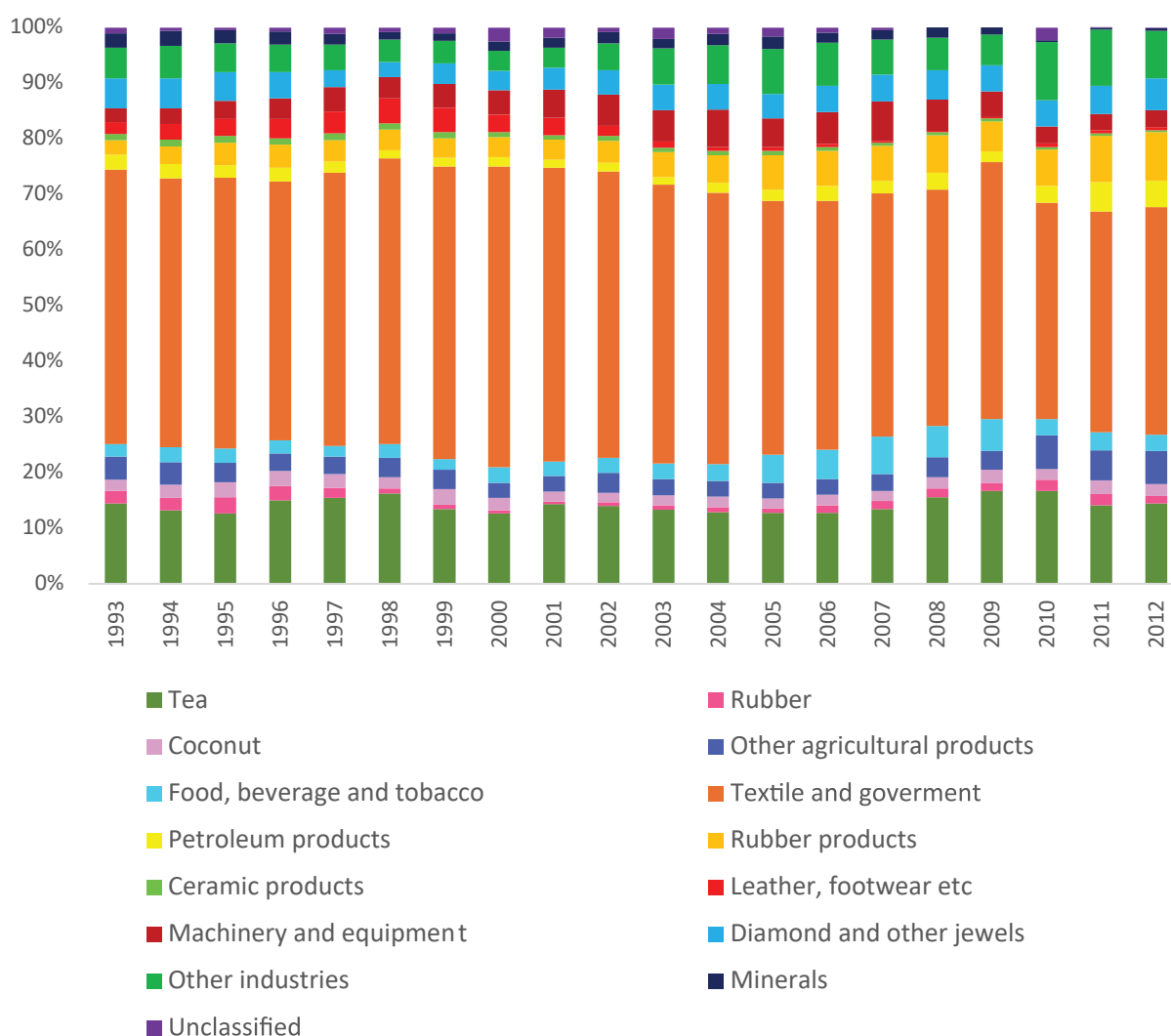
2. Sample was not representative at the industry level, as suggested by historical evidence

For instance, there were no observations under the industry code 0113 with reference to 'Growing fruits, nuts, beverage and spice crop' from 2002-2012, despite this being a significant sector of the economy. With respect to the gemstones industry, there was no specific categorisation. It may be included in industry code 1429 on 'Other mining and quarrying not elsewhere classified', but this remains uncertain. Moreover, the number of observations under code 1429 appeared to underrepresent the workforce. According to the LFS data, there were approximately 1,042 persons working in the gemstone mining industry in 2012. But contemporary records by the National Gem and Jewellery Authority indicate that there were around 40,000 people working in gemstone mines.

Annex C: Summary statistics of macroeconomic variables

Variable	Obs	Mean	Std dev.	Min	Max
ImpGDP	63	29.76043	8.55708	14.11903	50.96149
ImpGDP	63	29.76043	8.55708	14.11903	50.96149
logRealGDP	63	10.3721	0.9687772	8.777102	11.86897
iLFP_tot	60	44.43723	7.253445	32.7	54.1
iUnemp_tot	60	11.53707	5.170641	4	19.7
Govt_exp	63	26.75556	5.710934	16.7	42.7
infl	62	8.924699	7.466535	-.1777778	46.37378

Annex D: Composition of exports by industry type 1993-2012



Source: Annual reports of Central Bank of Sri Lanka 1996-2013

The export industries considered in depth in the micro analysis were selected primarily based on the contribution to Sri Lanka's export earnings, the nature of the industrial categorisation, and the data available in the LFS sample. Ideally, they should have included industries that contribute significantly to job creation (i.e., labour-intensive), in addition to export earnings. They should also have included non-manufacturing jobs such as agriculture and fisheries. This may be possible for later years, given increasing data availability and accuracy.



Sri Lanka's Spatially Skewed Growth Through Middle-Income Transition – A Deep Dive

Umesh Moramudali

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Abstract

This study examines Sri Lanka's spatially uneven growth during its middle-income transition and explores the structural and politico-economic factors underpinning its imbalanced development. Having been a low-income country in 1990, Sri Lanka transitioned into lower-middle-income status in 1997 and briefly into upper-middle-income status in 2018. Between 1990 and 2018, per capita income tripled. Yet this growth was overwhelmingly concentrated in the Western Province, which consistently accounted for nearly 40% of GDP. Concentration of skilled labour, market access, and infrastructure in Colombo and its hinterland reinforced business clustering, while peripheral provinces faced limited labour demand, scarce high-paying jobs, and persistent informality.

The consequences were far-reaching. Labour force participation stagnated and even declined after 2016, with rates in 2018 similar to those of 1997, despite significant improvements in education and infrastructure. While the end of the ethnic conflict temporarily boosted participation with the inclusion of the Northern Province, uncertainty in peripheral labour markets—dominated by seasonal and weather-sensitive agriculture—discouraged sustained entry into the workforce. Evidence suggests that limited demand and low wages in peripheral regions acted as key deterrents, pushing many educated youth towards government jobs within their provinces or, alternatively, to migrate to the Western Province. The 2017 Labour Demand Survey shows that 60% of vacancies in skilled and professional services were located in the Western Province, reinforcing migration flows.

Wage differentials further incentivised migration. In 2018, earnings in Colombo were substantially higher than in peripheral provinces, encouraging second- and third-generation internal migrants to settle permanently in the Western Province. By 2001, nearly 30% of its population consisted of migrants, driving urbanisation, rising housing prices, and expansion of real estate, education, and health services. For many early-career workers, the cost of commuting or renting made peripheral employment preferable, despite lower wages, particularly where opportunities existed in government service. However, for those with the means, permanent relocation to Colombo offered greater income potential and professional advancement.

From an economic geography and political economy perspective, these dynamics are explained by cumulative and self-reinforcing growth. Historically, Colombo's colonial-era role as an administrative and trading hub, the establishment of its port and Bandaranaike International Airport in Katunayake, and subsequent liberalisation reforms created strong locational advantages. Once industries clustered in the Western Province, supporting sectors such as finance, logistics and transport, expanded around them, amplifying its centrality. This 'cumulative causation' process, as described by Myrdal (1957), ensured that the Western Province became the locus of high-value employment and market access, further entrenching disparities.

Politically, successive governments favoured a Western Province-centric growth model, which produced higher short-term growth within electoral cycles. In peripheral regions, political support was instead secured through welfare programmes, agricultural subsidies, and infrastructure projects. Despite substantial investment in roads, irrigation, and social indicators, employment creation in these regions remained largely informal and poorly remunerated. As a result, Sri Lanka's brief elevation to upper-middle-income status in 2018 occurred without meaningful transformation of spatial or labour market dynamics. Regional disparities persisted, labour participation stagnated, and nearly 60% of the workforce remained in the informal economy.

The findings highlight that spatially skewed growth, while not an immediate threat to macroeconomic stability, is a critical barrier to equitable development, social mobility, and resilience. The study concludes by advocating for integrated regional planning, stronger tradable sector linkages in peripheral provinces, and targeted support for Micro, Small and Medium Enterprises (MSMEs). Without such interventions, Sri Lanka's trajectory towards sustained middle-income prosperity will remain fragile and uneven.

Keywords: Sri Lanka, middle-income transition, spatial growth, uneven growth, labour markets, economic geography

1. Introduction

Sri Lanka was historically considered a development success story due to high indicators achieved early in its journey compared to other developing nations. Within South Asia, too, Sri Lanka stood out, boasting a higher per capita income than all its neighbours, except the Maldives (World Bank, 2024). This progress led to its classification as a middle-income country in 1997, and sustained growth further elevated it to upper-middle-income status in 2018 [World Bank, 2019; Central Bank of Sri Lanka (CBSL), 1998]. However, the status was short-lived, as an economic slowdown resulted in Sri Lanka's downgrade to lower-middle-income status in 2019 (World Bank, 2020). The recent economic crisis and sovereign default brought to light numerous underlying vulnerabilities that went largely unnoticed during Sri Lanka's ascent to upper-middle-income status. Since the 1990s, Sri Lanka's growth model has suffered from weak fiscal discipline, culminating in a debt crisis and a subsequent sovereign default in 2022. Furthermore, Sri Lanka's economic growth was inward-oriented, uneven, spatially skewed and heavily reliant on the informal sector.

This policy paper focuses on the spatially skewed and uneven nature of Sri Lanka's growth until the country's temporary transition into an upper-middle-income country in 2018. It explores the political economy of spatially skewed growth and how it co-evolved with labour force dynamics. Currently, Sri Lanka has significant regional disparities, with approximately 40% of its GDP concentrated in the Western Province while the eight other provinces share 60% of GDP (CBSL, 2024). Approximately 60% of the labour force is employed in the informal sector, which has limited labour rights and employment protection, and low salaries and wages. Throughout Sri Lanka's transition into an upper-middle income country from a low-income country, these aspects of inequality and uneven development remained unchanged, while some inequalities worsened.

The situation was made more complex by the ethnic conflict that lasted for more than 30 years. Most parts of the Northern and Eastern Provinces were severely affected, which limited infrastructure development. It also impacted human capital in those areas as education opportunities were disrupted while many youths engaged in the conflict (Sarvanathan, 2008). This had not only short-term but also long-term consequences.

Table 1: Provincial differentials in Sri Lanka – 2019

Province	Land area (sq.km)	Land share (%)	GDP per capita (USD)	Population share (%)	GDP (LKR billion)	GDP share %	GDP per capita - as % of country
Western	3593	5.7%	5,329	28.2%	5857.8	39%	152.5%
Central	5575	8.9%	3,427	12.7%	1694.6	11.3%	98.1%
Southern	5383	8.6%	3,143	12.2%	1491.3	9.9%	89.9%
North-Western	7506	12%	3,595	11.7%	1639.5	10.9%	102.9%
North-Central	9741	15.5%	3,344	6.3%	823.3	5.5%	95.7%
Uva	8335	13.3%	3,266	6.3%	803.4	5.4%	93.5%
Sabaragamuwa	4921	7.8%	3,074	9.4%	1131	7.5%	88%
Northern	8290	13.2%	3,512	5.2%	717.6	4.8%	100.5%
Eastern	9361	14.9%	2,763	7.9%	854	5.7%	79.1%

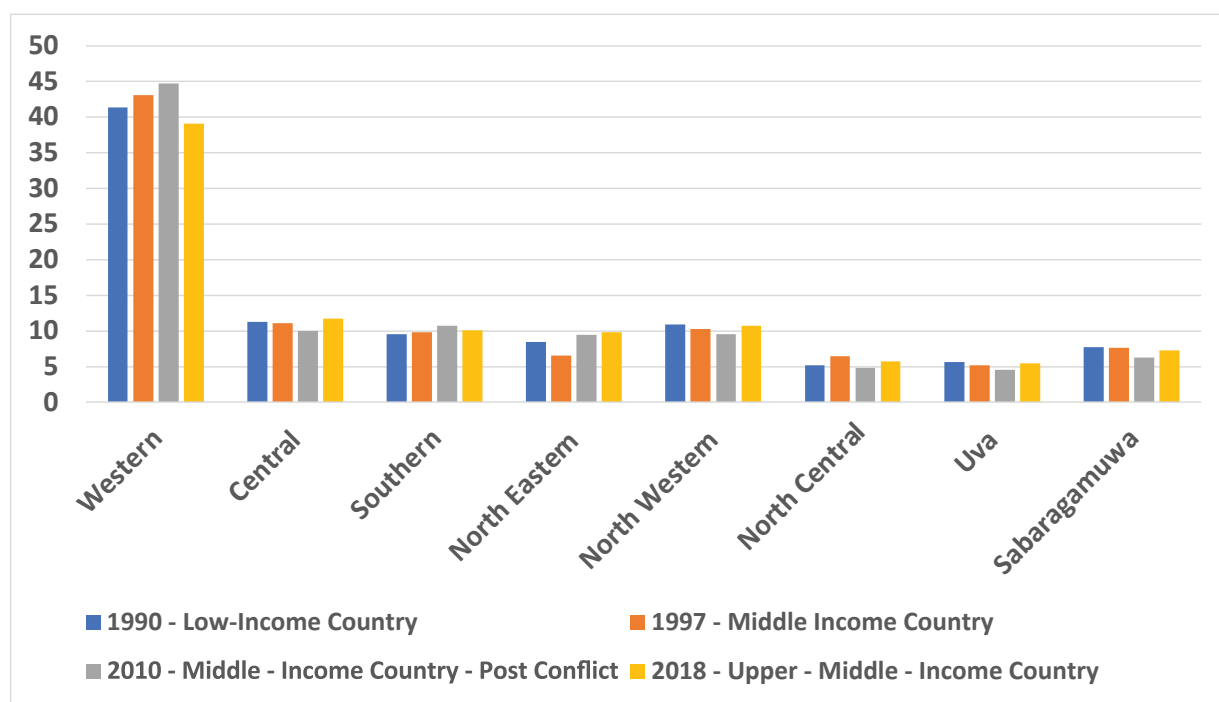
Source: Author-constructed, based on data from the Department Census and Statistics (DCS), Central Bank of Sri Lanka (CBSL).

Regional Disparities in Sri Lanka

As the data reflect, Sri Lanka's production is heavily concentrated in the Western Province, which accounted for more than one-third of GDP every year since 1990. Different researchers offer different explanations for this. Castro and Devarajan (2006) argue that market-oriented reforms, like trade liberalisation and deregulation, favoured the Western Province due to its superior location and infrastructure. However, Bandara and Jayasuriya (2010) critique this view, emphasising the role of historical policies and political factors in creating advantageous 'initial conditions' for the Western Province, further compounded by the impact of the prolonged civil war. Studies show that the Northern and Eastern Provinces achieved a lower level of development due to the conflict, and some researchers argue that the economic embargo imposed by the Sri Lanka Government on Northern Province between 1990 and 2001 was the single most significant cause of the economic and social decline in the region (Sarvanathan, 2008; 2009). This policy paper does not specifically focus on those provinces and draws limited comparisons as development in both regions was affected by war. However, scholars who study post-conflict development in the Northern and Western Provinces observe that regional disparities have remained throughout, even 15 years after the conflict ended (Kadirgamar, 2017)¹.

At country level, regional disparities prevailed throughout Sri Lanka's transition into an upper-middle-income country in 2018. The Western Province continues to account for approximately 40% of GDP, indicating that a substantial part of Sri Lanka's economic growth was concentrated therein. This means that employment opportunities as well as other income-generating opportunities are also heavily located within the Western Province.

Graph 1: Evolution of Sri Lanka's provincial GDP from 1990–2018



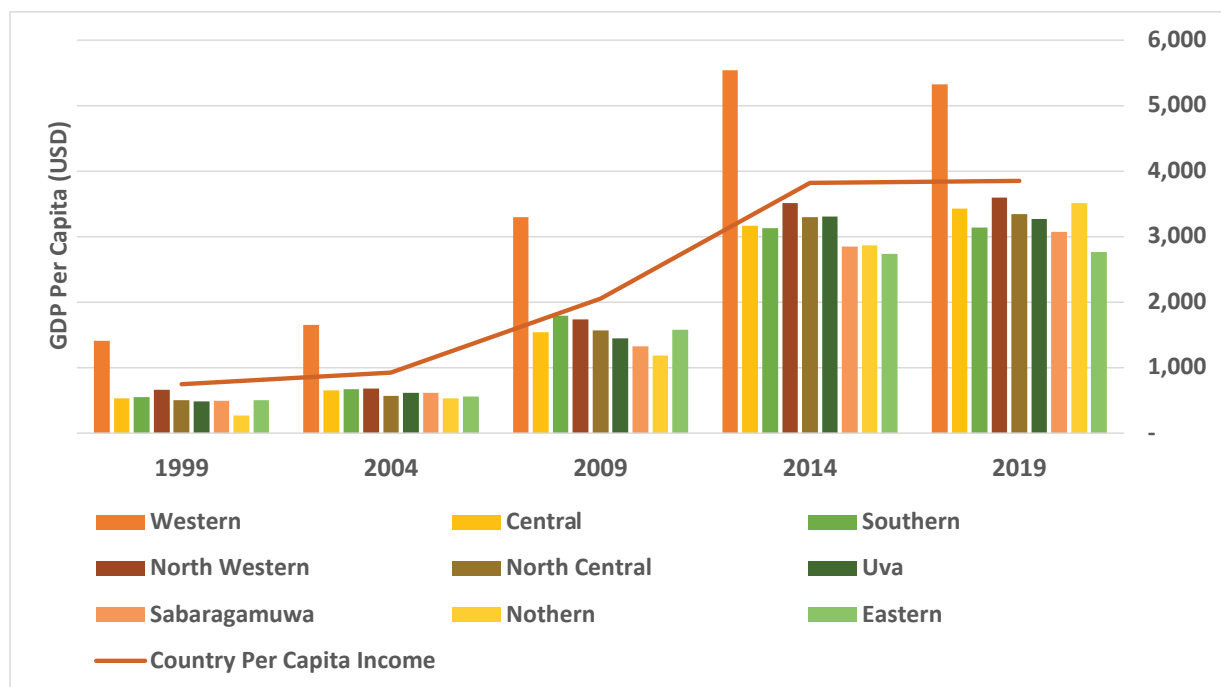
Source: Author-constructed, based on CBSL and DCS data, various years

Note: In this graph, the Northern and Eastern Provinces are represented as one, titled 'North-Eastern', as desegregated data for the two provinces were not available in 1990 and 1997 owing to the domestic conflict. Furthermore, in both those years, data were not collected from some of the severely war-affected areas, meaning that the GDP data for the two provinces were underreported.

¹This policy paper places limited emphasis on growth in the Northern and Eastern Provinces. For anyone interested in the matter, I recommend writings by M. Sarvanathan and A. Kadirgamar, two Northern Province-based scholars who have extensively studied the matter.

The data demonstrate that, two decades after Sri Lanka's middle-income transition in 1997, its per capita income nearly tripled from USD813 to USD4,372 in 2018 (CBSL, 2018). However, throughout this period, the per capita income of all provinces except the Western Province remained below the country average, with rare exceptions. The Western Province's GDP per capita, on the other hand, was as high as 150% of Sri Lanka's GDP per capita throughout these two decades, indicating spatially skewed growth and higher purchasing power of those who reside (and are employed) there. This means, there are more employment opportunities and earning capacity in the Western Province. Economic activities, ranging from constructing buildings, banking, retail and wholesale sales to education and health services have expanded significantly. This in turn resulted in those who work in the Western Province earning a much higher income than those elsewhere.

Graph 2: Province-wise GDP per capita increase in Sri Lanka



Source: Author-constructed, based on the data from CBSL and DCS

Spatial Growth in the Context of Middle-Income Transition

The central thesis of this research and policy paper is to examine Sri Lanka's regional growth within the broader context of countries transitioning into middle-income status and beyond. In 1990, Sri Lanka was classified as a low-income country. By 1997, it had transitioned into a middle-income country, with a recorded per capita income of USD950 per year. Thereafter, Sri Lanka's per capita income continued to grow at a rapid pace, reaching USD4,000 in 2018, which marked its brief classification as an upper-middle-income country. However, this upgrade was short-lived, as the country was soon downgraded to lower-middle-income status the following year, due to a decline in growth.

Despite this reversal, it is important to note that between 1990 and 2018 Sri Lanka experienced significant growth, with per capita income tripling over nearly three decades. While this progress was impressive, it occurred amid persistent structural weaknesses. Two key ones were the country's failure to achieve fiscal consolidation—primarily due to a consistent decline in the tax-to-GDP ratio—and a persistently high current account deficit. The latter was driven largely by the failure to increase exports, with growth being concentrated in the non-tradable sectors of the economy.

While there is substantial literature analysing these two issues in relation to Sri Lanka's GDP per capita growth and its brief transition into upper-middle-income status, there is limited attention given to the spatial dimensions of this growth—specifically, where within the country it originated. This is a particularly important question given that historically a significant portion of growth has been concentrated in the Western Province. This research finds that this trend persisted during the brief transition into upper-middle-income status. Growth continued to be concentrated in the Western Province.

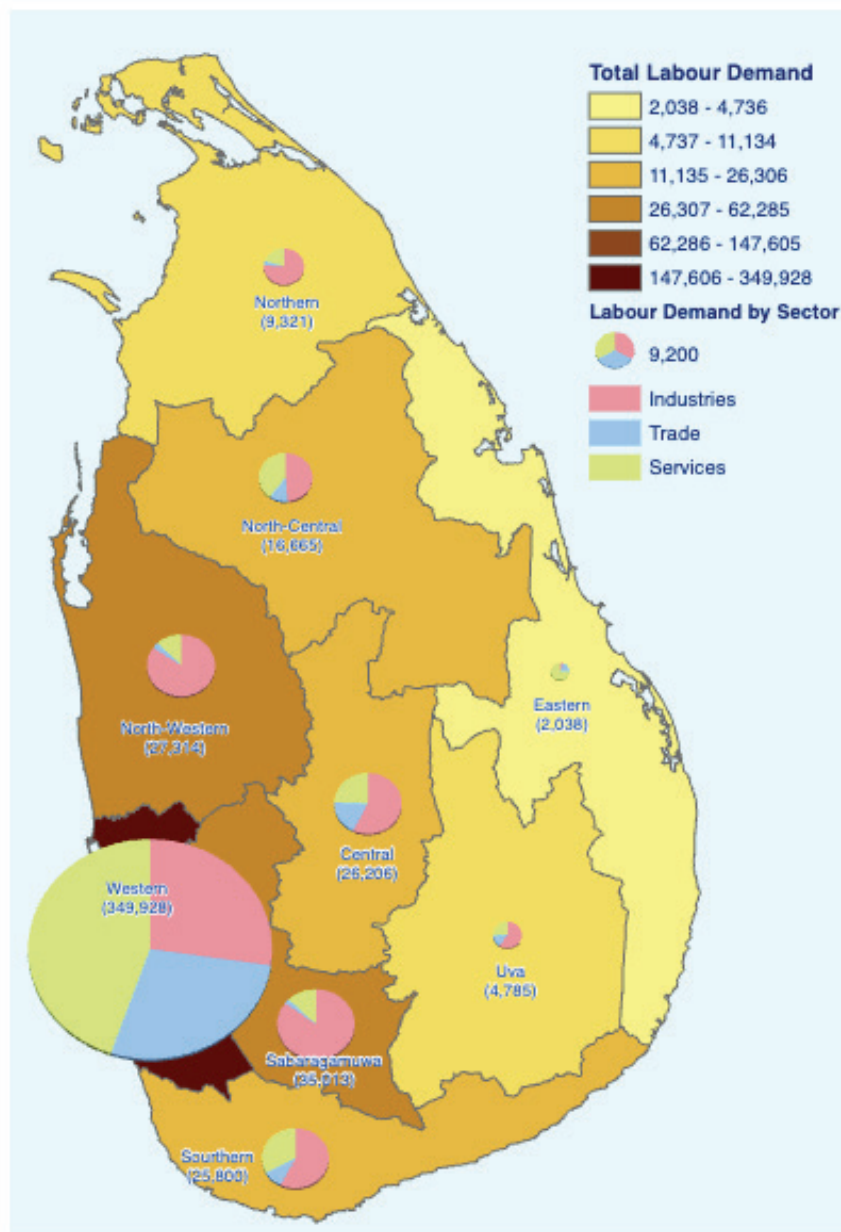
Although such spatially uneven growth may not immediately pose a threat to macroeconomic stability—unlike issues related to tax revenue or the current account—it raises concerns about the long-term growth potential of other regions and the prospects for inclusive and equitable development across provinces. Since the adverse impacts of spatially skewed growth are long-term, as opposed to short-term, there is little political will to implement a comprehensive regional development programme. Conversely, international financial institutions (IFIs), particularly the International Monetary Fund (IMF), interventions also largely focus on fiscal and balance of payment (BOP) issues, driven by their assigned mandates. Thus, there is little push from them to carry out long-term regional development programmes. (Some regional development programmes are supported by the World Bank and the Asian Development Bank. However, such initiatives focus largely on infrastructure development, and addressing the underlying structural issues pertaining to spatially skewed growth remains challenging within these programmes).

As previously highlighted, Sri Lanka is currently a lower-middle-income country after a yearlong dream as an upper-middle-income country. The key to achieving the aspiration of becoming an upper-middle-income country, and subsequently a high-income-country, is to sustain the growth momentum. Maintaining a higher economic growth rate is more feasible through a Western Province-centric growth model, as opposed to a growth scattered across provinces. This is because existing infrastructure and business networks that are well-established in the Western Province facilitate higher growth while a lack of such business networks and human capital in peripheral provinces would slow down growth. Therefore, the political incentive often is to promote a Western Province-centric growth model to achieve the aspiration of becoming an upper-middle-income and, subsequently, a high-income, country.

Western Province-Centred Employment Opportunities

Given the Western Province's significant contribution to the GDP, most labour demand also originates from within this region. Defined as an employers' staffing needs for casual, contract and permanent positions, labour demand reflects the potential for securing employment. According to the 2017 Labour Demand Survey (LDS), a striking 90% of labour demand was concentrated within the Western Province. This skewed distribution of opportunities suggests that individuals seeking employment outside the Western Province face significantly reduced prospects. Consequently, many job seekers from other provinces are compelled to relocate or commute to the Western Province to access available employment.

Figure 3: Sri Lanka's labour demand – 2017



Source: Sri Lanka LDS 2017 and DCS data.

More alarmingly, very limited skilled and professional employment opportunities are available in the periphery. The Western Province is heavily dominated by the service sector while employment opportunities in other provinces are either in the industrial or agricultural sectors. In most cases, employment in both the industries and agriculture sectors is informal, with lower pay than jobs in the service sector. Research shows there's a higher likelihood of people residing or working within the Western Province earning more than those outside (Table 2). This has compelled residents beyond the Western Province to either live temporarily in the Western Province, so as to engage in employment, or to travel a significant distance daily.

Table 2: Salary differentials across provinces

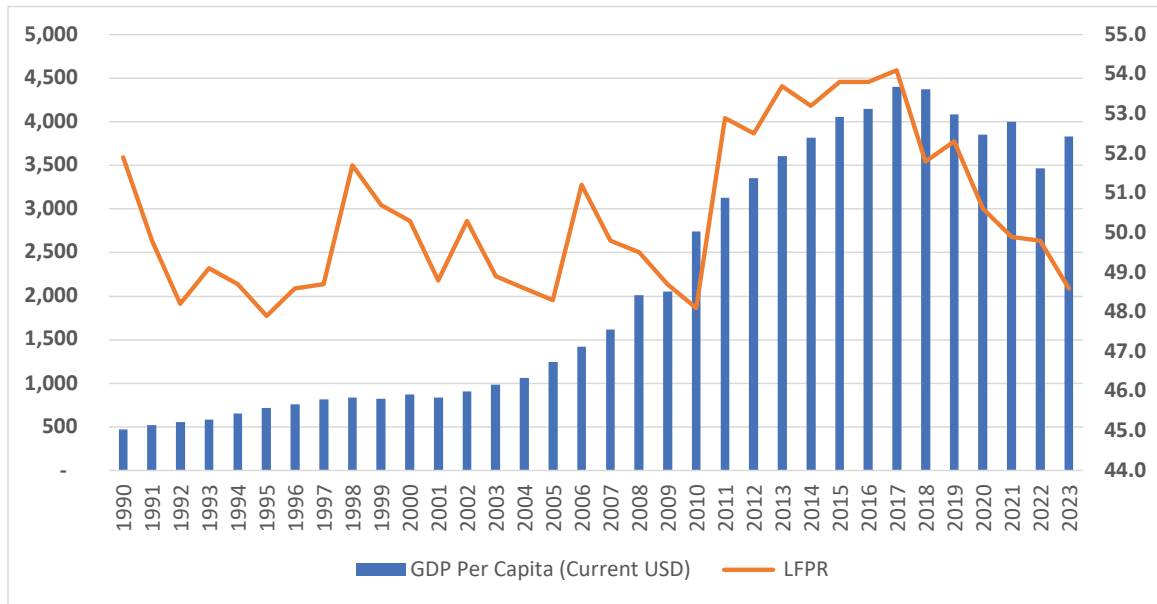
Salary Differentials by Provinces 2018 (LK)				
Province	Average monthly earnings of monthly salary earners	Annual average earnings of monthly salary earners	Average monthly earnings of daily wage earners	Annual average earnings of daily wage earners
Western	39,277	471,324	24,826	297,917
Central	30,725	368,704	20,076	240,916
Southern	30,549	366,584	23,485	281,821
North-Western	31,416	376,993	18,914	226,971
North-Central	33,281	399,376	21,512	258,140
Uva	33,151	397,816	18,377	220,527
Sabaragamuwa	25,847	310,165	18,403	220,836
Northern	31,511	378,132	19,756	237,070
Eastern	30,756	369,073	21,869	262,425
Country average	33,700	404,404	21,115	253,385

Source: Author calculations based on LFS 2018 data

Note: The Labour Force Survey data collate information under two categories of employment. The first comprises monthly salary earners. Those in this category usually have stable jobs and are allowed to take leave based on stipulated laws and regulations. The second category are those whose earnings are determined based on the daily wage. Sometimes, they are paid a daily wage while on other occasions they receive a monthly payment based on the number of days they have worked. Workers in the informal sector and plantations mostly fall into this group.

I surmise that this scenario has resulted in a few consequences. Firstly, a significant decline in employment opportunities has led many individuals to opt not to join the labour force or seek employment. Data reveal that Sri Lanka's labour force participation rate experienced a considerable drop following the country's middle-income transition and beyond, between 1990-2018. While there is a considerable increase in labour force participation arising from the end of the ethnic conflict (see Graph 4: the jump in 2011 is attributed to inclusion of the Northern Province in the labour force), it starts to reduce again from 2016. When Sri Lanka was upgraded to upper-middle-income status in 2018, the labour force participation rate was almost the same as in 1997, when it was upgraded to lower-middle-income country.

Figure 4: Evolution of labour force participation in Sri Lanka



Source: Author-constructed, based on LFS reports, DCS, multiple years

The labour force participation rate in peripheral provinces has stagnated, and in some instances even decreased, due to the limited availability of employment opportunities in those regions. Interestingly, labour force participation in the Western Province did not increase, despite the growth during 1998–2018. Researchers have not paid much attention to this, thereby warranting a detailed enquiry.

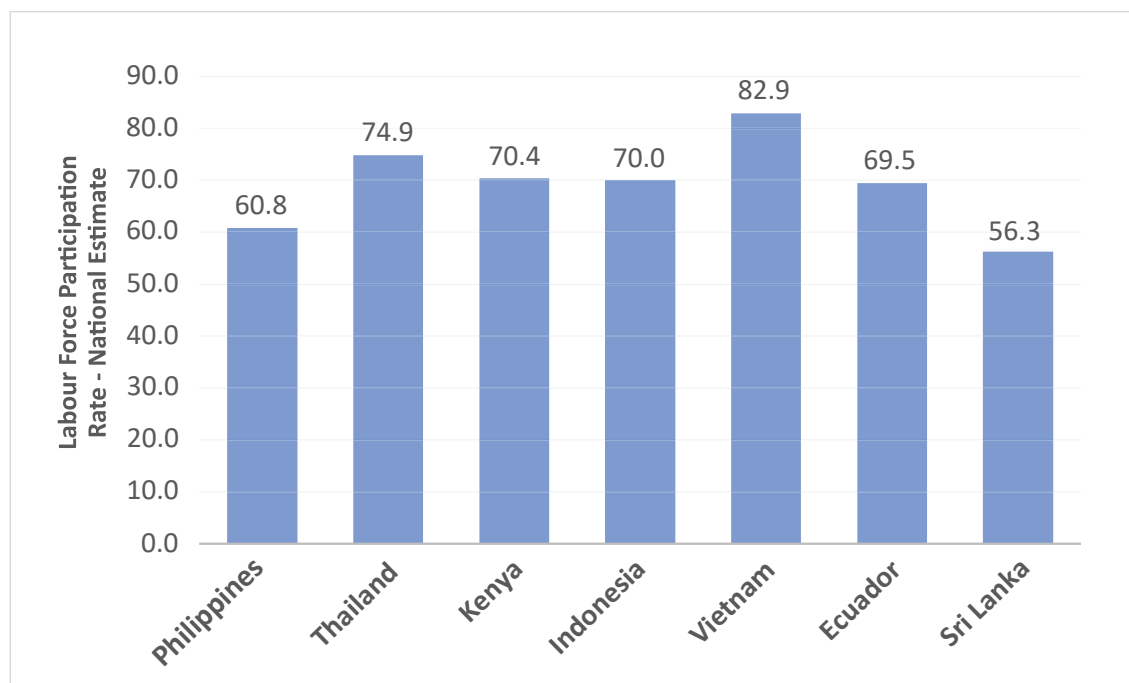
Table 3: Labour force participation rate of Sri Lanka

Year	1996	1997	1998	1999	2000	2004	2010	2018
Total	48.7	48.7	51.7	50.7	50.3	48.6	48.1	51.8
Western	47.4	47.4	49	47.7	47.1	46.9	45.5	50.6
Central	48.5	50	54.4	52.9	53.2	49.3	48.1	53.7
Southern	48.4	47	49.3	48.3	47	49.8	46.7	51.0
North-Western	48	49.3	52.3	51	51.3	49.5	50.1	54.6
North-Central	52.1	49	55.1	54.3	55.1	54.3	55.2	54.9
Uva	52.4	53.5	61.9	61	58.6	55.4	55.7	53.5
Sabaragamuwa	49.7	48.6	48.7	50.1	50.3	51.6	50.7	55.6
Northern	-	-	-	-	-	-	-	46.0
Eastern	-	-	-	-	-	-	41.1	45.5

Source: LFS, DCS, multiple years

Once we look at this scenario on a global scale, data show Sri Lanka lagging behind its peers, who recorded higher labour force participation rates in 2018, when the country crossed the upper-middle-income threshold. Researchers observe that persistence of low female labour participation rates was a major contributing factor to the overall low labour force participation (ILO, 2016). Studies also indicate that earlier birth cohorts exhibited higher labour force participation rates, while more recent cohorts experienced lower ones, resulting in a reduction in labour force participation (Werawella, 2023).

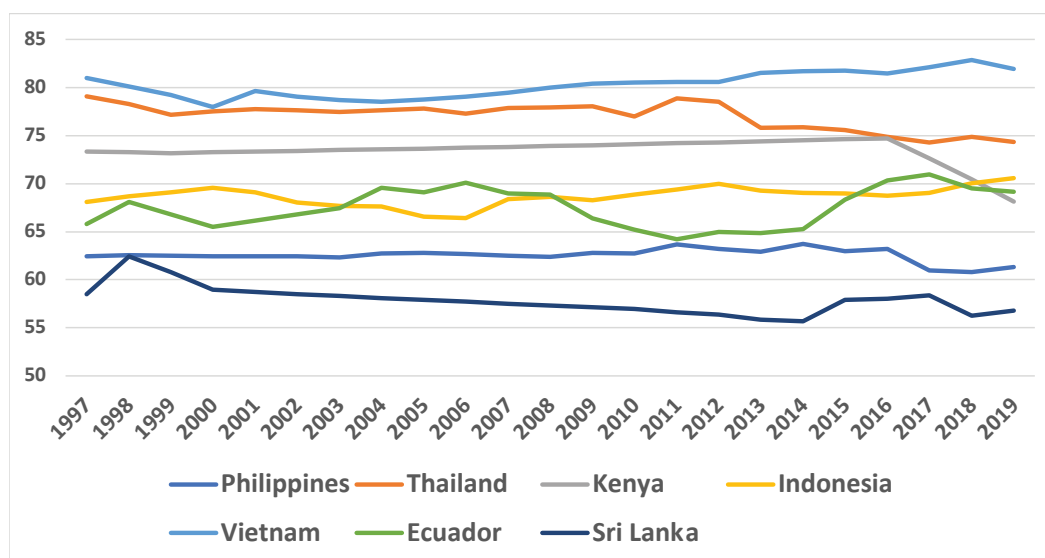
Figure 5: Labour force participation rates of Sri Lanka and peers - 2018



Source: World Bank (2025)

Data show that 2018 was not an outlier and that Sri Lanka's labour force participation rate has historically been lower than almost all of its peers, and has continued declining throughout, even while reaching the per capita of an upper-middle-income country. Although ILO's model estimates (Figure 6) indicate an upward trend since 2013, this study attributes that increase to a rise in the working population owing to the inclusion of the Northern Province to the estimates after the end of the ethnic conflict in 2009.

Figure 6: Labour force participation rate trends of peer countries – (ILO-modelled estimate)



Source: World Bank (2025)

Although many studies, policy proposals and IMF reports identify low labour force participation as a concern and a growth constraint, they hardly examine how labour force participation is influenced by regional disparities, labour demand and employment dynamics. I argue that limited labour demand and a lack of pay, particularly in the peripheral provinces, are two major influential factors for low labour force participation. Global evidence suggests that a lack of labour demand could result in some people choosing not to participate in the workforce. Some researchers argue that uncertainty in the labour market also leads to a decline in labour force participation (Fontaine, 2017). Studies show that such uncertainties are frequent in Sri Lanka's peripheral provinces, where agriculture accounts for a major share of economic activity. Agriculture-related economic activities are seasonal and vulnerable to weather shocks, which results in a high level of uncertainty in labour supply. In that context, I argue that people have limited incentives to be a part of the labour force, or they join seasonally, resulting in a low labour force participation rate.

Spatially Skewed Growth and Unemployment

Spatially skewed growth also affected unemployment dynamics due to the limited employment opportunities created in peripheral provinces throughout the last three decades. Lack of labour demand, driven by slow expansion of economic activities, resulted in a significantly high unemployment rate among educated youth, as indicated by the unemployment rate among those who completed G.C.E. Advanced Level (A/L). While the unemployment rate shows a downward trajectory, data show that the unemployment rate² among these educated young groups continued to remain higher than the unemployment rate among other groups, reflecting the lack of employment opportunities and pay to match the education level of the said group.

Table 4: Unemployment rate of Sri Lanka at different education levels

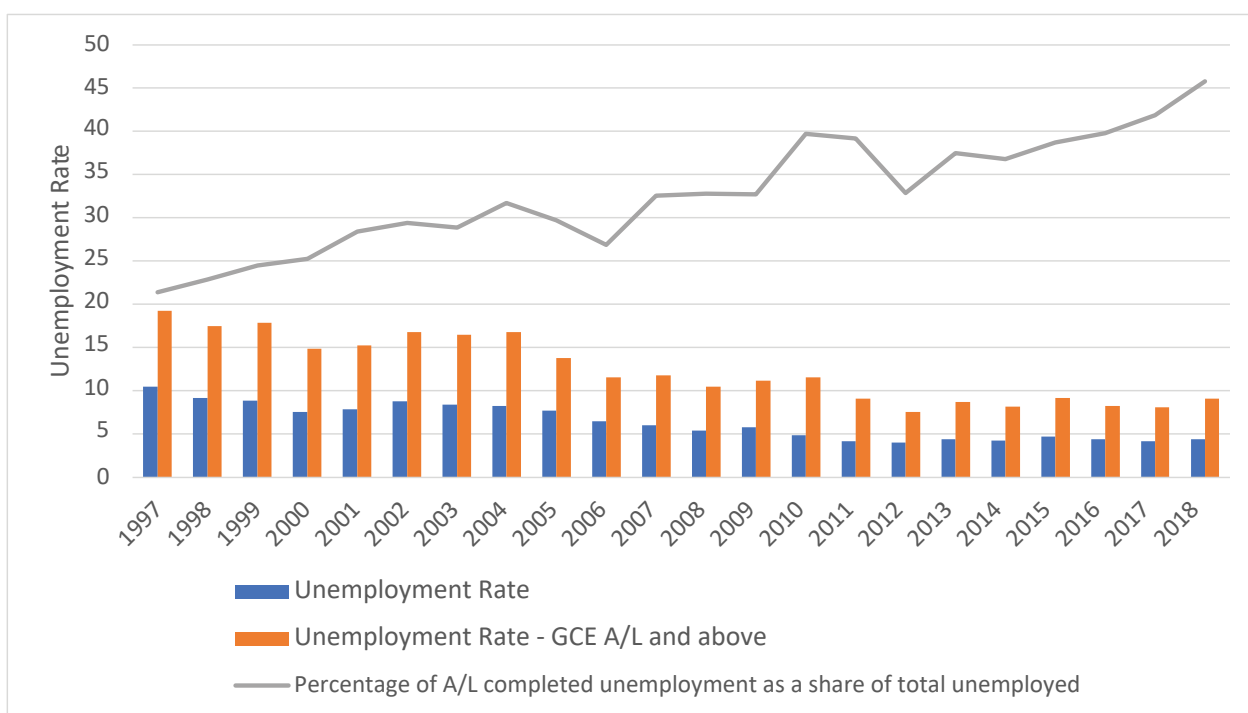
Year	Unemployment rate overall average	Unemployment rate GCE A/L and above
1997	10.5	19.3
1998	9.2	17.5
1999	8.9	17.9
2000	7.6	14.9
2001	7.9	15.3
2002	8.8	16.8
2003	8.4	16.5
2004	8.3	16.8
2005	7.7	13.8
2006	6.5	11.6
2007	6.0	11.8
2008	5.4	10.5
2009	5.8	11.2
2010	4.9	11.6
2011	4.2	9.1
2012	4.0	7.6
2013	4.4	8.7
2014	4.3	8.2
2015	4.7	9.2
2016	4.4	8.3
2017	4.2	8.1
2018	4.4	9.1

Source: Author-compiled from LFS, DCS data, various years

² Sri Lanka's unemployment rate is calculated

Data show that, out of the total unemployed population, a majority are the ones who completed secondary education (G.C.E. A/L, higher national certificates of education & above). In 1997, out of the total unemployed population, 21.4% had completed secondary education while this number increased to 45.8% in 2018 (Figure 7). This means that although Sri Lanka's unemployment rate remains low, the unemployment dynamics amongst educated youth has worsened. Studies show that such a high unemployment rate among the youth does not stem from them being engaged in education or training. Wickremeratne and Dunusinghe (2021) show that Not in Education Employment and Training (NEET) continues to be high in Sri Lanka. Based on this premise and evidence, I argue that spatially skewed growth has acted as a significant barrier to fully utilising the potential and returns of Sri Lanka's education system which provides universal education up to the secondary level and, for some, up to the undergraduate level.

Figure 7: Unemployment dynamics among those who completed secondary education



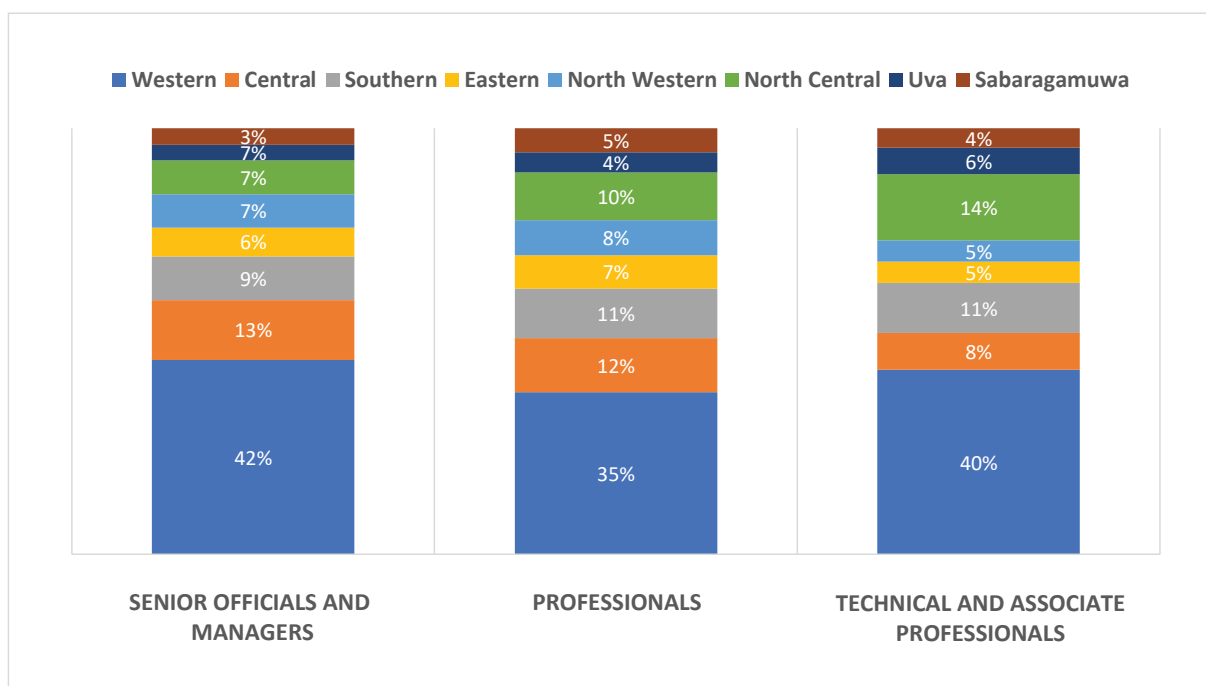
Source: Author-constructed, using LFS, DCS data various years

I observe that well-paid employment opportunities are limited in the peripheral provinces due to the lack of economic activity, when compared with the Western Province. This scarcity of employment opportunities and low pay-employment in such areas have compelled some educated youth to seek government jobs, as certain of these sometimes provide options to work within the residing province. Conversely, some choose to migrate to the Western Province or commute there daily to access employment opportunities. However, I contend that the rationale for such actions hinges on the earnings from employment being substantially higher than the costs associated with rent or daily commuting to the Western Province. Those who live in areas that are very distant from the Western Province or lack connectivity do not have the option of commuting daily. Thus, they are compelled to migrate there, permanently or semi-permanently (including staying on rent). Most people live on rent in the Western Province during the initial phase of their careers. If the salary/monthly earnings are low, it is difficult for such individuals to be on rent for the purpose of employment. I argue that those who face this phenomenon are compelled to seek employment within the residing province. As a result of low travel cost and not incurring an expense to rent a living space, those who reside in peripheral provinces settle for lower salary employment within those provinces compared to salaries received in the Western Province. However, as indicated by the 2017 LDS, limited employment opportunities are available in peripheral provinces, particularly in the professional and service categories. Thus, I argue that many educated youths facing this scenario seek government employment, although these often are lower salaries than an average private sector company in the Western Province would provide. Therefore, some state university graduates' preference for government employment partly originates from the lower salaries and the lack of labour demand in the peripheral provinces.

Regional Differences in Occupations and Industries

Data show significant regional differences across occupations as well as industries, indicating that both industries and occupations with high earning potential are positioned in the Western Province. Estimates based on LFS data suggest that 42% of senior managerial occupations in 2018 were concentrated in the Western Province. Interestingly, this scenario has remained unchanged for the last 20 years despite the country's significant per capita growth. In 1996, the year before Sri Lanka was upgraded to a middle-income-country, 46% of the country's managerial and professional occupations were concentrated in the Western Province, and by 2018 the percentage remained barely unchanged at approximately 39%.

Figure 8: Occupation distribution across provinces in Sri Lanka – 2018



Source: Author-constructed, using data from LFS 2018

These occupations are associated with higher earnings and job security as well as economic and social status (Table 5). They often require educational qualifications, a high level of skills or a long period of experience. Based on this premise, I argue that a significant portion of educated and skilled individuals continue to migrate to the Western Province seeking high-paying jobs, as limited earning opportunities are available in other provinces.

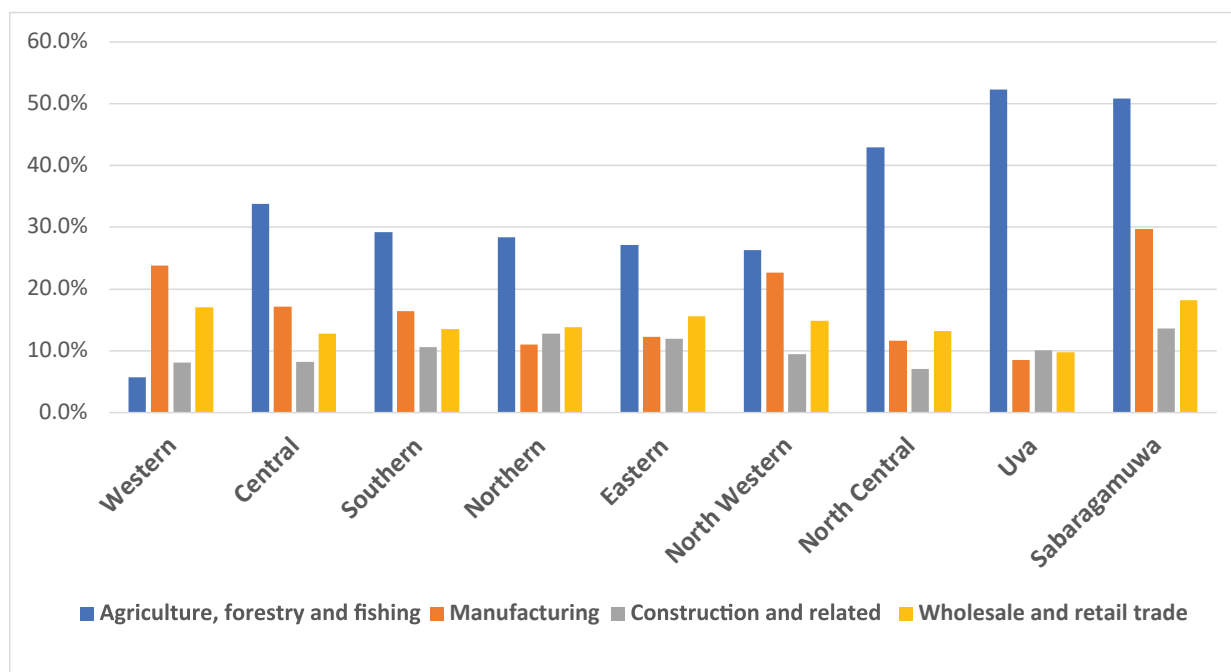
Table 5: Average earnings across different occupations – 2018

Occupation type	Average total salary per month (LKR) - 2018
Managers and professionals	46,102
Clerical support	32,488
Skilled workers	27,924
Unskilled workers	21,810

Source: Author calculations, using data from LFS 2018

Skewed distribution of occupations is a consequence of the spatial dynamics of industries in Sri Lanka. Manufacturing, which is considered the industry with the most earning potential, is heavily concentrated in the Western Province. In spite of the large GDP, this sector accounts for approximately 24% of total employment in the Western Province (Figure 9).

Figure 9: Employment distribution in major industries according to provinces – 2018



Source: Author-constructed, using data from LFS 2018

At the country level, approximately 37% of manufacturing sector employment is located in the Western Province. This means many educated individuals, trained professionals and skilled labour have more employment opportunities in that province. Prominent industries in peripheral provinces are agriculture-related industries which account for more than 25% of the total labour force in all such provinces. These industries not only have a significantly lower pay scale than other industries but also are uncertain and informal.

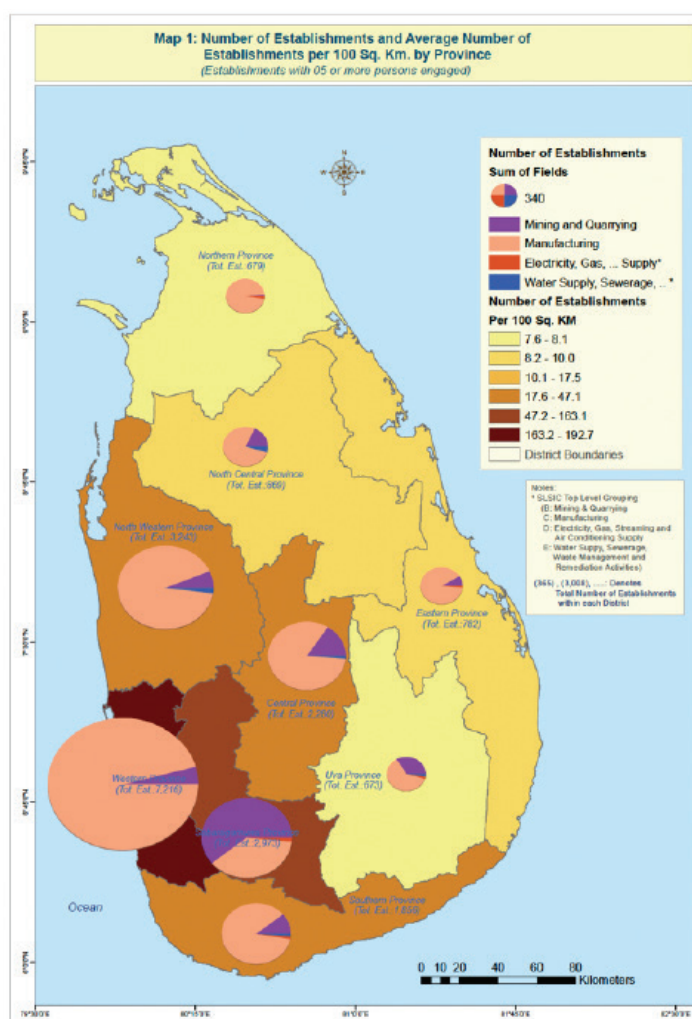
Table 6: Salary differentials across selected sectors – 2018

Industry-employed	Average total salary per month (LKR) - 2018
Agriculture and related industries	19,646
Manufacturing industries	30,640
Trade-related services	36,474
Professional services	41,290
Other services	23,721
Overall average	35,085

Source: Author calculations, based on LFS 2018

This dynamic is visible in the distribution of industrial establishments and the density of the same, as reflected by surveys. In 2016, nearly 35% of total industrial establishments were in the Western Province, with nearly 90% of them in manufacturing (Figure 10). Industry survey data provide a clearer picture regarding the spatial distribution of industries in Sri Lanka. According to the Industry Survey 2016, on average 168 to 193 industrial establishments are located per 100 square kilometres in the Western Province. With the exception of the Sabaragamuwa Province, all others have under 50 industrial establishments per 100 square kilometres. Data imply that many peripheral provinces have a limited number of industrial establishments.

Figure 10: Industry distribution in Sri Lanka - 2016



Source: Annual Industry Survey 2016

Data show that spatially skewed growth dynamics remain the same for FDIs, as well. Often, however, data indicate that most of the FDI projects are located in the Western Province (Table 6). Thus, people in peripheral provinces are often compelled to rent housing in the Western Province. I argue that this scenario significantly reduces the disposable income of workers as they have to allocate a substantial amount to pay rent. Despite the rents being considerable, research shows that living conditions of FDI workers, particularly those in the apparel sector, are poor.

Table 7: Board of Investment industries of Sri Lanka by district – number of BOI establishments

Year/district	2014	2015	2016	2017	2018
Colombo	1152	1186	1170	1083	998
Gampaha	654	682	676	651	632
Kalutara	169	179	182	178	176
Galle	139	148	151	143	139
Puttalam	99	104	101	98	94
Kandy	96	105	106	104	101

Kurunegala	93	93	90	88	81
Matara	31	31	32	31	32
Hambantota	34	40	42	46	45
Nuwara Eliya	64	71	73	73	75
Ratnapura	58	62	65	68	63
Anuradhapura	25	26	26	25	25
Badulla	31	34	34	35	39
Kegalle	49	52	52	47	47
Matale	31	38	40	46	46
Monaragala	-	-	-	-	-
Polonnaruwa	-	-	-	-	-
Ampara	19	20	20	17	17
Trincomalee	23	26	25	25	-
Batticaloa	-	-	-	-	-
Vavuniya	-	-	-	-	-
Jaffna	-	-	-	-	-
Mannar	4	5	4	4	3
Kilinochchi	-	-	-	-	-
Mullaitivu	-	-	-	-	-

Source: CBSL Annual report, 2018

LFS data provide a detailed picture of how the spatial dynamics of business establishments shaped the employment dynamics of Sri Lanka. Data demonstrate that agriculture, forestry and fishing continued to be the major source of employment in all peripheral provinces, with each province having more than 25% of its labour force attached to the respective sectors. This implies that employment generation in these areas has been driven by the agriculture sector, which entails relatively low earning capacity in addition to uncertainty arising from the impacts of weather.

Table 8: Employment distribution under different industries in provinces – 2018

Province	Agriculture forestry and fishing	Manufacturing	Construction and related	Wholesale and retail trade	Transportation and storage	Public administration and defence
Western	5.7%	23.8%	8.1%	17%	8.8%	8%
Central	33.8%	17.1%	8.2%	12.8%	6%	4.5%
Southern	29.2%	16.4%	10.6%	13.5%	5.4%	4.3%
Northern	28.4%	11%	12.8%	13.8%	5.4%	4.9%
Eastern	27.2%	12.3%	11.9%	15.6%	5.4%	6.2%

North-Western	26.3%	22.6%	9.5%	14.9%	4.7%	3.5%
North-Central	42.9%	11.7%	7.1%	13.2%	3.4%	5.7%
Uva	52.2%	8.5%	10%	9.7%	5.1%	3%
Sabaragamuwa	50.8%	29.7%	13.6%	18.2%	9.2%	6.3%

Source: Estimates from LFS 2018.

Labour Force Dynamics Through Middle-Income Transition

Interestingly, this dynamic has hardly changed since Sri Lanka's middle-income transition in 1997. To showcase this scenario, I use the LFS data from 1997, when Sri Lanka upgraded to middle-income country, and from 2010, when the three-decade-long ethnic conflict came to an end. Data from those years indicate that the employment share of agriculture had declined substantially in all provinces, with a modest increase in manufacturing, wholesale and retail trade, and other services, such as education. This means some existing workers, as well as the second generation of the agriculture employees, either shifted to other sectors or migrated to the Western Province. It is important to note that I am not drawing causation between these variables, as that would require an in-depth quantitative analysis. However, the data indicate a trend and a correlation, and call for further analysis, considering demographic factors such as education level, age, and gender.

Table 9: Employment distribution under different industries in provinces - 2010

Province	Agriculture forestry and fishery	Manufacturing	Construction and mining	Wholesale and retail trade	Transport and storage	Public admin	Education
Western	7.9%	25.5%	7.5%	18.6%	9.2%	8.2%	4.8%
Central	42.3%	10.4%	6.8%	12.9%	6.2%	6.1%	3.9%
Southern	37.1%	18.4%	7.1%	11.7%	5.7%	6.3%	3.8%
Eastern	35.3%	10.2%	8.8%	13.8%	4.6%	9.8%	6.8%
North-Western	36.9%	19.2%	6.5%	13.1%	5.5%	5.4%	3.4%
North-Central	59.4%	7.7%	4.2%	8.7%	2.3%	7.9%	3.1%
Uva	59.3%	6.8%	4.4%	9.9%	3.8%	6.4%	3%
Sabaragamuwa	40.9%	15.2%	10.2%	9.7%	5.5%	5.4%	1.8%

Source: Estimates from LFS 2018

However, the question is whether the magnitude of the shift of employment to the manufacturing and services sector has been sufficient enough to catch up with the needs and economic structure of an upper-middle-income country. Data indicate that the employment share of the manufacturing sector has not witnessed a substantial increase over the two decades after middle-income transition, even after the end of ethnic conflict in 2009. The North-Western Province has seen a modest increase of employment share in manufacturing while all other provinces only witnessed a marginal growth of employment in that sector (see table 8 and 9).

Table 10: Employment distribution under different industries in provinces – 1996

Province	Agriculture	Manufacturing	Construction	Trade and hotel	Transport and storage	Personal services	Not defined
Western	9.3%	23.7%	7%	16.8%	8.4%	25.9%	3%
Central	47.7%	9.8%	4.4%	12.3%	2.7%	17.9%	3%
Southern	47.6%	13.3%	6.3%	10.2%	3.8%	13.2%	2.9%
North-Western	41.5%	15.9%	5%	9%	4.5%	15%	5.4%
North-Central	61.3%	4.9%	4.6%	8.7%	2.1%	15.3%	0.5%
Uva	73.8%	3.2%	1.9%	7%	2.3%	9.6%	0.8%
Sabaragamuwa	43.4%	9.9%	4.5%	9.4%	3.4%	15.3%	7.7%
Total	37.4%	14.6%	5.4%	12%	4.9%	18.2%	3.5%

Source: Estimates from LFS 1996

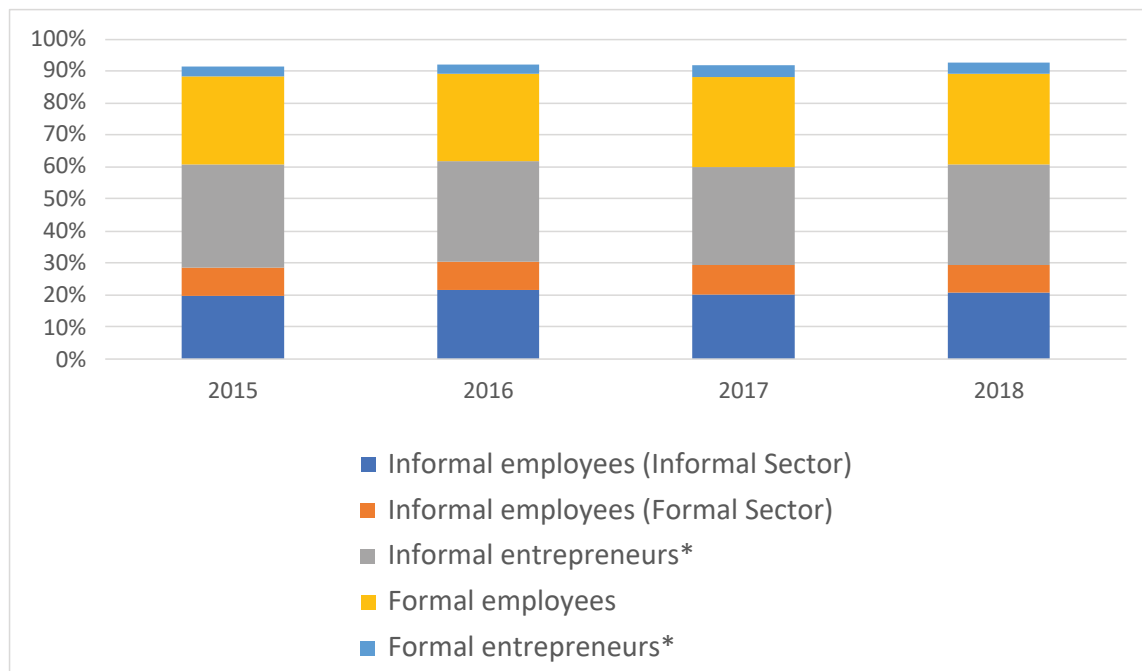
I argue that less than 25% of the labour force engaging in the manufacturing sector even after Sri Lanka's middle-income transition, is a result of limited growth in manufacturing. As the data indicate, Sri Lanka's growth largely stemmed from the non-tradable sectors, particularly from services and construction, with limited growth in the tradable manufacturing sector (Athukorala 2024). Researchers have extensively discussed the impact of such a non-tradable sector-driven growth model and highlighted that it has led to deterioration of the country's export performances. This, in turn, increased Sri Lanka's macroeconomic vulnerability, subsequently leading to a sovereign default in 2022.

Another aspect of ignoring the manufacturing and tradable sector-driven growth is that the lack of growth in manufacturing, particularly in the peripheral provinces, generated limited employment opportunities there. The employment opportunities available in such provinces have low earning potential compared to an export-oriented industry. Data from the Labour Demand Survey indicate that most of the demand stems from the apparel sector which focuses on exports to US and Europe. Other employment is available predominantly in the informal sector with lower pay, limited employment security and protection.

Dominance of Informal Sector and Middle-Income Transition

Research indicates that despite middle-income transition and rapid growth of the country's per capita GDP, Sri Lanka's economy is heavily dominated by the informal sector—nearly 60%, according to DCS data.

Figure 11: Informal sector LFS 2018



Source: Author-constructed, using data from LFS 2018

Sri Lanka's informal sector is heavily concentrated on agriculture and some industrial sectors (LFS 2018). In the North-Central and Uva Provinces, which have high poverty rates, most labour force participation is in the agricultural sector. Therefore, employment opportunities and labour force participation are not only informal but also cyclical. The composition implies that a large portion of informally employed persons are either informal entrepreneurs or attached to businesses run by informal entrepreneurs. These are usually micro and small-scale enterprises (MSMEs) which operate in a small geographical area. While Sri Lanka's economy transitioned into upper-middle-income status, informal businesses of this nature still account for a large portion of businesses and employment. They often operate in silos, and without linkages with registered companies or businesses. That, in turn, results in them continuing to operate as informal businesses as there are limited incentives for them to move to the formal sector.

These dynamics point to an important thesis: Sri Lanka's growth and upgrade to upper-middle-income status occurred without significant improvement of employment and labour force dynamics in peripheral provinces and with spatially skewed growth. In summary, limited employment opportunities were available in peripheral provinces, and the available employment opportunities were mostly in the informal sector, or low-paying ones. This resulted in the educated and skilled labour force converging on the Western Province. I surmise that this mismatch between labour demand and labour supply was addressed in two major ways by those who sought employment. Firstly, some people permanently migrated to the Western Province. Secondly, some live on rent in suburbs in the Western Province. In rare cases, some travel to the Western Province, mostly to Colombo, by rail.

Internal Migration, Urbanisation and Real Estate

Researchers observe that limited growth and opportunities in the peripheral provinces resulted in many people migrating to the Western Province seeking better employment opportunities, education, access and other factors. Perera (2012) identifies a significant shift of Sri Lanka's interprovincial migration (migration between provinces) during 2007-2012, with a growing trend of out-migration, mainly to the Western Province. She observes that four out of the nine provinces register net migration losses, indicating a departure from historical patterns in 2012. For example, the North-Central and North-Western provinces,

which previously experienced positive net lifetime migration rates of 16.54% and 8.45%, respectively, now exhibit negative five-year rates, at -0.39% and -0.71%. This indicates that people were moving out of these provinces, largely to the Western Province, for employment or studies.

Table 11: Interprovincial migration for employment and education – 2012

Province	Migration for employment as % of total	Migration for education -as % of total
Western	61.4%	34.2%
Central	7%	19.6 %
Southern	4.8%	11.8%
North-Western	6.3%	10.2%
North-Central	5%	4.6 %
Uva	4.5%	6%
Sabaragamuwa	4.3%	5.9%
Northern	2.9%	5%
Eastern	3.8%	2.8%
	100%	100%

Source: DCS, 2012

Researchers argue that the increase in out-migration from peripheral provinces is driven by the scarcity of agricultural land, limited employment opportunities, and inadequate infrastructure development. Perera (2012) observes that second- and third-generation migrants, who were initially part of government-led resettlement initiatives such as the Mahaweli Scheme and Gal Oya Project, are now moving out due to these constraints. I argue that such migration is largely driven by a lack of demand for skilled labour and professional services in peripheral provinces. For example, out of total vacancies for skilled labour and professional services, 60% were available in the Western Province (Sri Lanka LDS, 2017). This pushed educated people to migrate from peripheral provinces to the Western Province seeking better employment opportunities. Additionally, higher salaries for jobs in the Western Province also act as incentives for internal migration. It is important to note that migration into the Western Province was not a recent phenomenon. Data from the population census in 2001 indicate that approximately 30% of the Western Province's inhabitants are a migrated population (see table 11).

Table 12: Interprovincial migration dynamics – 2001

Province	Usual resident population	Resident since birth	Total migrant population	Percentage of migrated population	Migration duration more 10 years
Western	5,365,801	3,847,086	1,518,715	28.3%	620,002
Central	2,417,922	2,028,093	389,829	16.1%	198,146
Southern	2,276,672	2,012,363	264,309	11.6%	125,153
North-Western	2,167,387	1,819,988	347,399	16%	189,414
North-Central	1,101,339	783,185	318,154	28.9%	202,480

Uva	1,174,943	982,294	192,649	16.4%	113,005
Sabaragamuwa	1,800,592	1,567,418	233,174	12.9%	121,960

Source: Population Census 2001, DCS

The literature lacks studies that explore causal links between different salary levels and employment opportunities in the provinces and internal migration in Sri Lanka. However, empirical and theoretical studies in other countries suggest that a lack of pay and employment opportunities lead to migration within the country, seeking better earning opportunities (Parrado and Gutierrez, 2016; Amara and Jemmali, 2018). Based on this premise, I hypothesise that, in Sri Lanka, too many people migrate to the Western Province seeking better employment. It is important to note that research examining internal migration in Sri Lanka, and causal links pertaining to it, is limited. Thus, more in-depth research, both quantitative and qualitative, is required to decipher how internal migration is shaped by spatially skewed growth, uneven employment opportunities and differences in salary levels. This policy paper only provides a premise to this and does not establish a causal relationship.

Table 13: Salary differentials of professional services – Western Province vs other

Salary Differentials by Provinces – 2018				
Province	Average monthly salary	Annual average salary	Average monthly wage	Annual average salary
Western	39,277	471,324	24,826	297,917.16
Central	30,725	368,704	20,076	240,916.68
Southern	30,549	366,584	23,485	281,821.20
North-Western	31,416	376,993	18,914	226,971.48
North-Central	33,281	399,376	21,512	258,140.64
Uva	33,151	397,816	18,377	220,527.84
Sabaragamuwa	25,847	310,165	18,403	220,836.48
Northern	31,511	378,132	19,756	237,070.08
Eastern	30,756	369,073	21,869	262,425.36
Country average	33,700	404,404	21,115	253,385.64

Source: Author calculations, based on LFS Data, 2018

To establish such a premise, I provide estimates on earning differentials (both monthly salary and daily wage) across provinces in 2018. These estimates (Table 12) indicate that salaries and wages in the Western Province are substantially higher than in other provinces. Within that context, I argue that such differences resulted in many second- and third-generation individuals permanently migrating to the Western Province, when they were able to finance constructing or purchasing a house there. This migration caused increased urbanisation and a rise in housing prices. The question, then, is have successive governments attempted to address such regional disparities? If so, why were those efforts not sufficient to address uneven growth?

Perera (2012) observes that despite various government initiatives—including dry zone development programmes, decentralisation efforts, and rural development projects—population pressure in the Western Province persists. This suggests that existing interventions have had limited success in addressing regional disparities and promoting more balanced development. However, there aren't any studies that deep dive into the question of why government initiatives to address spatially skewed growth did not have substantial success.

What Factors Led to Sri Lanka's Spatially Skewed Growth?

A significant portion of economic literature argues that economic growth is often spatially skewed due to various factors relating to economic geography and economic structure. For example, evidence suggests that industrial growth often occurs in clusters. Research identifies market access, self-reinforcing growth and the balance between economies of scale and transportation costs as major determinants of such clustering of economic activities (Ahmad, 2002). Evidence also suggests that all three factors significantly contributed towards growth and development converging on the Western Province. It is important to note that the influence of these factors was facilitated by historical developments in the Western Province. For example, during colonial times, Colombo emerged as the country's commercial centre, administratively and logistically. The Colombo Port played a crucial role in facilitating trade, both domestic and international. Choosing Katunayake as the location for Sri Lanka's first international airport further increased the importance of the Western Province as a connecting centre. Thus, when Sri Lanka liberalised the economy in 1997, the Colombo and Gampaha districts (two major districts in Western Province) were the most crucial locations in its economic geography, and trade- and logistics-related activities, as well as services that facilitate such trade, predominantly occurred in these two districts. With economic liberalisation, and limited regional development, income- and profit-generating economic activities largely took off in the Western Province as it already had infrastructure and connectivity that appealed to businesses. With businesses flocking there, it led to the expansion of supporting industries such as banking and finance, and transportation. These developments were coupled with a substantial increase in internal migration into the Western Province, as people sought better paying employment. Such internal migration then led to expansion of sectors such as real estate, education and health services as much of this population permanently settled in the Western Province. These dynamics resulted in significant self-reinforcing growth within the province. The growth spurt resulted in a substantial increase of per capita income in the Western Province, compared to other provinces. Consequently, an average person in the Western Province had more purchasing power than an average person residing elsewhere. Therefore, for businesses, the Western Province had more market access than peripheral provinces and offered more earning potential. This, in turn, resulted in further economic expansion. Self-enforcing growth of this nature is referred to as 'cumulative approach' in economic geography. It argues that, once industries establish themselves in a location, the economy around that area grows cumulatively as industrial centres expand markets, attracting new industries that further expand the local market (Myrdal, 1957). When Sri Lanka liberalised its economy, many industries were set up in the Western Province. Thus, the location attracted new industries, and markets continued to expand the locational advantage and cause an increase of labour migration into the Western Province.

Table 14: Earning differentials across provinces

Province	2004		2019	
	Average income per household	Gini coefficient	Average income per household	Gini coefficient
Western	25,602	0.47	109,813	0.46
Central	14,029	0.42	65,420	0.43
Southern	13,733	0.39	68,410	0.42
North-Western	15,792	0.42	55,390	0.42
Sabaragamuwa	12,225	0.4	51,536	0.42
Eastern	13,395	0.51	75,148	0.44
Uva	11,178	0.43	64,645	0.43
North-Central	15,624	0.48	62,363	0.5
Northern	15,204	0.44	56,335	0.39
All-island	17,109	0.46	76,414	0.46

Source: Household and Income Expenditure Surveys, 2019 and 2003/04, DCS

As explained, spatially skewed growth and a lack of regional/peripheral growth has been a clearly identified and acknowledged issue. Successive governments attempted to reduce such regional inequalities through different approaches. While some such development attempts have succeeded, evidence suggests that regional disparities continue to remain, and the path to upward social mobility often lies in migrating to the Western Province.

Spatial Growth and Infrastructure Gaps

As highlighted before, Sri Lanka's growth remains significantly spatially skewed throughout the country's per capita income growth, which facilitated Sri Lanka's short-lived upgrade to upper-middle income status in 2018. It is important to note that, despite this, by 2018, infrastructure development had reached many areas beyond the Western Province during the preceding three decades. This is very much evident in the case of road development, and access to electricity and clean water.

When Sri Lanka upgraded to a middle-income country in 1997, almost half of its households did not have an electricity connection. Data show that in 1996/97, only 56.8% of total households had electricity (CBSL, 2005). However, by 2018, nearly 95% had electricity, with more than 90% of households in all provinces having access (Table 14), indicating widespread availability.

Table 15: Availability of electricity, % of households by province

Province	2003/04	2016
Western	92.4	98.7
Southern	78.4	98.6
North-Central	62	97.3
Central	72.7	96.8
Uva	56.7	96
Sabaragamuwa	64.7	96.4
North-Western	68.5	95.9
Eastern	65.6	93.2
Northern	63.6	92.4
All-island	74.9	96.9

Source: CBSL statistical bulletin, multiple years

Road development dynamics indicate a similar trend. Throughout the decades prior to 2018, significant road development occurred in Sri Lanka such as the construction of expressways, road rehabilitation and improvement of road conditions. Expressways connected the Southern Province to the commercial capital, Colombo, and to the Bandaranaike International Airport (BIA), located just outside of Colombo city. Roads within provinces were also developed. All this took place under various road development programmes such as *Maga Neguma*, *Deyata Kirula*, *Uthuru Wasanthaya* and *Nagenahira Navodaya*. It is observed that there was significant political will and commitment towards road development as it is often seen as an achievement of the ruling government. The significance attached to it is seen through the ways in which it was carried out under the Rajapaksa regime, between 2005 and 2015. Most major post-war road development programmes, which contributed to an increase of road connectivity in regional areas, including the conflict-affected Northern and Eastern Provinces, were headed by former President Mahinda Rajapaksa's brother Basil Rajapaksa (who later became the Minister of Economic Development in 2010), given their short-term political benefits to the administration.

Table 16: Sri Lanka road development by province - 1997 and 2018

Road Kilometrage by province										
1997										
Road type	Western	Central	Southern	Northern	Eastern	North Western	North Central	Uva	Sabaragamuwa	Sri Lanka
Class A	374	409	353	1354		353	494	468	416	4221
Class B	1124	1270	860	984		915	562	571	640	6926
Class C		1820	870	305		1075		1218	500	5788
Class D		331	670	249		1017		447	341	3055
Class E		200	45	2		39	28	277	180	771
Total	1498	4030	2798	2894		3399	1084	2981	2077	20761
2018										
Class A	374	409	347	734	620	352	492	471	416	4215
Class B	1230	1338	1154	525	551	1003	702	693	809	8005
Class C	1078	1666	915	1973	848	1914	1227	1689	1268	12578
Class D	874	578	715	161	273	831	721	682	1355	6190
Expressways	98		71							170
Total	3655	3991	3202	3393	2292	4101	3141	3535	3847	31158

Source: CBSL statistical bulletin, multiple years.

Dynamics regarding water connectivity also improved significantly after Sri Lanka's middle-income transition in 1997. While all areas did not have water connectivity, there was a significant increase of access to connections, particularly in peripheral provinces. This improvement was largely driven by a significant expansion of water supply programmes by the government during the last two decades. They include the Jaffna-Kilinochchi Water Supply & Sanitation Project, Polgahawela Pothuhera & Alawwa Integrated Water Supply Project, Anamaduwa Integrated Water Supply Project, Anuradhapura North Water Supply Project and many more (National Water Supply and Drainage Board, 2025).

Table 17: Sri Lanka's water connectivity—piped water connections as % of households

Province	2004	2015
Western	57.2	59.7
Central	51.2	50.2
Southern	40.4	55
Northern	11.4	9.8
Eastern	19.6	48.8
North-Western	17.6	29.2
North-Central	16.4	47.9
Uva	37.3	42.6

Sabaragamuwa	36.6	22.9
Sri Lanka	38.9	45

Source: Economic and Social Statistics 2005, CBSL, and Sector Assessment Water Supply and Other Municipal Infrastructure and Services 2006 -2015 , ADB

These data point to the fact that there was substantial infrastructure development in peripheral areas after 2000, and that such development had expanded to conflict-affected areas after 2009. Based on this premise, it can be argued that a lack of industrial development, manufacturing activities and growth in peripheral provinces was not largely driven by a dearth of physical infrastructure. In that context, I surmise that industrial development and manufacturing activities did not diverge substantially to these peripheral provinces due to the preference of businesses to locate within the Western Province, and the overall absence of foreign investments in the manufacturing sector in the last three decades. The Economic Development Framework for a Northern Province Master Plan 2018 notes that 'project-based' development designed in the absence of a macroeconomic vision, flawed development policies and a lack of overall coordination are at the core of the economic issues of the Northern Province. I argue that this isn't merely the case of the Northern Province but all the peripheral provinces.

Government Intervention to Address Spatially Skewed Growth and Results

As shown in this policy paper, regional disparities and spatially skewed growth continued in Sri Lanka despite government efforts to promote growth in the peripheral areas. In 1997, a new concept, Regional Economic Advancement Programme (REAP), was initiated with the objective of generating economic growth and creating employment opportunities in rural areas. REAP identified the importance of linking the private sector and informal economic agents in the peripheries and had plans to support MSMEs and set up provincial enterprise promotion centres. However, studies observe that REAP did not proceed as planned and the follow-up phase of the programme, scheduled for 1999, did not take place. Moreover, several new projects were implemented that year, instead of carrying out the follow-up phase, to satisfy political demands in the run-up to the 2000 general elections (Bastian et al., 2004). After this, there were many other government programmes to address unbalanced growth across provinces, largely focusing on infrastructure development and welfare. As studies indicate, Sri Lanka's approach to regional development has been predominantly reactive to short-term political demands, as opposed to being proactive and long-term to address spatial imbalances (Karunanayake and Abhayaratna, 2002). This could be a major factor behind the failure of REAP as a regional development initiative. I argue that governments relied on social protection programmes like *Janasaviya* and *Samurdhi*, road development and major infrastructure construction to sustain political popularity. Thus, little political significance was assigned to a long-term regional development programme like REAP. Conversely, highly politicised social protection programmes and politically supported government employment opportunities provided short-term gains for the public as well as the polity. This resulted in regional development programmes often being relegated to the back-burner as they did not deliver benefits within an election cycle.

From the perspective of regional and electoral politics, there were efforts to promote some peripheral areas as economic centres, bring private investments to other least developed areas, and to uplift the living standards of the poor. The latter was driven through programmes such as *Gam Udawa* and *Janasaviya*, initiated during the presidential tenure of R. Premadasa. However, such efforts had limited focus on increasing employment and earning opportunities within peripheral provinces. In terms of bringing private investment to the underdeveloped areas, President Premadasa launched the 200 Garment Factories Project under which factories were set up in 200 identified *pradeshiya sabha* areas with the objective that each would provide employment to 500 low-income persons. Through this programme, the setting up of new factories started to shift from the Katunayake and Biyagama Free Trade Zones (Central Bank Annual Report, 1997). Accordingly, they were established in Moneragala, Badulla, Tissamaharama, Anuradhapura, Ratnapura, Avissawella, Kurunegala, Kandy, Galnewa, Ampara, Nuwara Eliya, Mahiyangana, Wategama, Dehiattakandiya, Ranna, Dikwella, and many other distant places (Watagala, 2025). After 1992, however, Sri Lanka did not carry out any programme similar to this, nor was there an extension of it. There were regional development initiatives such as the setting up of provincial development authorities. But these lacked private sector participation and heavily focused on infrastructure development with limited emphasis on increasing employment opportunities and the potential to generate higher income. Instead of export orientation, Sri Lanka's preference shifted to the

non-tradable sector and an inward-oriented growth strategy which had limited focus on manufacture-driven growth (Athukorala, 2022). Such non-tradable sector-driven growth had limited capacity to increase production and income in the peripheries. With little intervention from governments to direct private investments to peripheral areas, and with the emphasis on non-tradable growth, businesses had more incentives to locate their activities in the Western Province, given the high per capita income of the region. This resulted in a significant expansion in non-tradable sectors such as real estate, finance, education, and wholesale and retail in the Western Province, as it had a population with purchasing power.

After 2005, Mahinda Rajapaksa, driven by his electoral politics, attempted to develop Hambantota as a peripheral economic centre. During his tenure, an industrial international seaport and an international airport were established there. To complement these infrastructures through connectivity, the Southern Expressway was extended to Hambantota, alongside a lengthening of the railway line to Tangalle. However, Hambantota did not experience substantial growth in the subsequent decade, as indicated by its stagnating GDP contribution and low household income of the Southern Province. Given the contemporary nature of the phenomenon, there is no research exploring the causes behind the lack of peripheral growth in the Hambantota area.

In that context, this paper identifies four key reasons for Sri Lanka's failure to address spatially imbalanced growth through the country's temporary transition into an upper-middle-income country in 2018. Firstly, most of the development programmes aimed at reducing regional disparities followed a top-down approach. Their conceptualisation and implementation, as well as prioritisation, was led by the central government with limited coordination and contribution from regional administrations. As Karunanayake and Abhayaratna (2002) highlighted, these programmes lacked regional planning, preventing the emergence of 'people'-and 'place'-focused concerns in regional development. This, in turn, resulted in the ignoring of deep-rooted politico-economic issues at the regional level. Secondly, issues pertaining to Sri Lanka's power devolution and administration structure continue to be a hindrance to regional development. The role of provincial councils as well as local government bodies is extremely limited in national planning pertaining to regional development. Although there is scarce literature on this matter, government practices indicate that policies at local government, provincial and national levels are determined in silos. Thirdly, government interventions placed limited emphasis on supporting MSMEs and linking them with formal sector businesses. The programmes that had such a component, such as REAP, did not continue and were diverted for short-term political gains. The evidence from the Northern Province indicates that the government's failure to systematically invest in transforming the productivity of 'small-sized' producers and organisations was a key reason for high unemployment and low earning capacity in the post-conflict era (CBSL 2019). Fourthly, most regional development initiatives had limited or no emphasis on expanding businesses in the peripheral areas. The focus was largely on infrastructure development. As a result, regional development initiatives failed to substantially increase the labour demand. This incentivised some part of labour force to migrate to the Western Province where labour demand exists.

As the above analysis indicates, Sri Lanka's growth as well as employment concentration have been heavily skewed towards the Western Province. This has resulted in growth potential, and a skilled, educated population converging on the Western Province throughout the transition into upper-middle-income country in 2018. These dynamics resulted in Sri Lanka's growing middle class further concentrating in the Western Province. Consequently, the middle class became a dominating and influential voting bloc in Sri Lanka's politics, with the Western Province's development becoming politically crucial for governments and other political parties owing to the region being preferred by the middle classes. Conversely, I argue that the middle-classes living in peripheral regions also aspire to migrate to the Western Province. This, I argue further, promotes convergence of growth on the Western Province, thereby widening the gap between opportunities and quality of life between that region and the peripheral provinces. It is likely to make upward social mobility an almost unattainable dream for those in peripheral provinces.

Conclusion and Recommendations

In the three decades preceding its sovereign default, Sri Lanka recorded a rapid GDP growth with a significant per capita increase from 1990 to 2018, when the country was upgraded to the upper-middle-income category (this lasted only one year as Sri Lanka was downgraded to the lower-middle-income category in 2019). This rapid growth, however, largely originated within the Western Province, which continued to account for more than 35% of country's GDP. This meant that, as Sri Lanka's per capita income rose, industries and employment opportunities continued to converge on the Western Province, with limited income generation opportunities being available in peripheral provinces. This also resulted

in industries as well as occupations with higher earning potential further concentrating in the Western Province, compelling the educated populace to migrate there. Such internal migration, in turn, further expanded the service sector in the Western Province alongside the urban and suburban housing industry. Thus, I conclude that Sri Lanka's transition into an upper-middle-income status took place as a spatially skewed growth with limited employment generation in peripheral provinces.

This growth also occurred without substantial improvement of labour force dynamics. Between 1990–2018, Sri Lanka's labour force participation saw a slight decline although the unemployment rate dropped below 5 percent. By 2018, however, nearly 60% of the country's labour force was in informal employment with low pay and limited job security and retirement benefits. Continued domination of the informal sector and data on labour force participation posit that Sri Lanka is lagging behind its peers in both indicators, pointing to a failure to improve the quality and availability of employment opportunities. Thus, Sri Lanka's brief ascent into upper-middle-income status in 2018 unfortunately did not translate into a significant reduction of its spatially imbalanced growth. This failure can be attributed to a few interconnected factors that are deep-rooted in the country's economic structure and political economy. Firstly, Sri Lanka's approach to designing and implementing regional development programmes was dominated by the central government with limited incorporation of localised needs and priorities, effectively overlooking critical politico economic dynamics at the regional level. The absence of robust regional planning prevented the emergence of people-centric and place-based development strategies. Secondly, the unresolved issues surrounding power devolution and the limited autonomy of provincial councils and local government bodies in national planning processes acted as a significant impediment. The siloed approach to policy formulation across different tiers of government further exacerbated this challenge. Thirdly, the lack of sustained and strategic government support for MSMEs and their integration into formal sector value chains hindered economic diversification and job creation in peripheral regions. The discontinuation of promising initiatives like REAP for short-term political gains underscores this deficiency. Fourthly, and crucially, the majority of regional development initiatives lacked a strong emphasis on fostering business expansion and consequently increasing labour demand within peripheral provinces. Most regional efforts, which often centred on infrastructure development without robust private sector engagement, and a focus on export-oriented manufacturing proved insufficient in addressing the fundamental issue of limited economic opportunities outside of the Western Province. The nation's shift towards a non-tradable sector and inward-oriented growth strategy further incentivised businesses to concentrate in the already affluent Western Province, drawn by higher per capita income and purchasing power, leading to the expansion of sectors with limited capacity to drive widespread income growth in the peripheries. Ultimately, the absence of consistent and strategically targeted government interventions to direct private investment towards less developed areas, coupled with a growth strategy that favoured the already developed Western Province, perpetuated and even exacerbated the existing spatial economic disparities in Sri Lanka.

Furthermore, most of the labour demand exists for contract basis or informal employment. I argue that such dynamics resulted in a substantial portion of the populace engaging in informal businesses or service provision (e.g., small shops, three-wheeler drivers). While such economic activities offer them a sufficient income, it also increases their economic vulnerabilities and exposes them to economic crises. This dynamic became apparent in 2020–2024 when Sri Lanka experienced a few quarters of economic contraction due to COVID-19 and the debt crisis. During this period, the country's poverty rates increased from 6.9% to more than 25%, with estimates suggesting more than 2 million people fell below the poverty line. This was a consequence of the informal sector- and employment-driven growth model, to which successive governments paid little attention. Therefore, Sri Lanka's middle-income transition had three major problems from a spatial growth perspective. Firstly, sufficient employment opportunities were not created in peripheral areas. Secondly, the available employment opportunities in the peripheries were in the informal sector, with limited employment benefits or employment guarantees. Thirdly, employment opportunities there did not pay sufficient salaries. Thus, Sri Lanka's transition into upper-middle-income country in 2018 was driven by uneven spatial growth which resulted in widening the gap between rich and poor as well as between opportunities for upward social mobility.

In that context, this policy paper put forward five key recommendations. First, it is proposed to pursue an integrated approach in designing the implementation of regional development programmes by actively involving local governments and provincial councils. Instead of the central government determining regional development programmes in silos, a bottom-up approach should be pursued. Secondly, the government needs to actively incentivise tradable sector growth through linking private sector companies with MSMEs and the public in peripheral provinces. To make this effort successful, it is proposed to revisit the REAP framework and to align it with the country's long-term economic planning. Thirdly, Sri Lanka needs to identify a few peripheral economic centres based on existing connectivity, economic geography and development plans. The focus should be on developing such centres to serve as connecting points for 2–3 provinces. Fourthly, it is recommended to facilitate strengthening the business networks within peripheral provinces, and between them and the Western Province. Fifth, it is proposed to link the

Aswesuma and Samurdhi social protection schemes as empowerment schemes with business networks and investment projects, similar to the 200 Garment Factories Project. Overall, ensuring less spatially skewed growth through Sri Lanka's transition into upper-middle-income country and beyond requires increasing labour demand in peripheral provinces and policy interventions should be designed to facilitate this.

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Sri Lanka's Accountability Deficit

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Abstract

Sri Lanka's 2022 economic crisis was not merely a result of poor fiscal and monetary policy but also the direct consequence of a deep-rooted, systemic accountability deficit. Termed Sri Lanka's "third deficit" (alongside its chronic budget and trade deficits), this governance failure enabled catastrophic policy decisions, such as the 2019 tax cuts, to proceed without institutional challenge. The study identifies the extreme concentration of power within the Executive Presidency as the primary cause of this accountability deficit. Through process tracing, key informant interviews, and a historical-institutional analysis, the paper demonstrates how the Executive systematically eroded horizontal accountability, i.e., the capacity of state institutions to check and balance one another. It details the subordination of Parliament and its oversight committees, the Executive's direct interference in the Ministry of Finance and the Central Bank, and the parallel decline of an independent, professional public service into a politicised bureaucracy. The analysis reveals a critical gap between *de jure* institutional design and *de facto* political behaviour, where formal checks and balances exist but are rendered inert by political capture and institutional timidity. The paper concludes that sustainable economic recovery is impossible without first addressing this foundational governance crisis. It asserts that closing the accountability deficit through genuine constitutional and institutional reform is a prerequisite for preventing future crises, challenging the long-held notion that democratic accountability must be sacrificed for economic development.

1. Introduction

When Sri Lanka's unprecedented protests erupted in 2022, the central demand was the resignation of President Gotabaya Rajapaksa for, as the protestors saw it, causing the worst economic crisis in the country's independent history. In short, Sri Lankan protestors were asking for the President and his government to be held accountable for the devastating crisis. The immediate causes of this cataclysm were starkly visible: a catastrophic depletion of foreign exchange reserves, unsustainable debt, and a widening budget and trade deficit. For decades, these twin deficits have been the standard diagnostic for Sri Lanka's economic malaise.

Yet, this conventional analysis misses the heart of the failure. The devastating policy decisions that precipitated the collapse, such as the 2019 tax cuts that eviscerated government revenue, were not made in a vacuum. They were the result of a deeper, more pernicious void within the state itself. Local and international observers had repeatedly warned of the perilous path Sri Lanka was on, yet those warnings were systematically ignored (Fitch Ratings, 2020; Daily FT, 2022). The decisions were made in spite of this knowledge. This paper argues that the nation's economic collapse is not merely a story of reckless policymaking but a profound crisis of governance, enabled by a longstanding and systemic accountability deficit.

This accountability deficit constitutes Sri Lanka's third deficit. It is the critical missing variable that explains how such impactful decisions went completely unchecked. It is the institutional black hole where oversight, dissent, and professional counsel vanished, allowing short-sighted and politically expedient policies to proceed unchallenged. This deficit is the product of an authoritarian drift, most starkly exemplified by the concentration of power in the Executive Presidency which systematically eroded horizontal accountability by which state institutions are meant to check and balance one another.

While extensive literature exists on Sri Lanka's authoritarian turn and its constitutional enablers, it has largely focused on traditional political consequences like the separation of powers and ethnic devolution (Welikala, 2016). When it does look at legislative oversight, it focuses mostly on budgetary oversight, auditing and anti-corruption. Less examined is the direct causal link between this centralisation of power and the quality of economic policymaking. This paper seeks to fill that gap. It investigates how the unchecked dominance of the Executive obstructed the essential roles of Parliament, its committee system, the Ministry of Finance, the Treasury bureaucracy¹, and the Central Bank, creating a policy environment devoid of the necessary safeguards.

This paper argues that concentration of power in the Executive President, especially Executive interference in the Finance Ministry and the Central Bank of Sri Lanka (CBSL), and the lack of legislative oversight was a major contributory factor in the decisions that led to Sri Lanka's sovereign default and subsequent economic crisis. It attempts to draw a causal link between the Executive Presidency and the declining

¹This paper distinguishes between the Ministry of Finance and the Treasury. The Treasury refers to departments within the Ministry of Finance with the notable exclusion of the revenue departments (Customs, Excise and Inland Revenue Departments). However, while the revenue departments are headed by Commissioners General, they answer to the Secretary to the Treasury and the Minister of Finance.

quality of economic policymaking, specifically through the study of policy decisions that led to the sovereign default and subsequent crisis. It investigates the institutional dominance of the Executive Presidency which obstructs and discourages a dispersion of power and the scope for discussion, dissent and critical expression of views that are the attributes of sound policymaking. However, the policy environment during that period was not unusual in the Sri Lankan context. Thus, the paper also traces the evolution of the Executive Presidency in relation to the legislature, legislative committees and the public service. It uses the lens of horizontal accountability to understand the erosion of accountability arising from the consolidation of power within the Executive Presidency. The key distinction here is that of *de jure* versus *de facto* checks and balances between state institutions.

Finally, this paper is also an attempt at marrying two siloed debates around development in Sri Lanka: the one on economic policymaking, and the other on constitutional reform. The focus is not just academically pertinent but critically aligned with Sri Lanka's current moment. The country's reform agenda under the International Monetary Fund's (IMF) Extended Fund Facility (EFF) emphasises fiscal discipline, institutional accountability and governance reform. Understanding how the accountability deficit enabled the economic crisis is the first step towards building the resilient institutions necessary for a stable recovery. By diagnosing this third deficit, this paper reframes the discourse on economic crises in developing countries, arguing that governance failure is not a peripheral issue but the central, structural condition that enables fiscal irresponsibility and unsound policy.

2. Methodology, Positionality and Theoretical Framework

The central question of this paper is to what extent the centralisation of power within the Executive Presidency contributed towards the policy decisions that led to the Sri Lankan economic crisis of 2022.

How has the centralisation of power within the Executive Presidency affected Sri Lanka's economic policymaking landscape? The following supplementary research questions stem from the main question:

- What are the significant milestones in the strengthening of the Executive Presidency since its introduction and how has it affected economic policymaking?
- What are the key reasons for poor economic policymaking that have led to Sri Lanka's twin deficit problem?
- What are the safeguards that can be introduced to prevent short-sighted economic policy decisions and avoid such crises in the future?

To answer my research questions I conducted an extensive desk review followed by key informant interviews (KIs). There is limited literature on economic policymaking in Sri Lanka and even less that connects the Executive Presidency's consolidation of power with the quality of policymaking. As a remedy, the desk review drew on sources detailing reform politics, especially in relation to Sri Lanka's wave of liberalisation starting in 1977. The review also delved into the extensive literature on the Executive Presidency to understand its relation to Sri Lanka's developmental causes and consequences. The wielding of the powers of the Executive Presidency has differed between Presidents (Venugopal, 2015) but has overwhelmingly seen a trajectory towards the consolidation of power at the expense of horizontal accountability.

The KIs centred on establishing the nature of Sri Lanka's policy environment with a special focus on horizontal accountability in economic policy. The people selected for KIs were academic experts on the Executive Presidency and Sri Lankan public finance, and key policymakers who worked in the Ministry of Finance and the CBSL. Where formal records are incomplete, political economy research often employs institutional ethnography and elite interviewing (Mosse, 2004; Soss, 2014). This is the methodological tradition this paper follows, given the lack of official documentation of policy processes in Sri Lanka. To protect participant confidentiality, all identifiable information relating to who they are has been removed from this study, particularly given the politically sensitive nature of the interview content. Specific roles and institutional affiliations have been omitted as the pool of policymakers involved is small. Given the undocumented nature of policymaking, the analysis is limited to fiscal and monetary policies as the institutions responsible for both are easily identifiable and I was able to access key policymakers in each. Industrial policy was excluded from the analysis, owing to the inevitable role of the private sector in determining successful industrial policy, unlike in the case of fiscal and monetary policy.

The paper uses process tracing to demonstrate a causal link (George and Bennett, 2005) between the erosion of accountability and the economic crisis. This approach moved it beyond a simple description of events by systematically examining diagnostic evidence such as constitutional amendments, government and media records, and KIIs. For example, the analysis of how the government used its parliamentary majority to take over the chairmanships of key oversight committees provided evidence for the mechanism through which legislative checks were dismantled. Similarly, a key informant's account of a specific instance where the President's Secretary instructed the CBSL Governor to disregard the Monetary Board's decisions served as a crucial piece of diagnostic evidence, revealing the precise sequence of events that led to the collapse of monetary policy autonomy. Through this process, the case study was transformed from a narrative description into a tool for causal explanation, providing a structured way to infer how and why the crisis occurred by examining the detailed sequence of events (George and Bennett, 2005).

A major component identified through the literature review was the parallel decline of the Sri Lankan public service and its politicisation. This led to formulating a supplementary research question: What is the interplay between public sector reform and the rise of political patronage in the bureaucracy? The abolishment of the Ceylon Civil Service (CCS) in 1963 represents a major shift in the public service but precedes the introduction of the Executive Presidency. I delve into the reform and its consequences as documented in the succeeding decades. This section is presented not in opposition to the consolidation of the Executive Presidency but as a symbiotic development within the state.

My previous role as a researcher at the Ministry of Finance from 2017 to 2019 provided unique access to key policy actors but introduced potential biases due to my direct experience and professional relationships. To mitigate these risks and to enhance the rigour and credibility of the findings, a systematic approach to triangulation was undertaken. Claims made in interviews, such as the weakening of parliamentary committees, or Executive interference in the CBSL, were cross-verified against documentary sources. For instance, assertions about the Treasury interference and, by extension, Executive interference, in the CBSL was corroborated by records of budget speeches. Records detailing committee chair appointments and media archives reporting on specific policy decisions have also been used. This multi-source validation process strengthened the evidentiary basis for the institutional analysis and reduced the reliance solely on elite perceptions, thereby enhancing the trustworthiness of the findings.

2.1 The Parameters of Accountability

Unlike the concentration of political power, the concentration of economic power does not always receive the same level of attention (Johanisova and Wolf, 2012). To understand the policy environment in which key economic policy decisions were made, it is necessary to determine who the decision-making actors were and what safeguards, if any, were in place to ensure accountability and transparency. This paper will look at Sri Lanka's policy environment through the lens of accountability, specifically horizontal accountability. For the purposes of this paper, horizontal accountability is understood as the existence of 'state agencies that are legally enabled and empowered, and factually willing and able, to take actions that span from routine oversight to criminal sanctions or impeachment in relation to actions or omissions by other agents or agencies of the state that may be qualified as unlawful' (O'Donnell, 1999). This emphasises that both legal empowerment and the practical willingness of institutions to exercise oversight is crucial. It showcases the significant gap between institutional form and function in Sri Lanka's context, where formal structures often lack the practical ability or political will to constrain Executive power.

In contexts like Sri Lanka, formal institutional mechanisms for horizontal accountability may exist *de jure*, yet, remain functionally inert *de facto* due to political capture, institutional timidity, or eroded autonomy. This underscores that accountability is not merely a matter of constitutional design or statutory provision, but hinges on the actual behaviour and independence of state institutions and their officials. To better understand this disconnect, it is useful to distinguish between the legal framework of accountability and its practical application. Ernst Fraenkel's concept of the 'dual state' offers a valuable analytical lens. It describes a 'normative state' where rules and procedures formally prevail, existing alongside a 'prerogative state' where power is exercised arbitrarily, often untethered from legal constraints (Fraenkel, 2017).

Applying this framework to Sri Lanka helps clarify whether accountability failures stem from weaknesses in institutional design or from the decline of institutional conduct; this is where formal rules are systematically bypassed or ignored. The evidence examined in this paper, particularly regarding the dominance of the Executive Presidency over Parliament, the Ministry of Finance, and the CBSL points strongly towards a pervasive implementation gap. What emerges is not simply a deficit in the legal

architecture of accountability but also a deeper erosion of norms, incentives, and professional courage required for its practice. Consequently, Sri Lanka's democratic institutions often retain a veneer of functionality while being hollowed out from within. This illustrates how horizontal accountability can be formally enshrined yet substantively absent.

Within the typologies of democracies, there are useful features that both explain Sri Lanka's situation and also provide some comparative examples. Delegative democracies, for example, function on the premise that a person who wins a presidential election can govern as they see fit because the President is considered 'the embodiment of the nation and the main custodian and definer of its interests' (O'Donnell, 1994). This is reflected in the thinking behind the Office of the Executive President. Additionally O'Donnell notes that delegative democracies are characterised by 'extreme individualism' and their Presidents are presented as 'saviours', such as in the cases of Argentina, Brazil and Peru (O'Donnell, 1994). However, unlike in those cases, Sri Lanka did not have a *de jure* authoritarian regime prior to establishing the Executive Presidency. The Sri Lankan case does, however, demonstrate the compromised checks and balances and an abusive Executive that is central to a delegative democracy (O'Donnell, 1994; Levitsky and Way, 2022).

Other sources of accountability frameworks, such as vertical accountability, which is mainly via elections, and diagonal accountability, which is through the influence of non-state actors, usually have indirect influence when key economic decisions are made. It would have been ideal to also consider the influence of the corporate sector and the markets and their interplay with state accountability. However, this paper will focus only on the state and horizontal accountability within it, as its main aim is to understand the internal processes of policymaking. Further, the paper will not be exploring the role of the Judiciary as a key institution within the framework of horizontal accountability as policymaking at this level does not fall under the purview of the courts.

3. A History of Consolidation: the Executive Presidency

The extraordinary concentration of power in Sri Lanka's Executive Presidency is not a recent phenomenon but rather the result of a long-term erosion of institutional checks and balances. This history can be best understood through the incentives of political actors and the structural factors that led to a weakening civil service and the rise of patronage politics. The very concept of the Executive Presidency, introduced by then Prime Minister J.R. Jayewardene in 1978, was rooted in a developmentalist ideology that viewed a strong, centralised Executive as essential for economic progress. Jayewardene famously argued that such an Executive, insulated from the 'whims and fancies' of an elected Parliament (Jeyaraj, 2015), was necessary for developing countries that may need to make unpopular policy decisions for long-term benefits. This perspective recast Parliament, not as a check on Executive power, but as an obstacle to economic development. This reframing makes it clear that if the trade-off is between accountability and development, the pragmatic choice would be development.

Over time, this dynamic intensified. The 'absentee Finance Minister' arrangement, where the President directly controlled the Finance Ministry, became a common practice (Moore, 2017). This gave Presidents like Ranasinghe Premadasa, Chandrika Kumaratunga and Mahinda Rajapaksa direct control over the country's fiscal health, allowing them to pursue populist welfare schemes while masking governance deficits. The incentive was to consolidate both political and economic power, blurring the lines between the Executive's role in national development and its responsibility for fiscal prudence. As the Chief Executive Officer (CEO) and Chief Financial Officer (CFO) of the country, a President could prioritise political imperatives, such as pleasing key voter blocs with tax cuts, over sound fiscal policy. This structural flaw meant that crucial safeguards, like a strong, independent Finance Minister who could implement tough but necessary fiscal policies, were eliminated.

This erosion was facilitated by the parallel decline of the public service which will be explored at length in Section 5. The shift from the CCS to the Sri Lanka Administrative Service (SLAS) marked a significant change. While it was framed as a move to make the bureaucracy more accessible, the reform was deeply intertwined with Sinhala ethnonationalism and the 'Sinhala Only' policy, which effectively excluded Tamil and other minorities from the civil service. The result was a politicised civil service that lacked the independence to oppose politicians and instead became reliant on the political establishment for career security. This created a culture of patronage politics where the incentives for civil servants were to comply with the Executive rather than uphold principles of good governance and accountability. This symbiotic relationship between a centralised Executive and a weakened, politicised bureaucracy created an environment where disastrous policy decisions, such as the 2019 tax cuts and the chemical fertiliser ban, could be enacted without meaningful challenge.

3.1 Key Constitutional Amendments

Sri Lanka's political system was a standard Westminster parliamentary system until a new Republican Constitution in 1978² changed it to a semi-presidential system that centralised power in the Office of Executive Presidency (Venugopal, 2015). One interviewee pointed out that the semi-presidential system had the challenges of both Westminster and the presidential system without the necessary checks and balances required of either (Participant 4). The first Executive President J.R. Jayewardene contributed greatly to the making of this Office as is explored in the next section.

During the Presidency of Mahinda Rajapaksa, the brother of Gotabaya Rajapaksa, the Eighteenth Amendment to the Constitution (18th Amendment) was passed, further increasing the powers of the Executive Presidency. The Amendment removed the two-term limit on the Office and significantly increased the Executive's power over the state, especially the legislature. An example of this was when Mahinda Rajapaksa unilaterally impeached the Chief Justice at the time without oversight from the legislature (Welikala, 2019). Rajapaksa ran for a third term in 2015 but lost to Maithripala Srisena, a defector from his Cabinet.

The only successful attempt at reversing the growing powers of the Executive Presidency was during the National Unity Government of 2015–2019 (popularly known as the 'Yahapalanaya' government³). The Nineteenth Amendment to the Constitution (19th Amendment) passed by the government placed restraints on the Executive Presidency, and introduced several independent commissions and electoral oversight committees in Parliament (Centre for Policy Alternatives, 2015). It also changed the composition of the Constitutional Council (CC) which oversaw appointments to high-level public service positions to include members of civil society. Under the 18th Amendment, the Constitutional Council was made to only consist of Members of Parliament (MP) and limited to providing the President with observations (Centre for Policy Alternatives, 2015).

Some key constraints placed on the Executive Presidency were the reintroduction of the two-term limit, decreasing the President's term from six to five years and taking away the power to remove the Prime Minister. There was also a failed attempt at making a new Constitution by the same government that was derailed by a breakdown in the coalition government (Pushparajah and Balamayuran, 2022). In the presidential election in 2019, won by Gotabaya Rajapaksa, his manifesto promised a new constitution (Sri Lanka's Vistas of Prosperity and Splendour: A Critique of Promises Made and Present Trends, 2021). The 20th Amendment was passed as an interim measure. As predicted by Welikala, there was a rollback of the democratic reforms that were seen during the 2015–2019 period (Welikala, 2019).

President Gotabaya Rajapaksa swept into power on an ethnonationalist tide soon after the Easter Sunday attacks of 2019 which were partially blamed on the weakening of the state apparatus including the Executive Presidency (Wickramasinghe, 2021). The Easter attacks were widely seen as a serious display of dysfunction and incompetence by the Executive (Participant 2). The consolidation of power through the 20th Amendment was, thus, in keeping with the 'strongman' image created around Gotabaya Rajapaksa (Macan-Markar, 2019; Gunasekara et al., 2022). Rajapaksa's new party, the Sri Lanka Podujana Peramuna (SLPP or Sri Lanka People's Front), gained a two-third majority in Parliament, allowing them to pass the 20th Amendment with ease. The result of this was that the safeguards introduced through the 19th Amendment were lost. The Executive President's powers over the Prime Minister, the Cabinet of Ministers and Parliament were increased again. Presidential immunity was expanded. The diverse CC was replaced by a Parliamentary Council of only MPs (Centre for Policy Alternatives, 2021). The 19th Amendment had balanced the relationship between the CC and the President to be much more than consultative (Participant 2). It is worth noting, though, that the short shelf life of the 19th Amendment had prevented any widespread change in institutional behaviour.

On the side of public finance, independent commissions such as the National Procurement Commission and the National Audit Service Commission were abolished and state-owned enterprises (SOES) removed from under the purview of the Auditor General. The reintroduction of the 'urgent bills' provision allowed the President to surpass Parliament in passing legislation under certain circumstances (Centre for Policy Alternatives, 2021). It allows for the limitation of judicial review and legislative oversight of bills. While a

²This was Sri Lanka's Second Republican Constitution, replacing the First Republican Constitution of 1972. It was Sri Lanka's third Constitution since 1948, when it gained independence as the Dominion of Ceylon.

³Yahapalana is Sinhala for 'good governance' and was used to describe the government at the time because it was elected on a good governance and anti-corruption platform. The coalition government consisted mainly of members from the main opposition party of the time, the United National Party, and crossovers from the Sri Lanka Freedom Party, Rajapaksa's own party.

pragmatic provision necessary for the functioning of government in emergency situations, it is often abused (Participant 2). All these changes adversely affected the oversight and accountability that had been introduced in the 19th Amendment. It was in this policy environment that the Rajapaksa government made many of the economic and public finance policy decisions that directly contributed towards Sri Lanka's sovereign default.

3.2 The Theory and the Practice of the Executive Presidency

The thinking behind Sri Lanka's Executive Presidency system is largely attributed to J. R. Jayewardene (Jeyaraj, 2015; Venugopal, 2015), who would become the first to hold the Office from 1978 to 1989. Jayewardene wielded the power of this position as he intended, by fast-tracking economic liberalisation reforms (Venugopal, 2015). Venugopal traces the Executive Presidency back to the 'elite impulse' to make an Executive that was impervious to pressures of the electorate (Venugopal, 2015, p. 3). The thinking behind this kind of Presidency came from the developmentalist thinking that was prevalent at the time. (Participant 2). This is clearly illustrated in the following statement by Jayewardene:

...the executive is chosen directly by the people and is not dependent on the legislature during the period of its existence, for a specific number of years. Such an executive is a strong executive, seated in power for a fixed number of years, not subject to the whims and fancies of an elected legislature; not afraid to take correct but unpopular decisions because of censure from its parliamentary party. This seems to me a very necessary requirement in a developing country faced with grave problems such as we are faced with today- J.R. Jayewardene, Keynote Address to the Ceylon Association for the Advancement of Science, Colombo, 14th December 1966 (Jeyaraj, 2015).

For Jayewardene, Parliament was not a necessary counterbalance to the Executive but rather an impediment to economic development. Thus, Parliament was re-conceived to be 'a partner in development' rather than a confrontational accountability mechanism to the Executive (Participant 2). Some of the reforms to Parliament under the 1978 Constitution are explored in the next section. The argument against the Westminster system was partially anti-colonial (Participant 1, 2) but also paternalistic. Proponents of this view argue that Sri Lanka's development was stagnating because Parliament was beholden to its electorate. This 'hold' was mainly in the form of welfarist measures (Kelegama, 2006). Jayewardene was successful in his pursuit of market reforms. However, it must be noted that he was not insulated from all electoral pressures from the Sinhala-Buddhist majority as seen in his party's 'exaggerated display of Buddhist religiosity and Sinhala patriotism' (Venugopal, 2015, p. 9).

The erosion of accountability was displayed through the 1982 referendum, which extended the term of Parliament by six years without an election, and serves as a textbook example of Sri Lanka's shift towards a plebiscitarian Presidency. By bypassing a general election and appealing directly to the people via a national vote, President Jayewardene used his popular mandate to circumvent the traditional legislative process. This move undermined the foundational principle of a representative democracy which recognises the legislature as a co-equal branch of government. This precedent, where the President's will is legitimised by a direct vote overriding checks and balances, is in line with the features of a delegative democracy (O'Donnell, 1994; Levitsky and Way, 2022).

While Jayewardene's initial goals of market reforms were fulfilled, his vision for the Executive Presidency was not. His immediate successor Ranasinghe Premadasa's Presidency (1989-1993) was characterised by its authoritarian efficiency. Market reforms and rural development schemes were pursued decisively while masking governance deficits with populist welfare (Kelegama, 2006; Venugopal, 2015). Under Premadasa, Sri Lanka saw the practice of the 'absentee Finance Minister' arrangement which gave the President direct control of the Finance Ministry (Moore, 2017). This practice was continued by President Chandrika Kumaratunga (1994-2005)⁴ and President Mahinda Rajapaksa (2005-2015), both of whom either retained the Finance Ministerial portfolio or had a nominal Minister (Moore, 2017). The far-reaching consequences of this practice on the Treasury Secretary and bureaucracy and economic policymaking is investigated in Section 5. The subsequent sections will detail how key institutions, the legislature, fiscal and monetary policy bodies, and the civil service, were compromised by the Executive Presidency, and their role in failing to prevent the economic crisis.

⁴ One notable exception was in 2001-2004, when President Kumaratunge was compelled to share with a rival UNP-led government following their victory in parliamentary elections.

4. Horizontal Accountability through the Legislature

A critical issue for horizontal accountability within Sri Lanka's semi-presidential system is the co-optation of Parliament. The legislature has been reduced to an appendage of the Executive, representing a significant constitutional shift (Participant 1, 2). While parliamentary systems depend on structured dissent and formal processes for conflict resolution, the developmentalist approach recasts the opposition as obstruction (Participant 2, 4). MPs, including those from opposition parties, increasingly rally behind the Executive's agenda in the name of national interest, neglecting their oversight responsibilities (Participant 2, 4). As a result, MPs encounter distorted incentives that discourage active participation in core legislative functions. There is little motivation to engage deeply in lawmaking, committee work, or policy research when the prevailing system rewards compliance over scrutiny (Participant 2). A clear example is Parliament's consistent failure to enforce the Fiscal Management (Responsibility) Act (FMRA) to check Executive overreach, demonstrating how the legislature's role has been redefined from watchdog to rubber stamp (Participant 3).

4.1 Changing Role of Parliamentarians

The role of MPs as legislators has weakened over time in Sri Lanka. Even under the Soulbury Constitution (1947 to 1972), there were observations of how parliamentarians saw themselves as supervisors of administrations rather than debaters of policy (Wiswa Warnapala, 1974). Warnapala's observation of Parliament 1947 to 1956 notes that budget debates focused on the needs of constituencies with 'parochial grievances' taking precedence over issues of policy (Wiswa Warnapala, 1974). Parliament carries the prime responsibility for control of both taxation and expenditure and therefore the concept of the Member as a taxpayer's defender is not obsolete (Wiswa Warnapala, 1974).

This trend intensified after 1978 with the introduction of Ministerial Consultative Committees (MCC), which transformed MPs from scrutineers into partners of the Executive. These departmentally related standing committees are chaired by Cabinet Ministers (The Parliament of Sri Lanka, 2025). They encouraged MPs to adopt a 'constructively critical' stance, supporting the government's developmental agenda rather than enforcing rigorous accountability (Participant 2). As one interviewee noted, MPs now saw their role as assisting Ministers in national development, not as adversarial overseers (Participant 2). This shift was compounded by decentralised budgets, where funds were directly allocated to MPs in both government and opposition. This further co-opted MPs into the Executive's delivery mechanism. Elected to address local needs, MPs increasingly focused on disbursing funds for small-scale projects, blurring the line between legislative oversight and executive implementation (Participant 2, 4).

However, this system has eroded the traditional accountability function of Parliament. Despite having one of the lowest sitting-day ratios globally, parliamentary attendance remains poor, reflecting diminished engagement with legislative scrutiny (Participant 2). The decentralised budget incentivised MPs to prioritise pet projects over national fiscal discipline (Participant 3, 4). This has fostered patronage culture, with MPs attending MCC meetings merely 'to see if their project is being done' (Participant 4). It also distracts from core legislative duties, as MPs increasingly act as local benefactors rather than national policymakers (Participant 3). This changed role of the MP reinforces a ruler-and-ruled dynamic where MPs are expected to bring public resources to their constituencies rather than debate their prudent allocation (Participant 2, 4).

The broader issue lies in Sri Lanka's lack of institutionalised planning. Project evaluation remains weak, and priorities are often set by political leaders rather than technical experts. While not unique to Sri Lanka, this reflects a political culture where MPs are expected to deliver tangible benefits—school placements, jobs, and infrastructure—as a form of kinship-based patronage (Participant 2, 4). Ultimately, these practices highlight a systemic decline in Parliament's role from a forum of national policy debate to a conduit for Executive-driven, constituency-level development. This shift has undermined both fiscal accountability and long-term governance.

4.2 Rubber Stamping Policy Errors

Among the policy decisions that directly led or contributed to the deepening crisis in Sri Lanka, the fiscal stimulus package and the chemical fertiliser ban were particularly disastrous. The fiscal stimulus policy consisted of massive tax cuts that eventually led to Sri Lanka's lowest recorded government revenue in 2021 (Moramudali and Panduwawala, 2022). The fiscal stimulus policy was in direct violation of the conditions of the IMF's EFF programme that Sri Lanka had entered into in 2016. The tax cuts would also lead to Sri Lanka losing its ability to roll over debt, thus causing it to use its foreign exchange reserves to continue servicing its debt (Fitch Ratings, 2020). The disastrous 2019 tax cuts faced no meaningful opposition even from the private sector, as evidenced by the Ceylon Chamber of Commerce's support (Daily Mirror, 2019). It must be noted that the announcement of the tax cuts occurred even before the passing of the 20th Amendment, which brings up two vital points: that the 19th Amendment was not a sufficient constraint on the Executive, and that Sri Lanka also faces a larger issue of a gap between de jure institutional design and de facto political behaviour.

The overnight chemical fertiliser and pesticides ban, under the guise of an organic agriculture drive, was an attempt to save the country's foreign exchange reserves (Komireddi, 2022). Sri Lanka imports an estimated USD400 million worth of chemical fertiliser yearly, but the government had to spend more than that importing rice to supplement domestic rice production which decreased by 20 percent (Shah, 2022). This policy was hastily reversed but not before it effectively accelerated a food crisis that was already growing as a result of massive food price inflation. However, in both cases there were no avenues to prevent these radical and hasty changes to government policy via Parliament.

Strong legislatures are a key feature of liberal democracies as they are vital in ensuring government accountability (Rahman, 2007). They are also usually the largest democratic institution that can claim to represent the sentiments of the population they serve. The Sri Lanka Parliament, however, has gradually lost some of its ability to serve one of its most important functions of executive oversight, especially in relation to public finance. Article 148 of the Sri Lankan Constitution states that, 'Parliament shall have full control over public finance. No tax, rate or any other levy shall be imposed by any local authority or any other public authority, except by or under the authority of a law passed by Parliament or of any existing law' (Ratnasundaram, 1997). The Supreme Court has held on multiple occasions that controlling public finance is the responsibility of Parliament with only some areas of discretion on financial policy that can be held within the Executive (Samararatne, 2023). However, in reality, Parliament is often designated to a 'rubber stamping' role and does not have the autonomy to hold the Executive accountable (Participant 1, 2). This is clearly demonstrated by the inequality between the powers of the President to interfere with the proceedings and the inability of Parliament to hold the President accountable (Perera, 2021). In the specific case of the aforementioned policy decisions, however, it is the weaknesses of the parliamentary committee system that are stark.

4.3 Parliamentary Committee System

The major parliamentary oversight committees in the Sri Lankan Parliament in relation to government finances are the Committee on Public Finance (COPF), Committee on Public Accounts (COPA) and the Committee on Public Enterprises (COPE). The chairing of these vital committees is traditionally held by the opposition to ensure the integrity of their oversight function. However, in 2020, the government used its majority in Parliament to secure the chairs of all three committees (Sri Lanka Brief, 2020). This effectively rendered the committees inoperative during the period where most of the policy errors leading to the default were made. The institutional structure of these committees, especially that of COPA have, however, been compromised for some time, calling into question their ability to ensure accountability. This is mainly due to the poor operationalisation of the committees and the lack of external scrutiny as media is often denied access to sittings (Ananda, 2015).

COPA and COPE function in a post-mortem fashion so there was no scope for policy and legislation to be scrutinised beforehand. COPF has scope to examine public finance bills and regulations beforehand but can only report their observations to Parliament (The Parliament of Sri Lanka, 2022). However, it should be noted that when these committees are allowed to function fully as oversight bodies, they create much needed visibility on fiscal issues (Participant 3, 4). The Treasury bureaucrats take greater care to make evidence-based policy as they know COPF will ask for clear justifications (Participant 3). However, a major issue faced by COPF is the lack of institutional research support (Participant 3). While COPA and COPE have the National Audit Office at its disposal, COPF faces a serious research capacity issue. The Parliament research unit does not have the capacity to perform this vital function (Jayathilake and Tennakoon, 2021), leaving COPF members to rely on the Treasury itself (Participant 3, 4).

On the other hand, the original purpose of the Sectoral Oversight Committees (SOCs), introduced in the 19th Amendment, was to increase the level of scrutiny on legislation and policy before it is enacted, with the involvement of subject experts, civil society actors and other pressure groups (Jayathilake and Tennakoon, 2021). This was a move towards a more accountability-based committee system (Participant 2). However, in reality, the SOCs do not perform this function as they have not yet been able to establish themselves in the institutional culture of Parliament (Perera, 2021). The weak committee system thus provided no means of questioning either policy. The power of the Executive over Parliament and its committee system therefore contributed towards a deterioration of a policy environment with the necessary checks and balances to prevent the enactment of policies that directly contributed to the crisis.

5. Horizontal Accountability in Fiscal and Monetary Policy

Interference of the Executive in the functioning of both fiscal and monetary policy has been observed for a few decades. The concentration of power in the Executive Presidency, particularly when combined with control of the Finance Ministry portfolio, has severely weakened horizontal accountability in Sri Lanka. As noted by one interviewee, this merging of roles creates an 'absolute power' situation that exacerbates existing planning deficiencies since neither position receives the full attention it demands (Participant 4). Playing this dual role leads to inadequate policy evaluation (Participant 4). This concentration of power worsens policymaking as it diminishes the role of Cabinet, the Treasury bureaucracy and the CBSL while propping up the Treasury Secretary as an unelected Finance Minister. Fiscal dominance in monetary policymaking was aided by the Treasury Secretary's ex-officio seat on the Monetary Board.

5.1 Fiscal Policy - Kicking the Can Down the Road

After the tenure of the first President under the semi-presidential system, there has been growing interference of the Executive in the Finance Ministry (Moore, 2017). This was mostly in the form of the 'absentee Finance Minister arrangement' and it can be directly linked to Sri Lanka's decades-long battle with low tax revenue (Moore, 2017). Simply put, Sri Lanka's Finance Ministry, except in a few periods such as 2015–2019, was either directly under the portfolio of the Executive President or had a nominal Minister of Finance. The trend of absentee Finance Ministers coincides with the decline in tax revenue, pointing towards a significant correlation (Moore, 2017). While running persistent budget deficits created the need to raise revenue, political imperatives took precedence over revenue collection (Kelegama, 2006). Over time, this meant prioritising consumption patterns of the growing middle class who had become the key voter bloc in national elections (Fernando and Moramudali, 2024).

There was a general consensus in the KII that the President holding the Finance Ministerial portfolio compromises the role of the Finance Minister and the Treasury (Participant 1, 2, 3, 4, 5). One of the participants likened the combination of the role of the President and the Finance Minister to a corporation in which the CEO was also the CFO (Participant 3). The logic holds that, while the President and Cabinet are responsible for the overall development of the country, there must be a Finance Minister who is directly responsible for its fiscal health. The President faces significant lobbying and pressure from various interest groups, and must carefully balance these competing demands (Participant 3, 5). In contrast, a Finance Minister would not be subjected to the same level of political pressure, allowing for more sound decision-making (participant 5). This structural difference means a Finance Minister is both more likely to implement tough but necessary fiscal policies and be better positioned to serve as a check on imprudent spending. Importantly, the Finance Minister role provides a crucial safety valve; if unpopular measures backfire, the Minister can be replaced without destabilising the entire government (Participant 5). This distinction serves as an important check and balance, promoting greater fiscal prudence.

Historical comparisons reveal the importance of strong, independent Finance Ministers. Ronald 'Ronnie' de Mel's (Minister of Finance from 1977 to 1988) tenure is a rare example of effective fiscal leadership, where decisions were made from a macroeconomic perspective rather than political expediency (Participants 2, 3, 4, 5). President Jayewardene's own experience as Finance Minister may have informed his willingness to maintain this check on Executive power. Subsequent Presidents have typically kept the finance portfolio, eliminating this critical balance.

The separation of the Finance Ministry portfolio does not always yield different results, as was the case during the tenure of Ravi Karunanayake (2015–2017)⁵. However, the tenure of Finance Minister Mangala

⁵ Karunanayake was moved from the Finance Ministry post to Foreign Affairs in the wake of corruption allegations and eventually resigned from the Foreign Affairs post on August 10th, 2017.

Samaraweera (2017-2019) saw the implementation of major, unpopular fiscal reforms, including the landmark Inland Revenue Act of 2017 (IRA). During this period, President Srisena gave his own independent Cabinet observations, providing an additional check and balance (Participant 4). When compromises are needed in key legislation such as the IRA, it is easier for these to be made between a Finance Minister and another Cabinet Minister, rather than if a Minister were to negotiate with the President. (Participant 3). Cabinet is the place for such quiet dissent but Cabinet itself is compromised because of the overarching power of the Executive President (Participant 1, 2, 3). The Cabinet, which should serve as a forum for collective policy deliberation, has instead become a rubber-stamp body. Policy is approved by the President first, then ceremonially endorsed by Cabinet (Participant 4). This points to the absence of meaningful political collegiality in the Cabinet (Participant 2). Playing the dual role of President and Finance Minister has eroded the ability of the Cabinet of Ministers to provide policy checks and balances.

The 'absentee Finance Minister' also gives rise to influential Secretaries to the Treasury (ST) who became de facto Finance Ministers answering directly to the President (Participant 2, 3, 4). The result of this usually is that the role of finance lacks political ownership or accountability, as it is not held by an elected representative (Participant 3). This is especially true of the presidencies of Kumaratunga and Mahinda Rajapaksa when P. B. Jayasundara was the ST for a majority of that period⁶. After multiple public service reforms starting in 1963 with the abolishment of the CCS, the Sri Lankan bureaucracy has been highly politicised and weak in capacity (Somasundram, 1997). This weakening has run in parallel with the strengthening of the Executive Presidency, specifically in relation to the Office of the Minister of Finance and the Treasury bureaucracy. Thus, the Treasury's role as an independent evaluator has also been compromised. While Treasury departments are obligated to provide professional assessments of Cabinet proposals, their effectiveness depends heavily on the leadership of the ST (Participant 3). Overly centralised power in the ST position can stifle dissenting technical voices (Participant 3). When Treasury departments are not empowered to provide honest Cabinet observations, unsound policymaking increases (Participant 3).

This lack of horizontal accountability in fiscal policymaking was seen quite clearly in the prelude to Sri Lanka's economic crisis. Both the Treasury and Cabinet proved unable to hold the Executive Presidency accountable, with their institutional weakness becoming evident through the failure to prevent policy errors that contributed to default. The situation deteriorated particularly during 2019-2022, under President Gotabaya Rajapaksa's administration. During this period, the facade of the absentee Finance Minister was even thinner. The two Finance Ministers who served during President Gotabaya Rajapaksa's tenure were his brothers, Mahinda Rajapaksa and Basil Rajapaksa. In the case of the latter, his appointment was controversial as he was brought into Parliament through a vacated 'National List' seat despite being previously disqualified by virtue of his dual citizenship (CPA statement on the constitutionality of the SLPP National List Appointment, 2021). It is this level of Executive interference that allowed for the disastrous reversal of the much needed fiscal consolidation programme.

During this critical juncture, fiscal authority became fully delegated to technocrats while political authorities demonstrated neither expertise nor willingness to consider external advice (Participant 3). The bureaucracy effectively shielded the President, who was reportedly caught by surprise when the crisis erupted in 2022 (Participant 3). This dysfunctional dynamic was exacerbated by the absence of an independent Finance Minister with a purely fiscal mandate; a safeguard that might have helped avert the default (Participant 3).

Without a Finance Minister or Treasury bureaucracy to hold the Executive accountable, there were no safeguards against pursuing short-sighted policies. With a weakened tax base, Sri Lanka's external debt became unsustainable leading to credit rating downgrades that cut the country off from the international capital markets at the height of the COVID-19 pandemic (Fitch Ratings, 2022). Decision-making became increasingly insular, with a small group in the bureaucracy excluding Treasury departments from policy formulation (Participant 3, 5). P. B. Jayasundara, in his new role as the Secretary to the President, was one of the most influential policymakers at the time (Participant 3, 5). This lack of institutional checks ultimately enabled reckless fiscal policies that precipitated Sri Lanka's economic crisis.

⁶ Jayasundara was Treasury Secretary from 1999 to 2001 and 2004 to 2015. Jayasundara resigned from his position in September, 2008, after a Supreme Court decision implicated him in financial misconduct.

5.2 Monetary Policy – the Revolving Door

The lack of horizontal accountability controls exhibited by the CBSL in the lead up to the economic crisis and its direct contribution to the crisis are evident. The CBSL has been plagued with political appointees to the role of Governor and an overall lack of a clear separation between its monetary policy and the government's fiscal policy. Ensuring its independence to improve accountability was, in fact, a key reform under the current IMF programme (Jayasinghe, 2023). The Central Bank of Sri Lanka, Act of 2023 (CBSL Act), finally removed Treasury representation from the Monetary Board's governance structure. However, that this reform only materialised after the economic collapse demonstrated the dangers of political interference in monetary policy (Participant 3). The delayed implementation highlights how the economic crisis became the necessary catalyst for institutional safeguards that technocrats had advocated for years.

Attempts to strengthen CBSL independence through the new law faced repeated obstacles. In 2019, reform efforts collapsed due to lack of support from Treasury officials and the political establishment, despite backing from CBSL officials (Participant 3). While CBSL officials convinced then Finance Minister Samaraweera of the need for reform, the legislation failed to pass. The CBSL Act only became viable in 2023, under IMF pressure following the economic crisis (Participant 3).

Historically, the ST held a seat on the Monetary Board. This structural flaw meant monetary policy constantly accommodated fiscal positions (Participant 3, 5). Powerful STs like Jayasundara and R. Paskaralingam dominated monetary policy during their tenures (Participant 3). While the Monetary Board voluntarily adopted some reform measures between 2015–2019, such as abstaining from primary market purchases of Treasury bills, this fragile progress was subsequently reversed (Participant 5). A revealing incident occurred when the Secretary to the President directly instructed the Governor to disregard previous Monetary Board decisions, effectively dictating monetary policy (Participant 3).

Of the policies that had a direct result on the crisis, fixing the currency exchange rate was key. As a result of this, foreign remittances to the country depleted with a rise in the use of informal remittance channels (Jayasinghe, 2021). As a major source of foreign exchange, this severely weakened Sri Lanka's ability to keep servicing its external debt and pay for essential imports such as fuel (EconomyNext, 2021; Moramudali, 2022). That, coupled with insistence on continuing to service its external debt, eventually led to Sri Lanka defaulting on its external debt payments in April 2022.

There were two Governors of the CBSL during President Gotabaya Rajapaksa's tenure who were responsible for the critical monetary policy decisions: Professor W. D. Lakshman and Ajith Nivard Cabraal. Lakshman was appointed in December 2019, passing over senior bureaucrats from within CBSL. Cabraal, who had served in the same role during Mahinda Rajapaksa's Presidency, was first appointed as the State Minister of Finance, Capital Markets and State Enterprise Reforms. He resigned from this role and gave up his seat in Parliament to be appointed CBSL Governor in September 2021 (BBC News, 2022). The President's wide discretion in such key appointments is a feature of the Executive Presidency (Participant 2).

Cabraal was especially in denial regarding the country's long-term solvency issue till he resigned, insisting that Sri Lanka would find a 'homegrown' alternative to entering an IMF programme (BBC News, 2022; Nikkei Asia, 2022). The direct influence of the Executive on monetary policy is, of course, not new in Sri Lanka. Another flagrant disregard for the separation of fiscal and monetary policy happened in 2011 when President Mahinda Rajapaksa in his capacity as Finance Minister announced the devaluation of the Sri Lankan rupee in his budget speech (Hull, 2011). Such a policy decision falls squarely within monetary policy which is the domain of the CBSL.

Subsequently, both Governors, the Treasury Secretary and the Secretary to the President, who was himself Treasury Secretary during the previous Rajapaksa Presidency, were all named in fundamental rights petitions made against key government figures considered directly responsible for the economic crisis (NewsWire, 2022). These examples of extreme politicisation of the Treasury and the CBSL are less surprising when viewed through the lens of long-term decline of the public service. This is explored in depth in the next section. While these parallel institutions were not able to hold the Executive accountable, the Judiciary may still be able to provide accountability for the harmful policy decisions made. The consequences of those decisions are, however, irreversible and a clear example of a breakdown in horizontal accountability between parallel institutions.

These systemic weaknesses point to broader accountability failures in Sri Lanka's economic management. The erosion of independent checks, the collapse of meaningful Cabinet deliberation, and the politicisation of the Treasury and the CBSL have created an environment where fiscal and monetary decisions

increasingly reflect Executive preferences rather than professional consensus or democratic oversight. Without strong leadership and institutional empowerment, horizontal accountability mechanisms cannot function as intended, creating poor economic outcomes.

5.3 The Parallel Decline of the Public Service and its Consequences

The most significant parallel development to the centralisation of power within the Executive Presidency was the decline of Sri Lanka's public service. By the time the policy decision of the 2022 default was made, the autonomy of the public service was almost wholly absent. Annual reports of key institutions, including the Ministry of Finance, the Inland Revenue Department and the CBSL, did not have any indication of the severity of the economic situation prior to the default. A long-term view of the public service showcases some of the reasons for its decline, particularly its dependence on the political class. Issues of technical capacities, though highlighted through the years, notably in the Administrative Reform Committee (ARC) in 1986, have remained unaddressed. The public service's loss of autonomy and capability explains why it was co-opted by politically aligned public servants in the period leading up to the sovereign default and economic crisis.

5.3.1 Ceylon Civil Service to the Sri Lanka Administrative Service

The CCS was an elite administrative service, established in Sri Lanka (then Ceylon) during British colonial rule, that functioned separately from the rest of the government administrative services. The CCS continued to play a vital role in the country's administration and policymaking after independence in 1948, till it was abolished in 1963 and replaced by the Ceylon Administrative Service (CAS) which was later called the Sri Lanka Administrative Service (SLAS) after the country became a republic in 1972. I have chosen to focus on the replacement of the CCS with the SLAS which showcases a reform of a Mandarin model of bureaucracy (Nadarajah, 1997) for the purpose of removing elitism and the colonial legacy of the civil service. This case study looks at the outcomes of the abolishment of the CCS and subsequent reforms till the 1990s, especially in light of the conversation around New Public Management practice.

The decades-long view gives a clear picture of the far reaching consequences of the abolishment of the CCS, particularly in relation to the loss of capability and acute politicisation of the bureaucracy. I argue that the CCS reform must also be looked at in the context of the rise of Sinhala ethnonationalism with some major reforms that contributed towards the 'Sinhalisation' of the state. The replacement of the CCS with the SLAS does not in fact follow any one model of bureaucratic reform and the result of it was a highly politicised bureaucracy that was resistant to any further reforms (Wanasinghe, 1994). The style of bureaucracy that emerged as a result did not embody the 'continuous, predictable and rule-governed' nature of a Weberian-style bureaucracy (McCourt, 2013). I argue that while the reforms were made under the guise of decolonisation and the breaking down of elitism, Sri Lanka actually created a bureaucracy dependent on, and often beholden to, the political establishment as part of a larger move towards Sinhala nationalism.

5.3.2 Elite and Elitism

The CCS was an elite public service characterised by their systematic modes of selection and induction which were broken down over the years when the SLAS was established (Somasundram, 1997b). Their yearly intakes were between five to eight cadets who were generally between the ages of 22 and 24, who were chosen through a rigorous examination and interview process which is in line with other Mandarin-style bureaucracies (Somasundram, 1997a). The CCS also had an induction and training programme to establish an 'esprit de corps' among the cadets and prepare them for their civil service careers. Somasundram recounts that any civil servant visiting the capital of Colombo, even for personal reasons, was expected to pay a call on the Secretary to Treasury who was head of the civil service (Somasundram, 1997b). This kind of practice exemplifies the CCS's status as a Mandarin bureaucracy while at the same time confirming its inherent elitism. A 'well devised career development programme' existed for cadets to incentivise better performance (Nadarajah, 1997) and a mentoring programme ensured that cadets had regular contact with senior bureaucrats (Somasundram, 1997b). These modes of selection and induction ensured that CCS maintained a 'single cultural frame' (Somasundram, 1997b).

These features were essential to maintaining a high standard within the CCS and remaining attractive to top-tier university graduates. Much like other former British colonies, Sri Lanka's civil service was not only the most prestigious form of employment but also the only secure form of employment (Kearney and Harris, 1964). However, these were the same features that made it symbolic of elitism to the point that Somasundram says CCS officers were accused of being 'Brahims' (Somasundram, 1997b). In fact,

the Wilmot A. Perera Commission of 1959–61 called for a unified administrative service because of the structure of CCS (Nanayakkara, 2015). Prior to the establishment of the CAS, there were two classes of officers in the public service which separated the CCS from all other officers. The non-CCS officers included Divisional Revenue Officers, District Land Officers, Land Development Officers, Assistant Commissioners of Local Government, etc. The differentiation extended to salary levels and promotion prospects which the Wilmot A. Perera Commission described as "a 'caste' system which, besides being a constant source of irritation and discontent, has created a division in an important level of the Public Service" (Wilmot A. Perera Commission, 1961). The CCS also could not disconnect itself from its colonial heritage and was not in line with the politics of decolonisation that prevailed at the time of its abolishment.

The 1956 election of the left-wing nationalist Sri Lanka Freedom Party (SLFP) especially brought with it an ethos of egalitarianism which eventually led to the dismantling of the CCS (Nadarajah, 1997). While the reasons for the abolishment of the CCS and the changes to its recruitment mechanism were supposed to make public service more accessible and less elitist, there were many unintended consequences. The modes of selection and induction were changed to fit the ethos of egalitarianism and by the 1990s yearly intakes increased to approximately a 100 cadets and their average age was 31. The process of induction became less rigorous and was eventually abandoned (Somasundram, 1997b). Even a mechanism publishing the significant career highlights of civil servants called the 'Civil List' was abolished in the 1960s as it was deemed too elitist (Nadarajah, 1997). By 1992, political interference in the SLAS induction had become so prevalent that three cadets made representations to a Cabinet Minister claiming that the one year induction period was too long and unnecessary. The cadets did not attempt to bring up this issue with the CCS Director but personally contacted the Minister first. The Minister issued an order in favour of the cadets despite opposition by the CCS Director. All the SLAS cadets were given appointments in the civil service despite their mandatory induction remaining incomplete (Somasundram, 1997b).

The consequences of these fundamental changes were the significant loss of capability of the SLAS. The civil service was no longer able to attract the same calibre of cadets (Somasundram, 1997; Nanayakkara, 2015). They were also not in a position to advise elected leaders on policymaking and instead were reliant on the political establishment for security in their careers. This is in direct contrast to the kind of reforms seen in the post-independence era where the focus was on building capacity and moving towards a more Weberian style administration (McCourt, 2013). The most significant diversion is the separation between politics and administration which was eroded after the abolishment of the CCS. The changes in the modes of selection and induction thus eventually led to severe politicisation of the civil service.

5.3.3 The Politics of Administration

The CCS was not without its politicisation but its abolishment saw a significant loss of autonomy of the civil service. This was mostly due to the fact that the SLAS did not follow the same model of a permanent public service. Previously, civil servants could only be removed through due process. This meant that there had to be a legitimate reason such as inadequate performance or a transgression that required disciplinary action. However, SLAS officers were almost entirely reliant on politicians for their career progression and security. This was due in no small part to changes to the Public Service Commission and mechanisms such as the 'pool' under the Ministry of Public Administration. The Public Service Commission (PSC) was abolished under the 1972 Republican constitution and the power over the civil service was given to the Cabinet of Ministers. The PSC had previously had the authority over all appointments, transfer and disciplinary actions of the public service to ensure a 'competent and impartial public administration' (Nadarajah, 1997, p. 258)

This kind of radical reform would not have been possible had the civil service not already been disempowered by the previous public sector reforms. The 'pool' mechanism was a particularly demoralising tactic whereby politicians could transfer out officers without due process into the pool. While the officers still drew their salaries, they were not assigned to another post. This was seen as a humiliating mechanism used to exert control over SLAS officers by politicians (Somasundram, 1997b). Even proponents of the SLAS admit that the use of the pool has made the public service subservient to the ruling party with changes in government often leading to large-scale transfers of SLAS officers (Nanayakkara, 2015). Nanayakkara also notes that the 18th Amendment allowed the Executive Presidency to exert more pressure on the selection of senior public servants⁷. The ARC, too, observed the partisan control over public servants that reduced morale, accountability and transparency (Kelegama, 2006).

⁷The 18th Amendment gave direct Presidential discretion in appointing for high-level positions including those in the independent commissions. Prior to the amendment there was a Constitutional Council which had to formally approve nominees for independent commissions, whereas its replacement, the Parliamentary Council, was limited to making non-binding recommendations.

Another development occurred through the Republican Constitution in 1972 which saw the further debasing of the SLAS. One reform was the change of Permanent Secretaries to Secretaries. This was not merely nominal but fundamentally altered the relationship between bureaucrats and politicians. Secretaries were previously independently responsible and directly held accountable to the Public Accounts Committee of Parliament but were now no longer under that level of scrutiny (Somasundram, 1997b). This made it easier to compromise on the demands of politicians. The interplay between politics and administration was significant in the SLAS and often was at the expense of state efficiency and effectiveness. The politicisation of the civil service was a boon to politicians not only because the civil servants lacked the independence to oppose them but also because it opened up avenues for further job creation in the public sector. McCourt notes that the 'deep-seated political patronage' (McCourt, 2013) seen in the Sri Lankan public sector played a major role in the failure of multiple public sector reforms. Thus, the move from a Mandarin-style bureaucracy to the highly dependent and politicised SLAS must be viewed within Sri Lanka's larger political context.

5.3.4 How Public Service Reforms Undermined Governance

The abolishment of the CCS and the establishment of the SLAS exemplifies a reform that attempted to decolonise and break the elitism within a Mandarin-style model of bureaucracy. The outcomes of this reform was the loss of capability, autonomy of civil servants and pervasive politicisation of the bureaucracy. The systematic modes of selection and induction of the CCS were replaced with less rigorous, and often ad-hoc, mechanisms. This came at the severe cost of the quality of administration and the ability of the civil service to function independently of the political establishment. Subsequent reforms worsened the level of autonomy of the civil service by decreasing transparency in the appointment and transfer processes of civil servants. The disempowered SLAS thus became an appendage of the political class and, as a result, administration and policymaking lacked the continuity that exemplified a Weberian bureaucracy. The absence of accountability that this engendered within the bureaucracy continues to this day and subsequent attempts at reform have been to no avail (McCourt, 2013). The reforms must also be understood within the larger context of Sinhala ethnonationalism, which, through efforts like the 1956 Official Language Act, effectively excluded Tamil and Burgher minorities from the civil service despite rising Sinhalese representation in both the public sector and universities. The reforms that led to a drastic shift in the power dynamics between civil servants and politicians in Sri Lanka not only benefitted politicians but also the non-English speaking Sinhala populace. The lack of horizontal accountability from the public service in the wake of policy decisions leading up to Sri Lanka's 2022 default is, thus, unsurprising.

6. Conclusion – Sri Lanka's Third Deficit

Sri Lanka's democratic backsliding under the deposed President Gotabaya Rajapaksa created a policy environment in which economic and public finance decisions went unscrutinised by state institutions. Much like in O'Donnell's original text, it is the lack of horizontal accountability (O'Donnell, 1999) that makes Sri Lanka an interesting case to study. It is also insightful as it provides important linkages between unsound economic policymaking and the centralisation of power. This is, however, not a new problem for Sri Lanka, as displayed through the various undemocratic practices that have shaped its Parliament, specifically its parliamentary committee system, the Cabinet of Ministers, the Ministry of Finance and the CBSL. The country's history of hyper-presidentialism also ran in parallel to its declining public service. As the institutions that would be directly responsible for providing checks on the Executive were unable to do so, several economic and public finance policy decisions were made on a populist and short-sighted basis.

The susceptibility of the overmighty Executive Presidency (Welikala, 2015) to populist demands is demonstrated across presidencies. This is a direct subversion of J.R. Jayewardene's proclaimed intention for the institution. Sri Lanka's issue of twin deficits persisted and worsened despite the Executive President wielding unprecedented power. The problem stemmed from a toxic combination of populist politics and deeply entrenched public expectations that reinforce each other, making fiscal discipline exceptionally challenging to maintain. The pattern becomes particularly evident when examining fiscal policy slippages, which consistently occur around election cycles as politicians prioritise short-term electoral gains over long-term fiscal stability (Fernando and Moramudali, 2024). Sri Lanka's accountability deficit highlights that true democratic resilience hinges not solely on the regularity of free and fair elections but also on the robustness, integrity, and autonomy of checks and balances.

Thus, it is evident that the persistent twin deficit problem has a sibling in the form of an accountability deficit. It can be argued that the government was trying to 'save face' by not reversing policies that were causing considerable harm and that it was not a lack of accountability that allowed them. However, this is exactly the kind of government behaviour that stronger parallel state institutions could have prevented had there been mechanisms for horizontal accountability. There have been bids to create more avenues of horizontal accountability such as the 19th Amendment's attempt to strengthen the parliamentary committee system as a critical entity in executive oversight. However, the constantly changing nature of their (committees) status under the Constitution have made their integration into the political system unsuccessful. Growing, blatant Executive interference in fiscal and monetary policy has compromised Sri Lanka's economic health for decades, culminating in the economic crisis.

With the current IMF EFF programme and the economic reform agenda underway, it is imperative that Sri Lanka fixes its governance issues to keep the country on the correct track. The 21st Amendment to the Constitution has been hailed as a step in the right direction but, as Sri Lanka's tumultuous history of constitutional amendments has shown, there is no assurance of stability. Further, it should be noted that the latest amendment does not expand on the functions of the parliamentary committee system nor does it prevent the Executive from taking on the Finance Ministry portfolio. There is still room for the same level of discretion that has evolved over many decades, and democratic institutions lacking in horizontal accountability. Legislative reforms such as the new Public Financial Management Act, the Parliamentary Budget Office Act, the Public Debt Management Act and the Central Bank of Sri Lanka Act will ensure better oversight and fiscal outcomes, if implemented fully. The current President Anura Kumara Disanayake, however, still holds the portfolio of the Finance Ministry, demonstrating the continued institutional dominance of the Executive Presidency. For too long has there been a notion that good governance must sometimes be sacrificed for the sake of economic reform. However, persistent, unsound, short-sighted, economic policymaking shows the inherent contradiction in such a notion. If Sri Lanka is to recover from its current crisis and prevent similar crises in the future, it will have to first close its accountability deficit.

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Watch the discussion

