Quality of Employment:

Selected Country Cases in Asia

Asian Productivity Organization

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QUALITY OF EMPLOYMENT: SELECTED COUNTRY CASES IN ASIA

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Quality of Employment: Selected Country Cases in Asia

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CONTENTS

FOREWORD

This publication, Quality of Employment: Selected Country Cases in Asia, explores the diverse range of labor productivity policies in nine APO members, such as initiatives to encourage structural transformation of employment from low-productivity to higher-productivity sectors, improve the quality of invested capital through adoption of new technologies, and develop human capital by increasing workers' skills. This explorative research approach covered policies to improve dimensions of the quality of employment with cases from Cambodia, the Republic of China, India, Indonesia, Pakistan, Sri Lanka, Thailand, Turkiye, and Vietnam.

The analysis and measurement of productive employment, indicating the proportion of workers earning incomes above the poverty line, were attempted using various methods in the APO members covered in this study. Substantial differences remain in measuring indexes and the quality of employment. Given the complexity of the concept of quality of employment, its measures depend on whether it is measured from the perspective of society, corporations, or individuals. In all reports in this study, the quality of employment index included seven dimensions: safety and ethics of employment; income and benefits from employment; working time and work-life balance; security of employment and social protection; social dialogue; skill development and training; and employment-related relationships and work motivation.

Policy prescriptions are suggested in each country report to improve labor productivity and the well-being of workers. These policies basically comprised two broad categories: labor productivity policies to improve economic performance; and policies that could directly improve the quality of employment and well-being of workers.

The APO is very grateful to all nine national experts under the guidance of Chief Expert Dr. Sandip Sarkar for their meticulous examinations of how to improve the quality of jobs and ultimately contribute to better economic performance and workforce productivity.

Dr. Indra Pradana Singawinata
Secretary-General
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INTRODUCTION

Background of the Study

Governments across the APO region have committed to achieving full employment as a means of enhancing economic development. The drive for job creation needs to be accompanied by the quality of jobs. The combined efforts of generating employment opportunities and improving job quality play pivotal roles in shaping the economy's performance and workforce productivity. Therefore, relying solely on the rate of employment may not provide a complete picture of the overall quality of life.

In essence, productive employment should yield sufficient returns to labor, enabling workers and their dependents to achieve consumption levels above the poverty line [1]. Productive employment aims to eliminate, or at least reduce, the number of working poor: those who, despite working full-time, are unable to afford adequate consumption for themselves and their family members to lift them above the poverty line. In short, by providing a sufficient return on labor, it empowers workers to break free from poverty, ultimately leading to an enhanced quality of life for workers and their dependents. Productive employment serves as the primary link between economic development and poverty reduction for the working class.

The importance of productive employment as a key objective gained global recognition through the adoption of the Global Jobs Pact at the 2009 International Labour Conference, garnering support from governments, employers, and workers' organizations worldwide. Sustainable Development Goal (SDG) 8 explicitly calls for the promotion of inclusive and sustainable economic growth, full and productive employment, as well as decent work for all.

The notion of quality of employment is intricately linked to the concept of decent work, developed by the International Labour Organization (ILO) [2]. The advantage of quality of employment is its capacity for statistical measurement, encompassing the essence of a decent work concept. Unlike the decent work agenda, the statistical framework of quality of employment is not target-oriented and it can be used as a statistical tool applicable to diverse policy needs, under the diverse institutional contexts of various countries.

However, the quality of employment is a complex concept [3]. Its measures depend on whether it is being examined from the perspective of society, corporation, or individual. This study adopts the individual's perspective on the quality of employment, considering it in terms of employment conditions, ethical considerations, monetary and non-pecuniary benefits, including factors such as working-hour arrangements and work-life balance, job security and social protection, skill development, and training opportunities, as well as factors related to work motivation and an individual's employment-related relationships.

Even though the concept of quality of employment adopted in this study primarily considers the perspective of individual workers, it is also influenced by determinants at various institutional levels. Regulatory provisions, such as minimum working conditions, minimum wages, and workplace safety measures, are factors examined by this study. Some elements may be decided at the sectoral or enterprise level, including specifics like working hours and compensation agreements

through processes like collective bargaining. Additionally, other aspects at specific job levels include tasks that may require mediation and the dynamics of relationships with supervisors and colleagues.

The expansion of productive employment can be achieved by focusing on two key aspects. First, enhancing the productivity of workers in their current sectors is essential. Historically, this has involved transitioning the workforce from traditionally low-productivity sectors like agriculture to higher-productivity sectors such as industry and services. Achieving these dual objectives and increasing employment rates would accelerate economic growth.

The improvement in productive employment and the research on the quality of employment necessitates an evaluation of numerous issues and criteria arising from the rapidly evolving contemporary industrial landscape, both on a global scale and its impact on the institutions within individual countries.

Objectives of the Study

- To assess the levels of productive employment and the employment quality.
- To analyze the impact of productive employment and the employment quality on labor market performance.
- To formulate labor productivity policies that promote the well-being of workers.

The first objective involves measuring and understanding the concepts of productive employment and employment quality. As part of the second objective, the report examines the intricate relationship between productive employment, quality of employment, and labor market performance. The impact of productive employment and the quality of employment on the performance of the labor market is quite complex and cannot be examined as a cause-and-effect relationship. It is, therefore, examined as an inter-relationship.

To better comprehend variations in labor market performance, the report takes a comprehensive view that encompasses diverse legal and institutional aspects of the labor market across different countries. This includes examining the extent to which workers are covered by protective institutional frameworks. Various labor market institutions and government policies, such as minimum wage legislation, unemployment benefits, social security benefits, and employment rates, establish the context in which productive employment and quality of employment operate.

Labor productivity policies cover a broad spectrum of initiatives, including:

- Policies that promote the structural shift of employment from low-productivity sectors to higher-productivity sectors.
- Enhancement of the quality of invested capital through the adoption of cutting-edge technologies.
- Ongoing human development through the upskilling of the workforce.

In addressing this matter, the approach involves the implementation of policies aimed at improving various dimensions of employment quality.

Nature of the Study

This study encompasses a multi-county analysis of the Asian region and includes nine countries. The study of each country broadly addresses the three aforementioned objectives. The countries included in this study are Cambodia, the ROC, India, Indonesia, Pakistan, Sri Lanka, Thailand, Turkiye, and Vietnam.

Researchers from each of these nine countries have assessed the three objectives mentioned above from their respective perspectives. It is important to note that the level of economic development and structure of the labor market vary across these countries and their institutional backgrounds exhibit notable dissimilarities. As a result, each country's report is unique in its own right.

Methodology

As mentioned earlier, the concept of productivity pertains to employment that yields an adequate return to labor, enabling workers and their dependents to attain a standard of living above the poverty line. In that sense, it serves as an indicator rather than a composite index, signifying a minimum standard of living for workers and their families.

Quality of Employment is a complex concept closely aligned with the ILO's decent work indicators. In a statistical framework, it encompasses seven broad dimensions.

1. Safety and ethics of employment
2. Income and benefits from employment
3. Working hours and work-life balance
4. Employment security and social protection
5. Social dialogue
6. Skill development and training
7. Employment-related relationships and work motivation.

The following table provides illustrative examples of indicators for productive employment and various dimensions of the quality of employment index.

Indicators	Illustrative Examples
Productive Employment	
1. The proportion of workers below the poverty line	Percentage of workers earning below USD1.25 per day in Purchasing Power Parity (PPP) terms
Quality of Employment Index	
1. Safety and ethics of employment	Rate of occupational injuries per 1,00,000 workers; percentage of employed people below the minimum working age

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Indicators	Illustrative Examples
2. Income and benefits from employment	Proportion of workers earning below minimum wage; minimum wage as a percentage of the median wage
3. Working hours and work-life balance	Percentage of workers working more than 48 hours per week
4. Security of employment and social protection	Percentage of workers covered under the social security and protection schemes; the share of informal workers
5. Social dialogue	Share of workers covered by collective bargaining
6. Skill development and training	Share of employed people who received job training in the last 3 to 5 years; share of employed people in high-skilled occupations
7. Employment-related relationships and work motivation	Share of employed people who feel they do useful work; share of employed people who are satisfied with their work

Source: Handbook of Measuring Quality of Employment – A Statistical Framework, United Nations, 2015.

To measure productive employment and various indicators of the quality of employment, researchers from nine countries have used their measures for each indicator.

Technique for Estimating Quality of Employment

The estimation of the quality of employment index aims to cover all seven dimensions discussed earlier. To calculate the index, one indicator from each dimension is selected, depending on its relevance to member countries and the availability of necessary information. However, the analysis of the quality of employment covers multiple indicators across all seven dimensions.

To calculate the quality of employment index, the Max-Min/Min-Max procedure is used to normalize the seven chosen indicators, as they may vary in terms of units, values, and ranges.

Normalization

Min-max normalization is one of the most common ways to normalize data. The exact formula is given below.

$$x_{transformed} = \frac{x - \min(x)}{\max(x) - \min(x)}$$

During the normalization process, the minimum value was closely approximated to zero, following standard statistical procedures. This is because, for all variables whose value is zero, the respective indicators are excluded from the estimation. After normalization, the impact of variation in units or range has been significantly minimized.

Making Unidirectional

In this estimation technique, the indicators must be unidirectional so that each of the variables reflects the quality of employment directly. In cases where certain indicators displayed negative correlations with other variables in the correlation matrix, adjustments were made to render them unidirectional.

Calculation of Index

To calculate the quality of employment index, a simple average or geometric average of all the indicators is used after the normalization of data and making them unidirectional.

Chapter Plan

This research report comprises a total of 11 chapters. Following this introductory chapter, the subsequent chapters present the nine country reports.

Chapters 2 through 10 cover the nine country reports. Following these chapters, there is a concluding Chapter 11, which summarizes the findings from all the country reports and offers policy recommendations derived from the insights gathered across these diverse national contexts.

References

[1] Ripley M., Hartrich S. Measuring Productive Employment: A How to Note. The Lab, ILO; July 2017.

[2] Decent Work Results – ILO Program Implementation, 2018–19, International Labour Conference, 109th Session; 2021.

[3] United Nations Economic Commission for Europe. Handbook of Measuring Quality of Employment – A Statistical Framework. United Nations; 2015.

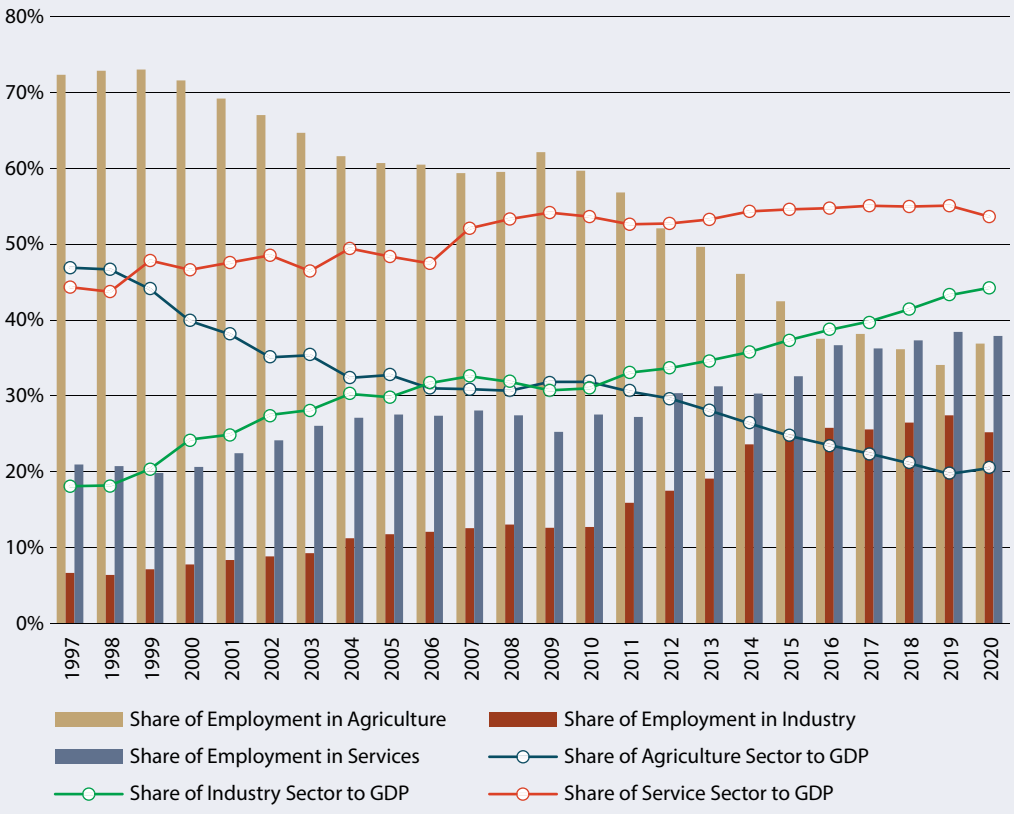
CAMBODIA

Introduction

Before the onset of the COVID-19 pandemic, Cambodia enjoyed an average annual economic growth rate of 7%. Historically, till the twentieth century, agriculture played a dominant role in the country, both in terms of food security and employment, with agriculture contributing to nearly 50% of the country's GDP and employing around 70% of the total workforce. However, as depicted in Figure 1, the sector's contribution declined to approximately 20% of the GDP and 40% of the total employment. This shift in economic structure indicates that the country is becoming more industrialized, with workers transitioning from agriculture to the industrial sector and migrating from rural to urban areas, where industrial factories or establishments are more concentrated [1].

FIGURE 1

SHARE OF GDP AND TOTAL EMPLOYMENT BY SECTOR.



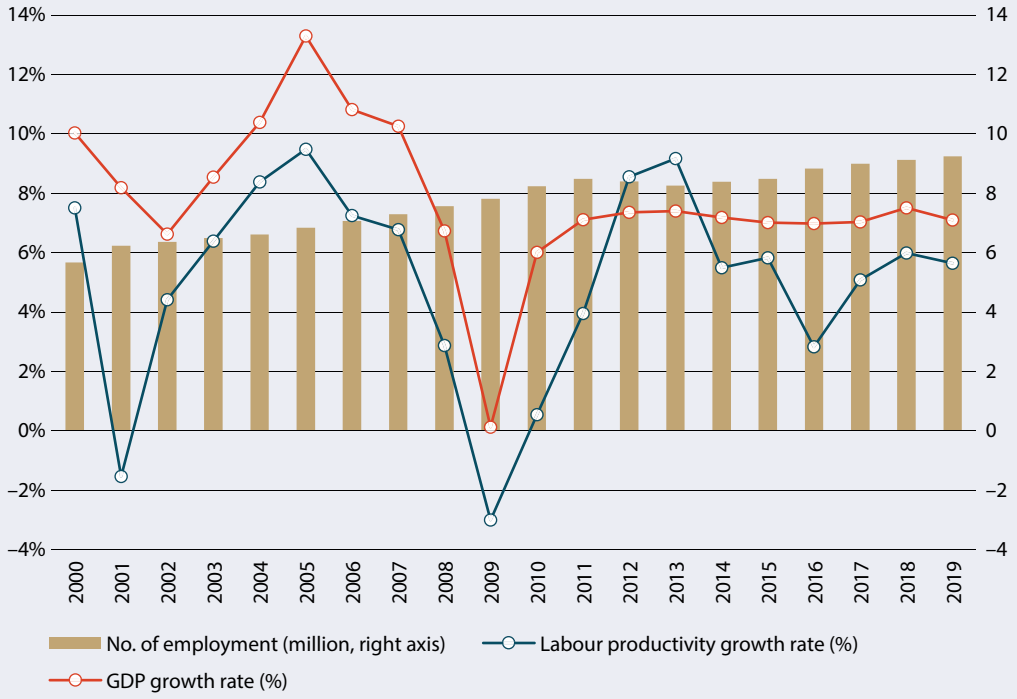
Source: Ministry of Labour and Vocational Training, Royal Government of Cambodia, 2022 [1].

While Cambodia is increasingly moving towards industrialization, the service sector in the country has also shown a similar upward trajectory. Its contribution to the GDP surpasses that of the industrial sector, and it absorbs the largest portion of the labor force, especially following the 2008

financial crisis. Figure 2 illustrates the changes in total employment, GDP growth, and labor productivity growth between 2000 and 2020. The figure shows a positive trend in total employment, along with an upward trend in labor productivity growth, although the rate experienced fluctuation from 2013 to 2019 before plunging in 2020 due to the impact of COVID-19. Figure 3 highlights that the industry sector has the highest productivity, followed by the service sector. In contrast, labor productivity in agriculture remains the lowest. Nonetheless, it has been increasing in recent years due to the adoption of modern machinery, the expansion of agricultural land, and the use of quality fertilizers.

FIGURE 2

TOTAL EMPLOYMENT, LABOR PRODUCTIVITY, AND GDP GROWTH RATE BY YEAR.

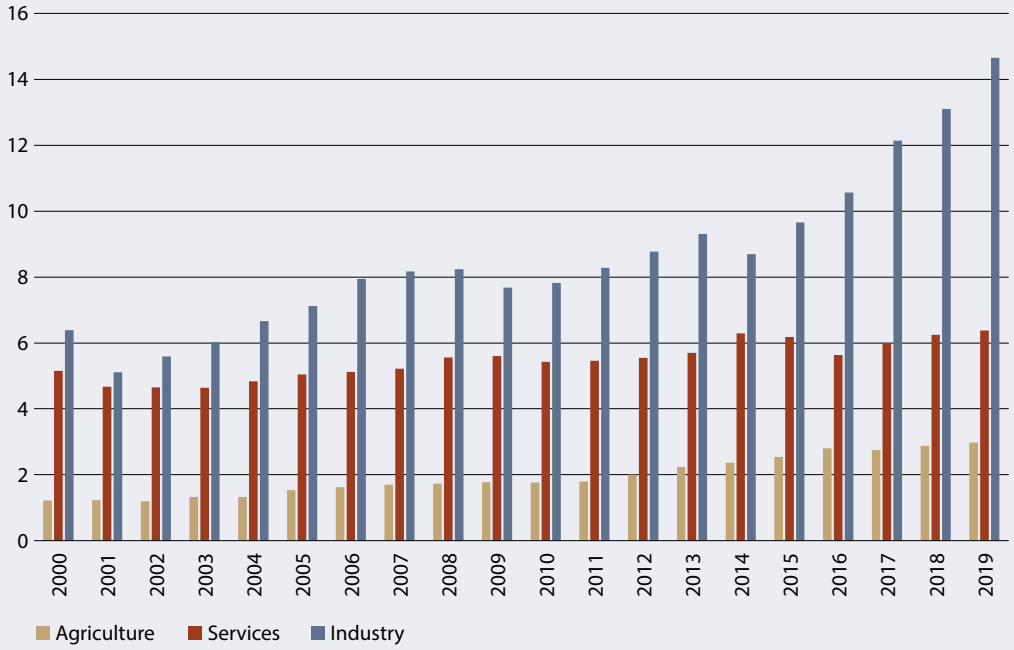


Source: Calculated based on the data from the World Bank Database [2].

Over a decade, poverty has declined significantly, at a rate of 1.6% on average, per year [3]. However, due to the COVID-19 pandemic, the country's GDP saw a negative growth rate of 3.1% in 2020, and business closures and layoffs or work suspensions became common during this time. Business closures and suspension, along with the imposed lockdowns and travel restrictions, led to a decline in income for many households, especially those who were in low-skilled jobs, unlike those in high-skilled occupations who had access to and were capable of utilizing digital technology to keep their work going. In a similar sense, micro, small, and medium enterprises were more likely to be hit economically by the pandemic. Low-income households had their loan burden increased, making it even harder for them. Tourism was hit the hardest by this pandemic. International arrivals in 2020 declined by more than 80% because of the travel restrictions in the country as well as globally. Forty to fifty percent of total workers in the sector were reported to have been laid off or were on suspension. Garment, textile, and footwear, a sector that absorbs many young and low-skilled Cambodian workers and accounts for more than 50% of the country's exports, also faced difficulties during the pandemic [3].

FIGURE 3

LABOR PRODUCTIVITY BY SECTOR AND YEAR (IN MILLION KHR).



Source: Calculated based on the data from the World Bank Database [2].

With the availability of the vaccines, as well as a speedy response of the Royal Government of Cambodia, both in terms of infection prevention and distribution of the vaccine, the country was able to reduce the infection rate significantly, and the economy started to recover.

Productive Empowerment

According to ILO, productive employment is defined as 'employment yielding sufficient returns to labor to permit the worker and their dependents to have sufficient consumption above the poverty line'. Therefore, productive employment is the opposite of the working poor, which refers to those who are employed but whose income is 'insufficient to bring themselves and their dependents above the poverty line', as the poverty line is used to determine whether one is living in poverty [4]. The concept is thus set as an SDG because it means that workers are ensured a level of income that lets them as well as their family members live above the poverty line.

Productive employment is one of the key determinants of sustainable and inclusive development, and it also defines the gaps between the levels of development of the countries [5]. However, productive employment is a difficult goal to achieve in developing countries without good social security policies and systems. The problem is mainly caused by unemployment rather than the working poor [6]. It is believed that productivity is the key while productive employment may in turn be determined by individual characteristics such as education, skills, experience, and health [7, 8]. It can also be determined by external factors either at the firm level or national level, such as investment in education and training, research and development, and the use of information and communication technology [9].

Nonetheless, productive employment can not only be achieved by increasing productivity, it also relies on macroeconomic and labor market policies that influence how workers are paid. Such

policies may include minimum wage policy, and trade and monetary policy. A minimum wage, when effectively binding and set by taking into consideration the living standard of the workers and their families, will be able to promote productive employment. A well-set minimum wage can increase productivity, especially for those at the lower quantile.

Once the minimum wage comes into effect, despite the increase in such compliance costs, workers raise their efforts. However, a constant raise in the minimum wage may also turn to 'different personnel policies or different production technology' to compensate for the increase in labor cost. Trade policy might contribute to improving working conditions and foreign direct investment (FDI) [10]. In this sense, structural change because of trade and FDI can also affect employment. It is argued that structural change towards a more productive sector increases productive employment and vice versa [11]. In addition, trade liberalization can push productivity in a way that might lead to skill upgradation while also leading to a decline in employment and wages [12].

An informal economy leads to a productive employment deficit, as a large proportion of the workforce is in informal businesses, making them less likely to be covered by minimum wage, social security, and other benefits determined by labor laws. Plus, workers often earn low wages and have lower productivity [13]. More than 60% of workers earn their living in the informal economy, where they are less likely to move out of the trap of poverty and lack decent work conditions [14].

Empirical Analysis

Labor Force Participation and Skills

The labor force participation rate is high in Cambodia. Also, according to the Cambodia Socio-Economic Survey, Cambodia's employment-to-population ratio is high, while its unemployment rate has been kept below 1%, except in 2019/20 when it increased to 2.4% due to the impact of the COVID-19 pandemic.

TABLE 1

LABOR FORCE PARTICIPATION, EMPLOYMENT, AND UNEMPLOYMENT RATE IN CAMBODIA (IN %).

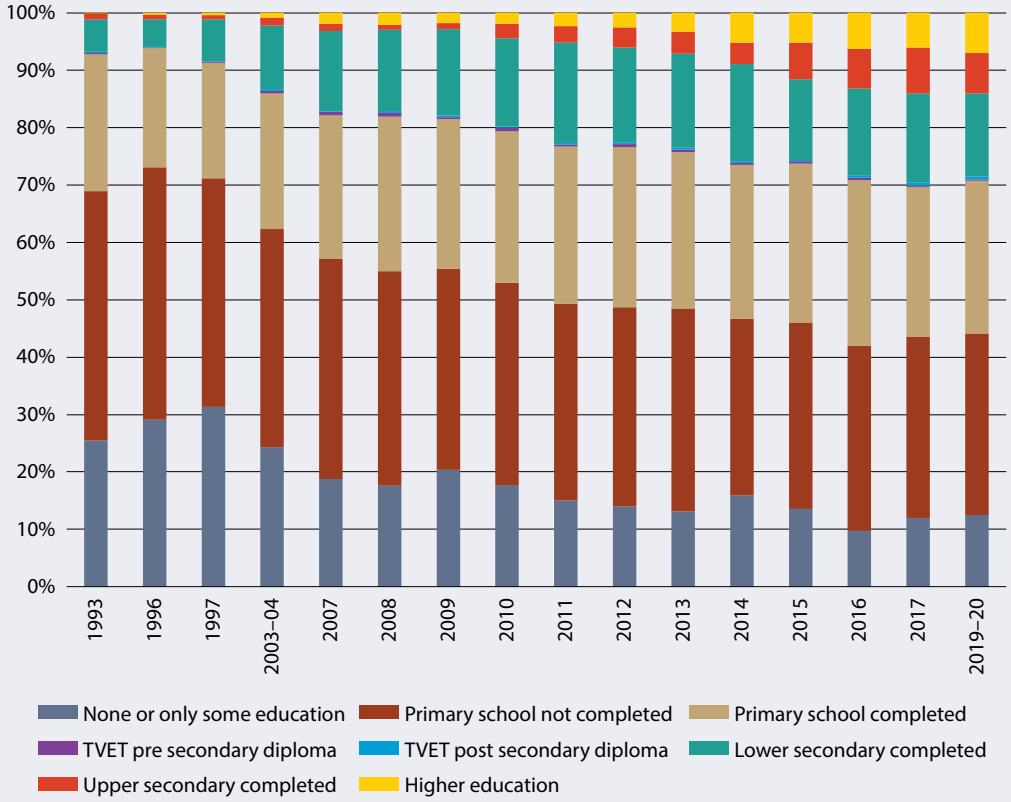
Years	2004	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2019–20
Labor Force Participation Rate													
Total	82.2	83.7	81.8	84.4	87.0	87.5	84.2	83.0	82.6	82.7	84.0	84.3	87.4
Women	77.5	78.3	75.6	80.4	84.2	84.8	79.7	77.8	77.5	77.2	78.9	80.1	84.1
Men	87.4	89.6	88.8	88.8	90.0	90.4	89.1	88.7	87.9	88.5	89.4	88.8	91.0
Employment to Population Ratio													
Total	81.3	83.0	81.5	84.3	86.7	87.3	84.1	82.8	82.4	82.6	83.9	84.2	85.4
Women	76.6	77.7	75.3	80.3	84.0	84.7	79.5	77.6	77.4	77.1	78.8	79.9	81.0
Men	86.6	89.0	88.5	88.6	89.6	90.2	89.0	88.5	87.8	88.5	89.2	88.7	90.0
Unemployment Rate													
Total	1.0	0.7	0.4	0.1	0.3	0.2	0.2	0.3	0.1	0.1	0.2	0.1	2.4
Women	1.1	0.8	0.4	0.1	0.3	0.1	0.2	0.3	0.1	0.1	0.1	0.1	3.7
Men	1.0	0.7	0.3	0.2	0.4	0.3	0.1	0.3	0.1	0.0	0.2	0.1	1.1

Source: Cambodia Socio-Economic Survey, 2004–2019/20 [15].

The structure of the labor force in Cambodia has not changed much, that is to say, a large portion of the total labor force remains less educated. Figure 4 shows that most of the labor force has only completed their schooling up to the primary level of education. In 2005 the share of the workforce with less education was around 85%, and although there is a decline in this rate, it remains high, at around 70%. At present, the small share of the less educated workforce enrolled in technical vocational education and training (TVET) may indicate that the Cambodian workforce is not equipped with a high skill set.

FIGURE 4

SHARE OF LABOR FORCE BY EDUCATION LEVEL (IN %)..



Source: Cambodia Socio-Economic Survey, 2005–2019/20 [16].

The Human Development Index covers the three dimensions of quality of health, quality of education, and standard of living for Cambodia. It also reveals that the growth of human development in the country has been slow as the index saw only a minor change from 0.576 in 2016 to 0.594 in 2019 [17].

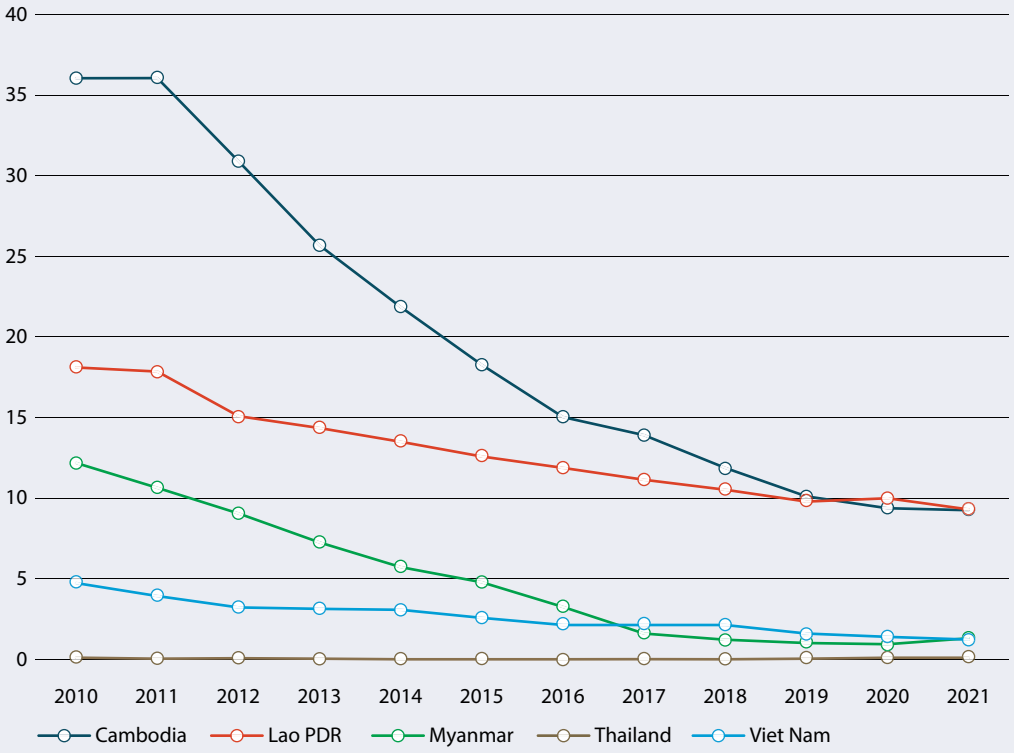
Skill shortage and skill gap have been two common phenomena, even before the Covid-19 pandemic. Employers had difficulties finding employees with the right skills and/or existing employees did not possess the right level of skills required. First-time job seekers lacked the necessary skills, soft skills, such as team building, foreign language, communication, planning, as well as leadership. The pandemic made matters worse, especially for low-skilled workers who were prone to be laid off due to social distancing and other virus-prevention measures.

The Working Poor

ILO's data provides the working poverty rate as the percentage of employed people living below USD1.99 per day in purchasing power parity. Available data shows that Cambodia had a high proportion of working poor with a rate of around 36%. The rate was the highest in 2010 compared to the neighboring countries of Lao PDR, Myanmar, Vietnam, and Thailand (18, 12, 4.7, and 0.1% respectively). The rate, however, declined dramatically over 10 years to just nearly 10% in 2020 and 2021 [18]. This might be partly because of the country's ability to maintain an economic growth rate of around 7% in the last decade. In addition, improvement in minimum wage policy as well as social security programs for poverty alleviation may have contributed to the decline of the working poor.

FIGURE 5

WORKING POVERTY RATE IN CAMBODIA AND NEIGHBORING COUNTRIES (IN %).



Source: ILOSTAT [18].

When disaggregated by gender and age group, it can be shown that there is not much difference in working poverty between females and males. However, a larger proportion of working youth aged 15 to 24 is in the working poor category, compared to those 25 years old and above [18].

Informal Employment

The informal sector accounts for the majority of the workforce in Cambodia. The latest Labour Force Survey (LFS) reveals that 77% of workers are in the informal sector. Overall, 41% of workers from the informal sector are working in the agricultural sector, while the remaining 59% are working in the non-agricultural sector. Besides, 48% of workers in the informal sector are female [19].

TABLE 2

FORMAL AND INFORMAL EMPLOYMENT BY SECTORS AND GENDER.

Sector	Female	Male	Total	Female	Male	Total
	Number			In %		
Informal sector	**2,914,025**	**3,190,956**	**6,104,981**	**77.4**	**77.5**	**77.4**
Agriculture	1,175,592	1,316,649	2,492,241	40.3	41.3	40.8
Non-agriculture	1,738,433	1,874,307	3,612,740	59.7	58.7	59.2
Formal sector	**804,644**	**887,730**	**1,692,374**	**21.4**	**21.6**	**21.5**
Agriculture	26,226	44,840	71,066	3.3	5.1	4.2
Non-agriculture	778,418	842,890	1,621,308	96.7	94.9	95.8
Household sector	**46,972**	**38,779**	**85,751**	**1.2**	**0.9**	**1.1**
Total	**3,765,641**	**4,117,464**	**7,883,106**	**100.0**	**100.0**	**100.0**

Source: Labour Force Survey, 2019 [19].

TABLE 3

FORMAL AND INFORMAL EMPLOYMENT BY SECTOR.

Employment/Sector	Informal Sector	Formal Sector	Household Sector	Total
		Number		
Informal employment	5,992,659	883,468	83,933	6,960,060
Formal employment	112,322	808,906	1,818	923,046
Total	**6,104,981**	**1,692,374**	**85,751**	**7,883,106**
		In %		
Informal employment	98.2	52.2	97.9	88.3
Formal employment	1.8	47.8	2.1	11.7
Total	**100.0**	**100.0**	**100.0**	**100.0**

Source: Labour Force Survey, 2019 [19].

However, informal employment is also prevalent in the formal sector. According to the LFS 2019, 52.2% of workers in the formal sector are in informal employment, indicating that even in formal sectors, workers are limited from social security and other benefits and are vulnerable to becoming working poor.

Quality of Employment

Safety and Ethics of Employment

Another indicator that defines the safety and ethics of employment is the number of working children. The percentage of working children in Cambodia declined from around 24% to 18% by 2019, especially the percentage of female working children, which is a positive sign showing that several working children started educating themselves to accumulate skilled labor in the market [20].

TABLE 4

PERCENTAGE OF WORKING CHILDREN BY GENDER (2012–2019).

Working children	2012	2013	2014	2015	2016	2017	2019/20
Working Children (5–17 years)	23.6	18.4	19.3	19.3	18.5	18.6	18.2
Not in the labor force	76.4	81.6	80.7	80.7	81.5	81.4	81.8
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: Cambodia Socio-Economic Survey, 2012–2019/20 [20].

In addition to that, working children aged 5–17, who attended school increased from 49.3% in 2012 to 52.3% in 2019. The improvement in this indicator resulted from the efforts of the government to reduce the number of working children [20].

TABLE 5

PERCENTAGE OF WORKING CHILDREN CURRENTLY ATTENDING SCHOOL BY GENDER.

	2012			2019		
Working Children (5–17 years)	Total	Male	Female	Total	Male	Female
Working children in school	49.3	51.1	47.3	52.3	53.7	51.1
Working children not in school	50.7	48.9	52.7	47.7	46.3	48.9
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Cambodia Socio-Economic Survey, 2012–2019/20 [20].

Income and Benefits from Employment

The average monthly wage/salary at a constant price (Oct–Dec 2006=100) from employment increased from KHR413,666 to KHR607,899, which shows an increase within seven years. Table 6 shows that the higher the relative positions and skills tend to get, the higher the wages are, both in 2012 and 2019, there were small gaps in wages between each position. Noticeably, professionals earned the highest wage in 2019, based on the data [21].

TABLE 6

AVERAGE MONTHLY WAGES BY OCCUPATION AND GENDER (IN KHR)*.

	2012			2019		
Occupation	Total	Male	Female	Total	Male	Female
Total	**322,516**	**349,995**	**282,864**	**607,899**	**640,651**	**564,922**
Managers	413,666	381,314	562,567	774,139	798,577	720,934
Professionals	357,438	391,577	312,300	845,828	854,662	836,582
Technicians and associate professionals	453,806	503,516	366,437	779,842	815,799	712,104
Clerks	392,500	409,547	357,699	808,110	899,173	720,584
Services and sales	336,345	347,585	323,408	671,954	806,070	505,927

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Occupation	2012			2019		
	Total	Male	Female	Total	Male	Female
Skilled agriculture workers	393,278	383,767	406,262	390,053	406,103	366,204
Craft and related trades	342,008	362,964	254,105	568,270	577,810	558,003
Machine operators	284,991	352,272	250,134	599,959	619,839	507,544
Elementary occupations	290,111	305,262	264,833	440,056	456,554	418,939
Armed forces	306,917	307,957	154,714	739,923	739,170	748,791

Note: * Calculated at Constant Prices (Oct-Dec 2006 = 100).
Source: Labour Force Survey, 2012–19 [21]

Table 7 shows that the monthly wages increased in all sectors between 2012 and 2019, especially in the service and industry sectors, while they increased moderately in the agriculture sector. This can reflect that the productivity in the industry and service increased at a faster rate as compared to the agriculture sector.

TABLE 7

AVERAGE MONTHLY WAGES BY INDUSTRY AND GENDER (IN KHR)*.

Industry (ISIC Rev. 4)	2012			2019		
	Total	Male	Female	Total	Male	Female
Total	**322,516**	**349,995**	**282,864**	**607,899**	**640,651**	**564,922**
Agriculture	296,859	309,172	281,344	395,683	425,218	361,761
Industry	303,397	344,737	256,139	567,664	572,596	562,021
Services	356,267	372,697	323,170	712,757	762,074	632,776

Note: * Calculated at Constant Prices (Oct-Dec 2006 = 100).
Source: Labour Force Survey, 2012–19 [21].

From the indicators of decent work, taken from the LFS 2019, the majority of people employed in Cambodia earn higher than two-thirds of the monthly median earnings. Table 8 shows that there were only around 18% of the total employed people that earned less than two-thirds of the monthly median wage, which reflects that many jobs have relatively higher quality, but it also reflects the low level of earnings inequality in the lower half of the employed people.

TABLE 8

LOW PAY RATE*.

Gender	In %	Urban/Rural	In %
Male	21.5	Urban	15.8
Female	15.3	Rural	15.2
Overall	**17.9**	**Overall**	**17.9**

Note: * Proportion of workers with monthly earnings below two-thirds of monthly median earnings.
Source: Labour Force Survey, 2019 [19].

Working Time and Work-Life Balance

According to the labor laws of Cambodia, the formal working hours are 48 hours per week. Table 9 illustrates that the average number of working hours per week was 46 in 2019, which is 2 hours less than the formal working hours defined by law. However, the working hours in the service and industry sectors were 52 and 51 hours respectively [21]. According to the law, those who work more than 48 hours per week should be compensated with higher overtime wages. Thus, these workers may be earning more than the normal workers. By working overtime for three to four hours per week, one can still maintain a work-life balance, as they are not excessive working hours.

TABLE 9

AVERAGE NUMBER OF WORKING HOURS PER WEEK BY INDUSTRY AND GENDER.

Industry (ISIC Rev. 4)	2012			2019		
	Total	Male	Female	Total	Male	Female
Total	**47**	**48**	**45**	**46**	**46**	**46**
Agriculture	41	44	38	35	37	32
Industry	50	51	49	51	51	50
Services	49	49	49	52	51	53

Source: Labour Force Survey, 2012–19 [21]

At the same time, the number of people who worked relatively more hours per week reduced from 2012 to 2019, especially in high-skill occupations such as managers, professionals, technicians, and associate professionals, except in services and sales, and crafts and related trades [21].

TABLE 10

PEOPLE WITH EXCESSIVE HOURS OF WORK PER WEEK BY OCCUPATION.

Occupation (ISCO-08)	2012	2019
Total	**3,573,152**	**2,839,848**
Managers	47,496	28,015
Professionals	69,688	38,059
Technicians and associate professionals	113,418	61,572
Clerks	43,457	36,799
Services and sales	940,626	1,041,443
Skilled agriculture workers	555,027	387,711
Crafts and related trades	467,578	646,657
Machine operators	531,413	214,956
Elementary occupations	785,203	367,895
Armed forces	19,246	16,740

Source: Labour Force Survey, 2012–19 [21].

People who worked relatively more hours per week were aged between 25 and 64 years old, which is the age group of the most active people in the working population. The share of people in this age group who work more hours also increased from 68.6% in 2012 to 79.5% in 2019. It should be

noted that more hours here do not mean working excessive hours, but only the number of working hours increased. This can be increased from less than 48 hours a week to a few more than 48 hours a week. This can also reflect an improvement in the underemployment status in some cases.

TABLE 11

PEOPLE WITH EXCESSIVE HOURS OF WORK PER WEEK BY AGE GROUP.

Age group	2012		2019	
	Both Genders	In %	Both Genders	In %
Total	**3,573,152**	**100.0**	**2,839,848**	**100.0**
15–24	1,058,036	29.6	505,470	17.8
25–64	2,449,882	68.6	2,257,308	79.5
65+	65,233	1.8	77,070	2.7

Source: Labour Force Survey, 2012–19 [21]

Security of Employment and Social Protection

The concept of employment security can be elucidated through the examination of employment status, including both formal and informal employment. Table 12 illustrates the relatively large share of own-account workers within the population aged 15 and older who are employed. Their share increased from 33.6% in 2012 to 36.9% in 2019. Own-account workers are generally defined as one of the vulnerable worker groups, with relatively lower employment security. Interestingly, while the share of this group increased, the share of employees also increased from 46.0% to 47.8% during the same period.

TABLE 12

EMPLOYED POPULATION AGED 15 OR OLDER BY STATUS IN EMPLOYMENT.

Employment status	2012		2019	
	Both Genders	In %	Both Genders	In %
Total	**7,197,415**	**100.0**	**7,883,106**	**100**
Employee	3,312,644	46.0	3,769,515	47.8
Employer	28,455	0.4	269,820	3.4
Own-account worker	2,415,194	33.6	2,908,447	36.9
Contributing family worker	1,439,847	20.0	935,324	11.9
Other	1,275	0.0	0	0

Source: Labour Force Survey, 2012–19 [21].

Table 13 shows the improvement in terms of the quality of employment if one looks at the status of formal and informal employment. People who worked in the formal sector enterprises increased from around 18% in 2012 to around 21% in 2019, and at the same time, the share of people who worked in the informal sector enterprises decreased from 81.2% to around 77% during the same period. This shows the improvement in the quality of employment in Cambodia, which mean that the working conditions, including wage, improved and jobs that were newly created were also better than before.

TABLE 13

EMPLOYED POPULATION AGED 15 OR OLDER BY SECTOR.

Sector	2012		2019	
	Both Genders	In %	Both Genders	In %
Total	**7,197,416**	**100.0**	**7,883,106**	**100.0**
Formal sector enterprises	1,276,331	17.7	1,692,374	21.47
Informal sector enterprises	5,845,356	81.2	6,104,981	77.44
Households	75,729	1.1	85,751	1.09

Source: Labour Force Survey, 2012–19 [21]

The data from LFS also shows improvement in the social protection system of Cambodia as the share of the employed population that the employers paid the social security increased from around 12.4% in 2012 to 19.1% in 2019. Surprisingly, the share of female workers with an employer contributing to social security funds dramatically increased from 8.5% to 22.6% between 2012 and 2019. This reflects that more women entered the labor market or moved from informal to formal employment, leading to an improvement in the quality of employment for women.

TABLE 14

EMPLOYEES WITH EMPLOYER CONTRIBUTING TO SOCIAL SECURITY FUND BY GENDER.

Gender	2012	2019
Total	**12.4**	**19.1**
Males	15.1	16.4
Females	8.5	22.6

Source: Labour Force Survey, 2012–19 [21]

In addition, during the COVID-19 crisis, the government made efforts and had strong commitments to supporting workers and employers, by providing wage subsidies, free vaccination for workers, employment services and skills training, tax exemptions for employers, and suspending the National Social Security Fund (NSSF) contributions.

Social Dialogue

As a member of the ILO, the social dialogue and tripartite mechanism are the fundamental principles in the development of labor and promotion of labor rights in Cambodia. In this connection, Cambodia is the first government to be a partner in the Global Deal Initiative, which is a multi-stakeholder partnership of governments, businesses, employers' organizations, trade unions, civil society, and other organizations, for the promotion of social dialogue and sound industrial relations. Furthermore, the Law on Trade Union is a crucial legislation for ensuring the rights of professional organizations, as outlined in the Constitution of the Kingdom of Cambodia, the Labour Law, and the International Labour Conventions Nos. 87 and 98, which the country approved on 23 August 1999. The Government of the Kingdom of Cambodia recognizes professional organizations (trade unions, employers' associations) as effective social partners. In practice, these professional organizations actively participate in efforts to protect the legal rights and interests of

workers and employers and promote national development. As of December 2022, 6,014 trade unions were registered at the Ministry of Labour and Vocational Training. As of 2022, there are 40 confederations of worker unions, 267 federations of worker unions, 5,694 local worker unions, and 13 employers' associations.

TABLE 15

NUMBER OF PROFESSIONAL ORGANIZATIONS IN CAMBODIA (2018–22).

Description	2018	2019	2020	2021	2022
Confederation of Worker Unions	28	33	36	40	40
Federation of Worker Unions	180	216	231	252	267
Local Worker Unions	4621	4996	5206	5442	5694
Employer Associations	9	11	11	12	13
Total	**4838**	**5256**	**5484**	**5746**	**6014**

Source: Ministry of Labour and Vocational Training, 2022 [22].

In addition, there are several employers' associations, confederations, and federations of workers' unions that have been actively involved in the tripartite mechanism and social dialogue. The most well-known and the first-ever tripartite body under the Labour Law is the Labour Advisory Committee (LAC). It takes the model of the Governing Body of the International Labour Conference, with 14 government representatives, 7 employers' representatives, and 7 workers' representatives. With the recent developments, the National Council of Minimum Wage has originated from the LAC and is in charge of setting minimum wage with equal tripartite representation. The Arbitration Council is also known as a tripartite body in labor dispute settlement mechanism with equal representation of tripartite members of arbitrators. The Governing Council of the NSSF also includes tripartite members with equal representation. These are to name a few, while several tripartite mechanisms have been put in place to promote a sound working environment, good employment management, and productivity, in particular.

Skill Development and Training

Managers, professionals, technicians, and associate professionals are considered as the high skill occupation (skill level 3 and 4). In Cambodia, between 2012 and 2019, the number of people employed in high-skill jobs increased from around 730 thousand to 747 thousand. However, the shares of this group slightly decreased during this period. This might have happened due to some working-age population staying longer in schools.

TABLE 16

HIGH-SKILL EMPLOYED POPULATION BY GENDER (2012–19).

	2012		2019	
Gender	Number	In %	Number	In %
Total	**729,732**	**10.1**	**746,833**	**9.5**
Male	472,235	12.4	458,357	11.1
Female	257,497	7.6	288,475	7.7

Source: Labour Force Survey, 2012–19 [21].

Employment-Related Relationships and Work Motivation

Individuals choose their jobs based on their preferences including high salaries, good working conditions, positive work-life balance, challenging work, and pleasant areas of work. Table 16 presents the job satisfaction level of the six graduate groups. Job satisfaction increased with the level of education. Noticeably, 90.5% of TVET graduates had job satisfaction.

TABLE 17

EFFECT OF EDUCATION ON LABOR MARKET OUTCOME.

Level of Education	Average Monthly Wages (USD)		Job Satisfaction (in %)	Job Insecurity (in %)	Skill Obsolesce (in %)
	Confidence interval (95%)				
	Lower	Upper			
Lower secondary	252.3	288.7	79.5	6.3	11.4
Upper secondary	258.3	281.4	79.1	3.9	11.0
TVET graduates (C1, C2, C3)	239.9	330.3	90.5	4.8	19.0
Tertiary education-Associate degree/High diploma	302.3	360.2	86.0	5.1	14.0
Tertiary education-Bachelors	414.7	437.1	85.9	3.7	14.3
Tertiary education-Post-graduate	688.6	914.8	88.2	1.5	16.2

Source: Qualifications and Skills Mismatches in Cambodia: Evidence from Employee's Skills and Jobs Survey 2020 [23]

Overall, Table 17 points out that around 85% of the employed people were satisfied with their current jobs, reflecting the good quality of employment. Among those, employees whose skills and qualifications were higher than what was required were associated with a lower level of job satisfaction, compared to those who were overqualified yet under-skilled. At the same time, respondents who had a perfect match of both skills and qualifications were mostly satisfied with their jobs.

TABLE 18

IMPACT OF QUALIFICATION-SKILL MISMATCH ON JOB SATISFACTION.

Skill mismatch status	Over Qualification (in %)	Matched Qualification (in %)	Under Qualification (in %)	Total
Over skilled	72.6	78.3	89.1	77.6
Matched skills	81.7	89.3	80.1	86.7
Under skilled	86.0	80.0	87.8	82.7
Total	**79.6**	**86.7**	**82.4**	**84.5**

Source: Qualifications and Skills Mismatches in Cambodia: Evidence from Employee's Skills and Jobs Survey 2020 [23]

Quality of Employment Index

Min-max normalization is used to normalize a set of values of indicators used for measuring the quality of employment, by transforming each value of the indicator to lie between 0 and 1. This

will bring all the values into a common scale and make them unidirectional with the following formula, where x is the value of a given indicator, whose minimum value is 0, and the maximum value is 100.

$$x_{transformed} = \frac{x - \min(x)}{\max(x) - \min(x)}$$

Then the quality of employment index is calculated as an unweighted index of all available indicators using arithmetic mean after normalization.

In this case, the calculation of values relevant to the quality of employment index has been calculated for seven indicators as shown in Table 19. The quality of employment is a positive indicator, so the direction of several indicators has been reversed.

TABLE 19

QUALITY OF EMPLOYMENT INDEX.

No.	Dimension	Detailed Description	Variables	Value	Quality of Employment Index
1	Safety and ethics of employment	Child labor	Percentage of children aged 5–17 years who are not engaged in child labor	81.8	**0.82**
2	Income and benefits from employment	Employees with low pay	Percentage of workers earning above 2/3rd of the median pay	82.1	**0.82**
3	Working hours and balancing work and non-working life	Long weekly working hours	Percentage of workers working up to 48 hours	64.0	**0.64**
4	Security of employment and social protection	Social Security benefits	Percentage of workers with any social contribution	19.1	**0.19**
5	Social dialogue	Trade union density rate	Percentage of employees who are members of one or more trade unions	18.2	**0.18**
6	Skills development and training	Skill levels of Workers	Percentage of highly skilled workers	9.5	**0.09**
7	Workplace relationships and work motivation	Job satisfaction	Percentage of employees who are satisfied with their current job	84.50	**0.85**
Quality of Employment Index					**0.51**

Source: Labour Force Survey, 2019 [19]; Cambodia Socio-Economic Survey, 2012–2019/20 [20]; and Ministry of Labour and Vocational Training, 2022 [22].

The value of each variable is explained below:

- Percentage of children aged 5 to 17 years who are not engaged in child labor: The percentage of children aged 5 to 17 who are not working is 81.8%.

- Percentage of workers earning above 2/3rd of median pay: This is one of the indicators of the SDGs, and the percentage of workers earning below 2/3rd of median pay is 17.9% or in other words, the percentage of workers earning above 2/3rd of median pay is 82.1%.

- Percentage of workers working up to 48 hours: The total number of people with excessive hours of work per week is 2,839,848 among the total labor force of 78,831,06 or 64.0% of the total labor force.

- Percentage of workers with any social contribution: The value of this indicator is 19.1%.

- Percentage of employees who are members of one or more trade unions: This indicator serves as a proxy, assuming that 18.2% or 1,433,935 workers registered at the Ministry of Labour and Vocational Training in 2019 were unionized among the total labor force of 7,883,106. This assumption is based on the notably high rate of unionization within the garment sector, where nearly all factories and workers are registered with the Ministry of Labour and Vocational Training.

- Percentage of highly skilled workers: Highly skilled workers are defined as those who hold positions as managers, professionals, technical, and assistant professionals, with 746,833 workers from a total labor force of 7,883,106 or 9.5% of the total labor force.

- Percentage of employees who are satisfied with their current job: This is a proxy indicator taken from the survey by the National Employment Agency, asking for current job satisfaction, and the value is 84.5%.

National Employment Quality Policies

Cambodia has set ambitious goals of attaining high-middle-income status by 2030 and high-income country status by 2050. A critical component in achieving these goals is to have high-quality employment that can contribute to overall economic development. Recognizing the importance, the government has rolled out several policies, spanning from overarching socio-economic policies to sector-specific initiatives These policies include the Rectangular Strategy 2004–23, Industrial Development Policy 2015–25, National Employment Policy 2015–25, National Technical Vocational Training Policy 2017–25, and Cambodia Garment, Footwear, and Travel Goods Sector Development Strategy 2022–27.

Rectangular Strategy 2004–23

The Rectangular Strategy is a cornerstone of the government's social, economic, and political policies. By 2023, the government will have implemented this policy for two decades, organized into four distinct phases, beginning 2004–08 to phase 4 during 2019–23.

Throughout these phases, the government has placed a high priority on human resource development. This commitment is geared towards generating more jobs, both in terms of quality and quantity. The government's focus is particularly significant for the country's youth. The strategy involves achieving these goals through skill training programs, provision of job market information, and improvement in working conditions.

Industrial Development Policy 2015–25

The government envisions the transformation and modernization of Cambodia's industrial sector from a labor-intensive industry to a skill-based industry by 2025, with a primary focus on creating and supporting high-quality employment. The key objectives of this policy are to generate employment opportunities for Cambodian workers, elevate the economy's value-added, and increase the income of the Cambodian population.

At its core, this policy aims to strengthen labor market mechanisms and skills training development to ensure a stable labor supply, boost productivity, and improve the living standards of workers. The country aims to achieve this by promoting skills training programs, reinforcing the mechanism for setting minimum wages, fostering harmony in industrial relations, and continuing to strengthen the tripartite labor relations framework that includes the government, employers, and employees. This aims to promote mutual understanding while developing an effective mechanism for setting minimum wages consistent with labor productivity, socioeconomic conditions, and the status of industrial development.

The measure for improving the well-being of workers in this policy is to initiate research on the relationships between employees and employers. This will help identify best practices for addressing systemic resolutions of industrial disputes, which can, in turn, enhance labor productivity.

The policy is also set to review the Labor Law and Law on Social Security to assess their strengths and weaknesses. The review will emphasize the roles of employers and unions in the labor market development process while considering the balance between development needs and the well-being of workers. It will also seek to strengthen mechanisms for managing skilled workers.

National Employment Policy 2015–25

The objective of this policy is to elevate the availability of decent employment opportunities and enhance labor productivity while fostering skills and human resource development, as well as enhancing labor market governance. One of the three goals stated in this policy relates to improving worker's well-being through the expansion of decent and productive employment opportunities. The first objective centers on promoting such opportunities by identifying and prioritizing sub-sectors with high employment potential. This involves boosting employment within the priority sub-sectors through enterprise development, supporting SMEs in both urban and rural areas, and encouraging domestic and foreign investments in these high employment potential sub-sectors.

The second objective aims to promote decent and productive employment by enabling the transition of both workers and economic units from the informal to the formal economy. This transition seeks to ensure the preservation and improvement of the existing livelihood during the process. To achieve this the policy advocates the promotion of formal business registration by simplifying the registration process. Additionally, it seeks to raise awareness among businesses operating in the informal sector about the benefits of formal registration, and orientation of informal and formal sector workers and employers regarding labor law and other related regulations.

National Technical Vocational Training Policy 2017–25

The National Technical Vocational Training Policy 2017–25 was formulated by the Ministry of Labour and Vocational Training and adopted by the government to enhance the quality of TVET. It aims to align TVET standards with international market demands, improve the accessibility of

TVET programs, and address the evolving skills needs. It also seeks to promote public-private partnerships and improve governance in the TVET system. The measures cover the improvement of TVET access by developing distance learning, continuous learning programs, mobile training, and short-course training at communities, training institutions, enterprises, industries, companies, and factories.

Cambodia Garment, Footwear, and Travel Goods Sector Development Strategy 2022–27

This is one of the sectoral strategies that focuses on enhancing the productivity of the garment, footwear, and travel goods industry by improving the well-being of the workers.

This entails transferring the roles of managers, technicians, and experts to domestic workers, thereby reducing dependency on foreign expertise. The strategy involves developing and implementing competency standards for assessing the skills of workers. These standards serve as a benchmark for evaluating worker competencies. Workers are incentivized based on their competencies.

It also involves research on skill mapping and future skill requirements within the industry, and promoting the use of Skill Development Fund. The key success of this policy is centered around skill transfers and training programs. The government is strongly committed to achieving the goal of elevating the garment sector to a higher value chain with a higher added sector.

Conclusion

Cambodia was one of the fastest-growing countries which had the highest economic growth in the last two decades, before the onset of the COVID-19 pandemic. The annual economic growth rate was around 7%, leading to its transition from a low-income country to a lower-middle-income country in 2015. This growth was accompanied by a shift towards more productive sectors, particularly industry, and services, while the role of the agriculture sector, both in terms of both employment and its contribution to GDP, diminished over time. The movement of the labor force from agriculture to more productive sectors led to an overall increase in labor productivity.

In the case of Cambodia, the industry sector has witnessed substantial productivity gains, largely attributed to new investments in various high-value productive manufacturing sub-sectors. However, the realization of the full benefits of these investments hinges on the availability of a quality labor force. According to the available data, a significant portion of Cambodia's labor force and employed population possesses a low level of education, which is reflected in the relatively lower productivity levels and the quality of employment.

This paper delves into seven key indicators of quality employment. Out of the seven indicators, skill development and training (as defined by the percentage of highly skilled workers) and security of employment and social protection (as defined by the percentage of employees with social security contribution), have relatively low indices. Recognizing these challenges, the government has taken proactive steps by rolling out several policies aimed at enhancing the quality of employment and productivity.

These policies encompass initiatives to develop skills, bolster public employment services, and strengthen social security. The government's continued commitment to these efforts bodes well for the promotion of productive employment. Nevertheless, the focus now lies on establishing effective implementation mechanisms and plans to realize the intended goals.

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REPUBLIC OF CHINA

Introduction

After retreating from the Mainland in 1949, the Republic of China (ROC) embarked on a journey of development through industrialization, ranging from traditional industries such as textiles across the region, to high-tech industries [1], as illustrated in Table 1. This industrial change, coupled with technological transfers from industrial economies like Japan and the United States, facilitated high economic growth. However, a pressing question remains: Has this rapid industrialization translated into productive employment opportunities?

When the growth of employment lags behind the rate of economic growth, the so-called growth happens without employment [2]. The share of the industrial sector in employment generation declined slightly after 2016 in the ROC, as shown in Table 2. Furthermore, labor productivity has reversed and outpaced that of the service sector since 2019, as indicated in Table 3. It is argued that most technologies applied are capital-intensive, resulting in higher productivity. However, it does not lead to a significant increase in employment. Instead, employment opportunities in the service sector have expanded, albeit with relatively lower wages.

Comparatively, wages in the ROC are lower than those in other major Asian economies, such as the Republic of Korea (ROK), despite having a similar level of education, technology, and overall development. This indicates a growing trend of uneven income distribution within the society.

Income inequality has been on the rise universally, a trend that is being moderated by increased involvement of the welfare state [3, 4]. The ROC established a system of labor protection in the 1950s, extending it to include national health care insurance by 1996. The initiative helped put in place social protection mechanisms, including minimum wage regulations, occupational accident insurance, and unemployment benefits. However, a gap exists in the strategy for productive employment, and decent work that is guaranteed under the context of a globalized manufacturing chain. The labor markets in the ROC are vulnerable to economic fluctuations and international competition.

This chapter reviews the status of productive employment and the quality of employment in the ROC, drawing upon government statistics. It analyzes the impact of these aspects on the labor market performance. The chapter also provides a series of policy recommendations based on expert suggestions.

TABLE 1

CONTRIBUTION TO THE ROC'S GDP BY SECTOR (IN %).

Sector	2016	2017	2018	2019	2020	2021
Agriculture	1.87	1.82	1.69	1.68	1.59	1.48
Industry	36.87	36.83	36.31	35.46	37.12	37.95
Service	61.27	61.35	62.00	62.86	61.29	60.57

Source: Key Indicators Database, Asian Development Bank. https://kidb.adb.org/economies/taipeichina. Accessed on 9 November 2023.

TABLE 2

SECTOR-WISE SHARE OF EMPLOYMENT (IN %).

Sector	2016	2017	2018	2019	2020	2021
Agriculture	4.92	4.90	4.90	4.86	4.76	4.73
Industry	35.83	35.79	35.71	35.58	35.43	35.45
Service	59.25	59.31	59.38	59.55	59.80	59.81

Source: Report on the Survey of Family Income and Expenditure, 2021. Directorate General of Budget, Accounting and Statistics (DGBAS), Executive Yuan, the ROC [13].

TABLE 3

SECTOR-WISE SHARE OF LABOR PRODUCTIVITY*.

Sector	2016	2017	2018	2019	2020	2021
Industry	100	103.25	105.37	105.30	113.80	127.36
Service	100	103.46	106.62	110.36	111.74	119.30

Note: *Baseline year: 2016.
Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

Measurement of Productive and Quality of Employment

Productive Employment

Before measuring the productive employment of a society, a clear understanding of its population base is needed. This study focuses on individuals aged 15 and, as per the data from the Manpower Survey. The survey targets households and encompasses the civilian population aged 15 years and above, having ROC nationality.

The population of the ROC experienced its peak in 2020 and has been declining since, primarily due to low fertility in the past twenty years. It had the lowest total fertility rate compared to all the other countries in 2022, according to CIA statistics [12]. Details for the past four years are presented in Table 4.

TABLE 4

POPULATION AGED 15 AND ABOVE FROM 2018–21 (IN '000).

2018	2019	2020	2021
20,129	20,189	20,231	20,193

Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

People in Employment

The ROC has adopted the definition of 'employed' from the regulations of the ILO and it is similar to the definition and criteria used in the labor statistics by leading countries. According

to this definition, during the survey's reference week (the week that includes the 15th day of each month), individuals aged 15 and above are considered employed if they meet one of the following criteria:

(1) Engaged in compensated work (regardless of hours), or unpaid family workers performing at least 15 hours of uncompensated work per week

(2) Compensated workers with work who have not worked during the survey reference week

(3) Individuals who have been hired, received compensation, but have not yet begun work.

Details for the last four years are provided in Table 5.

TABLE 5

PEOPLE IN EMPLOYMENT FROM 2018–21 (IN '000).

2018	2019	2020	2021
11,874	11,946	11,964	11,919

Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

Labor Participation

The labor participation rate refers to the labor force, defined as the proportion of the civilian population aged 15 years and above, and also the percentage of the civilian population aged 15 years and above engaged in labor[1]. Because the labor force includes both employed and unemployed people, any increase or decrease in the number of employed or unemployed individuals directly impacts the labor participation rate. The data for the past four years is presented in Table 6. In 2021, the ROC's labor participation rate averaged 59.02%, indicating a 0.12% decrease from the previous year.

TABLE 6

LABOR PARTICIPATION RATE FROM 2018–21 (IN %).

2018	2019	2020	2021
58.99	59.17	59.14	59.02

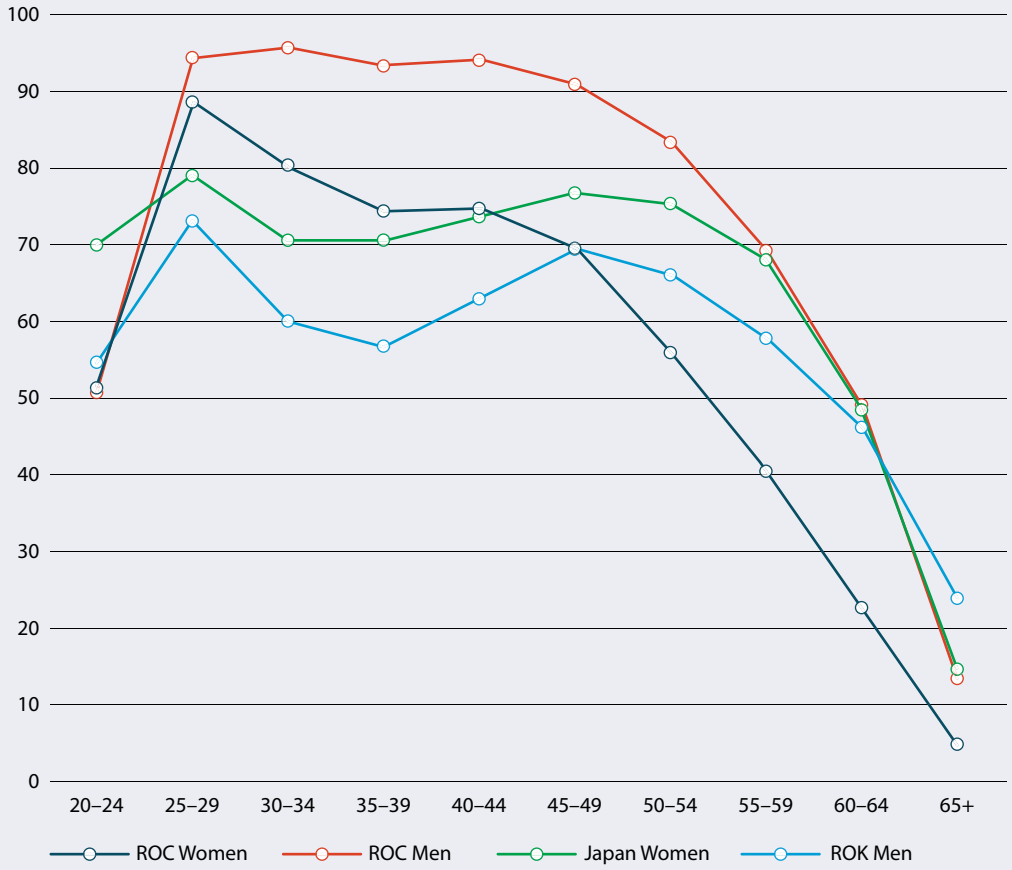
Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

However, gender disparities in labor participation exist, as depicted in Figure 1. The labor participation rate of males is higher than that of females across all age categories. When comparing the ROC to other East Asian countries such as Japan and the ROK, it is apparent that the overall rates of female employment mask critical differences in their patterns among the three societies. In the ROC, the female labor participation rate peaks between ages 25–29. In contrast, Japan and the ROK exhibit a twin peak pattern, with female participation rates rising at later ages of 45–49 and then declining.

[1] The labor participation rate is calculated using the following method: Labor participation rate (in %) = Labor force/Civilian population aged 15 years and above*100%.

FIGURE 1

LABOR FORCE PARTICIPATION RATE BY AGE GROUP IN 2014 (IN %).



Source: Wei-hsin Yu. Women and employment in Taiwan. Brookings Institution, 14 September 2015. https://www.brookings.edu/opinions/women-and-employment-in-taiwan/. Accessed on 9 November 2023.

People in Underemployment

The ROC does not have an official definition of underemployment. Instead, it has adopted the definition of atypical workers and collects information through the Manpower Survey. Details for the past four years are provided in Table 7.

TABLE 7

UNDEREMPLOYMENT IN THE ROC FROM 2018–21 (IN '000).

2018	2019	2020	2021
819	799	797	798

Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

Productive Employment

Productive employment is defined as work that provides a sufficient income for workers and their dependents to sustain a standard of living above the poverty line. In the ROC, the disposable income of the family serves as a critical measure for understanding productive employment. Accordingly, the family disposable income in the survey of family income and expenditure,

conducted by DGBAS, serves as the proxy indicator. This survey divides family disposal incomes into five ranges. The quotient obtained by dividing the average income of the top 20% by that of the bottom 20% is taken as the multiple. Regular income includes employee compensation, business owner earnings, property income, rent, regular transfers, and miscellaneous expenditures.

The percent distribution of disposable income is calculated by quintile of households, as shown in Table 11, and the value obtained is 6.58%, compared to 40.45%, which is the family disposable income of the top 20%. The family disposable income of the bottom 20% was around USD14,000 in 2021. For the bottom 20%, the number of people employed per household is 0.39, compared to 2.28 people employed per household in the top 20%. This means that the households whose disposable income falls in the bottom category have fewer people participating in the labor market.

TABLE 8

PRODUCTIVE EMPLOYMENT.

Indicator		Measure	Data Source
Productive Employment	The proportion of workers below the poverty line	Percent distribution of disposable income by quintile of households	Survey of family income and expenditure (2021)

Source: Country resource person.

Quality of Employment

The concept of quality of employment is complex and closely linked to ILO's decent work indicators. In a statistical framework, it can have seven broad dimensions.

1. Safety and ethics of employment.
2. Income and benefits from employment.
3. Working hours and work-life balance.
4. Security of employment and social protection.
5. Social dialogue.
6. Skill development and training
7. Employment-related relationships and work motivation.

Based on this, measurement from different data sources is selected, as shown in Table 9.

TABLE 9

QUALITY OF EMPLOYMENT INDEX.

Indicator		Measure	Data Source
Quality of Employment Index	1. Safety and ethics of employment	Rate of occupational injuries per 1,000 workers	Labour Statistics. Ministry of Labour, the ROC; 2021.
	2. Income and benefits from employment	Minimum wage as a percentage of the average wage in the manufacturing sector	Labour Statistics. Ministry of Labour, the ROC; 2021.

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Indicator		Measure	Data Source
Quality of Employment Index	3. Working hours and work-life balance	Percentage of atypical workers*	Manpower survey; 2021.
	4. Security of employment and social protection	Percentage of workers who are covered under labor insurance	Labour Insurance Statistics. Ministry of Labour, the ROC; 2021.
	5. Social Dialogue	Share of companies covered by collective bargaining	Labour Statistics. Ministry of Labour, the ROC; 2021.
	6. Skill development and training	Share of employed people who received job training in the last 3 years	Vocational training statistics (2019)
	7. Employment-related relationships and work motivation	Share of employed people who are satisfied with their work	Survey on the Living and Employment Situation of Labour; 2021.

Source: Country resource person.

Safety and Ethics of Employment

The rate of occupational injuries per 1,000 workers in labor statistics, including monthly employment and unemployment rate [14] was used to find that there were 0.25% of occupational injuries per 1,000 workers in 2021, which is fair if compared to, for example, 0.23% of occupational injuries per 1,000 workers in the United States [11].

Income and Benefits from Employment

The minimum wage as a percentage of the average wage in the manufacturing sector in labor statistics is also being used. This measure can reflect the benefit a worker is guaranteed by the government once they participate in the labor market. The minimum wage as a percentage of the average wage in the manufacturing sector was 41.76% in 2021.

Working Hours and Work-Life Balance

The percentage of atypical workers in the Manpower Survey is used. This survey[2], like similar surveys in many other countries, employs the ILO's standard definitions of employment and unemployment, as well as recommended statistical methods. It was found that 6.97% of employed workers were atypical workers in 2021, which indicates that only a small portion of workers are working on a part-time basis in this society. This figure can be interpreted from two opposite directions: on one hand, the majority of labor is working on a full-time basis; and on the other, the working hours among them are fixed and less flexible, which implies there is an imbalance between work and life.

[2] The Manpower Survey employs a stratified two-stage random sampling approach, including a monthly sample of 20,000 households, equivalent to nearly 60,000 individuals aged 15 and above. The sample consists of randomly selected households and engages close to 700 city/county fundamental statistics enumerators who conduct both personal and telephonic interviews. To ensure the professionalism and objectivity of statistical results, DGBAS has reinforced the training for survey enumerators and follow-up checking control mechanisms. The overall survey design and statistical methods are quite rigorous. Apart from providing the government with a reference to guide the planning of manpower policies, the results of this survey are also concurrently posted on the DGBAS website for use by all interested parties. The sampling rate is 0.24%, which is higher than the rate of 0.23% in the ROK, 0.09% in Japan, and 0.05% in the United States. This ensures that the sample is representative. To enhance the survey's accuracy, DGBAS continually refines sampling methods, updates sample population files to control sampling error, improves question design methods and training for survey personnel, and unifies survey question definitions to ensure that survey personnel will not allow their subjective judgments to affect their actual form completion. DGBAS is also actively implementing a follow-up control mechanism to reduce untruthful and inaccurate answers and improve the quality of survey data (see DGBAS, 2022).

This indicator can be supplemented with the long working hours in the ROC. Park and Lin noticed that the ROC had the second-longest average annual working hours in Asia and ranked fourth in the same category among the OECD countries [5].

Security of Employment and Social Protection

The percentage of workers who are covered under labor insurance was used to find that 93.84% of the employed workers were covered under labor insurance in 2021 [15]. This implies that the coverage of social insurance is almost complete.

Social Dialogue

Instead of the share of workers covered by collective bargaining, the percentage of workers who are unionized in the industrial sector was adopted as the indicator of social dialogue. The reason for this choice is that bargaining is less popular in the ROC, as the actual power of labor unions has been weak for a long time and the collective bargaining has achieved very little [10]. In the ROC, the Labour Union Law's 'single-compulsory union system' states that a company with more than 30 workers is obliged to organize a labor union and that only a single union is allowed to be formed in each company. Unionized workers comprised 33.2% of 11,480 thousand in 2021. Under this law, a 'labor union' has been divided into four categories: corporate, industrial, professional, and confederated. In this division, the industrial unions occupy a very small percentage of the unionized workers. In 2021, of a total of 3,396 million unionized workers, only 7.8% belonged to an industrial union. Professional unions, on the contrary, constitute a type of union open to non-worker wage earners: self-employed, unpaid workers, and subcontractors. Professional unions remain widespread, especially in the service sector, and group workers according to the profession, such as taxi drivers, tailors, barbers, waiters, truckers, etc. Registration with professional unions is aimed at guaranteeing insurance coverage and a pension. As the above data on unionized workers show, union registration has increased in number, but not in real participation.

TABLE 10

LABOR UNION MEMBERSHIP (IN %).

	Total Organized Rate	Corporate union organized rate	Industrial union organized rate	Professional union organized rate
2021	33.2	15.2	7.8	42.9

Source: Department of Labour, the ROC.

Skill Development and Training

A share of employed people who received job training in the last three years was used to find that 33.8% of employed people had received job training between 2016 and 2019

Employment-Related Relationships and Work Motivation

A percentage of employed people who are satisfied with their work is used as the indicator of employment relationships and motivation. It was found that 72.5% of the employed people were satisfied with their work in 2021.

Summary

This section provides an overview of the statistics collected as the indicators of productive employment and the quality of employment. The percent distribution of disposable income by the bottom quintile of households is used as the proxy indicator for productive employment,

representing the economic benefit workers can provide to their families through labor market participation. Unfortunately, workers whose income falls in the bottom quintile share less. In contrast, workers in the top quintile enjoy 40.45% of this share as benefits.

As for the quality of employment index, all sub-indexes are generally fair except for work-life balance and social dialogue. Each sub-component was given equal weight, with scores converted to a scale of 100 to generate the index. In 2021, the index stood at 50.92.

TABLE 11

RESULTS OF PRODUCTIVE EMPLOYMENT AND THE QUALITY OF EMPLOYMENT.

Indicator		Measure	Number (in %)	Index
Productive Employment	The proportion of workers below the poverty line	Percent distribution of disposable income by quintile of households	6.58	–
Quality of Employment Index	1. Safety and ethics of employment	Rate of occupational injuries per 1,000 workers	0.25	14.25
	2. Income and benefits from employment	Minimum wage as a percentage of the average wage in the manufacturing sector	41.76	5.97
	3. Working hours and work-life balance	Percentage of atypical workers*	6.97%	0.99
	4. Security of employment and social protection	Percentage of workers who are covered under labor insurance	93.84	13.41
	5. Social Dialogue	Percentage of workers who are unionized in the industrial sector	7.8	1.11
	6. Skill development and training	Percentage of employed people who received job training in the last three years	33.8	4.83
	7. Employment-related relationships and work motivation	Percentage of employed people who are satisfied with their work	72.5	10.36
	Total			**50.92**

Note: * Atypical workers refer to people who work on a part-time basis during the survey period in the ROC, a proxy measure for work-life balance.
Source: Country resource person.

Labor Market Performance and its Impact on Regulation

The review of productive employment and the quality of employment sheds light on several impacting the labor market performance in the ROC. Firstly, gender plays a significant role in labor participation; studies by Cheng and Loichinger reveal that the economic activity of women above the age of 25 is significantly lower than that of men and even lower than that of women in other East Asian nations [6]. Secondly, the low fertility rate in the ROC results in an aging labor force, contributing to a potential labor shortage in the industrial sector. Thirdly, the influence of labor unions is limited due to their weak bargaining power, making it challenging for low-income workers to secure a larger share of economic benefits in the market. These three factors have influenced the institutional design of labor regulations in the ROC.

Gender Equity

In response to the gender disparities in productive employment and concerns about working hours and work-life balance, the ROC introduced the Act of Gender Equality in Employment in 2002. The Act was designed to protect gender equality in the workplace and uphold the spirit of gender equality outlined in Article 7 of the Constitution. Chapter II of the Act prohibits employers from discriminating against employees based on gender or sexual orientation in hiring, evaluating, promoting, education, training, welfare, wage payment, and matters related to retirement, discharge, severance, and termination. Employers must also implement measures to prevent and rectify sexual harassment, establish complaint procedures, and define disciplinary measures.

The violation of the Act may result in fines ranging from USD667 to USD50,000, depending on the severity of the offense. Additionally, benefits are provided to encourage female labor market participation after marriage.

Paid Parental Leave

To support working parents in spending more time with their children and ensure that the parental leave allowances align with the actual needs of child-raising, an amendment was made to the Employment Insurance Act, implemented on 18 January 2022. The amendment removed part of the regulation that stated: "If both parents are covered by the insurance, they shall not claim parental leave allowance at the same time." As a result, both parents are now entitled to claim the parental leave allowance at the same time if they are both covered by employment insurance and meet the criteria for parental leave allowance.

According to the Employment Insurance Act, eligible individuals may apply for parental leave allowance from the Bureau of Labour Insurance if they have been insured for an aggregated period of one year or more. To qualify, applicants must have a child under the age of three and have applied for parental leave without pay in accordance with the regulations outlined in the Act of Gender Equality in Employment.

The parental leave allowance is calculated at 60% of the insured person's average monthly insurance salary for the six months preceding the month the person went on parental leave. For each child, the parent may, on an aggregated basis, receive a maximum of six months' allowance. Additionally, starting from 1 July 2021, a parental leave wage subsidy has been introduced, amounting to 20% of the average monthly insurance salary of the insured person applying for the parental leave allowance. In total, the insured person will receive an allowance and subsidy equivalent to 80% of their average monthly insurance salary. This helps in reducing the financial concerns of the parents when raising children.

Migrant Workers

In response to the labor shortage, the ROC started recruiting migrant workers, mainly from Southeast Asian countries, in 1992. These migrant workers now have a significant presence in the labor market. According to the statistics from the Ministry of Labour in 2021, the total number of migrant workers in the ROC reached approximately 680,000. Among them 449,000 were employed in industrial or manufacturing jobs, often referred to as the '3D' industry (dirty, dangerous, and difficult) and 230,000 were working as caregivers.

This significant presence of migrant workers also raises concerns. Interactions between migrant workers and the locals can be limited, as the sheer number of migrants can render them almost

invisible (an unknown group of strangers) [7]. A report by the US State Department highlighted the reliance of certain sectors, including domestic services, fishing, farming, manufacturing, and construction, on migrant workers [8].

Labor Insurance Amendment to Assure Social Transfer

The ROC government established its labor insurance program in March 1950, which was the first compulsory social insurance initiative. Following this, the Craft Workers' Insurance Program was introduced in 1951, and the Fishermen's Insurance in 1953. People[3] have the option of participating in the program compulsorily or voluntarily. Those insured shall be covered via the employers or the organizations or institutes to which they belong as the insured units. Besides workers who are insured compulsorily, employers concurrently engaged in labor services. People employed in enterprises with less than five employees may also participate in the program voluntarily. The coverage rates for 2021 are outlined in Table 12.

TABLE 12

LABOR INSURANCE COVERAGE.

Year	Insured Unit (employers)	Insured Person (employees)	Employed Person	Coverage Rate
2021	590,097	10,741,647	11,480,000	93.57%

Source: Report on the Survey of Family Income and Expenditure, 2021. DGBAS, Executive Yuan, the ROC [13].

Old-Age Benefits

To build up a complete labor insurance pension protection system and offer the insured person or insured person's dependents long-term living care, the labor insurance offers a monthly pension approach for claiming disability, old age, and death benefits, which have been added, as 'old-age pension benefits', 'disability pension benefits' and 'survivor pension benefits'. Through the implementation of the labor insurance pension scheme, laborers will obtain more complete labor insurance protection.

Unemployment Benefits

The unemployment benefits were inaugurated on 1 January 1999, as part of the Labour Insurance Law benefits. Later as the Employment Insurance Act took effect on 1 January 2003, unemployment benefits were separated from labor insurance and had its legal foundation. Employment Insurance Act was established to improve workers' skills and capabilities, promote employment, and provide basic living support to insured people for a certain period during unemployment and job training. The benefits include unemployment benefits, early reemployment incentives, vocational training living allowance, and National Health Insurance premium subsidies. Since 31 January 2007, dependents enrolled with insured people have also been allowed to receive national health insurance premium support.

Occupational Accident Benefits

Occupational Accident Insurance and Protection Act was implemented on 1 May 2022. The occupational accident insurance program has been separated from the labor insurance. When

[3] The following workers above 15 years and below 65 years of age shall be insured under this program compulsorily: (1) Industrial workers employed by public or private factories, mines, salt fields, ranges, pasturage, forests, or tea plantations; with more than five employees, as well as workers employed by a communication or transportation enterprise, or by a public utility. (2) Workers employed by a company or firm with more than five employees. (3) Employees in a journalistic, cultural, non-profit organization or cooperative enterprise with more than five people. (4) Employees of government offices or public or private schools who are not legally entitled to join civil servants' insurance or the insurance of teachers and employees of private schools. (5) Workers employed in fishing production. (6) People receiving vocational training in vocational training institutes registered with the government. (7) Members of an occupational union who have no definite employer or who are self-employed. (8) Fishermen who belong to Class A of the Fishermen's Association and are either self-employed or do not have a definite employer.

occupational accidents occur after the implementation of the Act, the Act will provide medical care benefits, injury and sickness benefits, permanent disability benefits, survivor benefits, and disappearance benefits.

The workers are offered elevated benefit levels as well as additional benefit items. Furthermore, if a worker is hired by an employer but has not been enrolled, they will still be entitled to claim the relevant benefits. Considering the long incubation period of certain occupational diseases, the Occupational Accident Insurance Act also offers subsidies and allowances to protect the rights and interests of the workers who had been engaged in specific harmful works during the valid period of the insurance but were diagnosed with occupational diseases after the termination of the employment and the insurance coverage.

Care subsidy is provided to reduce the financial burdens of the workers suffering from occupational accidents. For some of the workers who have not been enrolled in occupational accident insurance, subsidies for unenrolled workers will be granted as well.

Policies Promoting the Well-Being of Workers

Ensuring Employment Opportunities for Both Genders

As women's educational attainment has increased with time, it has encouraged more women to continue working after childbirth. However, in the ROC, this trend has led to a disproportionately large percentage of dual-earning families, especially among well-educated people [9]. Upper and upper-middle-class families increasingly have two earners, whereas lower and lower-middle-class families are more likely to rely on a single earner. This disparity has resulted in a rise in household inequality, as observed in the review of productive employment.

To address this problem, it is crucial to focus on providing equal employment opportunities for low-income females. Supporting women with lower income potential to remain in the labor market can help reduce household income inequality. The government can play a pivotal role by offering high-quality, affordable childcare centers and preschools, which would prove to be a more effective solution.

Extending Protection to Migrant Workers

The ROC is experiencing a growing labor shortage and has introduced migrant workers as a solution. However, the latter are not being fairly treated in the society. To address this situation, the ROC has approved a program for long-term retention of migrant workers. This program, while still ensuring job opportunities for local workers, enables migrant workers and foreign and overseas students in the ROC, who meet the program's qualifications, to be employed as 'intermediate skilled manpower' with no maximum limitation on work years. The policy aims to keep them in the ROC while supplementing the workforce needed in the shortest time possible.

Rising Minimum Wage

The ROC has a comprehensive labor rights protection system, primarily based on the Labour Standards Act, which stipulates the minimum wage, working hours, weekends and holidays, and other primary working conditions for the laborers. For people who are paid by the month, the minimum monthly wage required by law is USD842, and the minimum hourly wage was USD5.6 in 2022. The policy implication of a social transfer, in the form of guaranteed income, once a person is participating in the labor market, plays a key role in productive employment. It is still possible to increase the minimum wage further in the ROC.

Extending Assistance to Atypical Workers

Although atypical work provides flexibility for workers who seek work-life balance, it does not entitle them to social insurance. Legislative in the ROC has already necessitated the Executive Yuan, the administrative branch, to deal with unequal pay, lack of labor insurance coverage, and hazardous work conditions for workers engaged in atypical work.

Encouraging Collective Bargaining at Company Level

Collective bargaining is an important tool that ensures a fair share of distribution. Given this fact, the collective bargaining right has to be further protected and promoted.

Providing Training Opportunities to Less Educated Workers

Several inter-ministerial collaboration programs have been led by ministries of the government, industries, and academia to develop youth employment and training programs. The programs serve various constituents, including first-time job seekers, unemployed youth workers, atypical workers, and more. These programs provide career consultation to match job skills, conduct research to upscale the current education curriculum, and offer general financial incentives to encourage training opportunities and help young workers transition from atypical jobs to full-time jobs.

Promoting Work-Life Balance

The ROC government needs to implement laws and policies that facilitate work-family compatibility for married women and mothers so that they can be better prepared to go back to the labor market after marriage. The government needs to make combining work and family obligations relatively feasible so that women are more likely to remain in the workplace during the early child-rearing years.

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INDIA

Introduction

Employment, as commonly understood, is an agreement between an employer and an employee, wherein the employee gets a wage for the exchange of labor. But there are social, economic, and personal aspects to that exchange. In the process of the exchange of labor and wage, if the employee's needs are left unaddressed, then the employment cannot be sustained.

Employment is connected to poverty and economic growth. Former United Nations (UN) Secretary-General Ban Ki-moon on World Day of Social Justice in 2014 pointed out the importance of this growth-employment-poverty nexus in the following words [1]:

"Experience shows that economic growth, on its own, is not sufficient. We must do more to empower individuals through decent work, support people through social protection, and ensure the voices of the poor and marginalized are heard."

For both globalization and poverty reduction, the ILO considers 'productive employment' and 'decent work' to be the two key elements [2]. Productive employment is defined as "employment yielding sufficient returns to labor to permit a worker and his/her dependents a level of consumption above the poverty line." [3] Decent work is all about the 'aspirations' of people in their working lives that encompasses opportunities for productive work that not only generates revenue for the employer, but also provides fair income, workplace security, equal opportunity and treatment, and social protection to the employees for their personal development and social integration [2]. Moreover, decent work also includes the means of achieving the above, as well as employees having the freedom to express concerns and to organize and participate in workplace decisions [2]. The UN considers four pillars of decent work to be employment creation, social protection, rights at work, and social dialogue; and both decent work and productive employment are integrated in the 2030 Agenda for Sustainable Development [2].

Employment is a core aspect of human well-being, without which people get lost in a vicious cycle of poverty, unemployment, hunger, disease, and many other deprivations. That is why development is often perceived to be an improvement in productivity and quality of employment. Employment is linked with the very process of development. In this regard, arguing for a paradigm shift in defining development, Thorbecke [4] noted that:

"The definition of development broadened from being tantamount to GNP growth, as both an objective and a performance criterion, to growth and employment, to the satisfaction of basic needs and, ultimately, to the enhancement of human welfare and the reduction of multidimensional poverty to be achieved through a pattern of pro-poor growth." (p32)

Employment and development are intertwined. The development also entails a structural change in the economy. It has been noticed that the countries that have managed to pull their citizens out of poverty and got richer have also been able to move away from agriculture to industry and service sectors [5]. Modernization theorists argue that in the process of development through urbanization

and industrialization, employment opportunities are created with an expanding service sector [6]. Modernization also brings newer technology which may create new avenues of employment. Increased levels of employment growth involve both a high economic performance, expressed mainly by the high level of work performance, and especially development and diversification of the services sector [7]. The ILO [8], while urging for a review of the process of economic development, has insisted that development must be seen from an employment perspective and therefore an assessment becomes inevitable to understand to what extent economic growth has met the need for more job creation and higher productivity.

Literature suggests that a change in the structural components of an economy induces economic growth [9]. Two schools of economic thought highlight this link between structural change and economic growth. Neoclassical economists think that the sectoral composition is a byproduct of growth, but others argue that changes in sectoral structure are an important propeller of economic growth [10]. Structural change opens door for the new entrepreneurial activities, facilitates technological innovation, and promotes business-friendly law.

Productive Employment and Quality of Life

Employment need not be viewed from the simple fact of whether somebody is employed or not. Without discounting the importance of the number of people employed or the proportion of people in the employable age group, there is a strong need to go beyond these quantitative parameters. To understand employment with a broader outlook, one may consider two aspects associated with it: economic and social.

From the economic aspect of the employee, the employment must be productive or remunerative. First and foremost, it directly benefits the employee in terms of higher wage/salary, and thereby aids the employee's economic well-being. Also, looking from a macro perspective, this contributes to the country's GDP or economic growth and development. Most importantly, productive employment is instrumental in the reduction of poverty [11,12]. Also, one can argue productive employment promotes the competitiveness of enterprises. As a result, they can play a vital role in job creation and create conditions for innovation and wealth generation in any economy. The World Bank [13] indicates that the creation of jobs is one of the most crucial requirements for both the economic and social development of any country.

From the social aspect of the employee, the employment must be of quality. Quality of employment has a huge implication on the quality of the employee's life. Factors related to the quality of employment include job security, higher gender equality, social protection, and the employee-employer relationship [14]. Similarly, employment conditions like low wages, longer working hours, and untimed job schedules are potent factors that directly and adversely affect family life. Maditinos et al. [15] argue that time allocation and leisure in life influence satisfaction in life. Bertrand Russell, in his book In Praise of Idleness and Other Essays, emphasized that if one spends longer hours at work, it may affect family life as one may not spend enough time with one's spouse and children [16].

The quality of life, to a great extent, depends upon the quality of employment. In this regard, Martha Nussbaum and Amartya Sen [17] in the introduction of the book The Quality of Life categorically point out that employment should be rewarding and hence instrumental for enhancing the quality of life. While highlighting labor to be an important ingredient of the quality of life, they write [17]:

"We need to know about labor—whether it is rewarding or grindingly monotonous, whether the workers enjoy any measure of dignity and control, whether relations between employers and 'hands' are human or debased." (p1)

In short, the importance of productive employment and the quality of employment cannot be overemphasized. Both can feed into each other: a better quality of employment motivates employees to participate in employment and be more productive; a higher productive employment can potentially feed into a better quality of employment. The World Bank [17] highlighted that productive employment and the quality of employment are two important dimensions to be properly brought into the context of creating a productive employment index.

Role of Employment in Equity

For long, political economists have been concerned about how to maintain sustainable economic development to achieve both high per capita income and social well-being in an economy. In recent times, economists have agreed on the basic principle that economic development will be determined by growth in productivity over time, which in turn would depend on the rate of accumulation of physical capital, human capital, and technological progress [18]. Hence, labor productivity needs to get much priority, when one discusses all-round development in an economy including equal job opportunities to all sections of society. Worldwide, empirical research shows that growth and structural transformation of an economy have not ensured decent employment opportunities for many vulnerable sections of society [19], particularly in developing countries.

Studies across the globe identified several forms of inequality in labor markets including that of gender [20] and race [21]. In a study on the Indian labor market, Lama and Majumder [23] find several forms of inequality in wages including that of gender, region, and sector. These forms of inequality lead to social and economic inequality. Therefore, employment needs to be understood as both affecting inequality (i.e., unequal employment leading to further inequality) and getting affected by inequality (i.e., inequality leading to unequal employment). It will create a situation where inequality in one sphere will breed inequality in other spheres.

To make the exchange of labor for wage fair, a legal structure is essential which would ensure the quality of employment, which in turn will lead to more productivity at work. In this regard, two things are of utmost importance: First, the minimum elements on which both the parties, employees and employers, agree contractually. The second pertains to the contents of the employment contract that need to contain the three elements: mutual agreement between the employee and the employer, remunerated work and wages for the employee, and the pointers of management, direction, and supervision of the employer [24]. Different national laws on labor possess these three elements of an employment relationship: "work performed for another person"; "in exchange for remuneration"; and "within a relation of subordination" [25]. The ILO has recommended many clauses to ensure social and economic benefits for the employees. It passed a new Employment Contract Act in 2008 which, came into force on 1 July 2009 [26]. This Act is endowed with the best principles of employment relationship upholding justice and the rights of both parties.

The effective execution of the ILO's Contract Act of 2008 for a country like India is under doubt. One of the main reasons for the same is that informal employment has a lion's share of the total employment in the country [27]. Therefore, India needs to pay special attention to the informal segment. The focus of the current study is to evaluate employment in India, considering employees (or workers) at the center of the discourse.

The chapter is organized into sections to discuss India's employment landscape, its challenges, and its position in the global context. The typical characteristics of India's employment scenario have been highlighted. Subsequently, the chapter explores potential indicators for productive employment and various dimensions of the quality of employment. It also specifies the data source and indicates the boundary values (maximum and minimum) for each indicator with justification. For comparison and aggregation, the indicators are normalized using max-min normalization [Normalized value = (Value–Minimum)/(Maximum–Minimum)]. This formula is applicable for attainment (positive) indicators. For negative indicators, pointing out at failure where the best situation is represented by the minimum value (0) and the worst by the maximum (1), the additive inverse of the formula, i.e., Normalized Index = (Maximum–Value)/(Maximum–Minimum), has been used.

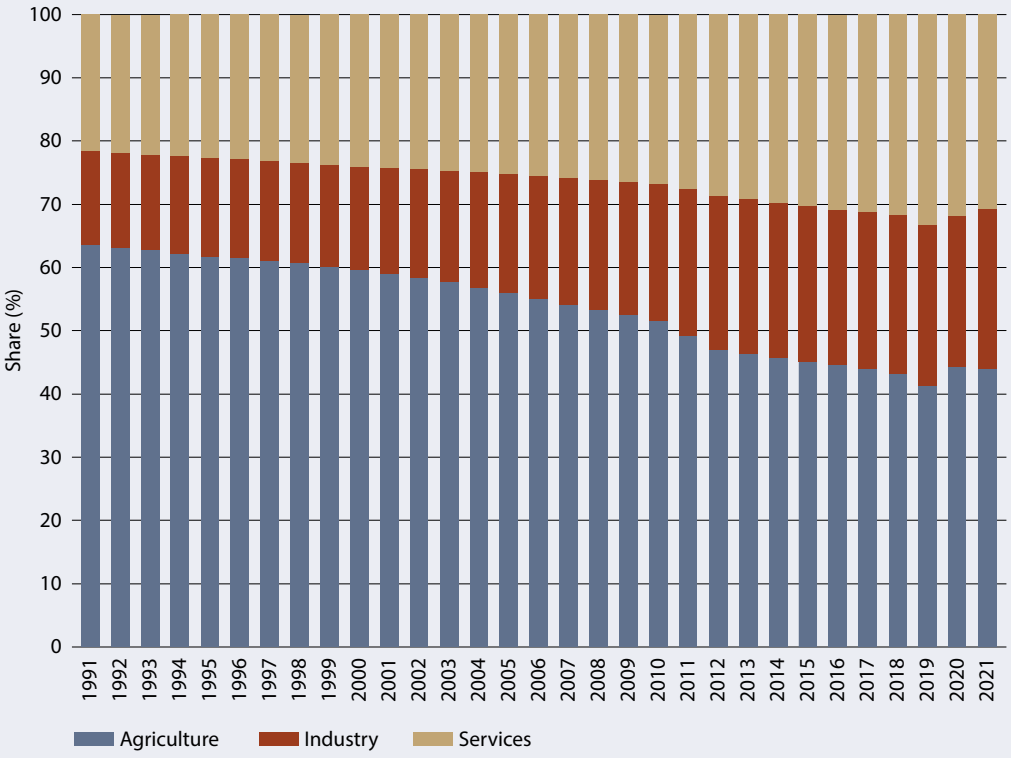
The section ends with a calculated quality of employment index of India, while the following section provides a brief on the new employment policy of India. The last section summarizes the findings of the chapter and discusses the way forward.

Challenges in India's Employment Scenario

India's Labour Force Periodic Survey (LFPS) of 2020–21 shows the Labor Force Participation Rate (LFPR) to be 41.6% [28]. The LFPR value for the world, as per the World Bank [29] is 59%. Similarly, the employment rate for India and the world are 43% and 55%, respectively [30]. Both these data show India compares poorly to the world average in terms of employment.

FIGURE 1

DISTRIBUTION OF EMPLOYMENT ACROSS SECTORS IN INDIA (IN %).

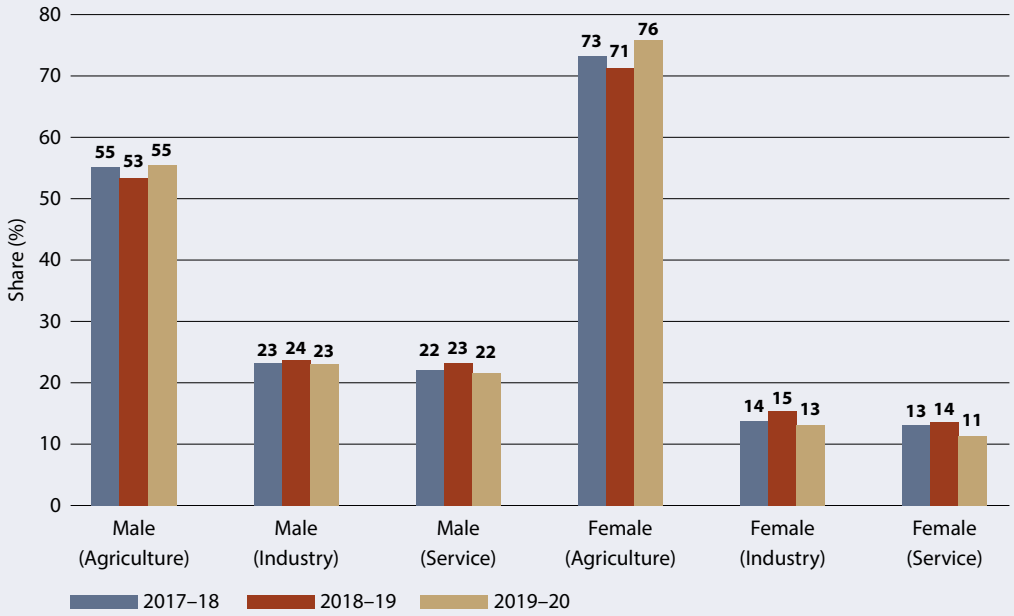


Source: Data on Employment in Agriculture, Industry, and Service sector. World Development Indicators. World Bank [31].

The distribution of employment across sectors in India is given in Figure 1. This shows a 20% decrease in the share of employment in agriculture between 1991 and 2021. In the same period, the shares of employment have increased both for industry and the service sector by 10%. This is on expected lines for any developing country, where the economy is transitioning from agriculture to industry and service sectors.

FIGURE 2

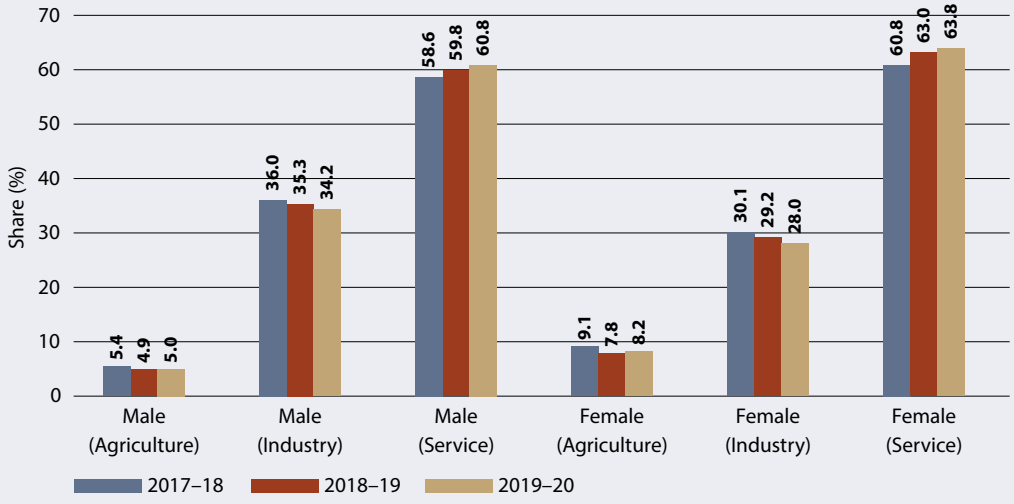
GENDER DISTRIBUTION OF WORKERS ACROSS SECTORS IN RURAL AREAS (IN %).



Source: SDG India. Index and Dashboard 2020–21. NITI Aayog [32].

FIGURE 3

GENDER DISTRIBUTION OF WORKERS ACROSS SECTORS IN URBAN AREAS (IN %).



Source: Chand R., Singh J. Workforce Changes and Employment – Some findings from PLFS data series. NITI Aayog [33].

Figures 2 and 3 give the distribution of male and female workers across the sectors in rural and urban areas, respectively. In rural areas agriculture dominates, whereas in urban areas the service sector dominates. In rural areas, the share of female workers in agriculture is higher than the corresponding share of male workers by approximately 20% points. On the contrary, the shares of female workers in industry and services are lower than the corresponding shares of male workers by 10% points. However, in urban areas, the shares of male and female workers across different sectors are similar.

Some of the major challenges that India's employment sector faces are (a) declining LFPR and employment rate, (b) high gender gaps in LFPR, (c) substantial level of unemployment and underemployment, and (d) high share of the informal sector among the employed. These challenges are briefly discussed in the following sub-sections.

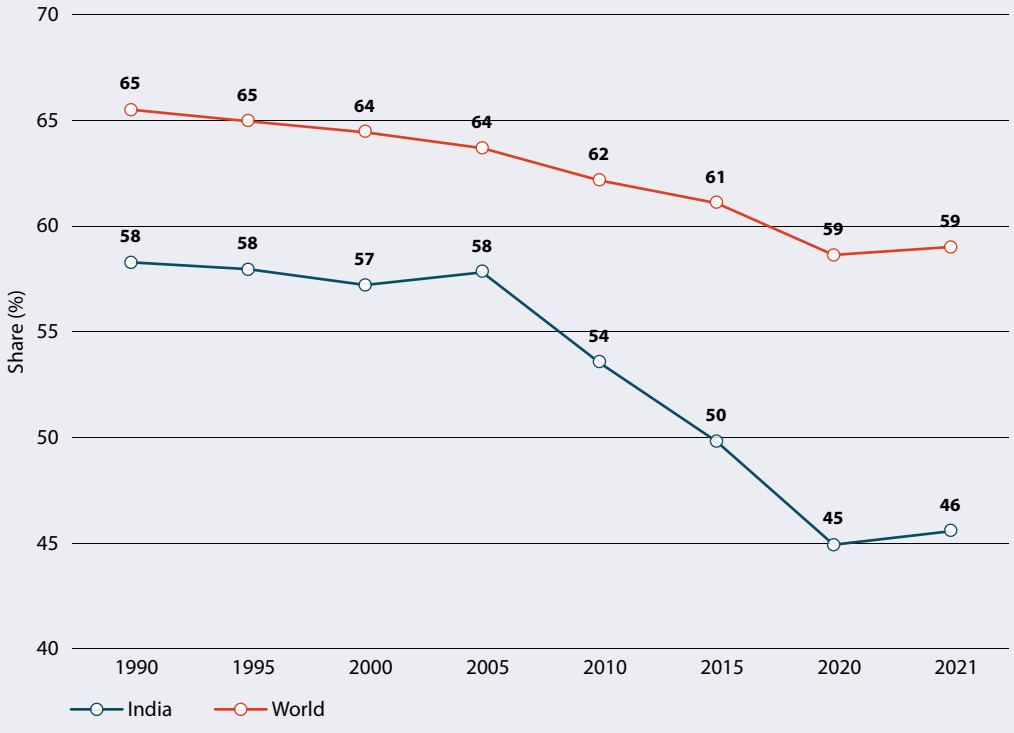
Falling LFPR and Employment Rate

The following two figures (Figures 4 and 5) show the LFPR and employment rate of the world and India during 1991–2021. India's fall in these two indicators is more since 2005. The LFPR gap between India and the world average has increased from 6% to 13% points (see Figure 4). Similarly, the employment rate gap between India and the world average has increased from 5% to 12% points (see Figure 5).

The divergence between India and the world average shows India is increasingly faltering in providing employment to its citizens. This is the first and foremost concern.

FIGURE 4

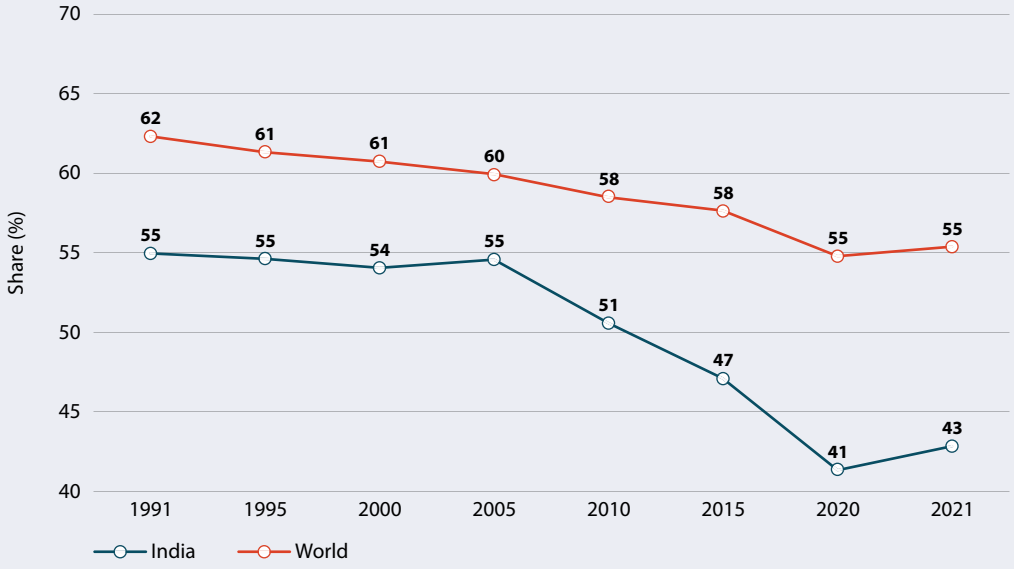
LABOR FORCE PARTICIPATION RATE IN THE WORLD AND INDIA (1991–2021).



Source: World Development Indicators. World Bank [29].

FIGURE 5

EMPLOYMENT RATE IN THE WORLD AND INDIA (1991–2021).



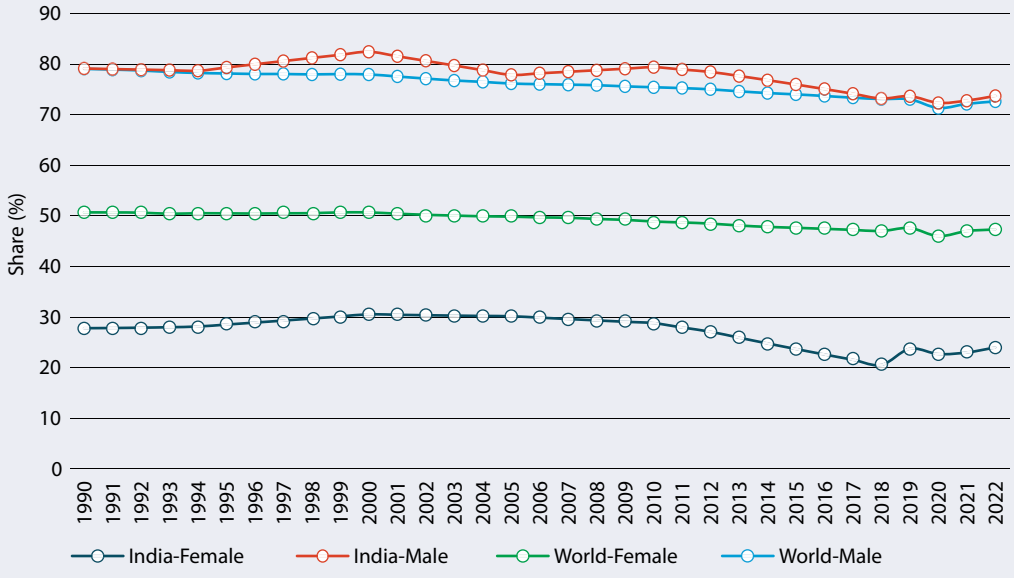
Source: World Development Indicators. World Bank [30].

High Gender Gap in LFPR

In India male and female LFPR are 73.6% and 24.0%, respectively [34], indicating a gap of 50% points and the male LFPR being more than three times the female LFPR. The values of male and female LFPR for the world are 72.5% and 47.3%, respectively, indicating a gap of 25% points. The male and female LFPR from 1990 for the world and India are given in Figure 6.

FIGURE 6

GLOBAL LABOR FORCE PARTICIPATION RATE BY GENDER.



Source: World Development Indicators. World Bank [34].

Unemployment and Underemployment

India's unemployment reached a 45-year high at 6.1% in 2017–18 [35]. During the COVID-19 pandemic, the problem aggravated, and unemployment went up beyond 20% in urban areas [36]. Currently, the country is in a recovery phase. Underemployment is also a severe challenge in India.[1] Table 1 below gives a picture of underemployment among different gender and age groups of the population in rural and urban areas. Underemployment is the highest among the age group of 15–24 years, for both males and females.

TABLE 1

UNDEREMPLOYMENT RATE IN INDIA (IN %).

Gender	Age Group (in years)	Rural	Urban	Total
Male	5–14	0.00	4.48	1.83
	15–24	2.92	2.57	2.82
	30–59	2.14	1.45	1.93
	60+	1.47	2.17	1.62
	All	2.27	1.79	2.13
Female	5–14	0.00	0.00	0.00
	15–24	2.27	1.38	2.02
	30–59	1.37	1.36	1.37
	60+	1.69	0.98	1.55
	All	1.58	1.34	1.52
Total	**5–14**	**0.00**	**3.66**	**1.14**
	15–24	**2.77**	**2.31**	**2.64**
	30–59	**1.91**	**1.43**	**1.17**
	60+	**1.52**	**1.94**	**1.61**
	All	**2.08**	**1.69**	**1.97**

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Informality of Employment

The informal sector dominates India's employment. The overall informality in India's employment can be found by considering informal employment in all sectors: formal, informal, and households. For India, the overall informality turns out to be more than 90% as illustrated in Table 2.

TABLE 2

EMPLOYMENT IN FORMAL AND INFORMAL SECTORS OF INDIA (IN %).

Type of Employment	Informal Sector	Formal Sector	Households Sector	All Sectors
Informal employment	79.6	9.50	1.20	90.30
Formal employment	0.50	9.20	0.00	9.7
Total employment	**80.20**	**18.60**	**1.20**	**100**

Source: Social Security for Informal Workers in India, Research Brief. Center for Policy Research, 2020 [27].

[1] Underemployment is calculated as a share of the employed. The underemployed are those who are employed largely (as per the principal status) but are unemployed as per the current weekly status.

The latest four rounds of PLFS show an increasing trend in the share of informal employment among workers in the non-agricultural sector in India (Table 3).

TABLE 3

INFORMAL EMPLOYMENT IN THE NON-AGRICULTURAL SECTOR IN INDIA (IN %).

	2017–18	2018–19	2019–20	2020–21
India	68.2	68.4	69.5	71.4
Rural	72.1	73.6	75.3	76.4
Urban	64.1	62.8	63.7	65.5
Female	54.7	54.1	56.5	56.7
Male	71.0	71.5	72.9	75.3

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28]

Indicators of Productive and Quality of Employment

Productive Employment

Productive Employment, as the name suggests, may indicate the economic valuation of the work done by the employer. However, looking from an employee's perspective, it would mean whether the employment is leading to the economic well-being of the employee. Following a similar line of argument, Szirmai et al. [37] identify three characteristic features of productive employment: (i) sufficient earning or income to permit workers and their families to maintain a consumption level above the poverty line, (ii) job security which ensures stable income over time, and (iii) decent working conditions and working hours. Productive employment provides the poor with a better income and stimulates learning and skills acquisition [5]. An important shift in our thinking about socio-economic development is linking poverty reduction and social inclusion to improved job creation and productive employment [38].

Indicator: The indicator that can be considered for productive employment is the "proportion of workers who are below the poverty line". For this study, a proxy for the indicator as the "proportion of the population which is below the poverty line" has been taken into consideration. Ghadoliya [39] has empirically shown that in the Indian context, the proportions of the population below the poverty line and the proportion of workers below the poverty line are nearly the same (p.117).

- Proportion of the population which is below the poverty line

Definition: The indicator of the 'proportion of population below the international poverty line' is defined as the percentage of the population living on less than USD1.90 a day at 2011 international prices [40]. Considering USD1.9 per day in PPP terms, this value translates to INR45.7 [41], or monthly INR1,371. This poverty line is reasonable considering that India's poverty line as per the Tendulkar method on Mixed Reference Period is at INR816 and INR1,000 in rural and urban areas, respectively [42]. However, it turns out to be low when compared to minimum wage rates in India as INR45.7 per capita per day implies INR228.6 per household per day, assuming a household size of five [43]. This is less than half of the minimum rates of wage as specified by the Ministry of Labour and Employment (MLE) [44], and also less than the wage rates of the Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA), which was introduced in 2005 for unskilled manual work [45]. Because of its low value, the poverty line in India has often been criticized as a starvation line [46].

Data source: In India, poverty has been estimated periodically. The NITI Aayog is the nodal body for the estimation of poverty (as was the Planning Commission earlier). Traditionally, the poverty estimation is based on minimum nutritional requirements as well as essential non-food items [47]. At present, the method of India's poverty line is based on the Tendulkar Committee methodology that "uses implicit prices derived from quantity and value data collected in household consumer expenditure surveys for computing and updating the poverty lines" [42].

Data depiction: A state-wise analysis shows India's poverty is mostly concentrated in states such as Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, and Uttar Pradesh [32].

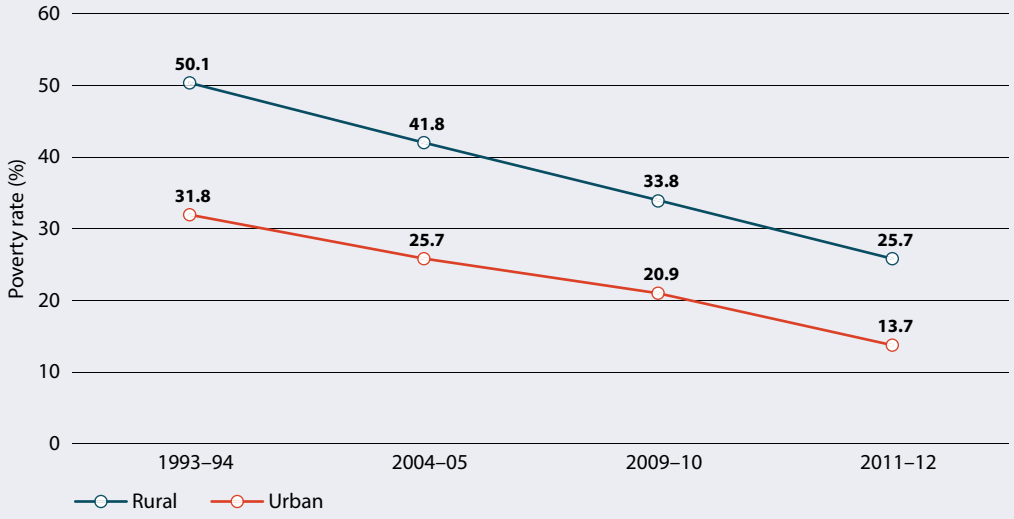
Normalization: The poverty rate is a normalized indicator.

Further discussion: Poverty may decline as an economy experiences higher growth and development, as it happened in some countries, but it is not linear. Further growth rate may seem promising, but it may fail to generate jobs in the economy. India's current growth rate is around 7% (the Reserve Bank of India estimates reported in Business Today [48]), and the unemployment rate is 7–8% [49]. This is a situation of jobless growth that has brewed a lot of debate in academic and policymaking circles [50], which challenges the traditional idea that growth brings employment.

In spite of India's growth in recent years at the aggregate level [51], inequality between rural and urban poverty persists. Though there is a convergence (see Figure 7), still the gap is 12% points. However, the declining poverty rate is an encouraging trend for India.

FIGURE 7

RURAL AND URBAN POVERTY RATES (IN %).



Source: Poverty Estimates for 2011–12. Planning Commission, Government of India [42] and Joyita. Poverty estimation in India. The PRS Blog; 2013 [52].

The government's continuous effort to improve the conditions of the rural poor through MGNREGA may have contributed to poverty reduction in rural areas. The mandate of the MGNREGA is to provide at least 100 days of guaranteed wage employment in a financial year to every rural household whose adult members volunteer to do unskilled manual work [53]. MGNERGA not only ensures

100 days of work but also guarantees an alternative livelihood opportunity to the rural poor. In addition, it creates durable rural assets starting from roads to land development to water conservation which generate a multiplier effect in developing the rural economy in India [54]. However, some scholars view MGNERGA as not very effective. For instance, Ashok Lahiri [55] argues that job creation under MGNERGA is growth-less, that is, it doesn't create jobs that lead to growth.

Wage inequality is higher in rural areas compared to urban areas and among women than men in India [56]. Also, there are wage inequalities both between and within different sectors (public, private, formal, informal) [56]. Hence, the labor policies of India must not only address the issue of low wages but also the inequality across different sub-groups of the population. We argue for raising the threshold poverty line and introducing a new labor policy that ensures an earning to maintain a family in a dignified manner as well as reduce inequality among different sub-groups of the population.

Although a proxy of people below the poverty line has been considered, there is a limited availability of data on the proportion of employed population below poverty. According to the Asian Development Bank, the proportion of employed population below USD1.90 (PPP) a day for India from 2017 to 2021 is given below [57].

TABLE 4

PROPORTION OF EMPLOYED POPULATION BELOW THE POVERTY LINE (PPP).

Year	Male	Female	Total
2022	NA	NA	5.7
2021	NA	NA	7.6
2020	7.4	8.6	7.7
2019	10.2	12.5	10.7
2018	12.9	15.2	13.4
2017	10.7	12.3	11.1

Note: The poverty line in India has been fixed at USD1.90 per capita per day.
Source: Basic Statistics 2023 to 2018. Economic Research and Regional Cooperation Department, ADB [57].

Table 4 depicts that the proportion of male employees below the poverty line is lower than that of females. This may indicate men's earnings to be higher than that of women [58]. The low income of women makes them vulnerable and keeps them in a vicious cycle of poverty, low skills, and ill health. Poor health impacts working men and women differently [59], with the latter being affected more adversely as in most cases women are not vocal about their poor health.

Further, the frequently changing percentage of the working poor indicates fluctuation in earnings. In a vast country like India, fluctuations in earnings put families in a more vulnerable and indecisive position. For instance, families cannot make decisions on investing in human capital.

Quality of Employment Index

Safety and Ethics of Employment

Globally, there are 2.78 million work-related deaths every year of which 2.4 million deaths are related to occupational diseases (ILO estimates reported in Database of Business Ethics [60]). In addition to the immense suffering caused for workers and their families, the associated economic costs are colossal for enterprises, societies, and countries. The losses in terms of compensation, lost workdays, interrupted

production, training, and reconversion, as well as healthcare expenditure, represent around 3.94% of the world's annual GDP [61]. Employers face costly early retirements of employees, loss of skilled staff, absenteeism, and high insurance premiums. Yet, many of these unwanted consequences can be averted through the implementation of sound prevention, reporting, and inspection practices. The ILO standards on occupational safety and health provide essential tools for governments, employers, and workers to establish such practices and provide for maximum safety at work.

Safety and ethics of employment can be represented respectively by occupational injuries/deaths and the extent of workers below a minimum age of work. These two aspects are discussed below.

Occupational Injuries and Deaths

Occupational injuries can be either fatal or non-fatal. The Directorate General Factory Advice Service & Labour Institutes (DGFASLI), under the Ministry of Labour and Employment prepares reports on occupational injury in India. Occupational safety data is collected by the Labour Bureau furnished by various states and union territories [62]. This data is governed by the Factories Act of 1948 [44].

Indicator: The data for this is available only for factory workers. Since fatal and non-fatal injuries should not be clubbed, the two following indicators have been selected.

- Occupational non-fatal injuries per 100,000 factory workers.
- Occupational fatal injuries per 100,000 factory workers.

Definition: Fatal injuries are deaths due to accidents, and non-fatal injuries are injuries resulting from industrial accidents, which prevent the person injured from attending to work for 48 hours or more immediately following the accident [62]. Factory workers, by definition, are the workers of any organization where more than 10 employees are working, and the organization is involved in some manufacturing processes [44].

Data source: The data for the above two indicators are available in DGFASLI annual reports. This data is available state-wise from 1999.

Data depiction: The data for the above two indicators, spanning from 2016 to 2020, is presented in Figure 8.

Figure 8 shows that while the fatal injuries have remained steady, the non-fatal injuries are on decline. A state-wise analysis shows that Gujarat, Maharashtra, and Tamil Nadu are among the states where both fatal and non-fatal injuries are high [62].

Normalization: For normalization of the two indicators, the following maximum and minimum values have been considered as indicated in Table 5.

TABLE 5

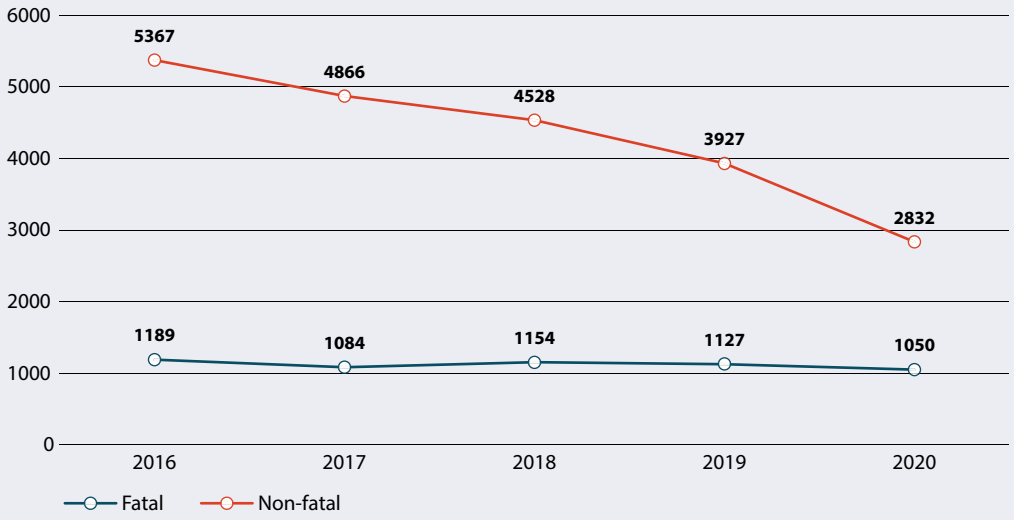
MINIMUM AND MAXIMUM FATAL INJURIES.

	Minimum	Maximum
Fatal injuries	0	20
Non-fatal injuries	0	10,000

The minimum value of zero for both the indicators is assumed from a normative sense (i.e., nobody should get injured during factory work) and in a positive sense (Countries like Sweden and the United Kingdom had the number of fatal injuries fewer than three per 100,000 workers) [62]. The maximum for fatal injuries is considered to be 20, as India's values were of the same order in the 1990s, a quarter century ago [62]. For non-fatal injuries, the maximum value can be considered as 10,000 as the same has been found in some countries like Spain consistently between 1997 and 2008 [62].

FIGURE 8

NUMBER OF FATAL AND NON-FATAL INJURIES PER 100,000 FACTORY WORKERS IN INDIA (2016–20).



Source: Standard Reference Notes – 1999 to 2021. Directorate General Factory Advice Service & Labor Institutes, Government of India. [62].

Further discussion: The ILO [63] admits that globally workplace deaths are vastly underreported. In each year about 2.2 million workers die due to either work-related accidents or diseases [63]. Fatal occupational injury is high, especially in the mining and quarrying sector among others. Hence, workplace safety is one of the major concerns in such sectors. The National Safety Council records work-related fatalities and rates for countries across the world. However, the data for India is limited to the four years between 2005 and 2008 and the same is a highly conservative figure. It shows that fatal occupational injury per 100,000 workers for all economic activities varies between 98 and 133, whereas the same for mining and quarrying varies between 151 and 208.

Jukka Takala, the director of the ILO Safe Work Programme, notes with regret: "The sad truth is that in some parts of the world, many workers will probably die for lack of an adequate safety culture." [63] A policy suggestion could be an investment in the protection of employees, which would add value to the quality of employment. In this regard, the management of business enterprises and the government need to be more proactive for employees' health and safety [64].

Workers Below a Minimum Age of Work

Child labor deprives children of their childhood [65]. It also reduces children's potential and dignity, and it is harmful to the physical and mental development of children [65]. In India, child labor is banned as per the constitutional provision under Article 24 [66]. Child labor deprives

children of education in many ways such as dropping out of school and making it burdensome because of the combined pressure of managing attendance at both school and work [65]. In India, children have been provided with the Right to Education under Articles 21A and 45 of the Constitution [66].

Indicator: For this study, two indicators were selected.

- Percentage of labor force below the minimum age of work.
- Percentage of employed persons below the minimum age of work.

Definition: In India, the minimum age of work is considered as 14 years. Article 24 of the Constitution of India reads as [67]:

"Prohibition of employment of children in factories, etc.—No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment" (p14)

This has been supplemented with states' provision of free and compulsory education till 14 years of age through a Fundamental Right enshrined in Article 21A that reads as [67]:

"Right to education—The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine." (p11).

Data source: The information on child labor can be obtained from PLFS [28]. It has LFPR and employment rate for the entire population as well as the same for 15 years and above population. These two sets of data along with the share of the population in these age groups would give the extent of child labor.

TABLE 6

CHILD LABOR IN INDIA (IN %).

Year	Share of Children (0–14 years) in Labor Force	Share of Children (0–14 years) among Workers
2017–18	2.02	2.08
2018–19	2.14	2.05
2019–20	2.34	2.46
2020–21	2.08	1.94

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Table 6 shows approximately 2% of workers/work seekers are child laborers. This data is available under rural, urban, male, and female as well as across state-wise classification.

Normalization: For child labor, the minimum value is naturally zero. The maximum value that can be considered is 20% since the prevalence of child labor in least-developed countries stands at 19%; for Africa, it stands at 19.6% [68].

Further discussion: India has 10.1 million child laborers in the age group of 5–14 years, which constitute approximately 4% of the children population in that age group [43]. Farming and

agriculture laborers constitute close to 60% of the total child laborers [43]. The top 10 states having maximum child labor, in order from high to low, include Uttar Pradesh, Maharashtra, Bihar, Andhra Pradesh, Madhya Pradesh, Rajasthan, Gujarat, Karnataka, West Bengal, and Tamil Nadu; and these states together constitute more than 84% of the total child labor in the country [43]. A comparison between the Census of 2001 and that of 2011 shows the following interesting facts. Though there is an overall decline in child labor, it has increased in urban areas, indicating a growing demand for child labor for menial jobs [69].

Income and Benefits from Employment

As discussed earlier, employment has to satisfy the goal of providing benefits to the workers through sufficient wages. The study has considered wages as the basis of income and benefits from employment.

Indicator: The following indicator is considered to represent the component.

- Proportion of workers earning below minimum wage.

Definition: It is worth noting that there are different minimum wages for different job categories in India. The Government of India has specified 45 types of minimum wages, whereas the state governments have determined minimum wages for 1,679 job categories [70].

Data source: The data for this is available with unit-level data of PLFS. The PLFS survey data is available annually since 2017–18 [28].

Data depiction: With the unit-level data, the proportion of workers earning below minimum wage can be calculated. However, for this study, overall, 33% of wage workers in India were paid less than the indicative national minimum wage [71].

Normalization: This indicator is a normalized one.

Further discussion: In India, there is a gender difference among workers earning below minimum wage. The rate of pay is lower for women than men [71]. Also, having a large number of minimum wage specifications for job categories in India has made the system complex and difficult to administer, leading to a lack of awareness on the one hand and a lack of compliance on the other [70]. The compliance rate for India was approximately 30% in 2004–05, which improved to more than 60% in 2009–10; the improvement was largely attributed to the rolling out of schemes like MGNREGA that resulted in higher rates of compliance in rural areas, in the informal sector among women, and among disadvantaged groups [70].

The value of minimum wage relative to the median or mean is also indicative of this component of quality of employment. Rani et al. [70] computed the ratio of the minimum wage to the median wage for India which changed from 1.3 in 2004–05 to 0.75 in 2009–10, indicating an increase in the median wage. Similarly, the ratio of the minimum wage to mean wage for India has changed from greater than 0.90 in 2004–05 to 0.4 in 2009–10 [70].

Working Hours and Work-Life Balance

Working hours per day of people reveal a lot about their lives in societies [72]. Work-life balance is an important aspect of employment. Though an increase in working hours may increase macroeconomic parameters like GDP, the same is contrary to employees' long-term health, well-being, and quality of

life. Alternative indicators like Gross National Happiness (GNH) conceived and operationalized by Bhutan consider both the aspects of working hours and non-working hours with equal weightage [73]. The UN has encouraged the spread of Bhutan's GNH philosophy worldwide [74].

On extended working hours, the ILO [75] has stated:

"Excessive hours of work and the need to protect workers' health and safety by limiting working hours and providing adequate periods of rest and recuperation, including weekly rest and paid annual leave, which are enshrined in international labor standards."

Indicator: The following indicator under working time and work-life balance has been used for the study.

- Percentage of working persons who are working more than 40 hours per week.

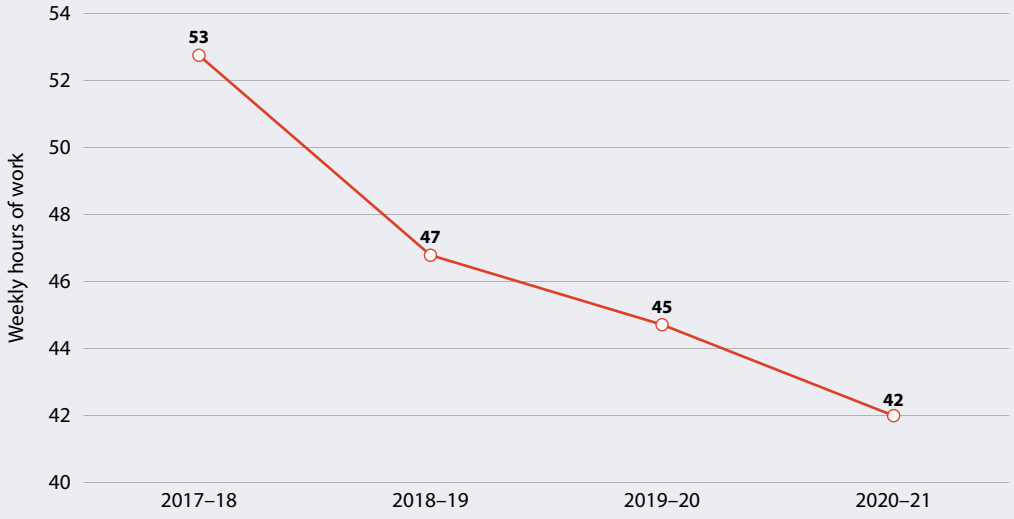
Definition: In recent decades, working hours have declined in many countries, but there are stark differences between developed and developing countries [72]. In India, the average hours per week per employed person in 2021 stood at 47.7 hours [76]. Europe followed the practice of 40 hours per week (8 hours a day, five days a week). This practice is even now observed in many countries across the world; hence, considered as the cut-off for the current exercise.

Data source: This data is available in the PLFS (MOSPI) [28]. Data is available for males and females, rural and urban, and state-wise.

Data depiction: Figure 9 shows a decline in the working hours per week. The later years of the decline can be attributed to the COVID-19 pandemic. However, overall, it shows improvement in work-life balance.

FIGURE 9

INDIVIDUALS WORKING MORE THAN 40 HOURS PER WEEK (IN %).



Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Normalization: This is a normalized indicator.

Further discussion: If we consider the cut-offs of 45 hours or 48 hours a week, the share of employees working excess hours will turn out to be much lower. However, we have taken 40 hours as the cut-off, following European practice in an aspirational sense.

Security of Employment and Social Protection

The term 'social protection' highlights three dimensions of protection of regular wage and salaried employees engaged in the non-agriculture sector [28], such as (a) written job contract, (b) eligibility for paid leave, and (c) eligibility for any social security benefit. Further, social security benefits for the employee consider seven types of schemes, which include provident fund (PF)/pension, gratuity, healthcare, and maternity benefits. Such benefits can be made available to the workers under a single scheme or multiple schemes.

Indicators: For this study, the following indicators have been considered to understand the quality of employment.

- Percentage of regular wage and salaried employees with no written job contract.
- Percentage of regular wage and salaried employees without paid leave.
- Percentage of regular wage and salaried employees without any social security benefits.
- Overall share of informal workers.
- Share of informal workers in non-agricultural sectors.

The indicators are discussed below one by one.

Percentage of Regular Wage and Salaried Employees with No Written Job Contract

Definition: A written job contract is an "agreement between a worker and employer about remunerated work, wages, working conditions, and the rights and obligations of each party to the labor relations" documented in written form [77]. In the Indian context, a written employment contract is a "written agreement between an employer and an employee citing the terms and conditions of the employment that binds both the parties" [78].

Data source: For this indicator, data is available in PLFS (MOSPI [28]). Data is available for males and females, rural and urban areas, and state-wise categories.

Data depiction: Table 7 gives the share of regular wage/salaried employees without a job contract in India's rural and urban areas. For both urban and rural areas, the extent of non-availability of job contracts is similar. In rural areas, the share of female employees without job contracts is less than that of male employees. There is no such difference observed among them in urban areas.

Also, the data shows there is an overall decline in the share of employees without job contracts. The decline is observed more in urban areas. Also, there was a decline for both males and females. This implies an improvement in the job security.

TABLE 7

EMPLOYEES WITHOUT WRITTEN JOB CONTRACT (IN %).

Region	Gender	2017–18	2018–19	2019–20	2020–21
Rural	Male	71.7	70.4	70.9	68.7
	Female	58.5	58.2	58.7	58.1
	Person	69.2	67.8	68.3	66.3
Urban	Male	72.7	70.3	66.3	62.8
	Female	71.4	71.2	68.2	63.6
	Person	72.4	70.5	66.8	63.0
All India	Male	72.3	70.3	68.1	65.2
	Female	66.8	66.5	65.0	61.5
	Person	71.1	69.5	67.3	64.3

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Normalization: This is a normalized indicator.

Percentage of Regular Wage and Salaried Employees with No Paid Leave

Definition: Paid leave is an indicator of a mature society. The ILO [79] defines paid leave as:

"Paid leave is the annual period during which workers take time away from their work while continuing to receive an income and to be entitled to social protection. Workers can take a specified number of working days or weeks of leave, with the aim of allowing them the opportunity for extended rest and recreation. Paid leave is available in addition to public holidays, sick leave, weekly rest, maternity and parental leave, etc."

Data source: Data is available in PLFS (MOSPI [28]). Data is available for males and females, rural and urban areas, and state-wise.

Data depiction: Table 8 presents the gender-wise share of regular wage and salaried employees without paid leave in India's rural and urban areas. Approximately half of the salaried and regular-wage employees in India do not enjoy the provision of paid leave. For rural areas, the extent of non-availability of paid leave is more than that of urban areas. In rural areas, the share of female employees without paid leave is less than that of male employees. There is no such difference observed among them in urban areas.

TABLE 8

EMPLOYEES WITHOUT PAID LEAVE (IN %).

Region	Gender	2017–18	2018–19	2019–20	2020–21
Rural	Male	58.1	58.6	56.8	55.5
	Female	47.9	49.5	46.1	41.8
	Person	56.2	56.7	54.5	52.3

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Region	Gender	2017–18	2018–19	2019–20	2020–21
Urban	Male	53.1	52.2	50.7	45.0
	Female	51.8	51.3	51.6	44.9
	Person	52.8	52.0	51.0	44.9
All India	Male	55.2	54.7	53.1	49.3
	Female	50.4	50.6	49.8	43.7
	Person	54.2	53.8	52.3	47.9

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

A declining share of employees having 'no provision of paid leave' across rural and urban areas and both genders indicate the quality of employment has improved in recent times.

The share of female employees having no paid leave is less than that of male employees, which may be because of female employees' entitlement to get maternity leave. Also, the higher decline in the share of employees without paid leave for female employees can be attributed to a rise in women empowerment through self-help groups and the involvement of women in Panchayati Raj Institutions responsible for local governance.

Normalization: This is a normalized indicator.

Percentage of Regular Wage and Salaried Employees without Social Security

Definition: As per the international labor standards, social security entails nine benefits: medical care, sickness benefits, unemployment benefits, old-age benefits, employment injury benefits, invalidity benefits, family benefits, and survivors' benefits [80]. In India, social security in employment includes provident fund/pension, gratuity, healthcare and maternity benefits, disability benefits, etc. (MOSPI) [28].

Data source: Data is available in PLFS (MOSPI) [28] across states for males and females, in both rural and urban areas.

Data depiction: Table 9 presents the share of regular wage and salaried employees without social security in India's rural and urban areas, categorized by gender. More than half of the salaried and regular-wage employees in India do not enjoy the provision of social security. For rural areas, the extent of non-availability of social security is more than that of urban areas. The share of female employees without social security is higher than that of male employees, particularly in urban areas. In rural areas, a similar gap was observed earlier; however, with the share of male employees without social security being on the rise, the gap has reduced in recent years.

TABLE 9

EMPLOYEES WITHOUT ANY SOCIAL SECURITY (IN %).

Region	Gender	2017–18	2018–19	2019–20	2020–21
Rural	Male	51.9	55.4	59.5	59.0
	Female	55.1	57.7	58.7	59.3
	Person	52.5	55.9	59.3	59.1

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Region	Gender	2017–18	2018–19	2019–20	2020–21
Urban	Male	47.0	48.5	49.9	49.0
	Female	50.1	52.6	54.7	53.5
	Person	47.7	49.4	51.1	50.1
All India	Male	49.0	51.2	53.6	53.1
	Female	51.8	54.4	56.0	55.8
	Person	49.6	51.9	54.2	53.8

Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Normalization: This is a normalized indicator.

Overall Share of Informal Workers

Definition: Informal workers do not have secure employment contracts, workers' benefits, social protection, or workers' representation [81]. In the Indian context, "Informal workers consist of those working in the informal sector or households, excluding regular workers with social security benefits provided by the employers, and the workers in the formal sector without any employment or social security benefits provided by an employer." [82]

Data source: The data source for this is the PLFS data. The share of the informal sector will be computed from the data considering all sectors of employment: formal, informal, and household-based.

Data depiction: The share of informal workers overall in India is provided in Table 3. The formal and informal sectors have respective shares of 18.6% and 80.2% in India's employment. The share of informal employment overall in India is 90.3%. The shares of informality are 51.1% in the formal sector and 99.3% in the informal sector.

Normalization: The max and min values can be kept as 100% and 50%, respectively. For Brazil, the informal sector employment share is 48%, and for China, it is 54% [83].

Share of Informal Workers in the Non-Agriculture Sector

Definition: Informal workers have already been defined in the previous subsection. The non-agriculture sector in India consists of manufacturing, construction, services, and other sectors, and excludes agriculture and allied sectors [84].

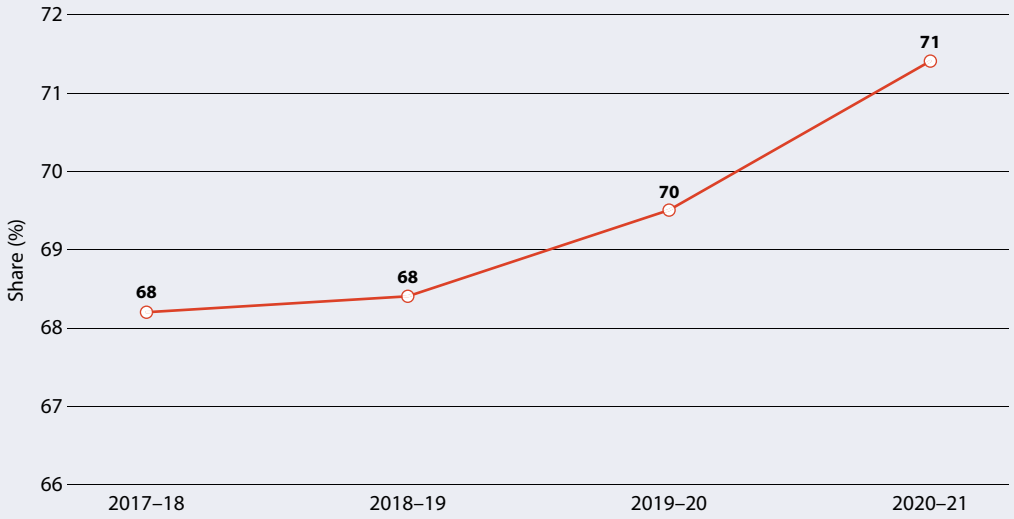
Data source: Data for this is available at PLFS (MOSPI [28]). Disaggregation levels of the data are male, female, rural areas, urban areas, and state-wise.

Data depiction: For India, the share of informal workers in non-agriculture is given in Figure 10. Considering the increasing importance of non-agricultural occupations, this trend is not healthy.

Informality is highly concentrated in states such as Uttar Pradesh, Jharkhand, Odisha, Bihar, and West Bengal. The states with lower informality include Sikkim, Arunachal Pradesh, Meghalaya, Lakshadweep, and Nagaland [28]. The data reveals that poor states have higher informality in the non-agricultural sector. Further, the states having lower informality are small and have low population density.

FIGURE 10

SHARE OF INFORMAL WORKERS IN NON-AGRICULTURAL SECTOR (IN %).



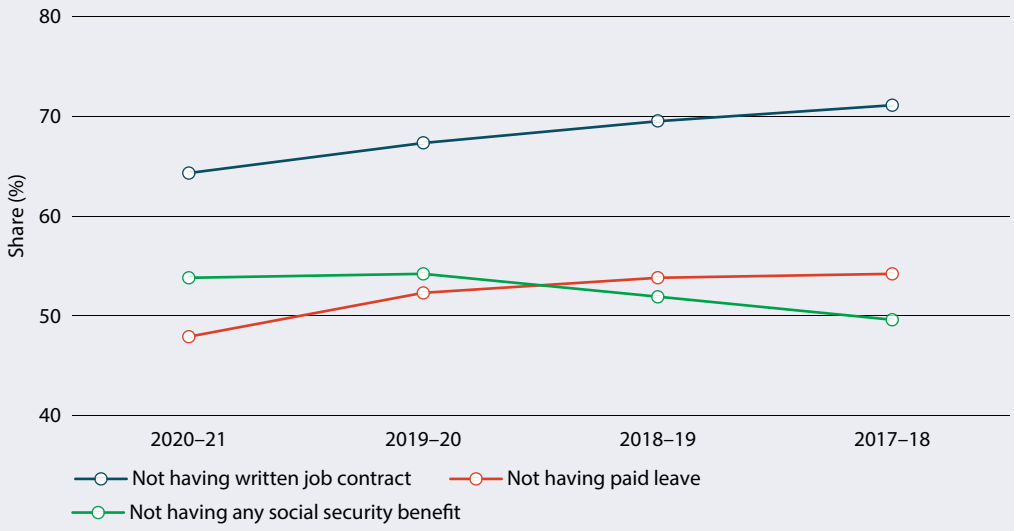
Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Normalization: The maximum and minimum values of the indicator can be kept as 100% and 10%, respectively. The minimum value is chosen considering the same for advanced economies [85].

Further discussion: Figure 11 plots all the factors discussed under the three dimensions of employee protection. It shows that when the share of employees with no job contract and paid leave increases, it correlates with a decreased share of employees without social security.

FIGURE 11

WORKERS NOT COVERED UNDER ANY SOCIAL SECURITY AND PROTECTION SCHEME (IN %).

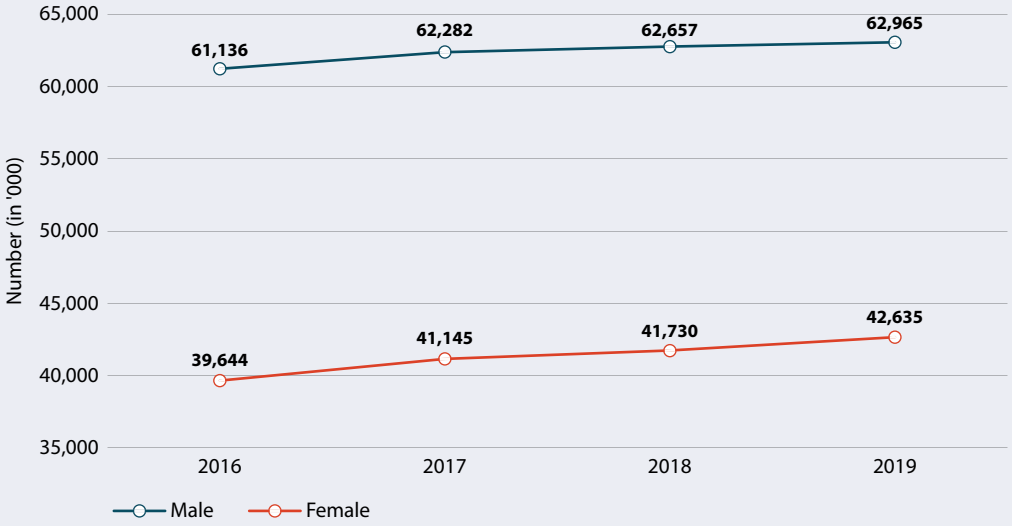


Source: Annual Reports and Periodic Labour Force Survey. National Statistical Office, MOSPI, Government of India [28].

Figures 12 and 13 show the extent of informal employment among male and female workers and rural and urban areas, respectively. The number of informal employments for females is less than that of males but considering that female LFPR is less than half of male LFPR, the proportion of informality among the female workers is higher than that of their male counterparts.

FIGURE 12

NUMBER OF INFORMAL WORKERS IN INDIA BY GENDER.

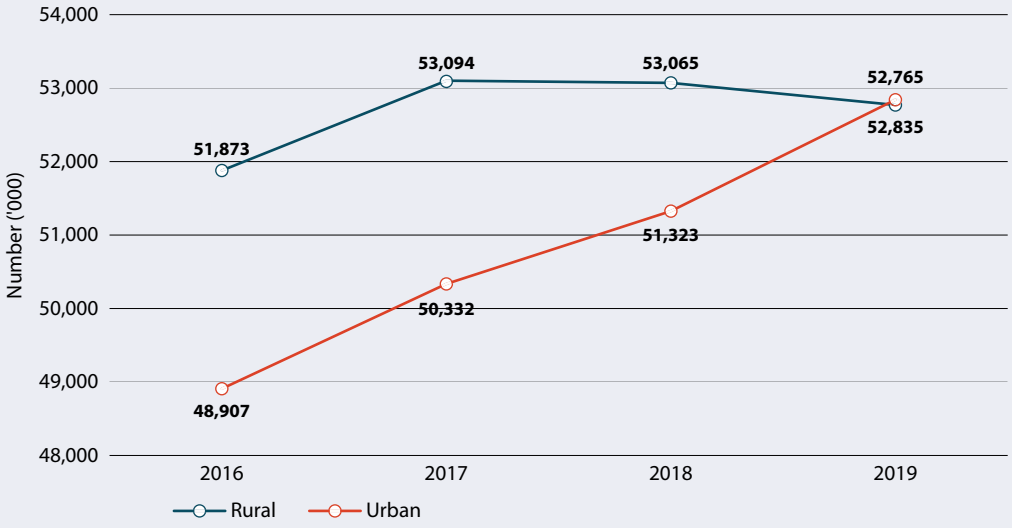


Source: Statistics on informal economy. ILO, 2023 [86].

From a comparison of rural and urban informality in employment (Fig. 29), it is evident that informal employment in urban areas is on the rise and has crossed that of rural areas, whose numbers are more stable.

FIGURE 13

NUMBER OF INFORMAL WORKERS ACROSS RURAL AND URBAN INDIA.



Source: Statistics on informal economy. ILO, 2023 [86].

Data shows an increase in informality in employment in India since the inception of economic liberalization policies in the early 1990s [87]. Given this situation, the government needs to be proactive in ensuring social security amid informality.

Social Dialogue

Social dialogue is a critical component of the quality of employment. As per ILO [88]:

"Social dialogue is one of the main means to promote satisfactory working conditions, as well as peace and social justice. It includes negotiations and consultations among the different labor market actors, collective bargaining, and dispute prevention and resolution. Successful social dialogue has the potential to resolve important economic and social issues and deal with economic crises effectively. The extent of social dialogue directly impacts stability, labor market governance, and the economy as a whole."

Social dialogue includes all types of negotiation and consultation. It refers to the exchange of information among the representatives of governments, employers, and workers on common issues related to economic and social policies [89]. It may take the form of a bipartite relation, tripartite process, or collective bargaining and workplace cooperation [89]. Social dialogue builds social cohesion and a productive economy [89].

Indicator: An indicator representing social dialogue can be the 'share of workers covered by collective bargaining'. Collective bargaining can be assessed through the prevalence of trade unions. Hence, the indicator chosen under this component is:

- Share of wage and salary earners who are trade union members.

Definition: An alternative name for this indicator is the 'trade union density rate'. The ILO [88] defines it as the share of employees who are union members. Trade union membership excludes those who do not come under paid employment such as self-employed, unemployed, and retired persons.

Data source: The ILO [88] gives data for the trade union density rate for most countries. In India, statistics related to trade unions are annually published by the Labour Bureau, Ministry of Labour & Employment [90]. It provides data on both workers' and employers' trade unions.

Data depiction: The trade union density rate of India is 19.8% [88]. The government report on trade unions in the country (based on the inputs received from 16 states) indicates that India has a total of 11,124 trade unions [90]. Among the different sectors, manufacturing has the highest share (27.7%) of trade unions [90]. Among the states, Uttar Pradesh tops with 3,803 trade unions followed by Jammu & Kashmir [a union territory since 2019] with 1,736 trade unions [90].

Normalization: This is a normalized indicator.

Further discussion: If one considers the total workers in India, only 1.87% of them are trade union members, and the penetration of trade unions among informal workers is only 0.77% [91]. There is a large regional disparity in trade unions in India with one-third of the unions concentrated in only one southern state, i.e., Kerala [91].

Skill Development and Training

Empirical research suggests that overall employee development impacts employee performance positively which enhances firm productivity [92]. Similarly, an individual employee's skill development and sharing of knowledge among team members enhance employee creativity, which leads to higher productivity [93].

In this era of globalization, workers need cutting-edge knowledge in the advanced form of organizational work, automation, and artificial intelligence [94]. Therefore, governments, employers, and workers have nurtured interest in skills development.

Indicator: The indicator under this component can be the "share of employed persons who received job training in the last five years". However, because of data unavailability, we have considered the following related indicator.

- Share of the total working-age population with advanced education.

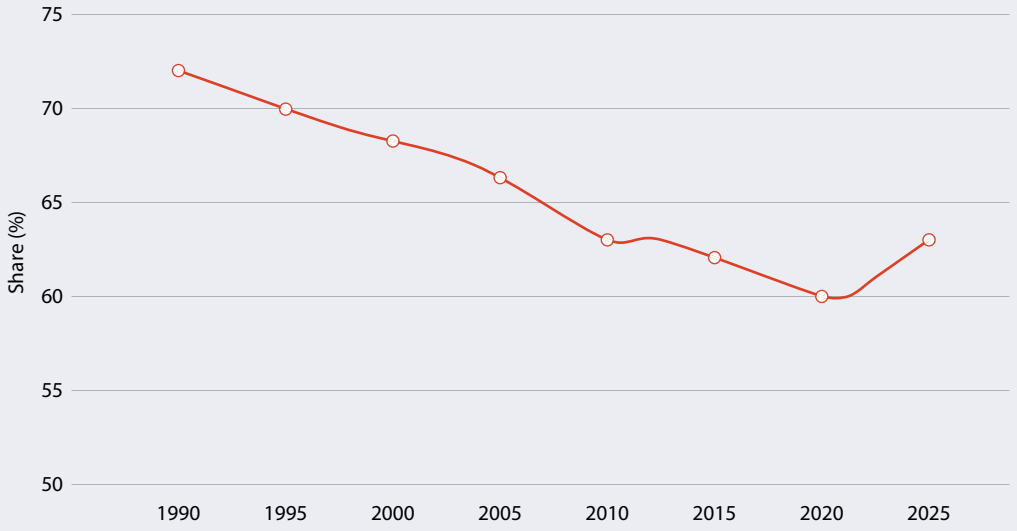
Definition: According to the World Bank [95], the advanced level of education includes short-cycle tertiary education, a bachelor's degree or equivalent education level, a master's degree or equivalent education level, or a doctoral degree or equivalent education.

Data source: The data for this for India is available in the database of world development indicators [96].

Data depiction: Figure 14 illustrates the share of the labor force with advanced education. The data shows a continuous fall in the share from above 70% points to 60% from 1994 to 2019. However, there has been a slight increase in the share in the last few years.

FIGURE 14

SHARE OF LABOR FORCE WITH ADVANCED EDUCATION (IN %).



Source: Labor force with advanced education, World Development Indicators. World Bank, 2022 [96].

Normalization: This is a normalized indicator.

Further discussion: One can obtain the value of the same indicator from PLFS data. PLFS provides nine categories of education levels with illiterate being the lowest one and 'postgraduate and above' as the highest category. One needs to consider only three (diploma/certificate course, graduate, and 'postgraduate and above') as advanced education.

Employment-Related Relationships and Work Motivation

The employment relationship is the legal link between employers and employees [97]. It exists when a person performs work or services under certain conditions for remuneration. This relationship works as the vehicle, with the help of which workers get access to the rights and benefits that are associated with employment in exchange for labor under the labor law and social security. It is the key point of reference for determining the nature and extent of employers' rights and obligations towards their workers. In short, it is the fundamental on which the entire idea of labor productivity and quality of employment rests.

Indicator: Indicators reflecting a healthy relationship between employees and employers may have to do with 'job satisfaction'. Job satisfaction depends on different dimensions of job quality, such as income, hours of work, and job security [98]. There is a relationship between job quality and job satisfaction, but it is complex, considering the subjectivity associated with it. Further, in typical measures of job satisfaction, inter-individual differences of preference are neglected [99].

The indicator chosen for this component is:

- Share of employed persons satisfied with their work.

Definition: Whether an employee is satisfied or not, is typically assessed by surveying employees and asking them directly the question – 'How satisfied you are with respect to your employment?' The responses can be sought in a dichotomous way (satisfied and not satisfied) or a Likert scale with multiple levels of satisfaction and dissatisfaction.

Data source: In 2018, 'Times Jobs' surveyed 1,100 working professionals to assess job satisfaction among Indian workers.

Data depiction: The survey results of Times Jobs found that only 20% of employees are dissatisfied with their jobs [100]. The main factors that contribute to job satisfaction include growth opportunities, job security, flexible work environment, and salary. The survey reveals that though three-fourths of the respondents are satisfied with their jobs, less than one-fourth are satisfied with their pay. Lack of career growth opportunities is the most crucial factor that brings dissatisfaction to employees.

Information on job satisfaction collected by the Paycheck India project (2009–12) shows that four to five people out of 10 are satisfied in terms of overall job, job contract, and job security (see Fig. 15) [101], indicating scope for improvement. Concerning satisfaction of pay, the share is low at 21–22% [101]. Dissatisfaction with payment may be indicative of underemployment.

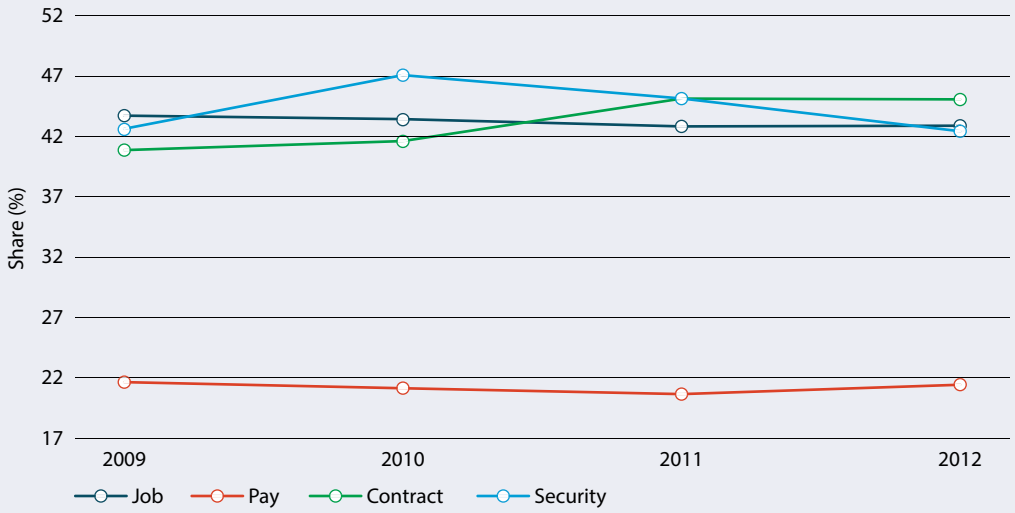
Low payment or earning has cascading effects on human life. It has also a negative influence on creating next-generation human resources. So, the labor policy must bring provisions to ensure a decent earning.

Normalization: This is a normalized indicator.

Further discussion: Good earning is essential to get out of poverty, disease, and squalor. As far as payment-related satisfaction is concerned, there is a substantial gender gap in India, which is in decline with time and increases with age, educational qualification, and progression in the occupational hierarchy [101].

FIGURE 15

SHARE OF EMPLOYEES SATISFIED WITH JOB, PAY, CONTRACT, AND SECURITY (IN %).



Source: Exploring job satisfaction in India using paycheck India survey data. WageIndicator Data Report, 2023 [101].

Quality of Employment Index

We have dealt with seven components of quality of employment. The components and the representative indicators with their values are given in Table 10. The weights are assigned equally to all seven components and across indicators representing any component.

TABLE 10

QUALITY OF EMPLOYMENT AND THEIR VALUES FOR INDIA.

Components and their Weights	Sub-Components and their Weights	Indicators and their Weights	Value	Normalized Value
Safety and ethics of employment (1/7)	**Safety of employment (1/14)**	Occupational non-fatal Injuries per 1,00,000 factory workers (1/28)	2832	0.717
		Occupational fatal Injuries per 1,00,000 factory workers (1/28)	1050	0.000
	Ethics of employment (1/14)	Share of Children (0–14 years) in the labor force (1/28)	2.08	0.896
		Share of Children (0–14 years) among workers (1/28)	1.94	0.903
Income and benefit from employment (1/7)		The proportion of workers earning below minimum wage (1/7)	0.33	0.667

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Components and their Weights	Sub-Components and their Weights	Indicators and their Weights	Value	Normalized Value
Working hours and work-life balance (1/7)		Percentage of working persons who are working more than 40 hours per week (1/7)	42	0.580
Security of employment and social Protection (1/7)	**Social security and protection (1/14)**	Percentage of regular wage/salaried employees who had no written job contract (1/42)	64.3	0.357
		Percentage of regular wage/salaried employees not having paid leave (1/42)	47.9	0.521
		Percentage of regular wage/salaried employees not having social security (1/42)	53.8	0.462
	Informality (1/14)	Share (in %) of informal workers overall (1/28)	90.3	0.097
		Share (in %) of informal workers – non-agriculture (1/28)	71.0	0.290
Social dialogue (1/7)		Share (in %) of wage and salary earners that are trade union members (1/7)	19.8	0.198
Skill development and training (1/7)		Percentage of the total working-age population with advanced education (1/7)	63	0.630
Employment-related relationship and work motivation (1/7)		Share of employed persons (in %) who are satisfied with their work (1/7)	42.82	0.428

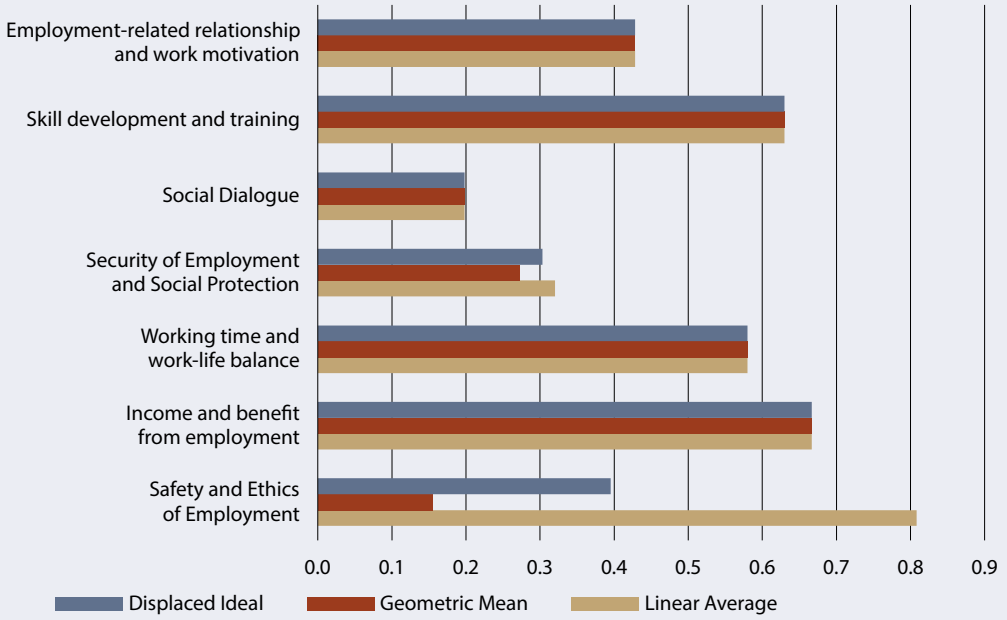
Source: Calculated by the country resource person.

To get the aggregated score, we have employed three methods: linear average, geometric mean, and displaced ideal. Linear average or arithmetic mean is a simple method; however, it suffers from the limitation of compensability or perfect substitutability (a low score gets compensated completely by a high score) [102]. Citing the same reason, the United Nations Development Program in the computation of the Human Development Index has moved away from the linear average method to the geometric mean [103]. The geometric mean method has a limitation in that it becomes zero if one of the indicators becomes zero (hence, we have assumed 0.001 in line with UNDP [103]). Compared to the geometric mean, the displaced ideal method turns out to be superior in terms of satisfying desirable properties such as being shortfall sensitive and capturing inequality at higher stages of attainments [102]. Overall, the displaced ideal method satisfies a set of desirable properties, referred to as MANUSH [102].

Figure 16 shows the scores of the seven dimensions of quality of employment under the three methods. The overall score of quality of employment for India turns out to be 0.519, 0.366, and 0.434, respectively, under the three methods.

FIGURE 16

COMPONENTS OF QUALITY OF EMPLOYMENT.



Source: Calculated by the country resource person.

New Labor Law and Policies in India

Academicians and policymakers have been arguing for long to bring labor reforms in India. India introduced the New Economic Policy in the early 1990s and overhauled the economy's structure with liberalization, but it could not bring reforms in labor laws. The new labor code came into effect across the country on 1 July 2022, which may bring certain differences in the in-hand salary, weekly off, and daily hours of work [104]. The government argues that this labor reform ensures 'minimum government and maximum governance' [104].

The new law was meant to replace 29 old labor laws [104]. It made a provision for four labor codes: the Code on Wages, Industrial Relations Code, Social Security Code, and Occupational Safety, Health and Working Conditions Code [104]. These codes have been designed keeping in mind the workers of the unorganized sector of India, where over 80% of the country's labor force works. Table 11 briefly summarizes the newly introduced labor codes in India.

TABLE 11

PROVISIONS IN NEW LABOR CODE IN INDIA.

Labor Code (Law)	New Provisions
Code on Wages	The newly framed codes apply to all establishments and employees of the organized and unorganized sectors. • Guarantee of minimum wages • Introduction of the concept of a floor wage • Provisions of timely payment of wages • Review of minimum wages every five years

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Labor Code (Law)	New Provisions
Industrial Relations Code	Faster justice to the workers through the Tribunal. • A trade union having 51% votes shall be recognized as the sole negotiating union • Industrial tribunals to have two members to facilitate faster disposal of cases • At the time of retrenchment, a worker would be provided 15 days' wages for re-skilling • In case of job loss, a worker will get benefits under the Atal Bimit Vyakti Kalyan Yojna
Social Security Code	It has amalgamated nine Labor Laws into the Social Security Code to secure • A provision for workers' insurance, pension, gratuity, maternity benefit, etc. • A system would be institutionalized for the contributions received from both the employer and the worker • Government will add to the contribution of workers from disadvantaged sections • Provision of free treatment is available under hospitals and dispensaries listed under Employees' State Insurance Corporation (ESIC), which will now be opened for the workers of all sectors along with the workers of the unorganized sector • Plantation workers to get the benefit of ESIC • Institutions working in hazardous areas to be compulsorily registered with ESIC • Benefit of the pension scheme to workers of the organized, unorganized, and self-employed sectors
Occupational Safety, Health and Working Conditions (OHS) Code	Previous Labor Laws have been subsumed in the Occupational, Safety, Health and Working Conditions Code, 2020 • Employers to provide traveling allowance annually to inter-state migrant workers • Providing appointment letters to the workers is mandatory • Construction Workers will get cess fund • Inter-state migrant workers would get ration facilities where they work
Special provisions for Women Empowerment	• Now women have the right to do work at night and the employer would make adequate safety arrangements and facilities for women workers on the night shift • Provision of more paid maternity leave for women workers (from 12 to 26 weeks) • Now it is mandatory to provide crèche facility in all establishments having 50 or more workers

Source: New Labour Code for New India 2022, Biggest Labour Reforms of Independent India. Ministry of Labour and Employment, Government of India, 2022 [104].

The introduction of new labor codes (laws) has the potential to ensure the welfare of workers. However, more resources for labor welfare also affect the cost of production. If the employer is to bear that cost, there should be a conducive ecosystem. The government, judicial system, national and international agencies, civil society, as well as worker unions have a role in building that ecosystem.

Conclusion

India has become the largest populous country in the world by surpassing China in April 2023 [105]. India is also facing an unprecedented unemployment crisis in recent times. India's median age in the population is at 28.2 years [106]. The challenges related to employment are going to become more severe in the years to come. Hence, India's economy needs to focus on 'growth with jobs' as jobless growth not only keeps India's high unemployment situation unaddressed but also increases inequality in society.

One of the major characteristics of India's employment that our study highlighted is its informality. The overall informality in India's employment is greater than 90%. Even in the formal sector, informality is more than 50%. High informality is reflected in workers not enjoying the confidence of having a job contract, paid leave, or other forms of social security. Six out of 10 workers in India do not have a job contract and five out of 10 do not have paid leave and social security.

Informality also is responsible for the prevalence of child labor in the country. Though the extent of child labor in India is less compared to several parts of the world [68], the solution to child labor lies in the education system of the country. It is not always that 'children are unable to go to school because they have to work', rather it is that 'children work because they have dropped out of school' [107]. Improvement of the quality of education, introduction of midday meals, and introduction of education as a fundamental right are some of the steps in the right direction that the country has taken to curb child labor.

One of the biggest challenges India faces in its employment sector is concerning non-uniformity or non-standardization of minimum wages. Central and state governments have specified minimum wages for thousands of job categories. Such multiplicity of minimum wages has adversely affected compliance rates. Cent percent compliance with minimum wages can improve the situation of workers below the poverty line which affects productive employment.

The other symptom of India's workers has to do with their low job satisfaction. Long hours of work on one hand and less pay on the other hand contribute to job dissatisfaction. India can target to set 40 hours per week as the duration of work so that workers are encouraged to spend quality time with family. Reducing informality in the job can improve social security as well as job security which would enhance job satisfaction.

More than 60% of India's employees having a higher education is indicative of a higher education level among Indian workers. However, it would be interesting to study how workers' job profiles match with their education. While the new National Education Policy of 2020 has provisions for skill-based education [108], it is equally important to develop the entrepreneurial ecosystem in the country to create jobs that match the skills.

One of the important highlights of this study is that the safety aspects of India's employment require urgent attention. The fatal injury rate of more than 1,000 per 100,000 among factory workers annually is a very high number, considering that many advanced countries have this number in single digits.

Last but not the least, India's employment situation is characterized by horizontal inequalities across different sub-groups of the population including gender. The high gender gap in labor force participation is alarming. However, it provides an opportunity for the country to improve female

participation in the labor force with more female induction in higher education. Also, affirmative action for different social groups as well as economically weaker sections of the population is a step to make employment more equitable in the country.

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INDONESIA

Introduction

Measuring productivity is undoubtedly a necessary endeavor undertaken by employment stakeholders including the Ministry of Manpower (MOM). Within the context of Indonesia, productivity measurement has been receiving significant attention since November 2019 when the notion of the Employment Development Index (Indeks Pembangunan Ketenagakerjaan or IPK) was introduced. The main objective of developing the IPK is twofold. First, it aims to measure the achievements of development, in the context of employment policies. Secondly, it helps in formulating inputs and feedback in the policymaking process.

A composite index for development indicators is constructed in various contexts. However, a development index as an alternative to measuring development progress often finds itself at odds with the objective of development in and of itself, e.g., welfare measurement, which is often simplified and often mixed with irrelevant indicators. According to Fanchette et al [1], the main problems in developing a composite index, primarily concern the choice of the theoretical framework, the availability of data, the selection of more representative indicators, and their treatment to compare and aggregate them.

Prominent among this approach are, among others, the multidimensional poverty index (MPI) and the democracy index. The former was subjected to heavy criticism about its ostensible purpose of capturing all the meaningful aspects of poverty while appearing to "gloss over" its most important factors. The latter, on the other hand, has been receiving more favorable responses, especially in the context of country comparisons that became more relevant after Indonesia hosted G-20 meetings in 2022 and proposed to be a reference country. Before that, the Human Development Index (HDI) received worldwide recognition and is being used as a main yardstick to observe development progress, sometimes up to the lowest level of government entities.

In particular, this also follows the global trend of "quantification" to better monitor and evaluate the progress. In a way, this can also be regarded as a manifestation of "positivism" as prevailing epistemology in academics and professional discourse. This approach holds that all genuine knowledge is either true by definition or positive, meaning posteriori facts derived by reason and logic from sensory experience. As a result, these days, numerous indices, mostly representing abstraction and intangible matters, have been created. These include the corruption index, the transparency index, and the openness index.

In light of the above, this paper discusses the notion of the employment development index and its relation with the concept of productivity. It reviews the empirical research on productivity in Indonesia published in both peer-reviewed academic journals and reports from many sources. It then provides an analysis of correlation using the IPK dataset at the provincial levels for the period from 2018 to 2021. The access to the dataset was given by the Centre of Manpower Planning (an echelon-II unit within the MOM).

This study attempts to address the following points:

1. Measuring levels of productive employment and quality of employment.

2. Analyzing the impact of productive employment and quality of employment on labor market performance.

3. Formulating labor productivity policies promoting the well-being of workers.

By addressing these research questions, this paper aims to meet its purpose of defining whether all the variables in IPK are relevant to explaining productivity and quality of work in Indonesia.

At the outset, it is important to clarify that this paper does not attempt to answer causal questions. It is intended to be the first of a series of academic papers using the 2018–21 dataset generated. Thus, the purpose of this paper is to consider variables that have relevance in explaining productivity in Indonesia.

This paper is structured as follows: Section 1 reviews the literature on relevant topics that revolve around productivity in Indonesia since 1990. Section 2 provides stylized facts with a particular discussion of trends and regional patterns. Section 3 describes the data used for this study, Section 4 provides the analysis result, and Section 5 offers the conclusion.

Literature Review

There has been a growing body of knowledge on topics revolving around factors explaining productivity rates in Indonesia. Most studies highlight the factors that cause the trend and development of productivity. An analysis from Dua and Garg [2] shows that determinants of productivity in developing countries from the 1980s to the 2010s relate to capital deepening, human capital, and knowledge base, among other observed factors.

Within the context of the pre-Reform period, a study from Sjoholm [3] points out competitiveness as the single important factor explaining employment productivity. In a similar vein, Takii and Ramstetter [4] also describe the importance of the presence of multinationals which effectively acted as a labor productivity differential in the Indonesian manufacturing sector during 1975–2001. Previously, Szirmai [5] undertook a comparative analysis that estimated purchasing power parities, real output, and labor productivity of Indonesia and the USA in 1987 as the benchmark year. His main finding is that the catching-up stagnated between 1980 and 1990, implying that relative productivity remained unchanged despite considerable productivity growth in Indonesia. In his paper, Szirmai [5] also points out that Indonesia managed to show higher labor productivity than India but it was still lower in 1990 than that of the Republic of Korea (ROK) in 1970.

Tadjoeddin and Chowdhury [6] provide a solid foundation in the literature by giving the context that employment policies in Indonesia during the post-Suharto era are influenced and in large part have also been motivated by factors of political economy. Regulations on minimum wage, social security, and decent work have been influencing the productivity of labor in Indonesia. They also mention that leading employment indicators such as unemployment rates fail to describe development progress. With that context, they suggest that more attention should be given to the improvement of quality employment rather than unemployment reduction.

Meanwhile, contemporary studies tend to reflect on the impact of labor migration [7], skills development [8], and automation [9] on employment creation and productivity. The topic of automation in a developing country has been discussed extensively. Schlogl and Sumner [10] examine the future of inequality, work, and wages in the age of automation with a focus on developing countries. Acknowledging the impact of automation on productivity, they argue that the rise of a global "robot reserve army" has profound effects on labor markets and economic development, but, rather than causing mass unemployment, new technologies are more likely to lead to stagnant wages and premature deindustrialization.

Further, Wihardja and Pradana [11] elaborate on the changes in labor market premiums that consist of explanatory variables based on individual workers' characteristics; namely, age, gender, education, location, job status, economic sector of employment, and occupation, with its impacts to mean earning and earning inequality. The World Bank has also been regularly publishing reports on labor productivity in Indonesia. The important findings of the most recent ones point out that there are large gaps in labor productivity between the primary agriculture sector and nearly all other segments of the Indonesian economy [12], that most Indonesians do not have 'good jobs' that provide an entry point to the middle class [13], and that the difficulty in creating middle-class jobs is increasing given that the tailwind of favorable demography will wane over the coming decade as the population begins to age rapidly, especially after the COVID-19 pandemic [14]. A complete list of selected studies is provided in Annexure 1.

Stylized Facts

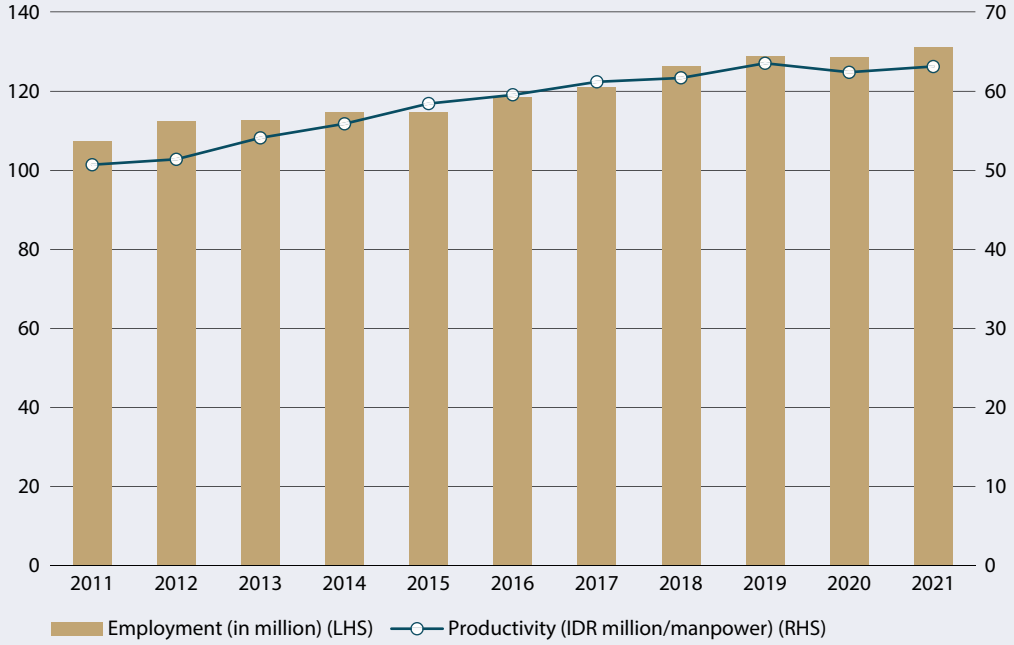
Labor productivity in Indonesia has been showing an increasing trend. During the 1980s and 1990s, Indonesia was known as a case of "growth with equity" and named among "Asian tigers" during the era of the "East Asian Miracle" [15]. However, after the Asian Financial Crisis (AFC) in the late 1990s, which was followed by a chain of economic crises and political turmoils in the region that ended with wide-ranging reforms, productivity became the main concern. This was largely motivated by the need to rectify the economic structure of emerging economies which previously relied heavily on commodities and raw materials, with their fluctuating prices, that did not seem to contribute much to the added value and national economy.

Figure 1 shows the increasing trend for employment creation from nearly 110 million workers in 2011 to around 130 million workers by 2021. An increasing trend is also observed for productivity that is measured by GDP divided by the number of employment in the same year. Adjusting the base price for all periods, the growth rates of productivity and employment creation seem to be increasing at relatively stable and incremental rates between 2011 and 2021.

Figure 2 displays indicators for employment numbers and labor productivity along with the growth of economic contribution for manpower, as depicted by the green line. The latter indicates that productivity in the period before the AFC recorded impressive rates with an average of above 5%. The productivity growth rate had significantly plunged to around -14% in 1998 as a consequence of AFC. Meanwhile, periods after the AFC had shown a rather different image with productivity growth rates at the below 5% threshold. Exceptions are spotted in the years 2011 and 2013, possibly due to the commodity boom which to some extent correlates with the uptick of the productivity growth rate.

FIGURE 1

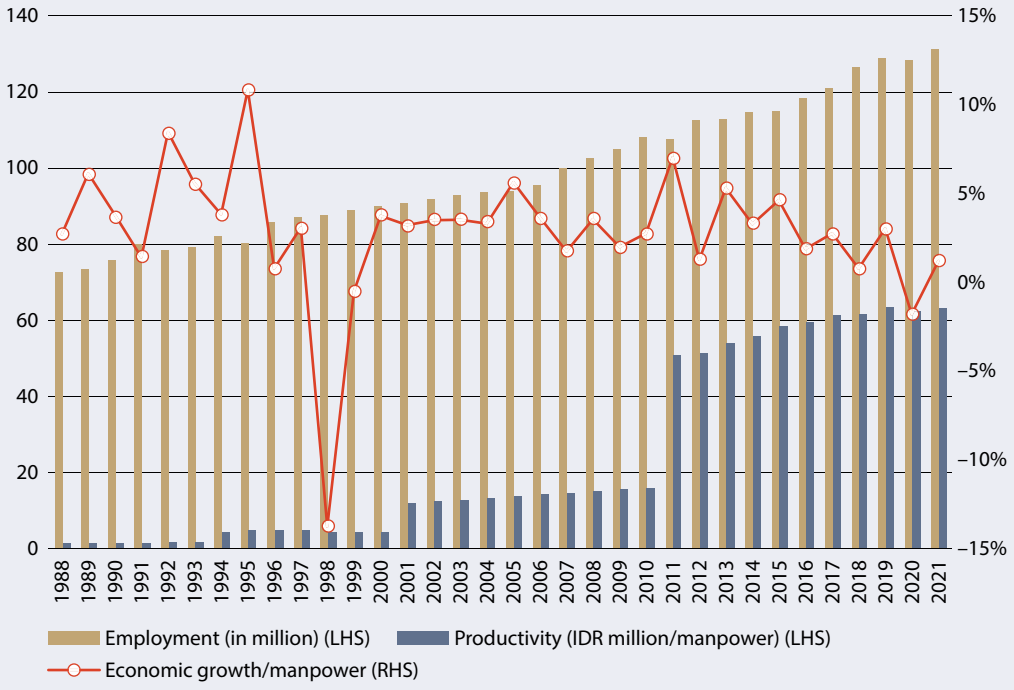
LABOR PRODUCTIVITY IN INDONESIA (2011–21).



Source: Statistics Indonesia (Badan Pusat Statistik).

FIGURE 2

LABOR PRODUCTIVITY AND ITS GROWTH IN INDONESIA (1987–2021*).

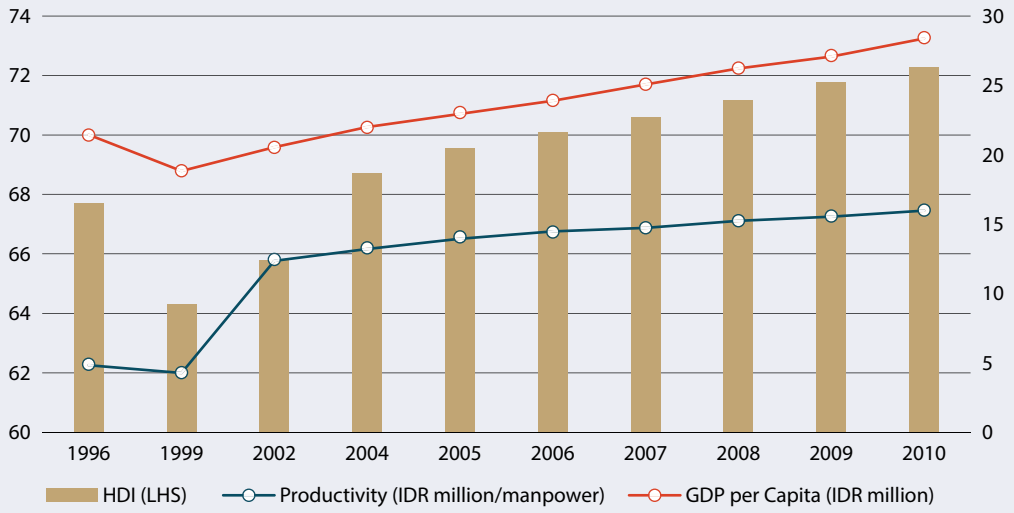


Note: * Change of base year in 2010.
Source: Statistics Indonesia (Badan Pusat Statistik).

Discussion on productivity often relates to the narratives of welfare development. Arguably, there has been a clear connection between productivity, the advancement of the economy, and the human development index which encompasses indicators of economic progression, education, and health. Figure 3 depicts these relations in Indonesia for the period between 1996 and 2010. When the productivity dropped in 1999, the HDI also showed a decline from 67 to 65. Conversely, when productivity displayed stable growth from 2002 to 2010, the HDI also showed similar positive progression. This relation is considered intuitive and logical since GDP per capita is a component of the HDI.

FIGURE 3

LABOR PRODUCTIVITY, PER CAPITA GDP, AND HDI IN INDONESIA (1996–2010).



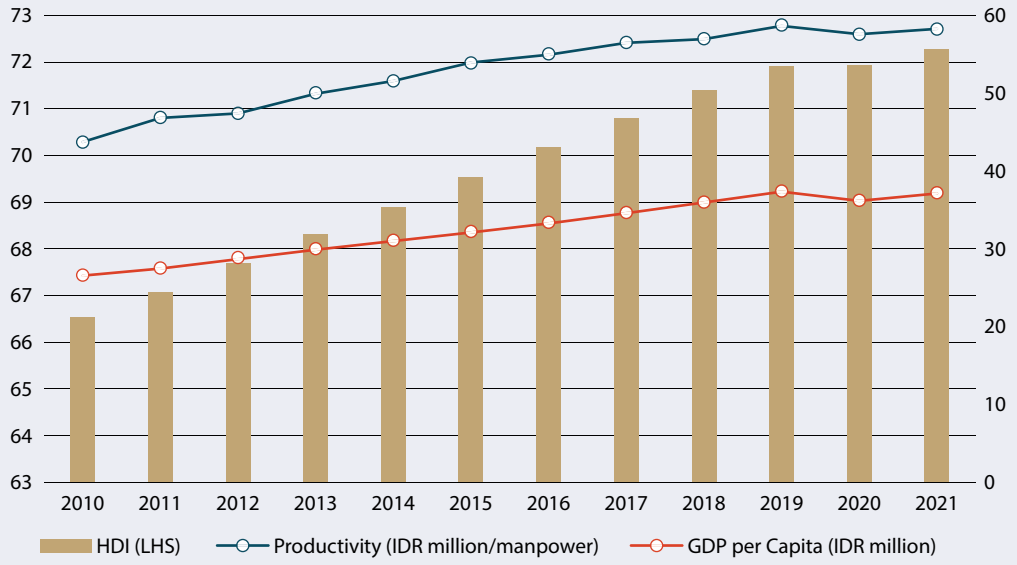
Source: Statistics Indonesia (Badan Pusat Statistik).

A similar pattern can be found in Figure 4. Although the growth rate of productivity and GDP per capita seems to show rather incremental changes, these are still followed by a positive trend of the HDI. Interestingly, during 2010–21, the increasing trend of the HDI seems to display significant progression compared to the growth rate of productivity and GDP per capita. The COVID-19 pandemic seems to have affected and halted the progression of these variables. Productivity and the GDP show declining rates while the HDI looks to stagnate in 2020. However, a positive trend is predicted to resume after 2021 along with recovery attempts.

About the growth of productivity relative to the labor force, the long-run trend (the dotted line) in Figure 5 suggests a declining pattern. Yet, if we consider at least four periods, we can see various trends. Between 1988 and 1995, it is apparent that there is an increasing trend with record growth of 10.8% in 1995 preceded by impressive growth rates. Meanwhile, there was a sharp drop in 1998 when productivity growth recorded a negative rate (-13.7%). During the first decade of the recovery period starting from 2000, productivity growth seems to show only meager rates with a seemingly declining trend. In 2011, ostensibly with the benefit of the commodity boom, productivity growth (recorded at 7.03%) was at the third highest level within the period under observation. However, this impressive growth rate could not be sustained in the following years. From 2012 until 2021, the highest level it reaches is only 5.31% (in 2013). With the impact of COVID-19, the growth rate drops to a negative level for the second time after the AFC.

FIGURE 4

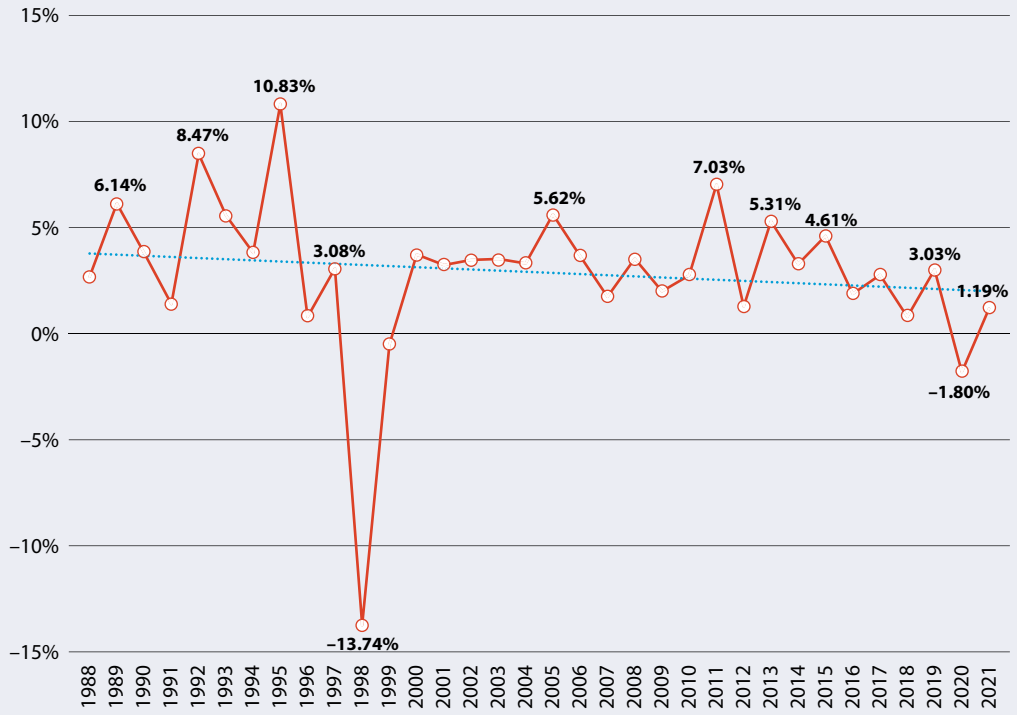
LABOR PRODUCTIVITY, PER CAPITA GDP, AND HDI* IN INDONESIA (2010–21).



Note: * HDI, as calculated using the new method.
Source: Statistics Indonesia (Badan Pusat Statistik).

FIGURE 5

ECONOMIC GROWTH AND MANPOWER IN INDONESIA (1988–2021).

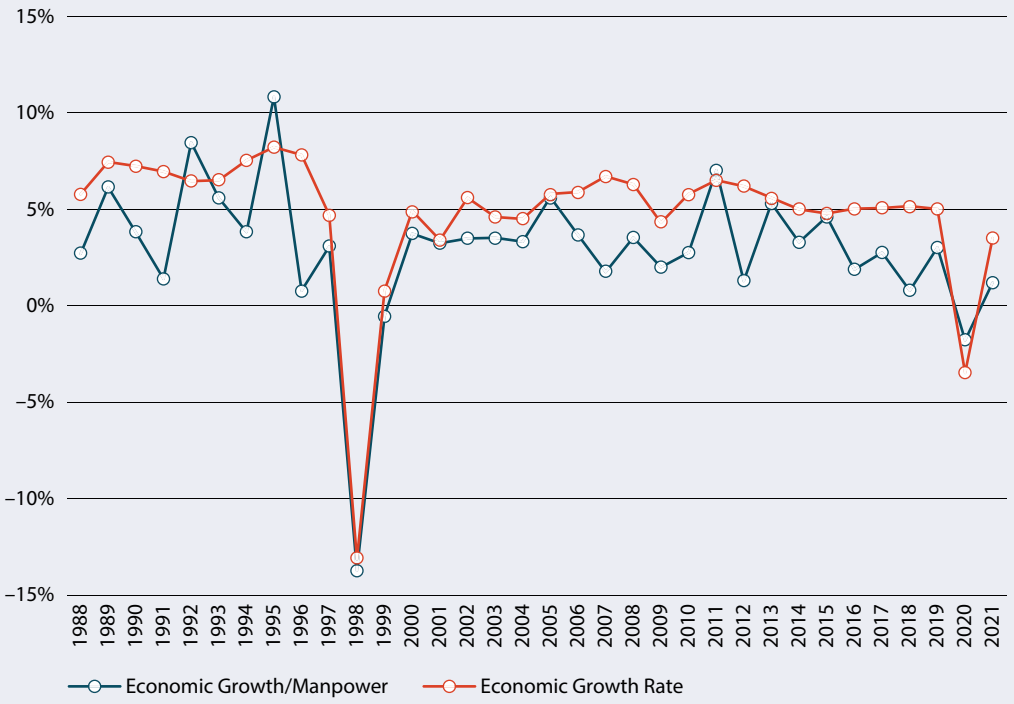


Source: Statistics Indonesia (Badan Pusat Statistik).

A positive correlation between labor productivity growth and economic growth (measured by GDP) can be expected a priori, albeit with different trajectories. In other words, labor productivity should generally increase as the economy grows, and vice versa. However, Figure 6 displays the relation between the two variables from 1988 to 2021, revealing fluctuations. Despite these fluctuations, a consistent trend can still be discerned. Between 1988 and 1996, there were periods when labor productivity outpaced economic growth. After 1996, such instances happened only once in 2011, with the remaining periods characterized by higher GDP growth. This chart hints at the possibility of a diminishing contribution of labor to total factor productivity (TFP).

FIGURE 6

ECONOMIC GROWTH AND MANPOWER VS. GDP GROWTH IN INDONESIA (1988–2021).

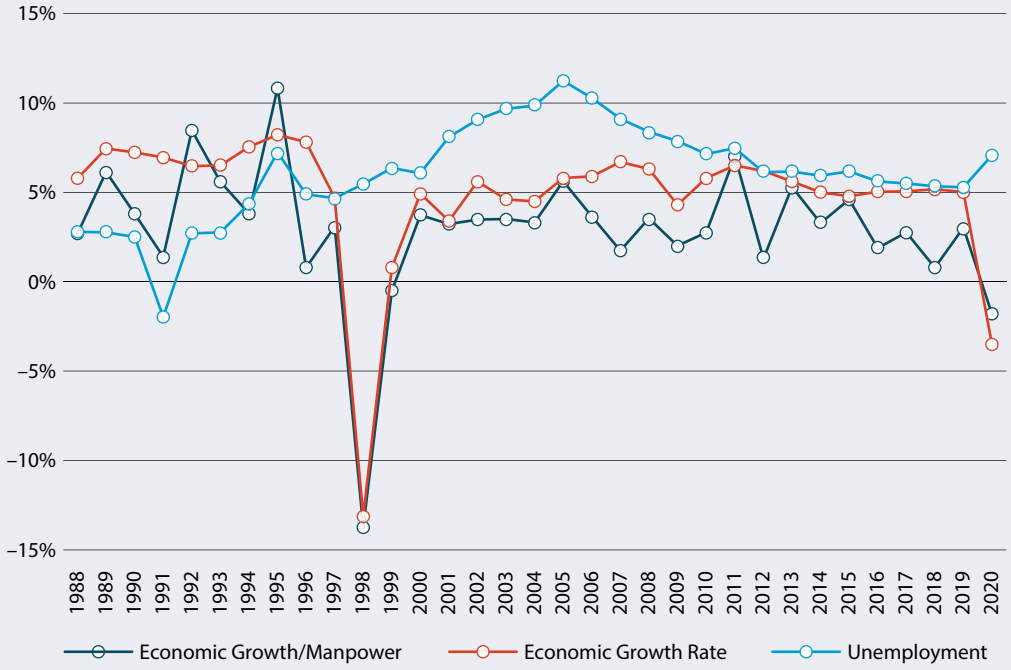


Source: Statistics Indonesia (Badan Pusat Statistik).

Figure 7 depicts the relationships among three variables, i.e., labor productivity, GDP growth, and unemployment rate, for the period of 1988–2020. While we see a seemingly positive correlation between labor productivity and economic growth, the relations of these variables with the unemployment rate show different directions. Intuitively, as it may seem from the chart, there is a negative correlation between economic growth, which should lead to job creation, and the unemployment rate. Assuming that labor productivity and GDP growth are in the same direction (though with varying rates), a similar pattern occurs between labor productivity and the unemployment rate. However, these relationships are not necessarily apparent in the chart, particularly, in the post-AFC periods where the unemployment rate shows an increasing trend despite positive growth rates for both labor productivity and GDP. The declining rates of unemployment from 2005 to 2019 are followed by a relative decline in labor productivity and economic growth rates. This finding probably gives an early indication of the decoupling among economic growth, TFP, and employment creation.

FIGURE 7

ECONOMIC GROWTH AND MANPOWER VS. GDP GROWTH VS. UNEMPLOYMENT RATE (1988–2020).



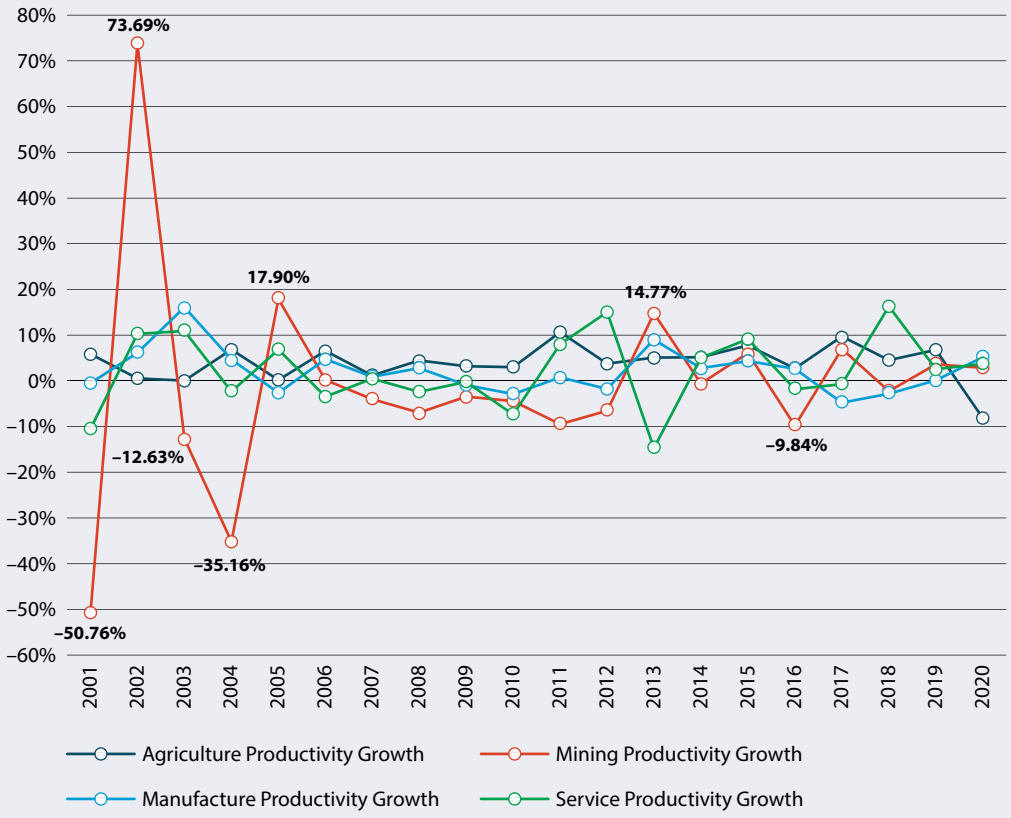
Source: Statistics Indonesia (Badan Pusat Statistik).

Growth rates of labor productivity vary depending on the respective sectors. Figure 8 displays trajectories for four sectors. First, the agriculture sector which does not oscillate much between 2001 and 2020, and its fluctuation only shows a maximum value of 10% on average. This sector recorded negative growth in 2020, largely due to the pandemic, which eventually drove the labor force to agriculture as "the last resort of employment". Second, the mining sector, which swung very widely, especially in the early 2000s. Mining contributed to the highest value of growth (73.7% in 2002) and the lowest minimum growth rate in 2001 (-50.7%). After 2005, the mining sector showed a relatively stable trajectory with a significant uptick in 2013 (14.7%). Third is the manufacturing sector which has not shown high growth rates for the last two decades. It registered a growth rate close to 20% only in the early 2000s. In many periods, the manufacturing sector recorded negative growth rates. Arguably, this finding might have some relation with the hypothesis of early deindustrialization in Indonesia. Lastly, the service sector shows fluctuation between values of 15% (in 2012) to -15% (in 2013). Service is considered a "future sector" following a natural progression of the economy in other countries, but in Indonesia, it probably portrays a different trajectory. Unlike those in developed countries, services in developing countries usually revolve around informality which offers merely low added values and low return for its workers.

As for human development, component variables in HDI have been mentioned as a factor influencing productivity. Human development is invariably associated with the narratives of workers' well-being which consequently entails a deeper analysis of productivity. In the context of Indonesia, Figures 9 to 11 depict typologies or clusters of productivity, GDP per capita, and the HDI rank at the provincial level for 2010, 2015, and 2020. Provinces with lower productivity and lower GDP per capita are posited in the lower left part of the chart while those with higher

FIGURE 8

PRODUCTIVITY GROWTH BY SECTOR (2001–20).



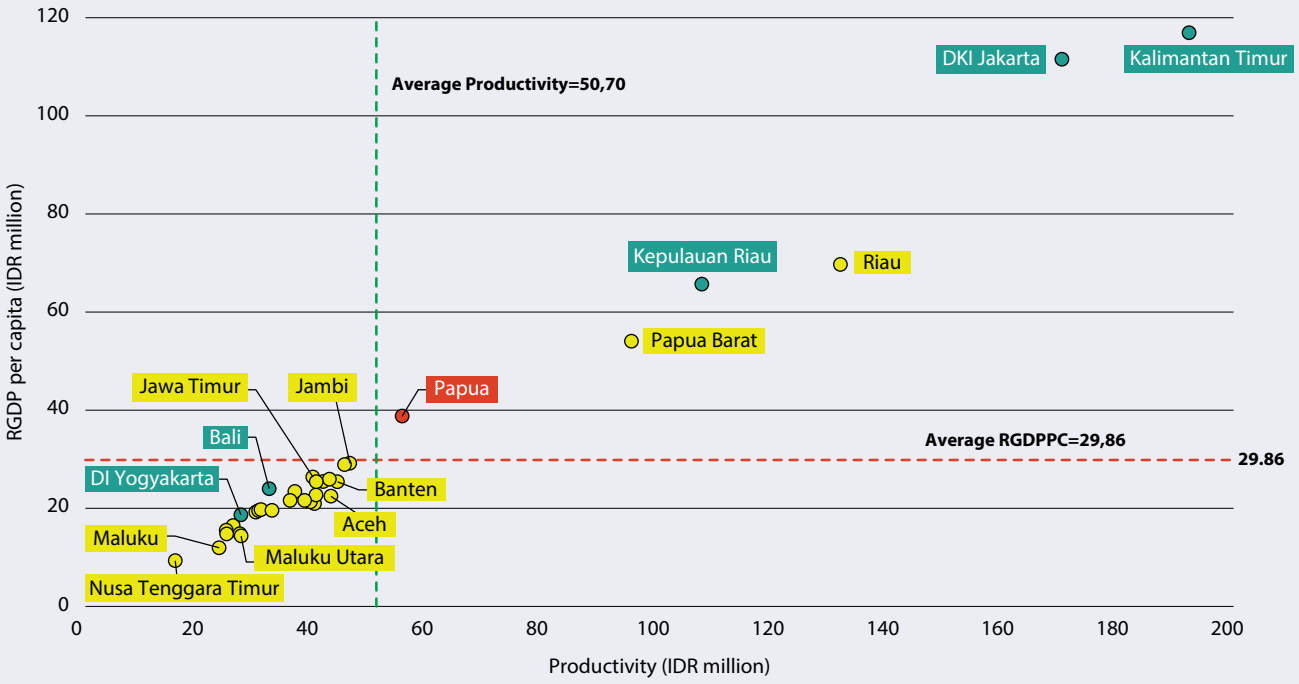
Note: There was a change in the GDP base year in 2010.
Source: Statistics Indonesia (Badan Pusat Statistik).

productivity and GDP per capita can be found in the higher right side. Color codes are used to represent the state of human development. Following the HDI, categories are divided into four groups: very high (blue), high (green), medium (yellow), and low (red). At first glance, we can easily identify signs of wide disparity among the regions. This is indicated by the number of provinces in the upper-right quadrant which had always been six with only a change of provinces (from Papua Barat to Kalimantan Utara). Figures 9 to 11 also convey a message that there has been a significant positive relationship between productivity and GDP per capita. Meanwhile, there is no strong indication of the relationship between the HDI and other indicators. The provinces with a high HDI can be seen in the lower left quadrant while those with a medium or low HDI can be located in the upper right.

Figures 9–11 indicate strong positive correlations between GDP per capita and productivity, even to the extent that there is almost no province situated in the upper-left and lower-right quadrants. More importantly, these charts show a concentration pattern in the lower-left quadrant which implies low productivity and low GDP per capita for most provinces. Only a few provinces are located in the upper-right quadrant group (those with higher average productivity and higher average GDP per capita). Yet, using the perspective of human development (proxied with the HDI), there has been an increasing HDI status for most provinces, including those in the lower quadrant group.

FIGURE 9

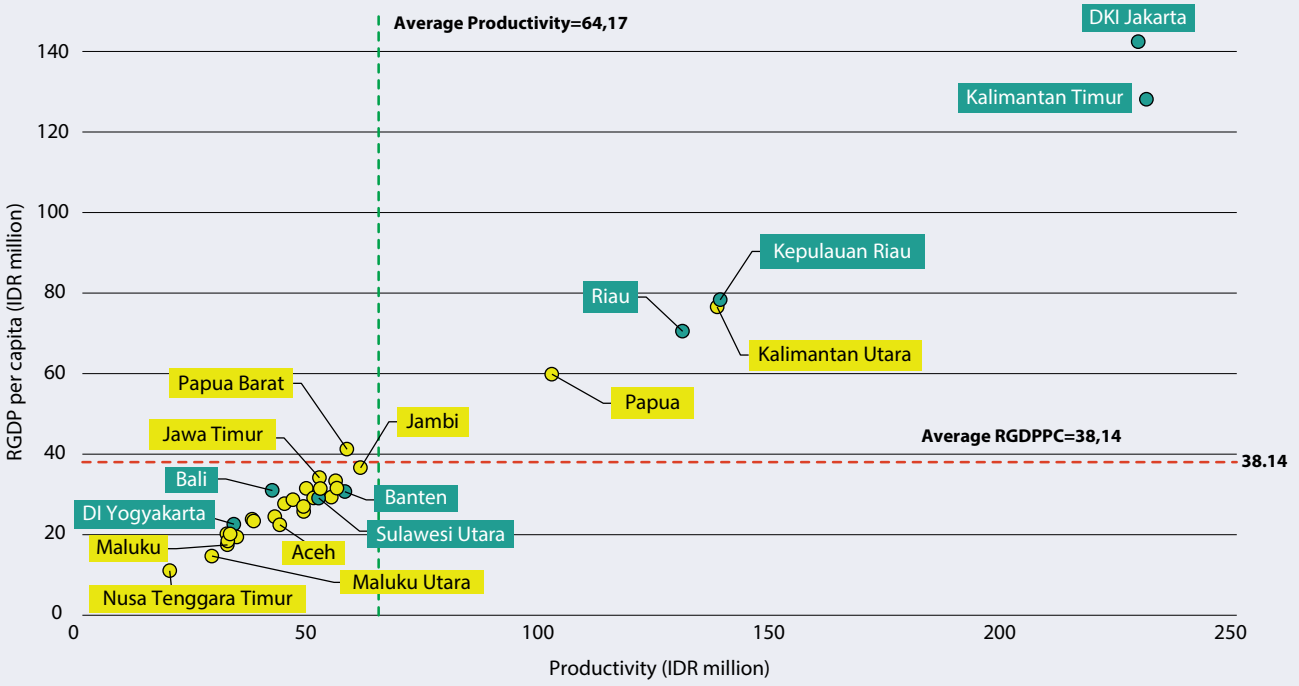
PRODUCTIVITY AND PER CAPITA GDP IN 2010.



Source: Statistics Indonesia (Badan Pusat Statistik); processed by the country resource person.

FIGURE 10

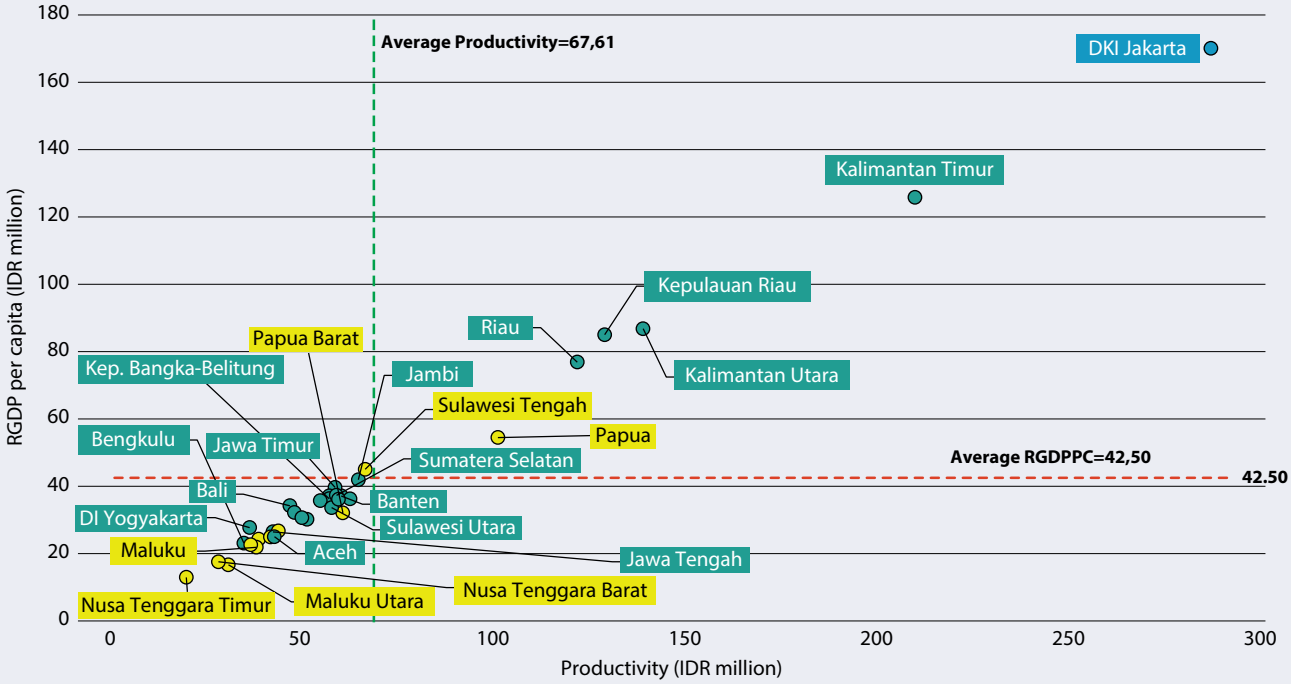
PRODUCTIVITY AND PER CAPITA GDP IN 2015.



Source: Statistics Indonesia (Badan Pusat Statistik); processed by the country resource person.

FIGURE 11

PRODUCTIVITY AND PER CAPITA GDP IN 2020.



Source: Statistics Indonesia (Badan Pusat Statistik); processed by the country resource person.

In 2010, there was only a province (Papua) with a low HDI, however, interestingly, Papua managed to sit in the higher quadrant. In the lower quadrant, there were only two provinces in 2010 (Bali and DI Yogyakarta) with high scores of the HDI. Meanwhile, the numbers have increased to four and 11 in 2015 and 2020 respectively. Figures 10–12, therefore, give an impression that productivity is not necessarily controlled by the HDI but surely those who are in the higher productivity group tend to have a higher HDI.

Data Sources and Compilation

In the previous part, the prepared dataset comprised nine groups of 25 variables at the provincial level. It helped establish a dataset with 34 provinces for four years, from 2018 to 2021. The selected variables were used entirely in the construction of IPK within the MoM. These 25 variables are clustered into nine categories with details provided in Table 1. These data were collected using the "bottoms-up" approach that implied high involvement of the regional office, under the local governments.

The choice of variables, including their weightage, was decided through a deliberative process referring to the guideline that was stipulated through the Regulation of MOM Number 206 of the Year 2017. This regulation, an update on the previous ministerial regulation, had changes focused on the insertion and adoption of SDG targets. It had four main objectives.

1. Utilisation of the entire labor force to partake in the economy and development

2. Equal work opportunity for all labor force in Indonesia

3. Protection from employment-related risks for all workers

4. Welfare for all workers and their families

The collection of data and information was undertaken in close coordination with the MOM. The formal definition or metadata was given in the form of written instructions and guidelines from the MOM. These documents were explained and discussed in regular meetings. Overall, 3,341 (98.3%) entries were gathered for the construction of IPK.

While several variables, such as unemployment rates, productivity rates, and Regional Gross Domestic Product (RGDP), were available from regular national labor force surveys (Sakernas) for use, there was a need to collect and verify most other variables from the ground. The weights were decided through a series of deliberative processes and varied between variables (see numbers in the square brackets in Table 1). Later, these weighting coefficients were used to calculate the index and ultimately to decide the rankings.

The variables are grouped into nine clusters.

1. Planning
   a. Indicated by the score of local manpower planning documents (comprising functions of the local office, structure of the local team, and publication).

2. Modality
   a. Indicated by Not in Employment, Education, and Training (NEET) segment, as defined by the statistics office as a segment of youth (age 15–24 years old) who are not in education, employment, or training.

   b. Percentage of child workers (age 10–17 years old).

   c. Unemployment rate (official definition).

   d. Underemployment (official definition).

3. Opportunity
   a. Percentage of formal employment.

   b. Share of non-agriculture informal sector employment.

   c. Share of non-agriculture informal sector employment for male workers.

   d. Share of non-agriculture informal sector employment for female workers.

   e. Share of agriculture informal sector employment.

4. Capacity Building
   a. Scores of local training capacity, indicated by a formula which takes into account: carrying capacity, unemployment rates, numbers of districts with local training institutes, and the total number of districts/municipalities.

b. Indicated by the rate of graduation from local training institutes in comparison to the unemployed with a mid-level education background.

c. Accredited training institutions, measured by numbers of local training institutes compared with all training institutions in the respective regions.

5. Productivity
   a. Workers' productivity as measured by local RGDP per capita divided by local working population.

   b. The rate of RGDP growth divided by the local labor force.

6. Industrial Relations
   a. Percentage of companies in regions that issued a written form of corporate regulations (mentioning the code of conduct and standard operation procedures) divided by the number of companies at the district/municipality level.

   b. Collective bargaining agreements that are registered in the local labor office, measured by all companies with such agreements divided by the number of eligible companies at the district/municipality level.

   c. Bipartite cooperation units measured by companies that established such units divided by the number of eligible companies at the district/municipality level.

   d. Industrial relations disputes, measured by the total number of disputes in the regions divided by the number of eligible companies at the district/municipalities level.

7. Working Conditions
   a. The implementation of occupational health and safety, is measured by the number of eligible companies that apply for occupational safety and health (OSH) principles divided by the number of existing large-scale companies (using Economic Census 2016 as a reference).

   b. The work accident rate, is measured by the number of workers who suffered employment accidents in workplaces divided by the number of workers registered as members of social insurance programs.

   c. The compliance rate of company reporting, measured by the number of eligible companies at the district and municipality level divided by the total numbers of companies ranging from small and medium to large scale (using Economic Census 2016 as a reference).

8. Wages
   a. Proportion of hourly wage to local minimum wage is a measurement with the formula involving variables such as the average wage of the local population, minimum wage at the local level, and number of working hours per week.

9. Social Insurance
   a. Companies registered with the social security agency. This is the ratio of the number of companies that are registered as active members with the social security agency

and the total number of companies ranging from small and medium to large scale (using the Economic Census 2016 as a reference).

b. Coverage of workers registered as members of the social security agency is measured by the number of salaried workers and non-salaried workers that are registered as active members in the social security agency divided by the total workers in the respective districts.

The data for this study was retrieved from https://ipk.kemnaker.go.id/ and extracted at the end of September 2022. The website provides official data and information related to the construction of IPK by MOM. Exclusive access to this data has been given to the National Development Planning Agency, one of the many stakeholders involved in the discussion related to the employment index.

TABLE 1

GROUPINGS OF VARIABLES IN THE EMPLOYMENT DEVELOPMENT INDEX.

Groupings [weightage]								
Planning [10%]	**Modality [10%]**	**Opportunity [15%]**	**Capacity Building [15%]**	**Productivity [10%]**	**Industrial Relations [10%]**	**Working Condition [10%]**	**Wages [10%]**	**Social Insurance [10%]**
Score of local manpower planning documents [100%]	NEET [20%]	Formal employment [40%]	Scores of local training capacity [30%]	Scores of workers' productivity [60%]	Enacted company regulations [35%]	Occupational health and safety design [40%]	Proportion of hourly wage to local minimum wage [100%]	Companies registered to social security agency [40%]
	Child worker (age 10–17) [20%]	Non-agricul-ture informal sector employment [20%]	Scores of the quality of students graduating from local training facilities [40%]	Growth rate of RGDP per worker [40%]	Collective bargaining agreement [25%]	Work accident rate [30%]		Coverage of workers registered as members of the social security agency [60%]
	Unemploy-ment rate [30%]	Non-agricul-ture informal sector employment for male workers [15%]	Accredited training facility (scores) [30%]		Bipartite cooperation unit [20%]	Compliance rate of company reporting [30%]		
	Under-em-ployment rate [30%]	Non-agricul-ture informal sector employment for female workers [15%]			Industrial relations disputes [25%]			
		Agriculture informal sector employment [10%]						

Source: Ministry of Manpower (Kementerian Ketenagakerjaan).

Analysis

The analysis of this study aimed to explore the meaningful relationship between variables that best explain productivity in Indonesia. The construction of a composite index for development aims to measure the combination of indicators into a unified number. Therefore, it can be said that a composite index is a function of variables and weights that maps attainments in a variety of attributes into a single real number as defined in the International Development: Ideas, Experience, Prospect (Oxford Scholarship Online, 2014).

This preliminary study focused on the correlation analysis among variables used in the construction of IPK. Correlation is important, especially at the early stage, to obtain the relationships among variables as hypothesized in the construction of IPK. Before proceeding further, an examination of the variables for substantial collinearity was conducted. Given that the initial dataset included 25 variables representing different employment dimensions, it was reasonable to suspect the presence of highly correlated variables in the dataset. However, the correlation matrix (Table 5) confirms that there were no variables with a very high correlation coefficient, which, therefore, indicates the absence of possible collinearity.

More importantly, this study observed the productivity variable. A further stage of the study treats the productivity variable as a dependent variable while making all others independent variables. With this strategy, it is expected that variables can be used to build a model that would best explain productivity in Indonesia.

In this study, correlation tests were conducted in several stages. The first stage of the test involved generating a correlation matrix for all variables used in the construction of IPK. As reflected in Table 3, of the 24 variables explaining productivity, only 12 variables, or 50% can be considered significant at 1–5%. Among the 12 significant variables explaining productivity, six have positive relationships while the other six have inverse (negative) relationships. A summary of these relationships is provided in Table 2. This result will provide a sound basis for further analysis.

TABLE 2

SUMMARY OF RELATIONSHIPS FOR SIGNIFICANT VARIABLES EXPLAINING PRODUCTIVITY.

No.	Positive	Negative
1	Unemployment rate	Child worker
2	Formal employment	Underemployment
3	Company regulations	Non-agriculture informal sector
4	Proportion of hourly wage to minimum wage	Non-agriculture informal sector for male workers
5	Companies registered to social security	Non-agriculture informal sector for female workers
6	Workers registered to social security	Agriculture informal sector

Source: Ministry of Manpower (Kementerian Ketenagakerjaan).

Regression Model on Productivity

Correlation results are followed up with the construction of statistical modeling to elaborate further on the relationships among variables with a particular focus on productivity. The result of the correlation analysis will be the basis of the productivity model. It is expected that the results of the economic model can provide the best indicators for a productive employment index in Indonesia.

Table 3 shows that Indonesia experienced a significant increase in productivity from 89.65 in 2018 to 92.94 (IDR million per worker) in 2020, but it dropped sharply in 2021. Unemployment rates decreased gradually from 5.10% in 2018 to 4.86% in 2019, and 4.77% in 2020, but jumped to 6.03% in 2021, possibly due to the impact of economic contraction following the COVID-19 pandemic. Similar trends can be observed in other variables with varying degrees. Formal employment shows increasing figures but in 2021 it declined to a level lower than that of 2018. The underemployment rate in Table 6 can be considered a confounding variable in a way that there was a remarkable increase from 8.85% in 2018 to 31.54% in 2019 although it tends to show a "normalized" pattern. Other characteristics disaggregated by gender for the non-agriculture informal sector show that the share of female workers out of total workers increased by around 50 percentage points. It is interesting to note that there is a larger number of female workers in the non-agricultural informal sector.

TABLE 3

DESCRIPTIVE STATISTICS FOR SELECTED VARIABLES EXPLAINING PRODUCTIVITY.

Variables	Description	Mean			
		2018	2019	2020	2021
UNEMP	Unemployment rate	5.10	4.86	4.77	6.03
FORMAL	Formal employment	42.08	42.09	43.50	39.12
COMPREG	Company regulations	22.26	23.14	29.80	23.39
MINWAGE	Proportion of hourly wage to minimum wage	121.42	114.20	110.07	96.99
COMPSS	Companies registered to social security	26.39	21.26	30.56	79.53
EMPSS	Workers registered to social security	20.85	22.71	29.12	26.13
CHILD	Child worker	8.18	8.04	9.80	10.87
UNDEMP	Underemployment	8.85	31.54	7.56	10.58
NAGRINF	Non-agriculture informal sector	33.44	42.89	43.44	47.18
NAGRIM	Non-agriculture informal sector for male workers	30.45	38.19	41.68	42.81
NAGRIF	Non-agriculture informal sector for female workers	36.80	49.89	54.04	53.47
AGRIM	Agriculture informal sector for male workers	85.45	85.96	85.53	85.07
PROD	Productivity	89.65	90.91	92.94	86.91
LPROD	Log (productivity)	4.31	4.32	4.35	4.22

Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

Adopting a Mincerian model for productivity which involves selected significant variables to estimate the partial relationships between explanatory variables of interest and productivity. Table 7 reports the coefficients from an OLS regression of productivity in natural logarithm by year (models 1–4) and the overall model (5). Four models (1–4) were built individually to explain the variables for each year from 2018 to 2021, respectively. Meanwhile, model 5 is purposely built to explore general relationships amongst variables for all years. Models 1–4 show almost no significant variable within the equation. On the other hand, model 5 shows seven variables that are considered significant at both 1 and 5%, i.e., unemployment rates, formal sector employment,

enacted company regulations, employees registered to the social security agency, non-agriculture informal sector employment, male workers in non-agriculture informal sector employment, and female workers in non-agriculture informal sector employment.

From Table 4, particularly Model 5, we can construct the following equation:

LPROD = f (UNEMP, FORMAL, COMPREG, EMPSS, NAGRINF, NAGRIM, NAGRIF) (1)

To determine whether sample data has been drawn from a normally distributed population, normality tests were undertaken. If the assumption of normality is not valid, the results of the tests will be unreliable. The results are provided in Figures 12 to 17.

While Table 4 presents models without dummy variables, Table 5 shows models that include dummies to capture the effect of the COVID-19 pandemic. Here Table 5 displays panel data results for models with fixed effects estimator and random effects model where the model parameters are random variables. There is little difference in terms of coefficient of determination between the results obtained from a variety of models in Table 4 and those of Table 5 (with dummies). The only discernible difference is that there are only six explanatory variables that are considered significant in Table 5. However, for models in Table 5, both fixed effects and random effects indicate no clear impact of the pandemic on the productivity model.

TABLE 4

MODELS ON PRODUCTIVITY IN INDONESIA.

Variables	(1) Log of Productivity (2018)	(2) Log of Productivity (2019)	(3) Log of Productivity (2020)	(4) Log of Productivity (2021)	(5) Log of Productivity
Unemployment rates	0.036	0.083	0.028	-0.017	0.049**
	(0.056)	(0.052)	(0.063)	(0.072)	(0.019)
Formal sector employment	0.016	0.030	0.009	-0.011	0.015***
	(0.016)	(0.022)	(0.018)	(0.042)	(0.005)
Enacted company regulations	0.001	0.005	0.003	0.005	0.003**
	(0.004)	(0.003)	(0.003)	(0.005)	(0.001)
Proportion of hourly wage to local minimum wage	0.000	-0.004	-0.001	0.002	-0.002
	(0.004)	(0.004)	(0.004)	(0.007)	(0.002)
Companies registered to social security agency	0.004	0.008	0.004	-0.002	0.001
	(0.006)	(0.007)	(0.007)	(0.002)	(0.001)
Employees registered to social security agency	0.007	0.010**	0.010	0.011	0.009***
	(0.009)	(0.004)	(0.006)	(0.008)	(0.002)
Child worker (age 10-17)	0.019	0.016	0.004	-0.008	0.005
	(0.029)	(0.024)	(0.004)	(0.036)	(0.003)
Under-employment rate	0.018	0.015	-0.009	0.031	0.004
	(0.040)	(0.023)	(0.051)	(0.060)	(0.003)

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Variables	(1) Log of Productivity (2018)	(2) Log of Productivity (2019)	(3) Log of Productivity (2020)	(4) Log of Productivity (2021)	(5) Log of Productivity
Non-agriculture informal sector employment	-0.022	-0.203	-0.018	0.111	-0.021***
	(0.024)	(0.167)	(0.014)	(0.257)	(0.006)
Male workers in non-agriculture informal sector employment	-0.017	0.096	-0.014	-0.133	-0.018***
	(0.017)	(0.109)	(0.008)	(0.163)	(0.004)
Female workers in non-agriculture informal sector employment	0.029	0.111	0.011*	-0.058	0.016***
	(0.024)	(0.074)	(0.006)	(0.119)	(0.004)
Agriculture informal sector employment	-0.012	0.001	-0.004	-0.011	-0.004
	(0.012)	(0.013)	(0.014)	(0.009)	(0.004)
Constant	4.053**	1.383	4.537**	8.618*	4.452***
	(1.933)	(2.931)	(1.689)	(3.963)	(0.452)
Observations	34	32	34	24	124
R-squared	0.788	0.827	0.767	0.869	0.770

Note: Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1
Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

TABLE 5

MODELS ON PRODUCTIVITY IN INDONESIA (WITH COVID-19 DUMMY YEARS)

	(1) Fixed Effect	(2) Random Effect
Unemployment rates	0.0444*	0.0444*
	–2.19	–2.19
Formal sector employment	0.0138*	0.0138*
	–2.23	–2.23
Enacted company regulations	0.00254	0.00254
	–1.86	–1.86
Proportion of hourly wage to local minimum wage	–0.002	–0.002
	(–1.26)	(–1.26)
Companies registered to social security agency	–0.000427	–0.000427
	(–0.36)	(–0.36)
Employees registered to social security agency	0.00928***	0.00928***
	–4.22	–4.22
Child worker (age 10–17)	0.00441	0.00441
	–1.41	–1.41
Underemployment rate	0.00872	0.00872
	–0.91	–0.91

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	(1) Fixed Effect	(2) Random Effect
Non-agriculture informal sector employment	–0.0262***	–0.0262***
	(–3.90)	(–3.90)
Male workers in non-agriculture informal sector employment	–0.0169***	–0.0169***
	(–3.80)	(–3.80)
Female workers in non-agriculture informal sector employment	0.0142***	0.0142***
	–3.6	–3.6
Agriculture informal sector employment	–0.00498	–0.00498
	(–1.25)	(–1.25)
The 2019 year	–0.0231	–0.0231
	(–0.10)	(–0.10)
The 2020 year	–0.0831	0.132
	(–0.80)	–1.31
The 2021 year	0	0.215
	(.)	–1.59
Constant	4.786***	4.685***
	–7.9	–8.07
N	124	124
R-squared	0.774	0.775
Dfres	110	108
BIC	91.3	100.2

Note: Standard errors in parentheses: *** p<0.01, ** p<0.05, * p<0.1.
Source: Ministry of Manpower (Kementerian Ketenagakerjaan), processed by the country resource person.

Regression Model on Well-Being

An analysis of the well-being of workers as the dependent variable requires us to refer to Table 5. In this analysis, well-being is largely indicated by three variables: (1) availability of occupational health and safety design (OSH), (2) work accident rate (ACCIDENT), and (3) compliance rate of company reporting (COMPLIANCE). These three variables are assumed to be explained by independent variables as identified in the previous sections.

TABLE 6

SIGNIFICANT VARIABLES OF WELL-BEING.

Variables on Working Conditions	Positive	Negative
OSH	NAGRIM	PROD
ACCIDENT	ACCREDIT	
COMPLIANCE	PLAN	COMPREG
	NEET	AGREEMENT
	UNEMP	
	OSH	

Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

Based on Table 6 we can observe a more positive relationship among variables explaining the well-being of workers. Each variable describing working conditions has at least one significant positive relationship. These significant variables will be later used in constructing the models on well-being.

TABLE 7

SIMPLIFIED MODELS OF WELL-BEING IN INDONESIA.

Variables	(1) Occupational Health and Safety Design	(2) Work Accident Rate	(3) Compliance Rate of Company Reporting
Local manpower planning documents			0.177
			−0.122
NEET			0.586
			−0.436
Unemployment rates			1.937*
			−1.083
Occupational health and safety design			0.194***
			−0.057
Enacted company regulations			−0.171**
			−0.076
Collective bargaining agreement			−0.581**
			−0.283
Accredited training facility		0.096	
		−0.096	
Non-agriculture informal sector employment	0.755**		
	−0.304		
Productivity	0.029**		
	−0.013		
Constant	−17.125	−2.162	−10.24
	−10.703	−2.565	−11.267
Observations	128	127	125
R-squared	0.033	0.054	0.258

Note: Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

Table 7 depicts the combination of models on well-being in Indonesia. Model 1 refers to the availability of occupational health and safety design in a company as a dependent variable with two explanatory variables, i.e., (1) employment in the non-agriculture informal sector and (2) workers' productivity. The second model puts the work accident rate as an explained variable with scores on accredited training facilities as the only independent variable although this variable is not significant with a rather low coefficient of determination. Model 3 aims to explain the compliance rate of company reporting with six explanatory variables, though only four of them are considered significant, i.e., (1) unemployment rate, (2) availability of occupational health and safety design,

(3) companies registered to social security agency, and (4) collective bargaining agreement. Model 3 also shows the highest coefficient of determination compared to the previous two models.

Meanwhile, Table 8 displays a comprehensive list of variables explaining the well-being of the workforce in Indonesia. This list encompasses significant variables in the productivity model as discussed in the previous section. A broader set of variables which include significant explanatory variables in the model is expected to address one of the problem statements, namely, to formulate labor productivity policies promoting the well-being of workers. Therefore, this model aims to act as a bridge connecting the findings from the productivity model to the well-being model. Table 8 explains three models.

First, OSH in this complete model is explained significantly by companies that are registered with the social security agency. Second, the model explaining the work accident rate is seemingly influenced by two variables: employees registered with the social security agency and accredited training facilities. The third model puts the compliance rate of company reporting as a dependent variable which is significantly explained by a pair of independent variables, i.e., companies that are registered with the social security agency and NEET. Comparing Tables 10 and 11, we can see that simplified models of well-being show larger numbers of significant independent variables. Fewer significant explanatory variables in comprehensive models lead to the conjecture or early hypothesis that the link between productivity and well-being is not that strong.

TABLE 8

COMPREHENSIVE MODELS OF WELL-BEING IN INDONESIA.

Variables	(1) OSH	(2) Accident	(3) Compliance
Log productivity	−2.833	0.29	−5.885
	−10.23	−3.18	−4.79
Unemployment rates	−1.864	0.856	−1.353
	−2.03	−0.61	−1.25
Formal sector employment	0.381	−0.054	0.039
	−0.53	−0.16	−0.26
Enacted company regulations	0.013	0.04	−0.177
	−0.15	−0.04	−0.11
Proportion of hourly wage to local minimum wage	−0.197	−0.02	0.092
	−0.16	−0.05	−0.07
Companies registered to social security agency	0.382***	−0.025	0.447***
	−0.1	−0.03	−0.05
Employees registered to social security agency	−0.006	−0.161*	−0.002
	−0.24	−0.08	−0.13
Child worker (age 10–17)	−0.017	0.004	0.201
	−0.33	−0.1	−0.15
Underemployment rate	−0.236	−0.025	0.049
	−0.28	−0.09	−0.13

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Variables	(1) OSH	(2) Accident	(3) Compliance
Non-agriculture informal sector employment	0.299	–0.154	–0.248
	–0.61	–0.19	–0.29
Male workers in non-agriculture informal sector employment	–0.009	0.032	–0.36
	–0.49	–0.15	–0.23
Female workers in non-agriculture informal sector employment	0.195	0.012	0.24
	–0.42	–0.13	–0.2
Agriculture informal sector employment	0.239	–0.226	–0.127
	–0.42	–0.13	–0.2
Accredited training facility		0.126**	
		–0.04	
Local manpower planning documents			0.197
			–0.13
NEET			1.092*
			–0.46
Occupational Health & Safety Design			0.028
			–0.05
Collective bargaining agreement			–0.249
			–0.37
Constant	–7.642	23.639	12.008
	–65.73	–20.08	–35.41

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1
Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

Composite Well-being Indicators

To ensure comparability and adherence to the popular consensus on the definition of well-being, this section aims to find relevant variables and components of well-being. Below is the list of indicators based on categories and dimensions representing quality of employment. It consists of seven dimensions and multiple variables which are ostensibly comparable across countries.

Using these dimensions, from Table 9 we can see that only six variables and five out of seven dimensions are available. These six variables will be the basis for index construction. Although seemingly insufficient at the outset, these variables are expected to convey important information. An employee well-being index derived from this exercise will give an early indication of employees' current level of well-being and its dynamics. Table 9 also shows values at the national level for the most recent available data.

The first dimension, which pertains to safety and ethics of employment, as indicated by the work accident rate, shows a worrying trend. Meanwhile, the second dimension representing income and benefits from employment (proxied with indicator: proportion of local minimum wage to hourly wage), indicates a declining trend from 2018 to 2021. This decline in proportion is likely attributable to the economic contraction following the COVID-19 pandemic.

The fourth dimension, namely, security of employment and social protection, is represented by two variables: (1) the percentage of workers who are covered under any social security or protection scheme, and (2) the share of informal workers. Both variables exhibit fluctuating yet stagnating trends at relatively low levels, indicating a serious issue with employment insurance coverage and attempts at formalization.

The fifth dimension, focusing on social dialogue, is indicated by the share of employees covered by collective wage bargaining, which shows an increasing trend. This increase indicates improvement in industrial relations. Lastly, the sixth dimension is represented by the share of employed individuals who have undergone job training in the last three to five years, and it shows fluctuating figures.

Dimensions that are not available in Table 12 are: (1) working hours, and balancing work and non-working life, and (2) workplace relationships and work motivation.

TABLE 9

INDICATORS FOR DIMENSION OF QUALITY OF EMPLOYMENT INDEX.

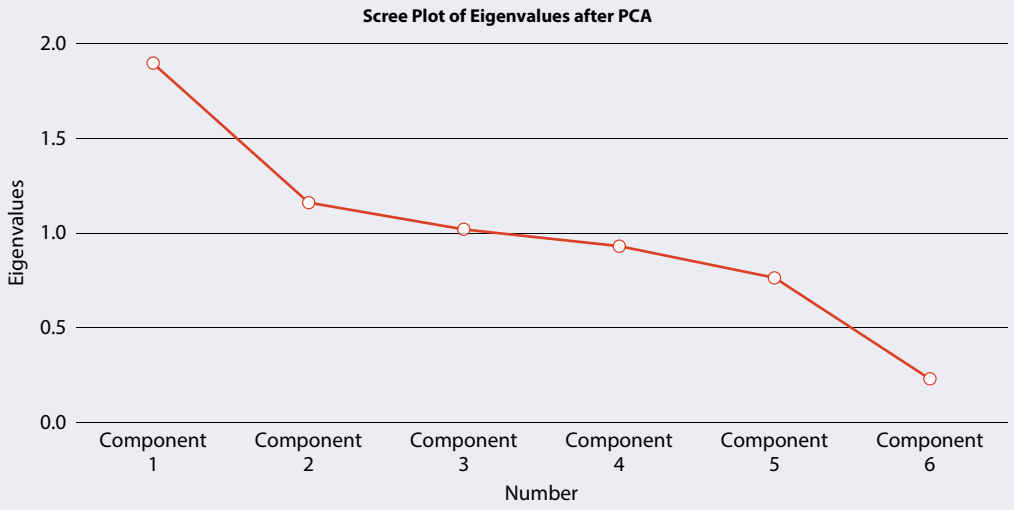
No.	Dimensions	Variables	Values at National Level					Values for Quality of Employment Index				
			2018	2019	2020	2021	(2018–21)	2018	2019	2020	2021	(2018–21)
1	Safety and ethics of employment	Work Accident Rate	1.54	1.55	1.55	1.55	1.52	0.985	0.985	0.985	0.985	0.985
2	Income and benefits from employment	Proportion of Local Minimum Wage to hourly wage	0.900	0.899	0.898	0.897	0.903	0.900	0.899	0.898	0.897	0.903
3	Working hours and balancing work and non-working life	Not available										
4	Security of employment and social protection	Percentage of workers who are covered under any social security/ protection schemes	24.8	24.7	24.8	24.8	24.71	0.248	0.247	0.248	0.248	0.247
		The share of informal workers	58.3	58.3	58.3	58.3	58.3					
5	Social dialogue	Share of employees covered by collective wage bargaining	7.08	7.09	7.15	7.12	7.07	0.071	0.071	0.072	0.071	0.071
6	Skills development and training	Share of employed persons who received job training in the last 3 or 5 years	10.17	10.16	10.23	10.17	10.09	0.102	0.102	0.102	0.102	0.101
7	Workplace relationships and work motivation	Not available										
Quality of Employment Index		Based on 5 dimensions						0.461	0.461	0.461	0.461	0.461

Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

In this paper, an exercise is presented for the development of composite well-being indicators based on principal component analysis (PCA). In principle, the objective of running a PCA in this exercise is to reduce the dimensionality of a dataset while minimizing the loss of information. In developing this approach, six available variables as presented in Table 12 are explored to identify what components are considered statistically significant. A unique index is then generated both at national and provincial levels to measure the overall well-being of workers.

FIGURE 12

SCREE PLOT OF EIGENVALUES.



Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

The most pivotal step in PCA is determining the number of principal components (PCs). The more variables that load onto a particular component (that is, have a high correlation with the component), the more important the factor is in summarizing the data.

An eigenvalue is an index that indicates how good a component is as a summary of the data. An eigenvalue of 1.0 means that the factor contains the same amount of information as a single variable. The Kaiser-Guttman rule is the most commonly used approach to selecting the number of components and it is the default in most statistical programs. This rule states that components based on eigenvalues greater than 1 should be retained. The rationale behind this criterion is that, since the sum of the eigenvalues is 'p', an eigenvalue exceeding 1 denotes an "above average" component in terms of information retention.

Using the Kaiser-Guttman rule, the scree plot (Figure 12) shows the number of eigenvalues from the example shown on the main principal components analysis page, ordered from the biggest to the smallest. Some researchers conclude that the correct number of components is the number that appears before the elbow (in this context, two).

Table 10 displays the index resulting from the PCA analysis. There is a clear increasing trend from 2018 to 2020, before the decline in 2021. The dynamics of this well-being index imply that there has been an improvement in terms of employee well-being at the national level. A significant drop

in the index in 2021 is seemingly associated with the COVID-19 pandemic which possibly reduces workers' satisfaction and well-being. The increase from 2018 to 2019 and from 2019 to 2020 is of different degrees. While the former shows a 16-point increase, the latter shows a 15-point increase. On average, from 2018 to 2021, the index of employment well-being is negative which indicates that well-being quality in 2021 is not in any better position than in 2018.

TABLE 10

QUALITY OF EMPLOYMENT INDEX (NATIONAL).

Years	Quality of Employment Index
2018	0.038
2019	0.054
2020	0.069
2021	–0.217
2018–21 (average)	–0.014

Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

The index at the provincial level (Table 11) is the elaboration result from the index calculated at the national level. At the outset, Table 11 displays various trends of the index among provinces. During 2018–21, as many as 23 provinces had negative well-being indexes while other 11 provinces managed to record positive figures. Nearly all provinces show a declining trend in the well-being index between 2018 and 2021. Provinces with a positive index are located mostly in Java, the most developed island in the country. Provinces outside Java, such as Lampung, Nusa Tenggara Barat, and Nusa Tenggara Timur, recorded the lowest well-being index.

TABLE 11

QUALITY OF EMPLOYMENT INDEX (PROVINCES).

Provinces	2018–21	Years			
		2018	2019	2020	2021
Aceh	–0.694	–0.584	–0.935	–0.564	n.a.
Bali	–0.023	0.551	0.301	–0.445	–0.498
Banten	1.632	1.600	2.239	1.659	1.030
Bengkulu	–0.448	–0.167	–0.651	–0.527	n.a.
DI Yogyakarta	0.279	0.084	0.287	0.754	–0.009
DKI Jakarta	2.289	2.159	2.636	2.568	1.793
Gorontalo	–0.704	–0.528	–0.792	–0.626	–0.869
Jambi	–0.347	–0.233	–0.240	–0.544	–0.373
Jawa Barat	1.911	1.838	2.709	1.843	1.253
Jawa Tengah	–0.178	–0.078	–0.196	0.206	–0.644
Jawa Timur	–0.130	–0.045	–0.109	–0.125	–0.242
Kalimantan Barat	0.052	–0.189	–0.284	–0.157	0.836
Kalimantan Selatan	–0.201	–0.158	–0.128	0.073	–0.594

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Provinces	2018–21	Years			
		2018	2019	2020	2021
Kalimantan Tengah	–0.257	–0.033	–0.082	0.183	–1.098
Kalimantan Timur	1.142	1.473	1.114	1.349	0.632
Kalimantan Utara	0.385	0.261	0.630	0.265	n.a.
Kep Bangka Belitung	0.358	0.541	0.497	0.859	–0.467
Kep Riau	2.062	1.757	2.033	3.015	1.443
Lampung	–1.183	–1.005	–0.983	–1.179	–1.566
Maluku	–0.372	–0.196	–0.371	–0.220	–0.701
Maluku Utara	–0.608	–0.264	–0.829	–0.732	n.a.
Nusa Tenggara Barat	–1.294	–1.303	–1.147	–1.286	–1.440
Nusa Tenggara Timur	–1.009	–0.952	–1.072	–1.003	n.a.
Papua	–0.055	0.154	0.042	–0.361	n.a.
Papua Barat	0.081	0.027	0.003	0.215	n.a.
Riau	0.436	0.021	–0.015	1.375	0.364
Sulawesi Barat	–1.163	–0.827	n.a.	–1.231	–1.431
Sulawesi Selatan	–0.772	–0.579	–0.771	–0.716	–1.024
Sulawesi Tengah	–0.638	–0.679	–0.426	–0.810	n.a.
Sulawesi Tenggara	–0.799	–0.595	–0.636	–1.165	n.a.
Sulawesi Utara	–0.203	0.027	–0.313	–0.099	–0.429
Sumatera Barat	–0.164	–0.366	–0.012	0.202	–0.480
Sumatera Selatan	–0.396	–0.253	–0.409	–0.579	–0.345
Sumatera Utara	–0.223	–0.152	–0.312	0.137	–0.563

Source: Ministry of Manpower (Kementerian Ketenagakerjaan); processed by the country resource person.

Conclusion

This study investigates variables that can best explain factors relating to productivity in Indonesia. Using the dataset from the MOM which is currently used in the process of constructing official IPK, several correlation analyses can be undertaken. The results of productivity analysis show that only half of all indicators can be considered significant in explaining productivity. The COVID-19 pandemic has not displayed any impact yet on productivity. Similarly, an analysis of workers' well-being in this study leads to two models, namely simplified and comprehensive, with more significant variables on the former rather than the latter. From this, it can be inferred that there has been a weak link between productivity and well-being, although it certainly entails further study to identify the causes. In apparent contrast with the findings on the productivity index, there is possibly a strong correlation between COVID-19 and the quality of employment. The PCA results for analysis on well-being show that there is a declining trend of the well-being index from 2018 to 2021. About the quality of the employment index computed using the PCA method, there had been an increasing trend from 2018 to 2020 before it plunged in 2021. In terms of distribution,

there is a concentration of provinces with a positive increase in Java island while most provinces outside Java show fluctuating if not negative trends.

While the basis for constructing an index suitable for the Indonesian context remains limited, the rationale for pursuing index development is well-founded. Several indicators find support in previous research on productivity within the context of Indonesia. It, therefore, becomes imperative to explore and identify meaningful factors before constructing an employment index. Also mentioned in the discussion for index construction is the principle of measurement which encompasses normative values such as 'accurate', 'unbiased', and 'sensitive'. The construction of such indices entails reliable and objective data sources. In addition, the attempt to measure employment programs indicated by the index requires an independent stakeholder to undertake data collection as well as its observations.

Currently, the development of IPK is still in its inception phase. The limitation of this index has already been observed: it cannot provide the justification needed to provide a calculation of resources. The current index is based largely on the SDG targets which consist of 25 indicators that are seemingly comprehensive at the outset but will be challenging at the further stage in terms of collection and verification, particularly because the collection requires immense work from local offices. Further attempts to increase the robustness of the index need to be undertaken. Law Number 11 Year 2020 on Job Creation underpins the context that policies surrounding employment creation have become an utmost priority. Therefore, the construction of a meaningful index will play a pivotal role, mainly to ensure the performance of factors relevant to productivity.

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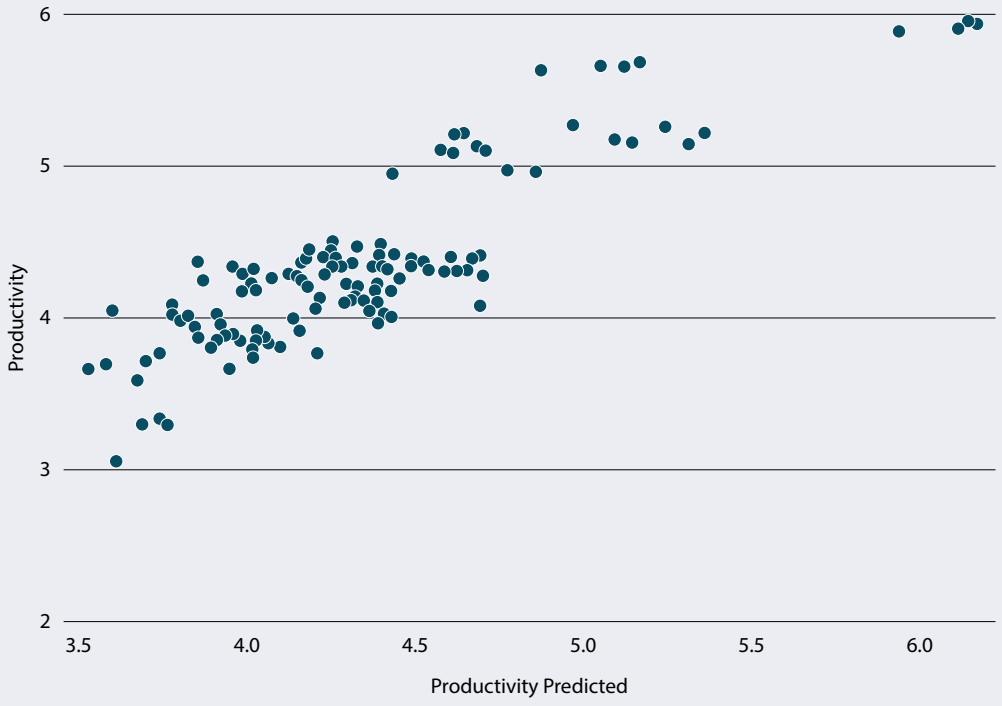
Annexure 1

FIGURE 13

SCATTER PLOT OF PRODUCTIVITY MODEL.



Source: Ministry of Manpower of Indonesia (2018–21); computed by Dharendra Wardhana.

The econometric literature shares insight into the determinants of model quality, which depends on at least three factors:

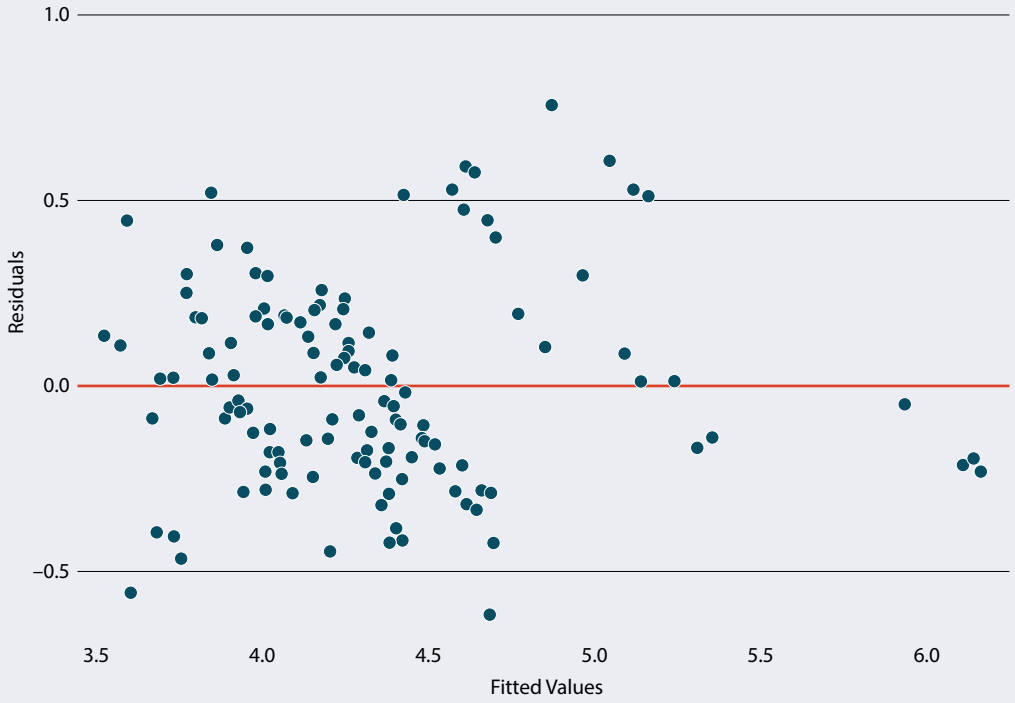
1. The model's ability to accurately predict the dependent variable, in this case, productivity.
2. The degree of linearity exhibited by the model.
3. The behavior of the residuals.

Considering these factors, one would anticipate observing a 45-degree pattern in the data. In Figure 12, the Y-axis (Log of Productivity) represents the observed data, while the X-axis represents the predicted data. Notably, Figure 12 shows that Model 5 seems to be doing good in predicting productivity.

Another important assumption in regression analysis is that the variance in the residuals must be homoscedastic or constant. This means that the spread of residuals should not vary for lower or higher values of X (which corresponds to the fitted values of Y, since Y=Xb). Figure 13 shows that residuals seem to exhibit a slight increase in spread at higher levels of Yhat. The consensus regarding the rule of thumb for assessing residual homoscedasticity dictates that there should be no discernible pattern in the residuals.

FIGURE 14

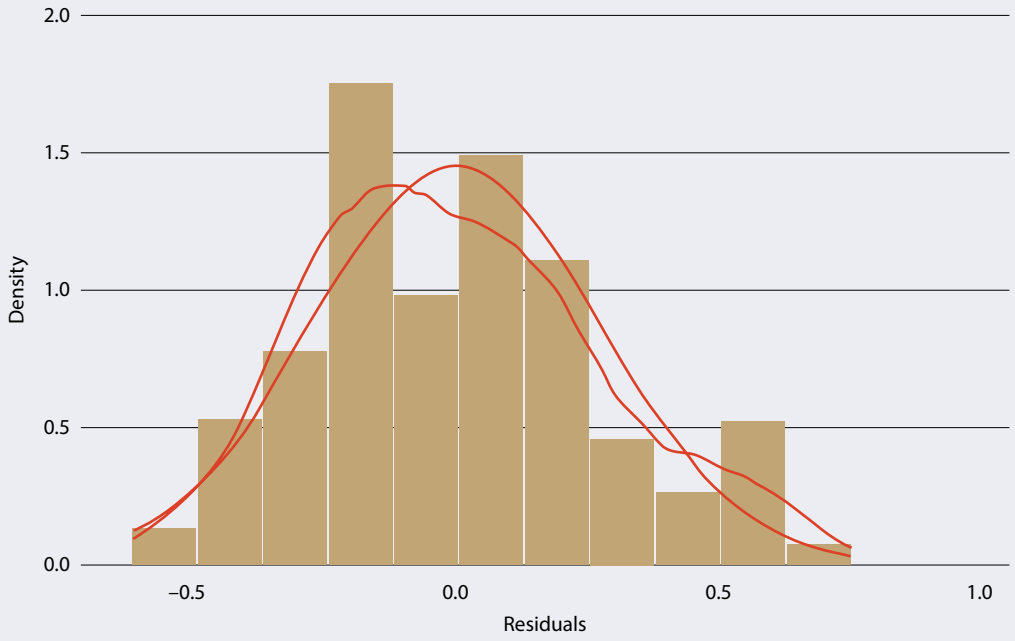
RESIDUALS VS. PREDICTED VALUES OF PRODUCTIVITY.



Source: Ministry of Manpower of Indonesia (2018–21); Computed by Dharendra Wardhana.

FIGURE 15

KERNEL DENSITY CURVE AND HISTOGRAM OF PRODUCTIVITY.



Source: Ministry of Manpower of Indonesia (2018–21); Computed by Dharendra Wardhana.

An additional important assumption of the regression model (OLS) that impacts the validity of all tests (p, t, and F) is that residuals behave 'normal'. Residuals are the difference between the observed values (Y) and the predicted values. In practice, normality does not represent much of a problem when dealing with big samples. Figure 14 shows that the kernel density estimate curve resembles normal distribution which adds to the confidence on Model 5.

Annexure 2

TABLE 12

SELECTED STUDIES OF LABOR PRODUCTIVITY IN INDONESIA (1990–2021).

Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Pre-Reformasi Period (1990–1998)						
Szirmai A. Real output and labour productivity in Indonesian manufacturing, 1975–90. Bulletin of Indonesian Economic Studies 1994; 30(2), 49–90. https://doi.org/10.1080/00074919412331336597	1980–90	Indonesian 1987 Survey of Large and Medium Scale Manufacturing (Statistik Industri) US 1987 Census of Manufactures	Total Gross Value of Output in Branches of Manufacturing Gross Value Added Employment Purchasing Power Parity	Descriptive analysis with detailed tabulations, trends, and composition effects for each indicator observed in this study.	Indonesian manufacturing productivity is 38% of that in Korea and 21% of that in Australia. In terms of binary comparisons of labor productivity per person, Indonesia is somewhat ahead of India but has not yet attained productivity levels comparable with those of South Korea in the early 1970s.	
Lim D. Forecasting employment growth in Indonesia. Bulletin of Indonesian Economic Studies 1997; 33(3), 111–119. https://doi.org/10.1080/00074919712331337255	1971–90	Statistik Industri from BPS	Employment-output elasticity	Heuristic regression approach using the Koyck-Nerlove adjustment mechanism	The results show great variation in each sector's elasticities over three periods (1971–80, 1980–85, and 1985–90). Also, there are reversals in the ranking of the sectors between 1971–80 and 1980–85 and between 1980–85 and 1985–90. These variations in each sector's elasticity over various periods cannot be due to technological changes because, in many of the sectors, the values of the elasticity had increased. A more plausible explanation is the risk of error inherent in using the estimation method.	There are many practical problems in estimating the elasticity. Moreover, the elasticity has only limited value for forecasting employment growth in Indonesia and other economies.

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Sjöholm F. Productivity growth in Indonesia: The role of regional characteristics and direct foreign investment. Economic Development and Cultural Change 1999; 47(3), 558–584. https://doi.org/10.1086/452419	Between 1980 and 1991	Statistics Indonesia (BPS)	1. Growth in employment 2. Investment 3. Specialization 4. Variety 5. Competition Direct Foreign Investment (DFI)	Ordinary least squares.	The coefficient for Specialization is not statistically significant at the province level but, again, negative and significant at the district level. A negative but small effect on employment from specialization. A diversified industry structure at a district level, then, increases productivity growth. The result therefore supports Jacobs's argument of inter-industry knowledge flows and matches Glaeser et al., who found diversity to have a positive effect on growth in employment. Competition has a positive coefficient at the national and province level but a negative coefficient at the district level. None of the coefficients is significant. Therefore, it can be concluded that competition does not affect productivity growth.	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Rama M. The Consequences of Doubling the Minimum Wage: The Case of Indonesia. Industrial and Labor Relations Review 2001; 54(4), 864. https://doi.org/10.2307/2696117	1988–95	National account Labor force survey (Sakernas) year 1993	Minimum wage Average wage Productivity	Descriptive analysis with detailed tabulations for each indicator observed in this study. Regression analysis involving data aggregated at the provincial level is used, in turn, to estimate the elasticity of wage earnings and urban wage employment concerning the minimum wage.	Minimum wage effects on productivity and average wage earnings are quite modest in Indonesia. Wage distributions display only minor clusters of observations at or around the minimum wage, and for some provinces and groups of workers, these clusters are hardly visible. However, this modest effect on aggregate wage employment hides considerable disparities across firms. Employment in small firms might decrease substantially, while large firms may see their employment increase. Consequently, in the short run workers in large firms would gain higher wages without running an increased risk of losing their jobs. These workers are the obvious winners of the minimum wage hike.	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Takii S., Ramstetter E.D. Multinational presence and labour productivity differentials in Indonesian manufacturing, 1975–2001. Bulletin of Indonesian Economic Studies 2005; 41(2), 221–242. https://doi.org/10.1080/00074910500117040	1975–2001	Macroeconomic indicators provided by BPS industrial survey data. FDI data from Investment Coordinating Board (BKPM).	MNC Shares of Employment in Large	Descriptive analysis with detailed tabulations for each indicator observed in this study.	Employment and production (value added) of MNCs increased steadily through the early 1990s and the rates of increase then accelerated markedly, both absolutely and relative to Indonesian totals, during the rapid economic growth of the early and mid-1990s. These increases were concentrated in the machinery industries and majority-foreign MNCs and continued through and after the crisis of 1997–98, despite apparently large withdrawals of inward FDI in 1998 and subsequent years. MNCs also tended to account for much larger shares of manufacturing production than of manufacturing employment. Correspondingly, MNCs generally had much higher average labor productivity than local plants, and we found these differentials to persist in about three-quarters of the cases examined, after accounting for plant-level variation in electricity consumption per worker, size, and vintage.	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Post-Reformasi Period (1999–date)						
Manning C. Indonesia's Achilles Heel in the first decade of the 2000s: Employment and Labour Productivity in Manufacturing. Masyarakat Indonesia 2013; 39(2), 437–458.	2012	Employment and Productivity Survey, Bandung 2012	1. Growth in manufacturing output and productivity. 2. Output per worker. 3. Factors that influence productivity: high levels of absenteeism, labor turnover, and industrial conflict (including strikes), working capital, floods, shortages of skilled labor.	Descriptive, only provides stylist facts related to the issue of employment and labor productivity in the manufacturing sector.	This article takes up some of the productivity and employment relationships outside agriculture that are critical to poverty alleviation, focusing especially on labor regulations, contracts, and management systems. Tight labor regulations and an aggressive minimum wage policy supported by the government have contributed to labor management systems that threaten improvements in labor productivity in the medium term in these industries. Some of the Labor Law clauses, especially regarding severance pay, need to be set more in line with international practice. The level of minimum wages should eventually represent a genuine safety, about existing market wages, allowing firms to adjust wages in relation to productivity.	This study is only limited to the case study of a small sample of manufacturing enterprises in Bandung region, West Java in the year 2012.

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Tadjoeddin M.Z. Earnings, productivity and inequality in Indonesia. Economic and Labour Relations Review 2016; 27(2), 248–271. https://doi.org/10.1177/1035304616643452	2001–12	SAKERNAS (labor force survey) for indicators of productivity. SUSENAS (National Household Social Welfare Survey) for estimating Gini coefficients.	Earnings is defined as the price of labor and productivity as GDP per employed population.	The three variables (earnings, productivity, and employment) are brought together in a two-step regression process for an employment function. The model is estimated for all nine sectors in the economy, namely, (1) agriculture, fisheries and forestry; (2) mining and quarrying; (3) manufacturing; (4) electricity, gas and water; (5) construction; (6) trade, hotel and restaurant; (7) transportation and communication; (8) finance; and (9) services. Since we have panel data observations with province-year as the unit of analysis, each regression is estimated using the system generalized method of moment (GMM) regression, where by default the lag-dependent variable is included as an independent variable in each regression.	This article argues that the declining income share of labor, or declining wage-productivity ratio, could help explain the continuous rise in economic inequality in Indonesia since the late 1990s Asian Financial Crisis. Support for the de-linking hypotheses between earnings and productivity is further found for the overall economy and across sectors, as can be seen from the first step regressions. While the productivity coefficient is insignificantly negative for the overall economy, the situation across sectors is not homogeneous. In five sectors, the productivity coefficients are significantly positive but the magnitude is negligible. Therefore, in most cases, productivity has no meaningful relationship with real earnings, pointing to a situation where the two are not moving in a similar direction or are doing very marginally.	Not mentioned

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Tadjoeddin M.Z., Mercer-Blackman V. Urbanization and Labor Productivity in Indonesia. In: Ginting E., Manning C., Taniguchi K., eds., Indonesia: Enhancing Productivity Through Quality Jobs. Asian Development Bank 2018; pp. 130–169. https://doi.org/http://doi.org/10.22617/TCS189213-2	2007–14	A balanced panel dataset of 497 districts for 8 years for when the data are available from the National Labor Force Survey, known in Indonesia as SAKERNAS	Descriptive analysis Modeling Productivity and Wages regarding the efficiency wage theory (Katz, 1986) and the effect of education on productivity (Black and Lynch, 1996)	A model with two equations was developed for productivity and wages with the district or sub-provincial unit as the unit of observation. This study is probably the first to model productivity, wages, and employment at the district level in Indonesia. First, productivity is modeled as a function of wages, education, and population density. Second, wages are modeled as the function of productivity (PROD), education (EDU), unemployment rate (UE), and population density (POPDEN) to denote the agglomeration externality.	Cities tend to outperform their rural district counterparts in terms of productivity gains from higher wages and more schooling. However, it is interesting to see variations in the magnitude of coefficients across district aggregations based on different levels of urbanization. Provincial capitals and medium-sized cities show strong positive and significant effects on wages and schooling, consistent with good governance (agglomeration is not significant).	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Bryan G., Morten M. The aggregate productivity effects of internal migration: Evidence from Indonesia. Journal of Political Economy 2019; 127(5), 2229–2268. https://doi.org/10.1086/701810	1995, 2011, 2012.	1995 SUPAS (Intercensal Population Survey) and from the 2011 and 2012 SUSENAS (National Socioeconomic Survey) supplemented by the Indonesia Family Life Survey (IFLS) to understand how key parameter estimates are affected by the limitations of the SUPAS/SUSENAS data. 2005 and 2011 Village Potential Statistics (PODES) datasets are used to get measures of amenity.	1. The share of people born in O who move to D. 2. Straight distance between Regency O and Regency D. 3. wages 4. measured amenity in destination d at time	Running linear regression for five different models related to migration in Indonesia: 1. Gravity: Movement Costs Affect Location Choice 2. (Movement Costs Create Productivity Wedges 3. Selection 4. Movement Costs Reduce Productivity by Reducing Selection 5. Compensating Wage Differentials	This study aims to undertake an empirical analysis of the relationship between migration and productivity. Large spatial wage gaps and recent experimental evidence suggest there may be important productivity gains from encouraging internal migration in developing countries.	Future research could aim to deepen our understanding of the mechanisms through which migration affects productivity. Theoretical and macroeconomic research could concentrate on the dynamic effects of encouraging migration. Microeconomic experimental evidence on the extent and nature of selection among internal migrants, as well as the strength of comparative advantage effects, would also add to our understanding.

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Dua P., Garg N.K. Determinants of labour productivity: Comparison between developing and developed countries of Asia-Pacific. Pacific Economic Review 2019; 24(5), pp. 686–704. https://doi.org/10.1111/1468-0106.12294	1980–2014	The paper uses data from seven developed nations of the Asia-Pacific region (Hong Kong (SAR of China), Japan, Korea, Singapore, Taiwan (China), Australia and New Zealand) and the eight largest emerging and developing economies (Bangladesh China, India, Indonesia, Malaysia, Pakistan, the Philippines and Thailand)	Labor productivity defined as GDP per unit of total employment is taken as the dependent variable	Using a Cobb–Douglas production function for an economy with two inputs, labor, and capital and homogeneity of degree 1, as follows and then extend the model to incorporate other potential determinants, with elaboration on the following factors: inflation, financial development, quality of institution, macroeconomic factors (both domestic and external), and share of agriculture in GDP. The study uses techniques of panel cointegration and group-mean FMOLS to estimate the model.	The econometric results of the study indicate that capital deepening, human capital, domestic technology, the share of agriculture in GDP, government size, quality of institutions, and openness are significant determinants of productivity of both the initially upper-middle-income as well as initially lower-middle-income economies in the developing Asia-Pacific region. The results further indicate that capital deepening, human capital, domestic technology or knowledge base, government size, quality of institutions, and openness are important determinants of the productivity of developed Asia-Pacific economies.	Not mentioned but it seems that indicators in the Human Capital (HK) variable, i.e., Gross enrolment in secondary education and Gross enrolment in tertiary education probably do not fully reflect the real situation.

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Tadjoeddin M.Z., Chowdhury A. An Overview of Employment Situation. In: Tadjoeddin M.Z., Chowdhury A., eds., Employment and Re-Industrialisation in Post-Soeharto Indonesia. London: Palgrave Macmillan 2019; pp. 39–71. https://doi.org/10.1057/978-1-137-50566-8_2	1990–2016	Sakernas	Official indicators revolving around employment and unemployment generated from Sakernas.	Descriptive analysis resulting in stylist facts.	Unemployment rate is not a good indicator of development progress in poor or developing countries such as Indonesia in the absence of decent social security provisions. Unemployment reduction does not automatically correlate with an improvement in the quality of employment or reduction of poverty. Therefore, attention should be focused more towards improving the quality of employment rather than mere unemployment reduction. Expansion of regular (formal sector) employment or the industrial base would not be sufficient to address socio-economic development deficits, such as rising inequality, vulnerability, and working poverty. Industrial revitalization strategies must include policies to deal with the increasing trends in casualization and incidence of low pay, especially in the industrial sector.	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Wihardja M.M., Cunningham W. Pathways to Middle-Class Jobs in Indonesia. Washington: World Bank 2021. https://doi.org/10.1596/35848	Various years starting from 1990 to 2019	• National Labor Force Survey (Survei Angkatan Kerja Nasional; Sakernas), 2001–August 2019 • Survey of Medium-Sized and Large Manufacturing Firms (Survei Industri Besar/ Sedang; Manufacturing Survey), 1990–2015 • Economic Census, 2006 and 2016 • Indonesia Family Life Survey (Survei Aspek Kehidupan Rumah Tangga Indonesia), 2000, 2007, and 2014 • National Socioeconomic Survey (Survei Sosial Ekonomi Nasional; Susenas), 2001–March 2018	Employment indicators and classifications	Descriptive analysis resulting in stylist facts.	Indonesia's economy has failed to deliver the jobs and labor income the country needs if it is to achieve its middle-class aspirations. As argued in this report, this is partly due to a disrupted structural transformation that resulted in the entrenchment of large and old firms, the growth of low-value-added services jobs, and a low-skilled labor force. To get Indonesia back on track, this report proposes a three-pronged strategy. First, Indonesia could promote productivity growth across the board, not least in sectors with low levels of value added. Second, Indonesia could facilitate a more decisive shift in economic activity and workers toward more productive and higher-paying sectors, firms, and jobs. Third, Indonesia could build a workforce that has the necessary skills to take on the new jobs in higher value-added and internationally competitive sectors.	

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Full Reference	Years Covered	Dataset	Indicators	Methodology	Main Findings	Limitations Recognized by Authors
Wihardja M.M., Pradana A.T. Examining the Drivers of Changes in Mean Earning and Earning Inequality in Indonesia. Economics Working Paper No. 2022–2; 2022.	Pooled dataset is built from 2001, 2002, August 2011, and August 2018 data	Sakernas from BPS	Wage Individual characteristics: educational attainment, age, job status, gender, location, economic sector, and occupation.	Linear regression following the approach of the decomposition method developed by Blinder (1973) and Oaxaca (1973)	Between 2001/2 and 2018, there was an increase in workers' education level, average age, job quality, and mean earnings. As more women participate in the labor market and women earn lower wages than men, higher female labor force participation lowers mean earning. For the overall period, the decline in educational returns at all levels of education contributed negatively to earnings. The Gini index increased during this period, driven by the education distribution effect and spatial location premium effect. Albeit educational improvement increased mean earning, it was inequality-increasing due to the "paradox of progress". The narrowing wage premia across districts contributed to the increase in mean earnings. There is a need for complementary policies to attenuate the inequality-increasing education and spatial location effects as well as the gender wage gap.	There are some limitations to this paper and the methodology used in this paper. First, the RIF decomposition does not establish a causality relationship. Second, the Sakernas data only provides earning data for paid workers namely employees, casual workers, and self-employed. Third, interpretations of the RIF quantile regression must be made in a global sense. Hence, results from the RIF quantile regression are often difficult or not possible to interpret at the quantile level.

PAKISTAN

Introduction

The importance of generating employment that caters to society's demands ranks as one of the top national priorities of governments aiming to achieve economic prosperity for their citizens and the nation as a whole. However, this commitment alone falls short of ensuring the sustained prosperity of a nation. International agencies, institutions, and scholars are continuously debating on this subject, unearthing intriguing insights. Notably, the ILO has played a pivotal role in reinvigorating this belief, which has now gained widespread recognition worldwide. This concept has also been enshrined in the UN 2030 Agenda Sustainable Development.

These efforts have led to the recognition and understanding of productive employment and quality of employment, leading to the formulation of the concept of 'decent work' as a key policy objective. Decent work goes beyond merely having a job; it entails the quality of employment that provides a sufficient income to keep workers and their families out of poverty. It encompasses fundamental rights at work and a voice in decisions that impact their lives and livelihoods. It also includes the security needed during times of adversity. All these elements constitute the core components of a decent job, which in turn upholds the dignity of work, fosters a sense of self-worth, and ensures family stability [1].

Productive employment serves as the key link between economic development and poverty reduction, a principle firmly established in the UN 2030 Agenda for SDGs [2]. The attainment of fully productive decent employment is reflected in SDG 8, titled 'Decent Work and Economic Growth'. Decent work lies at the core of global, regional, national, and local strategies for advancing economic and social progress. It plays a central role in poverty reduction and is essential for achieving equitable and inclusive development.

Green and decent jobs hold a pivotal position for sustainable development and resource productivity. They constitute a response to the pressing global challenges of environmental protection, economic development, and social inclusion. Such jobs create decent employment opportunities, enhance resource efficiency, and build low-carbon, sustainable societies. The UN 2030 agenda for sustainable development aims to eradicate extreme poverty for all individuals everywhere, a threshold currently measured at USD2.15 per person per day as per the World Bank: Fact Sheet 2022.

Context for Pakistan

From the country's perspective, Pakistan is committed to achieving a prosperous, inclusive, resilient, and sustainable society, despite facing a challenging environment marked by political instability and economic disparities. The availability of necessary infrastructure and governmental support is a pre-requisite to create opportunities for the people to access decent and productive employment, while also ensuring freedom, equity, security, and human dignity. In pursuit of these goals, Pakistan has partnered with international organizations, such as ILO, to sustain its efforts to eradicate poverty and gain stability.

Pakistan has been an important and active member of the ILO since 1947, and the ILO Office was established in the country in 1970. To date, Pakistan has ratified 36 ILO Conventions, including all eight Fundamental Conventions [3]. Pakistan's tripartite delegation comprises representatives from the government through the Ministry of Labor, Manpower, and Overseas Pakistanis, as well as Employers' Associations, and the Workers' Federations. This collaborative approach underscores Pakistan's commitment to addressing labor and employment issues through a multifaceted approach involving all relevant stakeholders.

Productive Employment

Employment in general is considered as having paid work, while the concept of productive employment entails a broader concept. According to the ILO, productive employment refers to paid work that yields a sufficient income for workers and their dependents, enabling them to maintain a standard of living above the poverty line, the estimated minimum level of income required to meet the basic necessities of life [4]. In essence, productive employment goes beyond mere job availability and focuses on ensuring that work provides individuals and their families with a decent standard of living.

According to the information from the World Bank, the new global poverty lines and corresponding poverty data are now presented in 2017 PPP prices, as compared to the 2011 PPP used in earlier editions. These new global poverty lines, which are set at USD2.15, USD3.65, and USD6.85, reflect the typical national poverty lines in low-income, lower-middle-income, and upper-middle-income countries when adjusted to 2017 price levels [5].

Hence, individuals living below the defined poverty line are categorized as living in extreme poverty. Therefore, it can be affirmed that productive employment refers to work that provides the workers and their dependents a wage not less than USD2.15 per day.

Pakistan is a collectivist society, differing from an individualist one, and therefore, its culture is deeply rooted in joint family systems. In contrast to Western societies, where each individual in the family earns for their own needs, in Pakistan, it is more common for the male members of the family, be it the father, husband, or son, to serve as the primary bread earners for the entire family. The division of a single person's income among multiple dependents is also the main reason for the increasing poverty levels and the decline in per capita income in the country.

In Pakistan, the official national poverty rates are calculated by the Planning Commission using the data from the Household Income and Expenditure Survey, which is conducted by the Pakistan Bureau of Statistics every alternate year. The Planning Commission, in line with the recommendations of the expert groups and international best practices, has adopted a new poverty line based on the Cost of Basic Needs (CBN) approach. This approach focuses on the consumption patterns of households within the reference group. According to the most recent poverty headcount based on the 2018–19 Household Integrated Economic Survey (HIES), approximately 21.9% of the population was living below the poverty line of PKR3,030 (USD13) per person, per month [6].

The CBN poverty line, which was estimated using data from the 2013–14 HIES, was set at PKR 3,030 per person per month, equivalent to USD13 at that time. These figures were updated to PKR3,741 for urban areas and PKR3,769 for rural areas in 2018–19 to account for changes in

prices. Based on these adjusted figures, the national poverty headcount rate stood at 21.9% in 2018–19, with urban and rural rates at 10.9% and 28.2%, respectively [7].

Over the years, Pakistan has witnessed a decline in its poverty headcount rate from 31% in 2001 to 4% in 2018, as measured against the international poverty rate of USD1.90 PPP per day in 2011. This decline was primarily driven by the expansion of off-farm economic opportunities and an increase in out-migration and associated remittances [7]. However, during 2018–19 the country experienced a macroeconomic crisis, leading to a slight increase in the poverty rate to 4.4% as shown in Table 1 and Figure 1.

TABLE 1

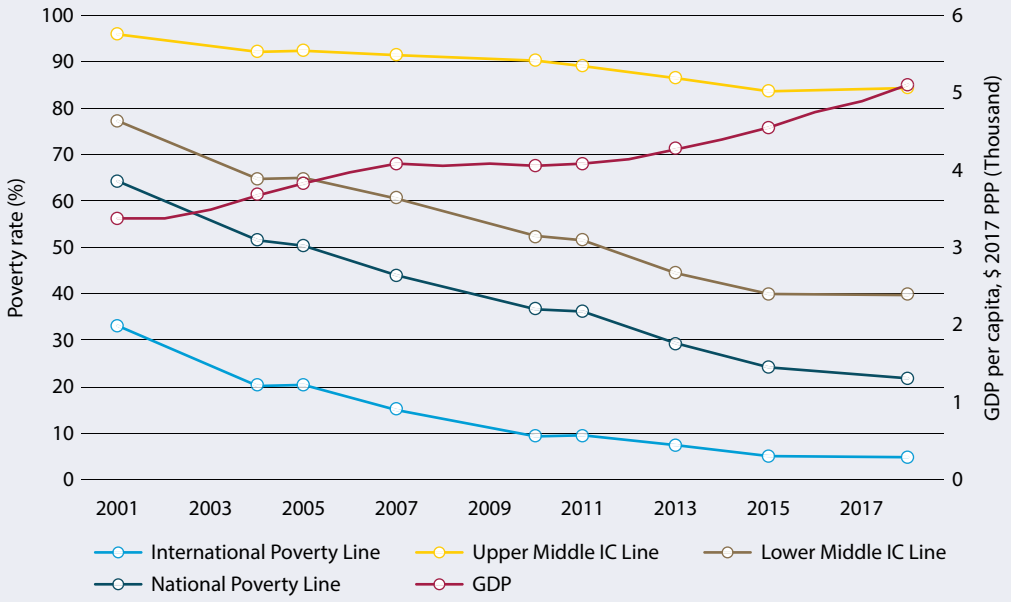
POVERTY STATUS IN PAKISTAN.

Poverty	Number of Poor (in million)	Rate (in %)
National Poverty Line Period: 2018	46.5	21.9
International Poverty Line PKR75.1 (2018) or USD1.90 (2011 PPP) per day per capita Period: 2018	9.4	4.4
Lower Middle Income Class Poverty Line PKR126.6 (2018) or USD3.20 (2011 PPP) per day per capita Period: 2018	75.8	35.7
Upper Middle Income Class Poverty Line PKR217.5 in Pakistan rupee (2018) or USD5.5O (2011 PPP) per day per capita Period: 2018	161.8	76.2

Source: Poverty and Equity Brief: South Asia Pakistan. World Bank Group.

FIGURE 1

POVERTY HEADCOUNT RATE (2001–18).



Source: Poverty and Equity Brief: South Asia Pakistan. World Bank Group.

The poverty rate in Pakistan further increased during the 2019–20 period, rising to 5.3%, primarily due to the impact of the COVID-19 outbreak. The most vulnerable segments of the labor force were the informal and low-skilled workers employed in elementary occupations, resulting in more than two million people falling below the poverty line.

Notably, poverty rates in Pakistan are significantly higher in rural areas compared to urban areas, and they exhibit substantial variation across provinces and districts. The prevalence of poverty and income disparities can be traced back to a range of factors that undermine productivity, resilience, and inclusion. The poor are more likely to live in larger households, have lower levels of education, and are less attached to the formal labor markets. Additionally, poor and vulnerable households are also dependent on income sources that are susceptible to natural disasters and economic volatility.

According to the World Bank, in 2018, 4.9% of the population in Pakistan lived on USD2.15 per day (2017 PPP). Also, the Asian Development Bank (ADB) reported that during the same year, 21.9% of Pakistan's population lived on USD1.9 per day (2017 PPP). Additionally, the ADB data for 2021 indicated that 3.7% of the employed population in Pakistan had a PPP income below USD1.9 per day. These statistics are summarized in Table 2.

TABLE 2

PROFILE OF THOSE LIVING UNDER THE POVERTY LINE IN PAKISTAN.

Organization	PPP Year	Purchasing Power Parity (in USD)	For the Year	Percentage of Employed Population
World Bank	2017	USD2.15	2018	4.9%
Asian Development Bank (ADB)	2021	USD1.9	2021	3.7%

Pakistan's poverty rate declined from 4.8% in FY 2020–21 to 4.4% in FY 2021–22. It is expected to further decline to 4.0% in the FY 2022–23. The World Bank had initially set the extreme poverty line at USD1.9 per person per day. However, since 2017, it has expanded its reporting for all countries to include two new international poverty lines: a lower middle-income International Poverty Line, set at USD3.20 per day, and an upper middle-income International Poverty Line, set at USD5.50 per day.

According to the World Bank Report, Pakistan's lower-middle-income poverty rate declined from 37% in FY 2020-21 to 35.7% in FY 2021–22. It is projected to further decline to 33.8% in FY 2022-23. Similarly, the upper-middle-income poverty rate is expected to ease from 77% to 76.2% in FY2021–22 and further decrease to 75% in FY2022–23 [8].

Labor Force Preview at a Glance

In the year 2022 Pakistan ranks as the fifth most populous country in the world, [9] with a population of 224.78 million, of which 82.83 million reside in urban areas, while 141.96 million live in rural areas [10]. The total labor force in Pakistan is 71.76 million, of which 67.25 million or 94% of the labor force are employed [11].

The economy of Pakistan, like other economies, has a diverse structure comprising three main sectors: agriculture, industry, and services, contributing 22.7%, 19.1%, and 58.2% to the Gross Domestic Product (GDP), respectively [10]. Agriculture is the largest sector of Pakistan's economy

and the majority of the population, directly or indirectly, is dependent on it. It contributes approximately 24% to the GDP, employs nearly half of the labor force, and serves as the largest source of foreign exchange earnings [12].

A quick view of the Labor Force Statistics for the years 2017–18 to 2020–21, as presented in Table 3, paints an encouraging picture, showcasing an increase in the employment rate and a subsequent decrease in the unemployment rate.

TABLE 3

LABOR FORCE AND EMPLOYMENT INDICATORS FROM 2017 TO 2021 (IN MILLION).

Period	2017–18	2018–19	2020–21
Labor force	65.5	68.75	71.76
Employed labor force	61.71	64.03	67.25
Unemployed	3.79	4.71	4.51
Unemployment rate (in %)	5.8	6.9	6.3

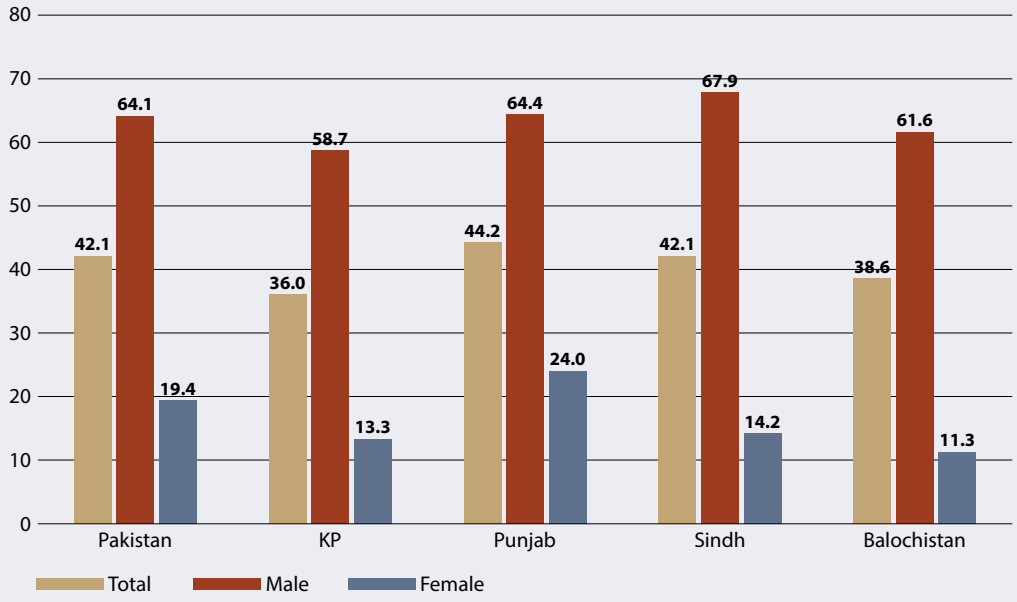
Source: Pakistan Economic Survey, 2021–22.

Employment to Population Ratio

The employment-to-population ratio is defined as the number of employed people as a percentage of the working-age population, which includes those aged 10 years and above. As indicated in Figure 2, Pakistan's overall employment-to-population ratio stands at 42.1%, with a significant disparity between working males, accounting for 64.1%, and working females, comprising 19.4%. A province-wise comparison reveals a similar pattern.

FIGURE 2

EMPLOYMENT TO POPULATION RATIO (IN %).



Source: Pakistan Economic Survey 2021–22.

Employment by Sectors

As a significant contributor to the GDP, the agriculture sector in Pakistan plays a vital role in the development of the economy. However, the employment share of the agriculture sector decreased from 39.2% in 2018–19 to 37.4% in 2020–21. This decrement can be attributed to a shift in employment from the agriculture sector to the industry and services sectors, driven by technological advancements and their impact on society. The services sector is the largest growing sector of the economy, with employment in the sector accounting for 37.2% in 2020–21 [10].

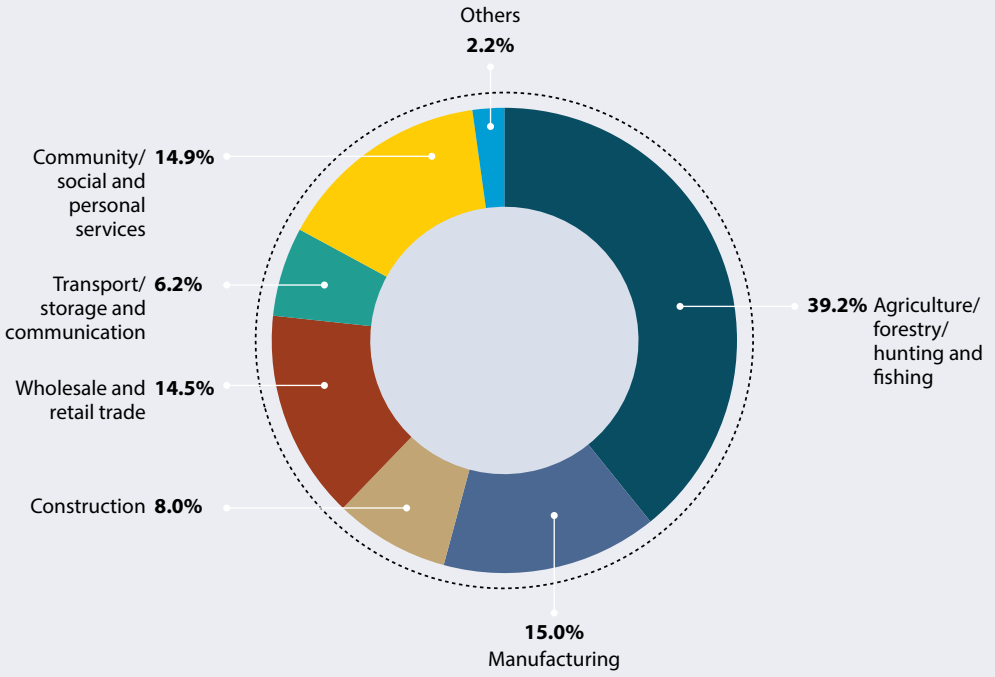
The construction and manufacturing sectors are also considered major sources of economic growth and development in the country. These sectors also play an important role in income generation, both formally and informally, across other sectors. The share of employment in the construction sector increased from 8.0% in 2018–19 to 9.5% in 2020–21, reaching a total of 6.4 million employed individuals, compared to 5.13 million in 2018–19. This reflects an increase of 1.28 million in the number of employed people [10].

The construction sector, on account of its backward and forward linkages, boosts approximately 40 allied industries simultaneously. It is therefore suggested that the expansion of these sectors can generate millions of jobs for workers across skill levels, including unskilled, semi-skilled, and skilled workforce. This expansion can result in the creation of a significant number of job opportunities, particularly within the industrial sector.

For a comparative view of employment by sector in 2018–19 and 2020–21, refer to Figures 3A and 3B.

FIGURE 3A

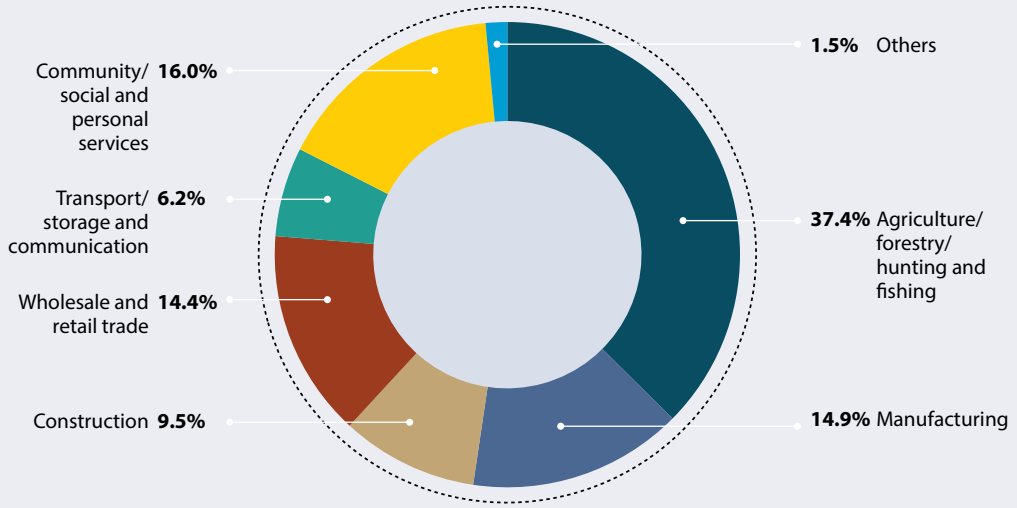
EMPLOYMENT BY SECTOR IN 2018–19.



Source: Pakistan Economic Survey 2021–22.

FIGURE 3B

EMPLOYMENT BY SECTOR IN 2020–21.



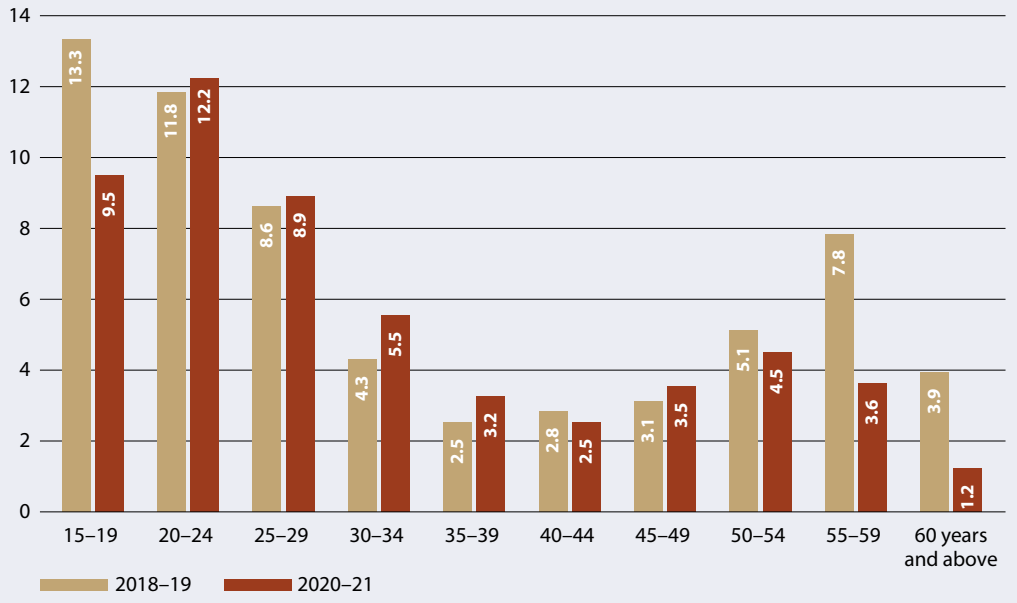
Source: Pakistan Economic Survey 2021–22.

Youth Employment

The overall unemployment rate in Pakistan stands at 6.3%, with a notably higher unemployment rate of 13.3% among individuals aged 15–19, as compared to 11.8% among those aged 20–24, in 2018–19. The youth unemployment rate is higher as compared to the average unemployment rate as depicted in Figure 4. This suggests the need for more attention on infrastructure improvement and skill development programs to create higher employment opportunities for the youth.

FIGURE 4

AGE-WISE UNEMPLOYMENT RATE (IN %).



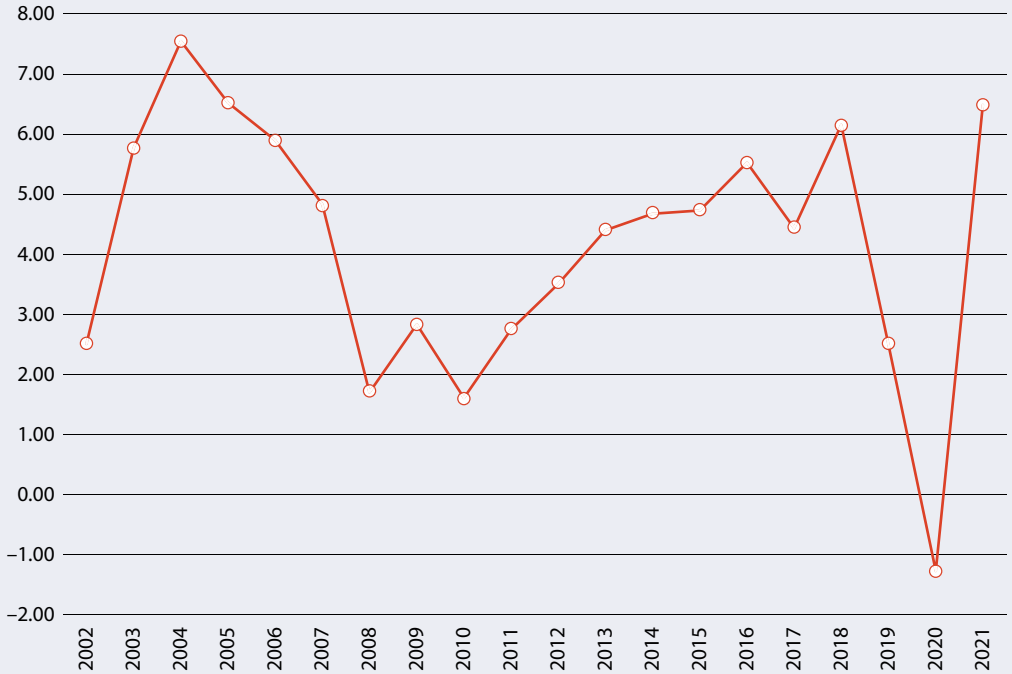
Source: Pakistan Economic Survey 2021–22.

Economic Swings and Upheavals

Pakistan's economy has undergone significant fluctuations over the past two decades, with various factors contributing to these shifts. While numerous miscellaneous causes can be identified, a comprehensive analysis requires three primary parameters: GDP growth, changes in total employment, and changes in labor productivity. These parameters provide a snapshot of the structural changes in the economy, aiding in a more profound understanding of its dynamics, as illustrated in Figures 5, 6, and 7, respectively.

FIGURE 5

GDP GROWTH IN PAKISTAN FROM 2002 TO 2021 (IN %).



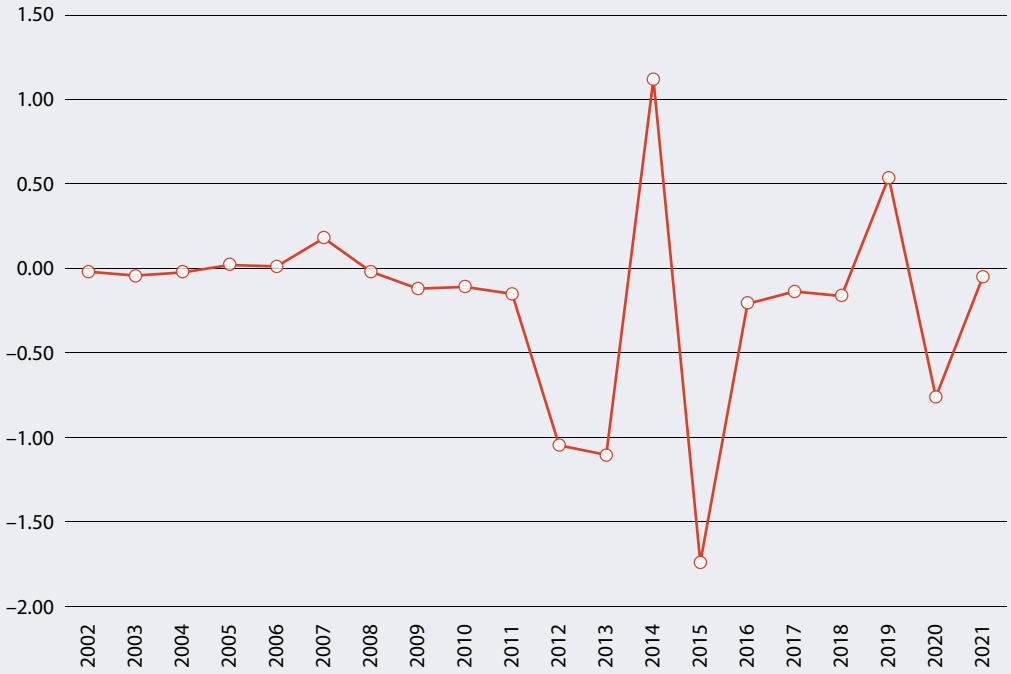
Source: Pakistan Economic Survey and Labor Force Survey.

As illustrated in Figure 5, Pakistan's economy experienced an upswing during 2002-06. This surge was a result of Pakistan's alliance with the Western world as part of the Coalition Support Fund, established for the War on Terror. In contrast, the preceding downturn can be attributed to the nuclear test in 1998. Subsequently, continuous political unrest and the global economic meltdown negatively impacted the growth rate after 2006, leading to a dismal figure of less than 2%. Later, the country experienced a recovery from 2010 to 2018. Unfortunately, post-2019, another setback occurred due to the impact of the COVID-19 pandemic.

Throughout 2002–21, as indicated in Figure 6, the economy in Pakistan encountered numerous challenges. These ranged from natural disasters such as the 2005 earthquake and the 2008 financial crisis to more recent events like the floods in 2022, all of which affected the overall employment trend. It is noteworthy that the economic stability in Pakistan is largely tied to its political stability. Unfortunately, every new government has to initiate new economic roadmaps due to the abrupt halt in policies from the previous regime. This discontinuity can send negative signals to foreign investors, posing challenges to sustained economic growth and stability.

FIGURE 6

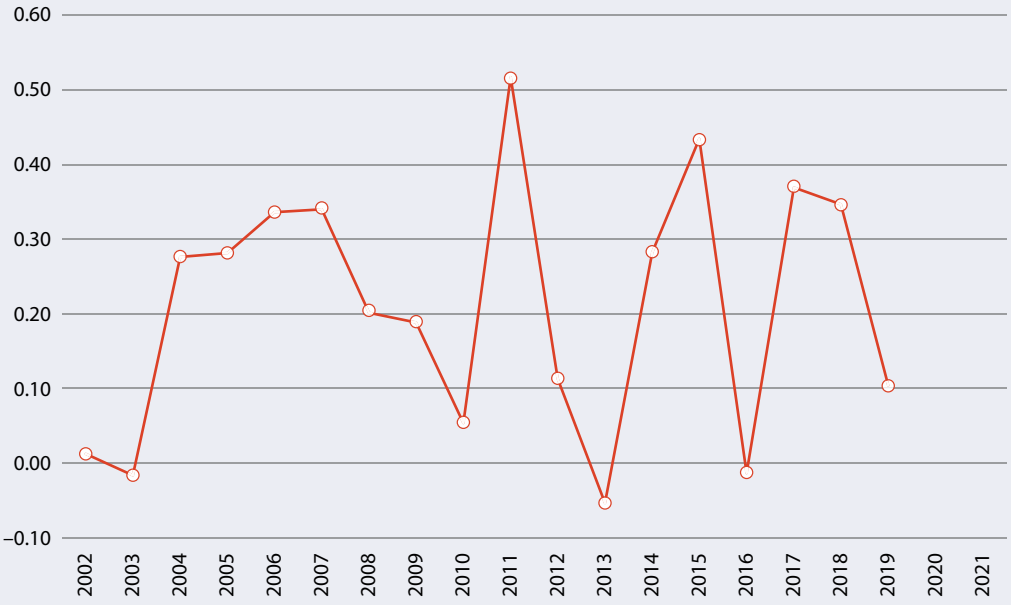
CHANGES IN EMPLOYMENT PATTERNS FROM 2002 TO 2021 (IN %).



Source: Compiled from World Bank Open Data. https://data.worldbank.org./

FIGURE 7

LABOR PRODUCTIVITY TRENDS FROM 2002 TO 2021*.



Note: * Expressed in international Dollars at 2017 prices, per hour.
Source: Compiled from Our World in Data. https://ourworldindata.org/.

As depicted in Figure 7, in the first decade of the millennium, Pakistan witnessed an increase in labor productivity, driven by technological improvement, Foreign Direct Investment (FDI), support from the US coalition fund, and later due to China's involvement. It is, however, important to note that factors such as poor and unsafe working conditions, health issues, and sub-standard living conditions contribute to low productivity. The rising cost of living, which often outpaces prevailing wages, has further worsened the situation, leading to lower productivity.

The pre-COVID-19 era brought to light structural issues in the economy, primarily stemming from high levels of consumption, low private savings, and reliance on foreign savings that, while contributing to some investment, ultimately led to low productivity and sluggish economic growth.

Another contributing factor to low labor productivity was the FDI, especially during 2008, when Pakistan attracted the highest-ever foreign investments. Unfortunately, these investments often failed to materialize to their full potential due to the sub-standard quality of local materials and poor promotion of the indigenization process. An example of this is the local automobile industry.

In summary, there is an urgent need for structural reforms in the economy to address these underlying issues, which are exacerbating Pakistan's already deteriorating economy. Enhancing workforce productivity can be achieved through improved education, training, and a higher investment by the firms that employ them. The government must prioritize productivity-enhancing programs and initiatives. Moreover, creating a conducive environment for foreign investments and fostering collaboration between foreign and local firms can contribute significantly towards capacity building and increasing productivity.

Quality of Employment

The importance of the quality of employment to society, policymakers, governments, and researchers cannot be underestimated. Employment is the key to the social and economic advancement of the workers, providing them with a sense of identity. However, it may also be associated with the risks of health and well-being. The ever-evolving labor markets can bring in challenges concerning the quality of employment that can be best explained by its seven dimensions. These dimensions are intricately connected to human needs in diverse ways.

The 7-dimensional framework is designed to provide flexibility, enabling individual countries to meet their needs and analyze the quality of employment, according to specific national policy priorities and institutional contexts. Recognizing that the various facets of quality of employment can be perceived differently by different individuals, this framework allows the assessment of specific sub-population groups. These groups may include comparisons between women and men, young or older workers versus middle-aged workers, lower-educated individuals versus those with higher education, migrants compared to nationals, or inhabitants from different regions.

These parameters not only reflect but also impact the performance of the labor force. This, in turn, plays a pivotal role in improving organizational performance, leading to heightened productivity and improved quality. Collectively, these factors contribute to a nation's economic prosperity, with the potential to reduce poverty and improve the standard of living of the people in a country. Table 4 provides an overview of the quality of employment index, based on the suggested indicators.

1. Safety and ethics of employment
    a. Safety at work
    b. Child labor and forced labor
    c. Fair treatment in employment
2. Income and benefits from employment
    a. Income from employment
    b. Non-wage pecuniary benefits
3. Working hours and work-life balance
    a. Working hours
    b. Working time arrangements
    c. Work-life balance
4. Security of employment and social protection
    a. Security of employment
    b. Social protection
5. Social dialogue
6. Skills development and training
7. Employment-related relationships and work motivation
    a. Employment-related relationships
    b. Work motivation

Quality of Employment Index

In recent decades, the labor market has undergone significant changes shaped by the hyper-competitive dynamic environment, both at the national and international levels. Amidst these complex variables, it becomes imperative to monitor and evaluate labor market changes, seeking to understand their positive impact on the economy. This process allows policymakers to identify and address vulnerabilities within the labor market, enabling them to formulate policy interventions and ensure successful implementation. Thus, there is a need to represent this multi-dimensional scenario through a unified metric, and the quality of employment index achieves this by encompassing the various facets of work as identified in the 7-dimensional framework proposed by the ILO.

Quality of employment index serves as a tool for evaluating well-being and sustainable development, with a particular focus on measuring SDG 8, full and productive employment, and decent work for all. It emphasizes thinking beyond the GDP debate and takes into account the environmental and social dimensions of development.

Considering that a significant portion of people's lives and time is spent on the job, the quality of life largely depends on the quality of employment, which subsequently reflects the well-being of people and the standard of living. However, assessing the quality of employment requires taking into account numerous aspects of the working conditions.

The Measurement Challenge

Measuring the quality of employment index presents a formidable challenge due to its intricate nature, comprising numerous aspects, as discussed earlier. Determining which aspects to include, how to assess them, and how to reconcile their diverse dimensions can be particularly challenging.

Various frameworks have been proposed by different institutions, such as the ILO Decent Work Indicators, OECD Job Quality Framework, and United Nations Economic Commission for Europe (UNECE) Quality of Employment Framework, among others, to measure the quality of employment. However, these frameworks are not indexes, rather they provide a list of indicators that help in offering a comprehensive picture of the quality of employment.

There is a need for the development of a composite index that will allow the assessment of the degree of the quality of employment in an integrated manner, taking into account various dimensions of quality that can be collectively interpreted.

Calculation of Quality of Employment Index

Table 4 shows the quality of employment index for Pakistan based on five dimensions. The methodology employed here is the min-max procedure, a commonly used technique to normalize a set of values that are on different scales. This procedure transforms these values so that they fall within the range of 0 and 1. This normalization process places all the values on a common scale, ensuring they are unidirectional and comparable.

The following formula is used to convert the values of a variable to the (0, 1) scale. Here 'x' represents a value in each variable.

$$x_{transformed} = \frac{x - \min(x)}{\max(x) - \min(x)}$$

As depicted in the formula, once the values are made unidirectional, they reflect the quality of employment on a standardized scale. The resulting proportional values for each dimension are the normalized values, with a minimum value of 0 and a maximum value of 1, enabling meaningful comparisons across different dimensions.

All the values of the indicators used to calculate the quality of employment have been expressed as proportions, ensuring that they fall within the same value range of 0 and 1. The quality of employment index was computed as an unweighted index of seven indicators using the arithmetic mean after they were normalized to the (0, 1) scale.

TABLE 4

QUALITY OF EMPLOYMENT INDEX.

No.	Dimension	Detailed Description	Variable	Year	Values	Relevant Values for Quality of Employment Index
1	Safety and ethics of employment	Non-fatal occupational injuries	Rate of non-fatal occupational injuries per 100,000 employed people	2018	4.016	0.99996
		Child labor rate	Percentage of children aged 5 to 17 years who are engaged in child labor	2018	9.0	0.910
		Hazardous child labor rate	Percentage of children aged 5 to 17 years who are engaged in hazardous child labor	2018	5.4	0.946
		Forced labor rate	Percentage of people who are in forced labor	2018	16.8	0.832
		Pay gap	Pay gap between sub-population groups (e.g., gender pay gap)	2021	29.0	
		Access to managerial occupations	Percentage of employed people in population subgroups (e.g., women) in managerial occupations (ISCO-08 major group 1)	2021	5.7	0.943
2	Income and benefits from employment	Employees with low pay	Percentage of employees with low pay	2018	37.5	0.625
		Employment-related income of self-employed	Employment-related income of self-employed by deciles (local currency)	2020	56.7	
		Paid leave entitlement	Percentage of employees entitled to paid annual leave	2022	100	
3	Working hours and balancing work and non-working life	Mean weekly working hours	Mean weekly hours usually worked per employed person	2021	47.5	
4	Security of Employment and Social Protection	Own account worker	Percentage of employed persons who are own-account workers	2021	35.5	
		Informal employment (experimental)	Percentage of employed people in informal employment	2021	72.5	0.275
		Pension insurance coverage	Percentage of employed people who are active contributors to a pension scheme	2021	14.7	0.147

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No.	Dimension	Detailed Description	Variable	Year	Values	Relevant Values for Quality of Employment Index
5	**Social dialogue**	Collective bargaining coverage rate	Percentage of employees covered by collective bargaining agreements	2021–22	2.8	0.028
		Trade union density rate	Percentage of employees who are members of one or more trade unions	2021	15.5	0.155
6	**Skills development and training**	Training participation	Percentage of employed people having received job-related non-formal education and training in the past twelve months	2020	0.848	
			Percentage of employees having technical or vocational training	2018–19	22.1	0.221
7	**Workplace relationships and work motivation**	Employment-related violence	Percentage of people who have been victim of physical, psychological, or sexual violence in relation to their employment in the last 12 months	2021–22	0.000062	
Quality of Employment Index			Based on 5 dimensions			0.455

Note: The values in bold have been used for calculating the Quality of Employment Index.
Source: Compiled from 2021–22 reports of the Pakistan Bureau of Statistics, LFS, Pakistan Economic Surveys, ADB, and ILO.

The quality of employment index serves as an important parameter, providing a measurement of the quality of employment. To be more precise, it functions as a relative measure, indicating the ratio of the total number of high-quality employment opportunities to the total number of low-quality employment opportunities. The concept of decent work sums up the aspirations of people for their working lives and therefore, is closely related to employment quality. Therefore, it can be safely proposed that in an economy where all jobs meet the criteria of decent work, they can still be classified as low-quality employment or high-quality employment based on other dimensions.

The quality of employment index for Pakistan has been calculated as 0.455 based on five dimensions. A quality of employment index of one signifies that there are as many low-quality jobs as there are high-quality ones, while a quality of employment index value of less than one implies that there are more low-quality jobs than high-quality ones. Conversely, the quality of employment index above one implies a surplus of high-quality jobs compared to low-quality ones.

Safety and Health Issues

Occupational safety and health are vital components of decent work. The physical conditions and safety requirements at a workplace provide an ethical and conducive climate to enhance the productivity output of employees. It helps in boosting their morale and inducing a sense of inspiration and motivation, leading to creativity and innovation. In contrast, an unsafe and unhealthy work climate leads to mental and physical vulnerability. Occupational accidents have a

significant human, social, and economic cost, leading to deterioration in humanity, society, and the nation at large.

Many developing and underdeveloped economies lag in terms of Occupational Health and Safety (OHS), resulting in high fatality and injury rates. Similarly, in Pakistan, where living conditions often fall below accepted standards, the inflation rate is high and literacy level is considerably low, OHS tends to be overlooked by most organizations. Despite the legal and ethical obligations for employers to prioritize investment in OHS, it is often not fully realized or successful due to various systematic issues that affect both labor and employers. These issues include factors like limited knowledge, restricted mobility, and lack of access to complete information, specifically in terms of work-related risks.

Various sectors of the economy, including construction, mining, agriculture, and fishing, grapple with significant challenges in terms of OSH risks and hazards. The rate of non-fatal occupational injuries per 100,000 workers in Pakistan is estimated to be 2,691 as depicted in Table 5. ILO report indicates that every year 2.2 million people die due to work-related accidents or illness, while more than 270 million workers suffer injuries and an estimated 160 million individuals suffer work-related illness [13]. Occupational injuries cause substantial costs to the socioeconomic system [14]. They result in financial losses for industries [15] and destabilize the earning potential of laborers [16], which has an adverse effect on the country's gross productivity levels.

TABLE 5

NON-FATAL OCCUPATIONAL INJURY RATE PER 100,000 WORKERS.

Migrant Status	Non-Fatal Occupational Injury Incidence Rate per 100,000 Workers			
	Provinces	Overall	Male	Female
All workers	Pakistan	2,691	3,200	972
	KP	2,920	3,310	1,192
	Punjab	3,050	3,924	719
	Sindh	1,874	1,897	1,753
	Balochistan	1,643	1,621	1,790
Non-migrants	Pakistan	2,678	3,170	941
	KP	2,737	3,164	8,23
	Punjab	3,062	3,901	720
	Sindh	1,930	1,963	1,754
	Balochistan	1,700	1,678	1,839
Migrants	Pakistan	2,820	3,529	1,196
	KP	4,763	4,820	4,536
	Punjab	2,946	4,151	717
	Sindh	1,145	970	1,741
	Balochistan	52	58	–

Source: Key Findings of Labour Force Survey 2020–21. Pakistan Bureau of Statistics, Ministry of Planning, Development and Special Initiatives, Government of Pakistan.

Labor Laws and Child Labor

In the prevalent era of globalization and technological advancements, Pakistan faces a pressing and urgent demand to prioritize safety considerations within the labor market. In this context, Occupational Injuries of Workers and OHS setups are considered essential to demonstrate the risks of a job, given the constraints faced by the labor force. OHS, including fire safety, are critical issues for the industry to address, especially within industries like the garment sector. The tragic Ali Enterprises fire incident in 2012 has left a profound impact. Although several laws, particularly those related to fire safety, have been enacted, their effectiveness remains minimal due to weak implementation mechanisms.

As part of its commitment to meeting international standards and complying with labor laws, the Government of Pakistan has ratified two ILO Conventions related to OSH as part of its efforts to provide safe and healthy working conditions [17]. These two Conventions are Convention No. 155[1] about Occupational Safety and Healthy Working Environment, and Convention No. 187, which focuses on the Promotional Framework for Occupational Safety and Health.

In general, Pakistan aims to promote sustainable and inclusive growth by supporting economic integration at both global and regional levels. It also aims to improve compliance of labor and environmental standards, and increase competitiveness.

The specific objective is to promote, implement, and ensure compliance with international labor and environmental standards within Pakistan. This entails the implementation, application, and enforcement of national legislation and standards by both the public and private sectors.

The rights of women and children are the other areas of concern highlighted by human rights organizations. Amnesty International has reported widespread instances of sexual abuse and violence against children. Additionally, the Human Rights Commission of Pakistan has noted a significant increase in the number of cases of sexual abuse in recent years [18].

Interestingly, there is a difference between child labor and child work. When work does not have a detrimental impact on the health, personal development, or access to education of children, it does not qualify as ‘child labor’. Instead, it can be termed as ‘child work’, which contributes to the personal, healthy, and productive development of children.

Child Labor is defined as work that has the potential to deprive children of their childhood, education, and dignity while also posing harm to their physical, moral, and mental development. According to the ILO, the distinction between child labor and child work depends on several factors, including the child’s age, the type and duration of work, working conditions, and the development stage of individual countries [19]. UNICEF defines it as work that exceeds a certain minimum number of hours, depending upon the child’s age and the nature of the work [20].

In Pakistan, both Constitution and Labor laws prohibit the employment of children under the age of 14 years. Article 11 of the Constitution of the Islamic Republic of Pakistan guarantees that no child below the age of 14 shall be engaged in any factory or mining work, or any other hazardous occupation [21].

[1] Convention No. 155 calls for the adoption of a coherent national occupational safety and health policy. It outlines the necessary actions to be undertaken by the governments and also within enterprises to promote occupational safety and health practices for improving working conditions.

There have been some legislative achievements in recent years, with a wide range of legal reforms in the labor market aimed at safeguarding the rights of children. Pakistan has ratified the UN Convention on the Rights of the Child, 1989, as well as the ILO Conventions on Minimum Age for Employment, No. 138 (1973), and the Worst Forms of Child Labor, No. 182, (1999). Additionally, efforts have been made to integrate the elimination of child labor into the National Labor Protection Framework.

Pakistan is a signatory to the UN SDG, specifically SDG 8.7, which requires that UN member states take immediate and effective measures to eradicate modern slavery and human trafficking, and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers by 2025 [22].

Despite significant legislation, Pakistan was ranked 8th on the Global Slavery Index 2018, with an estimated three million people living as modern slaves or bonded laborers [23]. Similarly, an estimated 12 million children were found to be engaged in child labor in the country [24].

The Pakistan Labor Force Survey 2017–18 reported that 13.7% of children aged 10–17 years were engaged in child labor, with around 5.4% involved in hazardous child labor [22]. However, there has been a significant improvement in recent years, as evident from Table 6, which indicates a reduction in the rate of child labor to 7.3% in 2018–19 and further down to 4.9% in the year 2020–21 [11].

TABLE 6

LABOR FORCE PARTICIPATION RATES BY AGE.

	2018–2019			2020–2021		
Age Groups	Overall	Male	Female	Overall	Male	Female
10–14	7.3	8.8	5.6	4.9	5.4	4.3
15–19	31.9	45.0	17.2	33.1	47.9	16.7
20–24	53.1	81.2	26.8	56.3	86.0	27.7
25–29	59.2	97.4	27.6	60.6	96.5	29.2
30–34	60.2	99.4	26.7	61.3	98.9	27.8
35–39	62.8	99.5	28.8	63.4	98.3	29.4
40–44	64.7	99.3	29.7	64.8	98.8	30.2
45–49	65.3	99.5	30.8	64.9	98.2	31.2
50–54	65.4	98.8	28.8	60.7	93.7	26.1
55–59	62.0	94.8	24.4	51.7	84.2	18.1
60 +	30.8	48.6	8.9	27.3	43.0	7.6

Source: Key Findings of Labour Force Survey 2020–21. Pakistan Bureau of Statistics, Ministry of Planning, Development and Special Initiatives, Government of Pakistan.

Continuing with labor rights and the ratification of international labor standards, Pakistan has ratified 36 out of 189 ILO Conventions [25], including:

1. Fundamental Conventions: 8 out of 8
2. Governance Conventions: 2 out of 4
3. Technical Conventions: 26 out of 177

The implementation of ILO and UN Conventions related to labor standards and human rights is an ongoing challenge in Pakistan. This anomaly may be attributed to systematic, administrative, and management issues at both the federal and provincial levels. For instance, the devolution of powers at the provincial level has provided flexibility and opportunities for provincial autonomy to draft labor laws that meet local needs and context. However, some constraints need to be addressed, such as the inadequacy of the labor inspectorate (in terms of manpower, training, and financial and other resources), insufficient security and protection (e.g. against anti-union discrimination), use of yellow unions, monitoring the diverse industrial relation policies, and the responsibility for reporting Pakistan's progress in the application and implementation of international conventions and standards.

Skill Development and Training

The growing need for contemporary and market-related skills is continuously increasing in today's world of digitalization and globalization. This has led to significant changes in the workplace and the skills needed. Organizations and economies are increasingly seeking a workforce equipped with modern tools and techniques, necessitating an ongoing process of skill upgradation, training, and development. As stated by OECD Secretary-General, Angel Gurria, "Skills have become the global currency of the 21st century. They transform lives and drive economies [26]."

Pakistan boasts of one of the world's largest labor force, ranking among the top 10 globally [27]. Providing an adequate number of employment opportunities for such a large labor force is a huge challenge. Moreover, skill gaps further compound the issue, making it difficult for individuals to find jobs and for employers to find suitably trained workers for their industries. Skills development not only enhances individuals' capacity to work but also their opportunities at work, offering more scope for creativity and job satisfaction. Skills development can play a pivotal role in poverty alleviation. Ultimately, a nation's future prosperity depends on the number of people employed and their productivity in the workplace.

The Government of Pakistan is providing skill training to the youth and facilitating access to finance for setting up their businesses, thus promoting entrepreneurship. Skill development institutes are making efforts towards enhancing the employability of the youth. To achieve the objective of inclusive and balanced growth, there is a need to make focused efforts to provide equal education and skill development opportunities.

To achieve SDG 8, which is decent work and economic growth, the Government of Pakistan has created a roadmap for youth development under the National Skill Strategy (NSS). The strategy lays a strong emphasis on improving governance, exploring multi-source funding, enhancing capacity through employable skills training, ensuring quality assurance, promoting access and equity, fostering industry ownership, and preparing the workforce for the international market to boost foreign remittances.

The NSS also places a strong emphasis on re-skilling existing workers through Recognition of Prior Learning and provides subsidized loans to unemployed youth. Further, the introduction of Competency-Based Training and Assessment is an important element of the NSS, which serves as the foundation of the Technical and Vocational Education and Training (TVET) sector reform in Pakistan. It also forms the basis for the implementation of the National Vocational Qualifications Framework.

TVET programs are promoted at various educational institutions in Pakistan, including technical secondary schools, trade schools, polytechnics, technical colleges, and public institutions. In 2018, the World Education Services listed more than 3,600 vocational and technical institutions in the country, enrolling over 400,000 students. The TVET sector accommodates approximately 13% of the nearly three million young people who enter the country's job market each year [28].

The overall percentage of employed individuals with technical or vocational training is 17.5%, comprising 13.7% males and 3.8% females. A comparative analysis of 2018–19 and 2020–21 data indicates a decline in the percentage of employed individuals with technical and vocational training, dropping from 22.1% to 17.5%, as depicted in Table 7.

TABLE 7

DISTRIBUTION OF EMPLOYED INDIVIDUALS BY TRAINING.

Technical/Vocational Training	2018–19			2020–21		
	Overall	Male	Female	Overall	Male	Female
Total	**100**	**100**	**100**	**100**	**100**	**100**
Having technical or vocational training	22.1	21.6	23.9	17.5	17.7	16.7
Not having any technical or vocational training	77.9	78.6	76.1	82.5	82.3	83.3

Source: Pakistan Labor Force Survey 2020–21. Pakistan Bureau of Statistics, Ministry of Planning, Development and Special Initiatives, Government of Pakistan

Income, Benefits, and Working Time

The minimum wage in Pakistan varies by region. Recently, the Government of Pakistan raised its monthly minimum wage for unskilled workers to PKR25,000 through a notification, which is about USD112 (calculated using the USD exchange rate of 221.74 as of 31 October 2022) [29].

Every company must provide guaranteed benefits to its employees, including time off for holidays and paid vacation days. Pakistan has 11 national and religious holidays for which employees get the day off. Employees who have worked continuously for at least a year are eligible for 14 consecutive days of annual leave during the following year. Unused vacation days can be carried over into the next year.

Another guaranteed benefit is 10 days of casual leave with full pay and 16 days of sick or medical leave during which employees receive 50% of their regular pay. While employers can grant casual leaves for situations such as sudden illness, taking sick leave requires a medical certificate, especially if it extends beyond three consecutive days or is requested by the employer. Provisions have also been made for three months of Statutory Maternity Leave and 7-10 days of Paternity Leave, depending on the region.

According to the Pakistan Labor Force Survey 2020–21, the percentage of people earning less than PKR15,000 has decreased from 45.2% to 36.5% compared to 2018–19, as shown in Table 8. The

survey also reveals that in 2020–21, females accounted for 61% of the labor force, earning less than PKR15,000 per month, while males accounted for 32.6%. The recent survey results indicate that the proportion of males earning higher wages is higher as compared to females.

TABLE 8

AVERAGE MONTHLY WAGES IN 2018–19 AND 2020–21.

Monthly Wages (PKR)	2018–19 (in million)			2018–19 (in %)		
	Overall	Male	Female	Overall	Male	Female
Less than 15,000	11.52	9.24	2.28	45.2	41.5	71.0
15,001–25,000	7.81	7.46	0.35	30.7	33.5	11.0
25,001–35,000	3.13	2.91	0.22	12.3	13.1	7.0
35,001–45,000	1.18	1.05	0.13	4.6	4.7	4.1
45,001–55,000	0.62	0.55	0.07	2.4	2.5	2.3
55,001 and above	1.22	1.07	0.15	4.8	4.8	4.6
Monthly Wages (PKR)	**2020–21 (in million)**			**2020–21 (in %)**		
	Overall	**Male**	**Female**	**Overall**	**Male**	**Female**
Less than 15,000	10.29	7.95	2.34	36.5	32.6	61.1
15,001–25,000	9.66	9.10	0.56	34.2	37.3	14.5
25,001–35,000	4.16	3.80	0.36	14.8	15.6	9.5
35,001–45,000	1.75	1.50	0.25	6.2	6.2	6.5
45,001–55,000	0.85	0.72	0.13	3.0	2.9	3.3
55,001 and above	1.51	1.31	0.20	5.3	5.4	5.1

Source: Pakistan Labor Force Survey 2020–21. Pakistan Bureau of Statistics, Ministry of Planning, Development & Special Initiatives, Government of Pakistan.

Table 9 indicates that the average monthly wage of employees in Pakistan is PKR24,028 per month while the median monthly wage is PKR18,000 per month. However, gender disparities are evident in the mean monthly wages of males and females, irrespective of their management level or occupation.

TABLE 9

AVERAGE MONTHLY WAGES OF EMPLOYEES BY OCCUPATION IN 2018–19 AND 2020–21.

Occupation	Monthly Mean Wages (2018–19)			Monthly Median Wages (2018–19)		
	Overall	Male	Female	Overall	Male	Female
Total	**21,326**	**22,172**	**15,461**	**16,000**	**16,800**	**8,400**
Managers	64,606	65,592	52,953	58,000	60,000	45,000
Professionals	36,514	42,315	25,663	30,000	35,000	18,000
Technicians	30,010	30,838	24,622	25,000	25,000	21,000
Clerical support workers	29,878	30,100	24,078	27,000	28,000	23,000
Services and sales workers	18,103	18,186	14,054	15,417	15,540	12,417

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Occupation	Monthly Mean Wages (2018–19)			Monthly Median Wages (2018–19)		
	Overall	Male	Female	Overall	Male	Female
Skilled agriculture and forestry workers	17,342	17,456	3,360	16,800	16,800	3,360
Craft and related trade Workers	17,466	19,199	5,773	16,800	18,000	4,200
Plant and machinery operators	19,260	19,336	11,745	17,400	17,500	12,000
Elementary occupation	14,274	15,257	8,199	12,600	14,280	7,000
Occupation	**Monthly Mean Wages (2020–21)**			**Monthly Median Wages (2020–21)**		
	Overall	**Male**	**Female**	**Overall**	**Male**	**Female**
Total	**24,028**	**24,643**	**20,117**	**18,000**	**18,900**	**12,000**
Managers	68,214	68,935	61,112	60,000	60,000	45,000
Professionals	41,815	47,597	33,236	35,000	38,630	28,000
Technicians	33,553	34,392	28,362	30,000	30,000	24,000
Clerical support workers	34,259	34,329	32,721	32,000	32,000	32,000
Services and sales workers	20,770	20,871	17,650	18,000	18,000	15,000
Skilled agriculture and forestry workers	24,917	24,948	14,036	21,000	21,000	7,560
Craft and related trade workers	20,091	21,709	10,554	18,667	20,000	8,400
Plant and machinery operators	21,721	21,742	19,980	19,800	20,000	13,000
Elementary occupation	16,238	17,241	10,170	15,000	15,120	8,820

Source: Pakistan Labor Force Survey 2020–21, Ministry of Planning, Development and Special Initiatives, Pakistan Bureau of Statistics, Government of Pakistan.

As indicated in Table 10, average wages increase with age until 64 years, after which a decline is observed in average monthly wages. Among the employees, youth aged 15–24 years are the lowest-paid, with a mean monthly wage of PKR16,895 and a median monthly wage of PKR15,000. It is further observed that female employees earn lower average monthly wages compared to their male counterparts, irrespective of age. Female employees below the age of 15 and those older than 65 tend to have the lowest wages, possibly due to a higher proportion of females engaged in the informal sector.

TABLE 10

AVERAGE MONTHLY WAGES OF EMPLOYEES BASED ON AGE.

Age Group	Monthly Mean Wages (2018–19)			Monthly Median Wages (2018–19)		
	Overall	Male	Female	Overall	Male	Female
10–14	8,003	8,706	5,374	7,000	8,000	4,200
15–24	13,985	14,770	8,895	12,600	13,600	6,300
25–34	20,595	21,023	17,714	17,000	17,640	10,000

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Age Group	Monthly Mean Wages (2018–19)			Monthly Median Wages (2018–19)		
	Overall	Male	Female	Overall	Male	Female
35–44	24,397	25,499	16,786	18,000	19,500	9,450
45–54	28,909	29,857	21,939	20,417	21,000	10,500
55–64	29,234	30,135	18,907	19,000	20,000	8,820
65 and above	20,778	21,226	10,883	14,700	14,700	10,080
Age Group	**Monthly Mean Wages (2020–21)**			**Monthly Median Wages (2020–21)**		
	Overall	**Male**	**Female**	**Overall**	**Male**	**Female**
10 – 14	9,999	10,319	8,828	8,820	9,240	7,560
15 – 24	16,895	17,357	13,807	15,000	15,120	10,000
25 – 34	24,087	24,137	23,788	18,900	20,000	14,700
35 – 44	26,788	27,784	20,779	20,580	21,000	13,000
45 – 54	30,698	31,868	23,206	22,000	23,520	12,600
55 – 64	33,075	34,047	23,657	21,000	23,000	10,500
65 and Over	21,027	21,860	12,294	16,800	17,640	8,400

Source: Pakistan Labor Force Survey 2020–21. Pakistan Bureau of Statistics, Ministry of Planning, Development and Special Initiatives, Government of Pakistan.

Trade Union and Social Dialogue

Article 17 of the Constitution of Pakistan states that every citizen shall have the right to form associations or unions, subject to reasonable restrictions imposed by the law in the interest of the sovereignty or integrity of Pakistan, public order, or morality [30]. However, labor laws exclude workers in export processing zones from participating in strikes and trade union membership [31].

Unionization in the informal economy remains minimal, with the majority of organized workers located in the formal sector, particularly in public enterprises. The trade unions have experienced a gradual and steady growth since the creation of Pakistan. Table 11 depicts this gradual growth, in terms of the number of registered trade unions and their membership over the past seven decades. In 1951, there were 209 registered trade unions with 393,137 members. By the year 2000, the number went up to 7,204 trade unions with over a million members, which accounts for approximately 3% of the total workforce at that time.

TABLE 11

NUMBER OF UNIONS AND TOTAL MEMBERS IN PAKISTAN FROM 1951 TO 2016.

Year	Number of Unions	Members
1951	209	393,137
1960	708	350,604
1970	2,522	735,620

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Year	Number of Unions	Members
1980	6,551	869,128
1990	7,080	952,488
2001	7,004	1,040,303
2016 (Dec)	7,096	1,414,160

Source: A Profile of Trade Unionism and Industrial Relations in Pakistan. International Labor Organization 2018 and National Industrial Relations Commission, Islamabad.

Overall, the state of labor unionization in Pakistan is quite dismal, with only 2.32% of the workforce being unionized. The union density in the formal sector is slightly higher at 15.55% [32]. The low percentage of unionized workforce is either because the workers are employed in the informal sector and thus, are not regulated, or in most cases, they are not recognized as labor, or hired through third-party contractors. Similarly, certain categories of workers, such as agricultural laborers, teachers, civil servants, and workers in special economic zones, are not permitted by law to form unions.

Amongst the four provinces of Pakistan, Sindh and Punjab are notable for allowing workers to establish and join trade unions and associations of their own choice without prior authorization. The laws also mandate the setting up of Worker Management Councils in factories with more than fifty workers [33]. Worker representatives on these councils should either be nominated by the collective bargaining agent (CBA) or, in the absence of a CBA, elected through a secret ballot by all workers. Industrial relations laws protect trade union members from any discrimination by employers in recruitment, promotion, and working conditions based on their trade union affiliation.

Table 12 provides an overview of unionization status in Pakistan, particularly in the formal sector. There were 7,096 registered trade unions in Pakistan, of which 1,390 were collective bargaining agents. The total membership of the unionized workforce was 1,414,160. However, it is important to note that the majority of the workforce is employed in the informal sector and thus not unionized.

TABLE 12

STATUS OF UNIONIZATION IN PAKISTAN.

Total unionized workforce	1,414,160*
Total number of unions	7,096
Total Collective Bargaining Agent (CBA) unions	1,390
Total non-CBA unions	5,706

Note: *This is based on the number of members declared at the time of union registration
Source: Pakistan Country Study 2021.

The percentage of unionized workforce in Pakistan stands at 2.32%, across both formal and informal sectors with reference to the total workforce of 61 million. Since unions exist in the formal sector and Industrial Relations Law practically does not apply to the informal sector, the union density in the formal sector stands at 15.55% as indicated in Table 13.

TABLE 13

PERCENTAGE OF UNIONIZED WORKFORCE.

S. No	Description	Workforce	Unionized Workforce	Percentage of Unionized Workforce
1	Workforce both for formal & informal	61,051,613	1,414,160	2.32%
2	Workforce for the formal sector	9,092,000	1,414,160	15.55%

Source: A Profile of Trade Unionism and Industrial Relations in Pakistan, International Labour Organization 2018. National Industrial Relations Commission, Islamabad.

As previously discussed, union density in the formal sector is low, hovering at around 15.5%. Several categories of workers, including agricultural workers, teachers, civil servants, and those in special economic zones, are prohibited by law from forming unions. Table 14 provides a list of sectors excluded from unionism as per the law. The low level of union activity can largely be attributed to the prevailing political environment in the country. Pakistan has experienced periods of military rule for much of its history since gaining independence and their patronage of the industrial elite has discouraged the fundamental rights of workers, and consequently, led to restrictions on unions through various legislations.

TABLE 14

SECTORS PROHIBITED FROM FORMING UNIONS IN PAKISTAN.

	Sectors
1.	Government services (provincial)
2.	Federal government
3.	Defence Line Pakistan Railways
4.	Agriculture (forestry, hunting and fishing)
5.	Self-employed persons
6.	Hospitals and clinics
7.	Educational institutions
8.	Export processing zones and specific public sector enterprises falling into the category
9.	Pakistan Security Papers
10.	Pakistan Security Printing Corporation
11.	Wah Ordinance Factory
12.	Pakistan Council of Scientific and Industrial Research
13.	Defence Housing Authority Karachi
14.	National Logistics Cell
15.	Civilians of the Defence Services
16.	Watch and Ward, Security or Fire Service of Oil, Gas, Seaport or Airport

Source: Pakistan Country Study 2021.

Among the employers' organizations and trade unions, several associations operate in Pakistan to represent employers and safeguard their interests by advocating and negotiating at various governmental and non-governmental forums. Some of these organizations are listed.

Employers Federation of Pakistan (EFP)	Employers Organization
Federation of Pakistan Chambers of Commerce and Industry (FPCCI)	Employers Organization
Pakistan Workers Confederation (PWC)	Trade Union
All Pakistan Trade Union Federation (APTUF)	Trade Union
Pakistan Textile Workers Federation (PTWF)	Trade Union
Pakistan National Textile, Leather, Garments, and General Workers Federation (PNTLGGF)	Trade Union
National Trade Union Federation (NTUF)	Trade Union
Home Based Women Workers Federation (HBWWF)	Trade Union
Pakistan Institute of Labour Education and Research (PILER)	Non-Governmental Organization
Labour Education Foundation (LEF)	Non-Governmental Organization
Kaarvan Foundation	Non-Governmental Organization
Homenet Pakistan	Non-Governmental Organization
International Labour Organization (ILO)	International Organization
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	International Organization
The Sustainable Trade Initiative (IDH)	International Organization

Recommendations

The economy of Pakistan, like many others, consists of three main sectors: agriculture, industry, and services, which contribute 22.68%, 19.11%, and 58.2% to the GDP, respectively [10]. In recent years, Pakistan's economy has been growing steadily. However, it was severely affected in 2020 by the global pandemic, resulting in significant income losses and stalling the progress made in poverty reduction over the last two decades. This progress had been supported by real minimum wage increases, the high inflow of personal remittances, and social safety net programs oriented towards the poor.

Given the current economic situation in Pakistan, there is an urgent need for massive infrastructure development, including the expansion of rail and road networks and, the construction of dams, bridges, airports, and seaports. Achieving these goals requires an effective and productive workforce that is motivated and result-oriented. However, this cannot be achieved if the population lacks proper training and education, suffers from poverty, receives unfair wages, faces social and safety issues, encounters gender discrimination and harassment, etc.

Pakistan consistently ranks at the lowest tier in various global indices, including human development, political governance, corruption, inequality, freedom of speech, and gender, among others. Over the past decade, a wide range of legal reforms have taken place in the labor market, including the devolution of power to the provinces due to the 18th Amendment of the Constitution. This has opened up opportunities for more provincial autonomy, including the Industrial Relations Act and trade unionism. However, several shortcomings persist, including a weak labor inspectorate,

lack of protection against anti-union discrimination, issues related to Employees' Old-age Benefit Institutions and pensions, and the influence of 'yellow unions', which continue to impact and undermine the union movement.

Karachi is considered one of the largest industrial cities in Pakistan and plays host to thousands of employees from industrial and service organizations. However, it is served by only 70–80 inspectors. In addition, an inefficient political system hampers the functioning of these labor inspectors, limiting their capacity to regulate working conditions [33].

Pakistan is currently facing challenges related to the compliance, implementation, and enforcement of legislation. To address these issues successfully, the country needs to formulate a comprehensive roadmap. This roadmap should prioritize effective stakeholder dialogue, including the active involvement of trade bodies and associations, to facilitate effective tripartite consultation aimed at promoting compliance with labor and environmental standards. It is recommended that a national consensus among all stakeholders be achieved before finalizing any decision to achieve success in its true spirit and to prevent potential conflict in the future.

The complete adoption of additional international legal obligations may not be fulfilled by the four provincial administrations due to variations in their respective infrastructure dimensions. Therefore, the priority should be to ensure compliance with existing national and international requirements. Before considering any new ratifications, it is essential to establish a robust legal framework supported by adequately resourced and skilled personnel. The government of Pakistan must also follow amendments in the various Acts and accurately define their terms.

According to the ILO, the use of forced labor, including bonded or prison labor, is strictly restricted (ILO Conventions 29 and 105). The Constitution of Pakistan contains several articles relevant to this issue, notably Article 11. Pakistan has also ratified the ILO Convention on Minimum Age (C138). However, there are approximately 12 million child workers in the country. This number, however, is an estimate because the official data on child labor is outdated, and the last child labor survey was done in 1996 [33]. Child labor is most prevalent in sectors such as cotton farming, brick kilns, carpet weaving, glass bangles, surgical instruments, garment manufacturing, domestic work, restaurants, gas stations, and auto repair services. Further, child labor is more prevalent in rural areas.

There is no specific legislation about occupational safety and health in Pakistan. The primary law governing these issues is the Factories Act, 1934. However, a few relevant laws have been formulated in the past that have gained prominence with stringent requirements, particularly after the 2012 fire incident in a garment factory (Ali Enterprises) in Karachi. The implementation of health and safety laws, especially the 'Building Code of Pakistan', is considered a significant challenge by most organizations as many small-to-medium-sized organizations do not comply with the mandatory requirements outlined in the code. This includes provisions for proper fire hydrants, comprehensive fire alarm systems, and fire-rated doors, among others. Lastly, it is evident that without a comprehensive implementation mechanism, achieving industry-wide improvements in health and safety would be impossible.

Labor inspection is considerably weak due to the low number of inspectors in provincial labor departments and the limited capacity of these employed inspectors. Official data regarding inspections conducted and reported cases of injuries and accidents is unavailable. In the majority of the cases, injuries and accidents are not reported to the Department of Labor, as required by the

labor law. The only publicly available data on non-fatal injuries comes from the Labor Force Survey, which documents self-reported injuries. However, no data is available for non-fatal occupational injuries.

Discrimination in various forms exists in Pakistan. For example, gender-based discrimination is evident in hiring, promotion, wages, social security access, and maternity benefits. It was also observed that the upward mobility of female workers in an organization is quite limited. Further, supervisory and managerial positions are held predominately by males.

Pakistan ranked 145 out of 146 countries in the Global Gender Gap Index and was the lowest rank in South Asia [34]. This is mainly due to the social and cultural context of Pakistani society, which is historically patriarchal, often with discriminatory terms for access to education, health, and economic opportunities for women as compared to men. This is reflected in most of the female labor force participation rates. The wages have increased over time as the government has been revising the minimum wage for the last few years. However, the wage growth for women has been approximately 5% less than for men [33]. This can be attributed to occupational segregation, lack of maternity support, and inequality in access to education and vocational training.

Women are mostly employed in the agricultural sector with a smaller share in the industrial and service sector. Discrimination based on ethnicity, religion, or caste is also common. In 2010, the Protection against Harassment of the Women at the Workplace Act was also introduced, aimed at providing a safe working environment for women. However, the implementation of the said law has been limited.

According to Article 25 of the Constitution of Pakistan on equality of citizens, ”All citizens are equal before the law and are entitled to equal protection of law. There shall be no discrimination based on sex” [35]. An overview of the labor laws of Pakistan shows that, in general, no provision in the labor law goes against the ILO Conventions. Section 15 of the West Pakistan Minimum Wage Rules, 196,275 and sections 15 and 18 of The Sindh Minimum Wage Act, 2015, binds employers to apply the principle of equal remuneration for work of equal value between men and women workers while fixing wages [36].

Despite a heated debate, the quality of employment index remains a valuable summary measure of the quality of employment. There have been numerous independent and academic efforts to measure the quality of employment, but its complexity arises from the multidimensional parameters that vary across and within countries. This complexity is further compounded by the contradictory interests of multiple stakeholders.

In countries like Pakistan, data availability is limited, making it difficult to replicate and conceptualize the quality employment measurement. While academics and policymakers are increasingly recognizing the vulnerability of this subject, no consensus has been achieved on how to measure it effectively [37]. In essence, the plethora of diverse perspectives has diluted the impact of decent work, hindering its materialization and operationalization to date.

In conclusion, Pakistan witnessed a serious setback to the country’s economy in 2022 due to political unrest, a deep economic crisis, catastrophic flooding, soaring inflation, and a depreciating currency. These challenges inevitably had a negative impact on the labor market performance. A significant portion of low-income households became susceptible to slipping back into poverty,

leading to deprivation of food, water, shelter, and health facilities. This, in turn, is expected to result in a decline in labor market performance and reduced employee productivity.

Unsafe working conditions and the unjust attitude of the employers, specifically towards low-income and informal sector workers, contribute to demotivation and frustration among them. Additionally, the limited participation of women in the workforce further hampers overall development. Addressing these issues is crucial for enhancing labor market performance, employment productivity, and the overall quality of employment.

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SRI LANKA

Introduction

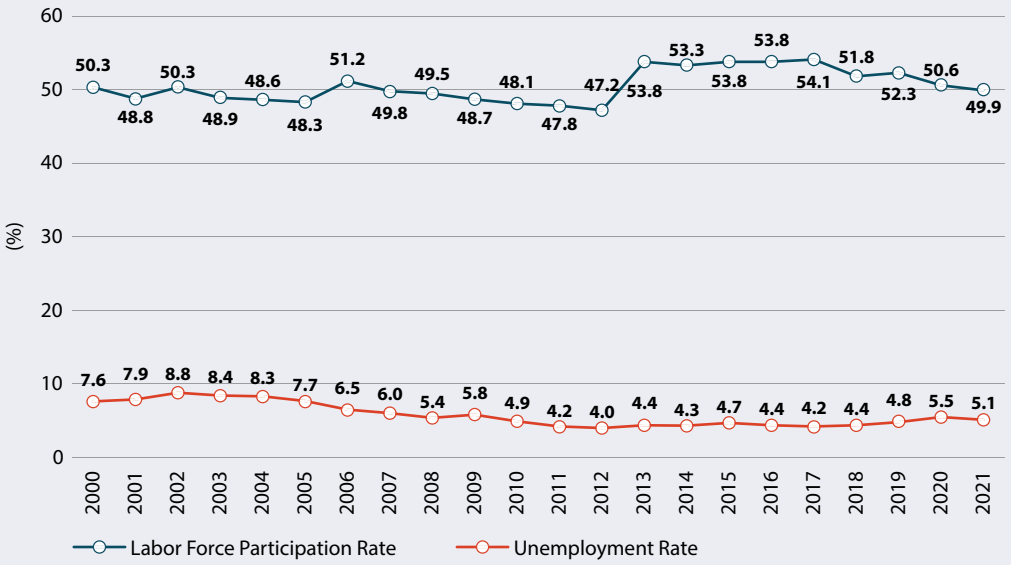
The estimated mid-year population of Sri Lanka in 2022 was 22,181,000, with the literacy rate of the country standing at 95.7%, according to the Population and Housing Census conducted in 2012. In 2011–13, the life expectancy at birth in the country was 72 years for men and 78.6 years for women. According to the Demographic and Health Survey conducted in 2016, the total fertility rate in Sri Lanka was 2.2. In 2015, the infant mortality rate per 1,000 live births was 7.5, while the maternal mortality rate per 100,000 live births was 23.2 [1].

According to the Household Income and Expenditure Survey (HIES) conducted in 2019, the size of an average household was 3.7 people, the average monthly household income was LKR76,414, and the average monthly household expenditure was LKR63,130. However, the mean income per month of people receiving income stood at LKR42,308. HIES – 2019 revealed that the official poverty line for Sri Lanka is LKR6,966 per person, per month, and the poverty headcount index was 14.3% [2].

The labor force participation rate for the population aged 15 and above, according to the 2021 Labor Force Survey (LFS), stood at 49.9% while the unemployment rate was 5.1% [3]. Figure 1 illustrates the labor force participation rate and the unemployment rate of Sri Lanka during the past two decades.

FIGURE 1

LABOR FORCE PARTICIPATION AND UNEMPLOYMENT RATE FOR THE POPULATION AGED 15 AND ABOVE FROM 2000 TO 2021 (IN %).



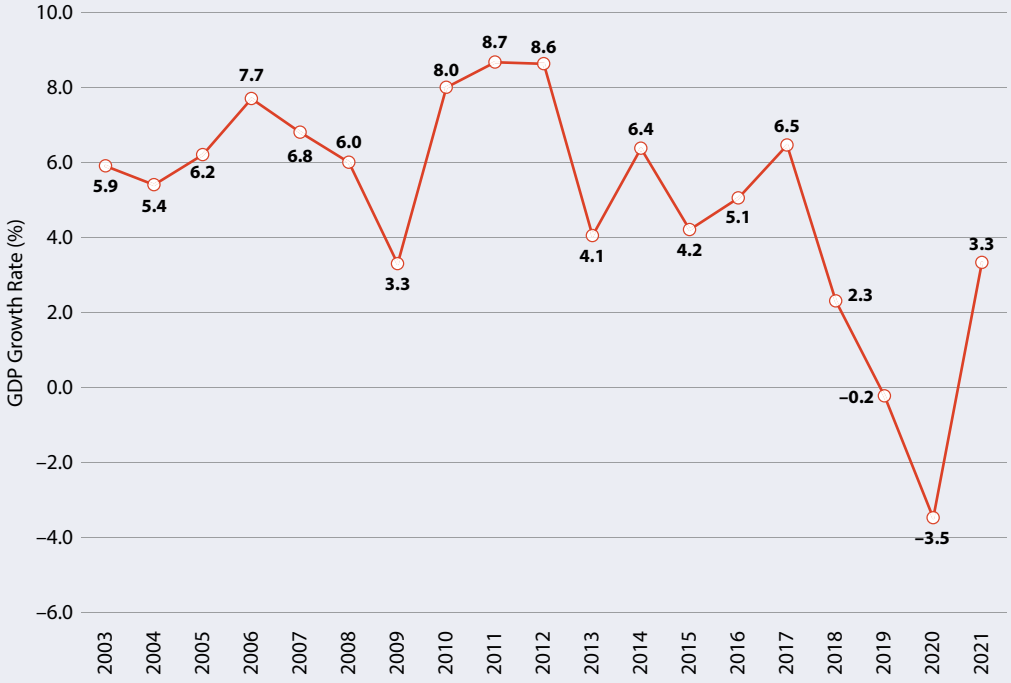
Source: Department of Census and Statistics, Government of Sri Lanka [1].

A higher percentage of employees are engaged in the services sector, accounting for 46.7% of the total employment in 2021. The share of employees engaged in the agriculture sector and industries sector in 2021 is 27.3% and 26%, respectively [3]. The contribution of these three industrial categories to the GDP shows a similar pattern. During the second quarter of 2022, the services sector contributed 49.4% of the country's GDP, while the agriculture and industry sectors contributed 10.2% and 32%, respectively [1].

In the second quarter of 2022, Sri Lanka's GDP at current prices was LKR5,374,716 million [1]. The figure depicts the country's growth rate of GDP from 2003 to 2021.

FIGURE 2

SRI LANKA'S GDP GROWTH RATE FROM 2003 TO 2021 (IN %).



Source: Department of Census and Statistics, Government of Sri Lanka [1].

Need for the Study

One of the main factors contributing to the economic development of any country is a high level of labor force participation. However, a high labor force participation rate alone may not be sufficient for economic development. To achieve rapid economic growth, employees must effectively engage in their job activities. This is where the concepts of productive employment and quality of employment come into play.

Productive employment and quality of employment are broad concepts that are used in the labor market and can be defined in several ways. Productive employment is often defined as a type of employment that allows a worker and their dependents to live a better life, such that, the household can maintain a standard of living above the poverty line [4, 5]. When an employee earns a sufficient income, they tend to be satisfied with their employment, leading to better performance in the workplace. However, if their earnings are inadequate to meet the needs of their family members,

they may find it challenging to work happily in that job. Such workers tend to engage in secondary jobs to fulfill their needs, resulting in low performance in their primary occupation, ultimately leading to lower productivity.

The quality of employment is closely tied to the well-being of workers. When workers have access to safety measures, benefits, training, motivation, job security, and adequate leave, they tend to be happier in their work environment. This may lead to higher levels of productivity, which in turn will benefit their respective organizations.

Therefore, assessing productive employment and the quality of employment is of utmost importance for a country. This assessment enables the country to gain a better understanding of whether it is utilizing its labor force effectively and efficiently.

Definitions

Productive Employment: It is a form of employment that yields sufficient return to labor, enabling the workers and their dependents to maintain a level of consumption above the poverty line.

Quality of Employment: It has seven broad dimensions as listed:

1. Safety and ethics of employment
2. Income and benefits from employment
3. Working hours and work-life balance
4. Security of employment and social protection
5. Social dialogue
6. Skill development and training
7. Employment-related relationships and work motivation

Quality of employment is a composite index that is calculated using these seven dimensions.

Objectives of the Study

1. To assess the levels of productive employment and the quality of employment.
2. To analyze the impact of productive employment and the quality of employment on labor market performance.
3. To formulate policies aimed at enhancing labor productivity and improving the well-being of workers.

Significance of the Study

The use of the Productive Employment Index and an indicator for assessing the quality of employment is critical for a country. It provides authorities with valuable insights into employee productivity and quality, enabling them to identify the existing drawbacks within the country. It also facilitates global

comparisons, allowing countries to identify where they stand. Therefore, it paves the way for improving the current productivity levels and quality of employment in the country.

Literature Review

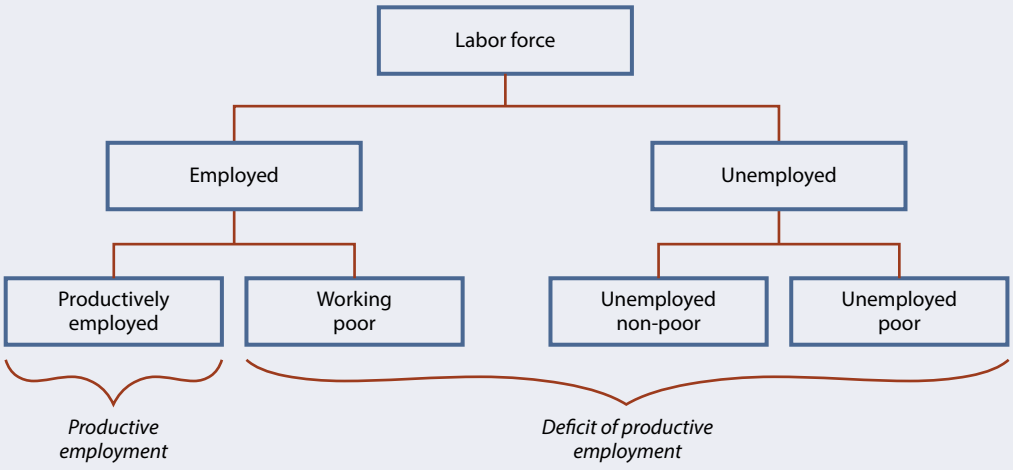
Productive Employment

Productive employment has been defined as "employment that generates sufficient returns for a worker and their dependents to maintain a level of consumption above the poverty line" [5].

Conversely, being in the labor force without obtaining productive employment is considered a deficit in productive employment [4]. Figure 3 illustrates this deficit in productive employment.

FIGURE 3

BREAKDOWN OF THE LABOR FORCE FROM THE POVERTY PERSPECTIVE.



Source: Understanding deficits of productive employment and setting targets: A methodological guide. International Labour Office, Employment Sector – Geneva, ILO; 2012. [4].

Demographic factors, including age, gender, civil status, and years in service are directly or indirectly linked to employment productivity [6]. Above all, employee productivity is of paramount importance for the success of any organization. When the workers of an organization are productive, they utilize their time effectively and efficiently, resulting in higher output, thereby adding higher value to the organization.

Poverty Line

The official poverty line for Sri Lanka is determined by the Department of Census and Statistics (DCS). It has been calculated since 2004 using the HIES, also conducted by the DCS. The official poverty line can be defined as the minimum monthly expenditure required to meet a person's basic needs. In this context, the basic needs refer to meeting the nutritional requirement of 2030 kilocalories and a minimum non-food allowance.

The most recent HIES survey, conducted in 2019 by DCS, established the official poverty line in Sri Lanka is LKR6,966 per person, per month [2].

Poverty Head Count Index

The Poverty Head Count Index is the percentage of people living below the official poverty line. In Sri Lanka, based on HIES 2019, the Poverty Head Count Index was 14.3% and the percentage of households in poverty was 11.9% [2].

Working and Employed People

All individuals engaged in paid employment, employers, own account workers, and contributing family workers during the referenced period, are categorized as working/employed people. Additionally, any person who did not work during the reference period but holds a job is also considered a working/employed person. In this context, the reference period is the week preceding the survey week [7].

Purchasing Power Parity

Purchasing power parity or PPP is used to compare the economic productivity and living standards between the countries.

Quality of Employment

Safety and Ethics of Employment

The rate of occupational injuries per 100,000 workers is a good indicator to get an idea of the safety of employment. This indicator is prepared by the Labour Department of Sri Lanka, which collects data on occupational injuries, including permanent injuries and partial injuries.

Examples of ethical behaviors in the workplace include adhering to workplace rules, effective communication, taking responsibility, being accountable, being professional, fostering trust, and demonstrating mutual respect for colleagues. These ethical behaviors are qualitative, making it challenging to measure them. As a solution to this challenge, a quantitative indicator, namely the percentage of employed people below the minimum age of work, can be considered as a measure of employment ethics. This indicator relies on data from the Sri Lanka Labour Force Survey. However, it is important to note that the LFS collects data from individuals aged 15 years and above [7–9].

The minimum working age in Sri Lanka is set as 16 years [10–11]. Therefore, when calculating this indicator, only the workers aged 15 years are included.

Income and Benefits from Employment

To measure the income and benefits from employment, two indicators can be used. These are the 'proportion of workers earning below minimum wage' and 'minimum wage as a percentage of median wage'.

Minimum Wage in Sri Lanka

The analysis of this report was conducted during the years 2018–20. During this period, the national minimum wage for workers in Sri Lanka stood at LKR13,500 [12–14].

Working Time and Work-Life Balance

The number of hours a person is engaged in their occupation is an indicator for assessing the quality of employment. If a person is engaged in their official duties for more than 48 hours per week, it is deemed that their working hours exceed the recommended level, and as a result, the quality of employment is not achieved [15]. Therefore, the indicator "the percentage of working

people who are working less than 48 hours per week' is used to gauge the work-life balance and quality of employment.

Security of Employment and Social Protection

To measure the security of employment and social protection, two indicators can be used.

1. The percentage of workers who are covered under any social security or protection schemes.

2. The share of informal workers.

Social Security or Protection Schemes

As stated in ILO Recommendation No. 202, social security is a fundamental human right and a social and economic necessity. The concept of Social Protection Floors is designed to guarantee that all people have access to basic income and essential healthcare throughout their lives, together with secure and effective access to goods and services that are considered essential at the national level [16]. Social protection is a combination of laws and programs aimed at helping underprivileged people to manage risk, which may include monetary support or in-kind transfers [17].

Sri Lanka has six pension benefit schemes, namely: the Civil Servant's Pension Scheme, the Farmers' Pension and Social Security Benefit Scheme, the Fishermen's Pension and Social Security Benefit Schemes, the Self-Employed Persons Pension and Social Security Benefit Scheme, the Employees' Provident Fund (EPF), and the Employees' Trust Fund (ETF). The first four schemes provide members with monthly pension payments, while beneficiaries of the EPF and ETF receive lump sum payments. However, the Farmer's Pension scheme collapsed in 2012 and has not made pension payments since then. The Self-Employed Persons Pension Scheme offers relatively low benefits and does not provide much social protection for its members. Therefore, it is assumed that only the Civil Servant's Pension Scheme, Fishermen's Pension Scheme, EPF, and ETF are currently operational and beneficial social security and protection schemes in Sri Lanka [16, 18].

Informal Sector

An institution that does not satisfy any of the mentioned conditions is considered an informal sector institution [7].

- The institution is registered in the Employment Provident Fund or Department of Inland Revenue.

- The institutions keep formal accounts.

- The total number of regular employees of the institution is greater than or equal to 10.

Informal Employment

All employment or workers falling into the following four categories are categorized as informal employment or workers [7].

1. All unpaid family workers.

2. All employers and own account workers in the informal sector.

3. All paid employees who do not have a permanent employer.

4. All paid employees whose employers are not contributing to the pension scheme or provident fund on their behalf.

Social Dialogue

The ILO defines social dialogue as any form of negotiation, consultation, or direct information exchange involving representatives of governments, employers, and workers. The information-sharing process can be on the topics related to economic and social policies and may take the form of formal negotiations with the government participating in the discussion as an official party or it may simply involve relations between the labor and the management (or trade unions and employers' associations). Social dialogue serves the purpose of maintaining or encouraging peaceful and constructive workplace relations [19].

Collective bargaining is a term that comes under the social dialogue. It is the process by which workers negotiate their needs and rights with their employers through their unions. These needs and rights include wages, working hours, training, occupational health, and safety policies [20].

TABLE1

LEGAL PROVISIONS FOR COLLECTIVE BARGAINING.

Description	Name of the Act
Scope of collective bargaining	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 5 (1))
Representativity requirements for trade unions to negotiate a collective agreement	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 32 A (g))
The relationship between collective agreements and statutory provisions	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 8 (2))
The relationship between collective agreements reached at different levels	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 10)
The relationship between collective agreements and individual employment contracts	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 8 (1))
Binding effect of collective agreements on signatory parties	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 8 (1))
Duration of a collective agreement	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 7 (2); 9)
Applicability of collective agreements to non-signatory parties in organized workplaces	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 10 (1))
Procedures for the extension of collective agreements to non-signatory parties	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 10 (1))
Initiating party for the extension of collective agreements	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 10)
Registration of collective agreements	Industrial Disputes Act (No. 43 of 1950) (Cap. 131). (Sec. 6)

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Description	Name of the Act
Categories of workers excluded from collective bargaining:	
Police and security forces	Trade Unions Ordinance (No. 14 of 1935) (Cap. 138). (Sec. 20 (2) (c))
Military (defense) forces	Trade Unions Ordinance (No. 14 of 1935) (Cap. 138). (Sec. 20 (2) (b))
Public and civil servants (managerial and supervisory staff only)	Trade Unions Ordinance (No. 14 of 1935) (Cap. 138). (Sec. 20)

Source: Industrial Disputes Act, No.43 of 1950 [21]; and Trade Unions Ordinance, 1935 [22].

Skill Development and Training

Skill development and training is another indicator of the quality of employment. This indicator can be measured using 'the share of employed people in high-skilled occupations'.

Since 2013, the International Standard Classification of Occupations – 2008 (ISCO-08) has been used for occupation classification in the LFSs. A list of occupations corresponding to different skill levels can be found in Table 2.

TABLE 2

OCCUPATION BY SKILL LEVELS.

Broad skill level	Occupations (ISCO-08)
Skill level 3 and 4	1. Managers
	2. Professionals
	3. Technicians and associate professionals
Skill level 2	4. Clerical support workers
	5. Service and sales workers
	6. Skilled agricultural, forestry, and fishery workers
	7. Craft and related trades workers
	8. Plant and machine operators and assemblers
Skill level 1	9. Elementary occupations
Armed forces	0. Armed forces occupations
Not elsewhere classified	X. Not elsewhere classified

Source: International Standard Classification of Occupations [23].

Skill levels 3 and 4 in Table 2, which encompass managers, professionals and technicians, and associate professionals, will be considered as high-skilled occupations in this analysis [24].

Employment-Related Relationship and Work Motivation

To measure employment-related relationships and work motivation, the ideal indicators are 'the share of employed people who feel they do useful work' and 'the share of employed people who

are satisfied with their work'. Unfortunately, the data for these indicators is unavailable in the national surveys. The only indicator within the Sri Lanka LFS that appears to be related to this indicator is the visible underemployment.

Underemployment

The ability of an individual to perform their job effectively plays a crucial role in maintaining positive aspects of their personal life, including social, physical, financial, and health. Therefore, it is important to assess whether workers are satisfied with their employment within the job market. Accordingly, underemployment emerges as a significant indicator that underscores the quality of the labor force in a country.

The ILO describes underemployment as the underutilization of the productive capacity of the employed population. Underemployment may refer to a variety of situations, but most commonly, it refers to individuals who are employed but not in their desired capacity. This unmet need may relate to any or all of the following: hours of work, the extent of skill utilization, the application of qualifications or experience, or the level of compensation. Considering the descriptions of underemployment, two related concepts emerge, namely, visible underemployment and invisible underemployment.

Visible Underemployment

Some individuals, despite being employed, are willing to work longer hours if given more work. This situation is referred to as visible underemployment [7]. The Sri Lanka LFS measures underemployment only under the concept of visible underemployment.

Invisible Underemployment

Within the labor force, there is a segment of individuals who work the recommended hours for their jobs. However, they are unable to utilize their skills, qualifications, and experiences, and they do not receive reasonable compensation commensurate with their abilities. This is known as invisible underemployment [7]. To measure the invisible underemployment, the above-mentioned indicators 'share of employed people who feel they do useful work' and/or 'share of employed people who are satisfied with their work' must be used. To measure these indicators, a separate nationwide survey needs to be conducted.

Research Methodology

Sources of Data

Secondary Data

The study utilized the microdata from LFS conducted by the DCS in 2018, 2019, and 2020. Among these surveys, LFS 2020 was the most recent in which the data was available for dissemination at the time the analysis commenced. However, it is important to note that the year 2020 was not a normal year due to the global impact of the COVID-19 pandemic. Therefore, it was assumed that the data from LFS 2020 might not accurately represent the overall situation in Sri Lanka. Hence, it was decided to incorporate microdata from the LFS 2018 and 2019 in the analysis.

The data collection of the LFS surveys was conducted throughout the calendar year and it covered all 25 districts in Sri Lanka. The primary objective of the LFS survey was to provide data to measure the levels and trends of employment, unemployment, underemployment, labor force, literacy, and computer literacy in Sri Lanka.

A quantitative approach was used to collect data, involving the use of a structured questionnaire. Well-trained field officers from the DCS conducted direct interviews at the household level to gather the necessary information.

Methods of Analysis

Most of the indicators have been calculated based on three broad industrial categories of agriculture, industry, and services. The gender dimension and the residential sector have been considered wherever possible, depending on the availability of data.

All the values of the indicators calculated for productive employment and quality of employment have been presented as percentages. Therefore, all seven indicators fall within the same value range. However, when calculating the quality of employment index, the Max-Min procedure was used to convert the selected seven indicators into values ranging between 0 and 1. Subsequently, the quality of employment index was calculated as an unweighted index of seven indicators using the geometric mean.

Max-Min Procedure

The Max-Min procedure is used to normalize a set of values that are on different scales. It transforms these values to ensure that all the values fall between 0 and 1. This normalization process brings all the values onto a common scale, makes them unidirectional, and enables easy comparison.

The following formula can be used to convert the values of a variable to (0,1) scale, with 'x' as a value of a given variable.

$$x_{transformed} = \frac{x - \min(x)}{\max(x) - \min(x)}$$

Geometric Mean

The geometric mean is the average value or mean that measures the central tendency of a set of numbers. It is calculated using the following formula.

Geometric Mean = $\sqrt[n]{x_1 \times x_2 \times \ldots \times x_n}$

Findings

Productive Employment

To calculate the Productive Employment Index, the percentage of workers earning above USD1.25 per person, per day, adjusted for PPP was considered. However, since the international poverty line is set at USD1.90 per person, per day, the Productive Employment Index was also calculated based on the percentage of workers earning above USD1.90 per person, per day, in terms of PPP.

As the income earner(s) of a family have to fulfill the requirements of all dependents, the average number of dependents per income earner was calculated. The corresponding values for the years 2018, 2019, and 2020 were 2.6, 2.56, and 2.62, respectively. Accordingly, an employee's income should be sufficient to support all the dependents in the family. Therefore, the following threshold values for each year were considered for calculating the Productive Employment Index.

TABLE 3

THRESHOLD VALUES FOR CALCULATING PRODUCTIVE EMPLOYMENT INDEX (2018–20).

Year	Average Number of Dependents per Income Earner	If Poverty Line = USD1.25		If Poverty Line = USD1.90	
		Minimum Income to be Earned per Day (in USD)	Minimum Income to be Earned per Day in Terms of PPP (in LKR)	Minimum Income to be Earned per Day (in USD)	Minimum Income to be Earned per Day in Terms of PPP (in LKR)
2018	2.60	1.25*2.60 = 3.25	3.25*50.08 = 162.70	1.9*2.60 = 4.94	4.94*50.08 = 247.40
2019	2.56	1.25*2.56 = 3.20	3.2*50.46 = 161.47	1.9*2.56 = 4.86	4.86*50.46 = 245.24
2020	2.62	1.25*2.62 = 3.28	3.28*51.83 = 170.00	1.9*2.62 = 4.98	4.98*51.83 = 258.10

Source: Labor Force Survey. Department of Census and Statistics, Government of Sri Lanka, and calculations by the national expert.

Based on the above threshold values, the productive employment index was calculated and the corresponding values for the years 2018, 2019, and 2020 were 95.17%, 95.55%, and 93.92%, respectively, when considering the poverty line as USD1.25. Alternatively, if the poverty line was considered as USD1.90, the respective values of the productive employment index were 90.62%, 91.19%, and 91.35% for the years 2018, 2019, and 2020. The data indicates that Sri Lanka stands in a good position in terms of productive employment.

TABLE 4

PRODUCTIVE EMPLOYMENT INDEX BY GENDER (2018–20).

Gender	If Poverty Line = USD1.25			If Poverty Line = USD1.90		
	2018	2019	2020	2018	2019	2020
Male	97.02	97.20	95.89	94.00	94.33	93.92
Female	90.92	91.85	89.25	82.89	84.17	85.25
Total	**95.17**	**95.55**	**93.92**	**90.62**	**91.19**	**91.35**

Source: Labor Force Survey. Department of Census and Statistics, Government of Sri Lanka.

Considering this indicator by gender shows that the percentage of male workers earning more than the poverty line per day was higher than females. This implies that in Sri Lanka, more males are engaged in highly paid occupations than females.

TABLE 5

PRODUCTIVE EMPLOYMENT INDEX BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	If Poverty Line = USD1.25			If Poverty Line = USD1.90		
	2018	2019	2020	2018	2019	2020
Agriculture	88.47	89.03	86.42	78.01	79.75	81.26
Industry	95.21	96.26	94.33	91.42	92.46	92.05
Services	98.23	98.08	97.52	95.97	95.62	96.11
Total	**95.17**	**95.55**	**93.92**	**90.62**	**91.19**	**91.35**

Source: Labor Force Survey. Department of Census and Statistics, Government of Sri Lanka.

The percentage of workers in the agriculture sector who earn more than the poverty line per day was lower than in the other two sectors. Workers in the services sector consistently displayed a higher percentage in all three years.

TABLE 6

PRODUCTIVE EMPLOYMENT INDEX BY RESIDENTIAL SECTOR (2018–20).

Residential Sector	If Poverty Line = USD1.25			If Poverty Line = USD1.90		
	2018	2019	2020	2018	2019	2020
Urban	97.98	98.64	97.30	95.92	96.30	96.27
Rural	94.37	94.73	93.06	89.29	89.87	90.24
Estate	97.60	97.38	96.39	92.71	93.74	92.79
Total	**95.17**	**95.55**	**93.92**	**90.62**	**91.19**	**91.35**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The productive employment index is lowest among the workers in the rural sector as compared to the other two sectors. This trend was the same for all three years.

Quality of Employment

Safety and Ethics of Employment

To measure the safety and ethics of employment the following two indicators were calculated.

- The rate of occupational injuries per 100,000 workers.
- The percentage of employed people below the minimum age of work.

Rate of Occupational Injuries per 100,000 Workers

According to the data from the Department of Labor in Sri Lanka, the fatal occupational injury rate in the country was 0.98 per 100,000 employees in 2019. The corresponding figures for 2020 and 2021 are 0.80 and 0.76 per 100,000 employees, respectively.

TABLE 7

RATE OF OCCUPATIONAL INJURIES PER 100,000 WORKERS BY GENDER (2019–21).

Gender	Occupational Injuries per 100,000 Workers								
	2019			2020			2021		
	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total
Male	1.46	20.58	22.04	1.15	15.50	16.66	1.07	15.05	16.11
Female	0.07	12.69	12.77	0.08	9.75	9.82	0.15	11.24	11.39
Total	**0.98**	**17.86**	**18.84**	**0.80**	**13.61**	**14.41**	**0.76**	**13.79**	**14.55**

Source: Department of Labor, Government of Sri Lanka.

The rate of occupational injuries per 100,000 workers, categorized by gender, indicates that males have a higher rate of occupational injury than females. This may be because males tend to work in more hazardous occupations than females. Overall, the incidence of fatal injuries is very low

compared to non-fatal injuries. The rate of occupational injuries in 2019 was higher than in 2020 and 2021. It may be noted that the years 2020 and 2021 were affected by the COVID-19 pandemic, which led to reduced physical engagement in employment. This reduction in engagement might be the reason for the low injury rates as observed in 2020 and 2021.

TABLE 8

RATE OF OCCUPATIONAL INJURIES PER 100,000 WORKERS BY INDUSTRIAL CATEGORY (2019–21)

Industrial Category	Occupational Injuries per 100,000 Workers								
	2019			2020			2021		
	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total
Agriculture	–	0.09	0.09	0.09	0.28	0.37	0.05	0.42	0.46
Industry	3.19	54.53	57.72	2.42	42.46	44.87	2.30	45.44	47.73
Services	0.27	6.92	7.19	0.27	4.60	4.87	0.31	3.71	4.02
Total	**0.98**	**17.86**	**18.84**	**0.80**	**13.61**	**14.41**	**0.76**	**13.79**	**14.55**

Source: Department of Labor, Government of Sri Lanka.

The agriculture sector showed lower rates of occupational injuries and the industry sector showed the highest rates across all the years under consideration. Since the majority of employees in the industry sector work with machines, the risk associated with those workers is very high. This might be the reason for the higher rates of occupational injuries among the workers in the industry sector.

TABLE 9

RATE OF OCCUPATIONAL INJURIES PER 100,000 WORKERS BY ECONOMIC ACTIVITY (2019–21).

Economic Activity	Occupational Injuries per 100,000 Workers								
	2019			2020			2021		
	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total
Total	**0.98**	**17.86**	**18.84**	**0.80**	**13.61**	**14.41**	**0.76**	**13.79**	**14.55**
Agriculture, forestry, and fishing	0.00	0.09	0.09	0.09	0.28	0.37	0.05	0.42	0.46
Mining and quarrying	1.80	52.19	53.99	10.55	19.35	29.90	10.42	20.84	31.26
Manufacturing	1.23	72.54	73.77	1.22	59.60	60.81	0.94	64.77	65.71
Electricity, gas, steam, and air conditioning supply	24.34	178.50	202.84	22.22	122.22	144.44	14.01	75.66	89.67
Water supply, sewerage, waste management, and remediation activities	0.90	0.90	1.79	–	0.35	0.35	0.18	–	0.18
Construction	41.73	61.55	103.28	21.80	33.18	54.98	20.87	29.55	50.42

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Economic Activity	Occupational Injuries per 100,000 Workers								
	2019			2020			2021		
	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total	Fatal	Non-Fatal	Total
Wholesale and retail trade; repair of motor vehicles and motorcycles	0.00	1.19	1.19	0.27	0.91	1.19	0.09	1.23	1.32
Transportation and storage	0.78	21.53	22.30	0.38	9.74	10.12	0.39	14.19	14.58
Accommodation and food service activities	0.42	0.85	1.27	0.92	10.59	11.51	-	0.92	0.92
Not elsewhere classified	7.52	202.93	210.45	5.83	165.14	170.97	19.03	114.20	133.23

Source: Department of Labor, Government of Sri Lanka.

In terms of economic activity, the employees working in the fields of electricity, gas, steam, and air conditioning supply exhibited the highest rate of occupational injuries. Construction, manufacturing, mining, and quarrying were the other economic activities with higher rates of occupational injuries. On the other hand, agriculture, forestry, and fishing, as well as water supply, sewerage, waste management, and remediation activities showed comparatively lower rates of occupational injuries.

Percentage of those Employed Below the Minimum Working Age

In the data collection of the LFS in Sri Lanka, the working-age population has been defined as individuals aged 15 years and above starting from the year 2013 [25]. It is, however, important to note that, the minimum age for work in Sri Lanka is 16 years [10, 11]. Therefore, while calculating the percentage of employed individuals below the minimum age of work, those employed at the age of 15 years were only taken as the numerator.

The percentage of employed people below a minimum working age of 16 years was very low. It was 0.04% in 2018, 0.01% in 2019, and 0.05% in 2020. Since the free education system is available in Sri Lanka most of the children in the country enjoy the benefits of it. Children take the Ordinary Level exam at the age of 16 years. Therefore, almost all the children who are at the age of 15 years in Sri Lanka are attending schools. This might be the reason for having such a low percentage for this indicator, which is considered a plus point for the country.

TABLE 10

PERCENTAGE OF EMPLOYEES BELOW 16 YEARS OF AGE BY GENDER (2018–20).

Gender	Percentage of employed persons below 16 years of age		
	2018	2019	2020
Male	0.05	0.02	0.07
Female	0.03	0.01	0.01
Total	**0.04**	**0.01**	**0.05**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

However, among this smaller percentage of working people aged below 16 years, males had a higher percentage than their counterparts in all three years.

TABLE 11

PERCENTAGE OF EMPLOYEES BELOW 16 YEARS OF AGE BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of Employed People below 16 Years of Age		
	2018	2019	2020
Agriculture	0.07	0.04	0.13
Industry	0.03	0.01	0.03
Services	0.03	–	0.01
Total	**0.04**	**0.01**	**0.05**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

In terms of industrial categorization, a higher percentage of employed individuals below the age of 16 was observed in the agriculture sector, as compared to the other two sectors. Further, the year 2020 showed a fairly higher percentage within the agriculture sector.

TABLE 12

PERCENTAGE OF EMPLOYEES BELOW 16 YEARS OF AGE BY RESIDENTIAL SECTOR (2018–20).

Residential Sector	Percentage of Employed People below 16 Years of Age		
	2018	2019	2020
Urban	0.09	–	–
Rural	0.03	0.02	0.05
Estate	0.01	–	0.18
Total	**0.04**	**0.01**	**0.05**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

In the year 2018, the percentage of employed individuals below the age of 16 years from urban areas was higher than in the other two residential sectors. However, in both 2019 and 2020, there were no workers in the urban sector who were less than 16 years of age.

Income and Benefits from Employment

The proportion of workers earning below the minimum wage was used to measure the income and employment benefits. For those receiving monthly wages, the gross salary for the previous month was considered as their monthly income. For daily wage earners, the total monthly income was calculated by multiplying their daily wage by the number of days worked in the last month. The minimum monthly wage or income was established at LKR13,500 [12–14]. The analysis includes employees, employers, and own account workers who provided information about their income for this analysis.

In Sri Lanka, the percentage of employed people earning below the minimum wage was 21.09% in 2018 and 19.38% in both 2019 and 2020.

TABLE 13

PERCENTAGE OF EMPLOYEES EARNING BELOW THE MINIMUM WAGE BY GENDER (2018–20).

Gender	Percentage of Employed People Earning below the Minimum Wage		
	2018	2019	2020
Male	15.00	13.60	15.16
Female	35.03	32.28	29.39
Total	**21.09**	**19.38**	**19.38**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

A fairly high percentage of employed females were earning less than the minimum wage as compared to males. It ranged around 29–35% for females and 13–15% for males over the years of 2018 to 2020.

TABLE 14

PERCENTAGE OF EMPLOYEES EARNING BELOW THE MINIMUM WAGE BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of Employed People Earning below the Minimum Wage		
	2018	2019	2020
Agriculture	44.20	41.11	39.44
Industry	18.30	16.20	16.79
Services	12.08	11.41	10.64
Total	**21.09**	**19.38**	**19.38**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The industrial category data shows that a higher percentage of people engaged in the agriculture sector were earning below the minimum wage as compared to other sectors. The services sector showed the best values for this indicator.

TABLE 15

PERCENTAGE OF EMPLOYEES EARNING BELOW THE MINIMUM WAGE BY RESIDENTIAL SECTOR (2018–20).

Residential Sector	Percentage of Employed People Earning below the Minimum Wage		
	2018	2019	2020
Urban	10.39	8.95	9.14
Rural	23.01	21.39	21.29
Estate	29.26	24.46	22.63
Total	**21.09**	**19.38**	**19.38**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

According to the residential sector, the percentage of workers earning below the minimum wage was higher in the estate sector. A comparatively lower percentage of workers in the urban sector were earning below the minimum wage, which implies that more highly paid employment is available in the urban areas than in the other two residential areas.

Working Time and Work-Life Balance

To measure the working hours and work-life balance, the percentage of working people who are working more than 48 hours per week was used. The percentage of working people who are working more than 48 hours per week was around 37% in all the considered years.

TABLE 16

PERCENTAGE OF PEOPLE WORKING MORE THAN 48 HOURS PER WEEK BY GENDER (2018–20).

Gender	Percentage of People Working more than 48 Hours per Week		
	2018	2019	2020
Male	44.55	44.61	44.53
Female	22.35	21.86	22.67
Total	**37.03**	**36.79**	**37.35**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

If this indicator is considered by gender, it is seen that a higher percentage of males were working more than 48 hours in comparison to females. Around 44% of males were working more than 48 hours per week, while only around 22% of females were working long hours.

TABLE 17

PERCENTAGE OF PEOPLE WORKING MORE THAN 48 HOURS PER WEEK BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of People Working more than 48 Hours per Week		
	2018	2019	2020
Agriculture	24.60	24.35	24.04
Industry	38.21	37.91	39.91
Services	43.12	42.84	43.71
Total	**37.03**	**36.79**	**37.35**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

If this indicator is considered by the industrial category, a higher percentage of workers in the services sector were working more than 48 hours per week as compared to the workers in the other two sectors. It is recorded to be around 43%. A lower percentage of workers in the agriculture sector were working long hours, which was around 24%.

TABLE 18

PERCENTAGE OF PEOPLE WORKING MORE THAN 48 HOURS PER WEEK BY RESIDENTIAL SECTOR (2018–20).

Residential Sector	Percentage of People Working More than 48 Hours per Week		
	2018	2019	2020
Urban	40.45	40.30	39.27
Rural	36.00	35.76	36.73
Estate	41.89	41.53	41.13
Total	**37.03**	**36.79**	**37.35**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The workers from the rural areas seem to be more relaxed than the workers in the other two sectors because the percentage of working people who were working more than 48 hours was lesser among the workers in the rural sector.

Security of Employment and Social Protection

The percentage of informal workers was considered for calculating the security of employment. The percentage of informal workers out of total employment was 68% in 2018 and 67% in both 2019 and 2020.

TABLE 19

PERCENTAGE OF INFORMAL WORKERS BY GENDER (2018–20).

Gender	Percentage of Informal Workers		
	2018	2019	2020
Male	71.22	69.67	70.38
Female	61.80	61.17	60.07
Total	**68.03**	**66.74**	**66.99**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The share of informal workers was higher among males than in females. The percentage ranged between 70–71% for males and 60–62% for females.

TABLE 20

PERCENTAGE OF INFORMAL WORKERS BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of Informal Workers		
	2018	2019	2020
Agriculture	90.99	91.83	91.40
Industry	68.82	66.90	67.08
Services	54.99	53.16	52.54
Total	**68.03**	**66.74**	**66.99**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The data for the industrial category indicates that the share of informal workers was very high in the agriculture sector. It was greater than 90% in all the considered years. On the other hand, a lesser percentage of informal workers were seen in the services sector as compared to the other two sectors.

TABLE 21

PERCENTAGE OF INFORMAL WORKERS BY RESIDENTIAL SECTOR (2018–20).

Residential Sector	Percentage of Informal Workers		
	2018	2019	2020
Urban	55.61	52.88	53.95
Rural	71.94	70.63	70.55

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Residential Sector	Percentage of Informal Workers		
	2018	2019	2020
Estate	47.10	51.16	51.79
Total	**68.03**	**66.74**	**66.99**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

Considering the values of this indicator by the residential sector shows that a remarkably high percentage of rural sector workers come under the category of informal workers. The corresponding percentages for informal workers living in rural areas were 72%, 71%, and 71% for 2018, 2019, and 2020 respectively.

Social Dialogue

The share of workers covered by collective bargaining can be used to measure the social dialogue.

TABLE 22

COLLECTIVE BARGAINING COVERAGE RATES OF EMPLOYEES (IN %).

Year	Coverage Rate of Collective Bargaining (in %)
2009	5.6
2010	5.6
2011	5.7
2012	5.5
2013	5.9
2014	5.4
2015	5.9
2016	4.8
2017	3.9
2018	3.6
2019	3.2

Source: International Labour Organisation (ILO).

The collective bargaining rates for Sri Lanka were calculated by the ILO. The collective bargaining coverage rate in 2009 was 5.6% which decreased to 3.2% in 2019, while showing some fluctuations over the years. More specifically, the rate started to decline from the year 2015.

Skill Development and Training

Managers, professionals, technicians, and associate professionals are considered as the high-skilled occupations. The share of employed people in high-skilled occupations was 23%, 24%, and 22% in the years 2018, 2019, and 2020, respectively.

TABLE 23

PERCENTAGE OF EMPLOYEES IN HIGH-SKILLED OCCUPATIONS BY GENDER (2018–20).

Gender	Percentage of Employed People in High-Skilled Occupations		
	2018	2019	2020
Male	20.71	21.65	19.01
Female	27.42	28.97	27.48
Total	**22.99**	**24.17**	**21.79**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The percentage of females who were engaged in highly skilled occupations was higher than the corresponding figures for males. More precisely, while around 27–29% of employed females were engaged in highly skilled occupations, only around 19–22% of males were engaged in highly skilled occupations during 2018–20.

TABLE 24

PERCENTAGE OF EMPLOYEES IN HIGH-SKILLED OCCUPATIONS BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of Employed People in High-Skilled Occupations		
	2018	2019	2020
Agriculture	2.65	3.01	1.53
Industry	12.44	13.47	13.62
Services	40.45	41.82	38.54
Total	**22.99**	**24.17**	**21.79**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

According to the industrial category data, a very low percentage of workers in the agriculture sector were engaged in high-skilled occupations (less than 3%), in all the considered years. The services sector had the highest contribution for this indicator as 40.45%, 41.82%, and 38.54% of workers in the services sector were in high-skilled occupations in 2018, 2019, and 2020, respectively. The percentage contribution by the industry sector to this indicator was around 12–14%.

TABLE 25

PERCENTAGE OF EMPLOYEES IN HIGH SKILLED OCCUPATIONS BY RESIDENTIAL SECTOR (2018–20).

Sector	Percentage of People in High-Skilled Occupations		
	2018	2019	2020
Urban	35.71	38.31	34.05
Rural	21.23	22.11	20.30
Estate	6.45	9.21	5.58
Total	**22.99**	**24.17**	**21.79**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

Residential sector data depicts a variation. A remarkably low percentage of estate sector workers were engaged in high-skilled occupations. The percentage was only around 6–9% of the total employed people residing in the estate sector. Workers residing in the urban sector showed the highest percentage of employed people with a high-skilled occupation, in all the three considered years.

Employment-Related Relationships and Work Motivation

The indicators that are recommended for the calculation of employment-related relationships and work motivation were 'share of employed people who feel they do useful work' and 'share of employed people who are satisfied with their work'. These two indicators are the ideal indicators for measuring underemployment, more precisely, the invisible underemployment. Since there was a lack of data for measuring invisible underemployment, visible underemployment was considered to measure employment-related relationships and work motivation. Visible underemployment is based on the working hours of an employed person. The total visible underemployment in Sri Lanka for the years 2018 and 2020 was 2.6%. It was 2.7% in 2019.

TABLE 26

PERCENTAGE OF VISIBLE UNDEREMPLOYMENT BY GENDER (2018–20).

Gender	Percentage of Visible Underemployment		
	2018	2019	2020
Male	2.17	2.28	2.26
Female	3.51	3.52	3.28
Total	**2.62**	**2.70**	**2.59**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

A gender-wise breakdown of the data on visible underemployment illustrates that the percentage of visible underemployment was somewhat higher among females than that of males.

TABLE 27

PERCENTAGE OF VISIBLE UNDEREMPLOYMENT BY INDUSTRIAL CATEGORY (2018–20).

Industrial Category	Percentage of Visible Underemployment		
	2018	2019	2020
Agriculture	4.12	3.98	4.26
Industry	2.96	3.10	2.49
Services	1.60	1.78	1.67
Total	**2.62**	**2.70**	**2.59**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

Visible underemployment was higher among the workers in the agriculture sector as compared to the workers in the other two sectors. As in most of the above cases, the services sector showed the best results, as the visible underemployment in this sector was the lowest, varying around 1.7%.

TABLE 28

PERCENTAGE OF VISIBLE UNDEREMPLOYMENT BY RESIDENTIAL SECTOR (2018–20.

Residential Sector	Percentage of Visible Underemployment		
	2018	2019	2020
Urban	1.61	1.84	1.73
Rural	2.88	2.94	2.80
Estate	1.85	1.87	2.10
Total	**2.62**	**2.70**	**2.59**

Source: Labor Force Survey, Department of Census and Statistics, Government of Sri Lanka.

The analysis of the residential sector shows that visible underemployment is highest among the workers residing in the rural areas as compared to workers residing in the other two sectors.

Calculation of Quality of Employment Index

To calculate the quality of employment Index, all the values of the seven mentioned indicators need to be transformed to a unique scale. Therefore, using the max-min procedure, the values of all the indicators were transformed such that their values ranged between 0 and 1. When the quality of employment index is calculated, all the indicators should be in favor of good quality employment. Therefore, the rate of employed people above the minimum age of work (16 years), the rate of workers earning above minimum wage, the rate of working people who are working less than or equal to 48 hours per week, the rate of formal workers, the share of workers covered by collective bargaining, the share of employed people in high skilled occupations, and the share of employed people who are not under the visible underemployment were considered. Whenever more than one indicator was available for any dimension, one of the indicators that was most suitable was considered for calculating the quality of employment index. In choosing the indicators, the availability of data also had to be considered. Table 29 presents each indicator that was considered for calculating the seven dimensions of the quality of employment index for the years 2018–20. All the values present in the table are in the range of 0 and 1. Finally, the geometric mean of the seven indicators was calculated to come up with the quality of employment index for each year.

TABLE 29

INDICATORS FOR CALCULATING THE QUALITY OF EMPLOYMENT INDEX (2018–20).

Dimension	Indicator	2018	2019	2020
Safety and ethics of employment	Rate of employed people above the minimum age of work (16 years)	0.9996	0.9999	0.9995
Income and benefits from employment	Rate of workers earning above the minimum wage	0.7891	0.8062	0.8062
Working hours and work-life balance	Rate of working people who are working less than or equal to 48 hours per week	0.6297	0.6321	0.6265
Security of employment and social protection	Rate of formal workers	0.3197	0.3326	0.3301
Social dialogue	Rate of workers covered by collective bargaining	0.036	0.032	–

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Dimension	Indicator	2018	2019	2020
Skill development and training	Rate of employed people in high-skilled occupations	0.2299	0.2417	0.2179
Employment-related relationships and work motivation	Rate of employed people who are not under the visible underemployment	0.9738	0.973	0.9741
Quality of Employment Index		0.3861	0.3859	0.5729

Source: Calculated by the national expert.

According to Table 29, the quality of employment index was 38.61%, 38.59%, and 57.29% in the years 2018, 2019, and 2020, respectively. It can be seen clearly from Table 29 that the rate of employed people above the minimum age of work (16 years), the rate of workers earning above minimum wage, and the share of employed people who are not under visible underemployment, depict values greater than 75%, which are in-favour of the quality of employment. The rate of working people who are working less than or equal to 48 hours per week also has a fairly good share of approximately 63%. However, the share of workers covered by collective bargaining stands at a very low level. It was 3.6% in 2018 and 3.2% in 2019. This indicator might be the main reason for getting a low value for the quality of employment index in Sri Lanka. For the year 2020, the data for the share of workers covered by collective bargaining was not available. Hence the quality of employment index for 2020 was calculated without considering the rate of collective bargaining. That resulted in a higher value of the quality of employment index for the year 2020 compared to the other two years. Likewise, the quality of employment index, calculated based on six indicators, ignoring the rate of collective bargaining, was 57.34% and 58.45% for the years 2018 and 2019 respectively.

Discussion and Conclusions

The Productive Employment Index for Sri Lanka, calculated on the basis of the poverty line, set at USD1.25 in terms of PPP for 2018, is 95.17%. The corresponding values for 2019 and 2020 are 95.55% and 93.92%, respectively. However, if the poverty line was considered to be USD1.90 in terms of PPP, the corresponding values of the Productive Employment Index were 90.62%, 91.19%, and 91.35% for the years 2018, 2019, and 2020, respectively. Therefore, Sri Lanka is well placed from the perspective of the Productive Employment Index. Overall, only around 9% of the workers in Sri Lanka earn below the poverty line, even when the poverty line is considered USD1.90 in PPP terms, per day.

Occupational injuries are very low in the agriculture sector. The data disaggregated by the economic activity confirms this by showing very low values in agriculture, forestry, and fishing. The chance of facing occupational injuries is higher for males than for females and the most probable reason for this might be because males have a higher tendency of engaging in dangerous jobs as compared to females.

The percentage of employed people below 16 is a very low percentage, from 2018 to 2020. It was 0.04% in 2018, 0.01% in 2019, and 0.05% in 2020. This is a positive point for the country and the main reason for this is the free education available in Sri Lanka. By getting the benefit of free

education, almost all of the children attend schools till the age of 15 years. Therefore, the child labor force is very low in Sri Lanka. However, the agriculture sector is the easiest and the most common industrial category that teenagers can enter as workers because there is a tendency for the children (especially children in the rural sector), to enter the labor force as contributing family workers in their home gardens or family paddy fields. This might be the reason for having a higher percentage of employed people, below the age of 16, among the workers in the agriculture sector as compared to the other two sectors. The percentage of workers below the age of 16 in the agriculture sector increased in 2020 and the reason behind this might be the promotion of the agriculture sector with the Covid-19 pandemic. On the other hand, the participation of males is higher than that of females in the group of workers aged less than 16 years.

A higher percentage of employed females are earning less than the minimum wage as compared to males. This implies that the tendency to engage in lesser-paid occupations is more common among females than in males. This is because some females are engaging in an occupation just to earn something, rather than spending their time without doing anything. The main objective of these women is not to bear the whole expenses of the family by themselves but to help their husbands by earning something.

A higher percentage of workers in the agriculture sector are earning below the minimum wage as compared to the other two sectors. Unlike the monthly wage earners, people who are engaged in the agriculture sector do not get a fixed income and their income varies according to the different periods of the year. In the harvesting period, they earn more but during some periods of the year, they earn very less. Therefore, on average their income becomes less.

People living in the estate sector in Sri Lanka are mostly the Indian Tamils. Most of the Indian Tamils are employed as laborers in the estate sector and they earn very less. This might be the most probable reason for the highest percentage of lower-income earners from the estate sector.

The percentage of those working more than 48 hours per week is higher among males than females. This difference aligns with the cultural background of Sri Lanka, where women often bear more responsibilities towards their families and children. Therefore, even when employed, women are expected to return home as early as possible. As a result, many women in Sri Lanka opt for jobs with fixed working hours, typically around 8 hours per day. This explains the lower percentage of women working more than 48 hours per week compared to males. Most of the government sector jobs are limited to 8 hours per day, while private sector employers often expect longer hours from their employees. Therefore, the contribution of around 22% of females working more than 48 hours per week likely comes predominantly from the private sector.

When considering the industrial categories, it becomes evident that working more than 48 hours per week is most common among workers in the services sector. In terms of residential sectors, it is notable that a lower percentage of workers residing in rural areas are working more than 48 hours per week, which implies that the rural sector workers are more relaxed than workers in the other two residential sectors.

The share of informal workers is higher among males than among females. Also, a significant majority, more than 90%, of workers in the agriculture sector operate as informal sector workers. This is largely because workers in the agriculture sector often engage in independent cultivation practices individually. Therefore, these workers fall within the definition of informal workers.

When examining the distribution of the residential sector, it becomes evident that informal sector workers are more common among people residing in rural areas. Workers living in rural areas mostly find employment in the agriculture sector, which likely contributes to the higher percentage of informal sector workers in rural areas.

Participation in high-skilled occupations was higher among female employees as compared to their male counterparts. Among the three industrial sector categories, a higher percentage of employees in the services sector were engaged in high-skilled occupations as compared to the workers from the other two sectors. Engagement in high-skilled occupations was notably less in the estate sector, where the majority of residents were of Indian Tamil descent.

Visible underemployment in Sri Lanka ranged between 2.6% and 2.7%, from 2018 to 2020. It was more common among female workers than among male workers. As in most of the cases, visible underemployment was also more common among the workers in the agriculture sector compared to other sectors. When comparing the residential sector, the data indicates that a higher percentage of workers in the rural sector were visibly underemployed.

The quality of employment index, calculated for Sri Lanka based on the seven indicators mentioned earlier, stood at 38.61% in 2018 and 38.59% in 2019. Since the data was not available for the rate of collective bargaining in 2020, the quality of employment index for 2020 was calculated without it, resulting in a value of 57.29%. This implies that the lower value of the collective bargaining rate had a significant impact on the value of the quality of employment index in Sri Lanka.

If the quality of employment index was calculated based on the other six indicators, omitting the indicator of collective bargaining, the corresponding values for the quality of employment index would be 57.34% and 58.45% for the years 2018 and 2019, respectively. This underscores the substantial role played by collective bargaining in determining the value of the quality of employment index for Sri Lanka, highlighting the need for action to further increase the value of collective bargaining.

Limitations of the Study

There is a need for a survey that can accurately estimate the indicators 'share of employed people who feel they do useful work' and 'share of employed people who are satisfied with their work'. These are indicators of invisible underemployment and essential for calculating the dimension 'employment-related relationships and work motivation'. However, due to time constraints, conducting such a survey was not feasible. Therefore, it was decided to rely on the visible underemployment, which could be calculated from the data available in the Sri Lanka LFS, as a proxy to measure employment-related relationships and work motivation.

The data source for the rate of occupational injuries was the Department of Labor. However, the data for the rate of occupational injuries were not available for the year 2018. Therefore, if this indicator were to be included in the calculation of the dimension 'Safety and Ethics of Employment', it would be impossible to calculate the quality of employment index for the year 2018. As a result, the 'rate of occupational injuries' was not factored into the calculation of the quality of employment index.

Policy Recommendations

Ensuring a safe workplace environment is of paramount importance, especially in the industry sector where the rate of occupational injuries is the highest. The agriculture sector, on the other hand, has the highest share of employees earning below the minimum wage and needs more attention. Given the significance of the agriculture sector to a country, it is imperative to address this concern. Insufficient earnings may drive people to other occupations, especially the younger generation. By setting up reasonable prices for the products of farmers, their earnings can be increased, attracting more people to the agriculture sector.

Approximately two-thirds of the workers in Sri Lanka come under the informal sector, with the agriculture sector making the highest contribution to the informal sector. However, converting agriculture sector employees into formal sector roles may prove challenging because most of the workers are engaged in this sector at the household level. Consequently, these workers are most likely to fall into the category of informal workers. Hence, there is a pressing need to develop national-level programs aimed at identifying institutions within the informal sector that have the potential to transition into the formal sector. These institutions should then be supported by the government to improve their current status.

The government should also take steps to introduce pension schemes for workers in the informal sector, providing them with security for their old age. This become crucial since the previously functioning Farmer's Pension scheme collapsed in 2012. To reactivate the pension scheme, it is essential to address the drawbacks that led to its failure while also introducing sustainable social security systems. Furthermore, attention should be focused on increasing engagement in high-skilled occupations within the agriculture sector. The sector requires comprehensive improvements so that the workers can earn higher wages, improve their living standards, and equip themselves with modern technical skills.

The majority of the Indian Tamil residing in the estate sector migrated to Sri Lanka during the colonial era to work as laborers on tea estates. This occupation has persisted through generations and it is essential to break this cycle by facilitating access to higher education for children in these estates. While Sri Lanka provides free education to all children in the country, the financial constraints faced by Indian-Tamil families often hinder them from providing the necessary support for their children's education. Implementing welfare programs to uplift their living standards can help Indian Tamil parents facilitate their children's education. Overcoming this barrier in one generation can pave the way for a gradual shift and stop the next generations of Indian Tamils from being restricted to working as laborers in tea estates.

The coverage rate of collective bargaining in Sri Lanka is currently very low. However, there is a separate division within the Department of Labor, the Human Resources Development Division, which is responsible for enhancing industrial peace and workplace cooperation through social dialogue. Currently, they are conducting Social Dialogue Promoting Programs for managers and employees in the private sector and semi-government institutions. They are also organizing Labor Law Awareness Programs for women workers in the plantation sector. Furthermore, District and Sub Labor Offices conduct Advisory Council Meetings and Implant Social Dialogue Promoting Programs. All these initiatives aim to promote collective bargaining. Therefore, this area needs to be given more attention and it should be developed further by conducting island-wide awareness programs.

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THAILAND

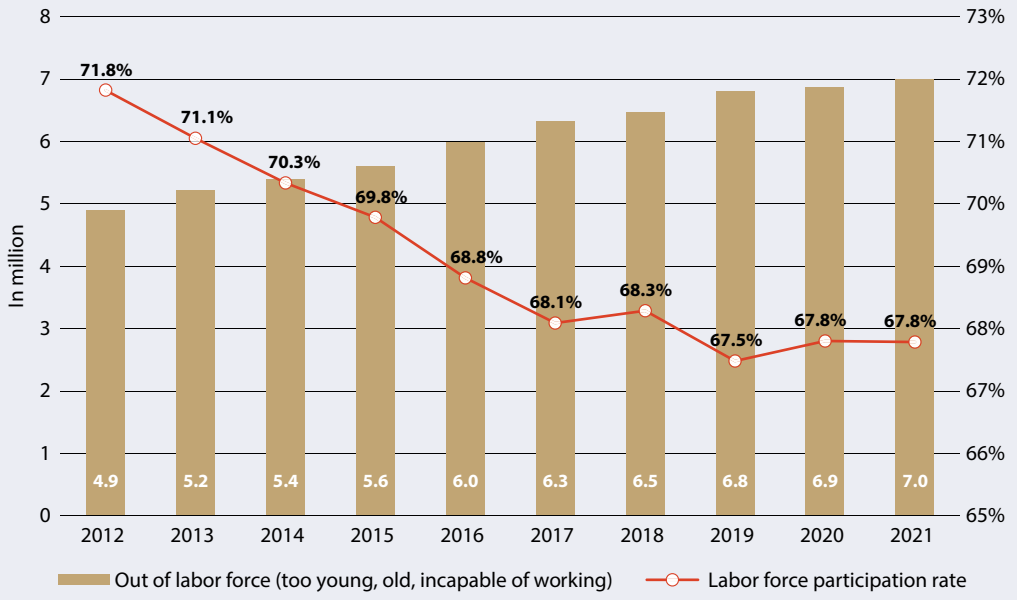
Introduction

Like many countries in the world, Thailand is grappling with a multitude of challenges, ranging from an aging population and globalization to digital disruption, geopolitical tensions, and the far-reaching impacts of the recent COVID-19 pandemic. These factors have dramatically reshaped the labor market, impacting both the quantity and the quality of employment opportunities available. The effects of these megatrends have been nonlinear, with the shocks hitting the vulnerable groups harder.

In terms of the quantity of manpower, Thailand is one of the fastest-aging countries, with the old-age dependency ratio exceeding the ASEAN and OECD averages [1]. This demographic shift has led to a gradual decrease in the overall labor force. Additionally, the labor force participation rate has also been declining, plummeting to 67.8% in 2021 from 71.8% in 2012. These trends underscore the challenges faced by the nation in adapting to the changing dynamics of its workforce.

FIGURE 1

LABOR FORCE PARTICIPATION RATE IN THAILAND.



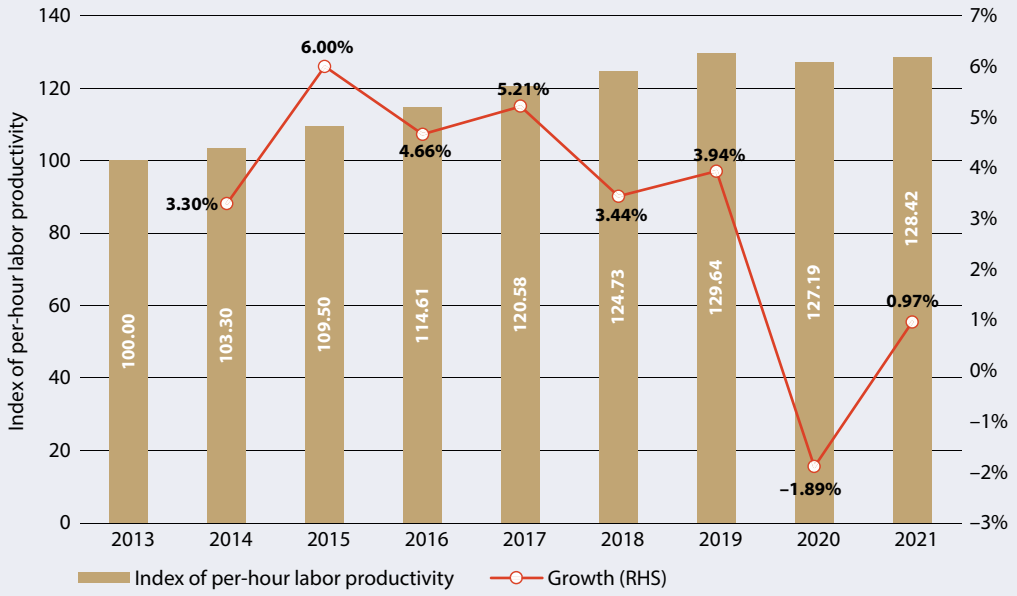
Source: Labor Force Survey. National Statistical Office (NSO), Ministry of Digital Economy and Society, Government of Thailand.

In 2021, the country had 38 million employed people. The majority of these workers were employed in the service sector, followed by agricultural, and then the industrial sector. Notably, Thailand maintained a low unemployment rate of around 1%, owing to the large agricultural sector and the prevalence of an informal economy. This informal sector plays a pivotal role in absorbing individuals who lose their jobs in the formal economy, resulting in low unemployment rates in general, including a minimal increase to 2% during the pandemic.

While the level of labor productivity in Thailand has seen steady growth, the rate of this growth started to decline after 2015. The impact of COVID-19 was acutely felt in 2020, causing a sharp decline in per-hour labor productivity. Agriculture exhibited the lowest labor productivity levels, with other sectors such as construction, hotel and restaurant, trade, and some other service activities following suit. In contrast, sectors like mining, electricity, information and communication technology (ICT), financial services, and real estate (particularly modern services) demonstrated relatively higher labor productivity levels.

FIGURE 2

INDEX OF PER-HOUR LABOR PRODUCTIVITY IN THAILAND*.



Note: *Base Year: 2013, Indexed at 100.
Source: Bank of Thailand (BOT).

TABLE 1

LABOR PRODUCTIVITY BY SECTOR IN THAILAND.

Industry	Per-Hour Labor Productivity (THB/Hour)				Per-Head Labor Productivity (THB/Person)			
	2014	2019	2020	Change (in %) (2014–19)	2014	2019	2020	Change (in %) (2014–19)
Agriculture, forestry, and fishing	26	29.9	30	15.27	51,153	56,765	54,867	10.97
Mining and quarrying	1,400.5	1,559.1	1,183.6	11.33	3,486,158	3,784,408	2,798,550	8.56
Manufacturing	160.6	190.6	195.8	18.67	412,811	471,334	455,592	14.18
Electricity, gas, steam, and air conditioning supply	1,110.3	1,257	1,146.5	13.21	2,291,598	2,587,152	2,336,460	12.90

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Industry	Per-Hour Labor Productivity (THB/Hour)				Per-Head Labor Productivity (THB/Person)			
	2014	2019	2020	Change (in %) (2014–19)	2014	2019	2020	Change (in %) (2014–19)
Water supply; sewerage, waste management, and remediation activities	142.9	285.3	277.2	99.71	343,649	588,694	568,095	71.31
Construction	41.4	57.2	60.3	38.13	101,453	133,402	132,583	31.49
Wholesale and retail trade; repair of motor vehicles and motorcycles	78.5	108.1	107.6	37.64	207,211	269,590	259,732	30.10
Transportation and storage	192.3	231.9	184.9	20.60	497,032	569,400	428,959	14.56
Accommodation and food service activities	65.4	100.3	67	53.49	168,619	245,083	152,059	45.35
Information and communication	729.7	1,368.2	1,276	87.50	1,713,731	3,087,857	2,746,488	80.18
Financial and insurance activities	512.8	705.4	742.3	37.55	1,137,336	1,529,952	1,576,702	34.52
Real estate activities	963.1	924.3	827.6	–4.03	2,245,423	2,133,557	1,876,490	–4.98
Professional, scientific, and technical activities	281.2	254.1	247.6	–9.64	638,662	570,088	534,755	–10.74
Administrative and support service activities	121.1	121.2	112.8	0.08	329,678	312,751	274,655	–5.13
Public administration and defense; compulsory social security	155.4	167.5	169.6	7.77	315,202	328,027	327,066	4.07
Education	149.2	150.6	157	0.93	280,906	286,964	277,813	2.16
Human health and social work activities	129.6	173.3	169.9	33.73	294,191	377,284	363,602	28.24

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Industry	Per-Hour Labor Productivity (THB/Hour)				Per-Head Labor Productivity (THB/Person)			
	2014	2019	2020	Change (in %) (2014–19)	2014	2019	2020	Change (in %) (2014–19)
Arts, entertainment, and recreation	101.9	198.1	185.7	94.41	244,577	435,980	369,434	78.26
Other service activities	72.5	76.1	79.3	5.07	183,791	174,964	169,499	–4.80
Activities of households as employers	29.9	31.9	25.5	6.69	77,416	75,573	73,608	–2.38

Note: THB, Thai Baht; Green cells represent high-productivity sectors while yellow cells represent low-productivity sectors.
Source: NSO, and the Office of the National Economic and Social Development Council (NESDC), Office of the Prime Minister; Government of Thailand.

A major concern for Thailand is the substantial number of workers being employed in lower-productivity sectors. For instance, one-third of the workforce operates in the agricultural sector, contributing less than 10% to Thailand's GDP. Contrastingly, the service sector employs 60% of employment. However, a large proportion of these individuals are working in traditional services like retail and wholesale trade, construction, accommodation, and food services, which in general are less productive due to low technology adoption and high labor intensity.

Measurement of Productive and Quality of Employment

In this section, the concepts of productive employment and the quality of employment are discussed. Productive employment refers to work that yields sufficient returns to enable workers and their dependents to maintain a standard of living above the poverty line. On the other hand, quality of employment is related to the decent work indicators of the ILO which cover many dimensions including safety and ethics of employment, income and benefits, working hours and work-life balance, security and social protection, social dialogue, skill development and training, and employment-related relationships and work motivation.

The examples of how productive employment and quality of employment are measured are displayed in Table 2. Note that some indicators are selected to construct the quality of employment index.

TABLE 2

INDICATORS FOR PRODUCTIVE EMPLOYMENT AND QUALITY OF EMPLOYMENT.

Indicator	Sub-indicator
Productive Employment	
The proportion of workers below the poverty line	• Percentage of workers earning below the national poverty line • Percentage of workers earning below USD1.9 per day in PPP terms
Quality of Employment	
1. Safety and ethics of employment	• Rate of occupational injuries per 100,000 workers • Percentage of employed people below a minimum age of work

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Indicator	Sub-indicator
2. Income and benefits from employment	• Proportion of workers earning below minimum wage • Minimum wage as a percentage of median wage • Rate of non-compliance to the labor protection law on the welfare committee • Proportions of establishments receiving welfare promotion beyond the law
3. Working hours and work-life balance	• Percentage of working people who are working more than 48 hours per week
4. Security of employment and social protection	• Share of informal workers • Percentage of workers who are covered under any social security/ protection schemes
5. Social dialogue	• Share of workers covered by collective bargaining • Ratio of labor unions to 100,000 establishments
6. Skill development and training	• Share of employed people who received job training • Share of employed people in high-skilled occupations
7. Employment-related relationships and work motivation	• Scores of happy workers

Source: Thailand Center for Happy Worker Studies (TCHS). ILO; NSO, Ministry of Labour, Government of Thailand; and NESDC.

The following section delves into the measurement process of productive employment and the quality of employment in Thailand. Historical data is analyzed to examine trends within each indicator, and the data is divided into subgroups of workers based on gender, age, and sector. This division allows for a detailed visualization of differences across these groups.

Productive Employment

According to the ILO, productive employment refers to work where the income is sufficient to lift workers and their dependents out of poverty. This is the opposite of the working poor, whose incomes fall below the poverty line. The working poor typically face this situation due to their low levels of productivity or insufficient work opportunities and would often desire more work [2].

TABLE 3

THE LINK BETWEEN POVERTY AND LABOR FORCE CLASSIFICATIONS.

Poverty	Labor Force	
	Employed	Unemployed
Poor	Working poor	Unemployed, poor
Non-poor	Productive employment	Unemployed, non-poor

Source: Understanding deficits of productive employment and setting targets: a methodological guide, ILO, 2012.

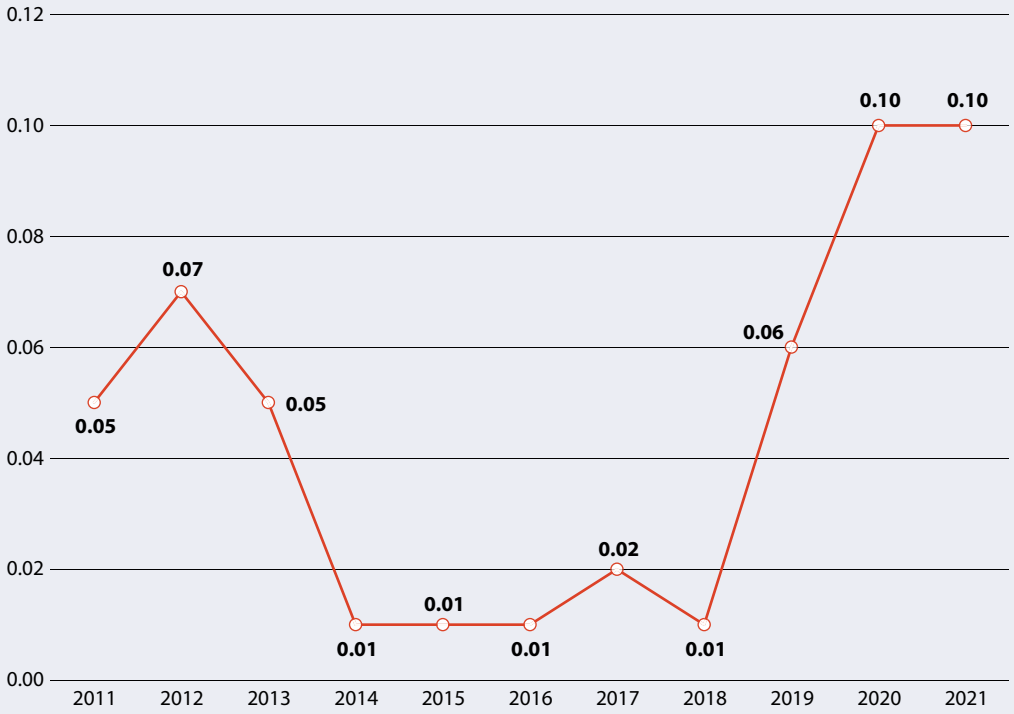
The ILO estimates and publishes statistics on working poverty. The working poverty rate conveys the percentage of employed people living in poverty despite being employed. Poverty is defined

using the international poverty line of USD1.90 per day in PPP. Those living below that threshold are considered extremely poor [3].

The working poverty rate in Thailand has been declining since 2010 but surged in 2019–21 due to the impact of the COVID-19 pandemic. In 2020-21, the working poverty rate stood at 0.1%, as depicted in Figure 3. Thailand's rates are comparatively lower than in many countries, such as China, Myanmar, and Vietnam, but higher than those in the ROK, Malaysia, and Turkiye.

FIGURE 3

PERCENTAGE OF EMPLOYED PEOPLE LIVING BELOW USD1.90 PPP.



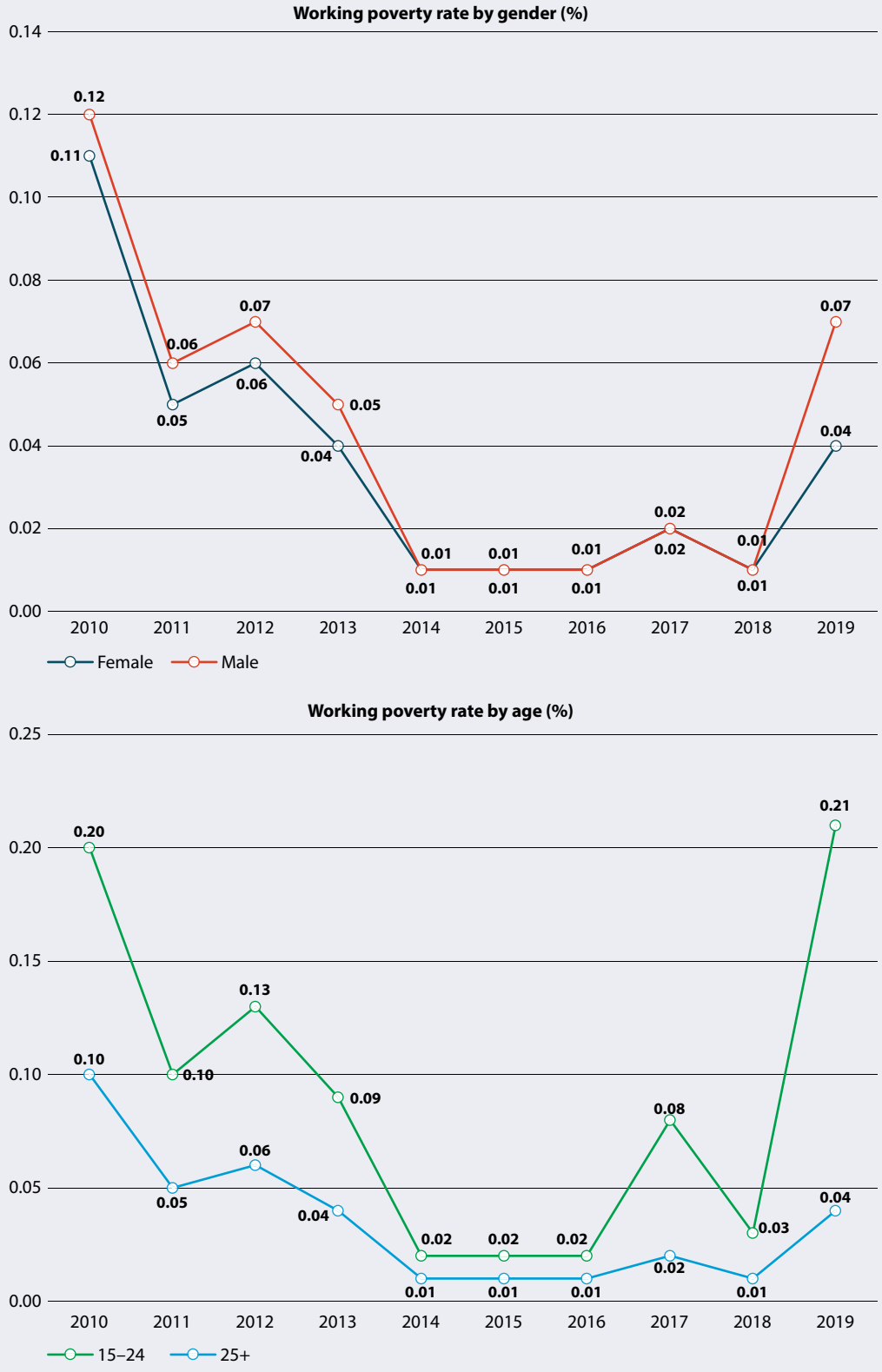
Source: Modelled Estimates and Projections (ILOEST) Database, ILO, November 2022.

The rate of working for men is slightly higher than that of women, and young workers in the age group of 15–24 years tend to be poorer than older workers aged 25 years and above. Notably, the gap between the working poverty rate based on gender and age groups was wider in 2019, reflecting the impact of the pandemic, especially on young workers, whose poverty rate rose to 0.2% in 2019.

Alternatively, Thailand's Office of the National Economic and Social Development Council (NESDC) also published the statistics on the working poor, benchmarking poverty to the national poverty lines which are different across regions and areas. As different countries may have different perceptions of who is poor, it might be interesting and useful to design policies based on national, rather than international poverty lines. In 2021, the proportion of workers living below the poverty line, or working poor, in Thailand was 5.4%. This figure marks a substantial improvement compared to 2011 when the percentage stood at 12.2%. The consistent decline over the past decade suggests an improvement in productive employment in Thailand.

FIGURE 4

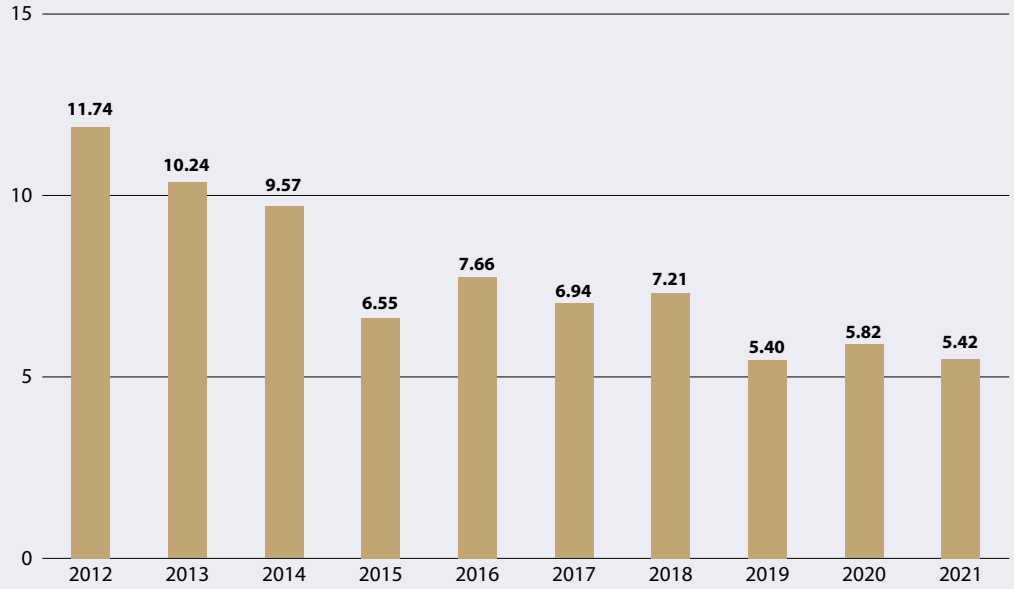
WORKING POVERTY RATE BY SUBGROUPS IN 2010–19.



Source: Modelled Estimates and Projections (ILOEST) Database, ILO, November 2022 edition.

FIGURE 5

SHARE OF POOR WORKERS (IN %).



Source: Socio-Economic Survey 2022, NESDC and NSO.

An analysis of the sectoral differences of the working poor in Thailand leads to several key observations.

- The sector with the largest share of the working poor is agriculture, forestry, and fishing, accounting for approximately one-third of the employed population in Thailand.
- In 2012, 22.4% of the working poor were in the agricultural sector. Over the years, this percentage has gradually decreased to 11.4% by 2021, indicating a notable decline.
- Other sectors with a significant number of working poor include other service activities (6.8%), construction (6.1%), and activities related to households as employers (4.9%).

TABLE 4

SHARE OF POOR WORKERS BY SECTOR (IN %).

	2017	2018	2019	2020	2021
Agriculture	14.55	15.19	11.38	12.60	11.43
Industrial	2.79	4.20	4.27	1.04	1.23
Construction	9.00	9.96	7.76	8.11	6.08
Trade	3.21	2.99	2.51	2.40	2.57
Services	2.24	2.09	2.07	1.75	1.71

Source: Socio-Economic Survey 2022, NESDC and NSO.

TABLE 5

SHARE OF POOR WORKERS BY SUB-SECTOR (IN %).

	2012	2014	2016	2018	2020	2021
Agriculture, forestry, and fishing	22.37	19.16	16.13	15.19	12.60	11.43
Mining and quarrying	2.52	4.03	3.43	0.36	0.17	1.21
Manufacturing	6.38	5.06	3.42	3.55	2.26	2.85
Electricity, gas, steam, and air conditioning supply	3.13	3.14	0.47	1.18	0.25	0.12
Water supply, waste management, and remediation activities	3.08	9.39	2.01	11.69	1.50	0.74
Construction	14.16	12.26	9.58	9.96	8.11	6.08
Wholesale and retail trade; repair of motor vehicles	5.31	3.46	3.23	2.99	2.40	2.57
Transportation and storage	3.34	2.23	1.99	1	0.97	0.86
Accommodation and food service activities	4.32	3.40	2.24	3.06	2.72	2.44
Information and communication	0.89	0.52	0.09	0.90	0.48	0.08
Financial and insurance activities	1.57	0.09	0.43	0	0.31	0.08
Real estate activities	2.42	1.20	0.61	1.83	0.42	0.00
Professional, scientific, and technical activities	0.74	0.74	0.22	0.69	0.08	0.22
Administrative and support service activities	4.43	1.86	1.01	2.39	0.62	1.64
Public administration and defense; social security	2.64	2.23	2.07	1.26	1.27	1.03
Education	2.10	1.52	1.29	1.17	0.42	1.10
Human health and social work activities	3.01	2.82	1.80	1.30	1.32	0.93
Arts, entertainment, and recreation	4.74	0.86	4.63	2.28	2.41	2.14
Other service activities	10.07	8.60	7.91	7.77	7.42	6.84
Activities of households as employers;	11.57	8.25	7.83	3.50	4.36	4.86

Note: Green cells represent larger shares while yellow cells represent smaller shares of poor workers.
Source: Socio-Economic Survey 2022, NESDC and NSO.

Quality of Employment

Apart from being employed, workers should be provided with appropriate income, welfare, security, occupational safety, and health, as well as favorable working conditions. The quality of employment can be divided into seven dimensions. Within each dimension, the relevant indicators are presented to evaluate Thailand's standing in terms of the quality of employment.

Safety and Ethics of Employment

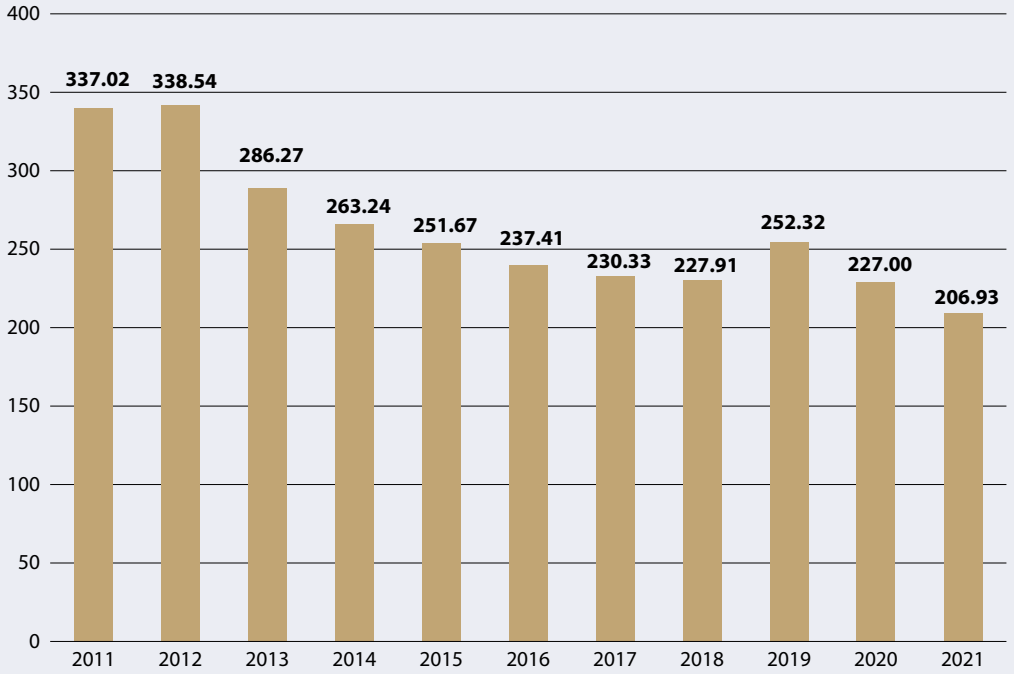
Rate of occupational injuries per 100,000 workers

Working conditions directly affect accidents or illnesses from work and have consequences on labor productivity. In 2021, the proportion of occupational injuries or diseases per 100,000 workers (the

number of occupational injuries or diseases from the Social Security Office (SSO) divided by 100,000 employed people from the National Statistical Office (NSO)) in Thailand was 206.93, declining from 227 in the previous year. Remarkably, the rate has been in a downward trend over the past 10 years.

FIGURE 6

NUMBER OF OCCUPATIONAL INJURIES OR DISEASES PER 100,000 WORKERS.



Source: Labor Force Survey, Social Security Office and NSO.

The sectors with a high rate of occupational injuries include agriculture, forestry and fisheries, manufacturing, construction, electricity, gas, steam, and air conditioning supply, water supply, sewerage, waste management, and remediation activities. It can be seen that in those sectors, workers tend to work with machines, making their jobs more dangerous and susceptible to accidents. Therefore, the service sector (except construction) had a lower rate of injury or illness from work than the industrial and agricultural sectors.

Noticeably, occupational injuries and labor productivity are negatively correlated. In other words, the sectors with high rates of injuries like construction and agriculture are the sectors with low productivity. This reaffirms the link between occupational safety and productive work.

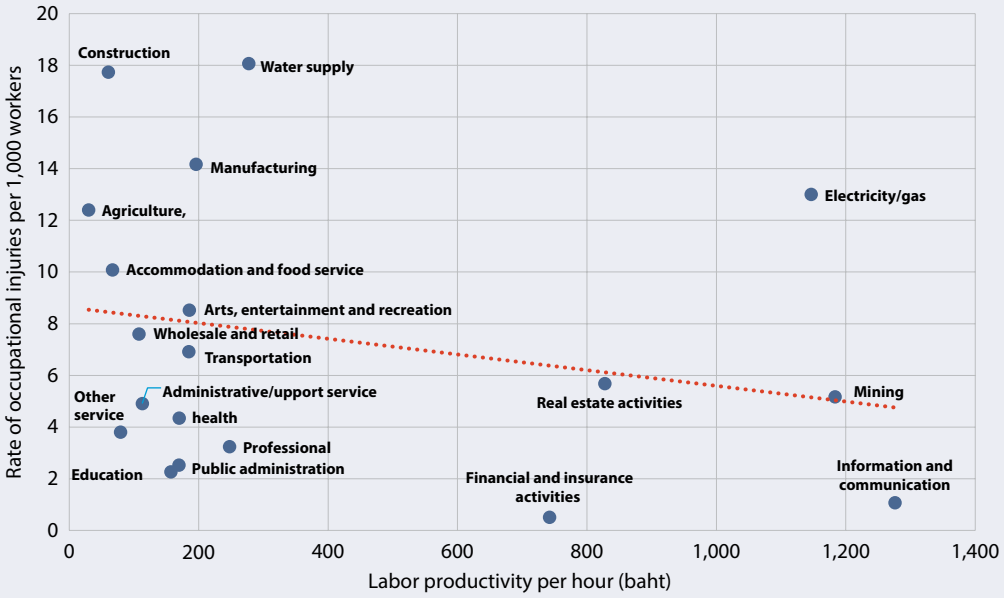
Percentage of employed people below a minimum age of work

According to Thailand's Labour Protection Act B.E. 2541 [4], the minimum age of work is 15 years old[1]. The share of workers aged below 15 years, out of the total employed people was 0.27% in 2018[2], dropping from 0.68% in 2015 (Table 6). In addition, the working children survey suggests that 1.31% of children aged 5–14 are working (either only working or working and studying) [5]. This percentage also decreased from 3.19% in 2015. These statistics imply that the situation of child labor in Thailand has improved.

[1] Section 44 indicates that an employer shall not employ a person under 15 years of age as an employee.
[2] The share is calculated by dividing the number of working children aged below 15 years old by employed people from the NSO.

FIGURE 7

RATE OF OCCUPATIONAL INJURIES AND LABOR PRODUCTIVITY IN 2020.



Note: Labor productivity per hour is calculated from real GDP (NESDC) divided by total hours worked (NSO), while the rate of occupational injuries or diseases is computed from the number of occupational injuries or diseases (SSO) divided by employed people (NSO).
Source: Labor Force Survey, Social Security Office and NSO; and NESDC.

TABLE 6

WORKING CHILDREN IN THAILAND.

	2015		2018	
	All	Working	All	Working
Population aged 5–12	6,372,596	117,488	6,156,530	41,508
Population aged 13–14	1,743,596	141,521	1,661,399	61,224
Population aged 15–17	2,760,083	433,810	2,652,809	305,947
Percentage of children (5–14 years old) who work		3.19%		1.31%
Employed people		38,016,170		37,864,539
Percentage of employed people below 15		0.68%		0.27%

Source: Working Children Survey 2018, NSO; and Labor Force Survey.

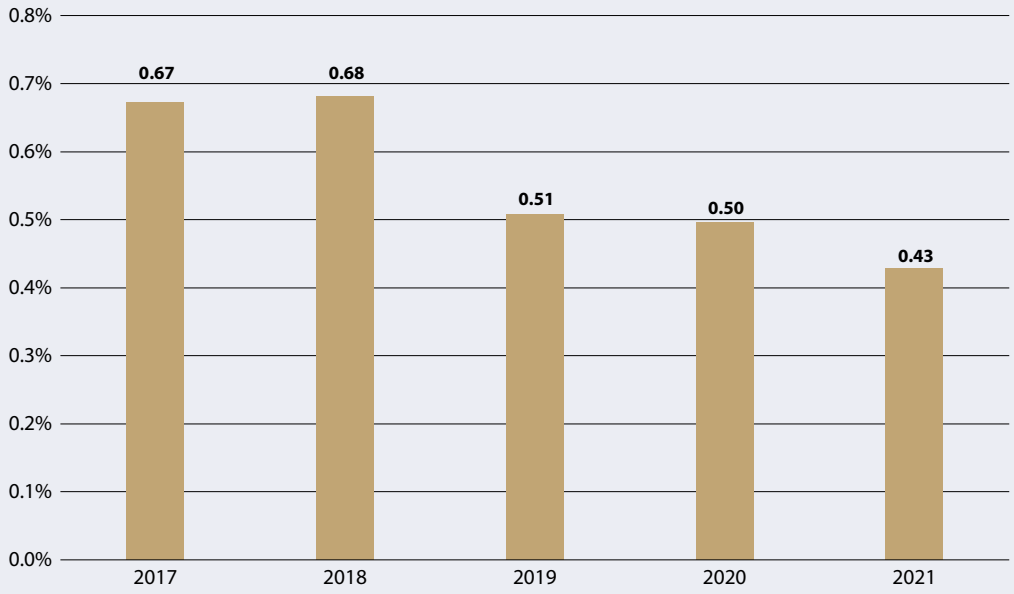
It should be noted that the labor force survey considers employed people who are at least 15 years old, by the definition of legal employment. That is why the data for those under the minimum age of work is missing. However, young workers aged 15–17 are of interest as, apart from a minimum age of 15, the law also stipulates conditions for hiring workers below 18 years old, including notifying the labor inspector[3]. Besides, these young workers cannot do certain jobs such as work involving poisonous substances, heat, cold, or vibration, work using an electric or motor saw, or underground and underwater work.

[3] Section 45 specifies that in the event of employing a worker under the age of 18, the employer must notify a Labor Inspector about the employment, maintain a record of employment conditions, and notify the Labor Inspector upon termination of the employment.

Considering the proportion of 15–17 year-old workers to all the employed people, a downward trend has been observed during 2017–21, and it was 0.43% in 2021. Remarkably, the shares substantially vary across subgroups of workers as displayed in Table 7. The sectors having large shares of young workers include construction, agriculture, and trade, while only 0.2% of young workers were employed in the industrial and service sectors in 2021. A relatively high proportion of young workers aged 15–17 years old were working in construction, reflecting that some children were working in generally dangerous work. Furthermore, the proportion of men in young workers was significantly larger than women (two times higher in 2017–21). This is probably because males enter the labor market faster than females in general.

FIGURE 8

SHARE OF WORKERS AGED 15–17 YEARS (IN %).



Source: Labor Force Survey, NSO.

TABLE 7

SHARE OF WORKERS AGED 15–17 YEARS BY SUBGROUPS (IN %).

		2017	2018	2019	2020	2021
All		**0.67**	**0.68**	**0.51**	**0.50**	**0.43**
Gender	Male	0.89	0.90	0.69	0.71	0.59
	Female	0.41	0.43	0.30	0.25	0.24
Sector	Agriculture	0.97	1.01	0.74	0.78	0.68
	Industrial	0.43	0.41	0.35	0.31	0.20
	Construction	1.01	0.81	0.80	0.82	0.57
	Trade	0.74	0.85	0.51	0.47	0.52
	Services	0.39	0.35	0.29	0.25	0.20

Source: Labor Force Survey, NSO.

Income and Benefits from Employment

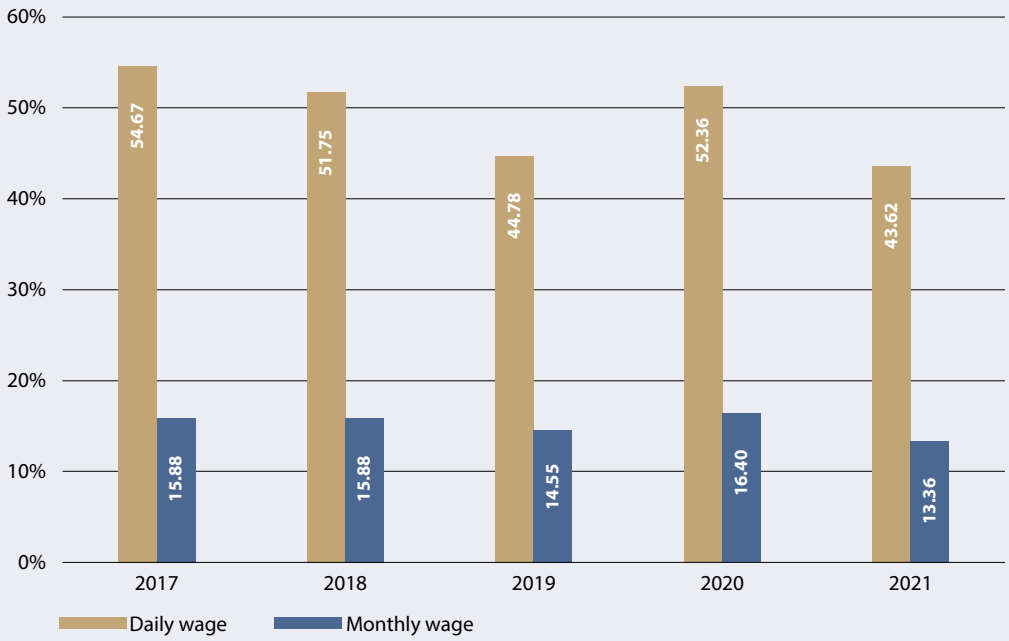
Proportion of workers earning below the minimum wage

The minimum wage in Thailand is set by the tripartite wage committee, consisting of employers, employees, and the government. The daily rate varies across 77 provinces due to different socioeconomic aspects and costs of living. From 1 October 2022, the minimum wage rates in Thailand were revised to THB328–354 per day, from THB313–336 per day, which has been used since 2019.

Considering only the daily-paid workers, the share of those paid below the minimum wage was significantly high at 43–55% during 2017–21. However, when the coverage was extended to workers with all types of wages (hourly, daily, weekly, and monthly) and their approximate monthly earnings were compared to the calculated minimum wage per month[4], a lower share of workers who were being paid less than the minimum wage was seen (13–17% during 2017–21). The latest data showed that 13.4% of employees in Thailand were compensated with less than the minimum wage stated in the laws. It should be noted that only the workers with the status of private and public employees report their wages in the labor force survey. The survey lacks the income data of the self-employed people or employers.

FIGURE 9

SHARE OF WORKERS EARNING BELOW THE MINIMUM WAGE (IN %).



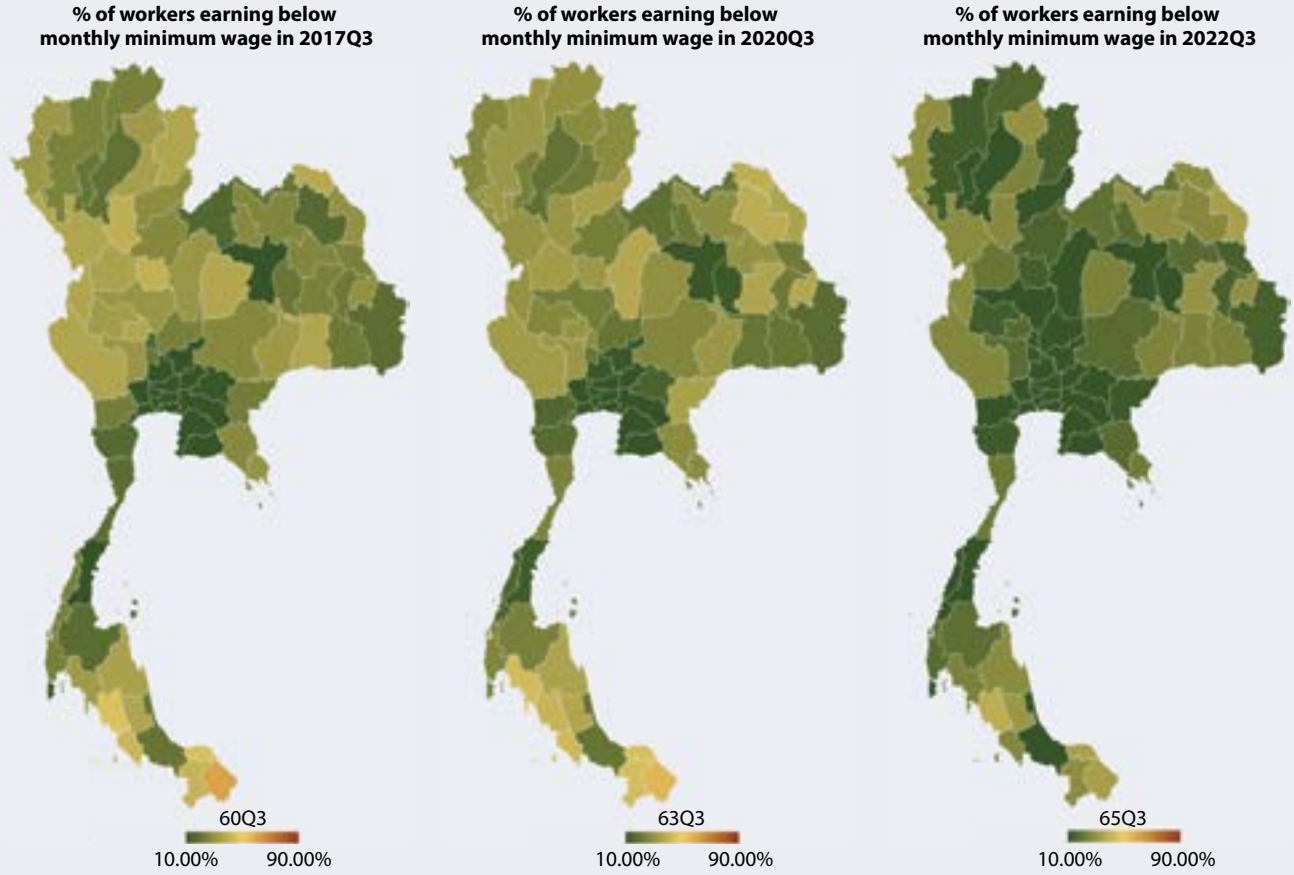
Source: Labor Force Survey, NSO and Ministry of Labour, Government of Thailand.

When the minimum wage compliance rates by area are analyzed, it is observed that the share of workers earning below minimum wage has declined over time in the past 5 years. Higher shares are observed in the upper central, northern, and southern parts of the country, while Bangkok and its vicinity, as well as tourist destination provinces, have lower rates of non-compliance.

[4] Monthly minimum wage equals daily minimum wage multiplied by 22 days of work per month

FIGURE 10

SHARE OF WORKERS EARNING BELOW THE MINIMUM WAGE BY PROVINCE.



Source: Labor Force Survey, NSO and Ministry of Labour, Government of Thailand.

TABLE 8

SHARE OF WORKERS EARNING BELOW THE MINIMUM WAGE BY SUBGROUPS.

		2017	2018	2019	2020	2021
All		**15.9**	**15.9**	**14.6**	**16.4**	**13.4**
Gender	Male	15.8	15.7	14.8	16.7	13.7
	Female	16	16	14.3	16	13
Age	15–17	56.6	60.7	54.5	64.6	52.4
	18–24	19	19.0	17.1	19.5	17.2
	25–44	11.2	10.9	10	11.8	9.4
	45–59	19.7	19.9	18.4	19.8	16.1
	60+	44.9	46	43.7	45.7	40.8
Sector	Agriculture	69.8	71.3	68.8	71.8	67.5
	Industrial	7.1	6.4	5.1	7	5.1
	Construction	25	24.1	21.8	25.3	22.2
	Trade	9	8.5	6.9	8.3	7.2
	Services	9.3	9.2	9.5	10.8	9.7

Source: Ministry of Labour and NSO's Labor Force Survey

Based on the data presented in Table 8, no significant difference was found in non-compliance rates between male and female workers. However, it was observed that young workers, aged 15–17 years old, experienced the highest rates of minimum wage non-compliance, followed by elderly workers aged 60 or over. The proportion of prime-aged workers who earn less than minimum wage is the lowest. When considering the shares by sector, the agriculture sector had the largest percentage of employed people paid below the minimum wage (around 70%). This is because many agricultural workers are informal workers not covered by the minimum wage law. Another sector with high rates of non-compliance is the construction sector, where 21–25% of workers are paid less than the minimum wage rates.

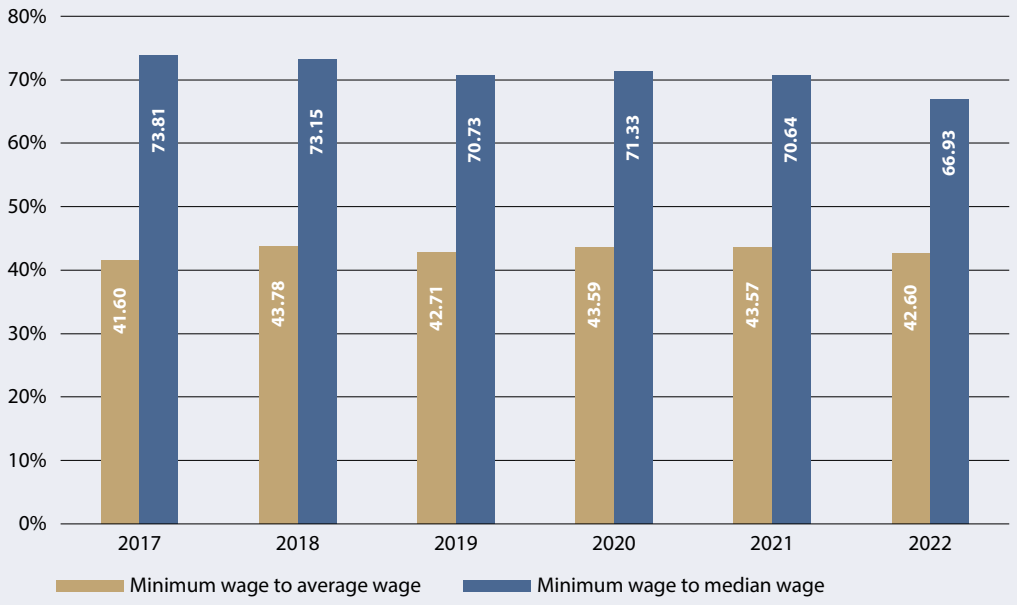
Minimum wage as a percentage of median wage

Another indicator to evaluate the level of minimum wage is the ratio of minimum wage to the median wage. In developed economies, the minimum wage as a percentage of the median wage[5] usually falls within the ranges of 35% to 60%, while the ratio in developing countries is often higher [6]. The disparity can be attributed to the fact that the median wage earners in developing countries are usually low-paid workers.

Looking at the ratio of the monthly minimum wage and median wage in Thailand, it was observed that the ratio was between 70–74% during the past five years, with a slightly downward trend. This ratio is high compared to developed countries, such as Japan, the ROK, the United States, and the OECD average. However, it is lower than that of Colombia and Costa Rica, as shown in Figure 12.

FIGURE 11

MINIMUM WAGE AS A PERCENTAGE OF AVERAGE OR MEDIAN WAGE.

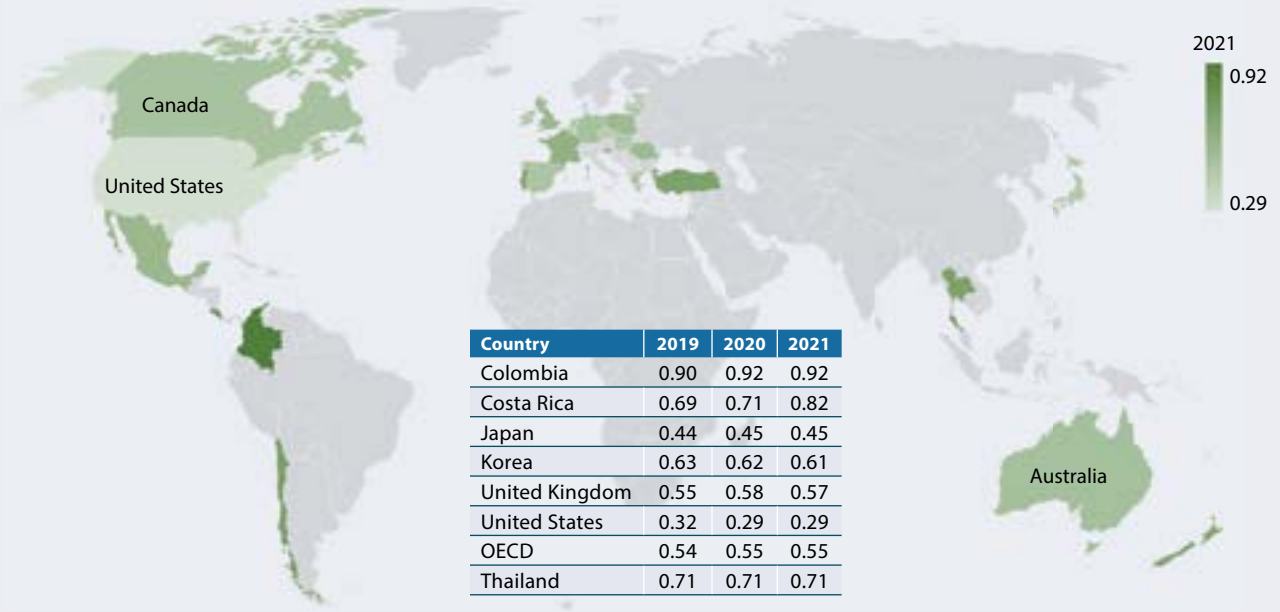


Source: Ministry of Labour and NSO's Labor Force Survey.

[5] Median wage provides a better basis for international comparisons than average wage as it accounts for differences in wage distributions across countries, according to the OECD.

FIGURE 12

MINIMUM WAGE TO MEDIAN WAGE RATIO IN SELECTED COUNTRIES.



Country	2019	2020	2021
Colombia	0.90	0.92	0.92
Costa Rica	0.69	0.71	0.82
Japan	0.44	0.45	0.45
Korea	0.63	0.62	0.61
United Kingdom	0.55	0.58	0.57
United States	0.32	0.29	0.29
OECD	0.54	0.55	0.55
Thailand	0.71	0.71	0.71

Source: OECD, Ministry of Labour, and NSO's Labor Force Survey.

Alternatively, the ratio of minimum wage to average wage (mean wage) per month can also be considered. The indicator in Thailand stayed at 43.6% in 2021, and that was somewhat stable during 2017–21. When compared with other countries, this ratio in Thailand is greater than that of the United States (20%), Japan (39%), and OECD average (43%), but lower than the ratio of ROK (49%), Costa Rica (55%), and Colombia (62%) in 2021.

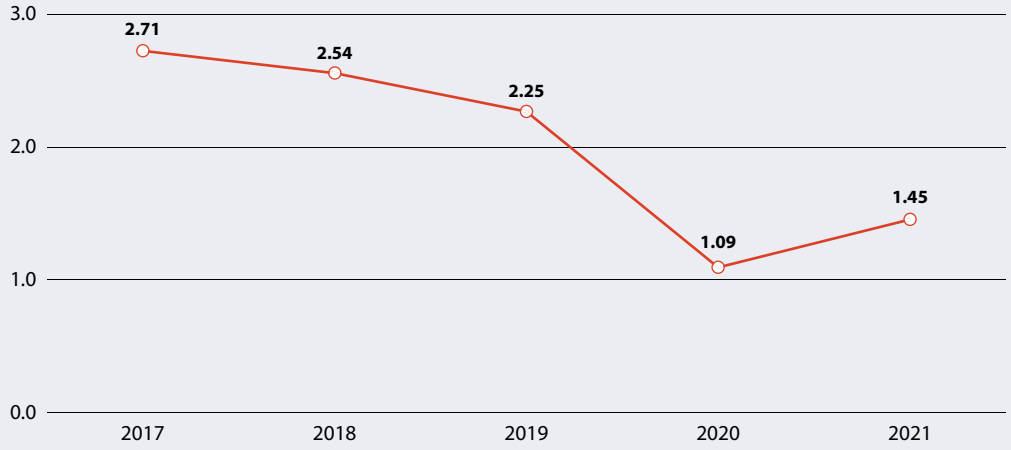
Welfare and benefits

Under the Labour Protection Act of Thailand, a company with 50 or more employees must establish a welfare committee. The committee should consist of at least 5 employees who are elected among the employees as representatives in consultation with the employers, for appropriate welfare arrangements. The rate of non-compliance to the labor protection law on the welfare committee, which is calculated from the number of establishments that do not perform properly on the welfare committee per number of establishments that have been inspected by the Department of Labour Protection and Welfare (DLPW), was 1.45% in 2021. Promisingly, the rates have been declining during 2017–21.

In addition to the welfare required by the law, the DLPW also encourages employers to provide benefits that go beyond the legal requirement, enhancing the well-being of their employees. These additional benefits are categorized into five aspects: financial incentives (e.g., bonuses), services and facilities (e.g., uniform and transportation), employee development (e.g., training and further education), recreational activities (e.g., outings and events), and health-related benefits (e.g., insurance and health checkups). However, the data presents challenges, as the proportions of establishments offering welfare benefits beyond the legal mandate, calculated as the number of establishments promoted by the DLPW per the total number of establishments, is still low at less than 10%. This proportion has experienced a slight decline over time.

FIGURE 13

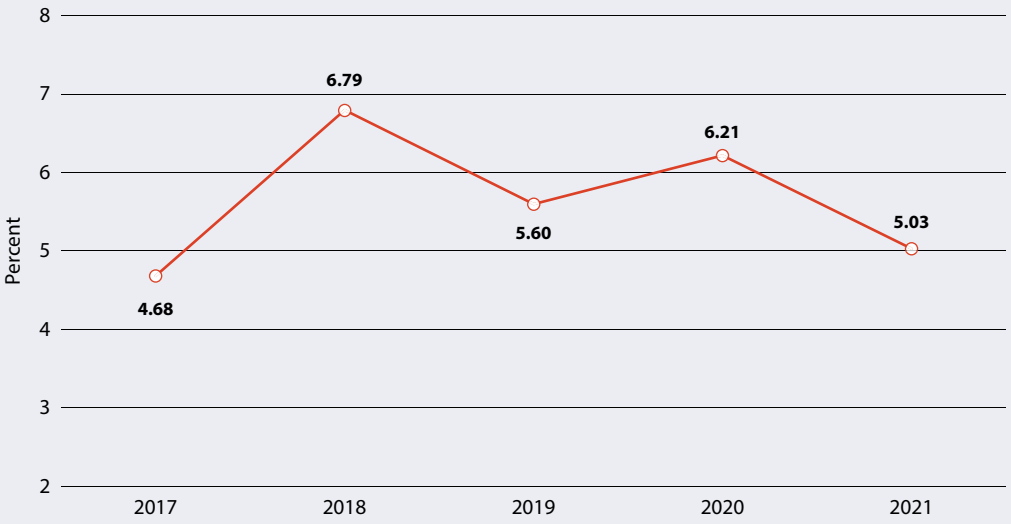
RATE OF NON-COMPLIANCE TO THE LABOR PROTECTION LAW ON WELFARE COMMITTEE.



Source: Department of Labour Protection and Welfare.

FIGURE 14

PROPORTIONS OF ESTABLISHMENTS OFFERING WELFARE BEYOND LEGAL MANDATE.



Source: Department of Labour Protection and Welfare.

Working Hours and Work-Life Balance

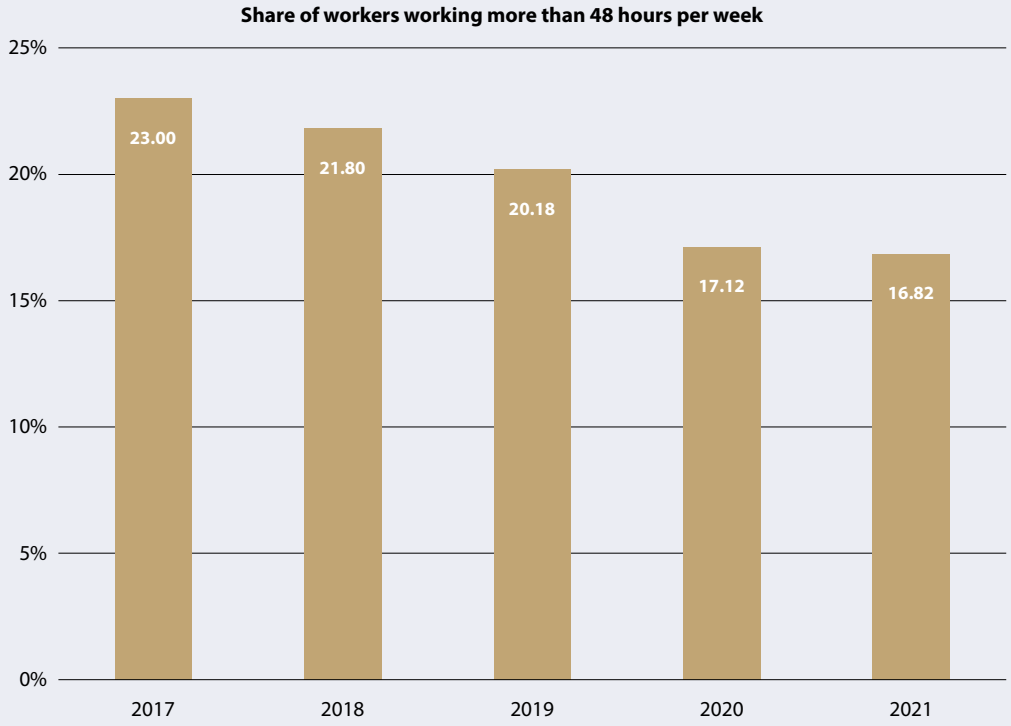
The Labour Protection Act in Thailand limits the working hours for general jobs to eight hours per day or 48 hours per week[6]. To evaluate compliance, the percentage of working people who are working more than 48 hours per week was computed and it was at 16.8% in 2021. There has been a downward trend in the rate of those working more than 48 hours a week, especially during COVID-19, as many workers had to voluntarily and involuntarily, reduce their working hours.

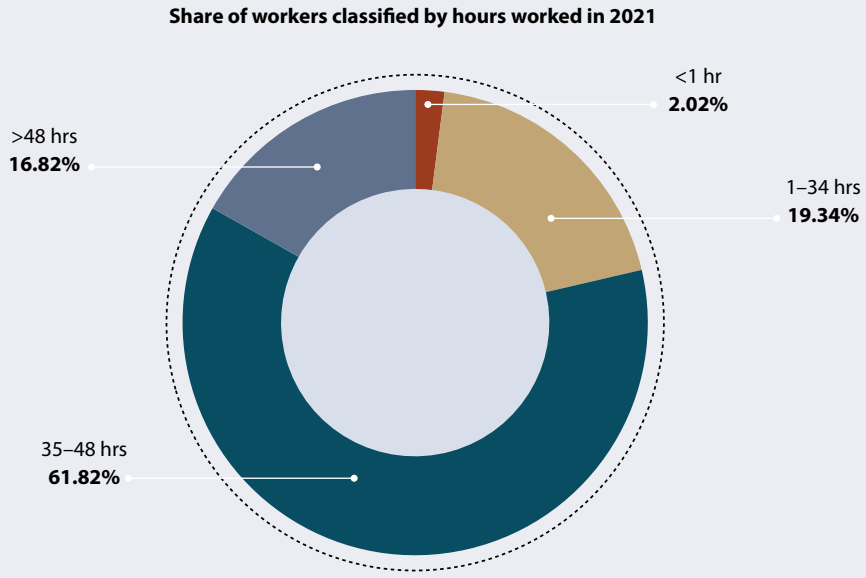
[6] For the work which may be harmful to health and safety of the employees as prescribed in the Ministerial Regulations, the normal working hours shall not exceed 8 hours per day and 42 hours per week (The Labour Protection Act B.E. 2541).

Most employed people in Thailand work 35–48 hours per week, accounting for 61.8% of the total number of employed people. However, it should be noted that those workers who work less than 35 hours, which account for over 20% of employed people, may be considered underemployed and that suggests another issue as their time and capacity are not being utilized fully.

FIGURE 15

PERCENTAGE OF EMPLOYEES WORKING OVER 48 HOURS PER WEEK.





Source: NSO's Labor Force Survey.

TABLE 9

EMPLOYEES WORKING OVER 48 HOURS PER WEEK BY SUBGROUPS (IN %).

		2017	2018	2019	2020	2021
All		**23**	**21.8**	**20.2**	**17.1**	**16.8**
Gender	Male	23.4	22.3	20.7	17.2	16.7
	Female	22.6	21.3	19.6	17	16.9
Age	15–17	6.1	5.2	5	4	9.7
	18–24	20.7	18.8	17.3	14.5	14.1
	25–44	22.6	21.8	19.8	15.7	16.2
	45–59	24.1	22.7	21.3	18.9	18
	60+	24.4	22.5	21.4	19.6	18
Sector	Agriculture	17.9	16.5	15.7	13.5	12.1
	Industrial	26.9	27.1	24.8	15.7	18.2
	Construction	17.2	14.9	14.7	11	10.8
	Trade	34.1	32.4	29.4	27.9	27
	Services	21.1	19.9	18.3	17	16.7

Source: NSO's Labor Force Survey.

By analyzing those who are working over 48 hours per week by the subgroups of workers, it can be concluded that the share of women and men working over 48 hours is comparable. Predictably, the share of employed people working more than the maximum weekly hours is higher for the older age groups, suggesting that people work more as they get older. Finally, workers in retail and wholesale trade in Thailand have the highest rate of working over 48 hours a week, followed by industrial, service, agricultural, and construction workers, respectively. It is also noticeable that the share was significantly lower during the pandemic in 2020–21, especially in the industrial and construction sectors, since some economic activities were prohibited in response to the spread of COVID-19.

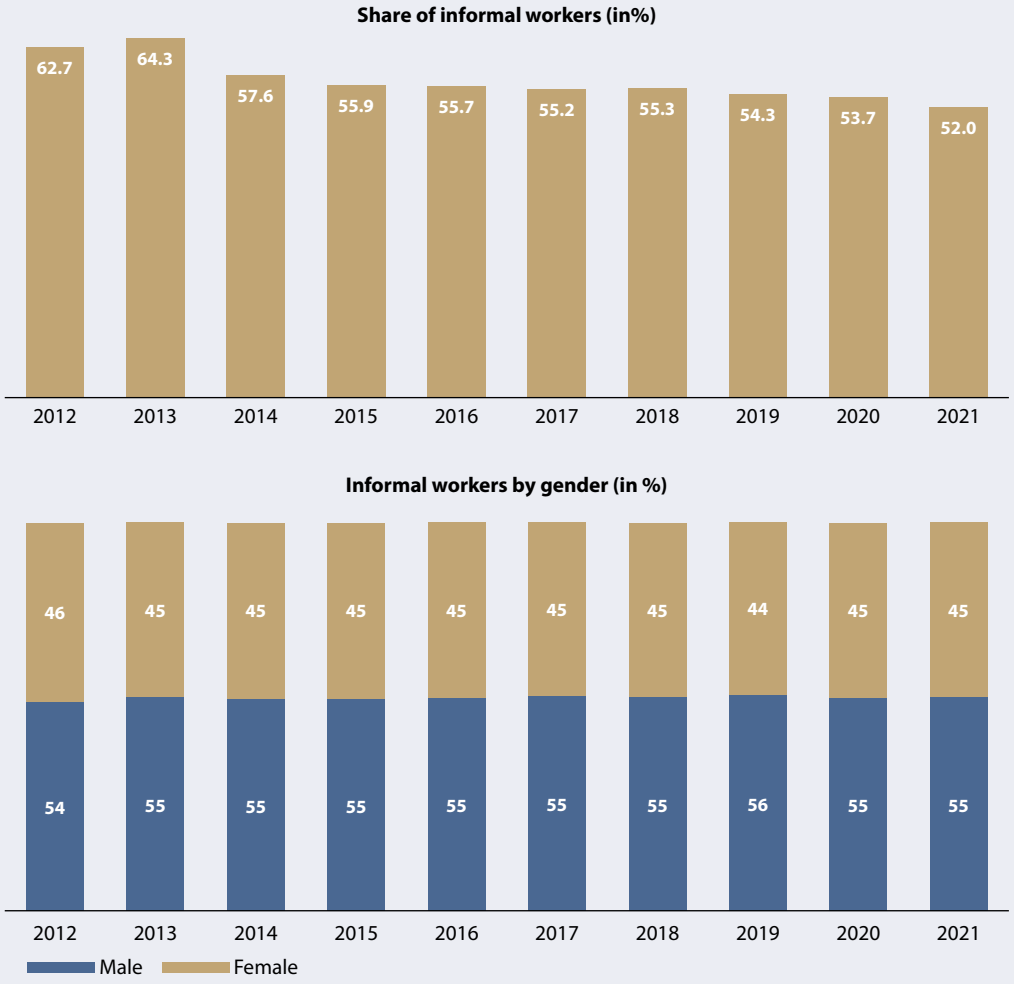
Security of Employment and Social Protection

The share of informal workers

In terms of security and social protection, a key indicator to consider is the share of informal workers. The NSO defines informal workers as employed people who are not protected or do not have any social security from work like formal employment. In 2021, informal workers account for 51.98% of the total employment. The share has consistently declined from 62.66% in 2012. Out of total informal workers, 55.1% are male and many of them (58%) work in the agricultural sector, followed by the trade sector (16.6%).

FIGURE 16

SHARE OF INFORMAL WORKERS.



Source: Informal Employment Survey. NSO.

TABLE 10

SHARE OF INFORMAL WORKERS BY SUBGROUPS (IN %).

		2017	2018	2019	2020	2021
All		**55.2**	**55.3**	**54.3**	**53.7**	**52**
Gender	Male	56.1	56	55.3	54.5	52.8
	Female	54.1	54.6	53	52.8	51
Age	15–24	49.1	53.2	49.8	53.3	51
	25–44	42	41.9	40.2	38.9	37
	45–59	65.4	64.7	64.3	62.4	59.7
	60+	88.3	88.2	88	87.1	87.2

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		2017	2018	2019	2020	2021
Sector	Agriculture	91.7	91.8	91.3	90.2	89.6
	Industrial	21.2	21.4	20.3	19.8	18.4
	Construction	48.1	49.3	44.5	41.8	39.8
	Trade	57.7	56.5	54.8	55.1	51.8
	Services	31.1	31.8	31.1	31.3	29.3

Source: Informal Employment Survey. NSO.

When different portions of informal employment are explored by subgroups, it is seen that the indicators for all genders are comparable, yet there are significant differences across age groups and sectors. The largest share 87.2% belongs to the group of older people who are 60 years or above, while middle-aged workers have the smallest share of informality. At the same time, 90% of the agricultural workers are informal workers, while the corresponding shares for trade and construction are 50% and 40%, respectively. This highlights that a high intensity of informality is associated with lower productivity in general.

Percentage of workers covered under social security and protection schemes

As per the definition of informal workers set by the NSO, those who have no social security fall under this set. In Thailand, employed people can be protected under the Social Security Act (SSA) as an insurer under one of these three Sections:

- **Section 33:** Workers under Section 33 are employees. In this mandatory plan, employees, employers, and the government contribute a certain percentage of the worker's wage to the social security fund. The benefits for insurers include illness, disability, childbirth, child welfare, death, unemployment, and pension.

- **Section 39:** Voluntary insurers under Section 39, are people who were insured under Section 33 and left the job for no longer than 6 months. They are provided with the same benefits except for the unemployment benefit.

- **Section 40:** Informal workers under Section 40 who opt in voluntarily. There are 3 plans for this Section and the prices vary by the benefits covered.

TABLE 11

BENEFITS FOR INSURERS UNDER THAILAND'S SOCIAL SECURITY ACT.

Benefit	Formal Workers (Mandatory Plan)	Informal Workers (Voluntary Plan)			
			Section 40		
	Section 33	Section 39	Plan 1	Plan 2	Plan 3
Illness	Yes	Yes	Yes	Yes	Yes
Disability	Yes	Yes	Yes	Yes	Yes
Childbirth	Yes	Yes	**No**	**No**	**No**

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Benefit	Formal Workers (Mandatory Plan)	Informal Workers (Voluntary Plan)			
			Section 40		
	Section 33	Section 39	Plan 1	Plan 2	Plan 3
Child Welfare	Yes	Yes	Yes	**No**	**No**
Death	Yes	Yes	Yes	Yes	Yes
Unemployment	Yes	**No**	**No**	**No**	**No**
Pension	Yes	Yes	Yes	Yes	**No**
Insured people (2021)	11.1 million	1.9 million	10.7 million		
Insured people (2019)	11.7 million	1.6 million	3.2 million		

Source: Social Security Office.

The register data from the Social Security Office displays that there are 23.7 million insurers in the social security fund. This includes 11.1 million Section 33 insurers, 10.7 million under Section 40, and 1.9 million under Section 39.

The number of SSA insurers rose dramatically from 16.5 million in 2019 since many informal workers had to apply for the Section 40 plans to receive cash transfers from the government during the pandemic. This resulted in a significantly higher percentage of workers who were covered under any social security scheme at 62.8% in 2021[7], compared to 43.6% in 2020.

The declining shares of informality and growing numbers of insurers in the social security fund suggest a promising trend for Thailand to make great improvements in promoting social protection to all workers.

Social Dialogue

According to the ILO, "Social dialogue includes all types of negotiation, consultation, or simply, the exchange of information between, or among, the representatives of governments, employers, and workers, on issues of common interests, that are related to economic and social policy."

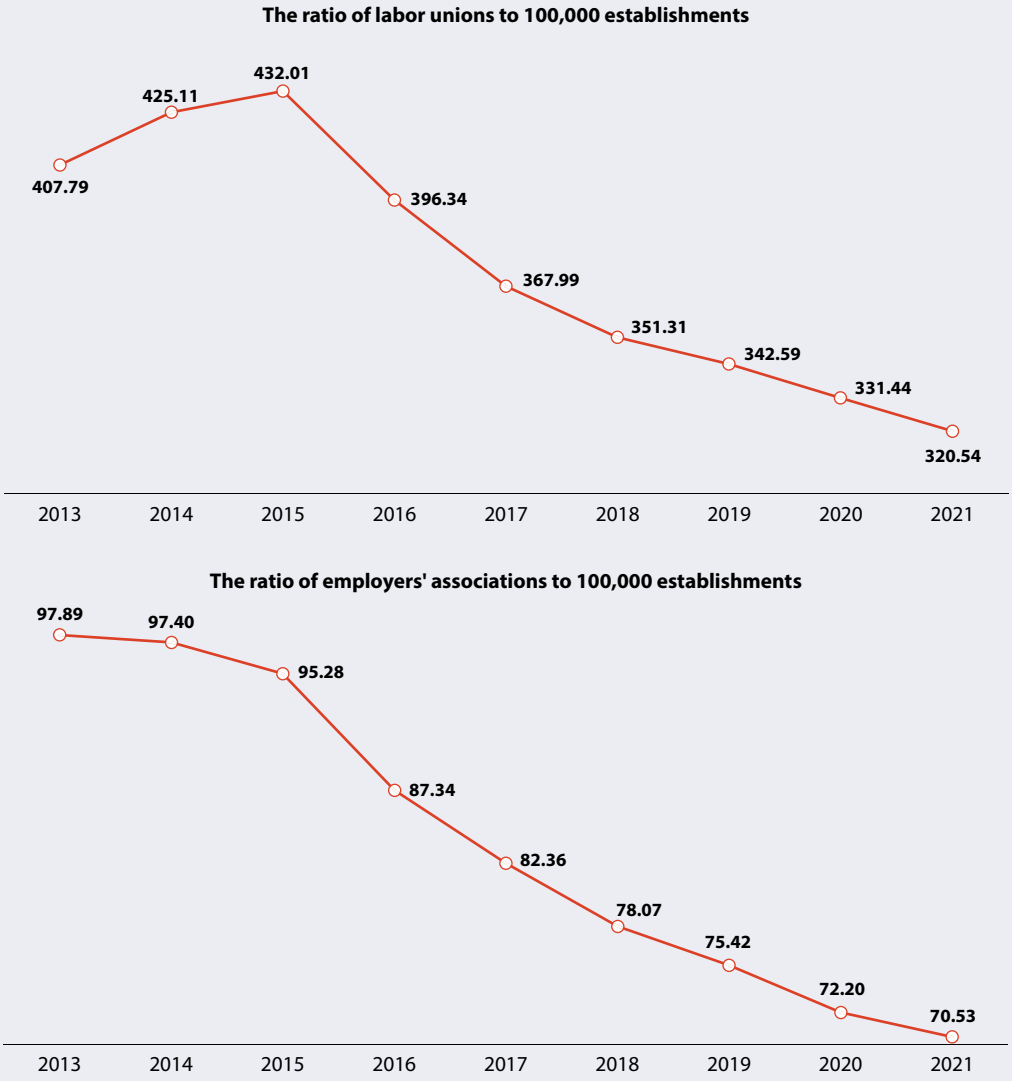
To see how many workers are covered by collective bargaining in Thailand, the data on labor unions, labor federations, and employers' associations from the DLPW can be analyzed and summarized as follows:

- In 2021, the ratio of labor unions per 100,000 establishments was 320.54, showing a downward trend in these ratios since 2015.
- The ratio of labor federation (an association of at least 2 trade unions) to the total trade unions was at 1.62 in 2021.
- The ratio of employers' associations to 100,000 establishments was 70.53 in 2021. Similarly, the ratios have been continuously declining since 2013.

[7] This ratio is computed from the registered data under the Social Security Office. Therefore, it does not correspond to the share of formal workers computed from the survey data by the National Statistical Office.

FIGURE 17

LABOR UNIONS AND EMPLOYERS' ASSOCIATIONS.



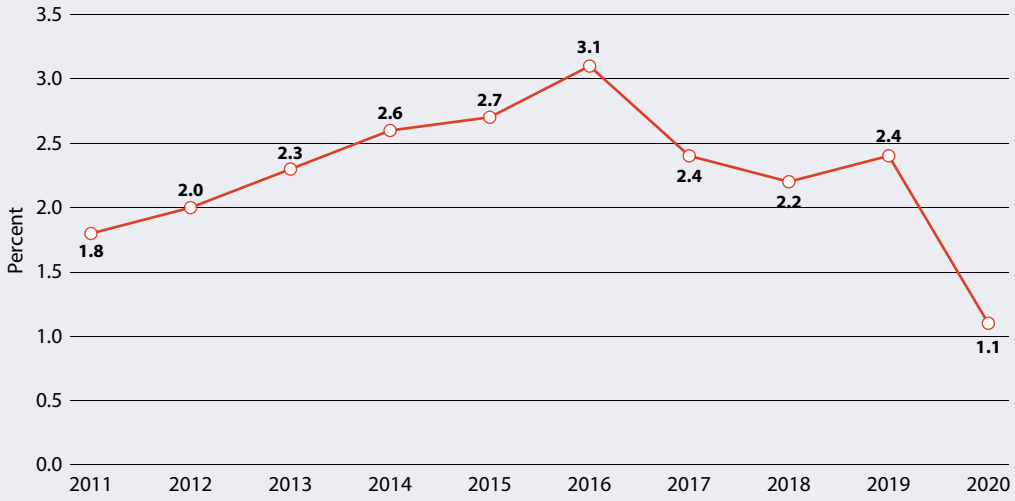
Source: Department of Labour Protection and Welfare, Ministry of Labour, Government of Thailand.

In addition to domestic data, the ILO also publishes statistics on collective bargaining coverage rate which can be monitored for the collective bargaining of Thai workers. The collective bargaining coverage rate is defined as the number of employees whose pay and/or conditions of employment are determined by one or more collective agreements as a percentage of the total number of employees. The ILO's collective bargaining coverage rates are adjusted to account for some workers who do not have the right to bargain collectively over wages, such as public service workers whose wages are determined by state regulation or other methods involving consultation [7].

The trend of coverage rates from the ILO is in line with the statistics on labor unions from the DLPW. The collective bargaining coverage rates have been falling since 2016, and stayed at 1.1% in 2020, as displayed in Figure 18.

FIGURE 18

COLLECTIVE BARGAINING COVERAGE RATE IN THAILAND (IN %).



Source: Statistics on collective bargaining. ILOSTAT.

In comparison to other countries, the coverage rate in Thailand is far lower than that of the European countries such as Italy, Austria, and France, where the coverage rates are above 98%. Overall, the Western countries are doing better in terms of collective bargaining as one can see from Figure 19.

FIGURE 19

COLLECTIVE BARGAINING COVERAGE RATES ACROSS THE WORLD.

Source: Statistics on collective bargaining. ILOSTAT.

The above evidence suggests that there are many places for improvement with regards to the promotion of collective bargaining in Thailand, for a better quality of employment.

Skill Development and Training

Share of employees receiving job training

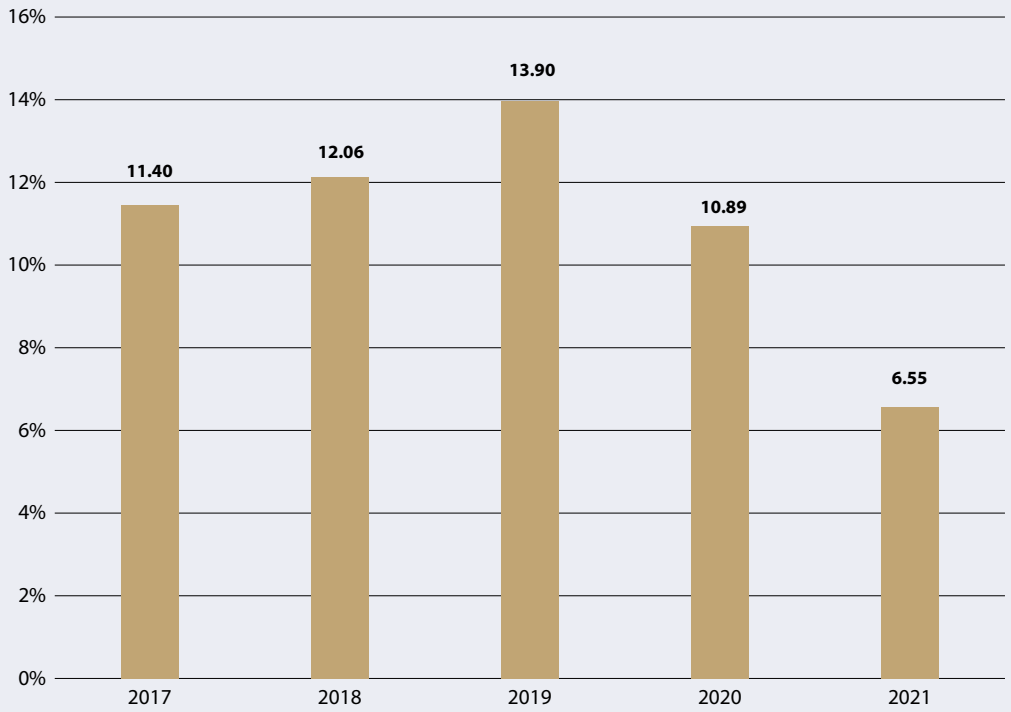
The Skill Development Promotion Act B.E. 2545 (2002) of Thailand (SDPA), is a mechanism that gives incentives for motivating enterprises to train their workers. Any private business providing occupational skill training to the labor force in general, or its employees, will be eligible for certain privileges as stipulated in the Act such as income tax exemption on the percentage of training expenses [8].

According to the Act, employers or establishments with 100 or more employees are required to provide training for at least 50% of the annual average number of employees. Those who do not provide such training are required to contribute to the Skill Development Fund. Such a requirement enables a large number of employees to be trained. However, most employees in the SMEs are at risk of lacking access to training following such mechanisms.

According to the data of the Department of Skill Development (DSD), approximately 4–5 million people are trained each year under SDPA. The ratio of trained workers to the total employed people was 6.6% in 2021, decreasing from the past five years.

FIGURE 20

SHARE OF EMPLOYEES RECEIVING TRAINING UNDER SDPA (IN %).

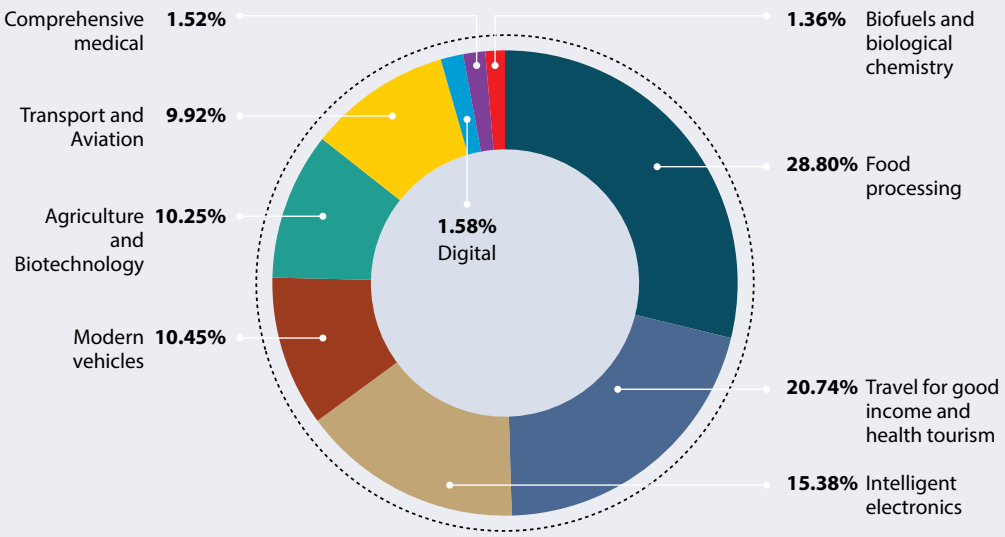


Source: Department of Skill Development, Government of Thailand.

Out of 2.7 million workers who received training under the SDPA in 2021, the food processing sector accounted for the highest share, followed by affluent, medical, and wellness tourism, smart electronics, next-generation vehicles, agriculture and biotechnology, and others as shown in Figure 21.

FIGURE 21

SHARE OF PRIVATE SKILL DEVELOPMENT UNDER SDPA BY TARGET INDUSTRY IN 2021.



Source: Department of Skill Development, Government of Thailand.

Share of employees in high-skilled occupations

According to the number of employees classified by the International Standard Classification of Occupations (ISCO), Thai people work as agricultural and fishery workers the most, followed by service and trade workers. These two groups account for half of the workers with a slumping share in total. Remarkably, the share of the former is decreasing, whereas the latter is growing, in line with the expanding service sector in the country.

The high-skilled workers are those who have jobs in managerial, professional, technical, and associate professional occupations [9]. The share of high-skilled workers in Thailand ranged from 11–25% during the past decade. In 2021, these groups of workers accounted for 13.7% of the total employed people, with professionals covering the largest portion of 5.7%. However, the share dropped from 15.1% in 2020.

TABLE 12

EMPLOYEES CLASSIFIED BY OCCUPATION (IN %).

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Legislators, senior officials, and managers	3.1	3.7	4	4	3.9	3.8	3.7	3.7	4.3	3.4
Professionals	4.8	5	5.6	5.8	5.8	5.7	5.6	5.6	6	5.7
Technicians and associate professionals	3.5	3.8	4.6	4.5	4.5	4.7	4.6	4.5	4.7	4.6
Clerks	3.5	3.3	4	3.9	4.1	4.2	4.2	4.5	4.4	4.4

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	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Service workers, shop and market sales workers	18.5	17.8	19.1	19.4	20.2	20.4	20.2	20.1	19.9	20.4
Skilled agricultural and fishery workworn	35.9	36.3	30.6	29.5	28.4	28.7	29.3	28.8	28.7	29.2
Craftsmen and related trades workers	11.1	11.1	11.8	11.8	11.9	11.4	11.3	11.3	11.1	11
Plant and machine operators and assemblers	8	8.2	9.5	10	9.8	9.7	9.7	9.9	9.6	9
Elementary occupations	11.3	10.6	10.7	11.0	11.1	11.2	11.3	11.4	11.1	11.4
Workers not included elsewhere	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1

Source: Labor Force Survey. NSO; and BOT.

When the share of high-skilled occupations by gender, age group, and sector was analyzed, it was observed that the female workers in Thailand had a larger share in high-skilled occupations as compared to the male workers (15.9% in comparison with 11.7%, in 2021). Moreover, it is unsurprising that a large portion of middle-aged workers (25–59 years old) are in high-skilled jobs with over 30% of all workers in this age group. Finally, the sector with the largest share of high-skilled occupations is the service sector, followed by the construction and industrial sectors. But, only 0.1% of employed people in agriculture are in high-skilled occupations.

TABLE 13

SHARE OF HIGH-SKILLED OCCUPATIONS BY SUBGROUPS (IN %).

		2017	2018	2019	2020	2021
All		**14.2**	**13.8**	**13.8**	**15.1**	**13.7**
Gender	Male	12.7	12.5	12.2	13.2	11.7
	Female	15.9	15.4	15.6	17.3	15.9
Age	15–17	1.1	0.7	0.6	0.5	0.3
	18–24	7.2	7	7.4	7.8	7.3
	25–44	18	17.7	17.6	19.2	17.8
	45–59	14	13.8	13.7	15.2	13.6
	60+	4.9	4.5	4.6	5.4	4.2
Sector	Agriculture	0.2	0.2	0.1	0.1	0.1
	Industrial	14.1	13.7	13.8	14.9	13.6
	Construction	14	16.4	15.3	17.3	14.8
	Trade	9.2	9	9.1	11.2	8.3
	Services	32.3	31.6	30.9	32.9	31.2

Source: Labor Force Survey. NSO.

In terms of middle-skilled occupations, which include clerks, craft workers, plant and machine operators, and assemblers, the share was 25.2% in 2021, rising from 22.7% in 2012. These trends point to better labor market outcomes since middle-to-high-skilled employment has been surging over time.

Despite the aforementioned positive trend, there is concern about medium to high skilled labor shortage as employers are highly demanding manufacturing and assembly workers, while many unemployed people have degrees in business administration, social sciences, or education. Thus, accelerated training may be required to provide the necessary skillset [10].

Employment-Related Relationships and Work Motivation

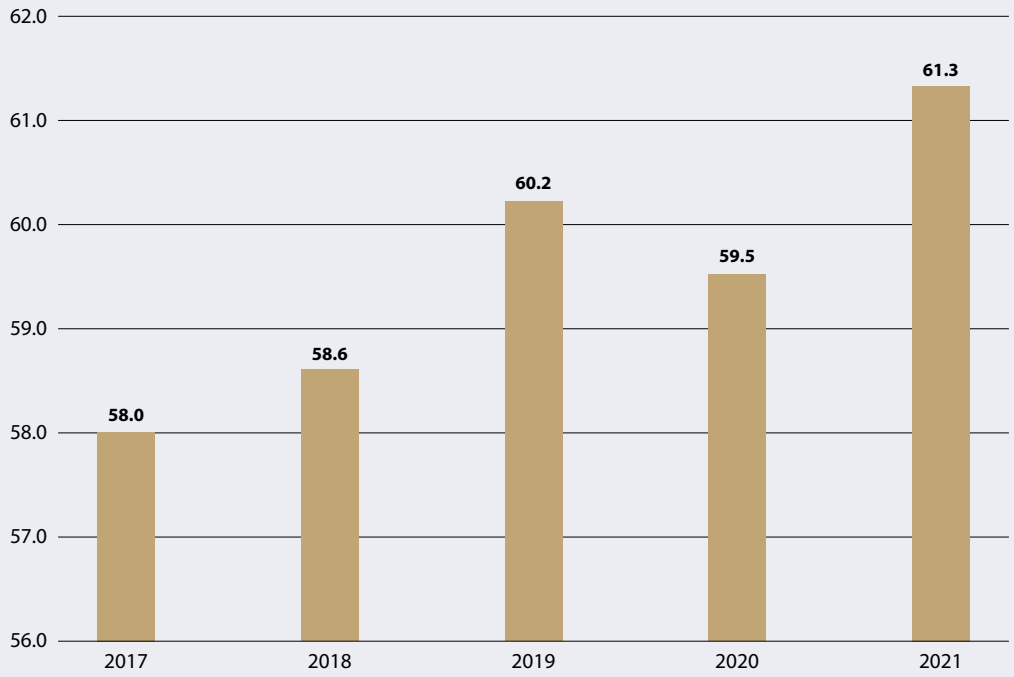
The indicator that could explain the status of employment-related relationships and work motivation in Thailand is the happiness of workers. According to the survey on the happiness of working people in 2021 [11], across the country, it had an average score of 61.3 out of 100, increasing from 59.5 in 2020 as illustrated in Figure 22.

The survey is conducted annually by the TCHS, the Institute for Population and Social Research of Mahidol University, and the Thai Health Promotion Foundation.

To evaluate scores of happy workers, the HAPPINOMETER tool was designed to measure happiness in nine dimensions, namely happy body, happy relaxed, happy heart, happy soul, happy family, happy society, happy brain, happy money, and happy work-life. This survey has questions related to employment relationships and the work-life balance of the employees.

FIGURE 22

SCORES OF HAPPY WORKERS.



Source: The Happy Worker Survey 2021. TCHS.

By analyzing the 2021 happy workers scores according to the subgroups, as shown in Table 14, some interesting results were found and they have been highlighted as follows:

- By dividing the scores by the level of educational attainment, it was found that working people who graduated from higher education had the highest happiness score, followed by diploma and high school workers.
- The government employees had higher happiness scores as compared to private employees.
- Female workers were happier than male workers and LGBTQIA+ workers.
- When classified by industry, education workers were the happiest with a score of 67.4, followed by those in financial and insurance activities, information and communication, and human health and social work activities. While employees in professional, scientific, and technical activities, other service activities, and manufacturing had the lowest scores.

TABLE 14

HAPPINESS SCORE BY SUBGROUP OF WORKERS IN 2021.

Category	Sub-category	Score
Gender	Male	60.5
	Female	62.0
	Others	58.7
Education	Primary or lower	59.8
	Lower secondary	58.4
	Upper secondary	59.5
	Diploma	60.2
	Bachelor	62.5
	Master or higher	65.4
Sector	Manufacturing	59.5
	Electricity, gas, steam, and air conditioning supply	63.8
	Water supply; sewerage, waste management, and remediation activities	61.8
	Construction	60.4
	Wholesale and retail trade; repair of motor vehicles and motorcycles	61.1
	Transportation and storage	61.9
	Accommodation and food service activities	60.1
	Information and communication	64.3
	Financial and insurance activities	65.6

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Category	Sub-category	Score
Sector	Real estate activities	60.2
	Professional, scientific, and technical activities	58.6
	Administrative and support service activities	63.5
	Public administration and defense; compulsory social security	63.5
	Education	67.4
	Human health and social work activities	64.0
	Arts, entertainment, and recreation	60.5
	Other service activities	59.5
Employer	Government agencies	65.1
	State-owned enterprises	62.0
	Private organizations	60.2
	Academic institute	61.5
	Others	64.6

Source: The Happy Worker Survey 2021. TCHS.

Productive Employment and Quality of Employment Indices

It is relatively straightforward to conduct an index for productive employment as one can convert the working poverty rate to productive employment rate (1 – working poverty rate).

In terms of the quality of employment index, one indicator for each dimension is selected to construct the index. Later, the max-min procedure is used to normalize different indicators with different units and directions into unidirectional data [12].

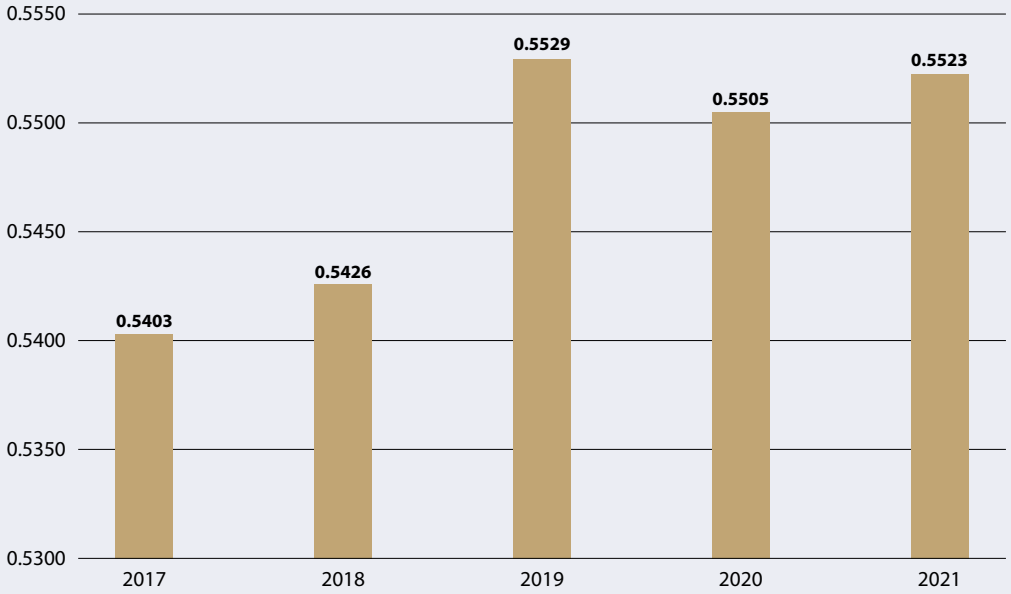
- The indicator which has a higher value reflects better development such as collective bargaining coverage rate and the share of employed people who received job training. An index is calculated from the following formula: (indicator value – minimum value) divided by (maximum value – minimum value).

- In the opposite direction, the indicator which has a lower value reflects better development such as the share of workers earning below minimum wage and the share of informal workers. An index in this case is calculated from the following formula: (maximum value - indicator value) divided by (maximum value – minimum value).

The quality of employment index can be calculated as an unweighted index of the seven indicators after the normalization of data. The results have been presented in Figure 23 and Table 16. It is observed that the quality of employment index steadily rose from 2017 and peaked at 0.5529 in 2019. It dropped to 0.5505 in 2020 largely due to the pandemic before slightly increasing to 0.5523 in 2021. In total, the movement of the quality of employment index during 2017–21 is similar to that of the productive employment index.

FIGURE 23

QUALITY OF EMPLOYMENT INDEX.



Source: Based on the data from NSO, Ministry of Labour, ILO, TCHS, and NESDC; calculated by the country resource person.

TABLE 15

SELECTED INDICATOR FOR PRODUCTIVE EMPLOYMENT AND QUALITY OF EMPLOYMENT INDICES.

Dimension	Selected indicator	Source	2017	2018	2019	2020	2021
Productive employment (in %)	**Share of poor workers**	**Domestic (NESDC)**	**6.94**	**7.21**	**5.40**	**5.82**	**5.42**
Quality of Employment							
1. Safety and ethics of employment	Rate of occupational injuries per 100,000 workers	Domestic (SSO, NSO)	230.33	227.91	252.32	227	206.93
2. Income and benefits from employment	Share of workers earning below minimum wage	Domestic (NSO, MOL)	15.88%	15.88%	14.55%	16.40%	13.36%
3. Working hours and work-life balance	Share of workers working more than 48 hours per week	Domestic (NSO)	23%	21.80%	20.18%	17.12%	16.82%
4. Security of employment and social protection	Share of informal workers	Domestic (NSO)	55.18%	55.32%	54.27%	53.69%	51.98%
5. Social dialogue	Collective bargaining coverage rate	International (ILO)	3.10%	2.40%	2.20%	2.40%	1.10%

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Dimension	Selected indicator	Source	2017	2018	2019	2020	2021
6. Skill development and training	Share of employed people who received job training	Domestic (DSD, NSO)	11.40%	12.06%	13.90%	10.89%	6.55%
7. Employment-related relationships and work motivation	Score of workers' happiness	Domestic (TCHS)	58	58.60	60.20	59.50	61.30

Source: Based on the data from NSO, Ministry of Labour, ILO, TCHS, and NESDC; calculated by the country resource person.

TABLE 16

PRODUCTIVE EMPLOYMENT AND QUALITY OF EMPLOYMENT INDICES (2017–21).

Dimension	Selected indicator	2017	2018	2019	2020	2021
Productive Employment	**Productive Employment Index**	**0.9306**	**0.9279**	**0.9460**	**0.9418**	**0.9458**
Quality of Employment	**Quality of Employment Index**	**0.5403**	**0.5426**	**0.5529**	**0.5505**	**0.5523**
1. Safety and ethics of employment	Rate of occupational injuries per 100,000 workers	0.9977	0.9977	0.9975	0.9977	0.9979
2. Income and benefits from employment	Share of workers earning below minimum wage	0.8412	0.8412	0.8545	0.8360	0.8664
3. Working hours and work-life balance	Share of workers working more than 48 hours per week	0.7700	0.7820	0.7982	0.8288	0.8318
4. Security of employment and social protection	Share of informal workers	0.4482	0.4468	0.4573	0.4631	0.4802
5. Social dialogue	Collective bargaining coverage rate	0.0310	0.0240	0.0220	0.0240	0.0110
6. Skill development and training	Share of employed people who received job training	0.1140	0.1206	0.1390	0.1089	0.0655
7. Employment related relationship and work motivation	Score of workers' happiness	0.5800	0.5860	0.6020	0.5950	0.6130

Source: Based on the data from NSO, Ministry of Labour, ILO, TCHS, and NESDC; calculated by the country resource person.

Considering the index by dimensions, Thailand is doing a great job in safety and ethics of employment, income and benefit from employment, and working hours and work-life balance, where the index values are high and on an upward trend.

On the other hand, the country needs to work hard on social dialogue as well as skill development and training, especially on the collective bargaining coverage which has large room for improvement.

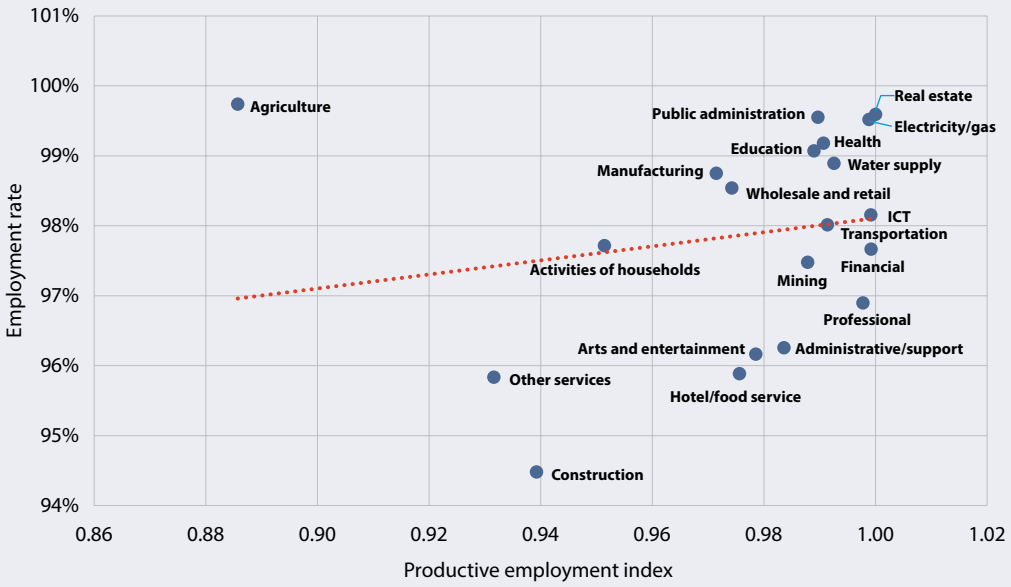
Impact of Productive Employment and Quality of Employment on Labor Market Performance

The goal of many policymakers around the world is to create more, as well as, better jobs. Yet, there is empirical evidence of a positive or a negative relationship between job quantity and job quality. On one hand, a positive relationship may arise from the good quality of jobs (e.g., better social protection and safer working conditions) increases productivity, economic growth, and labor supply, but on the other hand, hiring more workers will lead to higher business costs, leading to employers providing lower pay and welfare to their employees. In this case, there is a trade-off 4between job quantity and job quality [13].

To evaluate the impact of productive employment on the labor market performance in Thailand, the relationship between the productive employment index and labor market outcomes was examined. Figure 24 shows that the productive employment index and employment rate in 2021 were positively correlated across all the sectors. There are better quality and quantity of employment in the real estate, health service, education, and ICT sectors while certain sectors including construction; and hotel and food services have lower employment rates as well as productive employment index.

FIGURE 24

PRODUCTIVE EMPLOYMENT INDEX AND EMPLOYMENT RATE BY SECTOR IN 2021.

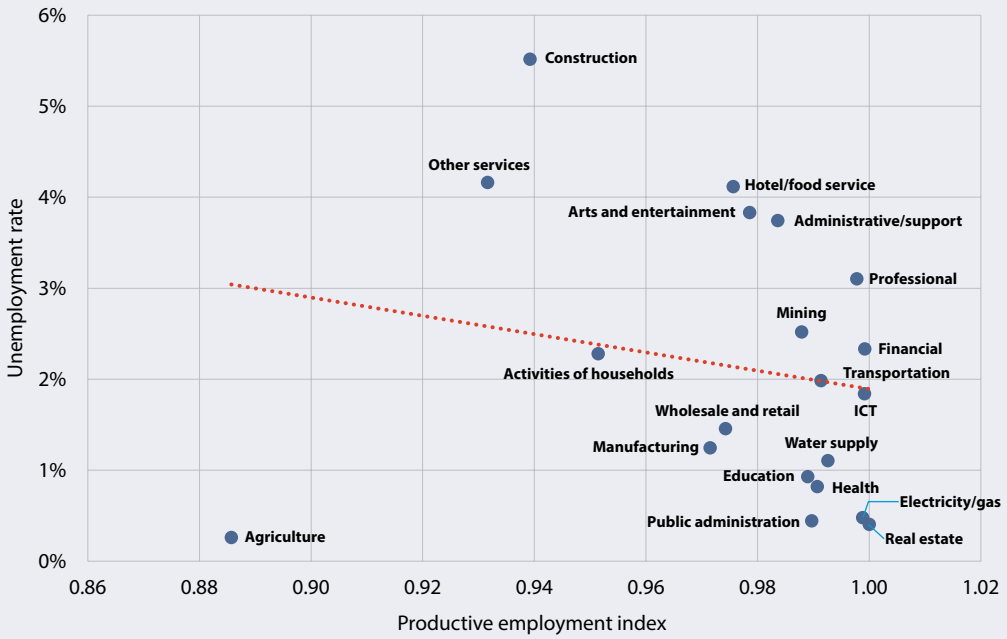


Note: Employment rate by sector equals employed people divided by labor force in each sector from the labor force survey (LFS).
Source: Labor Force Survey. NSO; and NESDC.

At the same time, the overall unemployment rate and productive employment index are negatively correlated, as illustrated in Figure 25. This pattern mirrors the sectoral outcomes observed in previous employment analyses. One stylized finding is the agricultural sector, which has one of the lowest productive employment but exhibits a very low unemployment rate and a high employment rate. This is possibly due to the sector's capacity to absorb employment and offer flexibility in work.

FIGURE 25

PRODUCTIVE EMPLOYMENT INDEX AND UNEMPLOYMENT RATE BY SECTOR IN 2021.



Note: Unemployment rate by sector equals unemployed people divided by labor force in each sector from the labor force survey (LFS).
Source: Labor Force Survey. NSO; and NESDC.

During the past five years (2017–21), there seems to be a trade-off between productive employment/quality of employment and labor market performance, in terms of quantity, as suggested by correlation coefficients in Table 17. In other words, better productive employment and quality of employment are associated with a decreasing employment rate, lower labor force participation rate, and higher unemployment rate. The evidence with the opposite direction from the sectoral analysis may stem from a large share of agricultural workers in the total employment (about one-third). On the contrary, the quality of employment is positively correlated with the average wage level and growth rate, implying that productive and better-quality jobs pay higher wages in Thailand.

In terms of labor productivity and economic performance, a positive relationship is observed between quality of employment and per-worker productivity and real GDP levels, but a negative relationship for growth rates. Finally, the productive employment index and quality of employment index are highly positively correlated, reflecting that having a better quality of employment is associated with a lesser tendency to become working poor.

TABLE 17

LABOR MARKET PERFORMANCE INDICATORS, PRODUCTIVE EMPLOYMENT, AND QUALITY OF EMPLOYMENT (2017–21).

Labor Market Performance	Correlation Coefficient with	
	Productive Employment Index	Quality of Employment Index
Employment rate	–0.52	–0.52
Unemployment rate	0.49	0.49
Labor force participation rate	–0.93	–0.87

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Labor Market Performance	Correlation Coefficient with	
	Productive Employment Index	Quality of Employment Index
Average wage	0.85	0.90
Average wage growth	0.53	0.70
Labor productivity (per worker)	0.16	0.16
Labor productivity growth	–0.40	–0.58
Real GDP	0.15	0.18
Real GDP growth	–0.48	–0.63
Productive Employment Index		0.96
Quality of Employment Index	0.96	

Source: Based on the data from NSO, BOT, Ministry of Labour, ILO, TCHS, and NESDC; calculated by the country resource person.

It is worth noting that the correlation presented above is calculated using the yearly data from 2017–21 and may require more data series to draw a robust conclusion. Therefore, monitoring updated data on productive employment and quality of employment will be useful for future impact analysis.

Policies and Regulations

Productive employment, quality of employment, or labor productivity are some of the focuses in the many strategies and policies of the country, including the main National Strategy and the Social and Economic Development Plan.

National Strategy (2018–37)

The first national long-term strategy, National Strategy (2018–37), which aims to make Thailand a developed country with security, prosperity, and sustainability, also places a great emphasis on human capital development.

One of the strategies is on Human Capital Development and Strengthening, which will help promote modern innovators, thinkers, entrepreneurs, farmers, and so on based on personal skills and abilities. The key development guidelines for this strategy include:

- Promoting human development at all stages of life from pregnancy to the elderly stage. For the working-age population, the focus is on enhancing skills and capacities to meet the existing market demands.
- Improving the learning processes to accommodate the changes of the 21st century by encouraging lifelong learning and development of skills.
- Realizing multiple intelligences by creating career paths, working environments, and support systems that promote special skills through various effective mechanisms.
- Promoting conditions that encourage human capacity development including, embedding and developing skills outside of the school, and developing database systems to facilitate human capital development, etc.

13th Social and Economic Development Plan (2023–27)

Upon the end of Thailand's 12th national development plan, the office of the NESDC launched the 13th plan to outline the country's development directions in the next five years based on four key conceptual principles including the Philosophy of Sufficiency Economy, Resilience Concepts, SDGs, and Bio-Circular-Green (BCG) Economic Model [14].

This plan consists of the following five key objectives.

1. Restructuring the production towards an innovation-based economy.
2. Human development for a new era.
3. A society focusing on opportunity and fairness.
4. The transition to sustainability.
5. Strengthening the country's ability to cope with risks and change in a new global context.

The plan outlines 13 Milestones, corresponding with its primary objectives, which indicate what Thailand wishes to be, to have, or to eliminate, throughout 2023–27. One of these milestones emphasizes the cultivation of a high-performance workforce in Thailand dedicated to continuous learning, and preparing for future developmental challenges. Human resource development is identified as a key enabler in Thailand's transformative journey.

Within the framework of the manpower development milestone, three primary focal points have been identified, including nurturing human development across all age groups (from children to the elderly), fostering the development of highly competent manpower to meet future job demands, and promoting lifelong learning. Detailed strategies to achieve this milestone are outlined in Table 18.

TABLE 18

STRATEGIES UNDER THE MANPOWER DEVELOPMENT MILESTONE OF THE 13TH SOCIAL AND ECONOMIC DEVELOPMENT PLAN.

Main strategy	Sub-strategy
Human development at all ages	• Develop children during pregnancy to early childhood to have all-rounded development and good habits. • Develop fundamental-level learners to have self-awareness and competencies necessary for learning, living, and working by improving the curriculum, vocational education, quantity and quality of teachers, learner evaluation, and learning support system. • Develop the higher education students to have competencies required for future work and innovation, by reforming to a demand-driven education. • Develop the working-age population to possess the necessary skills for the world of work in the future, by providing skill development opportunities for all groups of workers, and developing, learning, and upskilling platforms. • Develop the elderly to be valuable citizens of the society.

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Main strategy	Sub-strategy
High-competency manpower development	• Develop high-performance manpower in line with the needs of target sectors and future jobs by encouraging education and training collaboration between related organizations and developing a database system for manpower management. • Increase the number of quality manpower to support targeted sectors by establishing a national mechanism for collecting high-performing workforce. • Build smart entrepreneurs with the ability to create and use technology and innovations
Promotion of lifelong learning	• Develop an ecosystem for lifelong learning by encouraging various sectors to create and develop diverse learning resources, creating learning platforms for all, developing a credit bank system, and providing incentives for lifelong learning. • Develop options for accessing learning for those who are unable to study in the normal education system.

Source: 13th Social and Economic Development Plan (2023–27). NESDC.

In conclusion, Thailand is aiming to develop a high-quality education system that can develop essential skills that are needed and contribute to the creation of a lifelong learning society, for the future. Thailand is also focusing on productivity enhancement in the country in which labor is one of the main drivers.

Workforce Development Strategies (2017–36)

In 2016, Thailand's Ministry of Labour issued the 20-Year Workforce Development Strategy (2017–36). The strategy emphasizes productive manpower and science, technology, engineering, and mathematics (STEM) manpower development, which is consistent with Thailand 4.0 agenda[8].

The framework can be divided into the following four periods [15].

- **Productive Manpower (2017–21):** Aim to eliminate the labor-related obstacles to the development of the country, upgrade the Thai labor standards to meet the international standards, promote social protection as well as good working conditions and welfare for all workers, building multi-skilled labor and upskill the manpower, especially those in STEM for a transition to Thailand 4.0.

- **Innovation Workforce (2022–26):** Aim to develop a workforce to apply technology and innovation in productivity enhancement, encourage the development of STEM skills for Thailand 4.0, amend regulations to suit employment in the digital era, and make the workforce ready for a multi-cultural and cross-border work.

- **Brain Power (2027–31):** Aim to increase the number of STEM workers for high-productivity work to overcome the middle-income trap.

[8] Thailand 4.0 represents a transformative model designed to address pressing economic challenges such as the middle-income trap, inequality trap and imbalanced growth stemming from previous economic development directions centered around agriculture (Thailand 1.0), light industry (Thailand 2.0), and advanced industry (Thailand 3.0). The primary goal of Thailand 4.0 is to elevate Thailand into high-income country driven by innovation and value-based industries [21].

- **Creative Workforce (2032–36):** Aim to increase the number of STEM workers and create creative manpower, with research and development skills for better work quality and efficiency.

Productive employment has been a priority for Thai policymakers for a while. Although Thailand has improved continuously, there is a long journey ahead to achieve its goals that workers have high income, high productivity, and better quality of life.

Key Policies of the Ministry of Labour in 2022

In 2022, the Ministry of Labour (MOL) aimed to develop labor skills to be quality workers and prepare them for opening the country and supporting the new economy.

- Upskill, re-skill, new skill labor, provide training for the unemployed to have sufficient knowledge to work, increase labor productivity, and be able to return to the labor market. The MOL promotes learning new ways of working and increasing digital, technology, and innovation skills for both employed workers, and new graduates through offline and online channels.

- Produce high-performing workforces to be able to adapt to new work/jobs resulting from the changes and risks under the new world context towards digital technology advancement. The MOL is promoting the learning of skills for the future to respond to the country's manufacturing sector, support the New S-Curve, and in line with the national strategy. This is a Thai labor market restructuring aiming to drive the country's economy as well as build the competitiveness of the labor and the country.

- Develop professional skills of the youth and the new generation that are increasingly likely to become gig workers

- Foster cooperation between the public sector, educational institutions, and the private sector in labor development, to meet the demands of the labor market, support foreign investment, and create a balance in the labor market.

Reviews of the Laws on Productive Employment

Labor Protection

Labour Protection Act B.E. 2541 (1998) covers topics on employment of women, young workers, wage and welfare, and many more. Examples of welfare required by the law include clean drinking water, first-aid services, and medical supplies for employees' injuries or sickness. Apart from the above welfare, employers are encouraged to provide additional welfare such as working clothes or uniforms, health insurance, and transportation.

In addition to suitable welfare, proper compensation is also a key factor for keeping the workers productive. Therefore, apart from meeting the minimum wage law, having wages in line with productivity or setting wages based on the performance or productivity of the workers is necessary for an organization. Productivity gain-sharing is a concept that encourages an increase in wages as productivity increases. Employers do not need to have extra money or bear additional costs as it comes from saving on inefficient procedures or profits arising from higher productivity. Thus, the benefits gained from being more productive will be shared with everyone who contributes to the higher productivity. This is considered a reward for success. Other benefits include better teamwork, creativity, innovation, and productivity.

In terms of minimum wage setting, many factors are taken into account. One of the factors used in the formula is the labor productivity growth rate (calculated from gross provincial product (GPP) divided by the number of employed people by province). Other factors include previous wage rates, labor contribution to the GPP, inflation rate, and qualitative factors. The MOL has to regularly adjust the level of minimum wage rates to keep up with socio-economic factors and the cost of living. Finally, it is crucial to promote compliance and coverage of minimum wage, as it ensures that the workers receive reasonable and adequate pay for living a good quality of life.

Labor Relations

One of the areas that Thailand needs to work on is labor relations. The Labour Relations Act, B.E. 2518 (1975) is there, which helps in regulating industrial relations practices [16]. In terms of the work on freedom of association and collective bargaining, Thailand has not ratified the ILO Conventions No. 87 (Freedom of Association and Protection of the Right to Organize Convention) and No. 98 (Right to Organize and Collective Bargaining Convention), which are two of the eight fundamental Conventions.

Generally, Thai workers have little bargaining power and are at risk of being exploited. Also, it is not easy to form a trade union in Thailand [17] and the roles and powers of these unions are minimal. Thus, the government needs to promote social dialogue in the form of collective bargaining by considering ratifying the ILO Convention Nos. 87 and 98, and amending some regulations to support the unionization. Collective bargaining will enable workers to negotiate wages, welfare, as well as, working hours with their employers. This will be beneficial for the improvement of the quality of employment.

Occupational Safety, Health, and Environment

According to the Occupational Safety, Health, and Environment Act B.E. 2554 of 2011, which is the main legislation for regulating occupational safety and health in Thailand, the employer should provide a safe working environment for their employees. At the same time, the employees will cooperate with the employer to establish and encourage a safe environment at work.

In 2021, the proportion of establishments that did not comply with the laws was 7.61%, slightly more than the previous year. There has been an increasing trend in the shares since 2013. When classified by establishment size, it was found that large establishments had a higher rate of non-compliance as compared to small establishments. When classified by industry, the non-compliance rate was the highest in the mining and quarrying industry, followed by construction, manufacturing, and water management [18].

Improving work safety and working environment helps in reducing risk factors for health problems and injuries from work. As a result, the workers are more motivated to work and can work at their full potential, which will, in turn, lead to higher productivity.

Social Security

Although the number of insurers under the Social Security Act has been increasing over time, many employed people have been excluded from social protection. Those include informal workers, freelancers, and gig workers. These workers can voluntarily apply for Sections 39 and 40, but these two sections provide fewer benefits compared to Section 33, which they are not entitled to, as they do not have an employer, or their status of employment is ambiguous.

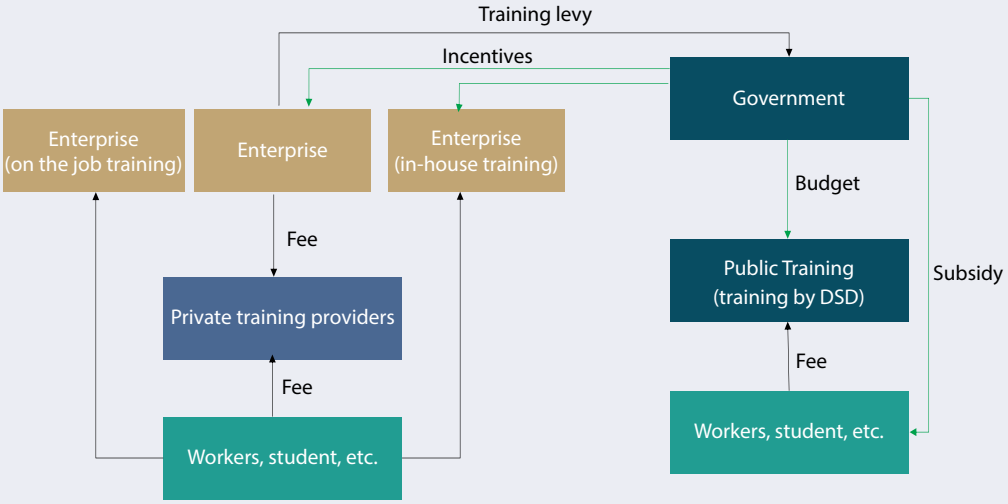
The government needs to encourage these groups of workers to have social protection. As the number of insured people under Sections 39 and 40 is far lower than that under Section 33, some self-employed people may not be aware of such schemes or not realize the importance of insurance. Therefore, better promotions for the social security package need to be implemented. Moreover, the SSO should develop a new package or adjust the existing plans to incentivize the informal workers to participate in the formal protection.

Skill Development Promotion

According to the Skill Development Promotion Act (SDPA), an establishment with 100 or more employees must contribute to the Skill Development Fund. However, the establishments that organize training, send employees to take the national skill standard test, or have employees certified for knowledge and competence (not less than 50% of the total number of employees), are exempted from the contributions. As a result, the establishments tend to provide training for meeting the minimum training hours stipulated by the law only. The training may not be effective and does not lead to an increase in labor productivity as it should.

FIGURE 26

THAILAND'S SKILL DEVELOPMENT OVERVIEW.



Source: Pornpattanapaisankul K. Labor Market Digital Transformation, 2020. BOT [19].

Data from the DSD on training courses under the SDPA revealed that many training courses in 2021 included internal audit, ISO standards, Kaizen optimization, risk management, and Microsoft Excel. However, a large portion of the training is in fundamental courses or courses that are essential for work, as is reflected in the course names, containing words such as introduction, requirements, and core tools. Applied and advanced courses are minimal, and therefore, it could be concluded that most of the training according to the SDPA is basic training, which does not contribute to higher productivity.

The skill development mechanisms that are currently being implemented by the government still have limited access to certain groups of workers and may not be in line with the needs of learners. However, with the advancement of technology, all groups of people these days can access learning and training more easily, comfortably, and less costly through various online platforms. There are

many platforms in Thailand, both public and private, owned domestically and internationally. All of them have a wide variety of courses that meet the needs of learners who want to upskill. These platforms can be divided into two types [20]:

- Platform that collects training courses such as Digital Skill by Depa, DSD Online Training, SkillLane, and FUTURESKILL.

- Platforms that develop Massive Open Online Courses (MOOC) such as Coursera, Udacity, Futurelearn, Chula MOOC, and Thai MOOC.

Therefore, the government needs to encourage or support all people to access various skill development platforms inclusively, especially the vulnerable groups of workers, such as the elderly, low-income workers, first jobbers, and informal workers. In addition, better promotion of these platforms is extremely important as well as providing information, advice, and consulting on the direction of the needs of the labor market, high-demand skills, and future trends in the labor market, so that workers can develop their skills to meet the needs of the market and become more productive.

Conclusion and Recommendations

Thailand's productive employment index and quality of employment index exhibited fluctuations between 2017 and 2021, having shown a consistent upward trajectory until the COVID-19 pandemic. However, in 2021 these indices experienced a slight increase compared to the previous year, indicating a promising trend worth monitoring.

Regardless of historical trends, the quality of employment indicator suggests that Thailand is doing well in safety and ethics of employment, income and benefits from employment, and working hours and work-life balance, where the index values are high and on an upward trend. On the other hand, a lot of work needs to be done on social dialogue and skill development and training as the indices for these indicators were relatively low.

In terms of skill development, the government should consider revising the guidelines aimed at promoting private sectors to conduct training programs. This could involve adjustments to the minimum criteria for training hours as well as the content, level, and overall quality of the training courses. Additionally, there should be a concerted effort to promote training programs focused on emerging skills such as digital proficiency, green technologies, and soft skills.

Ensuring accessible skill development for vulnerable workers, including informal workers, the elderly, and those in agriculture, is crucial. Apart from education and training, emphasis should also be placed on research and development as well as upstream initiatives. These efforts are essential to enhance the skills and productivity within the labor market. Finally, to foster a continuous drive for skill development and encourage citizens to acquire new competencies regularly, the Government of Thailand could consider subsidizing a portion of the training costs, promoting lifelong learning among the workforce and citizens alike.

Regarding collective bargaining, the government can promote social dialogue by considering the ratification of the fundamental ILO convention and making regulatory amendments that support unionization and collective bargaining. However, this would be a long-term policy and may require considerable time to take effect.

Furthermore, additional dimensions of the quality of employment should be promoted. Firstly, to enhance compliance with labor protection and OSH laws, the government can explore the option of offering more incentives, moving away from coercive measures to decrease the non-compliance rate. Secondly, improving the quality of data on productive employment is essential for comprehensive analysis and policy design. Establishing a robust labor database systematically linked on both the supply and demand sides can significantly reduce skill mismatch and facilitate more effective policy formation to enhance productivity.

Lastly, the effective promotion of productive employment and quality of employment requires collaboration between all stakeholders, including the government, the private sector, and civil society. Such collaborative efforts are vital for implementing comprehensive policies that can positively impact the workforce and overall economic productivity.

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TURKIYE

Introduction

This chapter is part of the study conducted within the framework of the APO Research on the Productive Employment Index Project and focuses on Turkiye. The research aimed to achieve the following objectives: measure the levels of productive employment and the quality of employment, analyze the impact of productive employment and the quality of employment on labor market performance, and formulate labor productivity policies that promote the well-being of workers.

To achieve these objectives, two primary quantitative data sets were utilized, namely, the Household Labour Force Survey (HLFS) and Labour Statistics. The HLFS, a comprehensive household-based survey, provides insights into the labor participation of individuals aged 15 years and older, including those outside the labor force. The Labour Statistics (2021), is compiled by the Ministry of Labour and Social Security, using the General Directorate of Labour within the framework of the Official Statistics Programme. These statistics are published in the Official Gazette twice a year.

These statistics adhere to both national and international standards, covering various aspects of working life, including labor inspections, occupational health, and safety. The HLFS is conducted and evaluated by the Turkish Statistical Institute (TurkStat), the official statistics authority of Turkiye. In addition to the quantitative data, relevant employment-related laws, policies, and regulations were reviewed to collect the qualitative data.

The study focuses on two key aspects of employment: productive employment and the quality of employment. Productive employment is defined as work that yields a sufficient return to labor, enabling the workers and their dependents to maintain a standard of living above the poverty line. The quality of employment is defined by the ILO's concept of decent work and encompasses several dimensions. This study considers seven dimensions and an index that combines several indicators from these areas to assess the employment scenario in Turkiye. The seven dimensions are as listed:

1. Safety and ethics of employment.
2. Income and benefits from employment.
3. Working hours and work-life balance.
4. Security of employment and social protection.
5. Social dialogue.
6. Skill development and training.
7. Employment-related relationships and work motivation.

The data from the year 2021 were utilized for analyzing both productive employment and quality of employment.

Section 2 of this report offers a comprehensive overview of job creation and workforce productivity in Turkiye. Section 3 presents the results of data analysis regarding productive employment and the quality of employment index. Section 4 examines policies relevant to both the productivity of the workforce and quality of life. Section 5 summarizes the findings and concludes the study.

Employment Creation and Productivity of Workforce in Turkiye

This section provides a summary of labor force statistics based on TurkStat data. Figure 1 illustrates the change in GDP, calculated as a ratio compared to the previous year, using the production approach for the years 2011–21. In 2021, Turkiye's GDP experienced a significant surge of 43.6% as compared to the previous year.

Figures 2 and 3 depict the index of value added per person employed (2010=100) and the change in value added per person employed compared to the previous year, respectively, for the period 2010 to 2020. These index values have consistently shown an upward trend over the years. In 2020, the value added per person employed index reached 140.09. Moreover, there was a notable 2.26% increase in the value-added per person employed in 2021 as compared to the preceding year.

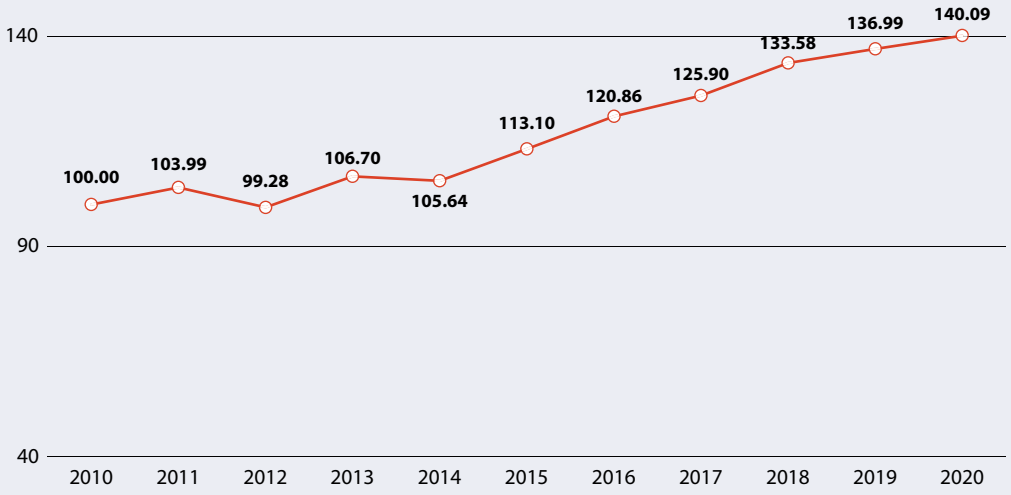
FIGURE 1

PERCENTAGE CHANGE IN GDP (2011–21).

Source: Turkstat and calculations by the country resource person.

FIGURE 2

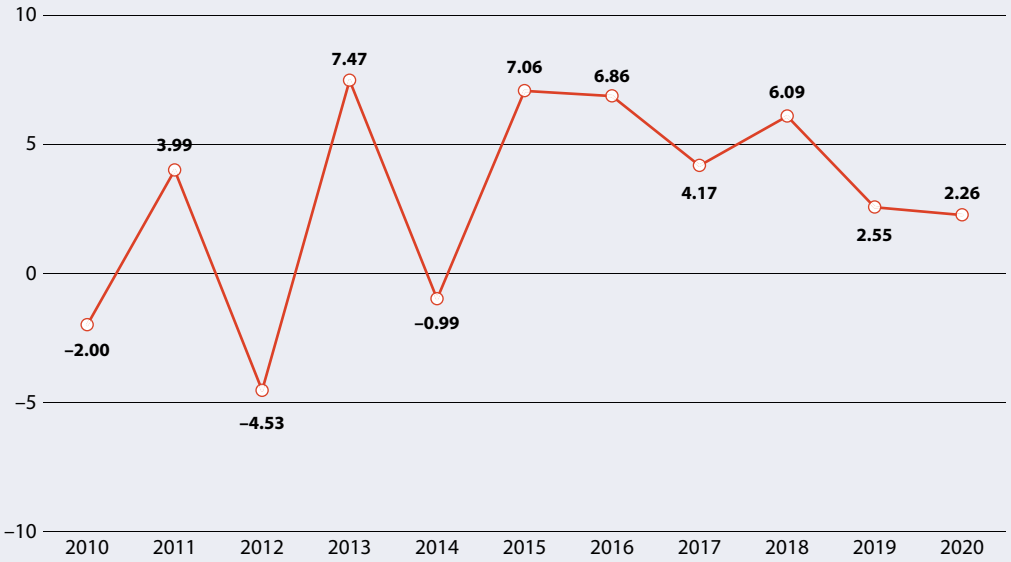
VALUE ADDED PER PERSON EMPLOYED INDEX (2010=100).



Source: Turkstat.

FIGURE 3

PERCENTAGE CHANGE IN VALUE ADDED PER EMPLOYEE (2010–20).

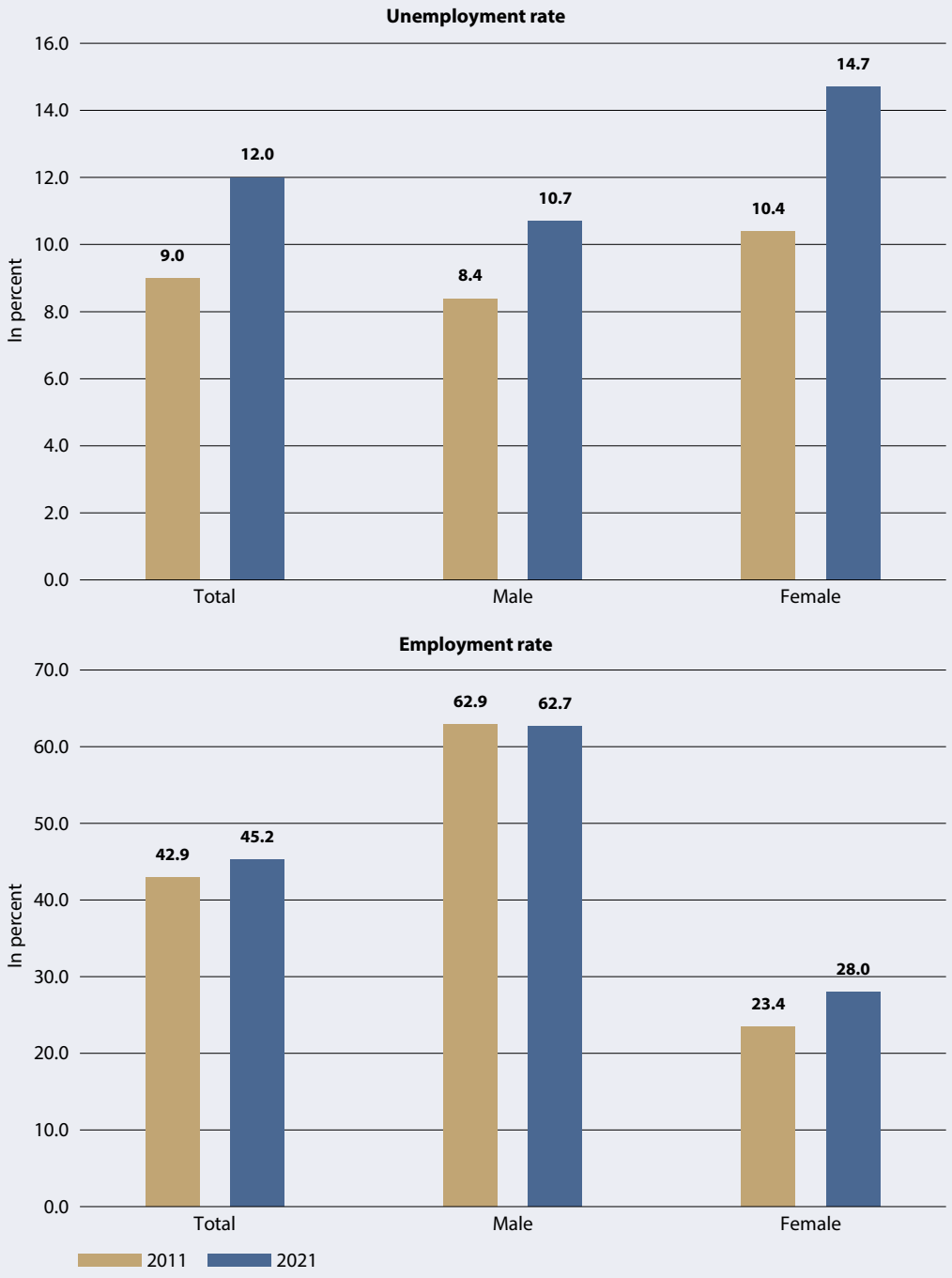


Source: Turkstat and calculations by the country resource person.

Figure 4 indicates the unemployment and employment rates, while Table 1 presents key labor force indicators for individuals aged 15 years and over. In 2021, the number of unemployed people aged 15 years and above jumped from 1.64 million to 3.93 million as compared to 2011. Consequently, the unemployment rate increased by 3.02 percentage points, reaching 12%. It was estimated at around 10.7% for men and 14.7% for women.

FIGURE 4

UNEMPLOYMENT AND EMPLOYMENT RATE (IN %).



Source: Turkstat.

In contrast, the number of employed individuals aged 15 years and over reached 28.81 million, marking an increase of 5.64 million people. Overall, the employment rate stood at 45.2%, reflecting a 2.3 percentage point rise in 2021 as compared to 2011. This rate was estimated at 62.7% for men and 28% for women.

The labor force comprised 32.73 million people, marking an increase of 7.28 million individuals since 2011. The labor force participation rate reached 51.4%, indicating a 4.23 percentage point increase in 2021 as compared to 2011. Notably, the labor force participation rate was estimated at 70.3% for men and 32.9% for women.

TABLE 1

KEY LABOR FORCE INDICATORS FOR POPULATION AGED 15 YEARS AND OLDER.

	2021			2011 (r)			Difference 2011–21		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
(in '000)									
Population 15 years and over	63,703	31,532	32,171	53,984	26,625	27,359	9,719	4,908	4,811
Labor force	32,732	22,163	10,569	25,452	18,301	7,151	7,280	3,862	3,418
Employment	28,806	19,787	9,018	23,166	16,759	6,407	5,640	3,028	2,611
Unemployment	3,927	2,376	1,551	2,287	1,542	745	1,640	834	806
Not in the labor force	30,971	9,369	21,601	28,532	8,324	20,208	2,439	1,045	1,394
(in %)									
Labor force participation rate	51.4	70.3	32.9	47.1	68.7	26.2	4.23	1.54	6.70
Employment rate	45.2	62.7	28	42.9	62.9	23.4	2.30	-0.19	4.60
Unemployment rate	12	10.7	14.7	9	8.4	10.4	3.02	2.30	4.25

Note: (r) The data was revised according to new definitions and concepts.
Source: Turkstat.

Measurement and Analysis

Data Sources

This research utilized Turkiye's official labor force surveys as its primary quantitative data. One of TurkStats' key responsibilities is the preparation and implementation of the Official Statistics Program. The initial quantitative data source used in this research is the Labour Force Statistics Microdata Set (2021), which is based on HLFS [1]. This data is compiled and published by TurkStat at a micro level, covering all settlements in Turkiye through a comprehensive sample selection process. The HLFS employed a two-stage stratified cluster sampling method was used.

In 2021, the survey comprised a sample size was 234,240 households, yielding a total of 635,159 observations. Out of these, 490,542 observations were related to individuals aged 15 years and above. The sample size was determined following the guidelines outlined in the Eurostat regulation numbered 577/98. The method employed for weighting, essential for extrapolating parameters from the sampled dataset to represent the entire population, was duly applied.

To enhance the accuracy of assessing changes in the labor market structure over the years, the ILO introduced new definitions and standards for the measurement of employment and unemployment in 2013. These updated criteria, aligned with the relevant European Union (EU) regulation, were implemented in the HLFS from 2021 onward. Consequently, statistics from 2021 onwards reflect these new definitions and concepts. Users must acknowledge that due to this transition, datasets from

previous years and the dataset of 2021 are not comparable. Researchers are encouraged to exercise caution and employ monthly, quarterly, and annual statistical tables for meaningful comparisons. It is possible to produce cross tables, make various statistical analyses, and run econometric models by using the microdata given in this data set. However, the variables in the microdata set are shared with users to be used in statistical analysis, not for creating cross tables. Therefore, following the TurkStat guidelines, this study is limited to the data available for the year 2021.

The second quantitative data source used in this research is the Labour Statistics (2021), compiled by the Ministry of Labour and Social Security in collaboration with the General Directorate of Labour within the framework of the Official Statistics Programme. These statistics are published semi-annually in the Official Gazette. The dataset provides comprehensive information regarding working life, adhering to both national and international standards. It encompasses data related to labor inspections as well as occupational health and safety.

Indicators

This study aims to assess the levels of productive employment and the quality of employment, aligning its indicators with the Millennium Development Goals (MDG) and the prevailing SDGs outlined by the UN. The SDGs comprise 17 goals, among which SDG 8, 'Decent work and economic growth', includes Target 8.5. This target emphasizes achieving full and productive employment and decent work for all women and men, including young people and people with disabilities, and promoting equal pay for work of equal value by 2030.

The global indicator framework for the SDGs and the Targets of the 2030 Agenda for Sustainable Development, established by the UN, outlines specific goals and their respective indicators. Relevant indicators pertinent to this study are presented in Table 2 as illustrative examples.

The following indicators have been used in this research.

Productive Employment: Percentage of workers earning below USD1.25 per day in terms of PPP.

Quality of Employment

1. **Safety and ethics of employment:** Rate of occupational injuries per 100,000 workers.
2. **Income and benefits from employment:** Proportion of workers earning below the minimum wage.
3. **Working hours and work-life balance:** Percentage of individuals working more than 48 hours per week.
4. **Security of employment and social protection:** The share of informal workers.
5. **Social dialogue:** Trade union density rate.
6. **Skill development and training:** Share of employed people in high-skilled occupations.
7. **Employment-related relationships and work motivation:** Share of employed people who are satisfied with their work.

TABLE 2

EXAMPLES OF SDGS AND INDICATORS.

Goals	Indicators
1.1 By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living with a salary of less than USD1.25 a day.	1.1.1 Proportion of the population living below the international poverty line by gender, age, employment status, and geographic location (urban/rural).
8.3 Promote development-oriented policies that support productive activities, decent job creation, entrepreneurship, creativity, and innovation, and encourage the formalization and growth of micro, small, and medium-sized enterprises, including access to financial services.	8.3.1 Proportion of informal employment in total employment, by sector and gender.
8.7 Take immediate and effective measures to eradicate forced labor, end modern slavery and human trafficking, and secure the prohibition and elimination of the worst forms of child labor, including recruitment and use of child soldiers, and by 2025 end child labor in all its forms.	8.7.1 Proportion and number of children aged 5–17 years engaged in child labor, by gender and age.
8.8 Protect labor rights and promote a safe and secure working environment for all workers, including migrant workers, in particular women migrants, and those in precarious employment.	8.8.1 Fatal and non-fatal occupational injuries per 100,000 workers, by gender and migrant status 8.8.2 Level of national compliance with labor rights (freedom of association and collective bargaining) ILO textual sources and national legislation, by gender and migrant status

Source: United Nations.

Analysis

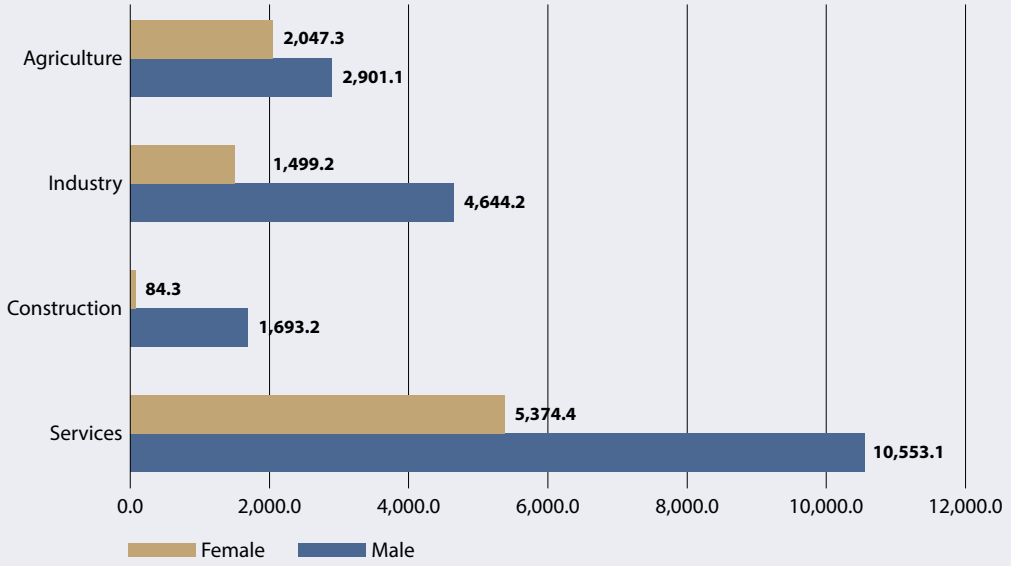
In 2021, the population of Turkiye stood at 84,680,273, comprising 42,428,101 males and 42,252,172 females. The weigh ted sampling of HLFS represents 82,803,362 people. The sample is a good representation of Turkiye's population.

All economic activities analyzed in this research are classified according to Nace Rev 2. Figure 5 provides the number of employed individuals categorized into broad industrial segments: agriculture, industry, construction, and services. Out of the total population, 17.2% are employed in agriculture, 6.2% in construction, 21.3% in industry, and 55.3% in services. Among the total employed population, 68.7% are males and are 31.3% females.

Of the total population, 28,796,813 people, which is approximately 38%, are employed. The employed individuals are categorized as self-employed persons with employees (5%), self-employed persons without employees (16%), unpaid family workers (9%), employees for wage or salary (65%), and casual workers (5%, including seasonal workers and daily job laborers) as shown in Figure 6.

FIGURE 5

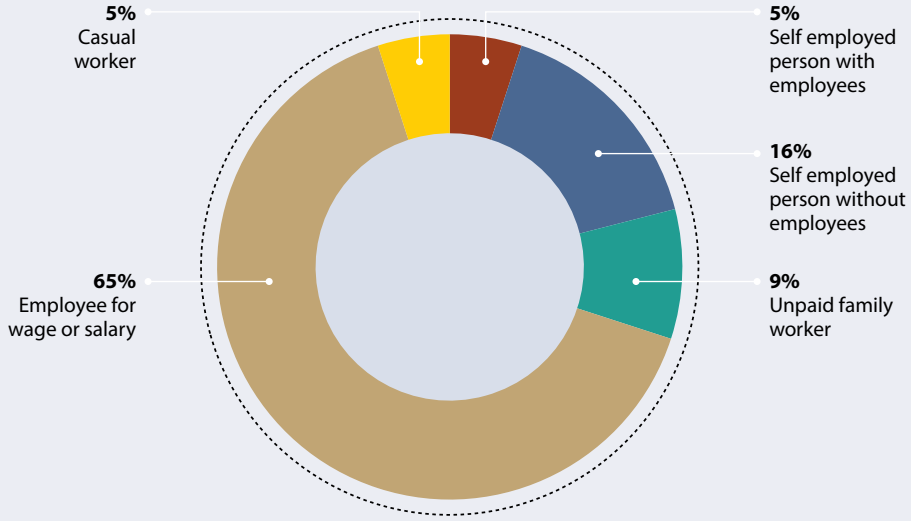
EMPLOYMENT DISTRIBUTION BY GENDER ACROSS SECTORS IN 2021 (IN '000).



Source: Turkstat and calculations by the country resource person.

FIGURE 6

DISTRIBUTION OF EMPLOYMENT STATUS IN 2021 (IN %).



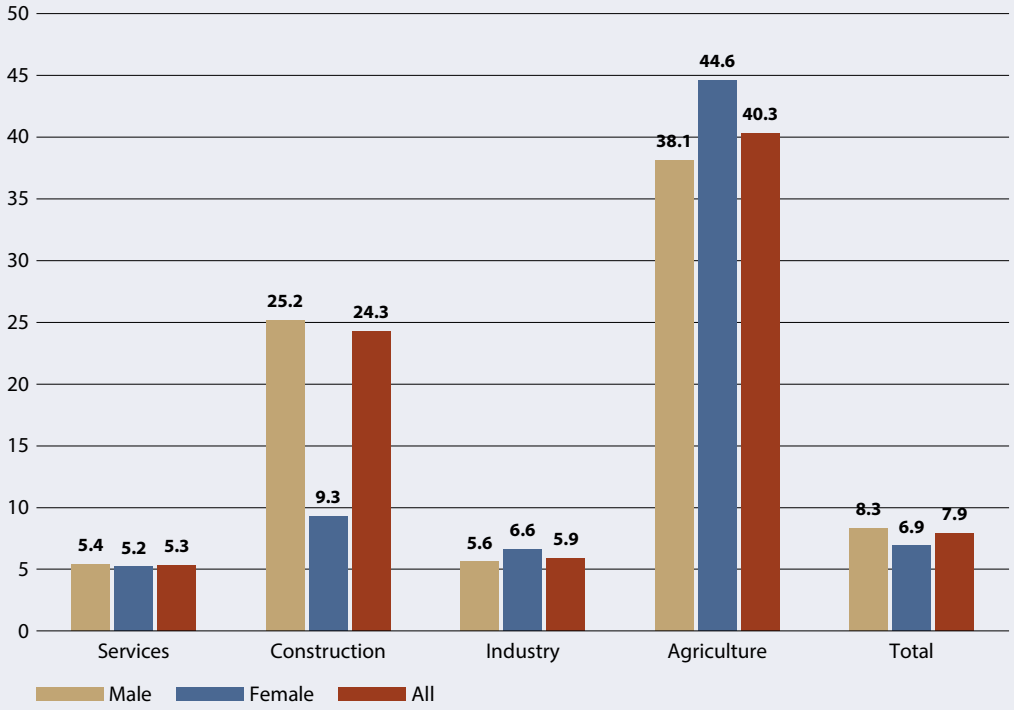
Source: Turkstat and calculations by the country resource person.

Productive Employment Index

The percentage of workers earning below USD1.25 per day in terms of PPP is used to measure productive employment. To calculate this indicator, data from the HLFS and the annual USD exchange rate published by the Central Bank Republic of Turkiye were used. The calculation covers the employees receiving wages or salary. Figure 7 illustrates the percentages of employees earning below USD1.25 per day.

FIGURE 7

PERCENTAGE OF INDIVIDUALS EARNING BELOW THE POVERTY LINE ACROSS SECTORS AND GENDER IN 2021.



Source: Turkstat and author's calculations.

A higher level of productive employment in a country is indicated by a lower percentage of employees earning below the poverty line. As illustrated in Figure 5, this percentage stands at 7.9% in total. The highest percentage is observed among females working in the agriculture sector (44.6%), while the lowest is among the women working in the services sector (5.2%).

The productive employment index, calculated at 92.1%, represents the percentage of employees earning above the poverty line.

Quality of Employment Index

The quality of employment index is calculated as an unweighted index of seven indicators.

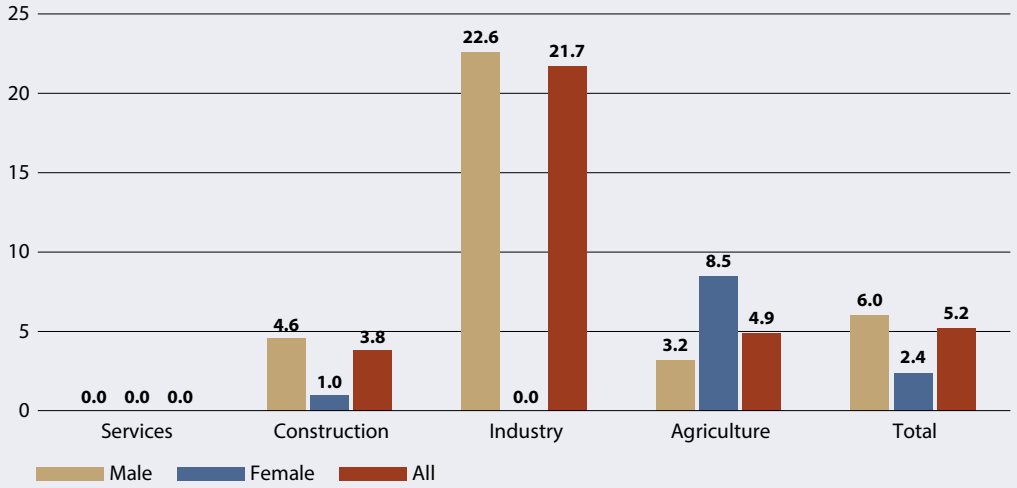
Indicator 1: Rate of Occupational Injuries per 100,000 Workers.

To calculate the rate of occupational injuries per 100,000 workers, the Labour Statistics data was used. There were 1,117,442 workers in this data set. In Figure 8, it is seen that any occupational injuries were not detected in the services sector by workplace inspections. The highest rate of occupational injuries was 22.6%, for male workers in the industry sector. The overall rate was 5.2%.

This rate should be lower since the indicator is affecting the quality of employment negatively. While using it in the calculation of the composite index, it had to be transformed into a percentage (0.0052%) and the the complementing rate (99.9948%) had to be used.

FIGURE 8

RATE OF OCCUPATIONAL INJURIES PER 100,000 WORKERS ACROSS SECTORS AND GENDER IN 2021.



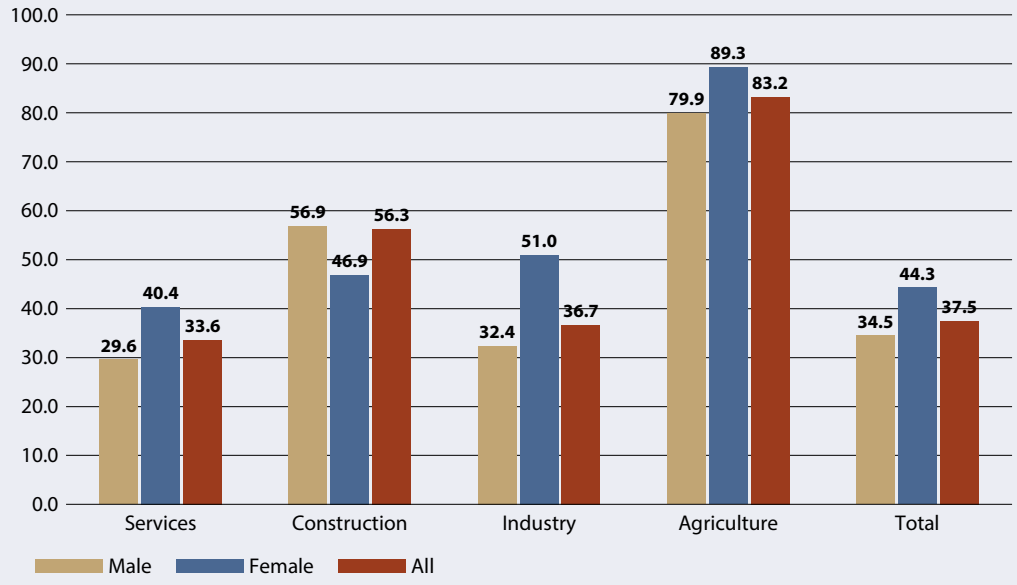
Source: SSI and calculations by the country resource person.

Indicator 2: Proportion of Workers Earning below the Minimum Wage

The calculation of this indicator closely mirrors that of the productive employment index. This indicator is calculated using the HLFS data and minimum wage amount in Turkiye, as determined annually by the Ministry of Labour and Social Security, Social Security Institution (SSI) [5]. The calculation specifically includes employees receiving wages or salary. Figure 9 shows the percentages of employees earning below the minimum wage.

FIGURE 9

EMPLOYEES EARNING BELOW THE MINIMUM WAGE ACROSS SECTORS AND GENDER IN 2021 (IN %).



Source: Turkstat and calculations by the country resource person.

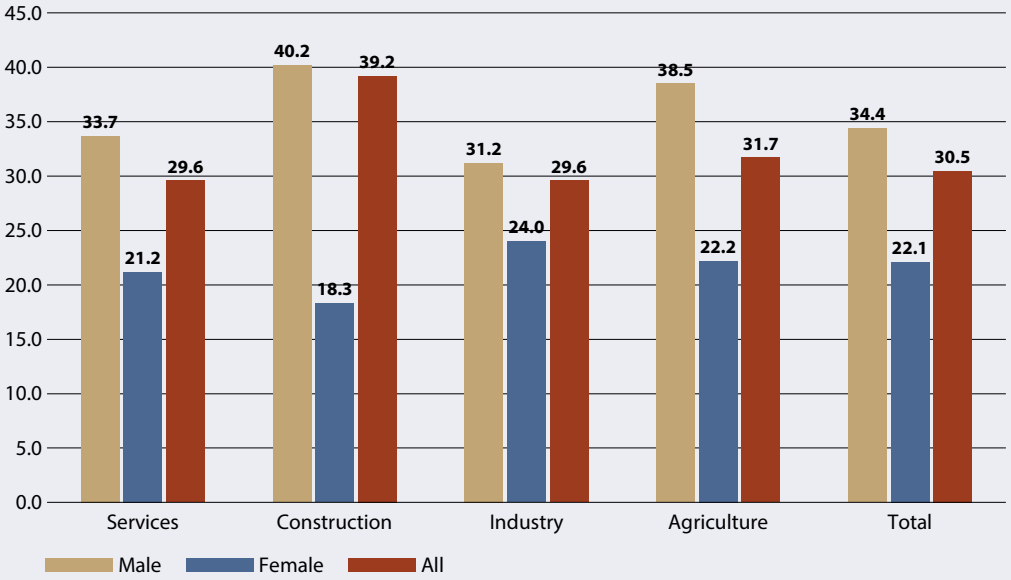
A significant majority of workers in agriculture were earning less than the minimum wage, and a considerable portion in construction also had a high percentage of workers below the minimum wage. The overall percentage was 37.5%. This rate should also have been lower since it affects the quality of work negatively. Eventually, the percentage of workers earning minimum wage or above minimum wage, which was 62.5%, had to be used.

Indicator 3: Percentage of Individuals Working more than 48 Hours per Week

This indicator was calculated using the HLFS data. Figure 10 shows the percentages of people working more than 48 hours per week. Notably, males in the construction sector had the highest percentage, standing at 40.2%. It was closely followed by males in the agriculture sector at 38.5%.

FIGURE 10

PERCENTAGE OF INDIVIDUALS WORKING OVER 48 HOURS PER WEEK BY SECTOR AND GENDER IN 2021.



Source: Turkstat and calculations by the country resource person.

The overall percentage for individuals working more than 48 hours per week was 30.5%. Conversely, 69.5% of workers were engaged in employment for 48 hours or less per week. This later percentage should have been lower, as it affects the quality of the employment index negatively.

Indicator 4: The Share of Informal Workers

There is no common definition accepted by the researchers about the concept of the informal economy, but it can be defined as income-generating economic activities that are used to obtain the gross national income accounts that cannot be estimated according to the known statistical methods and are not recorded for avoiding taxes and other laws [6].

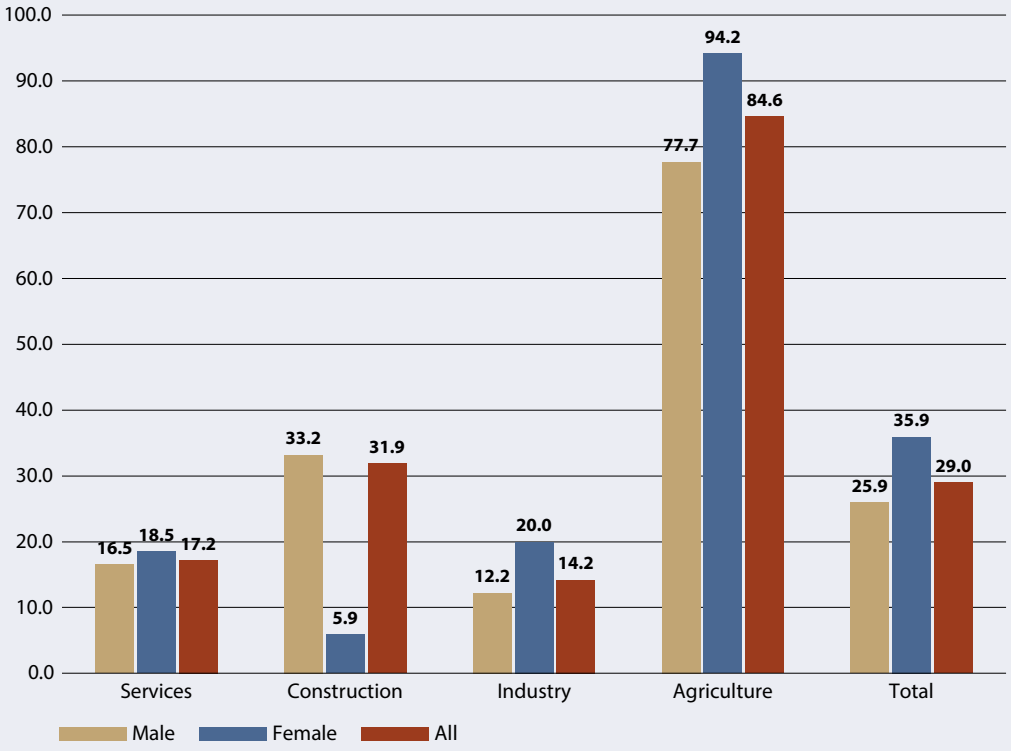
For an activity to be classified as unregistered, it is necessary that the records of the economic activities that have taken place are not kept or kept incomplete, and that it is outside the control of the public administration. Due to the difficulties in the supervision and control of informal activities, they are more common in the agriculture sector.

Informality in the labor market has increased due to the influx of refugees into Turkiye. As of 2021, Turkiye is home to more than 4 million refugees, making it the largest host of refugees in the world. The majority, close to 3.7 million, are from Syria, while the others are mostly from Afghanistan, Iran, and Iraq.

To calculate this indicator, HLFS data was used, which indicates that individuals who are employed but not registered with the SSI must be counted as informal. Figure 11 shows the share of informal workers. As shown in the figure, the agriculture sector exhibits alarmingly high informality rates, reaching 84.6%, notably peaking at 94.2% for female workers.

FIGURE 11

PERCENTAGE OF INFORMAL WORKERS BY SECTOR AND GENDER IN 2021.



Source: Turkstat and calculations by the country resource person.

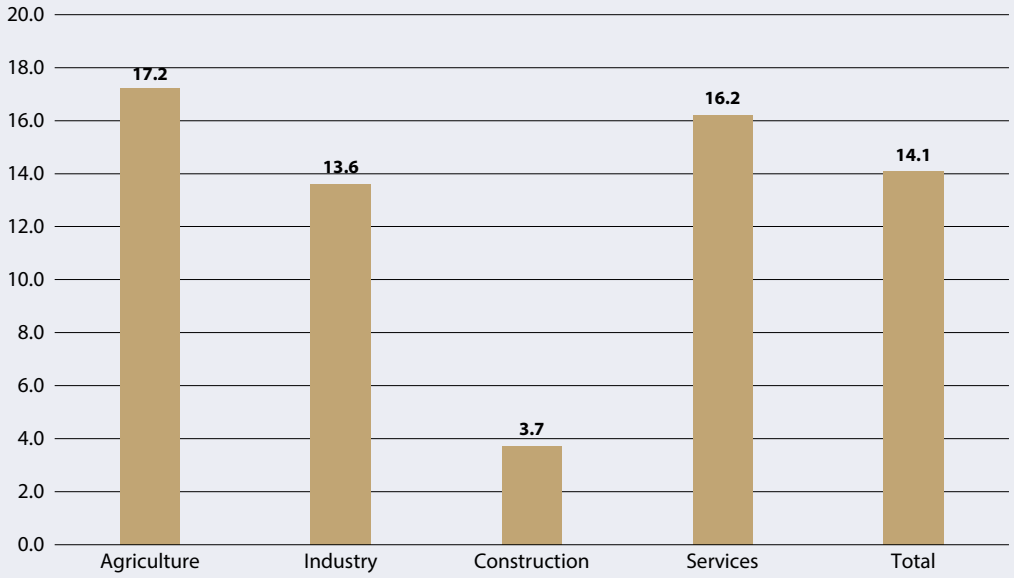
The overall informality rate stands at 29%. Ideally, this rate should have been lower since the indicator adversely affects the quality of employment. Consequently, the share of formal workers is 71%.

Indicator 5: Trade Union Density Rate

The trade union density rate refers to the number of trade union members who are employees, expressed as a percentage of the total number of employees in a given industry or country. To calculate the trade union density rate Labour Statistics data was used, encompassing 15,027,910 workers. Figure 12 depicts the trade union density across various broad sectors. Agriculture boasts the highest density at 17.2%, closely followed by services at 16.2%, and industry at 13.6%. Conversely, the construction sector exhibits the lowest trade union density at 3.7%.

FIGURE 12

DENSITY OF TRADE UNION BY SECTOR IN 2021 (IN %).

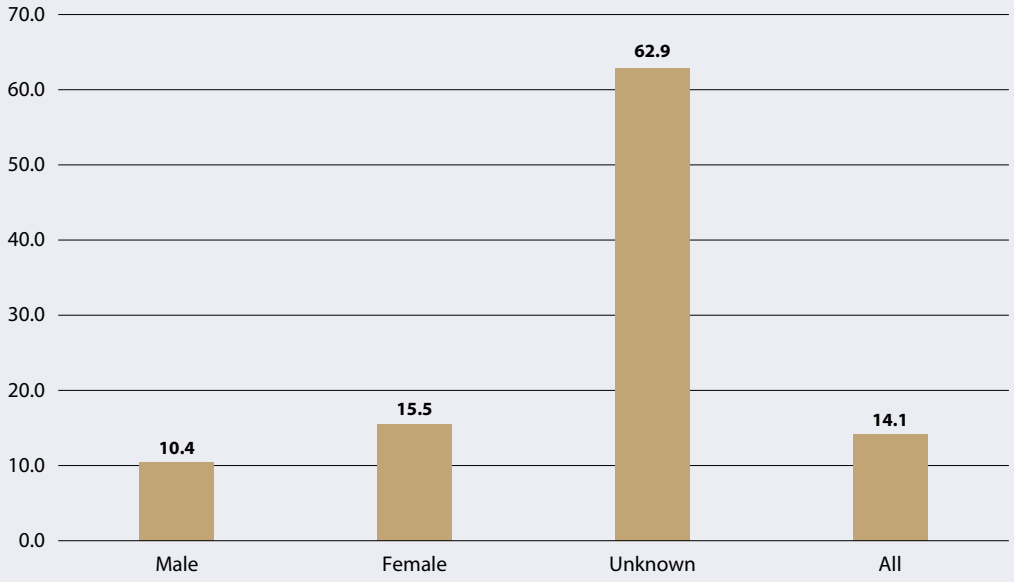


Source: SSI and calculations by the country resource person.

Figure 13 depicts trade union density according to gender. The overall density was 14.1% as reflected in Figures 12 and 13.

FIGURE 13

TRADE UNION DENSITY BASED ON GENDER (IN %).



Source: SSI and calculations by the country resource person.

The increase in the trade union density has a positive impact on the quality of employment. Therefore, the value for the indicator was taken as 14.1%.

Indicator 6: Share of Employed People in High-Skilled Occupations

According to the ILO, there are four levels of occupation skills [7]. High-skilled occupations are considered as Skill Level 4 and it uses ISCO 08 classification to define Skill Level 4.

1. Managers (Skill Level 3 + Skill Level 4).
2. Professionals (Skill Level 4).
3. Armed Forces Occupations (Skill Level 1 + Skill Level 2 + Skill Level 4).

High-skilled managers are:

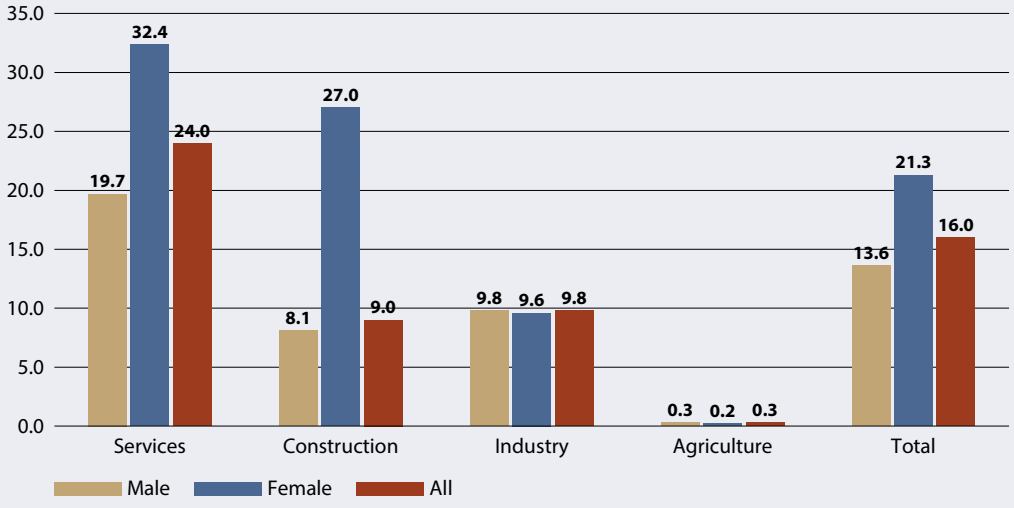
1. Chief Executives, Senior Officials, and Legislators.
2. Administrative and Commercial Managers.
3. Production and Specialized Services Managers.
4. Managers of hospitality, retail, and other services are considered Skill Level 3 so they are out of scope.

Commissioned Armed Forces Officers are also considered as Skill Level 4.

For the calculation of this indicator, HLFS data was used. Figure 14 shows the share of employed people in highly skilled occupations. The highest share (32.4%) belonged to females in the services sector.

FIGURE 14

PERCENTAGE OF THOSE EMPLOYED IN HIGH-SKILLED OCCUPATIONS BY SECTOR AND GENDER IN 2021.



Source: Turkstat and calculations by the country resource person.

The overall share of employed people in high skilled occupations was 16%. The share should have been higher since the indicator impacts the quality of employment positively.

Indicator 7: Share of Employed People Satisfied with their Work

In the calculation of this indicator, a few assumptions were made since there was no quantitative or qualitative data (categorized by broad sectors) available, directly talking about the satisfaction of work.

Assumption 1: Employee for wage or salary.

Assumption 2: Earning minimum wage or above.

Assumption 3: Not working more than 48 hours in a week.

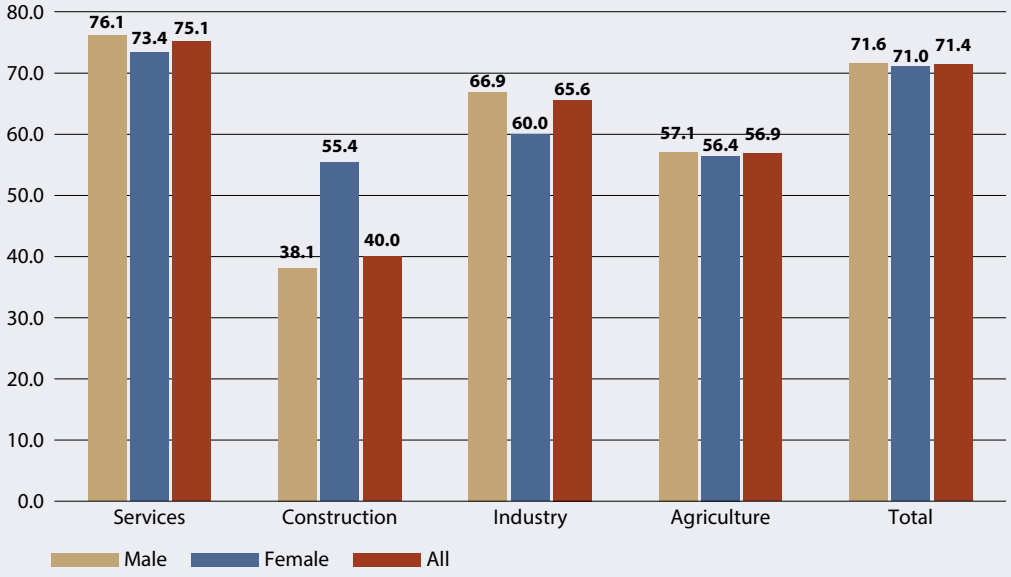
Assumption 4: Registered to SSI (not informal).

Assumption 5: Has been working at the same place for three or more than three years and still working there.

For the calculation of this indicator, HLFS data was used. Figure 15 shows the share of employed people who fit the five assumptions above. The lowest satisfaction level at 38.1% was observed in males working in the construction sector. At 76.1%, males in the services sector were the most satisfied group.

FIGURE 15

PERCENTAGE OF EMPLOYEES SATISFIED WITH WORK BY SECTOR AND GENDER IN 2021.



Source: Turkstat and calculations by the country resource person.

This indicator was calculated using the total share of employees satisfied at work, which stood at 71.4%. This indicator impacts the quality of employment positively.

The indexes calculated for Turkiye are as follows:

Productive Employment Index: 92.1% → 0.921
Quality of Employment Index: 57.8% → 0.578

Relevant Policies

Turkiye has ratified 55 conventions of the ILO. C187 Promotional Framework for Occupational Safety and Health Convention, C182 Worst Forms of Child Labour Convention, C155 Occupational Safety and Health Convention, and C144 Tripartite Consultation Convention are just a few examples of those conventions.

Workplace Safety and Social Protection

Occupational Safety and Health Law (No. 6331, 2012) (OSH Law) aims at ensuring and developing better health and security conditions in workplaces. The OSH Law applies to all jobs and workplaces in both the public and private sector, regardless of their field of activities or number of workers, and covers all employees, interns, employers, and their representatives. The ultimate aim of the OSH Law is to prevent occupational diseases and accidents, and other physical and mental health problems of the workers that are related to work and the work environment.

The other relevant laws are Labour Law (No.4857, 2003), Law of Obligations (No.6098, 2011), and Social Insurance and Universal Health Insurance Law (No.5510,2006).

The Labour Law regulates the minimum age of work as 15 years and the weekly working period as 45 hours. The activities included in the working period, rest periods, night work, underground work, and working periods during maternity are described. It defines maternity leave as 16 weeks; 8 weeks before and after delivery, and three hours daily leave for breastfeeding until the baby is six months old, then one and half hours until the baby is one year of age.

In the sense of the Law of Obligations, employers have the responsibility to protect workers' health by providing a safe working environment. In case of any harm caused to the health of workers as a result of work, employers should compensate the workers' losses. On the other hand, workers should obey the rules and regulations of safe work.

Social Insurance and Universal Health Insurance Law applies to the workers registered with the SSI, i.e. those with insurance premiums paid. People working in industrial establishments and services sectors, civil servants, agricultural workers, and self-employed people paying insurance premiums are covered under this.

Informality

The Government of Turkiye has been actively trying to reduce informality through various means. Informal labor and informality in the economy have decreased in the last decade. The government has developed various anti-informality strategies that include actions for various institutions that have to be implemented and enforced.

Launched by the Ministry of Labour and Social Security in 2005, the first campaign was a comprehensive action plan (Struggle against Informal Employment). A new strategy was proposed in 2009, called the 'Struggle against the Informal Economy Action Plan', and another in 2011,

which was used till 2013. These were led by the Revenue Administration with the core participation of other government institutions. Each strategy included several actions aimed at eliminating informal competition and informalization of the economy more broadly.

In line with the targets set in the Tenth Development Plan, 'Reducing Informal Economy Program Action Plan (2015–17)', which is one of the 'Priority Transformation Programs', the government prepared for various purposes to achieve the goal of healthy and sustainable development, aiming to reduce the informal economy (2015–17).

Later, the 'Reducing Informal Economy Program' of the Presidential 2019 Annual Program, under the responsibility of the Revenue Administration, was envisaged as an action plan to combat the informal economy with broad participation, was prepared and put into practice by evaluating the contributions and suggestions of the relevant public institutions, organizations, and non-governmental organizations.

Lastly, a Strategy Action Plan for Combating Informal Economy (2019–21) has been prepared. The 39 actions included in the Action Plan consist of the following five key components.

1. Raising volunteer compliance level.
2. Making audit capacity stronger.
3. Reviewing legislation and making arrangements.
4. Improving inter-institutional data sharing.
5. Raising awareness for all sections of the society.

Despite a substantial decrease in the informality rate, the informal sector remains a large source of jobs for workers. Women are most likely to be employed in informal jobs. The workers in the agriculture sector are generally hired informally, impeding efforts to reduce informality. Informal workers, including unpaid family workers, tend to be female, older workers, and the less educated, and work in agriculture, construction, or low and medium technology services. The regulation of the minimum wage is also contributing to the reluctance to job creation by formal firms.

Occupational Skills

Turkish Employment Agency (ISKUR) is giving services of employment services (domestic placement), active labor market policies (vocational training courses, on-the-job training programs, and public work programs), job and vocational counseling services, and passive labor market policies.

Conclusion and Recommendations

The most important economic and social problem of Turkiye is the high rate of unemployment [8]. From this point of view, job creation is a significant issue in the Turkish economy. When the level and composition of unemployment are considered while implementing the policies in the labor market, creating jobs and decreasing the unemployment rate are essential. To create jobs and decrease the unemployment rate active labor market policies, a human resources development

approach, enhancing the rate of women participation in the labor force and the employment rate, and combating the undeclared work policies can be followed. In this framework, some of the recommended actions are listed as follows [9].

Growth and Productivity

Strengthen the investment climate and support entrepreneurialism, strengthen the efficiency of fiscal support for better targeting of support to firms, increase the measure of worker support, and support firms for adopting technology.

Formalization

Reductions in excessive employment costs, an increase in the capacity for monitoring compliance with labor regulations, an increase in the flexibility of types of formal employment, easier business entry and exit procedures, and the promotion of the positive perception of formality, will strengthen informality prevention measures.

Job Creation

Employment support programs should be revised to support the disadvantaged workers better, improving employment-related services, addressing occupations and skills requirements, matching jobseekers to jobs based on skills not occupations, reviewing financial support programs to firms to increase their impact on productivity, and strengthening the incentives to support high-growth firms and sectors.

Labor Force Participation

The opportunities for affordable childcare should be enhanced, policies to allow flexible working hours and parental benefits need to be improved, employment support programs to support disadvantaged workers in productive firms have to be revived, and the effectiveness of placing disadvantaged groups in sustainable jobs needs to be increased.

Workforce Skills and Talent

The vocational and lifelong learning systems need to be modernized, the skills of existing workers need to be improved, upskilling of the workforce should be promoted, and the establishment of sector skills councils should be facilitated to focus on skills development.

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VIETNAM

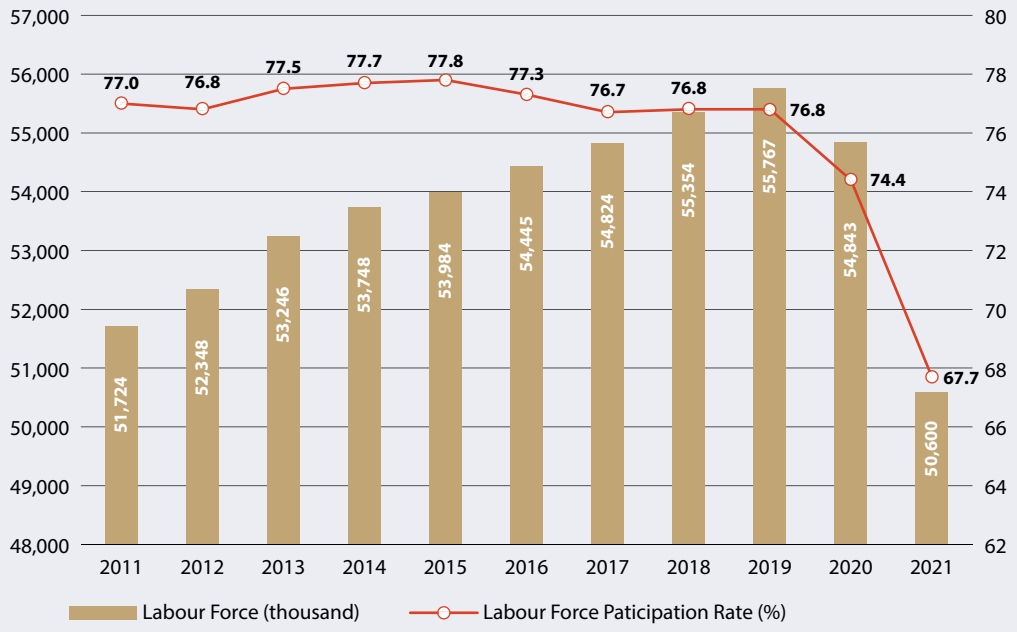
Introduction

With a population of close to 100 million, Vietnam stands as one of Asia's most populous nations. As of 2021, the average age of its citizens was projected to be 32.50, indicating a steady increase in the elderly population over the past few years [1]. Vietnam's labor force has played a pivotal role contributing significantly to the country's growing GDP.

The total number of employed Vietnamese citizens has been steadily rising in recent years, driven by economic development and its influence on the availability of employment. However, this growth experienced a sharp decline in 2020 due to the impact of the COVID-19 epidemic. Despite this setback, the Government of Vietnam has invested in its human capital by increasing its annual spending on education and training. Consequently, the productivity of the country's labor force has seen a remarkable increase in recent years.

FIGURE 1

DYNAMICS OF THE LABOR FORCE IN VIETNAM FROM 2011 TO 2021.



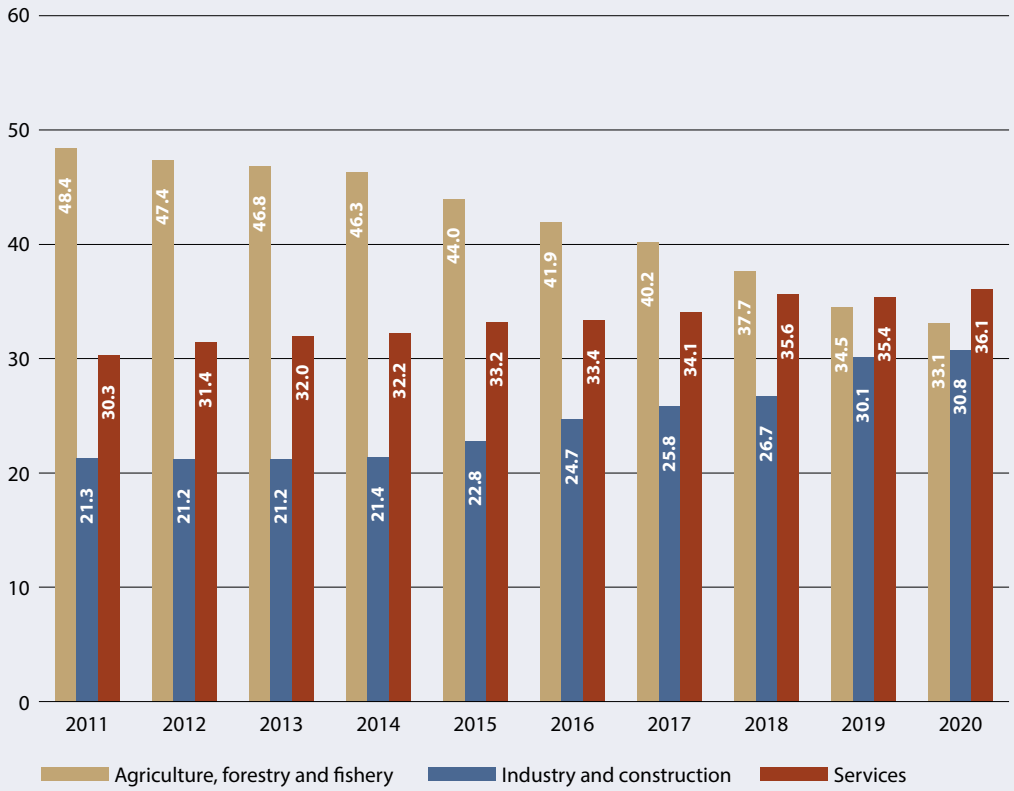
Source: Compiled from various sources as listed in [2–8].

In the past, agriculture has played a significant role in Vietnam's economy, serving as the primary source of employment for the country over the last decade. However, as the economy became more reliant on the industrial and service sectors, the percentage of employment in these sectors has grown, but at the expense of the agricultural sector. Vietnam is rapidly evolving into a major industrial center because of its low-cost workforce, with the manufacturing sector employing more

people than any other sector of the economy, second only to the agricultural sector. Furthermore, the average monthly wage for a worker in Vietnam's industrial sector was higher than that of an agricultural laborer. The growth in the industrial and service sectors in recent years has led to this shift in employment patterns, offering more opportunities at higher wages.

FIGURE 2

SECTOR-WISE SHARE OF EMPLOYMENT IN VIETNAM (IN %).



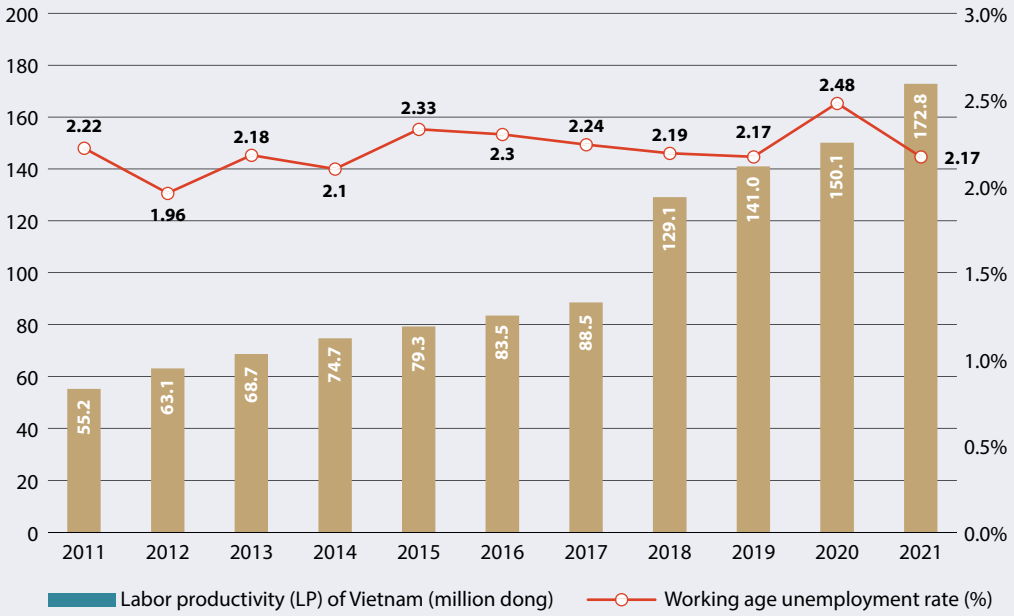
Source: Compiled from various sources as listed in [2–8].

Before the outbreak of COVID-19, Vietnam boasted a comparatively low unemployment rate of 2%. However, this rate saw a notable increase in 2020, immediately following the outbreak. According to a study conducted in October 2021, more than 40% of Vietnamese respondents experienced reduced wages or job losses due to the pandemic. During this period, numerous businesses were forced to lay off their staff. This was especially prevalent in micro and small-sized domestic private firms. The epidemic and the subsequent lockdowns made working from home necessary for many individuals. Post-COVID-19, this new working arrangement was expected to become more prevalent, necessitating enhanced digital preparedness from both companies and their workers.

With ongoing innovation and economic development, Vietnam has witnessed a significant improvement in its labor productivity over the years. This progress has gradually led to narrowing the gap between Vietnam's labor productivity and that of other ASEAN countries. Despite this positive trend, labor productivity in Vietnam remains relatively low compared to other countries in the region. Moreover, the absolute gap continues to increase over time.

FIGURE 3

LABOR PRODUCTIVITY (IN VND MILLION) AND UNEMPLOYMENT RATE IN VIETNAM.



Source: Compiled from various sources listed in [2–8].

Employment Creation in Vietnam

The challenge of employment creation is a global issue that impacts numerous nations. It represents a fundamental societal need and holds great importance for all individuals of working age.

Generating employment opportunities is essential for the socioeconomic growth of any nation. Without adequate job creation, there is a risk of rising unemployment and underemployment rates, leading to increased poverty, social instability, and sluggish economic progress.

To maintain a secure and steady social development, job creation has become a vital social policy, not only in Vietnam but also in numerous other nations worldwide. This is particularly important as population and labor growth rates continue to rise annually. Vietnam's macroeconomic objectives include the creation of additional jobs and the reduction of unemployment.

From 2019 through 2022, it is projected that the formal business sector will add over 9.6% more jobs, per year. Vietnam has to keep growing at this pace for the next five years so that it can bring all of its informal workers into the official economy. Specifically, the private sector and the foreign-invested sector are Vietnam's primary drivers for formal employment development. Vietnam will have a serious issue in the coming years when the pace of employment creation in the formal sector slows down dramatically.

Private businesses in Vietnam have shown a high level of initiative by significantly expanding their operations, workforce, and capital stock. Even though the economy has been in a downturn since 2019, the number of NSEs actively conducting business has increased dramatically. This mostly includes small firms, such as collective enterprises, partnerships, private enterprises, limited companies, joint stock companies having state capital under 50%, and joint stock companies

without state capital. The number of non-executive directors had increased tenfold by 2019 as compared to 2000. In 2021, these businesses accounted for more than 59% of the workforce employed by all businesses, which is more than twice as high as it was in the year 2000. The percentage of capital held by the NSEs (as a percentage of the total capital held by companies of all sorts) rose from 35% in 2015 to 50% in 2019 and was projected to fall to 48.6% in 2020 [2–8].

During the period of decelerating economic growth in 2020 and 2021, the private sector's contribution to employment creation fell from 61.33% to 59.27%. Fortunately, as the foreign-invested sector is immune to local issues, such as high interest rates, a collapsing banking sector, etc., it can expand robustly to compensate for the employment losses in the private sector.

To formalize employment in Vietnam over the next 10 years, it is evident that securing additional funds for foreign investment and boosting investment in the private sector are crucial. Initiatives such as joining the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), negotiating a free trade agreement between Vietnam and the European Union, and signing a free trade agreement between the Customs Union of Russia, Belarus, and Kazakhstan, are pivotal steps that will drive Vietnam's economy in this direction.

Large enterprises continue to play an important role in expanding formal employment, accounting for 54.56% of all positions in the formal enterprise sector. The industry exhibits an average yearly employment growth rate of 6.83%. These businesses serve as significant generators of net employment throughout Vietnam's growth trajectory. Moreover, the pace of job creation in micro and SME firms is considerably higher, contributing to an increased share in overall employment.

Approximately, two-thirds of occupations in Vietnam are either in agricultural roles or non-agricultural home businesses. Agriculture stands as the primary occupation for nearly 20 million employees, representing 39% of the approximately 50 million workforce. Additionally, ten million individuals (20%) describe their non-farm home business as their principal source of income.

Among the remaining 20.6 million wage earners, around 8.4 million or 17% of all employees lack formal contracts [2–8]. They mostly work in the construction, agricultural, and manufacturing sectors, each comprising more than 20% of this category. Less than 15% of all employees have contract-based wage employment in the private sector and less than 5% of the total employment is attributed to foreign-owned firms (the FDI sector), where most workers have formal wage contracts despite the sector's expanding market share. It has developed swiftly from a humble beginning, yet it remains small. This pattern suggests that the bulk of employment in the export business is provided by domestic companies, where informal remuneration without a formal contract is common.

Measurement and Analysis of Productive and Quality of Employment

The primary sources for this analysis were the 2011–21 Vietnam Enterprise Census (VEC), the 2011–21 Vietnam Labor Force Survey (LFS), and the 2011–21 Vietnam Household Living Standard Survey (VHLSS). However, some aggregate data from the Statistical Yearbooks of different years was all that was available for the informal sector.

Productive Employment

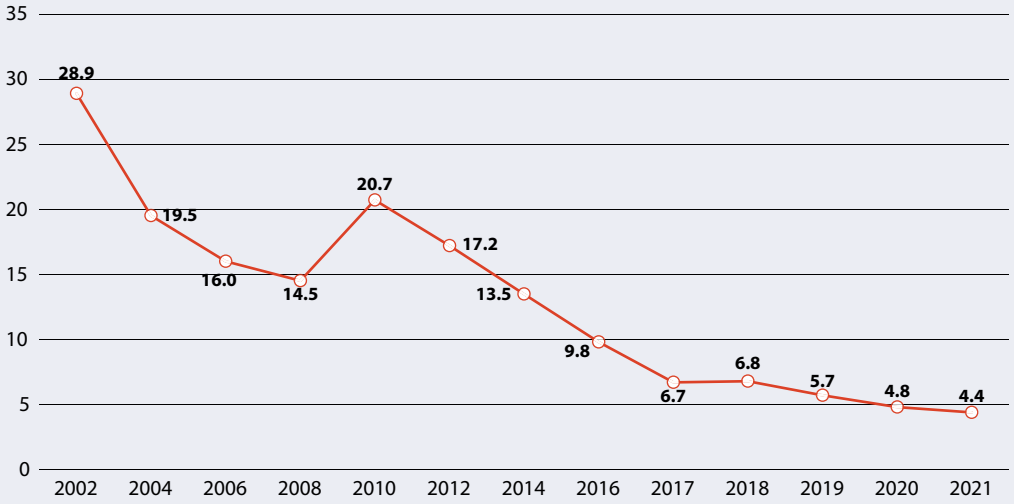
The ILO considers productive employment as employment yielding sufficient returns to labor to permit a worker and their dependents a level of consumption above the poverty line [10]. The

indicator of productive employment provides information about the growth in earnings, relative to a baseline rather than the absolute dollar amount.

Poverty in Vietnam is measured using a variety of approaches. USD1.25-a-day poverty headcount (2010) and USD1.90-a-day poverty headcount (2010) shows the poverty rates based on the international poverty line of USD1.25-a-day (PPP) and USD1.90-a-day (PPP), using the 2010 VHLSS [11]. International poverty lines were converted into the local currency using the PPP conversion factor and the consumer price index provided by the GSO.

FIGURE 4

POVERTY HEADCOUNT RATIO AT NATIONAL POVERTY LINES (% OF POPULATION).



Source: Poverty Data: Viet Nam. ADB; 2022. https://www.adb.org/countries/viet-nam/poverty.

Vietnam is a success story, that is, it has maintained a strong and extremely inclusive economic growth over the last two decades, making productive employment and decent work a primary policy target of the nation, at all levels of development. Less than 10% of the population lives below the poverty line, be it the national poverty line or the lower middle-income international poverty line (both assessed at the 2011 international PPP of USD1.90, per day, per person). According to the ADB, the proportion of the employed population below the PPP of USD1.90 a day in Vietnam was 1.2% in 2021 [12].

Labor-intensive development that has generated many employment opportunities has been significantly responsible for the country's achievement in pulling its citizens out of poverty.

Step-by-step Methodology

1. Extract the information on the working-age population, labor force, and employed and unemployed people, for the baseline year (the last year for which all the required data is available) disaggregated by gender.

    - Calculate the labor force participation rate and activity rate.

    - Calculate the unemployment rate.

2. Extract information on the headcount poverty rate and the number of working poor, to calculate or extract the working poverty rate at the baseline year. The number of working poor is either based on the micro-data from the household income expenditure or socio-economic surveys in the baseline year (working poor = employed × working poverty rate).

3. Estimate the number of productively employed, excluding the non-poor unemployed, and the deficit of productive employment as presented in Table 1.

TABLE 1

LABOR FORCE BREAKUP IN VIETNAM (2019–21).

	2019	2020	2021
(In '000)			
Working age population	73.180	74.374	74.741
Labor force	55.767	54.843	50.600
Unemployed	1.210	1.360	1.619
Employed	54.659	53.610	49.100
• Working poor	3.116	2.573	2.160
• Productively employed	51.543	51.037	46.940
(In %)			
Labor force participation rate	76.2	73.7	67.7
Unemployment rate	2.17	2.48	3.2
Headcount Poverty rate (based on national poverty line)	5.7	4.8	4.4
Productive employment rate	**92.4**	**93**	**92.7**

Note: The productive employment rate represents the share of the productively employed in the labor force.
Sources: Based on the GSO and data from the Labour Force Survey of 2019, 2020, and 2021 [7–9.]

Today, people in developing nations understand the critical role that gainful work plays in raising the average incomes and decreasing poverty. Gainful work, together with other forms of social protection, is one of the most effective means by which poverty can be mitigated.

Quality of Employment

The quality of employment is an essential concern for society, policymakers, and scholars. Employment is essential for the social and economic growth of the employees and gives them a sense of identity, but it may also pose threats to their health and well-being. The dynamic growth of labor markets might be accompanied by concerns about employment quality, which, therefore, needs a statistical assessment.

The quality of employment is seen as a multifaceted notion comprised of several components that connect to diverse human needs. To include all relevant factors, the framework specifies seven dimensions and twelve sub-dimensions of quality of employment:

1. **Safety and ethics of employment**
   a. Safety at work
   b. Child labor and forced labor
   c. Fair treatment in employment

2. **Income and benefits from employment**
   a. Income
   b. Non-wage pecuniary benefits

3. **Working hours and work-life balance**
   a. Working hours
   b. Working time arrangements
   c. Work-life balance

4. **4. Security of employment and social protection**
   a. Security of employment
   b. Social protection

5. **5. Social dialogue**

6. **6. Skills development and training**

7. **7. Employment-related relationships and work motivation**
   a. Employment-related relationships
   b. Work motivation

For each dimension and sub-dimension, the framework presents several statistical indicators that may be produced.

FIGURE 5

DIMENSIONS FOR EVALUATING QUALITY OF EMPLOYMENT.

To analyze the level of quality of the employment index in Vietnam, the following dimensions and sub-dimensions were used.

Dimension 1: Safety and Ethics of Employment (Safety at Work)

Based on the report on the situation of Occupational Safety in 2021 [13], the data can be tracked in Table 2.

TABLE 2

OCCUPATIONAL SAFETY OVERVIEW.

No.		2020	2021	Increase (+)/ Decrease (–)
1.	Cases of occupational accidents	7,473	5,797	–1,676 (–22,43%)
2.	Injuries from occupational accidents	7,649	5,910	–1,739 (–22,73%)
3.	Cases of Fatal occupational accidents	629	574	–55 (–8.74%)
4.	People died of occupational accidents	661	602	–59 (–8.93%)
5.	Employed person	54,659,000	53,610,000	–1,0490,000 (–1.92%)
6.	**Rate of occupational injuries per 100,000 employed people = (2)/(5)*100,000**	**14**	**11**	**–3**

Source: Labour Force Survey of 2020 and 2021 [8–9.]

Normalization: The indicator from the latest year is used for normalization.

$$The\ percentage\ of\ workers\ uninjured\ = 100 - \frac{Injuries}{Employed\ persons} \times 100 = 100 - \frac{5{,}910}{53{,}610{,}000} \times 100 = \mathbf{99.99}\ (\%)\ \boldsymbol{or}\ \mathbf{0.9999}$$

Dimension 2: Income and Benefits from Employment (Income from Employment)

TABLE 3

AVERAGE MONTHLY EARNINGS OF WAGE WORKERS BY GENDER.

Reference Year	Average Monthly Earnings (in VND '000)		
	Total	Male	Female
2011	3,105	3,277	2,848
2012	3,757	3,923	3,515
2013	4,120	4,287	3,884
2014	4,473	4,645	4,235
2015	4,716	4,925	4,430
2016	5,066	5,304	4,739
2017	5,451	5,715	5,094
2018	5,867	6,183	5,446

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Reference Year	Average Monthly Earnings (in VND '000)		
	Total	Male	Female
2019	6,697	7,067	6,203
2020	6,597	6,921	6,170
2021	6,628	7,054	6,098

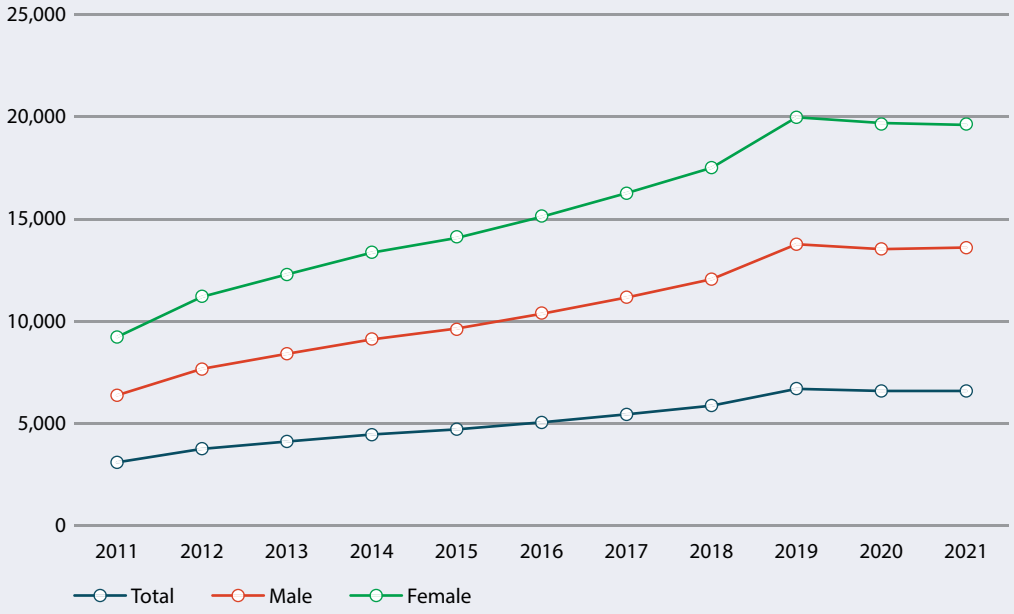
Source: Labour Force Survey data from 2011 to 2021 [2–9].

The variance in the average monthly wages of wage earners by gender is shown in Table 3. In all referenced years, the average monthly job earnings of males were greater than those of women.

Research shows that the continuous increase in labor earnings in recent years has contributed to a decrease of more than 90% in poverty since 2010, with the growth of the wage income accounting for more than half of the country's poverty reduction. Due to this achievement, a substantial consumer class has arisen. More than 70% of the population is currently categorized as economically secure, with sufficient revenues to cover daily expenses, sufficient reserves to withstand income shocks, and sufficient discretionary money. Their objectives have shifted from working for food to entering the global middle class. Obtaining these goals involves not just the creation of any employment, but the creation of higher-quality ones.

FIGURE 6

AVERAGE MONTHLY EARNINGS OF WAGE WORKERS BY GENDER.



Source: Labour Force Survey data from 2011 to 2021 [2–9].

The calculation of the percentage of workers earning less than the minimum wage is quite similar to that of the productive employment index. This rate is comparable to the rate of the number of working poor to employed people.

Normalization: the indicator in the latest year will be used to be normalized.

$$\text{The percentage of workers earning higher than or equal to the minimum wage} = 100 - \frac{\text{Working poor}}{\text{Employed persons}} \times 100$$

$$= 100 - \frac{2.160}{49.100} \times 100 = \mathbf{95.6}\ (\%)\ \boldsymbol{or}\ \mathbf{0.956}$$

Dimension 3: Working Time and Work-Life Balance (Working Hours)

There is a restriction on the maximum number of regular working hours for employees in Vietnam, and no parties to the employment relationship (employees, unions, or employers) can waive this restriction individually or with collective agreement. The regular working hours cannot exceed.

- Eight hours per day, 48 hours per week, for employees working under normal working conditions.
- Six hours per day, 36 hours per week, for employees working in extremely heavy, hazardous, or toxic working conditions.

However, some flexibility is permitted to the rules outlined above, and working hours can be set hourly, daily, or weekly, depending on the employer's needs. For example, in cases where an employer sets weekly hours, employees can work up to ten hours per day, provided that the total weekly working hours do not exceed 48 hours.

Employers are generally permitted to grant overtime, though this is capped at 40 hours of overtime per month and 200 hours of overtime per year, for each employee. Under special circumstances, prescribed by the government, employers can extend the annual overtime cap to 300 hours, after notifying the Department of Labour, Invalids, and Social Affairs, at least 15 days in advance of exceeding the cap.

The employees working overtime are entitled to overtime pay as follows:

- At least one-and-a-half times the normal hourly rate of pay for extra hours worked on regular working days.
- At least two times the normal hourly rate for extra hours worked during the weekend.
- At least three times the normal hourly rate for extra hours worked during public holidays and paid annual leave days.

Employees who work at night are also entitled to an additional 30% of their regular salary for any work completed at night.

To estimate the number of workers working more than 48 hours a week, the distribution of workers by their working hours per week was examined.

TABLE 4

INDIVIDUALS WORKING OVER 48 HOURS PER WEEK IN 2019–20 (IN %).

Residence/Socio-Economic Region	2019	2020
Entire country	35.6	30.8
Male	39.8	33.9
Female	30.7	27.4
Urban	32.7	29.5
Rural	36.7	31.5
Socio-economic Region		
Northern midlands and mountain areas	38.2	32.6
Red River delta	38.7	35.9
Northern Central and Central coastal areas	40.7	25
Central Highlands	26.3	26.6
South East	27.7	26.5
Mekong River delta	33	25.6

Source: Labour Force Survey data of 2019 and 2020 [7–8].

The average number of hours worked each week varies by gender, location (city vs. country), and economic status, as seen in Table 4. In 2019, around 35.6% worked more than 48 hours per week, and in 2020, the share was around 30.8%. When the workers of both genders were compared, a larger percentage of men put in more than 48 hours per week as compared to women. Out of the six socioeconomic regions analyzed, the percentage of employees putting in more than 48 hours a week was lowest in the Central Highland in 2019 and the Northern Central and Central Coastal areas in 2020.

Normalization: In total, the percentage of workers working over 48 hours per week was 30.8% or 0.308. As a result, the relevant indicator used was the percentage of employees who work up to 48 hours per week. Thus, the normalized value would be (1-0.308) = 0.692.

Dimension 4: Security of Employment and Social Protection (Security of Employment)

TABLE 5

PROPORTION OF WAGE WORKERS BY TYPE OF LABOR CONTRACT IN 2019.

Residence/Socio-Economic Region	Percentage Distribution (in %)		
	With Labor Contract	Verbal Agreement	Without Labor Contract
Entire country	**63.1**	**30.4**	**6.5**
Male	54.1	38.0	7.8
Female	75.2	20.2	4.6
Urban	75.5	19.0	5.4
Rural	54.4	38.4	7.2

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Residence/Socio-Economic Region	Percentage Distribution (in %)		
	With Labor Contract	Verbal Agreement	Without Labor Contract
Socio-economic Region			
Northern midlands and mountain areas	59.8	32.3	7.9
Red River delta	72.4	25.1	2.5
Northern Central and Central coastal areas	52.4	39.5	8.1
Central Highlands	47.1	41.1	11.8
South East	75.6	18.5	5.9
Mekong River delta	45.4	44.4	10.2
Age group			
15–24	61.4	31.1	7.5
25–54	65.0	29.0	6.0
55–59	46.9	44.6	8.4
60 and over	37.1	51.6	11.3

Source: Labour Force Survey data, 2019 [7].

The percentage of employees without labor contracts was lower among women (4.6%) than among males (7.8%) and was greater in rural areas (7.2%) as compared to urban areas (5.2%). This share was also greatest among older workers (11.3%). The Central Highland area had the highest percentage (11.8%) and the Mekong River Delta region had the lowest (10%).

The percentage of males with contractual employment was lower than that of women, it was greater in urban areas than in rural regions, and it was lowest amongst those aged 60 and above (37.1%) and the most among those aged 25–54 (65%).

TABLE 6

PROPORTION OF WAGE WORKERS BY TYPES OF LABOR CONTRACT IN 2020,

Residence/Socio-Economic Region	Percentage Distribution (in %)		
	With Labor Contract	Verbal Agreement	Without Labor Contract
Entire country	**62.3**	**30.9**	**6.8**
Male	53.0	38.9	8.1
Female	74.4	20.4	5.2
Urban	73.8	19.8	6.4
Rural	54.0	38.9	7.1
Socio-economic Region			
Northern midlands and mountain areas	61.3	330.0	8.7

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Residence/Socio-Economic Region	Percentage Distribution (in %)		
	With Labor Contract	Verbal Agreement	Without Labor Contract
Red River delta	72.0	24.5	3.5
Northern Central and Central coastal areas	52.5	40.0	7.5
Central Highlands	44.9	45.5	9.6
South East	73.8	19.4	6.8
Mekong River delta	44.7	45.7	9.6
Age group			
15–24	59.8	32.5	7.7
25–54	64.5	29.2	6.3
55–59	43.1	46.7	10.2
60 and over	35.4	51.2	13.4

Source: Labour Force Survey data, 2020 [8].

The percentage of employees without labor contracts was lower among women (5.2%) as compared to men (8.1%) and higher in rural regions (7.1%) than in urban areas (6.4%). This proportion was greatest in the Central Highland (9.6%) and lowest in the Red River Delta (3.5%). The proportion of employed people having a labor contract was significantly lower among males (53.1%) than among women (74.4%), and it was greater in urban regions (73.8%) than in rural areas (54.0%).

The proportion of employees having a labor contract was lowest among those aged 60 and older (35.4%), and greatest among those aged 25–54 (64.5%). The percentage of employed individuals with a labor contract was highest in the Southeast (73.8%) and lowest in the Mekong River Delta (44.7%).

Normalization: This data is already normalized

In total, the proportion of employed people having a labor contract is 62.3% or 0.623.

Dimension 5: Social Dialogue

In Vietnam, there is a multi-tiered structure of trade unions, ranging from the Vietnam General Confederation of Labour (VGCL) as an umbrella organization, to the unions at the grassroots level. In addition to collective bargaining, trade unions also perform duties at the corporate level that are performed by the works council in other nations.

Unlike in several European nations, trade unions in Vietnam have no right to participate in management decisions or be informed about the enterprise's economic success.

Employers are not required to form unions, but they are responsible for fostering a climate conducive to the formation of unions. To create a union at the company level, at least five workers must combine and seek voluntary membership in the Vietnamese union. Employers are required to provide unions with a proper workplace and enough amenities. Union officials are entitled to paid time off to carry out their duties.

The mandatory trade union fee is equivalent to 2% of the entire wage for the social insurance contribution of all workers every month and must be paid to the trade union's account, of which 70% will be returned to the company's grassroots union.

Many novel approaches, with a particular emphasis on non-state businesses, have been put towards the task of generating union members and forming trade unions at the grassroots level. Over the last two years, union membership has skyrocketed, from 9.6 million in 2016 to over 10.5 million in 2021, with more than 125,000 trade unions.

Normalization:

$$Share\ of\ employed\ persons\ belonging\ to\ an\ union = \frac{Union\ membership}{Employed\ persons}\ x\ 100$$

$$= \frac{10.500.000}{49.100.000}\ x\ 100 = \mathbf{21.4}\ (\%)\ \boldsymbol{or}\ \mathbf{0.214}$$

Dimension 6: Skills Development and Training

According to data from the LFS from 2011–21, the share of the employed population with technical training and qualifications is shown in Table 7.

TABLE 7

SHARE OF EMPLOYED POPULATION WITH TECHNICAL TRAINING AND QUALIFICATION (IN %).

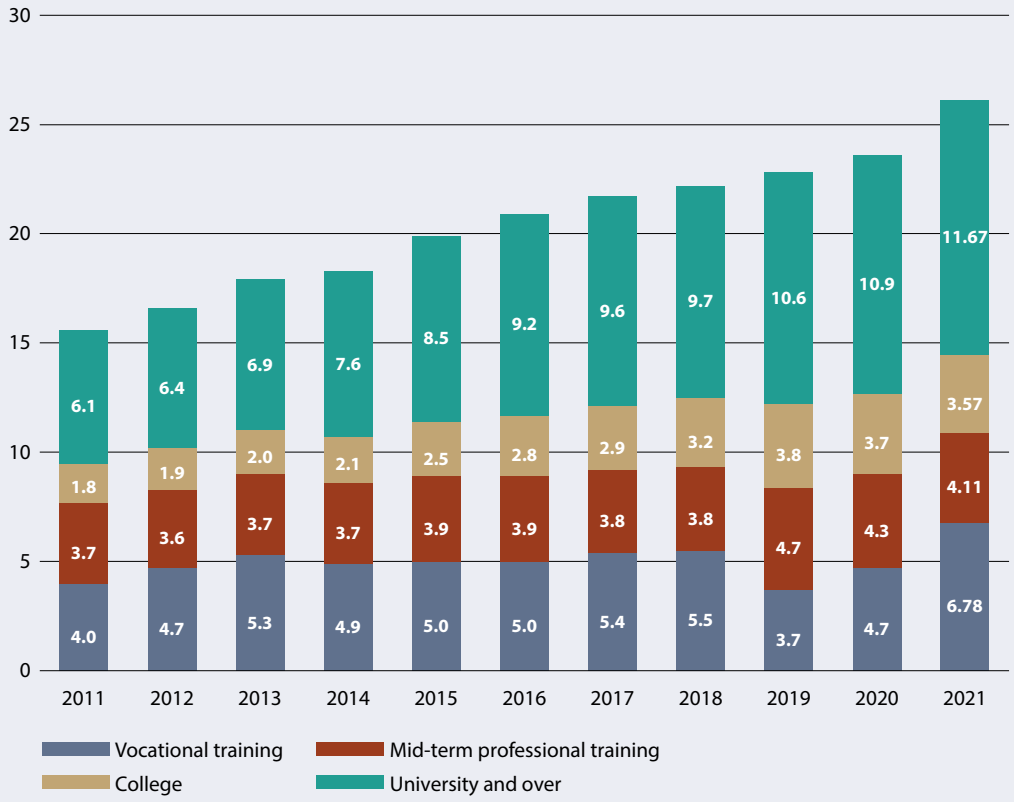
	Total	Vocational Training	Mid-Term Professional Training	College	University and Above
2011	15.6	4.0	3.7	1.8	6.1
2012	16.8	4.7	3.6	1.9	6.4
2013	18.2	5.3	3.7	2.0	6.9
2014	18.6	4.9	3.7	2.1	7.6
2015	19.9	5.0	3.9	2.5	8.5
2016	20.9	5.0	3.9	2.8	9.2
2017	21.7	5.4	3.8	2.9	9.6
2018	22.2	5.5	3.8	3.2	9.7
2019	22.8	3.7	4.7	3.8	10.6
2020	23.6	4.7	4.3	3.7	10.9
2021	26.12	6.78	4.11	3.57	11.67

Source: Labour Force Survey data from 2011 to 2021 [2–9].

Gaining the technical skills necessary to excel in one's chosen field can be accomplished through a combination of formal education, specialized training, and on-the-job experience. Graduates of four-year colleges and universities are often qualified for white-collar positions, whereas those who complete vocational programs have the practical abilities necessary to do skilled trades. The technical abilities learned in classroom settings can be refined and honed by on-the-job training.

FIGURE 7

SHARE OF EMPLOYED POPULATION WITH TECHNICAL TRAINING AND QUALIFICATION (IN %).



Source: Labour Force Survey data from 2011 to 2021 [2–9].

While enrollment in universities is on the rise in Vietnam, vocational schools and on-the-job training are not as popular. People, businesses, and governments all agree that higher education is essential for improving the quality of the workforce. Although enrollment has increased rapidly over the past decade, it is still significantly lower than that of the neighboring countries. There are also worries regarding the quality of education, especially in light of the rapid growth. There are still a lot of young people who choose vocational training over college. Many businesses are worried that the skills their employees are learning in college and the workplace are not relevant. Workplace instruction is offered by many businesses, supposedly. While there may be some external training, it looks rather minimal.

The World Bank placed Vietnam at number 11 out of 12 Asian nations examined due to its low quality of human resources (3.79 out of 10). In comparison, the ROK scored 6.91, India scored 5.76, and Malaysia scored 5.59. Based on the results of this analysis, it is clear that Vietnam's human resource is of low quality, low motivation, low creativity, and high labor intensity.

Normalization: This data was already normalized.

In total, the share of the employed population with technical training and qualification is 26.1% or 0.261.

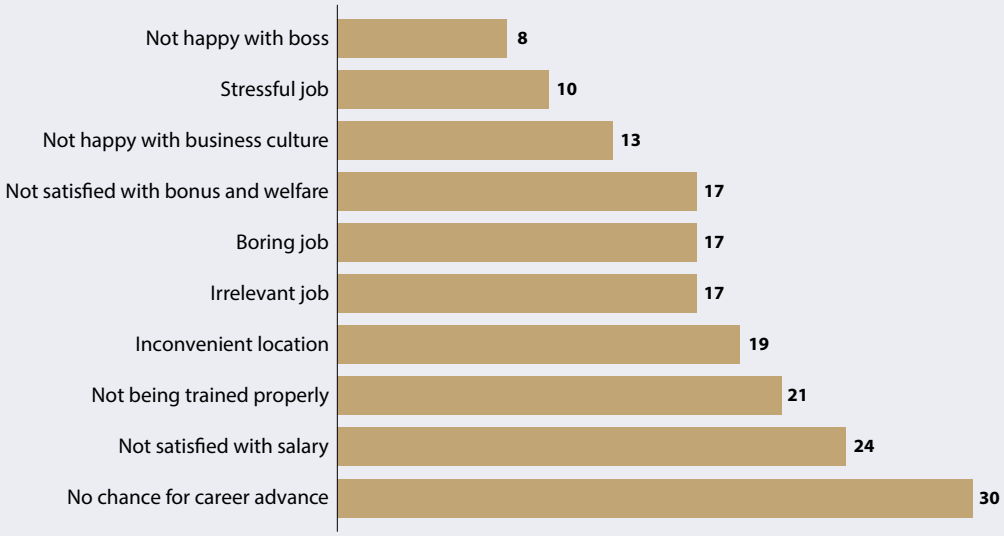
Dimension 7: Employment-Related Relationships and Work Motivation (Work Motivation)

Due to the lack of motivation at work, as many as 78% of Vietnamese employees are actively seeking new job opportunities with higher positions and wages in the upcoming year. A recent survey conducted by the recruitment firm VietnamWorks indicates that nearly six out of 10 respondents intend to switch jobs right at the beginning of the next year, with 26% planning to do so after the Tet or Lunar New Year holiday.

Over 30% of the 900 respondents of the VietnamWorks survey indicated that the primary reason for wanting to change was a lack of opportunities for advancement. The second most significant factor was salary, with 24% wanting a new job because they were unhappy with their current income. Additionally, 17% of the respondents expressed discontentment with their bonuses and other benefits. The third major factor, as cited by 21% of the participants, was the lack of desired training and growth, while 10% wanted to leave their jobs due to stress, and 8% were unhappy with their superiors.

FIGURE 8

REASONS FOR LACK OF WORK MOTIVATION IN VIETNAM (IN %).



Source: Most Vietnamese Want to Switch Jobs in 2019: Survey. VN Express International, 3 November 2018. https://e.vnexpress.net/news/business/data-speaks/most-vietnamese-want-to-switch-jobs-in-2019-survey-3833527.html.

Normalization: The fraction of employed people who lack job motivation reflects a failure to meet quality standards. As a result, the proper indicator would be the proportion of workers who are motivated to work. As a result, the normalized value is (1-0.78) = 0.22.

TABLE 8

MEASURING THE QUALITY OF EMPLOYMENT INDEX.

Dimension	Index
1. Safety and ethics of employment	0.9999
2. Income and benefits from employment	0.956

(Continued on next page)

(Continued from the previous page)

Dimension	Index
3. Working time and work-life balance	0.692
4. Security of employment and social protection	0.623
5. Social dialogue	0.214
6. Skills development and training	0.261
7. Employment-related relationships and work motivation	0.220

$$= \frac{(0.9999 + 0.956 + 0.692 + 0.623 + 0.214 + 0.261 + 0.22)}{7} = \mathbf{0.567}$$

Review of the Policies in Vietnam

Relevant Policies in Vietnam

A stable source of income is essential for a person's well-being and personal growth. Socioeconomic development plans for Vietnam rank employment creation and preservation as their top priority. A nation's most fundamental policies are those that aim to provide employment opportunities, strengthen the labor market, and lower the unemployment rate. Assuring that everyone who wants and can work has access to employment opportunities is a key part of any strategy aimed at promoting public welfare and social progress.

The Labor Law of Vietnam codifies the country's current employment strategy, outlining the minimum requirements for establishing a workplace and the kind of steps the government may have to take to encourage the hiring of workers. The focus of these programs is on labor relations, therefore issues like informal employment and rural regions are not addressed. Many new rules need new laws, yet the legality is neither visible nor consistent with the actual situation. The lack of policies on equal and safe jobs, the provisions on full-time and part-time work, a lack of clear definitions of the concepts and the labor market, insufficient state support solutions, and an inability to meet practical requirements are all examples of the policies' general yet unclear nature. The administration and execution of employment are hampered as a result of all this.

A revised Labor Code was approved by Vietnam and went into effect in January 2021. The amendment to the labor regulations is a step towards aligning Vietnam with international labor standards, particularly as the country integrates into the global economy, as noted by the ILO. The amendment provides greater protection for the employees and is regarded as being more in line with international best practices.

Changes were made to the clauses relating to probationary employment, required work rules, notice requirements, and other elements generally favorable to workers.

The following sections of the new labor code were examined:

Working hours: While the working hour limit remains the same as 48 hours per week, the new code states that the normal working hours cannot exceed eight hours a day or 48 hours per week. However, if the employer and the employee agree on an overtime deal, the overtime cannot exceed 12 hours a day, 40 hours a month, and 200 hours a year. For industries such as textile and clothing,

footwear, and electronics, in which seasonal orders during certain times of the year require an extensive workload, an overtime cap of 300 hours has been specified.

Labor contracts: The amended labor code now lists only two types of labor contracts as compared to the three types that were listed earlier (definite-term contracts, which cannot have a term longer than three years, and indefinite-term contracts). The definite contract can only be renewed once. Foreigners who have work permits (valid for two years) will also be able to renew only once. Seasonal contracts will no longer be permitted from 2021.

Termination: In a boost to employees, employees will be able to immediately terminate a contract for mistreatment, pregnancy, or if the employer fails to pay salary on time. As per the current labor policy employees are subject to minimum notice requirements (30 days for definite term, 45 days for indefinite term).

Unions: Vietnam now allows trade unions to operate independently as opposed to being supervised by the state-run VGCL. The independent union will still be required to get permission from state authorities to operate. This is partly done as Vietnam enters into free trade agreements, which require the opening of trade union rights. Nevertheless, further guidance will be required on how this will happen practically.

Retirement age: Vietnam will also increase the retirement age for men to 62 from the current 60 and increase the same for women to 55 from the current 50. However, workers may retire later or sooner depending on the situation. For example, employees working in dangerous environments or involved in heavy lifting can retire sooner, while those who work in the private sector or high-skilled jobs can retire later. The maximum extension for this will be five years. However, the increase in retirement age will be done gradually, by 2028 for men and 2035 for women. The increase in retirement has been done to avoid a labor shortage from 2040 and to address the social insurance deficits.

Discrimination: The new code also has safeguards protecting employees from discrimination in the workplace. This includes protection from sexual harassment and discrimination based on skin color, race, nationality, ethnic group, gender, marital status, pregnancy, political views, disability, HIV status, or if in a trade group. The amended labor code also enhances protections for younger workers.

Other changes: In addition, the government will not regulate salary policies at individual companies that are negotiated between the employer and employees, however, the rules on minimum wages must be followed.

Employees will also be entitled to an additional day off either preceding or after 2 September, which is the Vietnamese National Day.

Decree 145 – Implementing the Labor Code: To help with the implementation, the government issued Decree 145/2020/ND-CP (Decree 145) to guide the implementation of the labor code which came into effect on 1 February 2021.

While the decree is several pages long, some key points have been highlighted as follows:

Sexual harassment: The decree has more specific guidelines on sexual harassment in the workplace. This includes any form of sexual harassment including physical, verbal, or non-verbal,

such as body language and display of sexual activity directly or electronically. The workplace has also been defined to include anywhere where the employee works including work-related locations such as social activities, workshops, business trips, phone conversations, vehicles, and so on.

Labor supervision: Once a company begins operations, the employer must make a labor-management book at the head office branch, or representative office on the basic information about the employees. Any changes to labor must be reported every six months to the labor department.

Termination of labor contract: For unilateral termination, employers must give prior notice of at least 120 days for the labor contracts with an indefinite term or a fixed-term contract of 12 months or more. For labor contracts less than 12 months, prior notice of at least a quarter of the term of the contract must be given.

Overtime: Employers are required to obtain employee consent when planning overtime work, taking into account factors such as duration, location, and overtime work.

Female employees: To make it easier for female employees, those who have children under 12 months of age, are allowed to take a 60-minute break every day from work to breastfeed. Female employees are also allowed a 30-minute break during their menstruation period. The number of days for time off can be agreed upon by both parties but must be a minimum of three working days per month.

If female employees do not have time to take the aforementioned breaks and are allowed to keep working, the employer is required to pay additional wages for the work, which is separate from overtime pay.

The new code will have an impact on businesses and employers should seek assistance for their labor practices to ensure their policies are legally compliant.

Implementation of Labor Policies in Vietnam

Policies are issued comprehensively, but the implementation in some localities is poor and problematic because of the overlapping mechanisms and no separation of responsibilities between the implementing agencies. Some localities and enterprises do not implement the policies fully, such as the regulations on the establishment of the Job Fund, and implementation of these policies is contrary to the regulations as many programs and projects of socio-economic development must have job creation plans, but these are not applied, making enterprises unable to recruit or meet their requirements, and having a detrimental effect on their project progress.

Conclusion and Recommendations

If Vietnam strengthens its ties with regional and global value chains, it can generate more and better employment. There are existing opportunities for Vietnam to expand its value-chain employment as a result of rising incomes, urbanization, and the creation of regional value chains.

The Increases in the education and training of workers will pave the way for Vietnam to join the supply chains with greater possibilities for growth and prosperity. This may lead to a shift in the composition of the workforce, with more people moving into wage positions in the private sector, where compensation is higher and working conditions are generally better. This might be observed

in the agricultural sector if it was better leveraged, by reorienting the crop production and establishing agro-value chains to supply markets in Vietnam, Asia, and beyond.

Some groups may still be left behind as the economy shifts toward service and knowledge occupations. While the young, urban, and educated are reaping the benefits of the changing employment landscape, others, including women, the elderly, ethnic minorities, and people living in more rural regions, may find it more difficult to adapt to the new system. Therefore, Vietnam must pursue the labor supply side policies to increase access to better opportunities for the people in danger of being left behind, as well as to train its workers for future jobs.

Better work prospects will persist as the labor market evolves, and Vietnam can only benefit from this trend by seizing the chances presented by the country's and the world's dynamic economies. However, only around 25% of the occupations are considered to have "excellent" wages. Assuming the same pace of change continues as shown between 2008–15, 43% of the workforce will be in "excellent" employment by the year 2040. Although they will still account for more than half of the workforce in 2040, employment in family farming and domestic businesses will continue to shrink. This suggests that a legislative agenda that promotes agricultural and family business success, and profits while also paving the way for the growth of major local and multinational corporations, resulting in employment prospects is needed.

Reform Area 1: Increasing the new job opportunities in high-tech parts of the contemporary economy that are receptive to new workers may provide a substantial number of high-quality employment. Jobs in the contemporary economy are often the best option due to the increased productivity of workers, higher earnings, and perks they offer. These opportunities are inclusive, welcoming individuals of all genders and ages, including younger people and women. Currently, these occupations are among the fastest-growing job sectors in Vietnam, and they stand to increase in both number and quality if Vietnam can harness the potential presented by prevailing mega-trends. To position Vietnam for even greater success, policies need to focus on encouraging the formation and expansion of firms that are amenable to employment generation. There are three potential areas where policies can make a significant impact.

1. Reducing the constraints placed on domestic M&A activity.

2. Pushing the companies toward more knowledge-intensive local, national, and international supply chains

3. Advancing the agro-food industry in Vietnam.

Reform Area 2: The labor market should be reformed such that traditional jobs can provide higher-quality employment opportunities. Integrating family farming (and associated primary production) and home businesses into the larger economy has the potential to boost employment opportunities in these sectors. These positions are crucial to the economy and will remain so for the foreseeable future. As the primary employers of people from underrepresented groups, older employees, and those with lower levels of education, they play a major role in the fight against poverty. The two suggested policy domains are:

- Promoting crop diversification toward those with higher added value and the development of regional value chains in the agricultural sector.

- Easing the process of making connections between home-based businesses and medium and small-sized firms.

Reform Area 3: To improve the system's ability to place qualified workers in appropriate positions. Workers need varied skills and a variety of additional assistance to successfully participate in today's occupations and to be prepared for the needs of tomorrow's jobs.

Even though the performance of Vietnamese students in international tests at the secondary level is often compared favorably to that of European students, the vast majority of Vietnam's working population has only partially completed secondary school and they just have basic competencies. As mega-trends start to alter the employment landscape, the current shortage of skills will only become worse. The workers with the necessary talents are at a disadvantage as businesses lack accurate information about the quality of employees, societal norms that restrict employment opportunities, and financial restrictions that make it difficult to acquire new training or switch careers. The proposed policies fall into three categories:

- Providing auxiliary services to facilitate labor participation and labor mobility,
- Generating and providing information to fit the right workers into the right jobs.
- Building skills for the jobs of the 21st century through radical reforms to the education and training systems.

Better employment through coordination and job strategy creation would include visualizing the desired outcomes for employment and coordinating the efforts across all sectors to achieve those outcomes. The present employment strategy has been effective because it is based on the premise that better jobs would result in well-planned economic and sectoral growth. This research believes that more progress may be made with a well-thought-out plan for creating employment that prioritizes the eight policy reform areas. This will require the establishment of long-term employment goals and the monitoring of progress toward those goals, the involvement and accountability of various government and private sectors, and the provision of direction by a coordinating body to advocate for the issues regarding jobs and direct the many actors toward a common vision of future employment.

If Vietnam begins to prepare for this future, the employment outlook will be excellent. Continued progress on the present course will improve employment opportunities, but not without some diminution as global trends undercut Vietnam's comparative advantages and further marginalize the already marginalized people. The government might implement marginal changes in an attempt to stay up with the global trends, but as the global economy gets more competitive, this will become more challenging. Alternatively, Vietnam might integrate its economy by making large investments in its local businesses and farms, its workforce, regional and global trade networks, and more. Boosting Vietnam's economic standing via these investments will provide more, as well as better employment for all residents.

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CONCLUSION

In this comprehensive study, we delved into the labor market dynamics of nine diverse countries: Cambodia, India, Indonesia, Pakistan, the ROC, Sri Lanka, Thailand, Turkiye, and Vietnam. Each of these nations, detailed in Chapters 2–10, offers unique insights into their respective labor landscapes. As outlined in the introduction, these nine countries represent a varied spectrum of income levels, as classified by the World Bank.

This chapter aims to weave together the diverse threads of information from these reports, offering a broad synthesis that captures the multifaceted nature of labor markets across these distinct economies.

Among the South Asian countries, India, Pakistan, and Sri Lanka belong to the lower-middle income levels. Among the four Southeast Asian countries, Cambodia and Vietnam fall in the category of lower-middle income level, while Indonesia and Thailand belong to the upper-middle income category. Turkiye also shares the upper-middle income status. In the East Asian region, the ROC stands tall as a high-income economy.

Additionally, these countries diverge significantly in terms of the contribution of agriculture and allied sectors to their respective GDPs. For lower-middle-income countries like Cambodia and Pakistan, this share surpasses 20%, underlining the sector's pivotal role in their economies. In stark contrast, high-income countries such as the ROC see a mere 1% contribution from these sectors, highlighting the advanced nature of their economies and a more diversified economic landscape.

Moreover, the broad characteristics of the labor market exhibit substantial disparities across these income categories. In lower-middle-income countries, the share of employment in agriculture is well above 30%, except for the island state of Sri Lanka. In upper-middle-income countries, the percentage hovers around 30%, while in the high-income ROC, the share of employment in agriculture plummets below 5%.

In contrast, the services sector dominates employment in upper-middle-income countries, engaging over half of the total workforce. In lower-middle-income countries except Sri Lanka, it encompasses around one-third of the total employment.

Another important labor market characteristic is the degree of formal employment, a factor significantly influencing the quality of employment. In upper-middle-income countries, the share of formal employment is at least 40%, whereas in some lower-middle-income countries, the share stands at around 10%.

It can be seen that the countries covered in this study are quite different in their income levels and key labor market characteristics. Even though they address the same broad objectives the levels of their productive employment and quality of employment are quite different. Even their labor market regulation and labor productivity policies are quite varied.

The measurement of productive employment, which indicates the proportion of workers earning above the poverty line income, has been approached diversely across the countries covered in this study. Besides, the methodology employed is not always directly comparable. However, the comparable figures given by ADB in 2022 as shown in Table 1 provide a comprehensive view of the situation. This cross-country comparison highlights the intricate differences, underscoring the multifaceted nature of the findings of this study.

TABLE 1

SHARE OF WORKING POOR ACROSS THE COUNTRIES.

Countries	Proportion of Employed People below USD1.90 PPP per Day in 2022 (in%)
Cambodia	14.2
India	5.7
Pakistan	2.4
Sri Lanka	0.4
Vietnam	1.2
Indonesia	2.3
Thailand	0.1
Turkiye	0.1
ROC	0.1

Source: Based on various ADB reports.

In the majority of countries, the proportion of working poor among the employed population is relatively small. However, it is more than 5% in two countries, namely Cambodia and India. It is crucial to note that variations in methodologies across the study in this report have led to higher figures. Sri Lanka calculated its working poor at 9.1% and Turkiye at 7.9%. For most nations, because of the labor productivity level or the government policies on minimum wages, working poor or workers earning less than the daily poverty wages was not a major issue. The primary concerns highlighted by the authors of different chapters were job availability and the level of unemployment. Moreover, wage disparities across skill levels, gender, migration status, and social groups remain an important concern.

The measurement of the quality of employment index exhibits significant variations across countries, though methodological differences in calculating the quality of employment index did not pose a major challenge. All country reports in this study have used the following seven dimensions for the calculation of the quality of employment index. Only a few countries opted for less than seven dimensions in their calculations.

The seven dimensions are outlined in Table 2, which also provides an overview of the various indicators used in different country studies.

TABLE 2

DIMENSIONS AND INDICATORS OF THE QUALITY OF EMPLOYMENT INDEX.

Quality of Employment Index	
Dimensions	**Indicators Used by Various Countries.**
1. Safety and ethics of employment	Rate of occupational Injuries per 1,00,000 workers; percentage of employed people below a minimum age of work
2. Income and benefits from employment	Proportion of workers earning below minimum wage; minimum wage as a percentage of the median wage
3. Working hours and work-life balance	Percentage of working people who are working more than 48 hours or 40 hours per week; share of part-time workers
4. Security of employment and social protection	Percentage of workers who are covered under any social security/ protection schemes; share of informal workers; share of workers with labor contract; share of workers with paid leave
5. Social dialogue	Share of workers covered by collective bargaining
6. Skill development and training	Share of employed people who received job training in the last 3 or 5 years; share of employed people in high-skilled occupations; share of workers with technical/vocational training; share of workers with advanced education
7. Employment-related relationship and work motivation	Share of employed people who feel they do useful work; share of employed people who are satisfied with their work; share of workers motivated to work; composite index based on observed values; visible underemployment

Source: Country chapters. Quality of Employment: Selected Country Cases in Asia. APO, 2023.

Various indicators were used for different countries, corresponding to each dimension of the quality of employment index, based on the availability of data. All countries, except India, used one indicator for each dimension. In India, multiple indicators were used for each dimension, with equal weights assigned to ensure parity across all dimensions.

The calculated values of the quality of employment index are presented in Table 3.

TABLE 3

QUALITY OF EMPLOYMENT ACROSS COUNTRIES.

Countries	Value of Quality of Employment Index
Cambodia	0.510
India	0.510
Pakistan	0.455
Sri Lanka	0.573
Vietnam	0.567
Indonesia	0.461
Thailand	0.552
Turkiye	0.578
The Republic of China	0.509

Source: Country chapters. Quality of Employment: Selected Country Cases in Asia. APO, 2023.

Indonesia, Pakistan, and the ROC stood out due to the distinctive value of the quality of employment index. Both Indonesia's and Pakistan's indices were based on five of the seven dimensions due to data limitations. The excluded dimensions generally reported higher values for other countries, potentially resulting in the lower value of the quality of employment index for these two countries.

Surprisingly, the ROC, despite the expectation of a higher index, presented a lower value. This suggests the use of more stringent indicators with lower values across various dimensions. For instance, in the sixth dimension of skill development and training, the ROC used the indicator 'share of employees who received job training in the last three years.' In contrast, some other countries used the indicator 'share of people with any job training,' leading to varied results. Therefore, direct comparison of various countries in terms of the value of the quality of employment index is challenging. However, it holds analytical significance within the scope of this study. It highlights substantial room for improving the quality of employment in the workforce. Moreover, this index provides a valuable tool for tracking changes over time for each of the countries, indicating progress and areas that demand attention.

Upon analysis of the quality of employment across various chapters, some common points have emerged. First, in most countries, the labor unionization rate is quite low, indicating substantial room for improvement. Vietnam stands as an exception, displaying distinct labor market characteristics compared to the other nations covered in this study. Secondly, a critical requirement for enhancing the quality of employment in several countries appears to be the formalization of the informal sector. This is one of the most important requirements for the improvement of the quality of employment.

Substantial differences exist across the countries in the pattern of the growth of labor productivity and suggestions for labor productivity policies that promote the well-being of the workers.

In recent decades, Cambodia experienced a structural shift of the workforce from agriculture to the more productive sectors, with a noticeable increase in labor productivity growth. The labor productivity growth in the industry sector is led by new investments in the more productive manufacturing sub-sector. The major constraints of increasing labor productivity now lie in enhancing the level of education and increasing the overall skill level of workers. The low coverage of social security is also hampering the well-being of the workers and hindering further growth of labor productivity.

In developed economies such as the ROC, the challenges are quite different. It still faces the problem of a relatively lower female labor participation rate, an aging population resulting from a low fertility rate, and the subsequent large-scale in-migration of workers, primarily into low-paying jobs. To enhance labor productivity and the well-being of workers, key policy suggestions include providing equal job opportunities for females in low-income households, extending social protection to migrant workers, increasing training opportunities for less educated workers, and promoting work-life balance, especially for female workers.

In Vietnam, strategies to boost labor productivity include promoting jobs in knowledge-intensive industries with higher productivity levels, supporting the development of the agro-food industry, and enhancing integration between home-based industries and small and medium-sized firms. Additionally, it is crucial to implement policies that ensure qualified workers are placed in suitable positions.

The well-being of workers can be increased by better labor hiring practices, implementing standard working hours, increasing retirement age, and reducing discrimination at work.

Pakistan faces many fundamental challenges in increasing labor productivity. The main requirement for increasing productivity is large-scale improvement in physical infrastructure like railways, roads, bridges, airports, and seaports. It needs to be accompanied by an effective and well-motivated workforce. To make it possible, more education and training is required, along with fair wages, and addressing various social and safety issue. The main challenge is the implementation and enforcement of legislation. Unsafe working conditions, the prevalence of low-paid informal workers, and low participation of workers are major issues in the labor market.

In Turkiye, labor productivity can be increased by promoting productive investment and entrepreneurship, along with the adoption of modern technologies. Another set of measures that could increase labor productivity and the welfare of workers is an increase in the formalization of work, providing support to disadvantaged workers, and improving employment-related services. The enhancement of the skills of workers through modern, vocational, and lifelong learning systems, focusing on skill development, will go a long way in that direction.

Indonesia's study relied on econometric analysis to identify the factors that would promote labor productivity and improvement in well-being. Indonesia needs to implement policies that would help reduce unemployment, increase formal employment in various categories of workers, improve company regulation, increase the coverage of social security, and reduce the incidences of child labor.

The report on Thailand examined the relationship between productive employment and labor market outcome in 2021, across sectors, and found that sectors that are creating jobs are also providing a better quality of employment. This was also positively associated with the wage level and the growth of the GDP.

By analyzing the indicators of the quality of employment, policies that include an extension of collective bargaining coverages, promotion of skill development, and more vigorous efforts of on-the-job training for workers, to improve the well-being of the workers can be suggested.

The report of Sri Lanka suggested that to improve overall labor productivity, better price realization of agricultural produce in the low-productivity sector of agriculture is one of the key requirements. National-level programs have to be developed to upgrade the non-agricultural informal sector to the formal sector, which would increase labor productivity as well as the well-being of the workers. Other policy suggestions were the introduction of old-age pension, providing facilities to children of estate workers to get higher education to give opportunities for improving the economic conditions, and improving the coverage of collective bargaining.

India's report suggests that the primary requirement is to create jobs with higher economic growth. The major issue is the promotion of formality to reduce informality which sustains low labor productivity and low earnings. Other major policy suggestions to improve the well-being of workers are proper job contracts, the spread of social security measures, and better payment to the workers. The reduction in multiple minimum wages would go a long way to improve productive employment. Another key policy suggestion is improving the quality of education.

To reduce the horizontal disparity of wages, which would improve the well-being of workers, active policies need to be undertaken, to reduce the gender wage gap, along with affirmative action in favor of socially and economically weaker sections of workers.

Various policy suggestions have been given in the reports of different countries to improve labor productivity and the well-being of workers.

In a nutshell, these policies belong to two broad categories, namely, the labor productivity policies that have to be nurtured so that they would improve economic performance and policies that would directly improve the quality of employment and well-being of workers.

In the first category, recommendations include enhancing overall physical infrastructure, generating employment in high-productivity sectors, and fostering productive investment and entrepreneurship through the adoption of modern technology. Other suggestions entail ensuring better price realizations of agricultural produce and better integration of home-based workers with small and medium-sized industries. Moreover, suggestions were given to provide better quality education and improve educational opportunities for deprived sections of the population.

In the second category, recommendations aimed at enhancing labor productivity and improving the well-being of workers encompass a wide range. Key suggestions include intensifying the formalization of informal sectors, a move that would elevate both labor productivity and workers' earnings. The formalization of informal workers through proper job contracts is emphasized, as it would increase the coverage of social security measures and contribute significantly to the overall welfare of the workforce.

Recommendations have also been made for improving the skills of workers. These include providing better on-the-job training opportunities for workers, modernizing vocational and lifelong learning systems, and increasing training opportunities for workers with lower educational backgrounds.

On the social dialogue front, it is proposed that the governments should take appropriate measures to allow independent trade unions and implement other strategies to broaden trade union coverage, particularly in countries where it is notably low. Suggestions also focus on improving working hours and achieving a better work-life balance through the vigorous implementation of standard working time policies. In the dimension of income and benefits from employment, the emphasis is on ensuring fair pay and reducing the multiplicity of the minimum wage structure. The multiplicity of minimum wages across sectors and different parts of the country can render the minimum wage policies ineffective. Additionally, support systems for disadvantaged workers need strengthening to mitigate discrimination in the workplace.

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
BOT	Bank of Thailand
CBA	Collective Bargaining Agent
CBN	Cost of Basic Needs
CPTPP	Comprehensive and Progressive Agreement for Trans-Pacific Partnership
DCS	Department of Census and Statistics
DGBAS	Directorate General of Budget, Accounting and Statistics
DGFASLI	Directorate General Factory Advice Service & Labour Institutes
DSD	Department of Skill Development
EPFO	Employees' Provident Fund Organizatoin
ESIC	Employees' State Insurance Corporation
ETF	Employees' Trust Fund
EU	European Union
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GNH	Gross National Happiness
GPP	Gross Provincial Product
HDI	Human Development Index
HIES	Household Integrated Economic Survey (Pakistan)
HIES	Household Income and Expenditure Survey (Sri Lanka)
HLFS	Household Labour Force Survey
ICT	Information and Communication Technology
ILO	International Labour Organization
IPK	Employment Development Index (Indeks Pembangunan Ketenagakerjaan)
ISCO-08	International Standard Classification of Occupations – 2008
LAC	Labour Advisory Committee
LFPR	Labor Force Participation Rate
LFS	Labour Force Survey
MDGs	Millenium Development Goals
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MOL	Ministry of Labour
MOM	Ministry of Manpower

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(Continued from the previous page)

MOOCs	Massive Open Online Courses
NESDC	National Economic and Social Development Council
NSO	National Statistical Office
NSS	National Skill Strategy
NSSF	National Social Security Fund
OHS	Occupational Health and Safety
PCA	Principal Component Analysis
PPP	Purchasing Power Parity
ROC	Republic of China
ROK	Republic of Korea
SDG	Sustainable Development Goal
SDPA	Skill Development Promotion Act
SSA	Social Security Act
SSI	Social Security Institution
SSO	Social Security Office
STEM	Science, Technology, Engineering, and Mathematics
TCHS	Thailand Center for Happy Worker Studies
TFP	Total Factor Productivity
TURKSTAT	Turkish Statistical Institute
TVET	Technical and Vocational Education and Training
UN	United Nations
UNECE	United Nations Economic Commission for Europe
VEC	Vietnam Enterprise Census
VGCL	The Vietnam General Confederation of Labour
VHLSS	Vietnam Household Living Standards Survey

LIST OF TABLES

INDONESIA

PAKISTAN

SRI LANKA

THAILAND

TURKIYE

VIETNAM

CONCLUSION

LIST OF FIGURES

PAKISTAN

SRI LANKA

THAILAND

TURKIYE

VIETNAM

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