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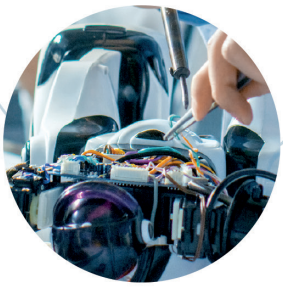
STRENGTHENING ACTIVE LABOR MARKET POLICIES TO DRIVE AN INCLUSIVE RECOVERY IN ASIA



Edited by Linda Arthur and Derek Hondo

ASIAN DEVELOPMENT BANK INSTITUTE

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ABBREVIATIONS

4IR	Fourth Industrial Revolution
ADB	Asian Development Bank
ALMP	active labor market policy
COVID-19	coronavirus disease
CTS	Craftsman Training Scheme
DTET	Department of Technical Education and Training (Sri Lanka)
FVT	formal vocational training
GCE	General Certificate of Education
GDP	gross domestic product
ICT	information and communication technology
ILO	International Labour Organization
IPS	Institute of Policy Studies
ISCO	International Standard Classification of Occupations
ITI	industrial training institute
IVT	informal vocational training
KMO	Kaiser Meyer Olkin
LFPR	labor force participation rate
LFS	Labor Force Survey
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act (India)
NEET	not in employment, education, or training
NESDC	National Economic and Social Development Council (Thailand)
NIE	National Institute of Education (Sri Lanka)
PLFS	Periodic Labour Force Survey (India)
SC	scheduled caste
ST	scheduled tribe
STEM	science, technology, engineering, and mathematics
TEWA	Termination of Employment of Workmen (Special Provisions) Act (Sri Lanka)
TVET	technical and vocational education and training
UR	unemployment rate
VTI	vocational training institute
VTP	vocational training program
WPR	worker population ratio

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INTRODUCTION

Linda Arthur and Derek Hondo

The coronavirus disease (COVID-19) pandemic caused unprecedented employment losses. The United Nations estimates that the pandemic has led to the loss of the equivalent of 255 million full-time jobs, which is four times the number lost during the global financial crisis. Lower middle-income countries, many of which are in the Asia and Pacific region, were severely affected, due to large numbers of youth, women, informal workers, and returning migrant workers, who were the hardest-hit groups. Massive cash transfer programs were mobilized in an effort to stabilize household incomes and stimulate demand for goods and services, but these programs were temporary crisis measures. Employment losses, however, have been lengthy, and may remain even after the pandemic recedes.

Compounding the problem of employment loss, the pandemic has also accelerated the digital transformation of work. Without reskilling or upskilling, many of the under- or unemployed will not be able to re-enter a transformed job market. While income support assisted low-skilled workers to maintain a basic living standard during the pandemic, it could not provide the skills needed to secure decent jobs. Indeed, emergency safety nets have already been phased across most countries in Asia, but there remains a pressing need for enhancing income-generating capabilities, especially for the least educated and most vulnerable segments of society.

Certain types of active labor market policies (ALMPs) can assist the recovery process due to their income-generating potential for the unemployed or underemployed, especially over the medium to long term. This is especially relevant for developing Asia, with vast numbers of informal and migrant workers facing prolonged or permanent job losses. Prior to the pandemic, however, and despite their potential, ALMPs were vastly underutilized and underfunded throughout the Asia and Pacific region, averaging only 0.1% of aggregate gross domestic product.

ALMPs can be categorized into four groups according to their main objective: (i) retaining and/or creating employment; (ii) seeking employment; (iii) human capital enhancement; and (iv) improved labor market matching. ALMPs aim to keep workers employed or provide them with employment opportunities, which will increase both household earnings and economic output. As economies struggle with mounting inflation, brought on in part by large financial stimulus packages, middle-income countries may need to evolve their social protection systems to rely less on cash transfers for long-term support, shifting instead to income-enhancing programs.

This policy report looks primarily at the potential for human capital enhancement ALMPs to assist post-pandemic employment recovery for the most vulnerable, including women and youth. The pandemic has reversed progress among developing economies toward Sustainable Development Goal 8, which aims to achieve full employment and decent work with equal pay for all. ALMPs may hold potential to offset pandemic employment losses by upskilling and retraining. In addition, governments may use ALMPs to stem the alarming increase in youth not employed, in school, or in training. In this way, governments can utilize ALMPs to ensure a sustainable and more inclusive recovery.

Strengthening Active Labor Market Policies to Drive an Inclusive Recovery in Asia brings together submissions from a call for policy papers conducted by the Asian Development Bank Institute in 2021. The report investigates the impact of the COVID-19 pandemic on employment of vulnerable groups in developing Asia, particularly the informal economy, which includes women, youth, and migrant workers. It explores inclusive ALMPs that could support recovery through stimulating labor demand, helping vulnerable groups find decent work, and preventing excessive unemployment.

The report also examines the barriers these groups encounter, in their access to technical and vocational education and training (TVET) and subsequently decent work opportunities, which hinders their social and economic well-being. Experts from academia, government, and research institutes provide policy recommendations for strengthening ALMPs, including TVET, to build a skilled workforce that can drive an inclusive and sustainable recovery.

Part I consists of three chapters that focus on building ALMPs in developing Asia. Authors provide country-specific case studies that highlight the need for strengthening the labor force and better preparing youth to ensure long-term labor force participation and sustainable economic growth beyond the pandemic.

Chapter 1 by Poongothai Venuganan highlights the fault lines in Sri Lanka's human capital base and how it can be strengthened to increase economic growth. The chapter gives an assessment of the country's human capital base pre-pandemic and how it evolved during the pandemic. These findings serve as a foundation to understand the linkages between socioeconomic outcomes and, thereby, economic activity. Next, existing fault lines are identified and analyzed to gauge the impact of the pandemic on the potential of the existing human capital base and its impact on the future productivity of this key resource, amid other ongoing developments such as the government's commitment to the creation of a "production economy" amid a rapid digital transformation, the Fourth Industrial Revolution. Policies should also prioritize science, technology, engineering, and mathematics (STEM) and digital literacy within the education system to keep up with this digital transformation and changing demands of the economy.

Chapter 2 by Partha Pratim Mitra discusses ALMPs in India and the role that education and other training programs play in enabling people to find decent work. Those with higher qualifications (e.g., postgraduate degrees and certificate and diploma holders) remain in the labor force despite adversity in labor market conditions. On the other hand, those lacking higher qualifications faced difficulties in finding jobs or were forced to withdraw from the labor force. Addressing these issues will require policies that effectively combine ALMPs with governance factors and closer collaboration with local governments for more equitable distribution of resources and scaling up such programs. As in the case of Sri Lanka, the education system also needs to be more skills-oriented and better linked with jobs so that vulnerable groups within the labor force are more resilient during times of crises.

Chapter 3 by Indrajit Bairagya analyzes the differential impact of vocational training on the earnings of different types of employment in India, categorized into four groups: self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment. Nearly half of the working-age population is unemployed or not in the labor force: 14.9% in educational institutions and 34.85% in the "not-in-employment, education, or training" (NEET) category, suggesting that there is a lack of sufficient ALMPs. Even after receiving formal vocational training, a substantial proportion remains unemployed or not in the labor force. Those who are working and formally trained tend to engage in formal employment and self-employment more than informal employment. Although both formal and informal vocational training positively impact employment participation and earnings, a heterogeneity is observed in terms of their effectiveness across different earnings quantiles. Effective policies are necessary to ensure that formal and informal vocational training are significantly effective across all quantiles of the four employment categories.

Part II consists of two chapters that focus on youth employment and the role of TVET programs in upskilling and preparing youth for better jobs. Country examples highlight the impact of the pandemic on youth employment and how improved access to TVET with assistance from the government could increase decent work opportunities for youth.

Chapter 4 by N. P. Dammika Padmakanthi explores the challenges youth encounter with employment in Sri Lanka, due in large part to the significant number of students dropping out of formal education and limited access to vocational training programs. Vocational training leads to increased employability and highly influences income increases in two ways: the ability to demand a higher salary and the ability to diversify their income-generating activities. However, unemployed youth are unwilling or unable to enroll in vocational training programs to enhance their skills because of financial difficulties, low education, negative personal attitudes, and other institutional factors. Therefore, they are constrained to working in the informal sector or remain unemployed. Strengthening public–private partnerships, improving the quality and quantity of the training programs, reexamining entrance qualifications to make them more attainable, and introducing new programs targeting females are among the important policy recommendations presented in this chapter to overcome the barriers of obtaining the vocational training and boosting the decent work opportunities.

Chapter 5 by Sasiwimon Warunsiri Paweenawat and Lusi Liao provides an overview of youth employment in Thailand and how the pandemic could generate a "lockdown generation" with long-term repercussions on future economic development. Prior to the pandemic, young workers already had a high unemployment rate, and the situation was only exacerbated once the pandemic hit. When compared to other global crises, the COVID-19 pandemic had a more significant impact on young workers in Thailand, particularly female workers who were found to be more vulnerable. Young workers suffered significant job losses due to the higher-risk sectors they work in, less occupational flexibility, and the more unstable jobs they hold. To address these issues, the Thai government has implemented a job creation scheme targeting recent university graduates. Although there was a decrease in the unemployment rate of young workers, it is only a short-term solution. ALMP responses to the youth employment crisis need to be tailored to target a wider range of groups and ensure the sustainable incorporation of young people in the labor market.

This report provides a snapshot of the impact of the COVID-19 pandemic on employment from a sample of countries across developing Asia. Experts identify the barriers in accessing decent work opportunities and give policy recommendations on how governments can implement effective ALMPs such as expanding TVET programs to address these issues. In doing so, governments will be able to ensure a sustainable and inclusive recovery. Continued research is necessary to better assess the effectiveness and long-term benefits of investing in these types of policies.

PART I

Building Resilient Active Labor Market Policies

CHAPTER 1

Addressing the Fault Lines in Sri Lanka's Human Capital Base for COVID-19 and Beyond

Poongothai Venuganan[1]

1.1 Introduction

Over several decades, policy makers have lauded and cited Sri Lanka as a success story in relation to social and human capital development. The consistent commitment of consecutive governments to the provision of universal health care and education has enabled the country to be ahead of its regional peers in education, health, and gender parity outcomes. Hence, Sri Lanka had achieved several of the Millennium Development Goals much ahead of the target year of 2015 and had remained ahead of its South Asian peers in its overall progress across the Sustainable Development Goals. This was also partly due to the resilience depicted by the Sri Lankan economy in the wake of adverse global and domestic macroeconomic conditions in the past. Even during the period of conflict, the economy recorded negative growth of 1.5% only in 2001 followed by negative growth of 3.5% in 2020 as a result of coronavirus disease (COVID-19). The resilience of the economy enabled it to rebound in 2021 amid two fresh waves of COVID-19. Amid the ongoing unprecedented economic crisis, Sri Lanka is in a dire need to revisit its policies to assess means of regaining its growth momentum. Accordingly, an assessment of the status quo of Sri Lanka's labor market to assess existing "fault lines" and their post-COVID-19 status can provide policy insights that will be essential for a sustainable recovery over the medium term and also for the country's avoidance of the "middle-income trap", which is likely to emerge as a challenge over time.

1.2 Idiosyncratic Issues in Sri Lanka's Labor Market: Review of Seminal Research

In the past, Sri Lanka's double-digit levels of unemployment amid high levels of social development had been a subject of immense research interest. A review of seminal research conducted on Sri Lanka's labor market (Richards 1971; Seers 1971; Glewwe 1987; Alailima 1991; Rama 1994, 2003; Dickens and Lang 1995) shows the presence of several idiosyncratic and cross-cutting issues: extended job search and queuing for public sector jobs underpinned by family support, structural imbalance caused by a mismatch between the types of work that people are willing and able to do and the pattern of opportunities available, skills mismatch, and the presence of a "good" and "bad" jobs wedge stemming from the Termination of Employment of Workmen (Special Provisions) Act of 1971 (TEWA). A review of the aforementioned literature highlights that, although authors offer different perspectives on the listed issues and occasionally refute each other's findings, the underlying premise remains the same.

In recent years, although Sri Lanka has transitioned away from the issue of "double-digit" levels of unemployment and has achieved natural levels of unemployment, this has not translated into sustained levels of economic growth. The long-standing Okun's law (Okun 1962) postulates the presence of a negative empirical relationship between changes in the unemployment rate and changes in real output. A relatively stable empirical relationship wherein a fall in unemployment by a percentage point is

[1] The views expressed in this chapter are those of the author and do not necessarily reflect those of the Central Bank of Sri Lanka.

associated with an increase of approximately 3% in real gross national product was later discovered by Okun (1970). While several empirical studies find that Okun's Law holds in countries, the absolute value of the estimated Okun coefficient (which was estimated to be in the proximity of 3) tends to greatly vary based on the time and spatial samples under consideration. In the case of Sri Lanka, Lal et al. (2010) and Prabagar (2015) do not find any relationship between unemployment and gross domestic product (GDP) growth across the periods 1980 to 2006 and 2003 to 2015, respectively. However, Amarasekara and Venuganan (2018) conduct a provincial-level analysis across different unemployment measures from 1990 to 2016 and find that, from a broad perspective, the law weakly holds and appears to have strengthened in the post-conflict era, although not to the extent posited by Okun.

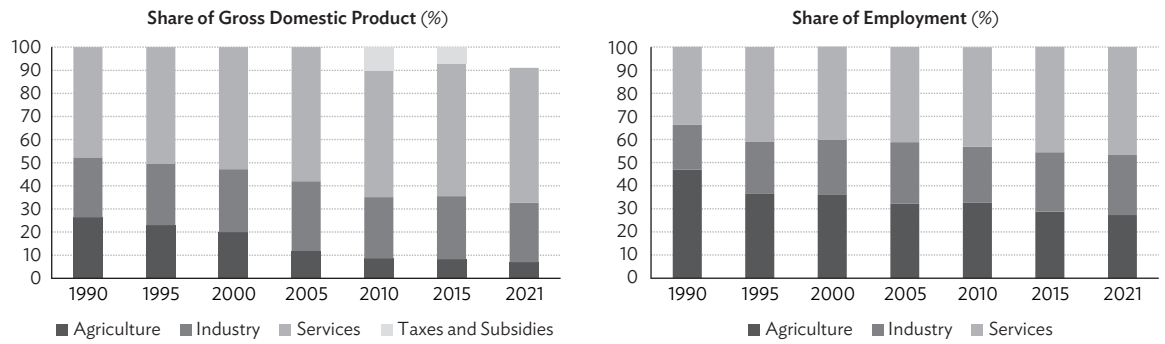
Another theoretical framework that may be reviewed in this regard is Arthur Lewis' model, which posits that when excess labor is engaged in a low productivity sector, such as agriculture, wage increases in the industrial sector are limited by wages in agriculture, as labor moves from the farms to industry (Lewis 1954). Accordingly, productivity gains that are realized in the industrial sector, particularly through increased investment, paves the way to raise employment in the industrial sector and across the economy. Productivity staying ahead of industrial wages contributes to the profitability of the industrial sector, which may be higher than if the economy was at full employment, thereby promoting higher investment. However, as agriculture surplus labor wanes, industrial wages tend to rise at a faster pace, thereby negatively impacting industrial profits and overall investment. At such a point, the economy crosses the Lewis Turning Point. Wignarajah (2018) notes that the development experience of Sri Lanka does not tally with this model. He notes the paradoxical combination of slow growth and labor scarcity, as reflected by the low unemployment rate.

1.3 Challenging Labor Market Trends

1.3.1 Sectoral Contribution of Employment

It is a well-known fact that Sri Lanka's economy has undergone a structural transformation from an agricultural economy into one that is largely dominated by the services sector (Figure 1.1). Despite the rapid decline in the agriculture sector's contribution to GDP, the share of the labor force engaged in this

Figure 1.1: Comparison of Sectoral Contribution to Gross Domestic Product and Share of Employment



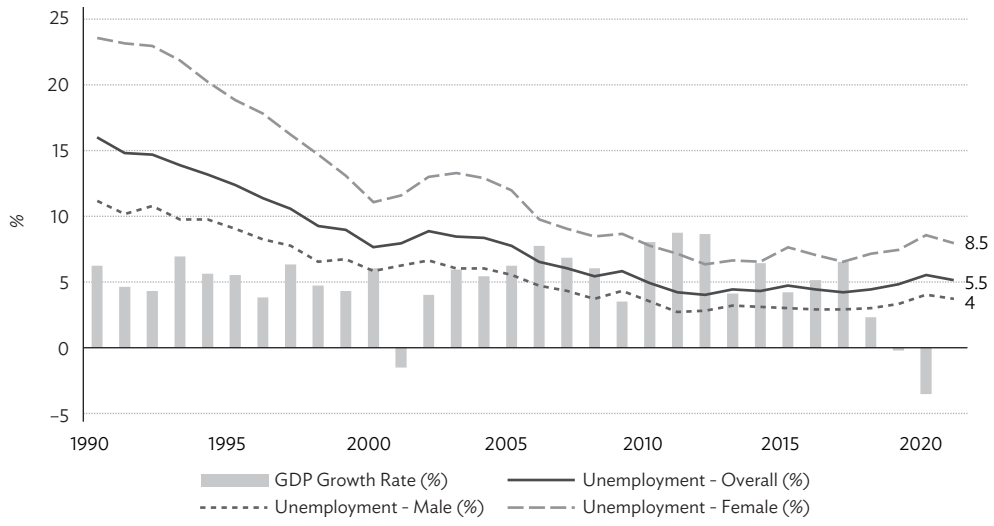
Source: Department of Census and Statistics.

sector is alarmingly high. In the post-conflict era, from mid-2009 onward, almost 30% of the employed were engaged in producing roughly 7% to 9% of GDP. This underlines the presence of significant productivity issues among those engaged in this sector. This trend is of a much more grave concern in certain provinces such as Central, Sabaragamuwa, and North Central where the share of employment in the agriculture sector is almost three times as high as the agriculture sector's share of GDP.

1.3.2 High Levels of Female Unemployment

When assessing unemployment, Sri Lanka seems to have attained almost natural levels of unemployment having recorded a post-conflict average of 4.5% and unemployment having increased over 5% for the first time in a decade, due to COVID-19 (Figure 1.2). As noted before, despite the declines in unemployment, especially female unemployment, these declines have not spurred any significant improvements in the pace of economic growth, especially in recent years. Another disconcerting aspect is that although female unemployment had drastically fallen over the last 3 decades, it still remains at least twice as high as unemployment in their male counterparts even during the decade after the conflict.

Figure 1.2: Trends in GDP Growth and Unemployment



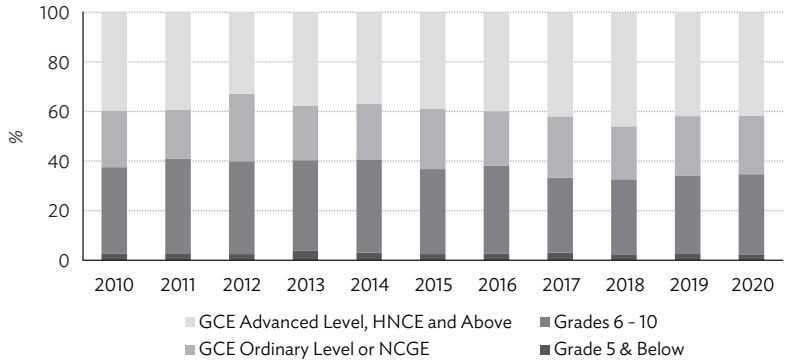
GDP = gross domestic product.

Source: Department of Census and Statistics.

1.3.3 Unemployment among Skilled Workers

As highlighted previously, Sri Lanka has undergone a significant economic transformation over 3 decades and the end of the conflict in 2010 entailed a significant boom in economic activity, especially in the industry and service sectors. However, despite this economic transformation and the consistent provision of free education, throughout the last decade, approximately one-third of the unemployed

Figure 1.3: Share of Unemployed Persons by Level of Education



GCE = General Certificate of Education, HNCE = Higher National Certificate of Education, NCGE = National Certificate of General Education.

Source: Department of Census and Statistics.

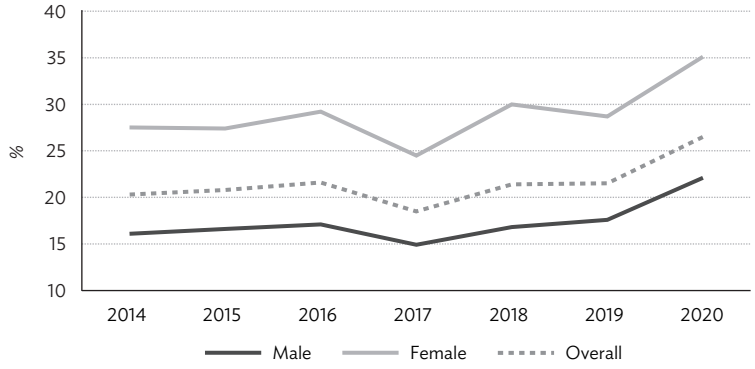
possessed educational attainment of GCE Advanced Level and above (Figure 1.3). This poses questions about the efficacy of educational outcomes, especially considering the universal provision of education in Sri Lanka up to GCE Advanced Level.

1.3.4 Youth Unemployment

The low levels of overall unemployment also mask an issue of significant socioeconomic consequence—youth unemployment (Figure 1.4).[2] In recent years, unemployment in younger age cohorts has been on the rise signaling serious deficiencies in the economy's ability to absorb this productive section of the population (Figure 1.5). In 2020, although overall unemployment in the age groups of 15–24 years and 25–29 years stood at 26.5% and 12.0%, respectively, unemployment in the succeeding age cohort of 30–39 years was just 3.5%. Another disconcerting aspect of this trend in youth unemployment is the higher levels of unemployment observed in those who possess higher secondary and tertiary qualifications, especially in the post-conflict period when the economy is noted to have undergone a significant transformation alongside a high growth episode. Youth unemployment highlights the presence of a substantial share of the population who are unable to contribute to the country's growth process while at their productive peak.

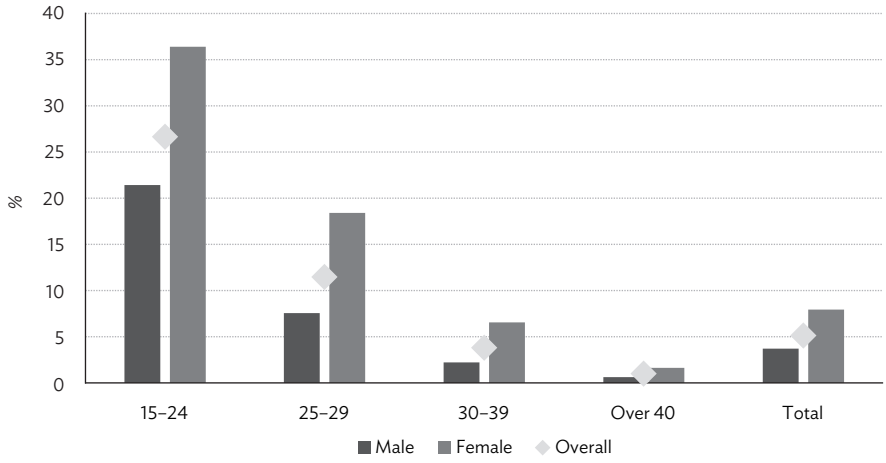
[2] Youth unemployment is the unemployed population in the age group 15–24 years as a percentage of the labor force in the same age group.

Figure 1.4: Recent Trends in Youth Unemployment



Source: Department of Census and Statistics.

Figure 1.5: Unemployment Rate by Age Group, 2021

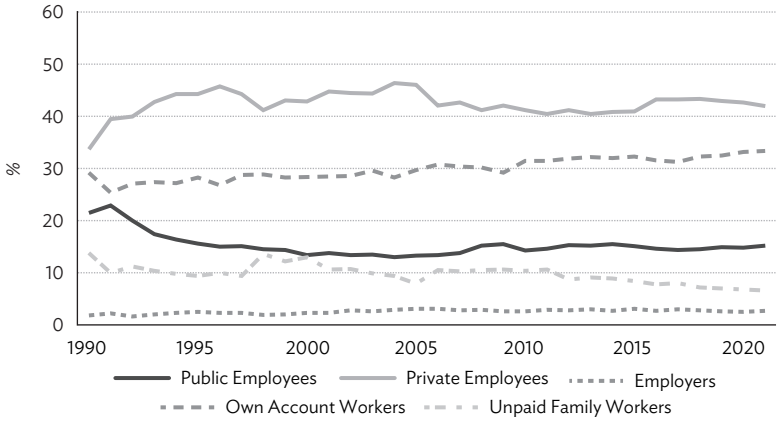


Source: Department of Census and Statistics.

1.3.5 Stagnating Levels of Public Sector Employment

Having reviewed unemployment trends, it may also be appropriate to review the composition of those who are employed (Figure 1.6). Public sector employment registered a minor uptick in 1991 to 23% after which it slowly declined to 15% in 1996 and has remained at roughly the same level thereafter. During this period, the share of private sector employment had also seen a paced rise, after which it has also somewhat stagnated, especially since 2006. Despite Sri Lanka's economy's transformation into

Figure 1.6: Status of Employment, 1990–2020



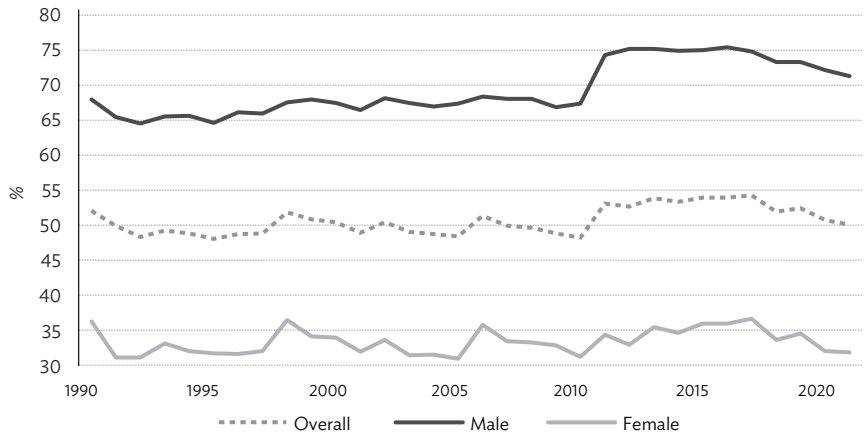
Source: Department of Census and Statistics.

a service-oriented one and the presence of dynamic and young Gen X, Gen Y, and millennial workers in the labor force, there has been no change in the strong preference for public sector jobs as seen over several decades. This could be a reconfirmation of the presence of a wedge between "good" public sector jobs and "bad" private sector jobs.

1.3.6 Poor Labor Force Participation

Another key aspect to be evaluated is the labor force. Poor labor force participation rates (LFPRs), alongside a demographic shift comprising low birth and death rates, have translated into the beginning of a phase of stagnation of the labor force (Figure 1.7). The Asian Development Bank and the International Labour Organization (ADB and ILO 2017) projected that the labor force will increase

Figure 1.7: Trends in Labor Force Participation



Source: Department of Census and Statistics.

only very gradually until 2028 and decline thereafter, assuming that the LFPR will continue to remain unchanged as has been observed in the past. Low levels of LFPR indicate the presence of a large section of unexploited labor resources that are not actively contributing to the growth process. Amid this issue, another pressing concern is the low female LFPR despite high levels of female literacy highlighting the underutilization of public investments made in this cohort of the population.

1.3.7 Recent Exodus of Skilled Workers

A particularly worrying trend in Sri Lanka that is yet to be fully investigated is the exodus of labor since the beginning of 2022, in the wake of the current economic crisis. During the period from January–September 2022, over 222,000 people had left the country for foreign employment, of which approximately 30% were skilled workers. It is to be noted that this number is likely to be higher when considering those who have permanently migrated amid these circumstances. As the majority, if not the entirety, of these workers would have benefited from the "free education and health" system, such migration is an irreparable loss to the economy in terms of the high levels of investment made which the economy has not reaped. While this exodus is triggered by the loss of macroeconomic stability, this trend of departures can cause a vicious cycle of worsening instability as continued outward migration will result in the continuous dwindling of skill availability and the economy's potential, leading to further deterioration of macroeconomic stability, which can trigger another round of accelerated labor exits and so on.

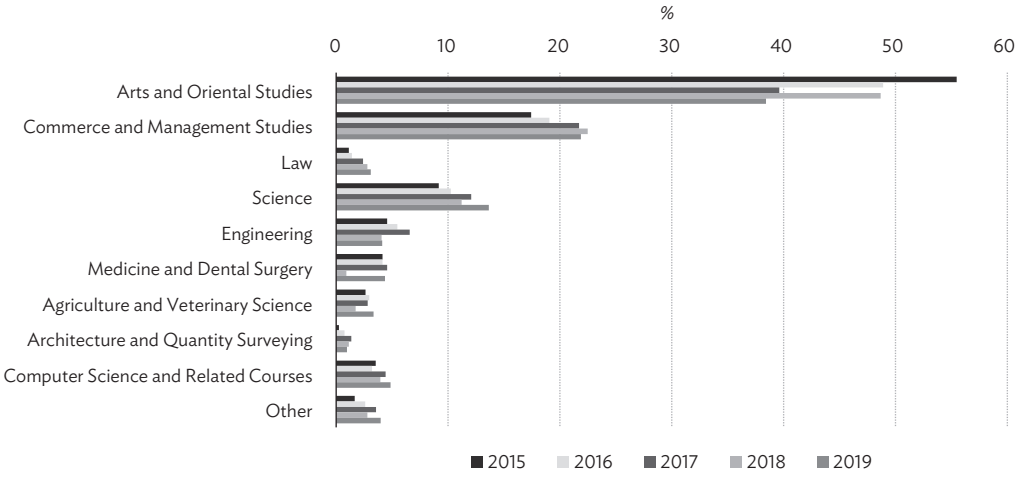
Further, as Sri Lanka's labor market provides little leeway for attracting foreign talent from elsewhere, this outward labor migration will likely hinder the recovery process in the near term and the subsequent progress of the economy into a middle-income one in the medium run. The implications of these are yet to be fully assessed as data sets in this regard are still limited.

1.4 Long-Standing Issues Relating to Sri Lanka's Human Capital Base

1.4.1 Skills Mismatch

The provision of universal health care and education since independence, amid several other economic constraints, enabled Sri Lanka to not only stay ahead of its regional peers in terms of social indicators but also to serve as a "development success story" across policy circles internationally. Despite near-universal primary completion and high levels of secondary net enrollment ratios, the output of the tertiary level education is low with approximately 26,000 undergraduate students and 10,000 postgraduate students being produced by the existing public university education system. The public education system in Sri Lanka has very limited opportunities. For instance, in 2021, although approximately 62.4% of those who sat for the General Certificate of Education (GCE) Advanced Level examinations were eligible for university admission, only 22.5% were admitted into the public university system. Even though there has been some expansion in the admission capacity of universities, this has not alleviated the growing demand for tertiary education in the country. The system is also struggling with despairingly low levels of public expenditure on education. Over the past decade, average government expenditure on education has been approximately 2% of GDP. On the other hand, although there were 21 non-state higher education institutions in operation in Sri Lanka as at end 2020, these remain outside the ambit of many due to limited places and the high cost associated with such programs.

Figure 1.8: Composition of Government University Graduates by Discipline



Sources: University Grants Commission, Central Bank of Sri Lanka.

Numerous research studies and surveys confirm the persisting presence of a "skills mismatch" where the skill sets possessed by graduates and others with vocational training institutions are both insufficient and unaligned with the needs of the economy. Despite the recent structural transformation, the largest share of output of the public university system comprises graduates from the arts stream. From 2015 to 2020, only about 10% of total graduates were from the medicine and engineering streams and another 5% were graduates of computer science and other related courses (Figure 1.8). These are worrisome considering that Sri Lanka's current government policy direction is in the course of the creation of a production economy through export-oriented industrial transformation. With relatively low turnout of science, technology, engineering, and mathematics (STEM) qualified persons, it will be difficult for Sri Lanka to shift away from basic, low-value addition industries to more complex and niche industries in the upcoming years. Without such transformation, escaping the middle-income trap will be an extremely arduous task.

Issues in the education system are further reiterated by Sri Lanka's ranking of 66 out of 140 countries in the "skills" pillar[3] of the World Economic Forum's Global Competitiveness Index 2019 (Schwab 2019). This pillar assesses the general level of skills of the workforce and the quantity and quality of education. Sri Lanka's performance across the index asserts that the issue of skills mismatch remains unaddressed. This is further affirmed by the *You Lead Employer Survey 2018* conducted by Verité Research where 26% of the respondents stated that the lack of applicants with job-specific technical skills was one of the two largest obstacles faced during recruitment across all four priority sectors of construction, health care, information and communication technology (ICT), and tourism. An earlier comparative study of employers' perception of skills demand against the skills availability of the workforce (Dundar et al. 2014) highlights that the availability of the workforce who have passed Advanced Levels (AL) and Ordinary Levels (OL) as minimum qualifications is extremely low compared to the expectations of employers. Another disconcerting finding of the survey was that although 80% of employers

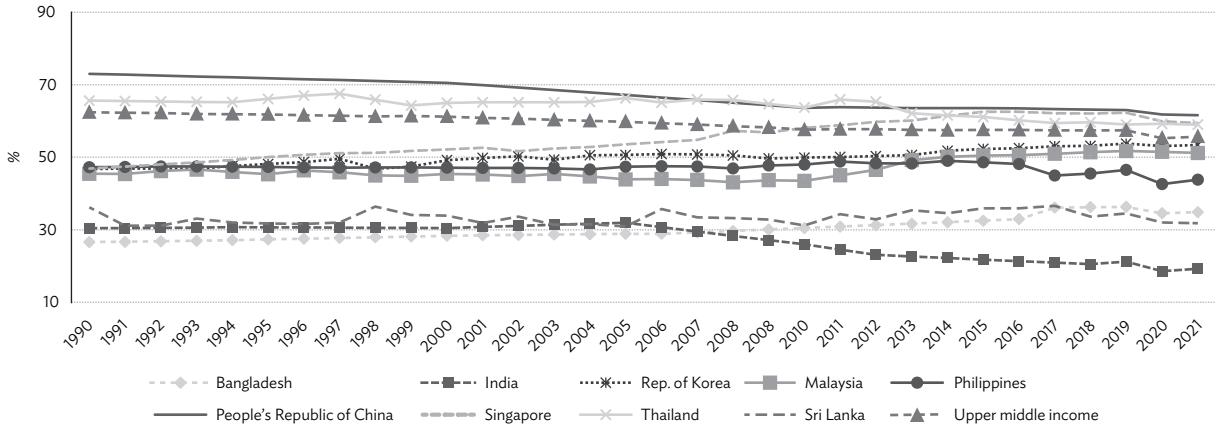
[3] The "skills" pillar (Pillar 6) of the Global Competitiveness Index 4.0 captures the general level of skills of the workforce and the quantity and quality of education. While the concept of educational quality is constantly evolving, important quality factors today include developing digital literacy, interpersonal skills, and the ability to think critically and creatively (Schwab 2019).

expected sound knowledge of English, only 20% possessed this essential language skill, whereas while 75% expected computer skills, only 15% of the population possessed these skills. Needless to say, this underpins the high prevalence of youth unemployment, especially among individuals who possess higher qualifications, despite the low levels of overall unemployment.

1.4.2 Stagnating Labor Force

Stagnating LFPRs complemented by a demographic transition characterized by low birth and death rates have caused Sri Lanka's labor force to remain largely unchanged. Low LFPRs signal the presence of a large pool of untapped labor who need to be urgently brought back into the labor force. This is especially applicable to the almost unchanged levels of female LFPRs over 3 decades despite high levels of female literacy. Further, despite having briefly graduated to "upper middle-income" status, Sri Lanka lies far below the average female LFPR of its peers in this income group (Figure 1.9). Given that women comprise 52% of Sri Lanka's population, such a significant share being absent from the workforce has a significant cost to the economy. It is estimated that raising the female LFPR to the average level observed in high-income countries could increase the overall labor force by 17%, which could offset the reductions brought about by aging (ADB and ILO 2017).

Figure 1.9: Global Female Labor Force Participation Rates



Source: World Bank. World Development Indicators (modeled ILO estimates).

1.4.3 Outdated Labor Legislation

Several pieces of research have repeatedly emphasized that institutional factors remain a key obstacle to employment in Sri Lanka (Gunatlilaka, Mayer, and Vodopivec 2010; Chandrasiri 2013). Chandrasiri (2013) notes that Sri Lanka's labor relations framework is highly regulated and centered on laws, rather than relations. Hence, the emphasis is on the settlement of disputes rather than their prevention. Sri Lanka's labor market is heavily regulated by an assortment of labor laws that cover aspects of work ranging from terms and conditions of work to layoffs—Sri Lanka is known to have one of the most costly severance pay systems in the world. Although this has translated into strong protection for employees in the formal sector, it has led to those in the informal sector being unprotected and exploited. Accordingly, several accusations have been levelled at the TEWA, which governs non-disciplinary termination

in private firms with more than 14 workers. The TEWA has been accused of hindering the flexibility of the labor market. The high levels of job protection afforded through the TEWA have prevented firms from altering their human resource capital in line with market volatilities. Accordingly, despite changes in aggregate demand, firms tend to continue to retain a suboptimal level of workers due to the associated high cost of severance pay, which in turn weighs negatively on the productivity of firms. It is estimated that a Sri Lankan worker with 2 decades of service would receive an average severance package equal to 39 months of wages compared with 16 months of wages in other Asian countries (IPS 2017). Stringent labor legislation also nurtures the high level of informality present in Sri Lanka's labor market. Firms choose to remain "informal" so as to remain outside the ambit of labor legislation, which enables them to retain their dynamism in terms of the ability to adjust the workforce according to their individual and market conditions. This gives rise to a large informal sector as the formal sector also tries to bypass reflected in almost 58.4% of those employed being in the informal sector in 2021.

1.4.4 Readiness for the Fourth Industrial Revolution

Countries around the world are now concerned about the impact of the Fourth Industrial Revolution (4IR), which broadly refers to a cluster of digitally driven technologies encompassing artificial intelligence, intelligent automation, and robotics, among others, in the world of work. The ensuing technological transformation can both replace and augment human labor simultaneously, thereby yielding widespread, complex, and anomalous transformations in labor markets. Much of the policy discussion surrounding 4IR is centered on the rate of obsolescence, rate of creation, and rate of change pertaining to jobs and their skill profiles, stemming from technological change.

Recent global studies show that while around 5% to 10% of jobs can be fully automated, it is estimated that at least 30% of activities in 60% of occupations can be automated with technologies that are currently available (Arntz, Gregory, and Zierahn 2016; Manyika 2017). Such findings suggest that while some occupations will completely disappear, several occupations will undergo enormous transformation, as observed in recent decades. Since the early 1990s, the creation of jobs has been largely concentrated among less-skilled occupations that are harder to automate and high-skilled occupations, including professional services and research and development (David and Dorn 2013). A rise in highly paid skilled work creates demand for employment in low-paid services, thereby augmenting the polarizing of occupations into "lovely" and "lousy" jobs, as described by Goos and Manning (2007). In turn, this also leads to the hollowing out of middle-income jobs, i.e., mainly clerical jobs and skilled manual jobs in manufacturing.

A study conducted by the Institute of Policy Studies (IPS) (2019) shows that Sri Lanka is also susceptible to this pattern. It is estimated that 70.3% of workers are involved in jobs that have more than a 70% probability of becoming outdated. In line with global studies, job categories that are less likely to be computerized require high levels of skills, such as International Standard Classification of Occupations 2008 (ISCO 08) categories 1 and 2 of "managers, senior officials, and legislators" and "professionals," respectively. This accounts for approximately 13% of all employed in 2020. ISCO 08 category 4 "clerks and clerical support workers" are noted to be the most susceptible to computerization, on average. The IPS study also foresees that the biggest change in occupation profile will happen among major occupation categories 6 and 7, i.e., "skilled agricultural, forestry and fishery workers" and "craft and related trade workers" in which 17.2% and 15.3%, respectively, of all employed are engaged at present. The study also highlights the inevitable: jobs that require high levels of factual knowledge, problem-solving skills, decision-making skills, and creativity (which may be honed through tertiary level education or equivalent experience) are the least susceptible to computerization, while those that require lower levels of skills, equivalent to primary or secondary education, will remain vulnerable to computerization. The only occupation in the low-skill category that remains unaffected by

computerization is "personal care worker." The susceptibility of low-skilled and middle-skilled workers has far-reaching implications on the labor market as low-skilled workers transiting out of agriculture and plantations tend to progress into the retail industry as it is an easy stepping stone into formal employment. The potential hollowing out of middle-skilled workers in the future will leave them in the precarious position of being unemployed or resorting to other insecure and temporary jobs as they possess only primary and secondary level skill equivalents that are insufficient to progress onto more stable and lucrative high-skilled occupations. This creates policy concerns, specifically pertaining to the education sector (as discussed above).

4IR also entails the intertwined rise of the "platform economy"[4] and the "gig economy,"[5] fueled by the pervasive nature of Sri Lanka's ICT infrastructure. While the traditional Labor Force Surveys are unable to provide detailed information on gig workers in Sri Lanka, it is estimated that around 17,000–22,000 Sri Lankan workers are engaged in web-based digital labor on global platforms and an additional 3,000 workers are engaged in digital platforms (ILO 2019). Needless to say, the platformization of labor has several advantages as individuals are now able to access novel and varied work opportunities, while both employers and workers enjoy immense flexibility. The gig economy can also be advantageous to Sri Lanka in the context of its ability to attract Sri Lanka's untapped female labor force potential as it allows women to break through both cultural and mobility barriers and can help them progress toward equal pay opportunities (OECD 2017). However, the unsupervised rise of the gig economy can have implications on workers' livelihoods and rights in significant ways as they lie outside the ambit of any formal arrangements and/or legislation. Accordingly, there are concerns regarding the ability of gig workers to access social security and labor protection guarantees that are available in regular formal employment opportunities. In turn, this is likely to add to the already prevalent informal sector woes of the economy.

1.5 Human Capital Fragilities Exposed by COVID-19

1.5.1 Large Informal Sector

The first domestic case of COVID-19 in Sri Lanka was identified in mid-March 2020. The country was quick to close international airports and impose a nationwide lockdown, in addition to rigorous contact tracing and rapid quarantining of residents and those returning from abroad. Sri Lanka used its experience from the first wave of the outbreak to curb socioeconomic scarring across the waves that emerged thereafter.

However, over the last 2.5 years, a significant portion of the labor force has been substantially impacted by COVID-19, followed by an unprecedented economic crisis since early 2022. As observed across the world, the most vulnerable people in the COVID-19 pandemic, and during crises in general, are low-wage workers whose nature of employment provides neither "work-from-home" options nor any paid leave and is not essential to the continuity of economic activity, i.e., they are easily replaceable. Such workers are largely informal sector workers and those in the lower occupational categories among formal sector workers. Considering that in 2021, almost 58.4% of those who were employed were engaged in the informal sector (Table 1.1), a sizable portion of the employed are extremely vulnerable to

[4] The platform economy comprises businesses that are adopting digital platform-based business models and digital strategies to remain competitive. Famously cited examples of leaders in the platform economy are Airbnb, Uber, Amazon, and Facebook, among others.

[5] The gig economy comprises three key components: independent workers paid by the "gig" (an individual task or project), consumers who need a specific service, and companies that connect the worker to the consumer in a direct manner, including through app-based technology platforms. A key feature of a gig is that it is a temporary work engagement and the worker is paid only for that specific job.

Table 1.1: Composition of Employment in Formal and Informal Sector, 2020

Sector	Total	Agricultural	Nonagricultural
Formal	3,352,613	239,095	3,113,518
	41.9[a]	7.1[b]	92.9[b]
Informal	4,646,480	1,930,584	2,715,896
	58.1[a]	41.5[b]	58.5[b]
Aggregate No. of Employed	7,999,093	2,169,679	5,829,414

[a] Expressed as % of aggregate number of "Employed".
[b] Expressed as % of aggregate number of employed in the "Formal" or "Informal" sector (as applicable).
Source: Department of Census and Statistics.

economic uncertainties and volatilities as they are unlikely to receive regular salaries or other regular employment benefits, such as health insurance, or even any unemployment benefits. Considering the recent years of uncertainties in the Sri Lankan economy, this large segment of the population is likely to have emerged as the "new poor," entirely owing to them being engaged in the informal sector.

A review of occupational categories (Table 1.2) depicts that the most vulnerable occupations of services and sales workers and other categories comprise almost 89.9% of informal sector employment and 52.8% of total employment. This highlights that a substantial share of the employed are possibly engaged in precarious employment where they are likely to be earning wages only if they attend their jobs. Hence, the incentive to maintain "social distancing" is low among such labor categories as they keep returning to their jobs and are more vulnerable to contracting the virus and potentially suffering over a longer period of time, which then creates a vicious cycle of income loss and poverty. Even amid the ongoing crisis, such labor categories are vulnerable to job losses or significant income losses.

On the other hand, these labor categories are also likely to face temporary idling due to specific quarantine and closure of workplaces and/or public spaces motivated by social distancing initiatives. It is likely that these individuals and their households will experience a substantial loss of income over a long period as the informal nature of their employment may not enable them to find suitable employment after any period of economic disruption or volatility due to the nonessential nature or lack of specialization required for the tasks that they usually undertake. The level of education among informal sector workers is also low, with the large majority having fulfilled only grades 6 to 10 education (Table 1.3) highlighting low occupational mobility, which will be a hindrance to finding work in a subdued or contractionary economic environment. Another issue is that amid difficulties stemming from either the ongoing economic crisis or any other future economic disruption such as COVID-19, they will need to incur day-to-day household expenditures irrespective of their inability to find suitable work opportunities, which will aggravate their financial vulnerabilities. The share of those engaged in the above categories in the formal sector is also considerable at 50% of total employment. However, as employment regulations in Sri Lanka hinder quick laying off of labor, although those in the formal sector may face some temporary losses in income, they will be able to return to their jobs as the economy gradually recovers.

Table 1.2: Distribution of Informal and Formal Sector Employment by Main Occupation, 2020

	Total		Sector					
			Formal			Informal		
	No.	% of Aggregate	No.	% of Sectoral Aggregate	% of Occupational Aggregate	No.	% of Sectoral Aggregate	% of Occupational Aggregate
1. Managers, Senior Officials, and Legislators	512,087	6.4	297,220	8.5	58.0	214,866	4.6	42.0
Chief Executive, Senior Officials, and Legislators	19,995	0.2	19,995	0.6	100.0		–	–
Administrative and Commercial Managers	106,882	1.3	99,816	2.9	93.4	7,066	0.2	6.6
Production and Specialized Services Managers	115,851	1.4	79,320	2.3	68.5	36,530	0.8	31.5
Hospitality, Shop, and Related Services Managers	269,359	3.4	98,089	2.8	36.4	171,270	3.6	63.6
2. Professionals	531,298	6.6	454,644	13.1	85.6	76,653	1.6	14.4
3. Technical and Associate Professionals	695,206	8.7	580,624	16.7	83.5	114,582	2.4	16.5
4. Clerks and Clerical Support Workers	306,448	3.8	288,830	8.3	94.3	17,618	0.4	5.7
5. Services and Sales Workers	756,851	9.5	410,221	11.8	54.2	346,630	7.4	45.8
6. Skilled Agricultural, Forestry, and Fishery Workers	1,373,582	17.2	29,546	0.8	2.2	1,344,035	28.6	97.8
7. Craft and Related Trades Workers	1,222,380	15.3	305,392	8.8	25.0	916,988	19.5	75.0
8. Plant and Machine Operators and Assemblers	729,394	9.1	306,595	8.8	42.0	422,799	9.0	58.0
9. Elementary Occupations	1,833,523	22.9	644,065	18.5	35.1	1,189,458	25.3	64.9
10. Armed Forces Occupations and Unidentified Occupations	38,235	0.5	35,476	1.0	92.6	2,849	0.1	7.4
Total	**7,999,093**		**3,352,613**			**4,646,480**		

Source: Department of Census and Statistics.

Table 1.3: Distribution of Informal Sector Employment by Level of Education, 2020

Education Level	No.	%
Grade 5 and below	914,872	19.7
Grades 6–10	2,643,694	56.9
GCE Ordinary Level	708,182	15.2
GCE Advanced Level and above	379,732	8.2
Total	**4,646,480**	**100.0**

GCE = General Certificate of Education.
Source: Department of Census and Statistics.

1.5.2 Issues with Online Education

Although Sri Lanka had rapidly adopted online platforms for educational activities, stakeholders need to be wary of the efficacy and equity of online education outcomes as these can propagate as inequalities related to opportunities and social mobility. With the emergence of COVID-19 in Sri Lanka in March 2020, followed by the economic crisis since early 2022, schools and educational institutions undertook blended learning approaches to ensure continuity of educational activities. However, even prior to the pandemic, there had been significant concerns regarding disparities in education infrastructure in terms of physical infrastructure, and also basic aspects such as the availability of qualified teachers and the subject streams offered in schools. Much of the education infrastructure is concentrated in urban centers with rural schools struggling with even basic amenities let alone other advanced infrastructure. The efficacy of online education outcomes has come under immense scrutiny against computer literacy and computer ownership statistics, which highlighted that in 2021, computer literacy rate stood at just 34.3% and only 22.9% of households enjoyed being owners of a computer. The disparities are even more pronounced in the estate sector where only 4.1% of households owned a desktop or laptop and computer literacy and digital literacy levels in the estate sector were only one-third that of the urban sector. Notably due to the geographical characteristics of the estate sector, there are serious issues relating to internet coverage and "dark spots" that are only gradually being addressed. This "digital divide" is likely to create significant inequalities in the period ahead with the growing reliance on technology for educational activities.

1.6 Policy Implications and Way Forward

Despite Sri Lanka's achievements in social outcomes, the education system continues to be an Achilles' heel in the economy. The issues faced by the labor market are a culmination of the deficiencies of the education system. Given the need for the domestic economy to rapidly evolve amid the ever-changing global economy, the current education system is woefully inadequate. In the past, there have been several planned policy reforms to uplift the education sector. However, these have not led to any notable improvement in the outcomes of the sector.

As highlighted previously, a large pool of Sri Lanka's youth does not possess higher education qualifications or any relevant skills training. In addition, they do not possess other marketable skills such as soft skills, digital literacy, and English literacy. These are significant stumbling blocks when they attempt to access high-level jobs that are in line with their aspirations. Hence, both educated and uneducated youth remain unable to productively contribute to the economy as they are also unwilling to settle for low-skilled, manual jobs even though they are unqualified for the needs of the private sector (ILO 2019). The inability of youth to tap into "decent work opportunities" in the private sector leads to them depending on public sector employment—over 77% of university graduates work in the public sector. The continued demand of public sector employment also suggests that the problem of good and bad jobs as seen in the past continues to exist. Graduates who lack marketable and/or relevant skills prefer to remain unemployed and queue for government jobs so that they may enjoy the long-term benefits of job security and financial security in terms of pensions over the lifetime of the employee. Unless addressed through policy reforms, these inherent benefits of public sector jobs will continue to create distortions in the labor market. It is also important to stop the handout of public sector jobs on a regular basis to simply absorb unemployed graduates and instead focus on streamlined recruitment of talented individuals to ensure the efficiency and productivity of the sector. Further, the redesigning of the Public Service Pension Scheme to be a contributory one can also reduce the premium and/or attractiveness of public sector jobs. This will also be essential considering the rapidly aging population alongside the limited fiscal space that will be available in the future.

The school education sector is also significantly lagging in outcomes related to science, technology, engineering, and mathematics (STEM) subjects, thereby creating negative spillovers on the output of the university system. For long, there have been concerns regarding the quality of mathematics and science education. The lack of proper allocation of resources in the STEM fields will hinder the agility of the economy to grasp modern technology and pioneer any innovation, especially in light of the transformative impact of the 4IR. It is disconcerting that currently only 10% of schools offer STEM subjects at the Advanced Level, and studies show that there are national-level shortages in qualified and experienced science and mathematics teachers at the secondary education level (Arunatilaka and Abayasekara 2017). This limited access to STEM education at the school level pervades into the tertiary level where undergraduate university enrollments in engineering, medicine, IT, and science account for only 28% of total enrollments, compared to over 50% in the arts, law, and management streams (Dundar et al. 2017). Equitable access to high-quality education, specifically STEM education, cannot improve overall productivity of the human capital base but can address provincial disparities. One of the most obvious disparities is observed in English literacy, which is at almost 50% in the Western Province, while being the lowest in north central, northern, and eastern regions, and Uva Province. Further, although 71.1% of Sri Lanka's English-literate population is computer literate, only 35% of Sinhala-literate and 27% of Tamil-literate populations are computer literate. This reiterates the need for focused policy interventions to address such disparities so that these regions do not get left behind amid the essential digital transformation of the economy. Unless access to digital technologies by labor in the lagging regions is improved, with the movement of workers away from the agriculture sector into other sectors and the automation of middle-skilled jobs, workers from these areas are likely to be left behind resulting in widening regional inequalities. Digital literacy is even more essential in the wake of COVID-19. Not being able to see the end of the pandemic in the near term, the labor force at all levels will need to adopt and adapt to the use of technology to remain relevant and employable. This is not only important for those who are in managerial or executive levels but even for those engaged in simple jobs such as delivery services.

When reviewing the education sector, the lack of contemporary and relevant policy reforms has led to the education system having little relevance to the changing needs of the economy. Currently, education policy reforms, as undertaken by the National Education Commission, take place once in a decade while changes and revisions to school curricula, undertaken by the National Institute of Education (NIE), are made once every 8 years (IPS 2016). Such a pace of reform implementation cannot result in conducive outcomes. Further, past curriculum reform efforts by the NIE have not been efficacious and have only resulted in limited changes to the quality of education as these have not taken into account weaknesses in preceding curricula, deficiencies in content, teaching methodology and curriculum material, poor knowledge of teachers about new curricula, and a lack of a proper monitoring and education system (NIE 2008). There is growing consensus regarding the need to focus on two key areas when designing curricula: (i) what to teach, and (ii) how to teach it (WEF 2017). Accordingly, education policy makers need to ensure that content focuses on uplifting linguistic, mathematical, and technological competencies that are essential to all jobs. This will help build in-depth subject knowledge, the ability to make interdisciplinary connections, and also develop noncognitive employability skills. Any national education policy must comprise regular updating of the curricula so that it is in line with the skill demands of local and global labor markets and has to be developed collaboratively through the engagement of all relevant stakeholders, including employers, parents, teachers, unions, and students. This also needs to be subject to a systematic review.

In addition to these long-standing issues in the education sector, the COVID-19 pandemic, coupled with the ongoing economic crisis, has created a novel set of challenges for the education sector. Despite the government having undertaken several initiatives to ensure the availability and continuity of education services for all, the sector is still in dire need of a consistent and holistic approach to

the delivery of these services amid unique circumstances, such as those relating to a pandemic or in relation to disruptions to normalcy due to issues pertaining to transportation and electricity, as seen in 2022. Although more pertinent to the aforementioned exceptional circumstances seen in recent years, even in usual circumstances, there needs to be an overall shift in educators' approach away from simply delivering content to facilitating and supporting the learning process. This will require improvements to both pedagogy and learning curricula, both of which needed to be revamped even prior to the pandemic. Today the internet provides a range of "open" content to students of all ages that can easily be curated, adopted, and aligned to the national curriculum rather than taking arduous efforts to develop content from scratch. It must be recognized that timely efforts, even small initiatives, by policy makers and sensitive efforts by educators can minimize any "learning poverty" during not only the pandemic but other difficult periods, such as unprecedented economic crises, as well. This will be particularly important for young children and students with special needs, both of whom tend to derive higher benefits from face-to-face pedagogy.

A close look at the low levels of female LFPRs points toward the stress associated with unpaid care work being an issue that remains unaddressed and one of the key stumbling blocks to women entering the labor force.[6] While "platform" and "gig" economies can facilitate women's participation in the labor force, the dearth of formalized and affordable child and elderly care facilities and services will continue to prevent women from being economically active. On the other hand, considering that a high share of women workers are already engaged as unpaid family labor, women are in a precarious position without any access to social security and labor protection guarantees. Despite long-standing discussions, there have been little concerted efforts to improve safe and reliable public transportation, the availability of formalized and affordable child and elderly care facilities, and formalized flexible work arrangements and relevant work opportunities that would be pivotal to increasing female the LFPR.

There is also a pressing need to revisit the labor laws of the country. Research evidence across other countries shows that permitting greater mobility of workers across jobs can contribute to labor productivity while enabling job creation. Despite the reforms undertaken in 2003 and 2005, desired outcomes have not materialized and job protection for formal sector employees continues to remain high. This continues to dampen the flexibility of the labor market and the growth of jobs in the formal sector. By offering excessive protection to formal sector employees, the TEWA has indirectly emerged as an impediment to the healthy development of the labor market as it hinders the flexibility of the private sector to adjust to the changing needs of the domestic and global economy. This can also address the issue of queuing for white-collar and protected jobs that are a result of both public sector dominance and the implementation of protective legislation such as the TEWA in the private sector. In turn, this has created a mismatch of labor demand for high-security jobs against the ample supply of low-security jobs.

1.7 Conclusion

The commitment of consecutive governments in Sri Lanka to the provision of universal health and education had helped the country remain ahead of its regional peers and even some of its advanced peers in terms of human capital development outcomes. However, this chapter highlights that Sri Lanka's human capital base is also straddled by several fault lines that are continuing to perpetuate across generations, thereby hindering the country's productivity. In turn, this will have negative

[6] According to the Sri Lanka Time Use Survey – 2017 conducted by the Department of Census and Statistics, on average, women spent about 6.5 hours on unpaid activities (including housework and caregiving) as opposed to men who spent just 2.6 hours.

implications on the country's transition to a high growth trajectory and its ascension to upper middle-income status and its ability to sustain the corresponding level of development. The onset of the COVID-19 pandemic, followed by an unprecedented economic crisis since early 2022 has further exacerbated many of these existing fragilities and is likely to have created a segment of new poor, due to the significant share of informal sector and low occupational category workers, while suffering from potential learning poverty in the medium term because of issues relating to access to quality education amid the challenges of COVID-19 and the economic crisis.

Another facet of this issue that is yet to be fully investigated and/or explored is the exodus of workers, especially skilled workers, since the beginning of 2022 in the wake of the current economic crisis. Considering the vast public investment that is made by the government in the labor force by way of free education and health, such accelerated migration of labor during crisis episodes can set off a vicious cycle of worsening macroeconomic stability and continued outward labor migration at a rapid pace.

As the government sets off on a path of fiscal consolidation, this might be an opportune moment for the government to revisit the effectiveness of the provisioning of universal education and healthcare and to identify means of ensuring that the benefits of such investments accrue to the economy. Accordingly, to address the several multi-faceted issues prevailing in the Sri Lankan labor market, a concerted effort by all stakeholders, ranging from the government to education sector policy makers, private and public sector education providers and practitioners, and even employers, is needed for Sri Lanka to continue to reap the benefits of the expensive investments that have been made thus far and thereby the existing human capital base of the country. Urgent and focused policy measures are imperative to safeguard this key resource of the economy which will be pivotal to the country's recovery process in the near-to-medium run and thereby the prevention of any scarring of the human capital base.

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CHAPTER 2

Active Labor Market Policies in Developing Asia: Case Study of India

Partha Pratim Mitra

2.1 Introduction

The coronavirus disease (COVID-19) pandemic has led to unprecedented disruptions in labor markets, increasing job losses, and reducing incomes. This has adversely affected the employability of a large section of the workforce with varying educational status. Recovery from this requires active labor market policies (ALMPs) to improve skilling and employability. However, such interventions are only possible if there is a granular understanding of the different labor market features, including the labor force participation rate (LFPR), worker population ratio (WPR), and unemployment rate (UR), and how these vary across different regions of India.

ALMPs that are needed to improve employability can be broadly grouped into four categories: (i) programs that operate on the labor supply side to improve the employability of workers through vocational training, (ii) programs that aim to increase the demand for labor by subsidizing the cost of labor to the firms by providing wage subsidies, (iii) policies that consist of search and matching assistance programs that help to bridge the gap between supply and demand for labor, and (iv) policies that relate to public works programs to ensure guaranteed wage employment for a fixed period of time.

Several recent global trends reflect increased policy interest in ALMPs for jobs and employability to help workers find employment (World Bank 2012). Interest in this has grown further after the global financial crisis of 2008, with continued demographic pressures and with growing concerns around automation that is undercutting the growth potential of manufacturing jobs (Mohammed 2015).

2.2 Active Labor Market Policies in India

Similar concerns exist in India. According to the National Policy for Skill Development and Entrepreneurship (NPSDE), an estimated 16 million young people are expected to enter the workforce every year, and all of them, except those opting for higher education, will need to acquire skills to be employable (NPSDE 2015). The primary aim of the 2015 NPSDE, which replaced the 2009 policy, is to meet the country's skilling requirement by scaling up training capacities and to provide an ecosystem for all types of skilling activities to meet the international benchmarks.

This trend, however, has early origins. India began after independence in August 1947 with the Craftsmen Training Scheme (CTS), which was introduced in 1950, to ensure a steady flow of skilled workers in different trades through systematic training. This was designed to reduce unemployment among the educated youth by providing them with employable skills. The CTS with its extensive network in the country is considered the most important venture in the field of vocational training (Ministry of Skill Development and Entrepreneurship 2016). There have been more developments since then.

Information available from the Ministry of Skill Development tells us that among the other notable ALMPs on skill building, the Prime Minister's skill development program, called the Pradhan Mantri Kaushal Vikas Yojana, has two training components: short-term training and recognition of prior learning. Blended learning was also launched under the CTS for long-term training through the

industrial training institutes (ITIs) in respect of six courses for electricians, fitters, welders, computer operators and programming assistants, cosmetologists, and diesel mechanics.

An important ALMP is the Jan Shikshan Sansthan scheme, which aims to provide vocational skills to non-literate, newly educated persons with a rudimentary level of education up to 8th grade standard and school dropouts up to 12th grade standard in the age group 15–45 years.

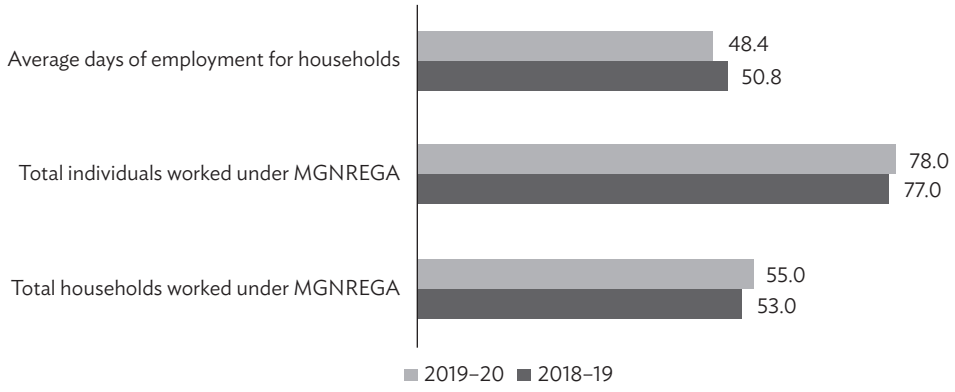
2.2.1 Rural Job Guarantee Scheme

The flagship rural job guarantee scheme under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) (enacted in September 2005), has three important goals:

1. employment creation,
2. regeneration of the natural resource base and creation of productive assets in rural areas, and
3. strengthening of grassroots processes of democracy through transparent and accountable governance.

The program enables rural households to access 100 days of employment a year from the local government (Figure 2.1). This is based on the Maharashtra Employment Guarantee Scheme, and has been scaled up from 200 districts in 2006 to national coverage in 2008. The MGNREGA is a rights-based employment guarantee program based on the demand for employment of the local population (Holmes, Morgan, and Zanker 2011).

Figure 2.1: Aspects of MGNREGA
(million)



MGNREGA = Mahatma Gandhi National Rural Employment Guarantee Act.

Source: Ministry of Rural Development, Government of India.

This chapter focuses on policies for increasing the employability of workers through vocational training programs and examining the relationship between adverse labor market features, its regional dimensions, and variations in the states of India in terms of ALMP approaches. This is predominantly in the form of establishing ITIs for skilling of the workforce. This is analyzed in the context of the recent trends in the labor market features in India as reflected in the LFPR, WPR, and UR for skilled human resources to bring out the importance of ALMPs.

2.3 Databases

This study has carried out detailed analysis of several data sets. These include:

(i) Periodic Labour Force Surveys (PLFS) (2017–2020). This considered the data set for both rural and urban areas providing estimates of important parameters of employment and unemployment in "usual status" in the PLFS. Three such surveys have been conducted for the periods July 2017 to June 2018, July 2018 to June 2019, and July 2019 to June 2020 by the National Statistical Office of the Government of India. Estimates in these surveys correspond to the data collected for each of the four quarters of the survey period (July–September, October–December, January–March, and April–June). The reference period of the estimates of a particular survey period for a specific quarter is the midpoint of the corresponding survey period.

The activity status of a person is determined on the basis of the activities pursued by the person during the specified reference period. When the activity status is determined on the basis of the reference period of the last 365 days preceding the date of survey, this is known as the usual activity status of the person.

(ii) Population data for India for the different states and the population projections made by the technical group of the Registrar General and Census Commissioner of India have also been utilized (National Commission on Population, Ministry of Health and Family Welfare 2019). The technical group has made the population projections based on the component method, taking into consideration the growth of the population that is determined by fertility, mortality, and migration rates. The basic source of data used for making the projections is the 2011 Census (the year when the last census for the country was held) and the Sample Registration System that provides time series data of fertility and mortality.

(iii) Data on the number of seats in ITIs are available latest for 2018 and 2019 and are obtained from the National Council for Vocational Training. The council, which is an apex advisory body, was set up by the government in 1956 (the then National Council of Training in Vocational Trades). The council has been entrusted with the responsibilities of prescribing standards and curricula for craft training, advising the government on the overall policy and programs, conducting All India Trade Tests, and awarding National Trade Certificates.

2.4 Review of Literature

The matter of ALMPs addressing employability and unemployment has drawn attention for a detailed technical investigation for a considerable length of time. The scholastic interest has grown more in the recent times.

The literature on ALMPs can be divided into four broad categories. First, the studies on the macroeconomic effects of labor market institutions and reforms, of which ALMPs are one component (e.g., Murtin and de Serres 2014; Blanchard and Wolfers 2001; Scarpetta 1996). One of the origins of the early literature on ALMPs is the analysis of Calmfors (1994), which studied the crucial determinants of policy effectiveness in a general equilibrium framework positing the Philips curve relationship.

In the second category, there are studies that focus primarily on the effects of ALMPs but do not arrive at any consensus on the effect of these policies on unemployment rates. An Organisation for Economic Co-operation and Development (OECD 1993) study argues that the results are not robust enough to be conclusive. However, Estevão (2004) found positive effects of ALMPs on the employment rate of the business sector in the 1990s (but not in the late 1980s). Baker et al. (2005) found the impact to be insignificant; and Bassanini and Duval (2006) found that ALMPs, like labor market training, may lead to the lowering of unemployment. Moreover, these studies have focused on whether total ALMP spending matters at the aggregate level (except for Bassanini and Duval [2006]) without going deeper into the variation on the effectiveness of different types of policies.

Third, there are also studies that assess the overall impact of ALMPs in OECD countries (OECD 2021a, 2021b). The studies found that during the COVID-19 downturn when public employment services were badly affected, many countries enhanced labor market services in 2020 and 2021 by extending support to firms and assistance to prevent insolvency and unemployment.

Finally, a fourth set of studies link the effectiveness of ALMPs to implementation aspects (Calmfors 1994). However, the existing knowledge on the aggregate effects of different ALMPs and the role played by implementation and design aspects in influencing those effects remains inconclusive.

There are also studies that focus on developing countries that have separately assessed the impacts of (i) technical and vocational education and training (TVET), and (ii) entrepreneurial skills training. Evidence on TVET programs finds positive benefits in terms of formal employment, earnings, and human capital formation (Escudero et al. 2018). Some studies, however, have questioned the evidence of long-term impacts (Kluve 2016). The study of Escudero et al. (2018) also finds that training programs that explicitly target poor people tend to yield positive results.

Levy Yeyati, Montané, and Sartorio (2019) reported the first systematic review of 102 randomized control trial interventions comprising 652 estimated impacts. One important finding of the study has been that programs aimed at building human capital, such as vocational training, independent worker assistance, and wage subsidies, show significant positive impact.

Recent studies by international organizations on ALMPs throw considerable light on the current policy evidence in many countries. Malo (2018) reviews how ALMPs can contribute to the development of social protection floors and can serve as a crucial element to protect workers against unexpected risks during their working life.

The present study links ALMPs with governance in India and attempts to bring out the relationship between labor market indicators and ALMPs to understand the vulnerability of the labor force during COVID-19.

2.5 Methodology and Estimates

Labor market indicators include the LFPR, WPR, and UR (Box 2.1).

While the categories of "All" labor force include "not literate" and "literate" (up to primary, middle secondary, and higher secondary levels of education; diploma or certificate holder graduates, and postgraduates and above), these categories are further segmented as (i) rural male, (ii) rural female, (iii) urban male, and (iv) urban female. For this analysis, a comparison is made between the three labor market indicators with a special focus on those who have obtained diplomas and certificates from

Box 2.1: Labor Market Indicators

Labor Force Participation Rate (LFPR): Number (No.) of employed persons + No. of unemployed persons/total population *100

Worker Population Ratio (WPR): No. of employed persons/total population*100

Unemployment Rate (UR): No. of unemployed persons/no. of employed persons + no. of unemployed persons *100.

Source: PLFS Annual Reports (various issues).

technical institutions, and graduate, postgraduate, and above qualifications. The ITI-trained persons are included in the categories of the workforce mentioned as graduates, postgraduates, and above.

Moreover, regional information has been analyzed based on the population of states and union territories (Table 2.1).

Table 2.1: Regional Classification of States Considered for the Study

Size of the States	Number of States
Big	21
Small	15 (inclusive of northeast states and union territories)

Source: Author.

The indicators for governance include the preparedness of states to improve skilling and employability with the help of ALMPs. This set of indicators compared the district-level population, share of youth population, and trend in the availability of ITI seats. This considers

(i) the average population of a district in a state, and
(ii) the number of ITIs set up in 2019 in the states and union territories.

ALMP indicators include the percentage increase or decrease in seats in ITIs in the state or union territory.

For each delineated region of India, state-wise data have been analyzed by estimating the percentage of each labor market indicator in the states under review in different regions and how these compare with the national average. After analyzing trends at the state level, trends are aggregated at the regional level to see the interregional variations of the different indicators. It is stated that these selective indicators are assessed based on the available data sets to highlight the indicative trend. This analysis has not considered several other aspects of governance and ALMPs that include the level of national and state macroeconomic policies and regulations that have a bearing on the employability and skilling or the impact of variation in economic opportunities across the states that influence the availability of jobs and market absorption, among others.

2.6 Labor Market Indicators to Identify Vulnerable Sections of the Labor Force

It is evident that the LFPR for all categories and segments of the labor force has improved between 2017/18 and 2019/20, except for rural female in the diploma and certificate category and urban male in the postgraduate and above category, which declined between 2018/19 and 2019/20 (Figure 2.2). This decline in the LFPR also indicates that these segments of the labor force may have withdrawn from the labor market due to the pandemic-linked lockdown phases during 2020.

Data also show that persons with higher qualifications, with either diplomas and/or certificates, graduates or postgraduates, have a higher LFPR compared to all other categories of the labor force. This shows the importance of education and skills in enabling persons to remain in the labor force despite adversity in the labor market conditions.

Figure 2.2: Labor Force Participation Rate: Usual Status 15 Years and Above, 2017/18, 2018/19, and 2019/20 (%)

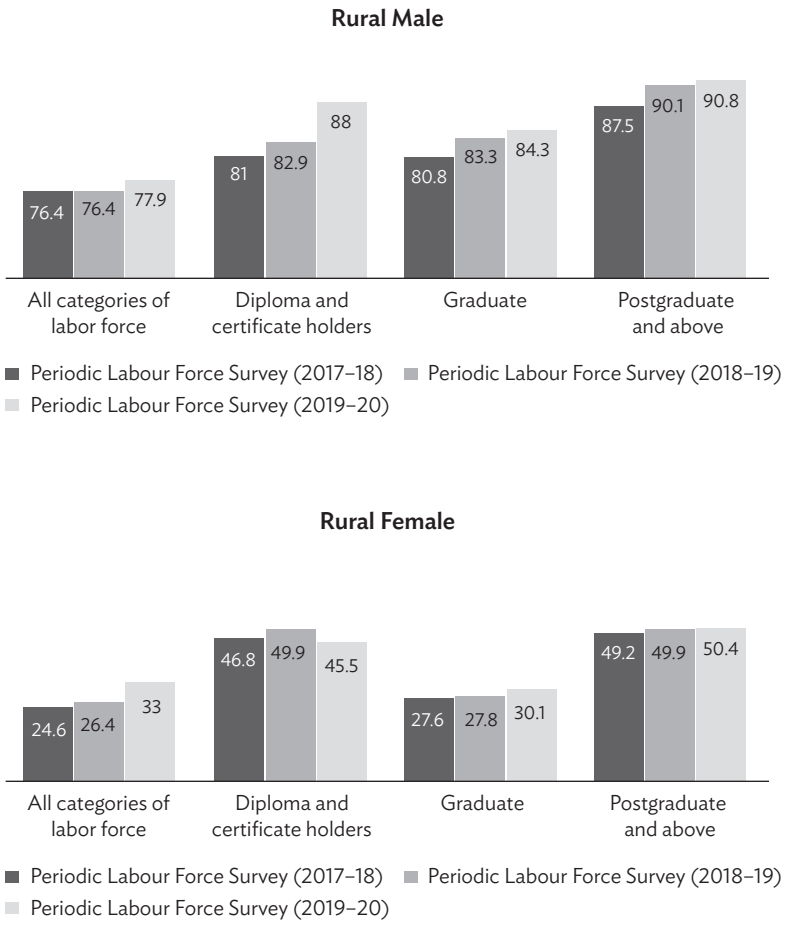


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Figure 2.2 *continued*

Source: PLFS (various years).

2.6.1 Changing Trend in Worker Population Ratio

Among all four segments of the workforce, the targeted categories that include rural male graduates, urban males with diploma and certificates and those with postgraduate qualifications and above, which saw a marginal decline in the WPR during the pandemic is reflective of a significant trend (Figure 2.3). Jobs requiring higher qualifications turned out to be relatively more vulnerable during the pandemic compared to those requiring lower qualifications, particularly for those who only have a diploma or certificate and not postgraduate qualifications. This shows that the higher-quality jobs are more vulnerable to pandemic-led economic disruption.

Figure 2.3: Worker Population Ratio: Usual Status 15 Years and Above, 2017/18, 2018/19, and 2019/20
(%)

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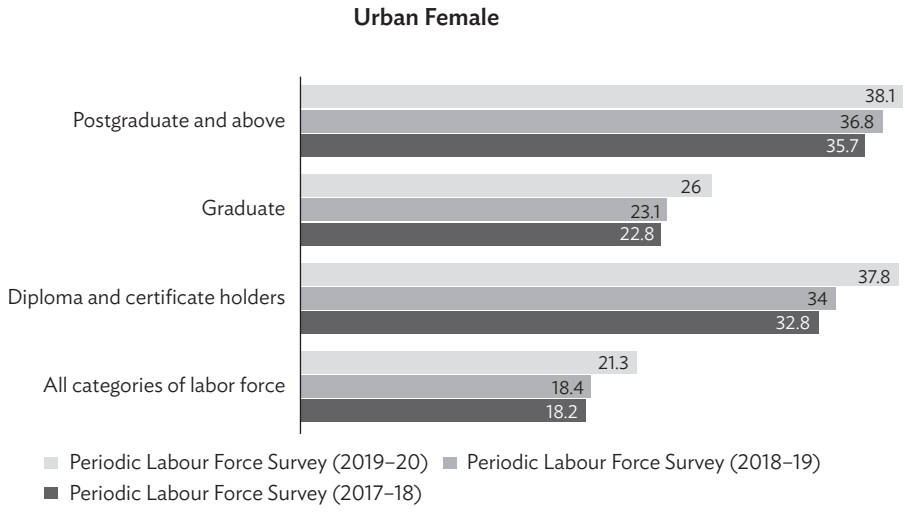
Figure 2.3 *continued*



Source: PLFS (various years).

2.6.2 Trend in Unemployment Rates

The trends in unemployment rates show that the rural segments of the labor force witnessed lower unemployment rates between 2017/18 and 2019/20 for all categories compared to the urban segments. The decline in unemployment rates during the pandemic in 2019/20 compared to 2018/19, the pre-pandemic year, was also higher in the rural segment compared to the urban segment for all categories of the labor force.

This clearly establishes that the rural areas showed more resilience during the pandemic-led lockdown. In the urban segment, women graduates witnessed higher unemployment rates in 2019/20 compared to 2018/19. This captures an important global trend that bears out that women are more vulnerable to job fluctuations during pandemic-led economic disruption.

The trend in unemployment rates establishes that jobs with higher qualifications, those requiring postgraduate qualifications, are more vulnerable to economic fluctuations caused by the pandemic. The unemployment rates between 2017/18 and 2019/20 have registered higher levels across all segments of the labor force and for all categories that require higher qualifications (Figure 2.4). This trend reflects the dilemmas of having a skilled and qualified labor force who are more susceptible to sudden economic disruptions. The data further highlight that those with only certificates or diplomas have a lower LFPR compared to those with postgraduate qualifications, thereby becoming more vulnerable to impacts brought on by the pandemic.

Figure 2.4: Unemployment Rates: Usual Status 15 Years and Above, 2017/18, 2018/19, and 2019/20
(%)

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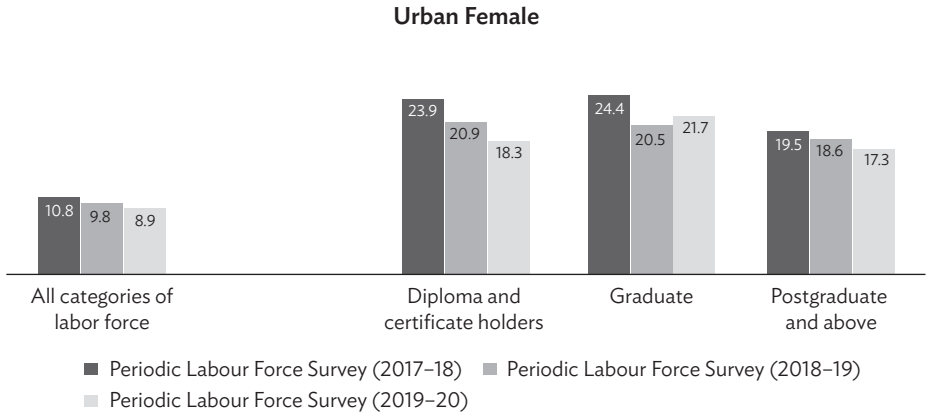
Figure 2.4 *continued*



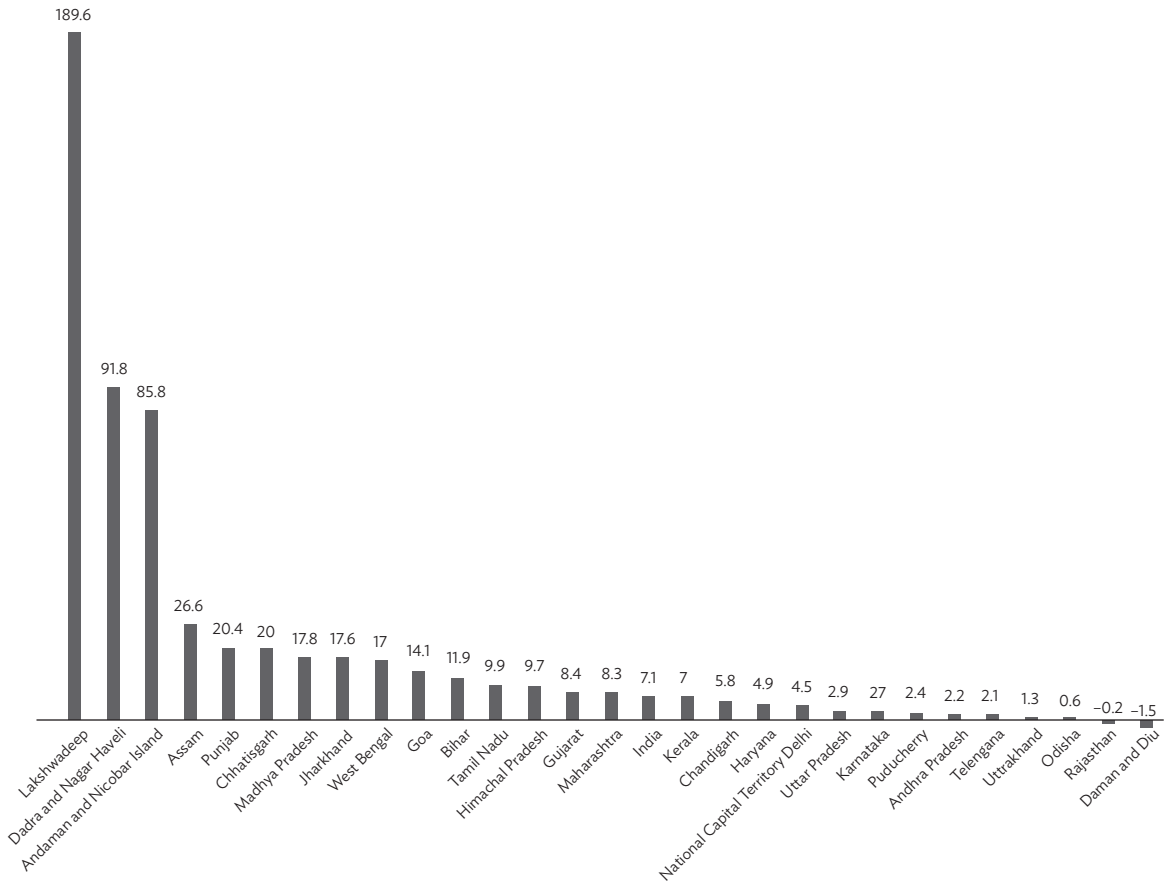
Source: PLFS (various years).

2.7 Active Labor Market Policy and Governance

The average population size per district (as projected for 2021 for all states of India) and the average population per ITI set up in the states in 2019 for which the latest data are available has been considered. This chapter has assumed that the governance of a state becomes more effective if the size of the population to be covered through ALMPs is smaller. It further assumes that the smaller size of the population improves the potential for better allocation of resources through ALMPs to improve labor market indicators.

Following the above assumptions, the average population of a district per ITI and the rate of increase in ITI seats in the state has been estimated (as shown in Figure 2.5). The rate of increase in ITI seats (2019 over 2018) is taken as an indicator of ALMPs. States with higher rates of increase in ITI seats than the national average have been considered as states with ALMPs more conducive for skill formation.

Figure 2.5: Regions Recording Higher Increase in ITI Seats Compared to National Average (2019 over 2018)
(million)



Source: Estimated from Census population projections and National Council for Vocational Training (NCVT).

2.8 Vulnerable Categories of the Labor Force and Regional Variations

The vulnerable categories identified as the ones that have witnessed a decline in the LFPR, WPR, and an increase in the UR between 2018/19 (pre-lockdown) and 2019/20 (during lockdown). The vulnerable categories of the labor force, which saw a decline in the LFPR between 2018/19 and 2019/20, have seen regional variations. The percentage of states in the regions that have shown lower LFPRs varies across regions and various vulnerable categories of the labor force.

The trends also indicate that persons with higher qualifications tend to remain longer in the labor force searching for jobs in keeping with their requisite skills. Persons with lower qualifications who face difficulties in getting jobs with their qualifications are forced to withdraw from the labor force.

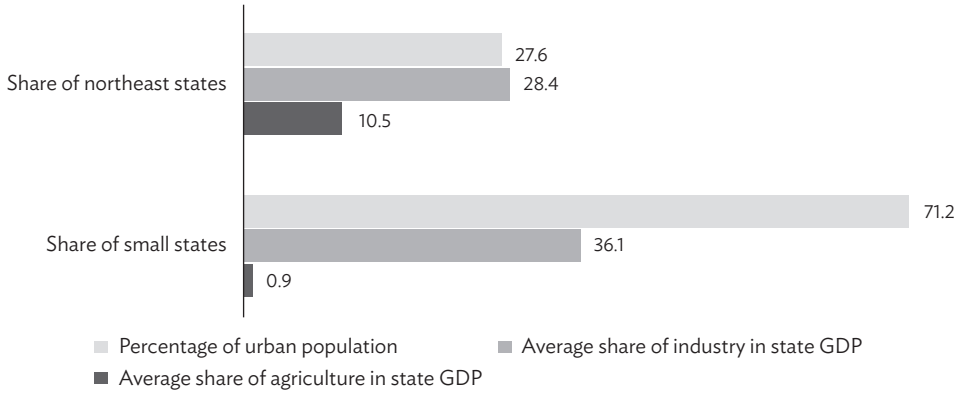
2.8.1 Worker Population Ratio

The regional variations in the WPR show that in 2019– 2020 the reduction in the WPR has been more widespread than the reduction in the LFPR. All regions have faced reductions in the WPR both in the rural and urban areas, except the smaller states among which more have witnessed lower WPRs in the urban areas for diploma and certificate holders and with postgraduate and above qualifications.

It also emerges that persons with lower qualifications, particularly diploma and certificate holders, faced higher unemployment rates in all regions except in the smaller states.

2.8.2 Regional Variations: Agriculture, Industry, and Urbanization

Figure 2.6: Regional Variations (2018–2019): Agriculture, Industry, and Urbanization



GDP = gross domestic product.

Notes:

1. Per capita net state domestic product and state GDP have been estimated at constant prices (base 2011/12) and rounded off.
2. Data on only three out of seven states are published.

Sources: Reserve Bank of India Central Statistical Office, Government of India, and Office of the Registrar General of India (census).

While industry and urbanization have the potential to generate higher per capita net state domestic product in normal times, the transition due to the COVID-19 pandemic has affected the potential of both industry and urban areas to generate income and employment as the pandemic was more severe in its impact on them compared to the rural areas. As a result, the rural segments of the labor force witnessed lower unemployment rates between 2017/18 and 2019/20 for all categories compared to the urban segment.

2.8.3 Regional Dimension of the Informal Sector

States with a higher proportion of self-employed households in rural areas that depended on agriculture and formed part of the informal sector were better positioned to face the transition as the impact of COVID-19 was less severe in the rural areas. Data from the Periodic Labour Force Surveys show that the proportion of self-employed households in the rural areas that depend on agriculture increased during the period of the transition between 2018/19 and 2019/20, from 36.6% in 2018/19 to 37.7% in 2019/20.

The number of states that had a higher share than the national average of informal rural employment in the form of self-employed households in the agricultural sector had a better cushion to protect themselves during the transition.

2.9 Conclusions and Recommendations

The pandemic-linked lockdown caused uncertainties and disruption of economies across the regions. This has made large sections of the labor force vulnerable. We have attempted to understand, based on empirical data from the PLFS 2017–18, 2018–19, and 2019–20, the categories and the segments of the labor force that became more vulnerable to the pandemic-led economic disruption.

Data show that persons with higher qualifications of diplomas or certificates, graduates, postgraduates, or above have a higher LFPR.

The vulnerable categories of the labor force, which saw a decline in the LFPR between 2018/19 and 2019/20, have seen regional variations. However, within this group, the decline in the LFPR for the diploma and certificate holders is sharper than for persons with postgraduate and above qualifications across regions. Persons with lower qualifications who face difficulties in getting jobs are forced to withdraw from the labor force. Many of them come from the poorer sections of society and may not have the option to withdraw from the labor force.

The regional variations in the WPR show that in 2019/20 the reduction in the WPR has been much more widespread than the reduction in the LFPR.

The trends show that the rural segments of the labor force witnessed lower unemployment rates between 2017/18 and 2019/20 for all categories of the labor force compared to the urban segments. The decline in unemployment rates during the pandemic in 2019/20 compared to 2018/19, the pre-pandemic year, has also been higher in the rural segment compared to the urban segment for all categories of the labor force.

While industry and urbanization have the potential to generate higher per capita net state domestic product in normal times, the transition had affected the potential of both industry and urban areas to generate income and employment as the pandemic was more severe in its impact on these sectors compared to the rural areas. As a result, the rural segments of the labor force witnessed lower unemployment rates between 2017/18 and 2019/20 for all categories compared to the urban segment and informality in the agriculture sector gave some protection from the impact of the pandemic on rural employment and livelihood.

The trends in unemployment rates also show that jobs with higher qualifications are more vulnerable to economic fluctuations caused by the pandemic. Based on the LFPR data, those with higher qualifications, particularly postgraduates and above, are able to remain in the labor market, while diploma and certificate holders had to withdraw. Persons with postgraduate qualifications and above had higher LFPRs compared to those with only a diploma or certificate. Moreover, while people remain unemployed, they do not necessarily withdraw from the labor force. The economic downturn caused by the pandemic forced certain categories of the labor force to withdraw, hence they were no longer part of the labor market. The LFPR captures this phenomenon.

States that have a lower average size of population and are governed at the district level when compared with the national average have witnessed a higher growth in the number of ITI seats in comparison to the national average. The comparative analysis shows that the LFPR and WPR of the smaller states are relatively lower. The smaller states and union territories have utilized ALMPs in reasonable measure .

The chapter, however, adds a qualifier that the smaller states and union territories have lower base levels. Therefore, the base effect for calculating the growth of ITI seats between 2018 and 2019 has come into play. Three of the union territories—Andaman and Nicobar Islands, Dadra and Nagar Haveli, and Lakshadweep—have the benefit of a lower base effect (Figure 2.5).

An important policy recommendation would be the need to effectively combine ALMPs with governance factors, namely the small size of the administrative unit to be governed for closer connections with the local community for more effective and equitable distribution of resources and scale-up of training and skilling initiatives. This discussion has also brought out the need to make education curricula more skills-oriented and linked with jobs so that the vulnerable sections of the labor force are better able to cope with the uncertainties and are eligible for decent jobs

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CHAPTER 3

Differential Impact of Vocational Training on Earnings of Different Types of Employment: An Analysis of India's Economy

Indrajit Bairagya

3.1 Introduction

An improvement in human capital brought about by an increase in schooling years and vocational training is usually expected to lead to a rise in the earnings of individuals. However, the need for studying the impact of vocational training on different types of employment arises from the lack of policy clarity with respect to the creation of sufficient decent employment opportunities for the youth in India and other developing countries. The issue of improving the employment status of the younger working population, who make up the largest unemployed section in India, can be addressed by making appropriate investments in vocational and skill-based education. Therefore, there is a need for focused research in this particular area in the Indian context, especially considering that a large amount of investment is being made on skill development training through the "Skill India" program in recent times.

Large numbers of studies related to vocational education have tried to look into whether (i) vocational training facilitates long-term employment, (ii) vocational education leads to an increase in earnings, as compared to general education, and (iii) informal or formal training is better when it comes to returns to education. The studies have shown that there is an increase in the earnings of those who have undergone vocational training (Meer 2007; Sakellariou 2003; Hotchkiss 1993; Dearden et al. 2002; Hall 2012; Tripney and Hombrados 2013; Pfister, Tuor, and Backes-Gellner 2015; Espinoza and Speckesser 2019; Korber 2019). In addition, regarding the employment opportunities available to people, who had gone through vocational training, we came across a mix of positive and negative outcomes. In a study conducted in Mozambique (UNU-WIDER 2021), the majority of the participants (91%) covered by the survey were either in low-earning jobs (retail sector), unemployed, or worked only for a short period, while less than 10% got jobs or received fixed contracts (mainly in the tertiary sector). This division could also be due to the labor market conditions existing in the country. In the Indian context, the impact was partly positive, especially for those who had received formal training when compared to those receiving none. They observed a hike in wages and earnings in both the primary and secondary sectors, although the share of increase was more in the primary sector (Kumar, Mandava, and Gopanapalli 2019). It is also noted that people, who were formally trained, were most likely to choose self-employment or their own business as an employment option, a trend seen in countries like Australia and others (Arum and Müller 2004). Taking Mongolia as a case study, Field et al. (2019) found that for those who had completed 2 years of vocational education, there was a greater likelihood of their being employed in paid jobs than their peers. It is interesting to note that women were more positively impacted, as their chances of being employed with higher earnings were higher than men. Similar trends were seen in other countries by Arum and Shavit (1995).

The above studies mainly focused on formal training and its outcomes. However, there is no uniform outcome as far as the type of training provided is concerned, as diverse labor market conditions play an important role in determining the effectiveness of the formal and informal training. Informal training is also seen to create employment, but mainly in the informal sector, and the benefits are not long-lasting. The outcome of informal training in India, i.e., traditional apprenticeship or hereditary training,

has not been found effective in increasing productivity or setting up new enterprises. In fact, they are mainly found working as casual wage workers in the informal sector (World Bank 2008). Nordman and Pasquier-Doumer (2014), whose study was based in urban West Africa, observed that the main source of vocational education and training was the informal sector, despite formal training providing better employment opportunities in the formal sector. They were mainly trained as apprentices or given on-the-job training. It was seen that the younger generation workers, who had been drawn into informal training, were at a disadvantage, as compared to the formally trained in terms of working position as well as the sector of employment. The formally trained had opportunities in sectors such as manufacturing, textiles, and transport, which were harder for informally trained workers to access.

With respect to the Indian economy, there are comparatively fewer studies that have looked into the earnings difference between self-employed and wage or salaried employed. In India, the returns to formal vocational education are significant with a positive impact on wages and participation in the formal sector (Kumar, Mandava, and Gopanapalli 2019). There is an increase in demand for those who completed vocational training, which has turned out to be an alternative to earning higher wages (Agrawal and Agrawal 2017). When we consider the case of India for understanding the impact of vocational education and training, it is seen that it does have a positive impact on wages, especially if they are engaged in salaried employment (NSSO 66th and 61st round data). This is the picture with formal training, but there is a difference between formal and informal training in terms of outcome. The daily wages among the formally trained are seen to be much higher, as compared to the non-formally trained. In the case of casual workers, the wage difference is much lower, but it is in favor of the formally trained (Agrawal 2012). But data on the earnings of self-employed are not available prior to the Periodic Labour Force Survey (PLFS) 2018–19. Using the survey, the study by Bairagya (2021) found the earnings difference between the formally trained self-employed in rural areas and those not formally trained.

Considering that the effectiveness of vocational training may not be the same across different types of employment, it is important to examine whether the impact of vocational training differs across different types of employment. In addition to the formal processes of skill development, a large number of people are into non-formal training, i.e., acquiring hereditary skills and learning-by-doing. According to the PLFS 2020, formal vocational training (FVT) includes training that is provided by institutions recognized by national certifying bodies based on structured curricula and standard assessment for certification. In contrast, informal vocational training (IVT) consists of skills that are acquired in daily life, workplace, family, or community based on one's requirement, motivation, and interest. FVT generally ends with diplomas or certificates, whereas IVT does not. However, in this context, it is important to mention that the Skill India program has taken the initiative of formalizing IVT by assessing its quality before issuing a certificate through its Recognition to Prior Learning program. However, studies on the impact of IVT are limited. Moreover, while assessing the impact of vocational education, the existing literature mainly categorizes employment by self-employment and wage employment. However, wage employment can also be divided into formal and informal employment. The concept of formal and informal employment is directly linked to the concept of decent work, as informal employment includes workers who do not enjoy any social security benefits. Such informal employment is not just restricted to the informal sector; it exists even in the formal sector in terms of casual and/or contractual workers. The National Commission of Enterprises in the Unorganised Sector (NCEUS 2008) has provided the precise definitions for the informal sector and informal employment separately, which have been followed in the chapter for subsequent analysis.

This chapter divides employment by self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment and then examines the differential impact of formal and informal vocational training on the earnings of different types of employment.

3.2 Methodology

For assessing the impact of formal and informal vocational training on the earnings of individuals from different types of employment, we specify the earnings equation as follows:

$$Y_i = \alpha_0 + \alpha_1 FVT_i + \alpha_2 IVT_i + \beta' X_i + u_i \quad (1)$$

where Y_i is i^{th} individual's earnings, which are dependent on his/her participation in FVT and IVT, and the vector of control variables X.

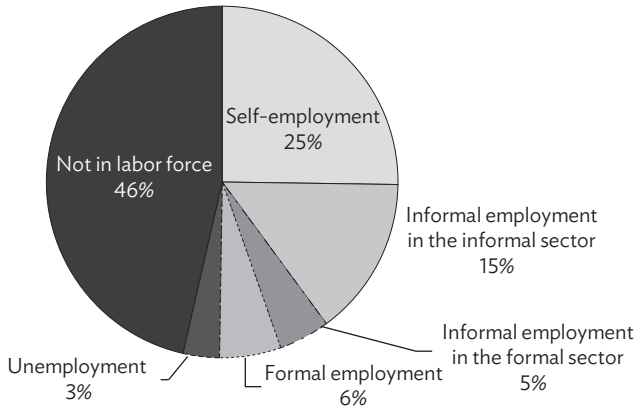
Lee's (1983) technique has been used for correcting the selection bias of the earnings equation of different types of employment, wherein we have used a multinomial logit-based selection model of participation in different types of employment of a joint determination with earnings from these activities. In the first stage, we used a multinomial logit regression technique, considering the fact that the dependent variable (i.e., different types of employment) is divided into five categories: self-employment, informal employment in the informal sector, informal employment in the formal sector, formal employment, and unemployed and not-in-labor force. We have clubbed unemployed and not-in-labor force categories together and set them as the base category. Therefore, our analysis provides the coefficient of variables for the other four outcomes (self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment), and their interpretations are compared with the base category. Therefore, based on the first-stage regression model, we examined the impact of FVT and IVT on participation in different types of employment, besides identifying the determinants of participation in different types of employment. In this context, it is essential to mention that there might be an issue of endogeneity between participation in vocational training and the choice of different types of employment. Therefore, to overcome such endogeneity issues, a control function approach, based on Wooldridge (2015), has been adopted, wherein we first estimated two probit models (one for participation in formal vocational training and another for informal vocational training), using the original instrument as an exogenous covariate along with several other control covariates. Following Bairagya, Bhattacharya, and Tiwari (2021), we used the number of registered skill providers in the district as an instrument for participation in FVT and the proportion of IVT holders in the district as an instrument for the participation in the IVT. Subsequently, generalized residuals are obtained based on the two probit models and are used as additional explanatory variables in the original multinomial logit model. In the second stage, we examined the impact of FVT and IVT on the earnings of self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment separately.

Besides the selectivity bias-corrected earning equation based on Lee's (1983) technique, we also estimated the impact of formal and informal vocational training for different quantiles based on the quantile regression technique for assessing the impact of formal and informal vocational training on the earnings by the earnings class. We used the predicted probabilities of joining different types of employment from the multinomial logit model as an additional explanatory variable in the quantile regression for correcting the sample selection bias for the respective categories. In order to accomplish the aforementioned objective, we used the nationally representative large sample of PLFS data for 2018/19 for the Indian economy.

3.3 Descriptive Statistics Related to Vocational Training and Different Employment Types

We start by presenting the distribution of the working age population by different employment types in India (Figure 3.1).

Figure 3.1: Distribution of Working Age Population (15 to 59 Years) by Different Types of Employment Classification

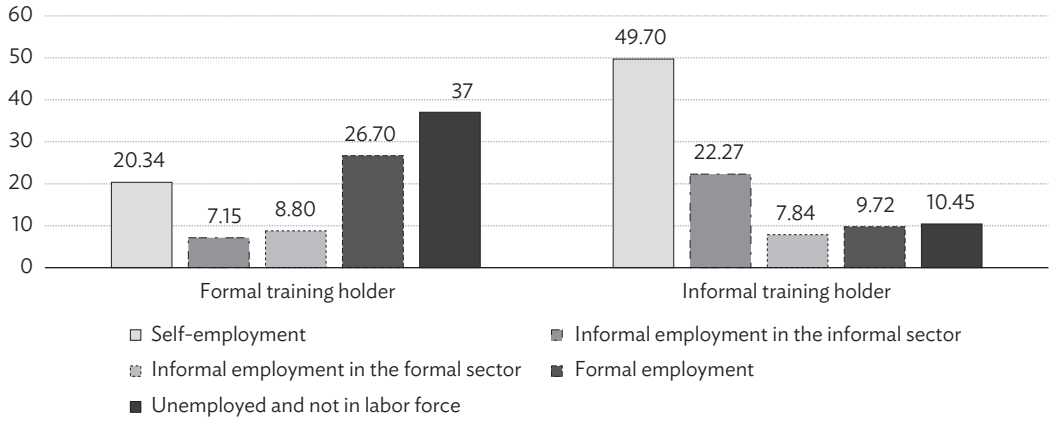


Source: Author's estimation using PLFS (2020).

Figure 3.1 shows that almost half of the working-age population in India is included either in the unemployment or not-in-labor force category. Besides a substantial proportion of the working age population are attending educational institutions (14.9%), a large section is also in the not in employment, education, or training (NEET) category (34.85%). Considering the percentage distribution only of the workforce by different types of employment categories, it is seen that the lion's share of the workforce (about 50%) is self-employed. Further, total informal wage employment accounts for about 39%, while formal wage employment accounts for only about 11% of the total workforce. Out of the 39% informal wage employment, about 29% exists in the informal sector and the rest about 10% in the formal sector.

In recent times, in order to tackle the downturn in employment creation, the promotion of skills training through vocational training has gained importance in the policy domain as part of enhancing the employability of individuals. Moreover, in addition to FVT, a large number of individuals possess IVT through hereditary processes and/or family tradition, and self-learning. However, the extent of formal and informal training may be the same across different employment categories. Figure 3.2 presents the percentage share of individuals with formal and informal vocational training within different employment categories.

Figure 3.2: Percentage Distribution of Individuals with Formal and Informal Vocational Training by Different Employment Categories



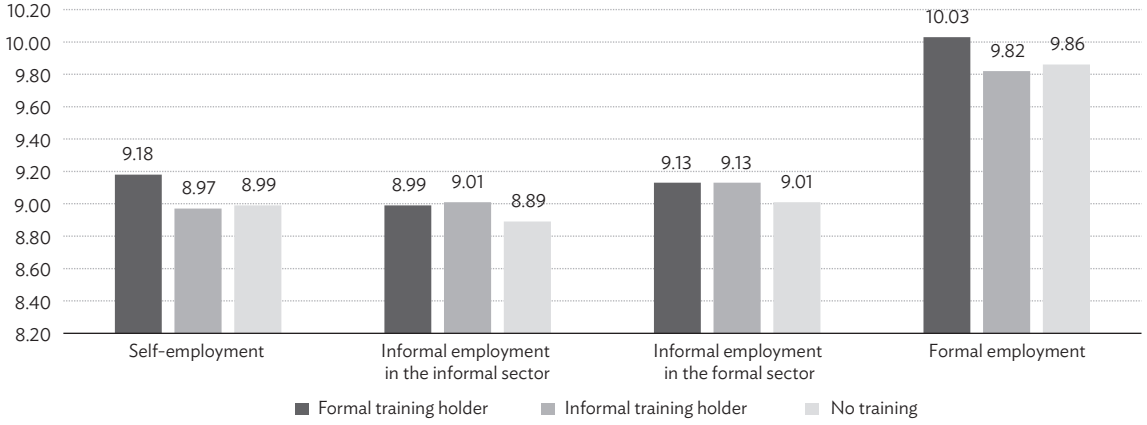
Source: Author's estimation using PLFS (2020).

Figure 3.2 reveals heterogeneity in the percentage distribution of formally and informally trained individuals in India by participation in different employment. It is also evident that the share of formally trained individuals engaged in formal employment (26.70%) is much greater than their engagement in other employment categories. On the other hand, the second-highest formally trained individuals are self-employed (20.34%). Further, it is important to note that the proportion of informally trained individuals engaged in self-employment and informal employment in the informal sector is much higher than formally trained individuals. For instance, 49.70% and 22.27% of informally trained individuals are engaged in self-employment and informal employment in the informal sector, respectively, whereas only 20.34% and 7.15% of formally trained individuals are engaged in self-employment and informal employment in the informal sector, respectively.

Moreover, a surprising observation from Figure 3.2 is that a substantial proportion of working-age people remain unemployed or are not in the labor force even after receiving formal and informal vocational training. More surprisingly, the percentage of individuals remaining unemployed with FVT is much higher (37%) than those with IVT (10%), indicating that their participation in FVT by itself does not necessarily assure employment. Skills mismatch between the training individuals possess and jobs they want is an apparent reason underlying such unemployment. Moreover, following Bairagya's (2018) argument in the case of general education, we can draw a similar type of inference. A higher unemployment rate and a lower participation in informal employment among formally trained individuals indicate that individuals do not prefer to get into low-profile vulnerable employment activities after formal vocational training. At the same time, sufficient opportunities in the formal employment activities are not available to them. This also points to the requirement of a proper policy attention toward engaging trained individuals either in wage employment or self-employment activities so as to avert the massive loss of human capital and the resources invested in training them. Moreover, the possible reason for a lower percentage of unemployment among IVT holders could be that they undergo informal training when they genuinely need it (work-specific) without bothering much about certification.

In this context, it is important to see whether formal and informal training holders can enjoy better earnings, as compared to those with no training of either type in respect of all four types of employment categories. Figure 3.3 provides a comparative picture of the mean earnings of individuals with formal training, informal training, and no training with respect to different employment categories.

Figure 3.3: Mean Earnings (log) of Individuals with Formal and Informal Vocational Training in Different Types of Employment Categories



Source: Author's estimation using PLFS (2020).

Figure 3.3 reveals that formal training holders enjoy higher earnings, as compared to those individuals with no training in respect of all four types of employment. It is obvious that individuals engaged in formal wage employment, irrespective of their status of vocational training, enjoy much higher earnings than self-employment and informal employment. However, even within formal wage employment, formal training holders have higher earnings than individuals with informal training and no training. Moreover, informal training holders enjoy higher earnings as compared to those with no training in informal employment (both in the formal and informal sectors).

In this context, it is important to note that the earnings differences across individuals with formal training, informal training, and no training are not only due to the training, but also the differences may exist because of the differences in individuals' socioeconomic and other characteristics. The next section examines the impact of formal and informal vocational training, based on regression analysis, controlling for several socioeconomic and other characteristics.

3.4 Impact of Vocational Training on Participation and Earnings

This section presents the multinomial logit-based regression results of the impact of formal and informal vocational training on participation in different types of employment (Table 3.1). In Table 3.1, the determinants of participation in self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment are presented in columns 1, 2, 3, and 4, respectively. In addition, as mentioned in the methodology section, to overcome such endogeneity issues between participation in vocational training and the choice of different types of employment, obtained generalized residuals based on the two probit models (one for participation in FVT and the other for IVT) are used as additional explanatory variables in the original multinomial logit model.

Table 3.1: Impact of Formal Vocational Training and Informal Vocational Training on Participation in Different Types of Employment in India: Multinomial Logit Estimates

	Self–Employment (SE)	Informal Employment in the Informal Sector (IEIS)	Informal Employment in the Formal Sector (IEFS)	Formal Employment (FE)
Variables	(1)	(2)	(3)	(4)
Formal vocational training	0.127*** (0.031)	0.055** (0.027)	–0.002 (0.012)	–0.054*** (0.013)
Informal vocational training	0.172*** (0.007)	0.031*** (0.005)	0.014*** (0.004)	0.04*** (0.004)
$\hat{V}_{1i}$	–0.037** (0.015)	–0.028** (0.012)	0.011* (0.006)	0.044*** (0.006)
$\hat{V}_{2i}$	–0.012*** (0.004)	0.009*** (0.003)	0.005*** (0.002)	–0.0004 (0.002)
Female	–0.193*** (0.001)	–0.157*** (0.001)	–0.034*** (0.001)	–0.045*** (0.001)
Age	0.029*** (0.001)	0.018*** (0.0004)	0.009*** (0.0003)	0.013*** (0.0004)
Age-squared	–0.0003*** (0.00001)	–0.0003*** (0.00001)	–0.0001*** (0.000004)	–0.0001*** (0.000004)
Household size	0.008*** (0.0004)	–0.006*** (0.0003)	–0.002*** (0.0002)	–0.005*** (0.0003)
Minority	–0.0003 (0.002)	–0.017*** (0.001)	–0.011*** (0.001)	–0.002* (0.001)
SC and ST	–0.037*** (0.002)	0.027*** (0.001)	0.007*** (0.001)	0.024*** (0.001)
Married	0.054*** (0.002)	–0.014*** (0.002)	–0.005*** (0.001)	0.002 (0.001)
Rural	0.11*** (0.002)	–0.006*** (0.001)	–0.015*** (0.001)	–0.034*** (0.001)
Primary school educated	0.005* (0.003)	–0.032*** (0.002)	0.002 (0.002)	0.034*** (0.003)
Middle school educated	0.001 (0.002)	–0.07*** (0.002)	–0.004*** (0.001)	0.071*** (0.003)

continued on next page

Table 3.1 *continued*

Variables	Self–Employment (SE) (1)	Informal Employment in the Informal Sector (IEIS) (2)	Informal Employment in the Formal Sector (IEFS) (3)	Formal Employment (FE) (4)
Secondary educated	−0.017*** (0.003)	−0.103*** (0.002)	−0.005*** (0.002)	0.099*** (0.003)
Higher secondary educated	−0.043*** (0.003)	−0.156*** (0.003)	−0.006*** (0.002)	0.141*** (0.003)
Undergraduate and above educated	−0.049*** (0.004)	−0.199*** (0.004)	0.007*** (0.002)	0.193*** (0.003)
Developed states	−0.063*** (0.003)	0.037*** (0.002)	0.015*** (0.002)	0.031*** (0.002)
Developing states	−0.02*** (0.002)	0.008*** (0.001)	0.01*** (0.001)	0.032*** (0.001)
No. of observations	278,086			
Wald Chi-square (72)	95820.88			
Prob > Chi-square	0			
Pseudo R-squared	0.282			
Log pseudolikelihood	−256342.65			

SC = scheduled castes, ST = scheduled tribes.

Notes: *** specifies 1% level of statistical significance. The coefficients are marginal effects, and robust standard errors are reported in parentheses. Both SC and ST belong to socially disadvantaged groups.

Source: Author's estimation using PLFS (2020).

Table 3.1 shows that the coefficient for formal vocational training is positive and statistically significant for self-employment and informal employment in the informal sector, but insignificant for informal employment in the formal sector and negative and statistically significant for formal employment, implying that FVT plays an important role in participation only in self-employment and informal employment in the informal sector. In contrast, the coefficient related to IVT is positive and statistically significant for all four categories of employment (self-employment, informal employment in the informal sector, informal employment in the formal sector and formal employment). Most importantly, the coefficient related to the generalized residual for FVT is statistically significant for all the employment categories and validates the presence of endogeneity between participation in IVT and participation in different activities. Further, the coefficient in respect of the generalized residual for IVT is statistically significant for all the employment categories, except formal employment.

Regarding the other control variables in particular, females have a lower likelihood of participating in all four types of activities. The coefficient related to age is positive and statistically significant for all four employment categories, but age-squared is negative and statistically significant. This implies that the likelihood of individuals participating in employment irrespective of the type increases with an increase in age, but it starts decreasing after a certain age. Moreover, the coefficient related to household size is positive and statistically significant for self-employment, but negative and statistically significant for all the other three types of employment. Individuals belonging to minority communities possess a lower probability of participating in all four categories of employment. Individuals belonging to scheduled caste and scheduled tribe social groups possess a lower probability of participating

in self-employment, but a higher likelihood of participating in formal and informal wage employment (both in the formal and informal sectors). As expected, individuals in rural areas possess a lower likelihood of participating in formal and informal wage employment, whereas there is a higher probability of their participation in self-employment activities. Further, the possibility of participating in formal employment increases consistently with an increase in the educational level of individuals. However, the likelihood of participating in self-employment and informal wage employment decreases consistently with an increase in the educational level of individuals. Moreover, individuals living in developing and developed states[1] are more likely to participate in formal and informal wage employment (both in the formal and informal sectors), with a lower chance of participating in self-employment.

Besides assessing the impact of formal and informal vocational training on the different types of employment, it is also important to examine whether formal and informal vocational training help earn better from all types of employment. Therefore, Lee's (1983) technique has been used for correcting the selection bias of the earnings equation of different types of employment, wherein predicted probabilities (Inverse Mills Ratio: Lambda) of participation in different types of employment, computed based on the above multinomial logit model, are added as an explanatory variable in the earnings equation of the respective type of employment, separately. Lee's (1983) correction-based regression results of the earnings equation of the respective type of employment are presented in Table 3.2.

From Table 3.2 it is seen that the coefficient for formal vocational training is positive and statistically significant for informal employment in the formal sector and formal employment, whereas it is insignificant for self-employment and informal employment in the informal sector, implying that formal vocational training helps individuals earn better from informal employment in the formal sector and formal employment. In contrast, the coefficient related to informal vocational training is positive and statistically significant for all four categories of employment (self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment), implying that informal vocational training helps earn better from every type of employment.

Related to the other control variables, it is seen that females earn less as compared to males in all four types of activities. The coefficient related to age is positive and statistically significant for all four employment categories, but age-squared is negative and statistically significant. This implies that individual earnings from every type of employment increase with an increase in age, but after a certain age, it starts decreasing. As expected, individuals living in rural areas account for relatively lower earnings from all four types of employment. Further, the earnings increase consistently with an increase in the educational level of individuals in respect of all the four types of employment. Moreover, individuals living in developing and developed states account for higher earnings for every employment category. In fact, the coefficient related to the lambda is found statistically significant for all four types of employment, justifying thereby the presence of a selection bias in the above regression equations and the need for corrections accordingly.

It is important to note that the above regression results point to the average impact of formal and informal vocational training on the earnings of different employment types. However, it is also important to note that the impact of formal and informal vocational training on earnings can vary depending on the earnings class individuals belong to within each type of employment. Therefore, besides the selectivity bias-corrected earnings equation based on Lee's (1983) technique, we estimated the impact of formal and informal vocational training for different quantiles based on the quantile regression technique. In addition, we used the predicted probabilities of joining different types of employment from the multinomial logit model as an additional explanatory variable in the quantile regression for correcting

[1] States have been classified as developed, developing, and underdeveloped states based on the Human Development Indices.

Table 3.2: Impact of Formal Vocational Training and Informal Vocational Training on the Earnings of Different Types of Employment

Variables	Self–Employment (SE)	Informal Employment in the Informal Sector (IEIS)	Informal Employment in the Formal Sector (IEFS)	Formal Employment (FE)
	(1)	(2)	(3)	(4)
Formal vocational training	–0.016 (0.025)	–0.001 (0.031)	0.078*** (0.025)	0.208*** (0.017)
Informal vocational training	0.025** (0.01)	0.079*** (0.011)	0.046*** (0.015)	0.056*** (0.013)
Female	–1.053*** (0.02)	–0.733*** (0.034)	–0.655*** (0.022)	–0.418*** (0.024)
Age	0.083*** (0.003)	0.065*** (0.005)	0.051*** (0.005)	0.054*** (0.005)
Age-squared	–0.001*** (0.00003)	–0.001*** (0.0001)	–0.001*** (0.0001)	–0.0003*** (0.0001)
Household size	0.018*** (0.002)	–0.017*** (0.002)	–0.027*** (0.003)	–0.027*** (0.003)
Minority	0.063*** (0.007)	–0.001 (0.011)	0.0005 (0.014)	0.056*** (0.01)
SC and ST	–0.107*** (0.008)	–0.052*** (0.011)	0.0004 (0.012)	0.067*** (0.012)
Married	–0.006 (0.012)	0.099*** (0.012)	0.053*** (0.015)	0.087*** (0.012)
Rural	–0.247*** (0.011)	–0.053*** (0.009)	–0.273** (0.013)	–0.277*** (0.014)
Primary school educated	0.079*** (0.01)	0.091*** (0.018)	0.022 (0.023)	0.09** (0.037)
Middle school educated	0.179*** (0.009)	0.127*** (0.019)	0.1*** (0.021)	0.317*** (0.035)
Secondary educated	0.216*** (0.01)	0.142*** (0.023)	0.197*** (0.021)	0.53*** (0.04)
Higher secondary educated	0.281*** (0.011)	0.133*** (0.031)	0.254*** (0.021)	0.843*** (0.048)
Undergraduate and above educated	0.453*** (0.014)	0.222*** (0.04)	0.509*** (0.022)	1.252*** (0.06)
Developed states	0.196*** (0.014)	0.329*** (0.016)	0.277*** (0.021)	0.071*** (0.016)
Developing states	0.114*** (0.007)	0.028*** (0.009)	0.116*** (0.012)	0.005 (0.012)
Lambda	–0.176*** (0.031)	–0.154*** (0.037)	–0.295*** (0.043)	–0.281*** (0.036)
Constant	7.111*** (0.093)	7.52*** (0.098)	7.564*** (0.151)	7.198*** (0.176)
No. of observations	48,429	12,139	9,112	20,053
F–Statistic	1044.52	221.08	214.12	623.78
Prob > F	0	0	0	0
R-squared	0.334	0.294	0.319	0.342
Root MSE	0.633	0.479	0.508	0.57

SC = scheduled castes, ST = scheduled tribes.

Note: *** specifies 1% level of statistical significance. The coefficients are marginal effects, and robust standard errors are reported in parentheses.

Source: Author's estimation using data from PLFS (2020).

the sample selection bias for the respective employment categories. The quantile regression results for self-employment, informal employment in the informal sector, informal employment in the formal sector, and formal employment are presented in Table 3.3.

Table 3.3: Impact of Formal and Informal Vocational Training on the Earnings across Quantiles of Self-Employment in India

	10th Quantile	25th Quantile	50th Quantile	75th Quantile	90th Quantile
	(1)	(2)	(3)	(4)	(5)
Self-employment					
Formal vocational training	−0.136*** (0.051)	−0.058* (0.033)	0.001 (0.027)	0.065* (0.036)	0.096*** (0.033)
Informal vocational training	0.025 (0.017)	0.033** (0.013)	0.048*** (0.008)	0.057*** (0.014)	0.051*** (0.012)
Informal employment in the informal sector					
Formal vocational training	0.01 (0.078)	−0.015 (0.036)	−0.011 (0.035)	0.073** (0.033)	0.074* (0.043)
Informal vocational training	0.056*** (0.021)	0.064*** (0.012)	0.078*** (0.015)	0.086*** (0.015)	0.046*** (0.014)
Informal employment in the formal sector					
Formal vocational training	0.092* (0.037)	0.03 (0.029)	0.068*** (0.022)	0.067*** (0.021)	0.158*** (0.034)
Informal vocational training	0.018 (0.037)	0.07*** (0.015)	0.057*** (0.012)	0.056*** (0.016)	0.061** (0.024)
Formal employment					
Formal vocational training	0.193*** (0.034)	0.197*** (0.023)	0.19*** (0.019)	0.154*** (0.02)	0.143*** (0.023)
Informal vocational training	0.062** (0.026)	0.063*** (0.02)	0.062*** (0.013)	0.011 (0.014)	0.012 (0.014)

Notes: ***, ** and * specify 1%, 5%, and 10% levels of statistical significance, respectively. Bootstrap (20) standard errors are reported in parentheses. Female, age, age-squared, household-size, minority, scheduled castes, scheduled tribes, married, rural, education dummies, developed states, developing states, and Lambda are included as control variables in all regression equations.

Source: Author's estimation using data from PLFS (2020).

Table 3.3 shows that the coefficient of the FVT changes from negative and significant to positive and significant as it moves from lower quantiles toward higher quantiles of self-employment. The possible reason could be that one can make use of the benefit of FVT when the production size is large in scale. However, IVT shows a positive impact for every quantile of self-employment. For informal employment in the informal sector, the coefficient of FVT is positive and significant for the 75th and 90th quantiles. However, IVT has a positive and statistically significant impact for every quantile of informal employment in the informal sector, statistically insignificant for the 10th quantile. Moreover, for informal employment in the formal sector, the coefficient of formal and informal vocational training is positive across all quantiles, but formal training is found statistically insignificant for the 50th quantile, and informal training is statistically insignificant for the 10th quantile. Lastly, the coefficients related to FVT are found positive and statistically significant at the 1% level across all earnings quantiles for formal employment. Moreover, although the coefficient of IVT is positive across all quantiles, it is found statistically insignificant for higher quantiles like the 75th and 90th.

3.5 Conclusion and Policy Recommendations

This chapter examines the differential impact of formal and informal vocational training on earnings of different types of employment, using Lee's (1983) correction technique. The regression results reveal that FVT plays an important role in participation in self-employment and informal employment in the informal sector, but IVT has a positive role in participation in respect of all four categories of employment. Moreover, the regression results also show that FVT helps individuals earn better from informal employment in the formal sector as well as formal employment, whereas IVT helps earn better from every type of employment. Further, there is cause for concern on the following grounds:

(a) Descriptive statistics show that about half of the working-age population in India is included either in the unemployment or not-in-labor force category. Even though a proportion of people in the not-in-labor force category attend educational institutions, a large section remain in the NEET category and need to be provided with employment opportunities.
(b) Considering the percentage distribution of the workforce by different types of employment categories, only 11% account for formal wage employment. It is also evident that the share of formally trained individuals engaged in formal employment and self-employment is much higher than their engagement in informal employment. Therefore, skill development of the youth at multiple levels on a massive scale may promote formal employment. At the same time, skilled individuals need to be encouraged to take up entrepreneurship.
(c) Surprisingly, a substantial proportion of the working-age population remains unemployed or not in the labor force even after receiving FVT, indicating that their participation in FVT by itself does not necessarily assure employment. This also points out the requirement of a proper policy toward engaging trained individuals either in wage employment or self-employment activities to avoid the massive loss of human capital and the resources invested in training them.
(d) Moreover, IVT plays a vital role in participating in all four types of employment with better earnings from these activities. Therefore, the strengthening of IVT is essential for promoting different types of employment, which will, in fact, help capitalize on the present demographic dividend and overcome the employment downturn to some extent.
(e) Although formal and informal vocational training positively impact employment participation and earnings on the whole, substantial heterogeneity is observed in terms of their effectiveness across different earnings quantiles. For example, IVT shows a significant impact for all quantiles of informal employment, but the impact is not so significant for higher quantiles of formal employment. In contrast, FVT shows a significant impact for all quantiles of formal employment, but not for lower quantiles of informal employment and self-employment. Thus, proper policy attention is required to ensure that formal and informal vocational training are significantly effective for all quantiles of all four employment categories. The formalization of IVT might help make it useful across all quantiles of formal employment. At the same time, FVT can also incorporate some of the lessons from IVT related to the requirement of some of the specific types of skills and their hands-on exercises for making FVT more useful across all quantiles of informal employment and self-employment.

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PART II

Improving Technical and Vocational Education and Training for Youth

CHAPTER 4

Effectiveness of Vocational Training Programs in Achieving Decent Work for Youth: The Case of Sri Lanka

N. P. Dammika Padmakanthi

4.1 Introduction

Decent work is the engine of economic and social development since it increases productivity, reducing poverty and income inequalities by empowering people. The Sustainable Development Goals also highlight the importance of decent work to achieve personal well-being and economic growth. The International Labour Organization (ILO 2001) has recognized decent work as a poverty alleviation tool. Accordingly, decent work is a human right (Fery and MacNaughton 2016). The four mainstays of decent work are rights at work, employment and income opportunities, social protection and social security, and social dialogue (ILO 1999). Decent work assures reasonable income, job safety, working rights, and heightened personal well-being and social assimilation (ILO 1999). Contradictory to the positive impacts of decent work, unemployment, underemployment, and low-paid employment can lead to social seclusion, negative impact on self-confidence, health problems, family and social problems, and negative impact on economic development (Gross 2010; Mundlak 2007; Sen 1999).

More than 60% of the world's population is employed in the informal sector, and 2 billion people work in the informal sector without decent work conditions (ILO 2018). People work in unfavorable conditions since they do not have the required qualifications to find decent work.

Training and education play a vital role in achieving decent work. According to human capital theory (Schultz 1963), investment in education significantly influences economic and social development. The labor force of any country should be trained and educated according to the requirements of the labor market to entirely make use of the labor force and boost the quality of the workforce.

Youth is the backbone of any country. In Sri Lanka, youth unemployment and underemployment are very high, reflecting the need of relevant education and training to boost employability in decent work. Although Sri Lanka has a high literacy rate, most students drop out of formal school education since they are not eligible for the next step of school education, according to the Sri Lankan education system. A significant number of students drop out of school education even if they qualify for the next step of the education because of financial problems and or any other matters. Such youth are a burden on the labor force since they do not have the relevant skills to find decent work. However, vocational training institutes (VTIs) provide various training programs according to the labor market's demand, especially targeting the youth who cannot continue with formal education. Hence, it is worthwhile to identify the impact of those programs in achieving decent employment and the impact of vocational training programs (VTPs) on income increases. Accordingly, to improve the skill development of youth, it is necessary to identify the barriers that hinder the unemployed youth entering VTIs. Therefore, the objectives of this study are to:

- analyze the impact of VTPs on employability,
- analyze the impact of VTPs on income increases, and
- identify the factors that hinder unemployed youth from entering VTIs.

4.2 Information on the Labor Market and Vocational Training in Sri Lanka

4.2.1 Characteristics of the Labor Market

The labor market characteristics of Sri Lanka emphasize the importance of promoting decent work to achieve economic development and social well-being. The gender gap, huge youth unemployment, higher employment in the informal sector, lack of technological skills, discouraged job seekers, and the gender pay gap are the main obstacles of the labor market in Sri Lanka that policy makers should pay attention to to boost decent work.

Table 4.1 illustrates the labor market characteristics in Sri Lanka.

Table 4.1: Labor Market Characteristics in Sri Lanka

Characteristics	Total %	Male %	Female %
Total labor force participation	52.3	73	34.5
Youth labor force participation (15–24 years)	30.7	39.8	21.7
Labor force participation according to education level			
Degree and above		84.2	85.4
GCE (AL)		47.1	76.6
GCE (OL)		27.6	64.5
Grades 6–10		30.8	76.2
Grade 5 and below		27.1	68.2

AL = Advanced Level, GCE = General Certificate of Education, OL = Ordinary Level.
Source: Department of Census and Statistics (DCS) (2020).

The labor force participation rate is the percentage of the economically active population 15 years old or above among total working-age people (DCS 2020). According to Table 4.1, both total and youth labor force participation are low, reflecting the need to enhance labor force participation to solve the unemployment problem. A significant gender gap also exists in the Sri Lankan labor market. This considerable gender gap can also be seen in each education level, age category, and according to the nature of employment. Participation in the labor force by less-educated people is low since they do not have the required qualifications to be employed. Conversely, the labor force participation rate is the highest for the highest education qualifications (degree and above). Also, the gender gap is very low among the people who have the highest educational qualifications. Hence, education can be identified as a vital tool to reduce the gender gap in the labor force.

People engaged in studies, household activities, retired or aged, and people with disabilities are considered economically inactive (DCS 2020). In 2019, 48.4% of the working-age population was economically inactive, consisting of 26.3% of males and 73.7% of females (DCS 2020). The gender gap

can be seen among all categories of economically inactive people. Low education highly affected the economic inactivity of the people. The highest number of economically inactive people (43.3%) were recorded from the people educated up to grade 10. In comparison, the second-highest economically inactive people (24.1%) were recorded from those who were educated only up to the General Certificate of Education (GCE) (Ordinary Level [OL]) (DCS 2020). Economically inactive people with the lowest education level (grade 5 and below) comprised 18.1% in 2019 (DCS 2020). As previously highlighted, the labor force participation rate of people with the highest education qualifications is high. So, the share of economically inactive people among those who have the highest education qualification (Advanced Level [AL] or above) is low (14.5%) (DCS 2020). Higher education encourages them to work. Hence, low-educated people, people engaged in household activities, retired people, and people with disabilities can also be attracted to the labor force by providing targeted training and employment opportunities.

The potential labor force consists of economically inactive persons, stating that the keenness to be employed is essential to boost decent work since they are not considered unemployed. In 2019, 0.2 million people were in the potential labor force (DCS 2020).

Discouraged job seekers can be used to measure people's inability to find a suitable occupation (DCS 2020). Lack of proper education and/or training, less confidence in employability, incompetence in finding employment opportunities, and personal difficulties are the main reasons for discouraged job seekers (DCS 2020). In 2019, out of total discouraged job seekers, 41.1% were male and 58.9% were female (DCS 2020).

The gender pay gap is also high in Sri Lanka. The monthly mean salary for females is lower than for males. The monthly paid mean salary for males and females was SLR44,471 and SLR34,124, respectively, while the monthly mean salary for daily waged males and females were SLR28,099 and SLR14,268, respectively, in 2019 (DCS 2020). The unemployment rate in Sri Lanka was 4.8%, while the male and female unemployment rates were 3.3% and 7.4%, respectively, in 2019 (DCS 2020). The female unemployment rate is higher for all age groups, declining as age increases.

Youth unemployment (age group 15–24 years) is an enormous problem in Sri Lanka. It creates substantial economic problems for the future with demographic transitions if necessary actions are not implemented to reduce the numbers. Youth unemployment as a proportion of total youth is vital for identifying youth employment-related consequences. Among the youth, only 30.7% entered the labor force in 2019, of whom about 21.5% were unemployed (DCS 2020). Female and male youth unemployment rates were 28.7% and 17.6%, respectively, in 2019 (DCS 2020).

Youth unemployment as a percentage of total unemployment was 49%, 57.3% for males, and 42.3% for females in 2019 (DCS 2020). Youth unemployment as a proportion of total unemployment by level of education was higher for the education categories of grade 6 to grade 10 (52.9%) and GCE (OL) (51%) (DCS 2020). The youth unemployment rate was slightly lower (47.1%) for those who are educated up to GCE (AL) or above (DCS 2020). However, the youth unemployment rate among the lowest education category (grade 5 or below) was the lowest (17.9%) since most of them were employed as unskilled workers or underemployed in formal or informal sectors without decent work conditions (DCS 2020).

The youth not in employment, education, or training (NEET) group indicates the non-consumed labor that can be attracted for economic development (DCS 2020). The NEET rate is significantly higher for females than males (DCS 2020). The NEET group as a percentage of total youth was 21.2%, while male and female NEET rates were 13.3% and 29.0%, respectively, in 2019 (DCS 2020). The highest NEET rate (59.7%) was documented in the lowest education category (grade 5 or below), while the lowest

NEET rate (15.3%) was reported in the education category of GCE OL (DCS 2020). The NEET rate for the highest education level (GCE AL or above) was 23.9%, and disaggregated data show that it was 15.3% and 29.7% for males and females, respectively (DCS 2020).

Except for government teachers, according to their nature of the employment, other people who work fewer than 35 hours per week in primary and secondary employment are considered underemployed according to the DCS (DCS 2020). The underemployment rate is higher among females compared to males. The highest underemployment rate (3.2%) was reported for those from the education category of grade 6 to grade 10. The underemployment rate for people educated up to grade 5 and up to GCE (OL) was 2.7% and 2.4%, respectively, in 2019 (DCS 2020). The lowest underemployment rate (1.9%) was reported from the highest education category (GCE AL or above) (DCS 2020). Hence, education and skill development could be identified as tools to reduce underemployment.

The majority of underemployed people work in the informal sector, which does not satisfy the decent work conditions. In Sri Lanka, the informal sector is more significant than the formal sector (DCS 2020). In 2019, 57.4% of people worked in the informal sector (DCS 2020). The lower the level of education, informal sector participation is increased. Out of the total labor force, 83.5% of people educated up to grade 5 worked in the informal sector (DCS 2020). Similarly, 80.1% of people who belong to the education category of grade 6 to grade 10 were employed in the informal sector in 2019 (DCS 2020). However, only 20.6% of people who belong to the education category (GCE AL) or above worked in the informal sector, indicating the positive impact of education in reducing underemployed (DCS 2020).

Technological knowledge of the labor force is also an essential factor for employability. In Sri Lanka, the overall computer literacy rate was 30.8%, and male and female computer literacy rates were 32.9% and 28.9%, respectively, in 2019 (DCS 2020). Even though computer literacy is higher among educated people and those who work in the professional skilled employment sector than the low-educated, unskilled workers such as fishery workers and workers in elementary occupations (DCS 2020). It is essential to increase computer literacy in all the employment categories to improve their productivity or develop their industries since technological improvement is essential to compete in a globalized world.

The labor market information highlights the importance of creating a skilled labor force to overcome unemployment and underemployment to boost decent work. Skill development of the labor force is entirely based on education and training.

4.2.2 Vocational Training in Sri Lanka

Vocational training in Sri Lanka is a multi-institutional service including public and private sector organizations. The Department of Technical Education and Training (DTET) is one of the leading institutions that conduct vocational training under the purview of the Ministry of Skill Development and Vocational Training. The DTET conducts VTPs for those who leave the formal education system and those who are already employed to boost their employment-related skills through 39 training centers comprising 9 colleges of technology and 30 technical colleges (DTET 2019). DTET has categorized the VTPs into 28 industry sectors according to the nature of the programs (DTET 2019). Table 4.2 shows the different industry sectors related to training programs.

Under these main industry sectors, 130 courses are conducted on a full-time and part-time basis. Out of the total courses, 21 courses are part-time courses (DTET 2019). In 2019, 42,657 students enrolled for vocational training, of whom only 17,459 were female and the majority were male

Table 4.2: Different Industry Sectors with Training Programs Conducted by the Department of Technical Education and Training

Course
Agriculture Plantation and Livestock
Art Design and Media (Visual and Performing)
Automobile Repair and Maintenance
Aviation and Aeronautics
Building and Construction
Electricity, Electronics, and Telecommunication
Finance Banking and Management
Fisheries and Aquaculture
Food Technology
Gem and Jewelry
Hotel and Tourism
Human Resource Management
Information Communication and Multimedia Technology
Languages
Leather and Footwear
Marine and Nautical Science
Mechatronics Technology
Medical and Health Science
Metal and Light Engineering
Office Management
Personal and Community Development
Printing and Packaging
Rubber and Plastics
Refrigeration and Air Conditioning
Textile and Garment
Trainer Training
Wood Related
Other

Source: DTET (2019).

(DTET 2019). The majority of students enrolled in full-time courses; 34,186 students have enrolled for full-time course, and 8,471 students for part-time courses (DTET 2019). The details of student enrollment highlighted that female participation in vocational training is low. The lack of vocational training may cause low labor force participation, a high unemployment rate, and low wages for females.

Apart from the various government authorities, the private sector also provides industry-related vocational training for their workers and outsiders. Private organizations and nongovernment organizations also play a vital role in providing vocational training.

4.3 Methodology

This study is based on primary data collected from two samples according to the objectives of the study.

4.3.1 Methodology for Objectives One and Two

Primary data were collected from past students of the three technical colleges administered by the DTET in three provinces of Sri Lanka to analyze the first two objectives. The sample was selected from the students who completed their training in 2017, 2018, and 2019. Data were collected mainly through telephone conversations using structured questionnaires if the responders could not meet physically. In total, 1,000 students were selected as a sample. However, because of incomplete information and difficulty contacting relevant persons, only 804 persons were considered for the analysis.

Objective One: Analyze the Impact of Vocational Training on Employability

The impact of vocational training on employability was analyzed using the probit regression model.

Model 1

$$Y = \propto + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \beta 8X8 + \beta 9X9 + \beta 10X10 + \beta 11X11 + \epsilon$$

Dependent variable

The dependent variable (Y) was measured by asking whether the candidate would be able to find an occupation that satisfied the decent work condition:

Y = 1 – Employed; 0 – Otherwise

Independent variables

X1 = Age (years)

X2 = Gender: 1 – Male; 0 – Otherwise

X3 = Marital status: 1 – Married; 0 – Otherwise

X4 = Years of school education

X5 = Extra qualifications – Computer literacy and English knowledge are considered the extra qualifications

1 – Responder has extra qualifications; 0 – Otherwise

X6 = Relevance of training program; 1 – Training program relevant to finding a job; 0 – Otherwise

X7, X8, and X9 measure the impact of the type of VTPs to be employed. For this purpose, all the programs offered by the DTET were categorized into the following four major categories according to the nature of the programs:

1. Technology-related programs
2. Agriculture-related programs
3. Service sector-related programs
4. Production sector-related programs

The impact of the type of programs was measured using three dummy variables:

X7 = 1 – Technology related courses; 0 – Otherwise

X8 = 1 – Service sector-related courses; 0 – Otherwise

X9 = 1 – Production sector-related courses; 0 – Otherwise

X10 and X11 measure the impact of the course duration on finding employment. The DTET provides VTPs from 3 months to 3 years. The duration of VTPs was categorized into three categories: less than 12 months, 12–24 months, and 25 months or above. Hence, two dummy variables were introduced:

X10 = 1 – Duration, of course, is 12–24 months; 0 – Otherwise

X11 = 1 – Duration, of course, is 25 months or above; 0 – Otherwise

Objective Two: Analyze the Impact of Vocational Training on Income Increases

The impact of vocational training on income increases was measured using the probit regression model. Only employed persons were considered to analyze this objective. Out of the total sample (804), 533 persons were employed after completing the vocational training. Income increases were measured by asking whether the person was able to demand a higher salary because of vocational training and/or whether the person could earn an income from a secondary occupation by using the knowledge obtained from the vocational training. The following model was estimated to measure the impact of vocational training on income increases.

Model 2

$$Y = \propto + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \beta 8X8 + \beta 9X9 + \beta 10X10 + \in$$

Dependent variable

The dependent variable was measured by asking whether responders were able to demand a high salary because of vocational training and/or they were able to earn extra income from a secondary occupation with the help of vocational training:

Y = 1 – Income increases; 0 – Otherwise

Independent variables

X1 = Age (years)

X2 = Gender: 1 – Male; 0 – Otherwise

X3 = Marital status: 1– Married; 0 – Otherwise

X4 = Years of school education

X5 = Extra qualifications; Extra qualifications were measured as model 1.

1 – Responder has extra qualifications; 0 – Otherwise

X6, X7, and X8 measure the impact of the type of programs on income increases. The impact of the type of VTPs was measured as in model 1:

X6 = 1 – Technology related courses; 0 – Otherwise

X7 = 1 – Service sector-related courses; 0 –Otherwise

X8 = 1 – Production sector-related courses; 0 – Otherwise

X9 and X10 measure the impact of the duration of the VTPs on income increases. The duration of VTPs was defined as model 1:

X9 = 1 – Duration, of course, is 12–24 months; 0 – Otherwise

X10 = 1 – Duration, of course, is 25 months or above; 0 – Otherwise

4.3.2 Methodology for the Third Objective—Determine the Factors That Hinder the Unemployed Youth Entering the VTIs

To analyze this objective, 400 unemployed youth (aged between 15 and 25 years) who live in the same district that selected VTIs were selected as a sample. Factor analysis was carried out to determine the barriers of accessing VTIs. Several statements that focus on financial difficulties, educational qualifications, institutional factors, and personal attitudes were used to identify the factors that hinder the unemployed youth from entering VTIs. Information was gathered using a five-point Likert scale: 1 – Strongly agree, 2 – Agree, 3 – Neutral, 4 – Disagree, and 5 – Strongly disagree.

4.4 Results and Discussion

4.4.1 Impact of Vocational Training on Employability

The impact of vocational training on employability was analyzed using the probit model. The results are illustrated in Table 4.3.

Employability was measured by asking whether the responders were able to find decent employment. Out of the total sample, 66.3% of responders are employed, but 33.7% could not find decent employment. According to the regression model, extra qualifications, the relevance of training, and years of school education significantly affect employability, emphasizing the importance of educational factors in finding decent work. The average years of schooling in the sample is 9.5 years and the maximum year of school education 13 years. However, only 5.2% of responders have completed the maximum years of school education. All others have dropped out of school education for various reasons such as failure of examinations, financial difficulties, inability to find a school to continue education, lack of infrastructure facilities, and personal problems. Out of the total sample, 19.3% of responders had 11 years of school education, reflecting those who dropped out of school after failing the GCE (OL) examination. The most important two examinations in the Sri Lankan school education system are

Table 4.3: Results of the Probit Model

Parameter	Coefficient	Wald Chi-Square	Significance
Intercept	–4.37	37.58	0.00
X1 – Age	–0.09	0.43	0.51
X2 – Gender	0.56	9.09	0.00
X3 – Marital status	–0.40	3.66	0.06
X4 – Years of school education	0.25	32.14	0.00
X5 – Extra qualifications	1.48	58.88	0.00
X6 – Relevance of training	3.74	114.03	0.00
X7 – Type of course – Technology related	0.39	2.81	0.09
X8 – Type of course – Service sector-related	0.66	7.12	0.01
X9 – Type of course – Production sector-related	0.53	4.32	0.04
X10 – Duration of course – 12 to 24 months	0.47	5.22	0.02
X11 – Duration of course – 25 months or above	0.55	5.43	0.02

Source: Author's calculation based on the primary data.

the GCE (OL) examination and the GCE (AL) examination. Only the students who pass the GCE (OL) examination held at grade 11 are eligible to enter the GCE (AL) classes, which select students for universities. Only those who pass the GCE (AL) with high marks have an opportunity to enter the government universities for higher education.

Extra qualifications are also highly relevant in finding employment opportunities. In this analysis, computer and English knowledge are considered the extra qualifications since those are essential factors to be employed. Out of the total sample, 58.8% of responders had extra qualifications despite the vocational training.

According to the results, vocational training is also a highly influential factor in getting employment. Out of the total sample, 57.1% of responders mentioned that vocational training was beneficial in finding employment.

Out of the total sample, 30.6%, 24.3%, 21.3%, and 23.8% of responders have completed technology sector, service sector, production sector, and agriculture sector related courses. The results indicate that every VTP positively impacts employability, indicating the importance of vocational training in finding decent work.

The duration of VTPs is also a significant factor to be employed. Especially compared to a short training period, a long training period is demanded by employers since getting a considerable duration of training boosts productivity. Out of the total sample, 46% have completed medium-term training (duration 12 to 24 months), 22.4% have completed long-term training (more than 24 months), and 31.6% have completed short-term courses (less than 12 months).

Although marital status is not an essential factor for employability, compared to married persons, unmarried persons get more employment opportunities. Some employers dislike recruiting married women since they are entitled to maternity leave and need more leave for family responsibilities. Out of the total sample, 29.1% of responders are married and 19.8% are married women.

According to the regression model, age is not significant. According to the DCS (2020), youth unemployment is very high, indicating the inability to find suitable occupation for youth. The average age of the sample is 20.5 years. Only 1.7% of responders were at maximum age (30 years).

Gender is also a significant factor that determines employability. Out of the total sample, 39.2% are female. Compared to females, males have a greater opportunity to be employed, indicating the gender gap in the labor market. The gender gap in the Sri Lankan labor market is high (DCS 2020). However, the existing VTPs could not provide a solid solution to reducing the gender gap.

4.4.2 Impact of Vocational Training on Income Increase

The impact of vocational training on income increases was analyzed by considering only the employed responders. Out of the total sample, 66.3% of responders are employed. Out of the total employed people, 83.3% of responders mentioned that their income is increased because of vocational training. The probit model was followed to determine the factors that increase income. The results of the regression model are illustrated in Table 4.4.

Table 4.4: Results of the Regression Model

Parameter	Coefficient	Wald Chi-Square	Significance
Intercept	–8.75	78.86	0.00
X1 – Age	0.23	28.57	0.00
X2 – Gender	0.64	11.61	0.00
X3 – Marital status	0.37	2.80	0.09
X4 – Years of school education	0.36	51.35	0.00
X5 – Extra qualifications	0.64	12.53	0.00
X6 – Type of course –Technology related	0.99	17.38	0.00
X7 – Type of course – Service sector-related	0.99	15.47	0.00
X8 – Type of course – Production sector-related	1.09	17.36	0.00
X9 – Duration of course –12 to 24 months	0.44	4.69	0.03
X10 – Duration of course – 25 months or above	0.40	2.58	0.11

Source: Author's calculation based on the primary data.

According to the probit model, all variables have a significant positive impact on income. Especially, educational factors such as years of school education, extra qualifications, type of VTPs, and duration of VTPs are highly influential factors for income increases. The average years of schooling is 10 years. Compared to low-educated employees, those who have a higher level of education can be employed with higher salaries. Extra qualifications also positively impact income since they help to demand a high salary and/or earn extra income from secondary occupations. Similarly, employment-related training courses increase productivity and income. The marginal impact of those courses on income is also high. The duration of courses also highly influences an increase in income. Well-trained employees are eligible to demand higher wages since their marginal productivity is high. Accordingly, employers also prefer to recruit well-trained candidates with high salaries since their

marginal contribution to productivity is high. Conversely, a significant percentage of responders have diversified their income-earning activities with the help of vocational training. Out of the total sample, 36% of responders have engaged in a secondary income-earning activity related to their training. Therefore, as an active labor market policy, vocational training provides the base for decent work by increasing income.

Gender is another significant factor that affects income increases. Compared to females, males are able to earn a higher income. Especially, females in the informal sector earn lower wages compared to males, reflecting the gender pay gap in the labor market (DCS 2020). Most females do not have enough time to engage in secondary occupations because of family responsibilities. Only 9% of females out of the total responders have secondary occupations.

Age also has a positive impact on income. As age increases, employees are able to demand a higher salary because of experience. Some institutes annually increase their employees' salaries according to their period of service. Marital status also significantly affects income increases. Compared to unmarried people, married people earn a higher income by diversifying their income-earning streams with the help of vocational training to manage their family responsibilities smoothly. Out of the total sample, 35.3% of responders are married.

4.4.3 Determine Barriers to Accessing Vocational Training Institutes

To determine the barriers to entering the VTIs, a survey was conducted among 400 unemployed youth. Several statements were included in the questionnaire to understand the barriers.

Socioeconomic Background of Unemployed Youth

Out of the total sample, 69% of unemployed youth are females, highlighting the severity of unemployment among the females. Most unemployed youth are from low-income families who benefit from the main poverty alleviation program (Samurdhi Program) in Sri Lanka.

Table 4.5 shows the education level of unemployed youth.

Table 4.5: Education Level of Unemployed Youth, Sri Lanka

Education Level	%
Primary education (grade 1 to grade 5)	7
Grade 6 to grade 9	23
Grade 10 and grade 11	34
Grade 12 and grade 13	28
Diploma or above	8

Source: Author's calculation based on the primary data.

The majority of unemployed youth (34%) have been educated up to grade 10 or grade 11. Mainly, they are unable to continue their education because of failing the GCE (OL) examination. About 7% of responders had only primary education. Financial difficulties, personal problems, the inability to find a nearby school, poor infrastructure facilities (especially transportation), and failure of the GCE (OL) examination primarily affect drop-outs from school education. A significant percentage of youth (28%) have been educated until the end of school education. However, they do not have enough qualifications to enter the higher education institutes such as universities. Only 8% of youth have completed diploma courses in private institutes related to computer and English knowledge. Although a number of vocational training centers provide various training programs, the unemployed youth of the sample have not enrolled in vocational training because of various reasons, including personal and institutional factors.

Selected unemployed youth are aged between 15 and 25 years. The maximum age is 25 years, and the minimum age is 15 years. The age distribution of the sample is illustrated in Table 4.6.

Table 4.6: Age Distribution of Unemployed Youth

Age Category (Years)	%
15–18	42
19–22	38
23–25	20

Source: Author's calculation based on the primary data.

The majority of unemployed youth are aged between 15 and 18 years. Most left school education and did not try to find any employment. Similarly, the second-highest percentage of unemployed youth belong to the age group 19–22 years. Most of these youth have been searching for employment opportunities for more than 1 year. The lowest percentage (20%) of unemployed youth belong to the 23–25 years age category. The majority of these have also been searching for employment since they left school education.

Out of the total sample, 13% of unemployed youth belong to the urban sector and 39% to the rural sector. The majority of unemployed youth (48%) are from the estate sector (DCS 2011).[1] These figures reflect the severity of the unemployed youth problem in the rural and estate sectors that lack infrastructure facilities for better education and training.

4.4.4 Results of the Factor Analysis

The adequacy of the sample size was measured using the Kaiser Meyer Olkin (KMO) and Bartlett's tests. The data set is appropriate for factor analysis if the KMO value is 0.5 or above.[2] The KMO value for the sample is 0.72, and the Bartlett's test of sphericity chi-square value is 879.2, which is significant at 0.00. Therefore, the sample is adequate to estimate the factor analysis. Table 4.7 illustrates the results of the factor analysis.

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[1] The estate sector consists of all plantations that are 20 acres or more in extent and with 10 or more resident laborers.

[2] See https://www.statisticshowto.com/kaiser-meyer-olkin/.

Table 4.7: Results of the Factor Analysis

Factors	Factor Loading
Financial difficulty factor	
Difficulty of affording training expenditure	0.63
Difficulty of affording other expenditures even when course is free	0.76
Lack of educational qualification	
Low level of school education is not enough to apply for the courses	0.66
Poor English knowledge	0.52
Poor computer literacy and technological knowledge	0.66
Institutional factors	
Lack of information	0.68
Application procedure is complicated	0.65
Difficulty to pass exam	0.73
Most courses are not in line with job requirements	0.64
Inadequate modern facilities for teaching	0.56
Lack of linkages between institutions and vocational training institutes	0.66
Training is not accepted by employers	0.67
Lack of training institutions	0.79
Limited courses are offered by each institution	0.57
Training hours are not flexible	0.72
Personal attitudes	
It is a waste of time	0.62
Most courses are not suitable for females	0.76
Poor social respect	0.69
Training will help to increase the salary	0.75
Dislike for the examination system	0.67
Less confidence about getting the occupation	0.56

Source: Author's calculation based on the primary data.

According to the factor analysis, four factors are identified: financial difficulty factor, lack of educational qualifications, institutional factors, and personal attitudes.

According to the responders, financial difficulties mainly cause lower enrollment levels for vocational training. Although courses are free of charge, students have to spend extra money on other costs such as transport, food, and accommodation. So, especially for those who stopped school education because of financial difficulties, it is challenging to proceed even with vocational training.

The required educational qualification, are relatively higher for most VTPs, depriving lower-educated people from getting vocational training in the preferred field. Unfavorable institutional factors also negatively affect entering VTIs. Significantly, 73% of responders mentioned that they do not know much about the enrollment procedures and the benefit of getting training from VTIs. Most responders mentioned that there is no proper mechanism between VTIs and employers to protect the job security of trainees. Therefore, they feel that it is a waste of time and money. A significant percentage of responders expressed that most industries do not accept the training provided by VTIs

since the standard of the training is low. Most responders mentioned that most VTPs are not equipped with appropriate equipment. A strict and traditional examination system also negatively influences getting training from VTIs. The lack of training institutions and the limited number of causes offered by each VTI also prevent unemployed youth from applying for vocational training since they have to spend much money to get training from the VTIs that are located far from their residence.

Apart from the factors mentioned above, negative personal attitudes also adversely affect getting training from VTIs. The absence of a guarantee for getting employment also highly influences negative attitudes. Additionally, the majority of youth dislike the traditional examination system. Conversely, the unavailability of a proper mechanism to increase salary according to the training also creates negative attitudes. Poor social acceptance also hinders the enrollment in VTPs.

4.5 Conclusion and Policy Recommendations

4.5.1 Conclusion

Decent work is the basis for a decent life. Education and training play a vital role in achieving decent work. However, in Sri Lanka, a significant number of students drop out of school education because of various reasons. VTIs provide several VTPs aimed at students who have dropped out of the formal education system and those who are already employed to boost their skills. However, the youth unemployment rate in Sri Lanka is still high. Similarly, underemployment and employment in the informal sector are also high. Accordingly, female labor force participation is also low, reflecting a considerable gender gap and gender pay gap in the labor market.

This study has analyzed the effectiveness of vocational training in achieving decent work by focusing on employability and income. Apart from that, an analysis was conducted to identify the barriers to getting training from VTIs. According to the results, educational factors such as years of school education, extra qualifications, type of vocational training, and the duration of vocational training highly affect employability. In addition, marital status and gender affect finding employment opportunities. Vocational training is also a significant factor in getting employment.

Vocational training highly influences income increases in two ways: the ability to demand a higher salary and the ability to diversify income-generating activities. According to the results of the probit model, educational factors and social factors such as gender and marital status also influence income increases.

According to the factor analysis, financial difficulties, the lack of educational qualifications, undesirable institutional factors, and negative personal attitudes mainly reduce the number of unemployed youth entering VTIs.

4.5.2 Policy Recommendations

According to the current labor market characteristics and findings of the survey, some policies can be recommended to boost decent work among youth.

Out of the total sample, 66.3% of responders have found decent work, and 57.1% mentioned that vocational training is relevant for finding an occupation. Similarly, vocational training has a positive impact on income. Out of the total sample, 83.3% of responders mentioned that they were able to earn a higher income with the help of vocational training. However, one of the main highlighted drawbacks is poor institutional and industrial relationships and less confidence about getting employment.

By considering all these factors, a proper mechanism should be developed to improve the link with the private sector and government sector industries to boost employment opportunities for trainees. Increases in internship opportunities with industries are also recommended since trainees have a better opportunity to get employment in the same industry after an internship.

The results highlighted that most youth do not have the motivation to enroll in vocational training since most employers do not accept the training because of its low quality. Hence, it is recommended to revise the curriculum at least every 2 years or as required according to the technological progress and requirement of the employer. Further, to assure job security of the trainees, legal agreements and memorandums of understanding should be implemented with VTIs and local and foreign industries and employers. Standardization of the certificates according to the employment requirement also ensures job security of the trainees.

Candidates have limited opportunities to enter VTIs and enter their preferred field due to the lack of VTIs in some areas. Even though there are some VTIs, those institutes offer a limited number of courses. By considering the high impact of vocational training on employability and income, required action should be taken to increase the number of VTIs and diversify the courses available in each vocational training center.

Accordingly, it is essential to establish a proper mechanism to disseminate information regarding VTIs since the lack of information also adversely affects getting vocational training. Hence, disseminating information through ground-level officers in relevant government and private institutions is highly recommended. Accordingly, the necessary information should be circulated through posters in public places, especially in marginalized areas. The rural and estate sectors have inadequate infrastructure facilities. Dissemination of information through proper channels is essential to boost decent work. Similarly, most unemployed youth are low educated, so it is essential to revise the basic entry qualifications to be flexible with the aim of giving all candidates an opportunity to obtain employment-related qualifications. Similar, instead of a traditional examination system, a more flexible evaluation system should be introduced to minimize students' failure rates. Female enrollment for vocational training is low. Most unemployed youth also mentioned that most of the existing VTPs are not suitable for females. By considering these factors, necessary action should be taken to introduce special courses targeting females. Increases in female enrollment for vocational training will have a positive impact on reducing the gender gap, female unemployment, and the gender pay gap in the labor market by improving the skills and productivity of female workers.

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CHAPTER 5

Unlucky Generation: The Impact of the COVID-19 Pandemic on the Youth Labor Market

Sasiwimon Warunsiri Paweenawat and Lusi Liao[1]

5.1 Introduction

The coronavirus disease (COVID-19) pandemic has severely affected global economies and disrupted labor markets. Recent studies have found that the impact disproportionately affects specific demographic groups, where women, younger workers, and less-educated workers have experienced heavier employment loss during the pandemic (Montenovo et al. 2021; Adams-Prassl et al. 2020; Bluedorn et al. 2021). Globally, the previous global crisis had a protracted and worsening effect on younger people, in which youth unemployment grew following the crisis (ILO 2020a). According to the International Labour Organization (ILO) and Asian Development Bank (ADB) (2020), young workers in Asia and the Pacific are historically disadvantaged and hit harder than older workers by the pandemic, in which the negative impact may generate a "lockdown generation" that has long-term damage to further development (ILO 2020a). Workers who have been in an economic recession or are unemployed during their graduation period or early career earn much less and are more likely to be unemployed over their lifetime (Oreopoulos, Wachter, and Heisz 2012; Liu, Salvanes, and Sorensen 2016; Macmillan 2012; Schmillen and Umkehrer 2018).

In Thailand, COVID-19 caused significant job losses in the first and second quarters of 2020, which had moderated by the end of the year. The unemployment rate increased from 1% to 2%, and the unemployment spike is substantial for young workers (World Bank 2021a). Paweenawat and Liao (2021) have suggested that young Thai workers have the highest unemployment rate compared to other demographic groups defined by age, gender, education, marital, and parenthood status. Due to the alarming rise of unemployment of young workers, the government implemented measures to support the vulnerable group.

In September 2020, the Thai cabinet approved a 1-year job creation scheme under the 1-Trillion-Baht Emergency Decree to promote new graduates harmed by the ongoing economic recession due to the COVID-19 pandemic (Fiscal Policy Office 2021). The program under the decree worth around B19.46 billion (0.12% of gross domestic product [GDP]) started in October 2020. It aims to create new jobs targeting 260,000 graduates from vocational colleges and universities, where the government subsidizes 50% of their salaries (World Bank 2021a).

This chapter first investigates the labor market disruption by comparing young workers and older workers in the pre-pandemic and pandemic periods. The study documents the changes in the unemployment of younger workers during the major crises in Thailand, including the 1997 Asian financial crisis, the 2008 global financial crisis, and the 2020 COVID-19 pandemic. The definition of young workers (15 to 24 years old) in this study follows the ILO (2020b). This study found that young workers had a high unemployment rate before the COVID-19 crisis and have experienced a more significant negative impact on their employment than older workers since the outbreak.

[1] The authors would like to thank the National Statistical Office of Thailand for access to the data used in this chapter.

The COVID-19 pandemic has hit youth employment more than any other recent crisis, and young female workers are more vulnerable than young male workers.

Second, this chapter analyzes the causes behind young workers' employment crisis. The chapter examines the distribution of young workers at the different levels of sectoral risk exposure relating to the COVID-19 pandemic, occupational flexibility, working sectors, and study fields. The results show that young workers have suffered from more significant job losses due to the higher-risk sectors they worked in, the less occupational flexibility they engaged in, and the more unstable jobs they hold.

Lastly, this chapter draws attention to the government's support measures targeting young workers to understand better the effectiveness of employment policy relating to young people. The study reviews the policy framework pertaining to youth employability and assesses recent job creation schemes for young people in Thailand. Although the implementation of the job creation scheme by the Thai government on the target group's unemployment rate has decreased, the efficiency of the policy may be weakened by the economic recovery. The results have suggested that the active labor market program responses to the youth employment crisis need to be tailored to target different kinds of unemployment and ensure the sustainable incorporation of young people and the labor market.

The chapter is organized as follows: Section 5.2 presents the impact of COVID-19 on youth employment disruption. Section 5.3 discusses policies tackling the employment crisis of young workers. Section 5.4 concludes with policy implications.

5.2 Impact of COVID-19 on Youth Employment

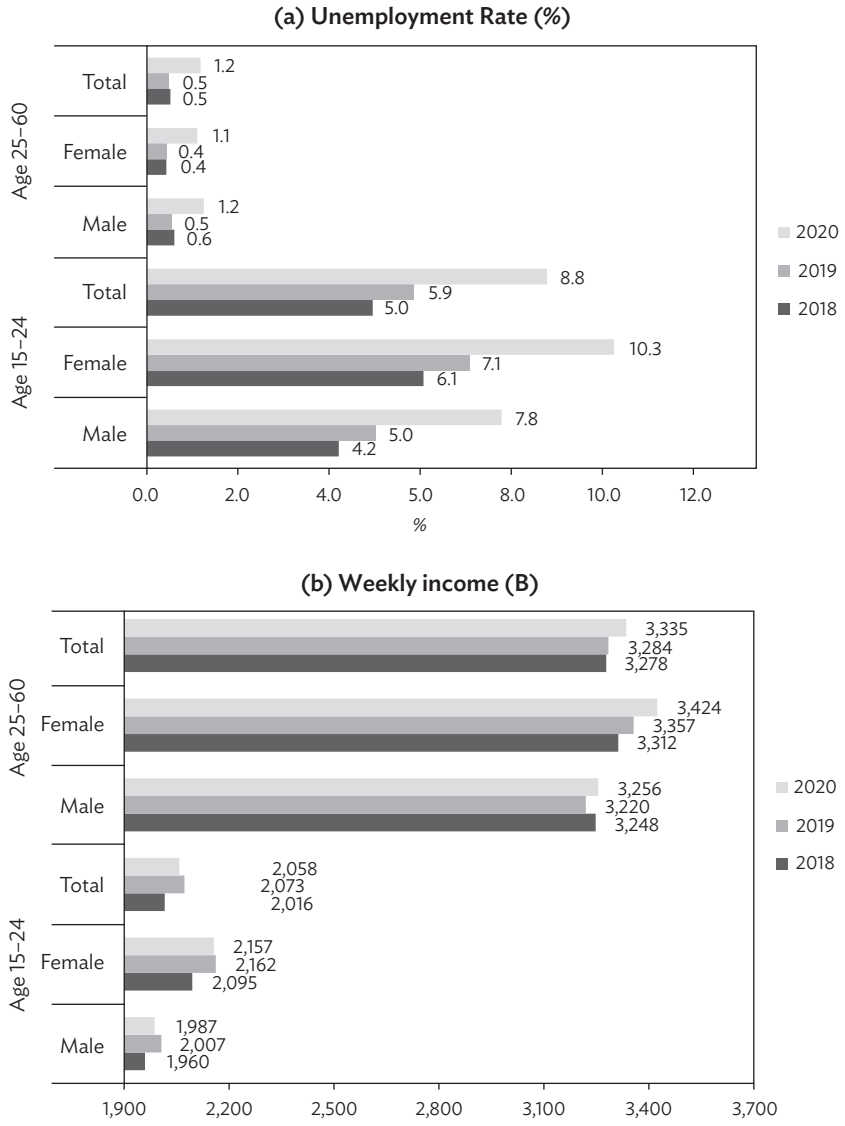
Thailand has implemented travel bans and social distancing restrictions since the COVID-19 outbreak in March 2020 (Ministry of Public Health 2020). Following success in containing the disease, easing of restrictions started in May until December 2020 before the second pandemic wave at the end of 2020. The second wave was brought under control rapidly by February 2021. The third wave emerged in April 2021 and became the most severe period of infection and deaths since the pandemic started. The economic impact of COVID-19 on Thailand is severe because of its openness and high exposure to tourism (World Bank 2020a). In 2022, due to the relaxation of COVID-19 measures and rise in vaccination rates, the economy grew by 2.2% in the first quarter (NESDC Economic Report 2022). This section first presents employment disruption in Thailand and then explores related factors to understand the situation of young workers.

5.2.1 Employment Disruption in Thailand

According to the ILO (2020b), before the COVID-19 crisis, the unemployment rate of young workers between 15 and 24 years old was three times higher than for those 25 years old and over. Since the COVID-19 outbreak, younger workers have suffered worse employment situations, with studies suggesting they are more likely to lose jobs (Gould and Kassa [2020] for the United States; Gustafsson [2020] for the United Kingdom; ILO [2020b]).

Figure 5.1 shows the unemployment rate and income in the pre-pandemic and pandemic periods (2018, 2019, and 2020) by gender and age. Comparing the age groups, young workers aged 15–24 have a much higher unemployment rate than workers aged 25–60 across all 3 years, while older workers have a higher income than younger workers. The unemployment rate increased significantly in 2020, from 5.5% in 2019 to 8.8% in 2020. Both young male and female workers have experienced a dramatic increase in unemployment during the pandemic. While female workers' unemployment rate is similar to male workers' for those aged 25–60, young female workers aged 15–24 have a higher unemployment

Figure 5.1: Unemployment Rate and Wages by Gender and Age, 2018, 2019, and 2020



Note: Unemployment rates and real weekly income are based on the Labor Force Surveys (LFS) in the third quarter (July to September) each year.

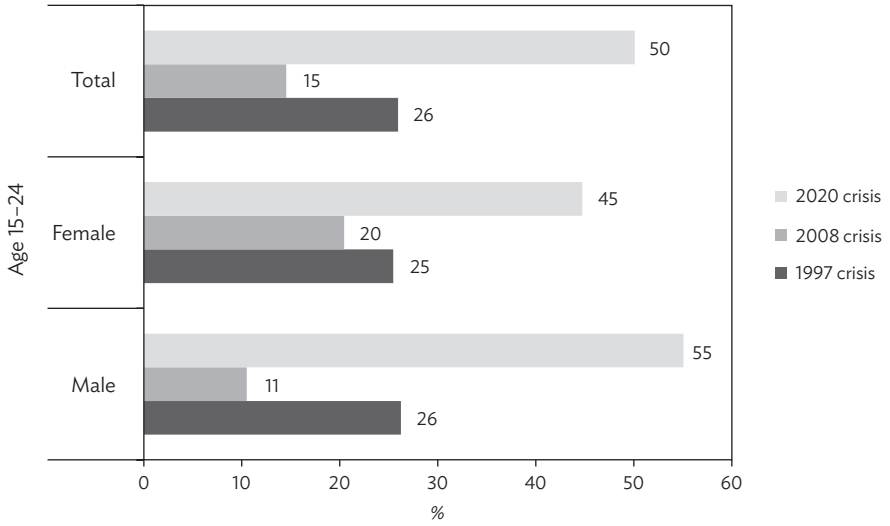
Source: Authors' calculation.

rate than young male workers (10.3% vs. 7.8% in 2020). In 2020, younger workers' income had decreased slightly but not for older workers. The crisis does not show a severe impact on the income of workers.

Figure 5.2 presents the percentage change of the unemployment rate of young workers by gender during the 1997 Asian financial crisis, the 2008 global financial crisis, and the 2020 COVID-19 crisis. The group's most significant increase in the unemployment rate is in the recent COVID-19 pandemic, which is around 50%, compared to 15% in 2008 and 26% in 1997. Males had a 10% higher change in the unemployment rate than females during the pandemic. Table 5.1 shows the unemployment rate and the percentage change of unemployment rate by age and gender during major crises in Thailand. Compared to older workers, the crisis has a larger impact on young workers. The COVID-19 pandemic

has raised the unemployment rate more than the 1997 Asian financial crisis and 2008 global financial crisis for both young and old workers, and young workers' unemployment rate reached the highest level in 2020.

Figure 5.2: Percentage Change of Unemployment Rate for Young Workers during Major Crises in Thailand



Note: The increase of unemployment rates are based on the percentage change of the unemployment rate in the year before the crises and in the crisis year using 1997, 2008, and 2020 Labor Force Surveys (LFS) in the third quarter (July to September).

Source: Authors' calculation.

Table 5.1: Unemployment Rate by Age and Gender during Major Crises in Thailand

Unemployment Rate		Age 15–24			Age 25–60		
		Male	Female	Total	Male	Female	Total
Asian financial crisis 1997	1996	2.8%	2.6%	2.7%	0.6%	0.8%	0.7%
	1997	3.5%	3.3%	3.4%	0.6%	0.8%	0.7%
Global financial crisis 2008	2007	5.0%	4.3%	4.7%	0.7%	0.5%	0.6%
	2008	5.6%	5.2%	5.4%	0.8%	0.5%	0.6%
COVID-19 pandemic	2018	4.2%	6.1%	5.0%	0.6%	0.4%	0.5%
	2019	5.0%	7.1%	5.9%	0.5%	0.4%	0.5%
	2020	7.8%	10.3%	8.8%	1.2%	1.1%	1.2%

Source: Authors' calculation.

Table 5.2 shows the GDP, inflation rate, and unemployment rate of Thailand in 2020 (quarters 1 to 4) and 2021 (quarters 1 and 2). According to the National Economic and Social Development Council (NESDC) (2021a), the Thai economy contracted by 2% in the first quarter (Q1) and 2.1% in Q2 2020, and has gradually recovered from Q3 2020 to the first two quarters in 2021. In Q2 2021, GDP increased by 7.5%, mainly due to the global trade recovery and low base of economy last year. The overall

unemployment rate rose from 1% in Q1 2020 to around 2% in Q2 and recovered in Q3 and Q4. Then, it got worse in Q1. The impact of the COVID-19 pandemic started to show negative signs on the Thai economy in the Q1 of 2020. The economy further contracted in Q2 due to the weaker global demand and restrictions on mobility (World Bank 2020a). The economy showed signs of recovery in Q3 and continued in Q4 with the start of easing restrictions (Ministry of Public Health 2020). The successive waves continued to affect the Thai economy in 2021 (World Bank 2021b).

Table 5.2: Quarterly GDP, Inflation Rate, and Unemployment Rate in Thailand, 2020–2021

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
GDP (YOY%)	–1.97%	–12.15%	–6.41%	–4.20%	–2.64%	7.54%
Inflation rate	0.53%	0.12%	0.32%	0.19%	–2.33%	–2.08%
Unemployment rate	1.03%	1.95%	1.90%	1.86%	1.96%	1.89%

GDP = gross domestic product, Q= quarter, YOY = year-on-year.

Source: NESDC (2021a).

Table 5.3 presents the basic statistics of younger and older workers by quarter in 2020 and 2021. In Q2 2020, working hours and wages decreased for both young and old workers, and the unemployment rate increased sharply. In Q3 and Q4 2020, old workers' working hours and wages recovered to the pre-pandemic level, whereas young workers' wages are still lower than in Q1 2020. The unemployment rate of young workers is much higher than older workers, where the group is restricted to those who participate in the labor force, and the unemployment rate remained significant. In 2021, wages have fully recovered for both groups, but the unemployment rate is still high, especially for young workers.

Table 5.3: Basic Statistics of Young and Old Workers by Quarter, 2020–2021

	Q1 2020	Q2 2020	Q3 2020	Q4 2020	Q1 2021	Q2 2021
Young (15–24)						
Age	19.16	19.24	19.19	19.12	19.06	19.11
Sex (1 = male; 2 = female)	1.48	1.49	1.50	1.49	1.50	1.50
Average working hours	41.05	37.81	41.08	42.18	45.51	45.87
Average weekly wage	2,102.47	1,985.13	2,058.25	2,073.98	2,207.99	2,215.16
Unemployment rate	5.61%	8.59%	8.79%	8.23%	11.38%	11.00%
Observations	19,392	21,427	22,229	20,669	18,639	20,089
Old (25–60)						
Age	44.33	44.22	44.14	44.28	44.03	43.86
Gender (1 = male, 2 = female)	1.53	1.53	1.53	1.53	1.54	1.53
Average working hours	40.82	38.08	41.40	42.30	45.66	45.72
Average weekly wage	3,327.67	3,289.02	3,335.38	3,343.96	3,402.01	3,460.50
Unemployment rate	0.59%	1.11%	1.18%	1.16%	1.62%	1.49%
Observations	103,391	107,816	111,198	106,441	82,660	89,931

Q = quarter.

Source: Authors' calculation.

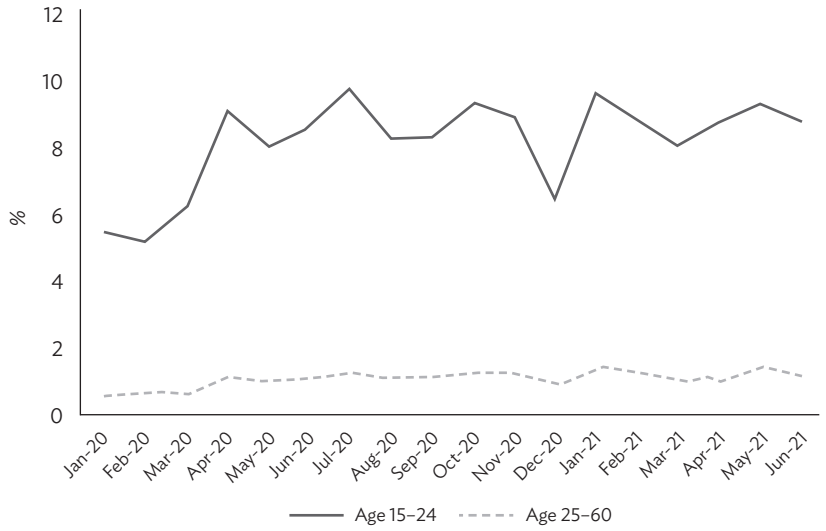
In order to see the dynamic effects, Figures 5.3 and 5.4 break down the unemployment rate by age and gender into each month. In addition, Table 5.4 shows summary statistics of the unemployment rate, working hours, and weekly wages in each month of 2020 and 2021 by age group. Figure 5.3 shows a large gap (average 6.4%) between young workers (15–24 years old) and old workers (25–60 years old) across the year, where old workers' unemployment rate is more stable than that of young workers. The gap is lowest in February (4.6%) and increases to the highest level in July (8.5%). The increase of job losses of young workers started in February 2020 and reached the highest rate in July (9.8%), nearly double compared to January 2020, and then gradually recovered from August to the end of the year. In December 2020, the unemployment rate of young workers dropped to 6.4%. Due to the second wave at the end of 2020 and the third wave in April 2021, the unemployment rate of young workers increased to 9.6% in January 2021 and 9.3% in May 2021.

Table 5.4: Monthly Unemployment Rate, Working Hours, and Wage of Young and Old Workers, 2020–2021

	Unemployment Rate		Working Hours		Weekly Wage	
	Age 15–24	Age 25–60	Age 15–24	Age 25–60	Age 15–24	Age 25–60
Jan 2020	5.42%	0.56%	36.90	36.76	2,110.32	3,372.04
Feb 2020	5.20%	0.60%	43.56	43.02	2,075.77	3,303.27
Mar 2020	6.23%	0.61%	42.84	42.61	2,122.92	3,308.26
Apr 2020	9.17%	1.18%	37.46	37.41	1,992.28	3,337.07
May 2020	8.03%	1.08%	37.24	37.53	1,958.41	3,302.02
Jun 2020	8.59%	1.08%	38.68	39.25	2,004.96	3,227.87
Jul 2020	9.75%	1.25%	40.42	41.20	2,032.13	3,348.94
Aug 2020	8.27%	1.15%	41.63	41.24	2,080.75	3,372.93
Sep 2020	8.32%	1.14%	41.21	41.76	2,060.84	3,282.42
Oct 2020	9.30%	1.29%	41.93	42.09	2,049.95	3,394.65
Nov 2020	8.90%	1.30%	42.45	42.48	2,092.72	3,351.64
Dec 2020	6.41%	0.90%	42.18	42.33	2,080.51	3,282.47
Jan 2021	9.64%	1.37%	37.02	36.96	2,107.38	3,436.19
Feb 2021	8.83%	1.27%	41.37	41.80	2,106.48	3,386.38
Mar 2021	8.01%	1.05%	41.44	41.31	2,158.37	3,275.59
Apr 2021	8.73%	1.09%	41.69	41.99	2,122.50	3,432.98
May 2021	9.31%	1.43%	40.68	40.65	2,141.79	3,440.01
Jun 2021	8.76%	1.10%	40.76	41.00	2,127.05	3,361.03

Source: Authors' calculation.

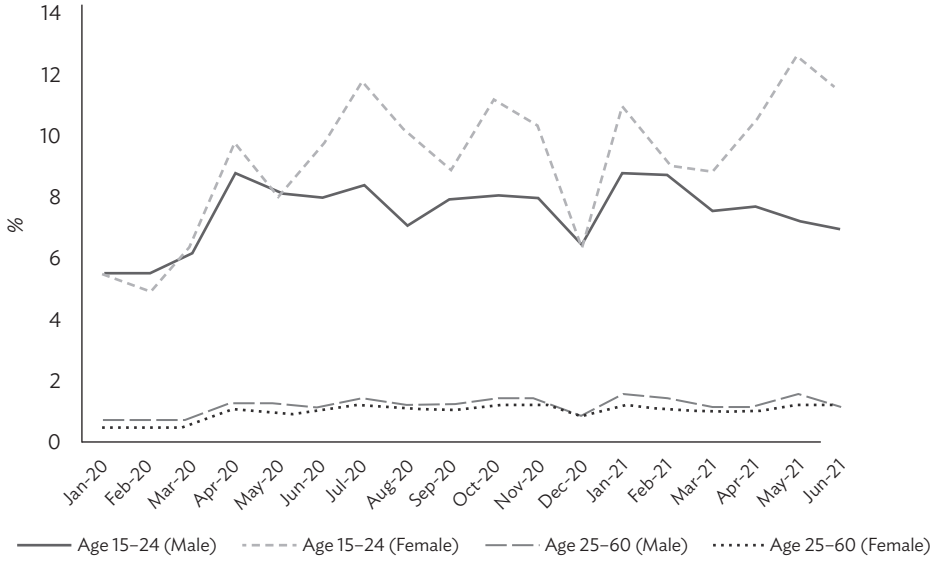
Figure 5.3: Unemployment Rate by Age and Month, 2020–2021



Note: Unemployment rates are based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

Figure 5.4: Unemployment Rate by Gender and Age, by Month, 2020–2021



Note: Unemployment rates are based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

Figure 5.4 further divides the age group by gender, and the results show that young female workers are more vulnerable than males, while the gender difference among old workers is not as visible in the unemployment rate. The unemployment rate of young female workers shows a more volatile pattern than for young male workers, with the rate of females increasing from 6.4% in March 2020 to the highest 12.6% in May 2021. Young females' unemployment rate has nearly doubled during the time. The gender gap of young workers has also increased from nearly 0% in January to the highest 5.4% in May 2021.

5.2.2 Why Are Young Workers More Vulnerable during the COVID-19 Pandemic?

In order to explore the reason why young workers suffer from worse employment disruption during the COVID-19 pandemic and the difference between young and old workers, this section investigates the risk exposure to COVID-19 regarding which industrial sectors and occupations young workers are in, what work status they hold, and what they have studied.

Industrial Sectors and Occupations

This chapter applies the COVID-19 disruption risk assessment for employment in Thailand by the ILO (2020c). The vulnerability to the disruption is estimated by two steps: first, the expected impact to economic output with two-digit International Standard Industrial Classification code is assessed (ILO 2020c);[2] second, using the Labor Force Survey of Thailand, the risk scenario associated number of employed people in the sectors is applied to estimate the proportion of occupations at risk (ILO 2020c; Paweenawat and Liao 2021).[3] The high-risk sectors in Thailand are predicted to be retail trade, transport, accommodation, travel and related activities, and sports-related activities. The outcomes are consistent with National Economic and Social Development Council's economic report (NESDC 2020).

Figure 5.5 shows the proportion of young and old workers who worked in each level of risk exposure. Over 5% of old workers are in low-risk sectors, while 41% of young workers are in low-risk sectors. Moreover, young workers have a higher percentage employed in mid- and high-risk sectors: 41% and 17%, respectively. This study further disaggregates the results by gender, which shows that a higher proportion of young female workers are in mid- and high-risk sectors than young male workers (42% and 25%). The results suggest that the increased vulnerability of young workers in employment during COVID-19 can be attributed to the higher risk sectors in which they work that are affected by economic disruption and social distancing measures.

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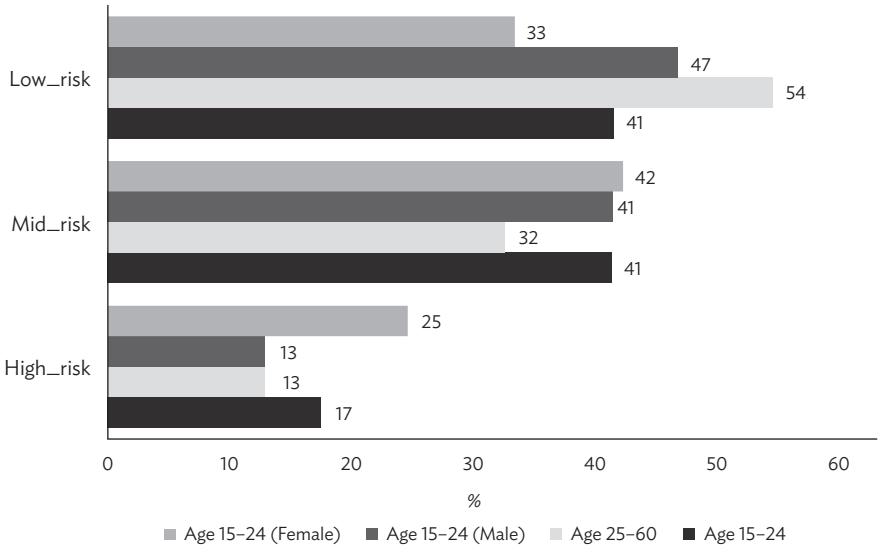
[2] The COVID-19 disruption risk assessment of employment in Thailand is at the two-digit International Standard Industrial Classification level (ILO 2020c). The low-risk sectors include 01–09, 12, 14, 17, 18, 33–38, 42, 49, 53, 58, 61–63, 66, 69–74, 80–88, 95, 96, and 99, for example, agriculture and mining related activities, manufacture of tobacco products, manufacture of wearing apparel, printing and reproduction of recorded media, and land transport and transport via pipelines. The mid-risk sectors include 10, 11, 13, 15, 16, 19–32, 41, 43–46, 56, 59, 60, 64, 65, 68, 75-78, 90–92, 94, and 97, for example, real estate activities, wholesale trade, except motor vehicles and motorcycles, and food and beverage service activities. The high-risk sectors include 47 (retail trade, except of motor vehicles and motorcycles), 50–52 (water transport, air transport, warehousing and support activities for transportation), 55 (accommodation), 79 (travel agency, tour operator, reservation service and related activities), and 93 (sports activities and amusement and recreation activities).

[3] Assigning the risk scenario from the first step to calculate the number of people employed in each sector and obtain a range of impacted workers, it is used to estimate the share of occupations at risk in the impacted sectors (ILO 2020c).

Figure 5.5: Proportion of Young and Old Workers in Each Level of Sectoral Risk Exposure to COVID-19

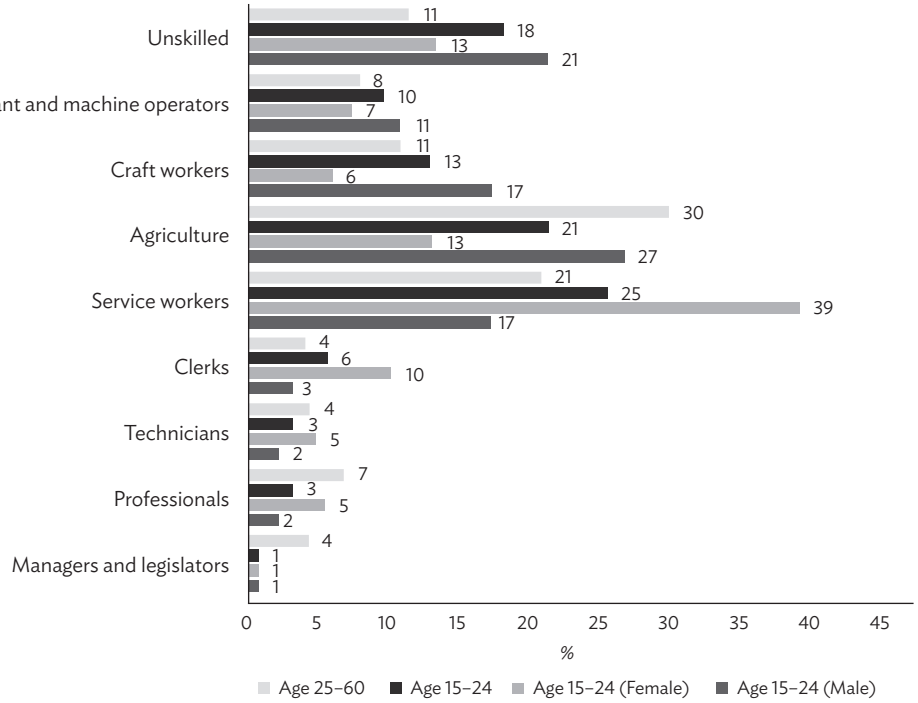


Notes: The proportion of workers is based on Labor Force Survey (LFS) (2020). The COVID-19 disruption risk assessment of employment in Thailand is at the two-digit International Standard Industrial Classification level (ILO 2020c). The low-risk sectors include 01–09, 12, 14, 17, 18, 33–38, 42, 49, 53, 58, 61–63, 66, 69–74, 80–88, 95, 96, and 99. The mid-risk sectors include 10, 11, 13, 15, 16, 19–32, 41, 43–46, 56, 59, 60, 64, 65, 68, 75–78, 90–92, 94, and 97. The high-risk sectors include 47, 50–52, 55, 79, and 93.

Source: Authors' calculation.

Figure 5.6 presents the occupational proportion of young and old workers. Similar to Figure 5.5, young workers are overrepresented among unskilled, plant and machine operators, craft workers, service workers, and clerks, who have experienced more considerable job losses during the pandemic due to their higher frequency of physical contact, machine dependence, and lack of flexibility (Dingel and Neiman 2020; Paweenawat and Liao 2021). About 39% of young female workers in service occupations experienced significant disruption due to lockdown measures. Therefore, in addition to risk exposure of sectors, the distribution of occupations also contributes to the disproportionate impact of COVID-19 on young and old workers.

Figure 5.6: Proportion of Young and Old Workers by Occupation



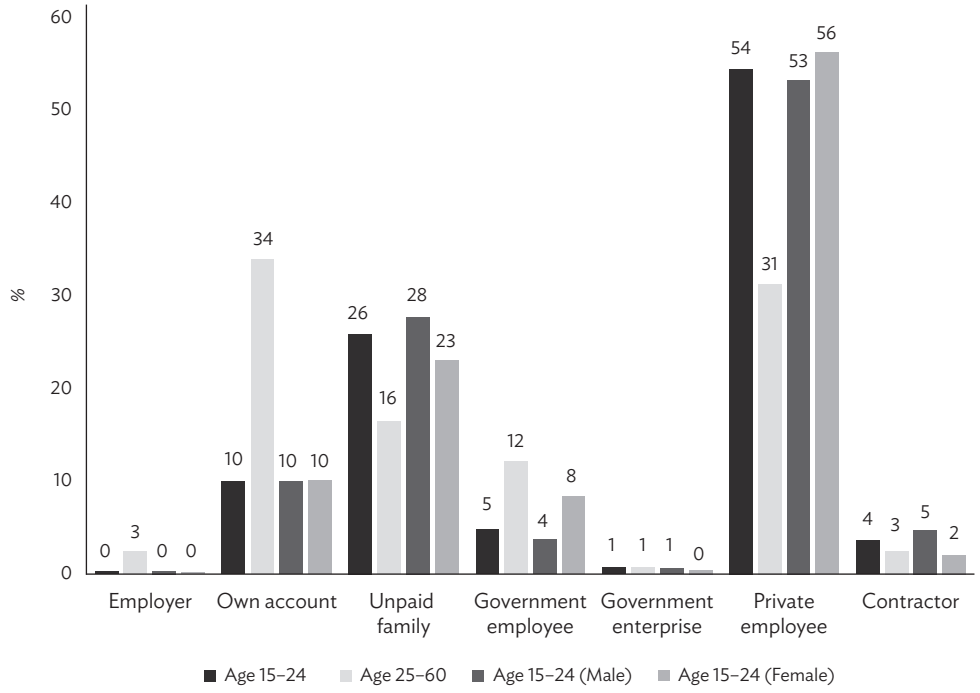
Note: The proportion of workers is based on Labor Force Survey (LFS) (2020). The occupations are classified according to the International Standard Classification of Occupations (2008).

Source: Authors' calculation.

Working Status

Another potential factor in explaining the high unemployment rate of young workers is their working status. Workers in the public sector are protected by labor regulations and have a lower risk of business closure, job loss, and reduction of income. Figure 5.7 shows the breakdown of working status for young and old workers. The proportion of young workers in the private sector is more than 20% higher than old workers, indicating a higher level of vulnerability as private employees compared to government employees. Moreover, young workers are overrepresented among unpaid family workers, who work in a business or farm owned by a family member without pay (26% vs. 16%), which are classified as a vulnerable population in Thailand (ILO and ADB 2020), while old workers are overrepresented among own-account workers, who work on their own account or with one or more partners (10% vs. 34%). Consistent with the ILO (2020a), young workers employed in the private sector have suffered a more significant impact, with 64% reporting a reduction in working hours, and the potential causes may link to temporary closures and slowdowns of business due to the COVID-19 restriction measures.

Figure 5.7: Proportion of Young and Old Workers by Working Status



Note: The proportion of workers is based on the Labor Force Survey (LFS) (2020).

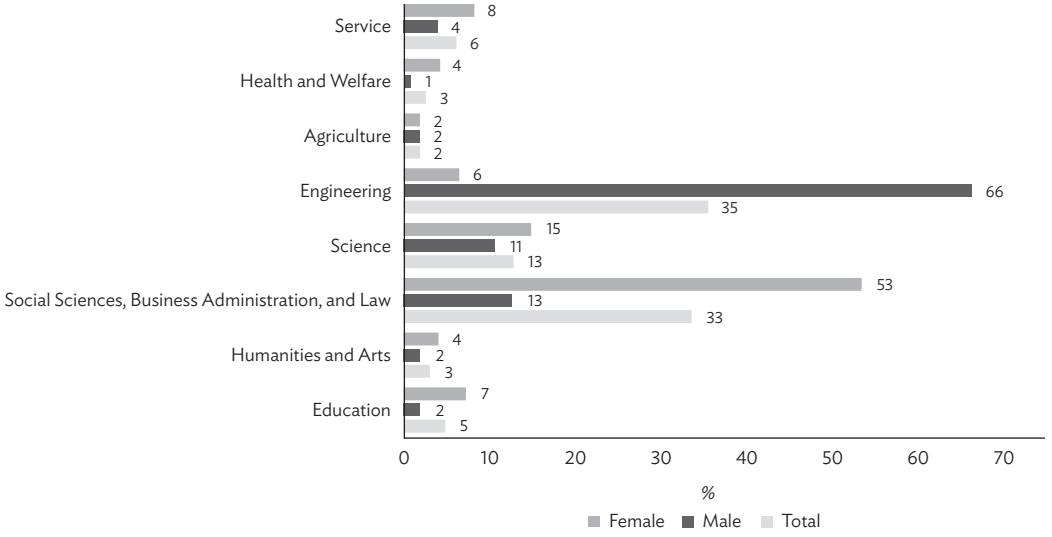
Source: Authors' calculation.

Study Fields

Further, the entry condition and outcomes in the labor market of young workers may relate to their fields of study (Altonji, Kahn, and Speer 2016). At a large economic recession, workers with higher-income majors experienced a significantly less negative impact on labor market outcomes (Oreopoulos, Wachter, and Heisz 2012; Altonji, Kahn, and Speer 2016).

The previous section discussed that young females experienced a more significant disruption from the COVID-19 pandemic than young male workers. Figure 5.8 displays the of breakdown of study fields for young workers. The highest share of the study field for females is in social sciences, business administration, and law, accounting for over 50%, while the highest for males is engineering, accounting for 66%. Next, this study assigns young workers with study fields to the levels of risk exposure relating to the COVID-19 pandemic, as shown in Figure 5.9. Engineering has a lower risk than social sciences, business administration, and law, and the service sector has the highest risk with 38% in the high-risk sector. The difference in the study field of young females and males associated with their working sectors and occupations accounted for the unequal impact of COVID-19 during the time.

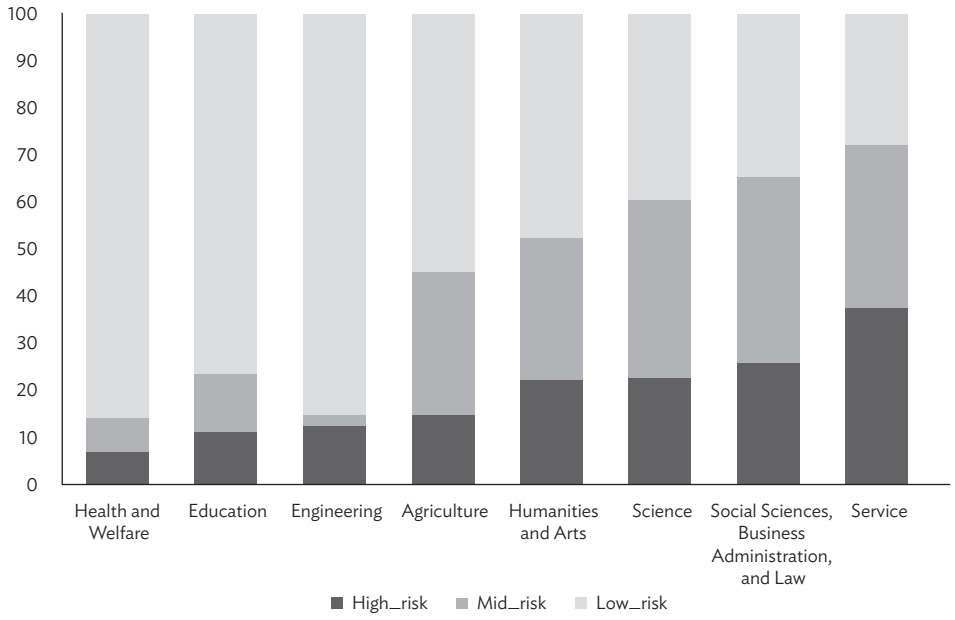
Figure 5.8: Proportion of Young Workers by Study Field and Gender



Note: The proportion of workers is based on the Labor Force Survey (LFS) (2020).

Source: Authors' calculation.

Figure 5.9: Proportion of Young Workers in Study Fields by Levels of Sectoral Risk



Note: The proportion of workers is based on the Labor Force Survey (LFS) (2020).

Source: Authors' calculation.

5.3 Policies Tackling the Employment Crisis of Young Workers in Thailand

Before the COVID-19 outbreak, the existing policy framework relating to youth employability included six main components: Nation Strategy 2018–2037; The Twelfth National Economic and Social Development Plan (NESDP) 2017–2021; National Scheme of Education (NSE) 2017–2036; Higher Education Policies; Labour Policies; and National Youth Policies (UNICEF 2020). According to UNICEF (2020), there are several problems with the framework. First, it does not provide sufficient long-term plans on youth employability, only medium-term policies limited in solving youth unemployment. Second, laws are not tailored to develop skills for youth. Third, agencies are limited in coordinating with policies and do not have enough authorities and resources to promote youth employability.

Besides, the vulnerability of young workers was already visible in Thailand before the COVID-19 pandemic due to education mismatch, gender disparity, and legal complexity (World Economic Forum 2018). Vocational graduates have the highest share of skill mismatch, with 47% in low-paid jobs due to the high rate of graduate unemployment that makes them apply for less optimal jobs (ILOSTAT 2018). UNICEF (2020) suggested that youth skill mismatch is one of the main difficulties for decent work. Although studies have indicated that education improves employment, the highest unemployment rate is those with bachelor's degrees, while those with primary education are the lowest, suggesting the unemployment of young workers is mainly caused by education mismatch (UNICEF 2020). Moreover, gender disparity in Thailand has remained significant due to the high number of young female workers in the "not in education, employment, or training" (NEET) group (UNICEF 2020).

The COVID-19 crisis has triggered massive labor market disruption and worsened the pre-existing vulnerabilities. The Thai government has announced a significant COVID-19 response package to mitigate the impact of the pandemic, which accounts for 13.1% of GDP (Fiscal Policy Office 2021). Compared to other East Asian countries, this fiscal and non-fiscal support is significant. Mongolia's is around 9% of GDP, Malaysia's about 7% of GDP, and Indonesia's 5% of GDP (World Bank 2020b). From May to July 2020, the programs targeting vulnerable groups, including farmers, informal workers, young people aged up to 6, older people, and people with disabilities, have been implemented. However, the efficiency of implementation and length of those programs have been doubted due to missed groups and short periods of implementation (World Bank 2021a).

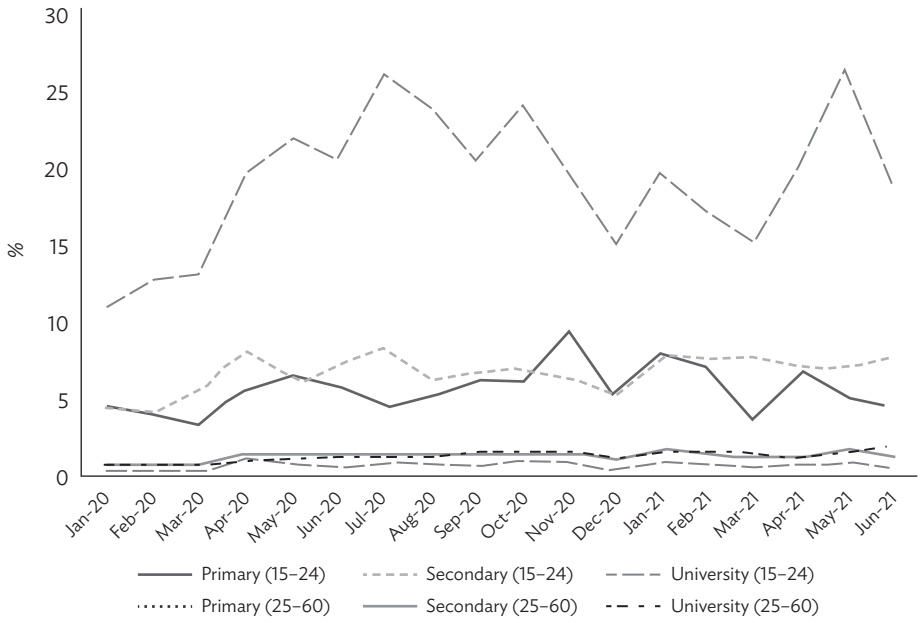
In October 2020, due to the jump in youth unemployment rates, the Thai government implemented a 1-year job creation scheme to promote the employment of new graduates aged less than 25 years who had completed vocational or university-level education and had been hit hard by the ongoing economic downturn due to the COVID-19 pandemic (World Bank 2021a). The project aims to generate 260,000 new jobs in both the public and private sectors by subsidizing companies hiring graduates with 50% of their salary (World Bank 2021a).

However, the program has drawn doubts on its effectiveness. First, the targeted group only accounts for half of the new graduates (with a total number of 500,000) in 2020 (Bangkok Post 2020). Based on the Q4 Labor Force Survey (LFS) 2020, the share of young workers eligible for the program is around 14%, among which young females comprise 13% and young males 5%. The majority of the youth are not covered by the program. Second, the hard-hit sectors, such as tourism or service-related industries, could not take advantage of this program as the companies prioritize reducing the workforce's cost during this time because of low demand in the market. Third, the program has difficulty reaching unemployed young workers, especially those in high-risk sectors.

Based on five categories of the active labor market policies (ALMP) (Eichhorst, Hinte, and Rinne 2016; Maguire 2020), coverage of the program is limited, and additional measures, such as job-seeking support, training programs, start-up subsidies, and self-employment assistance, are necessary to tackle the current crisis. Moreover, despite the most severe three waves of COVID-19 in Thailand, in May 2021, the Thai government reduced the number of the targeted group from 260,000 people at the beginning of the program to 50,000 people, as well as the budget support from B19,426 million to B3,209 million (NESDC 2021b).

Using the monthly data from the LFS in 2020 and 2021, this chapter presents the unemployment rate trend. Figure 5.10 displays the change in unemployment rate for young workers by age and education levels. Consistent with UNICEF (2020), young workers with university-level education have the highest unemployment rate and are highly volatile to the labor market disruption throughout the pandemic period. The unemployment rate of young workers with a university education increased from 11% in January to the highest 27% in May 2021, accompanied by temporary recovery between each wave, while other groups show a relatively stable rate.

Figure 5.10: Change of Unemployment Rate for Young Workers by Education Level



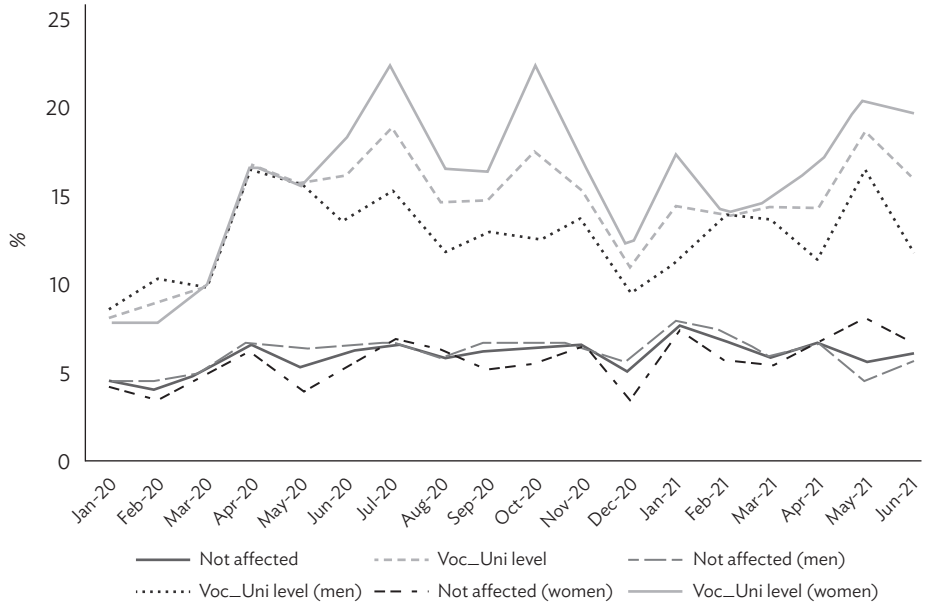
Note: The change of unemployment rate is based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

Figure 5.11 shows the unemployment rate change for young workers with and without being affected by the job creation scheme in each month in 2020 and 2021. The target group shows a higher unemployment rate than the non-affected group, with female workers more affected by the pandemic than male workers. The highest unemployment rate appeared in Q2 and Q3 2020, and the rate decreased in Q4, accompanied by economic recovery and implementation of the job creation scheme

for the group. Targeted young female workers' unemployment rate dropped by over 10%, from 22% in October to 11% in December 2020, similar to males' unemployment level. Non-affected groups have also experienced a decrease in unemployment since November 2020. However, the unemployment rate has risen again in 2021, and the job creation scheme has been weak in promoting employment of targeted groups.

Figure 5.11: Change of Unemployment Rate for Young Workers with and without Affected by the Job Creation Scheme

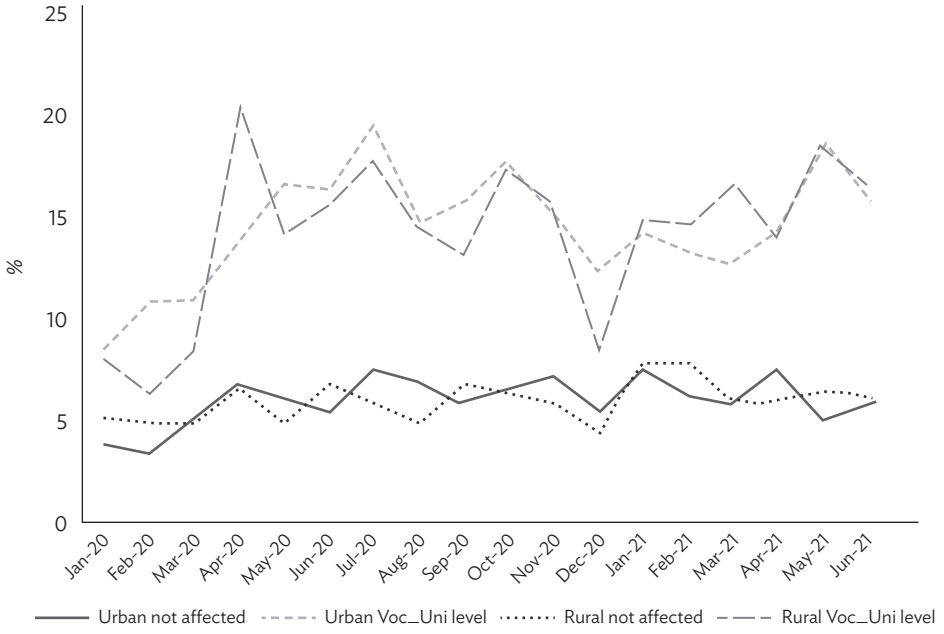


Note: The change of unemployment rate is based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

Figures 5.12 and 5.13 disaggregate the young workers by residence area and five regions and show the change of unemployment rate for each group with and without being affected by the job creation scheme. Similarly, the target group has shown a higher unemployment rate in both urban and rural areas. The southern region has the most volatile unemployment rate reacting to the impact of COVID-19 compared to other regions. The unemployment rate dropped at the end of 2020 for all groups and showed an increase at the beginning of 2021 and in May 2021 due to the second and third waves of the pandemic.

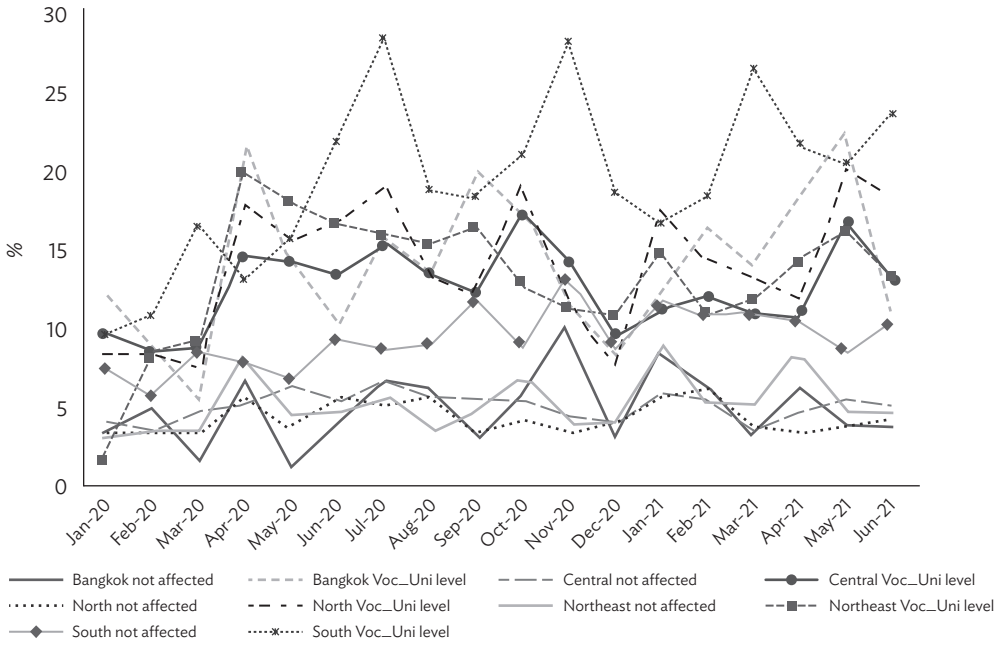
Figure 5.12: Change of Unemployment Rate for Young Workers by Residence Area with and without Affected by the Job Creation Scheme



Note: The change of unemployment rate is based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

Figure 5.13: Change of Unemployment Rate for Young Workers by Region with and without Affected by the Job Creation Scheme



Note: The change of unemployment rate is based on the Labor Force Surveys (LFS) in each month of 2020 and 2021.

Source: Authors' calculation.

In addition to the job creation scheme, in October 2020, the Thai Cabinet approved the "One Tambon One University" program to help economic and social conditions with a budget of B10,629 million (Government Relations Department 2020). The program aims to provide job opportunities for unemployed local residents, new graduates, and university and vocational students within the sub-districts, and it was extended with more participants of provinces in October 2021 (Buddhasri 2021). In June 2021, the Thai government implemented another project to promote the employment of new graduates, with the government required to hire 10,000 recent graduates as temporary government employees (Government Relations Department 2021). However, it is too early to see the effect of these programs now.

5.4 Conclusion and Policy Recommendations

This chapter explores the labor market disruption for young workers in the pre-pandemic and pandemic periods and compares the impact of major crises on unemployment in Thailand. In addition, the chapter investigates the causes behind the young workers' employment crisis and the government's policy response on youth unemployment. The study found that young workers had a much higher unemployment rate than older workers before the pandemic. The COVID-19 crisis hit youth employment harder as they are in higher-risk sectors, with less flexible and unstable jobs. Young female workers are more vulnerable than young male workers.

According to the ILO (2020b), globally, around 17% of young workers have stopped working since the COVID-19 outbreak. It suggested that the effect of the pandemic on young people is "systematic, deep, and disproportionate." Recent studies have shed light on the difficulties faced by young workers where COVID-19 has raised their vulnerability in the labor market and resulted in a "lockdown generation" (ILO 2020a, 2020b). Since the outbreak, Gould and Kassa (2020) have suggested that young workers have the highest unemployment rate in the United States among all other age groups. "Urgent, large-scale and targeted employment policy responses are needed to protect a whole generation of young people from having their employment prospects permanently scarred by the crisis" (ILO 2020b).

In developed countries, young workers are a vulnerable group in the labor market. The youth unemployment rate is historically higher than for old workers in Europe and the United States (O'Higgins 1997; Eichhorst and Rinne 2015; Gould and Kassa 2020). Prior to COVID-19, during the recession period, Immervoll and Scarpetta (2012) suggested that the unemployment rate is higher and job searching is harder, and the labor force requires more assistance in terms of job-search and other labor market policies. Studies have found that the accessibility of unemployment benefits is very limited for young workers, even in developed countries (Eichhorst, Hinte, and Rinne 2016). Effective activation measures should make sure to target active young job seekers and promote further education and training (Lahusen, Schulz, and Graziano 2013). Besides, the active labor market policy needs to provide support and incentives to workers simultaneously, along with rigorous targeting and re-employment assistance (Immervoll 2012; Immervoll and Scarpetta (2012).

Eichhorst, Hinte, and Rinne (2016) summarized the ALMPs in Europe into five categories, including job-search assistance, training programs, subsidized employment with private employers, direct job creation and public employment programs, and start-up subsidies, self-employment assistance, and support. The study suggested that it is significant to account for the different contexts of countries and connect the ALMPs to the participation in such measures. Policy responses to assist young workers need to focus on reducing the high unemployment and re-connecting young people who lost their job to the labor market. Waugh and Circelli (2021) shed light on the effect of vocational education and training on mitigating the employment crisis of young workers in the time of economic recession and the COVID-19 pandemic, in suggesting that vocational education and training protects young workers from the long-term negative impact of unemployment.

In the Asia and Pacific region, several countries have taken action to deal with the youth crisis. For example, in Indonesia, a training program targeting around 2 million youth, prioritizing unemployed workers, those in the informal sector, and owners of micro and small businesses in hard-hit tourist regions, has been implemented (IDN Financials 2020). In Malaysia, the government launched a RM2 billion fund to improve the employability of young workers and support student loans (Ministry of Finance, Malaysia 2020). In Singapore, a student mentorship program targeting those aged 16 to 25 years was launched in 2020 to provide students with career-related support and help them make formal decisions about the future (Advisory Mentorship Programme 2020).

The ASEAN Youth Survey (2020) found that the COVID-19 pandemic challenges the accessibility and ability to work and study remotely for ASEAN youth. In the survey, approximately 69% of respondents reported that it is difficult mainly due to the quality of the internet, the expense of connection, household distraction, and poor management. Moreover, most youth workers, especially those living outside the capitals, report not having sufficient digital skills. Compared to other ASEAN countries, youth in Thailand have one of the highest percentages of difficulties in remote work and study, around 76%. In comparison, in Singapore and Viet Nam, the percentage of young people having difficulties in remote work and study is only around 50% (ASEAN Youth Survey 2020). Governments should strive to deliver higher-quality internet and provide more support for people to learn digital skills.

The integrated approach, including both short and medium periods, is recommended by the ILO to help tackle the current youth unemployment crisis and promote economic recovery (ILO and ADB 2020). According to the ILO and ADB report (2020), the policy responses to the youth crisis need to take into account the country's socioeconomic context, such as social norms and labor market structure, with special attention on balancing youth employment promotion and efficiency of resource allocation. In Thailand, the government's policy requires a wider inclusion of youth in the labor market and, at the same time, support for hard-hit companies and industrial sectors to maximize job creation efficiency. Current support for youth is bare and lacks a recovery-oriented plan. The supportive measures need to be tailored to target various youth groups, including workers with different education levels, industrial sectors, occupations, gender, and working status. The sustainable incorporation of young people and the labor market has to be reinforced for inclusive recovery.

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CONCLUSION

The extensive economic disruption and employment loss caused by the coronavirus disease (COVID-19) pandemic has highlighted the need for governments to address vulnerabilities in the labor force. Although many economies, including middle-income and lower middle-income countries in Asia, are showing signs of recovery, the prospect of large segments of the population, particularly vulnerable groups, such as women and youth, permanently exiting the labor force is severely constraining their income-generating potential and negatively affecting economic development. Incomplete economic recovery from the pandemic is further threatened by rising inflation globally; hence, many governments have exited large-scale social assistance programs, though large segments of the population may still be struggling.

The chapters explored the potential of human capital enhancement active labor market policies (ALMPs) in Asia and the Pacific to boost post-pandemic employment recovery and decent work for the most vulnerable, including women and youth. Although historically underutilized and underfunded in the region, the authors offer timely policy recommendations to significantly enhance labor market participation.

Several authors focused solely on the problem of the vast number of youth not in employment, education, or training in developing Asia and the prospect of a "lost generation" without policy reforms. Specifically, governments need to address the lack of marketable skills among youth, which stems from structural problems within the education and training sector, creating a mismatch with qualifications required by the private sector. In particular, authors stressed the need for the education sector, at all levels, to prioritize science, technology, engineering, and mathematics (STEM) subjects, which, in one case study, were offered in only 10% of schools at pre-university level. Increasing the number of youth studying STEM subjects would not only increase their own chances of employment, but also be a prerequisite for an agile, innovative, and modern economy, without which lower- and middle-income countries will struggle to compete with technologically developed economies.

Authors also highlighted the particular challenges faced by women, such as unpaid home care burdens and cultural norms that preclude their participation in formal employment and/or training, which often explain their low levels of labor force participation rates. To address the issue, governments should consider providing child and elderly care, formalizing flexible working arrangements, and introducing new training programs specifically targeted toward improving the skills and productivity of women.

More generally, governments need to consider the potential of vocational training programs to boost decent work and increase employability and income. In doing so, careful consideration should be given for the appropriateness of formal and informal vocational training. While informal vocational training plays a vital role in providing all types of employment with better earnings, formal vocational training is particularly important for achieving higher wages for informal employment in the formal sector and for entrepreneurship. Governments should consider offering separate formal and informal vocational tracks, while combining some elements of each such that the former becomes more relevant across employment type, and the latter for higher quantiles of formal employment and for encouraging self-employment and entrepreneurship.

Although ALMPs have been underutilized in Asia and the Pacific, the severe employment and economic disruption caused by the COVID-19 pandemic should give governments pause to adopt more comprehensive social protection strategies. During the crisis, cash transfers were essential to deal with rapidly deteriorating social conditions, but, these will need to be replaced with medium- to longer-term programs with income-generating potential. Human capital enhancement ALMPs, with an emphasis on education and skills, can assist vulnerable groups by ensuring they can re-enter or remain in the workforce despite adversity in labor market conditions.

Strengthening Active Labor Market Policies to Drive an Inclusive Recovery in Asia

The coronavirus disease (COVID-19) pandemic has contributed to unprecedented job losses, disproportionately affecting vulnerable groups, such as youth, women, migrants, and informal workers. Pandemic responses in many developing Asian economies have included massive cash transfer programs to stabilize household incomes and stimulate demand for goods and services. However, these programs are temporary crisis measures, while COVID-19-induced unemployment may be lengthy and possibly permanent. Moreover, income support can help low-skilled workers maintain a basic living standard, but it cannot provide them with the skills needed to move to better quality work.

Active labor market policies focused on upskilling, reskilling, and on-the-job training can enhance the income-generating potential of the unemployed or underemployed and accelerate inclusive recovery after the pandemic, yet these programs have been vastly underutilized and underfunded in Asia. The pandemic has also highlighted the difficulties the poor face in joining skill-building programs due to work and family obligations.

This report examines the impact of the COVID-19 crisis on the employment of vulnerable groups in developing Asia, particularly those in the informal economy. It highlights the barriers that limit access to decent work and undermine socioeconomic well-being. Part I describes the keys to strengthening active labor market policies to better equip the most vulnerable for long-term labor force participation vital to boosting sustainable economic growth beyond the pandemic. Part II discusses youth employment and the role of technical and vocational education and training programs in upskilling and preparing youth for better jobs.

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The Asian Development Bank Institute (ADBI) is the Tokyo-based think tank of the Asian Development Bank. ADBI provides demand-driven policy research, capacity building and training, and outreach to help developing countries in Asia and the Pacific practically address sustainability challenges, accelerate socioeconomic change, and realize more robust, inclusive, and sustainable growth.

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