

Bhutan Labor Market Assessment Report

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Acknowledgments

This World Bank report was prepared by a team led by Jumana Alaref. Chapter authors are Jumana Alaref, Laurine Martinoty, Mariana Viollaz, and Esther Bartl. Alvin Etang Ndip and Phillippe Leite served as core members of the team and contributors to various chapters. Nazia Moqueet provided research assistance and support throughout the study, and Elfreda Vincent, Sofia Said, Dorji Drakpa, and Tshering Yangki offered administrative support. Sabra Ledent edited the report, and Sean Willmott served as its graphic designer.

The team would like to thank the following World Bank colleagues for their help. Abdoulaye Seck, Nicole Klengen, Stefano Paternostro, Cem Mete, S. Amer Ahmed, and Adama Coulibaly provided feedback, guidance, and support from management. Suhail Kassem, Melanie Simone Trost, and Mauro Testaverde served as peer reviewers at the decision review stage of the report. Ashiq Aziz, Sonam Choden Wangdi, and Joachim Vandercasteelen provided input, feedback, and support at various points during preparation of the report.

The team is also grateful to the external stakeholders who offered feedback and assistance at different points during the report preparation process. From the Royal Government of Bhutan were Duptho Wangmo, Tenzin Choden, and Ugyen Namgyel from the Ministry of Education and Skills Development (MoESD), and Dasho Tashi Wangmo, Director General Kunzang Lhamo, Dil Maya Subba, Jamyang Tshomo, Jigme Thinley, Ridgen Wangchuk, and Tshering Yangki from the Ministry of Industry, Commerce, and Employment (MoICE).

The report benefited from the generous funding of the World Bank's Rapid Social Response Program (RSR), which is gratefully acknowledged.

The team apologizes to any individuals or organizations inadvertently omitted from this list. It is grateful to all who provided guidance and assistance for this report.

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Abbreviations

ALMP	active labor market program
BLFS	Bhutan Labor Force Survey
BLSS	Bhutan Living Standards Survey
CCD	Critical Capability Development (program)
CEM	Country Economic Memorandum (World Bank)
COVID-19	coronavirus disease 2019
CSI	Cottage and Small Industries
CST	Critical Skills Training (program)
DWPSD	Department of Workforce Planning and Skills Division (MoESD)
ECCD	early childhood care and development
ES	Establishment Survey
ESC	employment services center
FY	fiscal year
GDP	gross domestic product
GNI	gross national income
JQI	job quality index
IT	information technology
IZC	institute for Zorig Chusum
KRIVET	Korea Research Institute for Vocational Education and Training
KSQA	Korea Skills Quality Authority
LMIS	labor market information system
M&E	monitoring and evaluation
MFI	microfinance institution
MIS	management information system
MoAF	Ministry of Agriculture and Forests
MoESD	Ministry of Education and Skills Development
MoICE	Ministry of Industry, Commerce, and Employment
MoLHR	Ministry of Labor and Human Resources
MSME	micro, small, and medium enterprises
NAS	National Account Statistics
NEET	not in education, employment, or training
NFE	nonformal education
OLS	ordinary least squares
PPP	purchasing power parity
RGoB	Royal Government of Bhutan

RUB	Royal University of Bhutan
SDG	Sustainable Development Goal
SDP	Skills Development Plan
SOE	state-owned enterprise
SSDP	Special Skills Development Program
TFP	total factor productivity
TTI	Technical Training Institute
TVET	technical and vocational education and training
VSDP	Village Skills Development Program
YELP	Youth Engagement and Livelihood Program

Executive Summary

Between 2001 and 2019, Bhutan made significant economic progress with an average annual growth rate of 7 percent. This progress was accompanied by significant improvements in monetary and nonmonetary standards of living. In recent years, the Royal Government of Bhutan (RGoB) has committed to advancing reforms through the implementation of its 12th Five-Year Plan (2018–23), which focuses on creating gainful employment and enhancing private sector diversification. However, recent shocks from the COVID-19 pandemic and global macroeconomic volatilities disrupted these efforts. The recovery could be further complicated by the country's pressing structural challenges related to a lack of economic diversification away from the hydro-power-led growth model, vulnerabilities to shocks, and weak productivity gains. In addition, human capital remains low. A child in Bhutan will be only 48 percent as productive in adulthood as he or she could have been with a complete education and better health care. The record number of Bhutanese migrating abroad with the reopening of the country's borders in mid-2022 is fueling further concerns by policy makers about the country's development prospects.

This report examines the labor market in Bhutan with the objective of identifying the most pressing challenges at the pandemic recovery stage and ways to mitigate them. It is hoped that the findings can be used to support the RGoB in its implementation of its 13th Five-Year Plan (2024–29). This report analyzes data from three sources: (1) the Bhutan Labor Force Survey (BLFS), 2013–22; (2) the 2022 Bhutan Establishment Survey; and (3) administrative program-level data from the Ministry of Education and Skills Development (MoESD) and the Ministry of Industry, Commerce, and Employment (MoICE)—see appendix A.

Key messages

Message 1: Workers in Bhutan face many challenges, including limited inclusion of women in meaningful employment and persistence of low-productivity agricultural employment. Employment quality outside of the public sector remains weak, leading to public sector queuing, rising unemployment among urban workers, and a record number of Bhutanese migrating abroad.

Young women (ages 15–24) invest less in higher education than men, and they have a 1.5 times higher risk of being not in education, employment, or training (NEET), notably to fulfill household responsibilities. The labor force participation of women of prime working age is strongly correlated with their marital status, the presence of young children, as well as labor force participation of other women in their family and community. They tend to work in low-productivity sectors such as agriculture, manufacturing, and services or as self-employed or family workers, and they have limited access to private employment or public sector jobs. Although women's labor force participation increased substantially during the pandemic, it fell in 2022 back to its pre-pandemic levels at 53 percent, which could be indicative of a discouragement effect.

Over 40 percent of workers in Bhutan remain engaged in low-productivity agricultural employment. This finding is reflected in the low-skill nature of the labor market, where 37 percent of employed workers have no formal schooling. This outcome is a consequence of the hydropower-led growth model, which is not labor-intensive. It thus does not tempt workers to leave agriculture, nor does it directly affect agricultural productivity. Therefore, the labor demand in agriculture

remains unaffected¹ and structural transformation occurs slowly. Between 2013 and 2022, the share of agriculture in total employment fell from 57 percent to 44 percent. Meanwhile, public sector employment grew to absorb educated and urban workers, comprising 25 percent of total employment. As a result, the labor market in Bhutan is heavily segmented along the lines of gender, location, and education. Men and high-skilled workers in urban areas dominate public sector employment, while female, low-skilled, and rural workers are more likely to remain employed in agriculture as self-employed or family workers, with limited options for upward mobility.

Outside of the public sector, poor employment quality persists in the nonagricultural economic sectors in urban centers. An assessment of job quality through the lens of hours worked finds that overwork (working more than 48 hours a week) is prevalent and affects 63 percent of the workforce. Overwork is concentrated in certain economic sectors where vulnerable types of employment (such as self-employed and family workers) tend to dominate. These sectors include construction, wholesale and retail trade, transportation, and accommodation and food services. A look at employment quality through the lens of the benefits attached to a job reveals that one out of three salaried employees have no written contract from their employer, accounting for over 11 percent of workers in Bhutan (and 23 percent of workers in urban areas). Manufacturing, construction, wholesale and retail trade, and accommodation and food services (where overwork is more prevalent) account for 55 percent of nonwritten contracts.

In response to the limited attractive options for the fast-growing cohorts of educated workers outside of the public sector, the rise of unemployment in urban areas that began in 2019 continued in 2022. Although there is no evidence that the unemployed have unrealistic wage expectations, the majority prefer public

sector jobs over private sector ones. In addition, a large number of Bhutanese workers have migrated since 2022 or have plans to migrate. The average number of those migrating increased significantly to more than 5,000 a month in early 2023, compared with less than 500, on average, one month prior to the pandemic. One out of 10 NEET individuals plans to migrate abroad.

Message 2: The private sector in Bhutan faces the twin challenges of accelerating job creation in productive sectors that can absorb the increasingly educated workforce, while also improving the allocation of labor to fill existing vacancies in low- and semi-skilled positions.

The underdeveloped private sector is dominated by low-productivity microenterprises—one of the main reasons for the high unemployment rate among skilled professionals. It also contributes to the low quality of employment outside the public sector and may explain in part the speed and scale of outmigration in recent months. Over 95 percent of registered firms in the private sector have five employees or fewer, and they do not grow over time. Close to 75 percent of firms with fewer than five employees have been operating for one to nine years. Firms are also geographically concentrated (69 percent of them are in Thimphu, Gelephu, or Punakha) and are not sufficiently diversified in terms of economic activity (80 percent are in the wholesale and retail trade and accommodation and food services sectors). These dominant economic sectors have, on average, low labor productivity.

Meanwhile, the private sector is undergoing labor shortages, despite rising unemployment. Labor shortages stem from two imbalances in the labor market. First, the profiles of available or future vacancies in the private sector do not match those of the current job-seekers in Bhutan. Today, most firms are hiring to fill low-skilled occupations, and about one-third of firms expect to have new vacancies in the next one

1. This argument is elaborated on in the forthcoming Country Economic Memorandum: Bhutan (World Bank, forthcoming a).

or two years. Firms will need workers with a low to medium level of education and specific technical skills (through certificates or diplomas) to mainly fill positions in services and sales and craft and related trades. On the supply side, only 10 percent of job-seekers have no education, and the majority have completed a secondary education. There is also a severe shortage of job-seekers with certificates. Second, a large number of low- or semi-educated workers who could fill the vacancies are either outside the labor force (mostly women), or are engaged in low-productivity livelihood activities (as self-employed workers). There is also evidence that some Bhutanese workers apply high reservation wages to jobs in certain vacant occupations, particularly in the construction sector. Therefore, making the available low-skilled positions more attractive and accessible to Bhutanese workers, especially women in urban areas, is an important priority.

As a result of labor shortages, approximately one-third of firms in Bhutan faced hiring difficulties in 2022, mostly due to few or no applicants. Findings show that labor shortages may have a spatial dimension. Regions that report the most hiring difficulties (Samdrup Jongkhar and Trashigang) also have tight labor markets (that is, they have more employed workers than job-seekers for the education categories in demand). Although cross-*dzongkhag* (district) mobility for work is common and could alleviate some of the observed spatial mismatches, it is less common among low-skilled workers. Reasons for that could include mobility, financial, skilling, or informational barriers that may prevent workers from moving to regions where some of those wage opportunities exist. Hiring low-skilled workers from neighboring countries could address worker shortages, but only 7 percent of firms hired at least one foreign worker in 2022, and that percentage has declined over time. In addition, over 90 percent of firms noted that they have no links to public vocational or training institutions to help meet their demand for skilled workers with technical and certificate-level education. A sizable share of firms noted

that hiring difficulties negatively affect firm performance and potential for growth.

Firms also face many other barriers to their growth that relate to investment climate factors and labor regulations. The extent to which some of those barriers are binding varies by firm size, which may require a tailored approach to supporting private sector development. Among smaller firms, access to finance, markets, and raw materials appears to be a major constraint. According to the 2017 “Investment Climate Assessment of Bhutan” (Santini, Tran, and Beath 2017), some Bhutanese firms are unable to access a loan due to lack of credit information and due to the complex, unpredictable, and ineffective restructuring and insolvency regime. Access to markets is also hampered by trade and logistical deficiencies and limited foreign investment. For larger firms, stringent labor regulations, high worker turnover, and market wage level are more prominent difficulties. Finally, private sector activity may be hampered by a competition policy that encourages the dominance of state-owned enterprises in key economic sectors.

Message 3: Bhutan’s employment support programs and delivery systems face gaps in addressing some of the challenges related to the activation of women, limited job-relevant skills, and the difficulties firms face in accessing trained labor.

Although Bhutan has improved its employment programs and policies over the last few years, significant gaps remain. Most active labor market programs remain small and do not specifically focus on the activation of women by alleviating some of the childcare or mobility constraints they face. Although the technical and vocational education and training (TVET) system is relatively well established, it remains too small to meet the existing labor demand. For example, there were only 401 TVET graduates in 2022. Tracer surveys reveal that over 45 percent of graduates remain unemployed one year after completing training and that employers have no links to most TVET institutes (MoESD 2023a).

Meanwhile, Bhutan's five employment services centers (ESCs) are not empowered enough to play a pivotal role in job placement and matching. Most ESCs have capacity gaps that limit the services offered. They also lack proper equipment and resources. Finally, although Bhutan has a new labor market information system (LMIS), it is still in its early stages and does not yet generate comprehensive data on the labor market. The key challenges include a lack of clarity on the extent to which data sharing arrangements are in place between the entity administering the system and the ministries that collect and store labor market data. In addition, there are information gaps in the LMIS in key areas, such as vacancies and their distribution by occupation/

sector, as well as returns to education and occupational skills.

Message 4: Addressing Bhutan's labor market challenges requires pursuing vertical growth policies that are sector-specific to support private sector development and job creation. In parallel, horizontal reforms that improve the business environment, strengthen human capital accumulation, and increase the effectiveness of employment support programs are needed.

Table ES.1 summarizes the policy directions suggested to address Bhutan's the labor market challenges.

Table ES.1. Policy directions to address challenges in the labor market

Challenge	Underlying constraint	Suggested policy direction
Limited productivity and job creation in the private sector, which partly explain the speed and scale of recent outmigration	Bhutan's hydropower-led growth model has had negative implications for the development of productive sectors outside of agriculture and the public sector.	Pursue a vertical approach to promoting the growth of promising job-rich sectors. At the same time, implement horizontal reforms across all sectors to improve the productivity of small firms and support their growth. These reforms include (1) strengthening entrepreneurship by facilitating access to finance, mentorship, and links to supply chains and markets; (2) governance reforms related to the investment climate, foreign direct investment, and the efficiency of state-owned enterprises; and (3) labor market reforms to promote flexible labor regulations that can support worker mobility and firms' access to labor, as well as a functional labor market information system (LMIS) that can regularly identify skills in the labor market and support hiring needs for start-ups.
Limited human capital accumulation	The productivity of Bhutan's workforce is undermined by low levels of human capital that stem in part from unequal and inadequate access to quality foundational human capital services, especially for disadvantaged families in rural areas.	Targeted government resources are needed to ramp up investments in early childhood education, nutrition, and development. Low-income young mothers benefiting from employment support could be linked to other human capital programs to strengthen maternal and infant health.
Limited human capital utilization	The productivity of agricultural workers is low. In urban areas, there is a suboptimal allocation of labor to meet employers' hiring needs.	In rural areas, the provision of coordinated economic inclusion services could support improvements in agricultural productivity. In urban areas, the following efforts are needed to strengthen employment support programs: (1) reorient the technical and vocational education and training sector to improve the links with the private sector; (2) allocate the appropriate resources to improve the capacity of employment services centers to establish relationships with local employers, engage in vacancy collection, and provide services such as on-the-job assistance, counseling, and mobility support for low-skilled workers; (3) implement programs to bridge the gap between labor supply and demand, such as on-the-job training; and (4) enhance the capacity of the existing LMIS to reduce data gaps and better understand the profiles of workers and how they align with the skills and occupations demanded by the private sector, thereby reducing skill mismatches.

Chapter 1

Overview

Jumana Alaref, Alvin Etang Ndip, and Phillippe Leite

Introduction

Globally, labor markets and productivity growth have been hit by multiple crises, including most recently the macroeconomic volatility and economic fallout associated with the COVID-19 pandemic. Average economic growth worldwide could slump to a three-decade low through 2030 because overlapping crises of the past few years have disrupted economic growth trajectories and slowed employment and productivity, which are essential for income growth and higher wages (Kose and Ohnsorge 2023). As a result, countries are facing the immediate challenge of rethinking their national policy plans and reformulating their labor market priorities to ensure a quick recovery. At the same time, they need to tackle the long-running structural challenges to boost investment, productivity, and economic growth.

Bhutan, a small mountainous, landlocked country (population, about 770,000) bordered by India and China is no exception. In recent years, the Royal Government of Bhutan (RGoB) has advanced structural reforms through implementation of its 12th Five-Year Plan (FYP) (2018–23). The plan placed a strong emphasis on creating productive, gainful employment and on enhancing private sector diversification. However, recent shocks from the COVID-19 pandemic and global

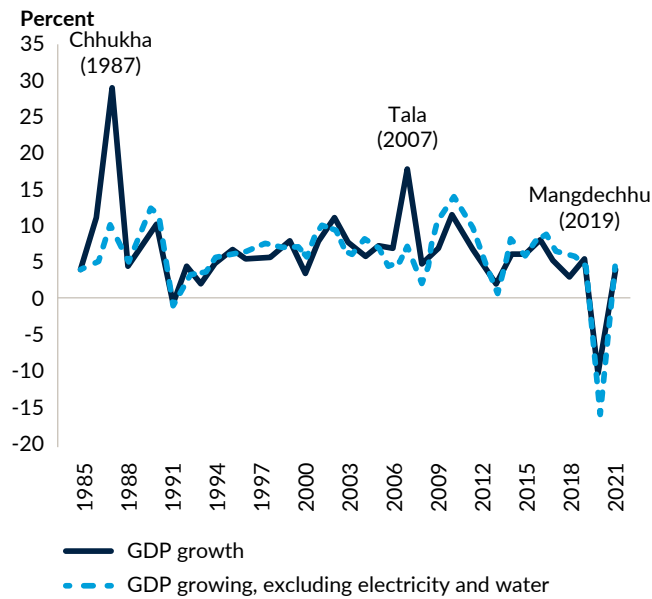
macroeconomic volatilities disrupted these efforts, despite a swift government response in the form of easing social and mobility restrictions and continued fiscal support. In addition, the RGoB continues to face several structural challenges that could further complicate the recovery process.

A key structural challenge facing Bhutan is the reliance of its growth model on the hydropower sector. Bhutan's economy grew at an average annual rate of 7 percent between 2001 and 2019, driven by the expansion of the hydropower sector since the mid-1980s. Figure 1.1 reveals that the growth of Bhutan's gross domestic product (GDP) has been heavily driven by its hydropower sector, and episodes of high growth have largely coincided with the launch of hydropower projects.² Hydropower accounts for more than a third of the country's goods exports and domestic revenue and constitutes 26 percent of its GDP.

Growth in the non-hydro sector averaged 7 percent from 2001 to 2019 (lower than the 9 percent growth of the hydro sector during the same period). It was driven by the services, construction, and manufacturing industries. Growth in services was driven by public administration (including health and education), trade and transport (accounting for 75 percent of growth), followed by the financial sector (including real estate). Since 1974, Bhutan has targeted high-value tourism to

2. The commissioning of the Chhukha and Tala hydropower plants resulted in discrete jumps in the growth rate.

Figure 1.1. Impact of hydropower on GDP, 1985–2021



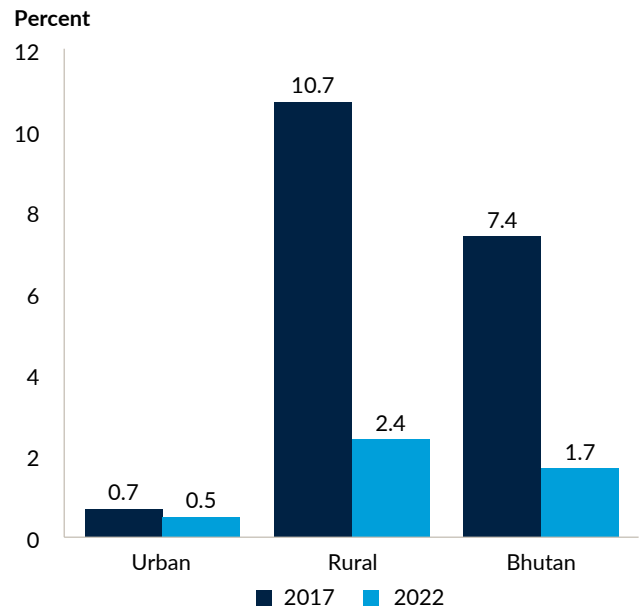
Source: World Bank, forthcoming a. Based on national sources.

minimize the impacts of growth on the environment. The hotel and restaurant sector grew at an average rate of 16 percent a year over 2001–19.

Hydropower-led economic growth has contributed to substantial and inclusive poverty reduction over the last two decades. Bhutan’s per capita income increased threefold in purchasing power parity (PPP) terms between 2000 and 2019. As a result, extreme poverty, based on the US\$2.15 a day poverty line, was eliminated by 2022, and there was a vast reduction of people living below the US\$3.65 a day poverty line (used for lower-middle-income countries) from 7 percent to less than 2 percent between 2017 and 2022 (figure 1.2). Based on the US\$6.85 a day poverty line (used for upper-middle-income countries), poverty declined from nearly 37 percent to 19 percent during this period.

The hydropower-led growth model also delivered substantial improvements in living standards over the last two decades by creating fiscal space for investing in human capital, thereby allowing Bhutan to

Figure 1.2. Poverty rate (US\$3.65/day), 2017 and 2022

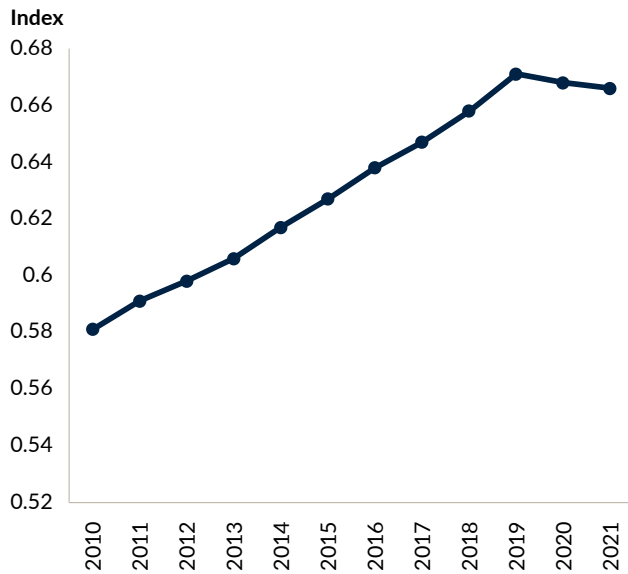


Source: World Bank, forthcoming b. Based on Bhutan Living Standards Survey (BLSS), 2017 and 2022.

significantly improve services, education, and health. In addition, GDP per capita between 1980 and 2017 grew by 7.5 percent annually—one of the highest growth rates in the world. Human development indicators improved over time as measured by life expectancy at birth, years of schooling, and gross national income per capita (figure 1.3). Educational attainment steadily increased in both urban and rural areas, and expected years of schooling increased from 12 years in 2010 to 13 years in 2021. Life expectancy at birth increased from 68 years in 2010 to 72 years in 2021. In addition, access to electricity has become almost universal. With a gross national income (GNI) per capita of US\$3,040 in 2021, Bhutan is approaching the threshold for upper-middle-income status.

However, the current growth model has had negative implications on economic diversification and remains unsustainable for many reasons. As typically observed in resource-rich economies, large foreign currency inflows during the construction and export phases of hydropower projects contributed to an appreciation

Figure 1.3. Human Development Index, 2010–21



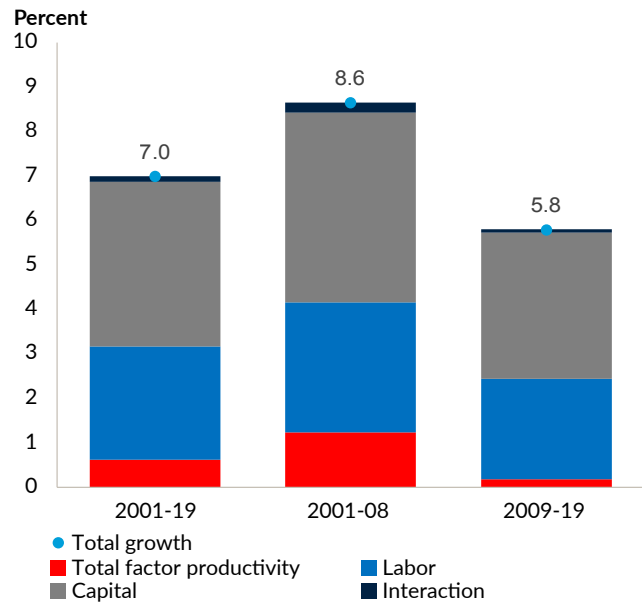
Source: United Nations Development Programme.

Note: The Human Development Index is a summary measure of the average achievement in health, education, and standard of living. The health dimension is assessed by life expectancy at birth; the education dimension by mean of years of schooling for adults age 25 years and over and expected years of schooling for children of school entering age; and standard of living dimension by gross national income.

of the real exchange rate. This appreciation has placed upward pressure on domestic prices, with adverse impacts on the competitiveness of non-hydro tradable sectors (the “Dutch Disease”)—see World Bank (forthcoming a); Boyreau and Rama (2015). In addition, the capital-intensive nature of the hydropower sector limited employment opportunities—the sector employed less than 1 percent of the labor force (World Bank, forthcoming a). In fact, a primary driver of poverty reduction in recent years is the significant improvement in living standards among rural households, which stems more from wealth redistribution and social transfers than improvements in labor market outcomes (World Bank, forthcoming b).

As a result, private sector development remains limited, and Bhutan suffers from weak productivity gains. Despite a modest acceleration in recent years, total factor productivity (TFP) plays only a minor role

Figure 1.4. Contributions of TFP, capital, and labor to economic growth, 2001–19



Source: World Bank, forthcoming a.

in driving aggregate growth, making significantly smaller contributions than capital stock and labor (figure 1.4). Limited productivity gains have slowed structural transformation. Labor remains predominantly employed by the low-productivity agricultural sector. The second major employer is the public sector, which the government used to create employment opportunities for the growing share of educated workers in urban centers, leading to greater pressure on an already small fiscal space.

Limited private sector development may also be undermined in Bhutan by its large state-owned enterprise (SoE) sector. The sector accounts for about 20 percent of total public sector employment. The total assets of SoEs amounted to 171 percent of GDP in 2020, and they remain important actors with a presence in the strategic and economic sectors, including power, telecommunications, transport, manufacturing, finance,

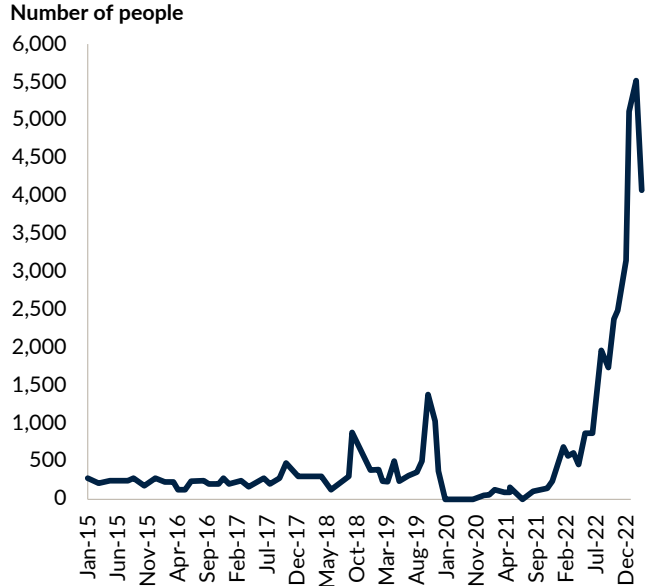
trade, agriculture, and natural resources. The SOE sector has been a critical part of the country’s development strategy since the 1960s because of its important role in providing critical services. With its geography and small population, Bhutan finds the provision of infrastructure and services costly and economies of scale difficult to achieve. However, the sector may be distorting the playing field with the private sector, so that it is unable to operate at its optimal level of efficiency (World Bank, forthcoming c).

The limited jobs available in the private sector became more pressing in the aftermath of the COVID-19 pandemic, and that is likely contributing to the alarmingly high outmigration of some professionals in Bhutan.³ Unemployment increased from an average of 3 percent in 2015–19 to 6 percent in 2022. Unemployment is significantly higher among urban women (15 percent), youth (37 percent of those ages 15–19 and 27 percent

among those ages 20–24), and those with a postsecondary education and above (12 percent). The average number of Bhutanese migrating via Paro International Airport increased significantly with the reopening of the borders in mid-2022—to more than 5,000 a month in early 2023, compared with less than 500, on average, a month prior to the pandemic (figure 1.5). This migration has raised concerns among policy makers about a brain drain, which can hinder development prospects (World Bank, forthcoming a).

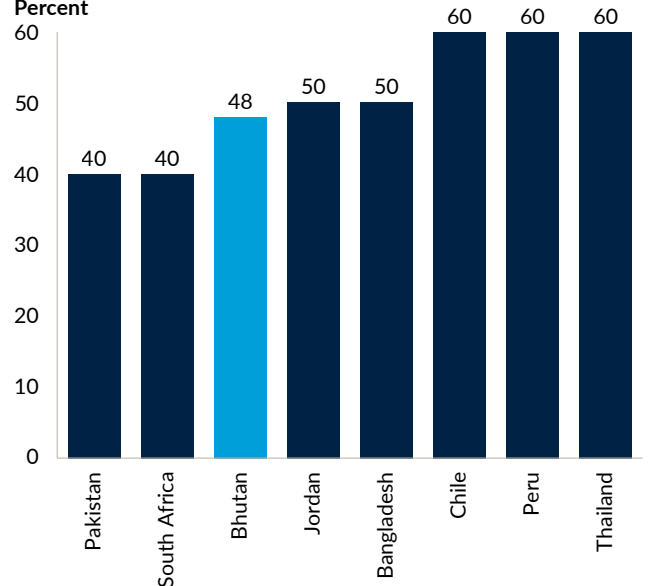
Bhutan’s structural challenges affect its ability to withstand external macroeconomic volatility and climatic shocks. Although it has maintained macro-fiscal sustainability over the last two decades, supported by large hydro revenues and external grants, the external shocks of the pandemic and the global ramifications of the Russian Federation’s invasion of Ukraine have disrupted Bhutan’s growth trajectory and exacerbated

Figure 1.5. Monthly migration through Paro International Airport, 2015–22



Source: World Bank, forthcoming a.

Figure 1.6. World Bank’s Human Capital Index, Bhutan and selected countries



Source: World Bank 2020b.

3. That said, a combination of push and pull factors could be driving outmigration, and this phenomenon may not be limited to high unemployment. For example, anecdotal evidence suggests that outmigration is high among employed workers because a high share of public sector employees are migrating in response to the high wage differential between opportunities in the domestic market and abroad. Without comprehensive data on the profile of recent migrants, the team cannot make a further assessment.

structural challenges. The trade and tourism dependence of the small landlocked economy has left it susceptible to the pandemic-induced shocks.⁴ In addition, with its vulnerable mountain terrain and volatile ecosystems, the country is susceptible to a variety of natural hazards. These include earthquakes, glacial lake outburst floods, as well as seasonal hazards such as landslides and flash floods during the monsoon season and forest fires during the dry winters.

Bhutan's vulnerability is further exacerbated by chronic human capital challenges that persist despite progress over the years and significant spending on health and education (figure 1.6). A child in Bhutan will be only 48 percent as productive in adulthood as he or she could have been with a complete education and better health care. Low human capital is driven by chronic poverty that remains more prevalent in certain pockets, such as rural areas and across *dzongkhags* (districts). The poverty rate (less than US\$3.65 a day) is as high as 11 percent in Zhemgang and 4 percent in Samdrup Jongkhar.⁵ The share of the per capita real expenditure of the richest quintile in Bhutan is more than four times higher than that of the poorest, suggesting that progress could still be made in terms of shared prosperity (World Bank, forthcoming b).

Low levels of human capital also stem from unequal and inadequate access to quality foundational human capital services. For example, pre-primary enrollment remains low, at 28 percent, with high regional disparities (figure 1.7, panel a).⁶ When years of schooling are adjusted to quality of learning, the years of schooling standards are, on average, six, which is a level considerably lower than those of comparable countries (figure 1.7, panel b). Moreover, the demand for and quality of health services related to maternal, newborn, and child health and nutrition services continue to lag, especially among low-income households and in rural areas. Stunting, for example, is high on average, with over a fifth of children under age five suffering from stunting (WFP 2022). Figure 1.7, panel c, presents several lagging maternal and child health outcomes that are below the Sustainable Development Goals (SDGs).

These challenges will make it difficult for Bhutan to reap the demographic dividend. Figure 1.8 shows that Bhutan has a favorable age structure as half of the population is under the age of 29. However, the dividend may not be fully realized when a large segment has low levels of human capital, and many working-age individuals are not employed productively. They cannot therefore use their skills and protect themselves from various shocks along the life cycle.

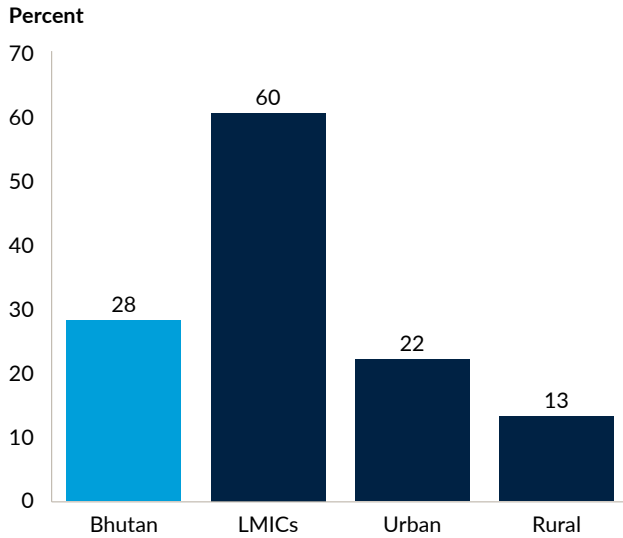
4. After contracting by 2.3 in fiscal 2019/20 and 3.3 percent in fiscal 2020/21, respectively, Bhutan's economy is recovering from the pandemic. Output grew by 4.6 percent in fiscal 2022/23, supported by the reopening of borders to tourism in September 2022.

5. The poverty rate is, however, less than 0.2 percent in Paro, Punakha, Thimphu, and Trashi Yangtse.

6. According to the Bhutan Living Standards Survey 2017, 22 percent of urban children have attended primary, early childhood care and development (ECCD), or daycare, compared with only 13 percent of rural children.

Figure 1.7. Education and maternal and child health outcomes, Bhutan and LMICs

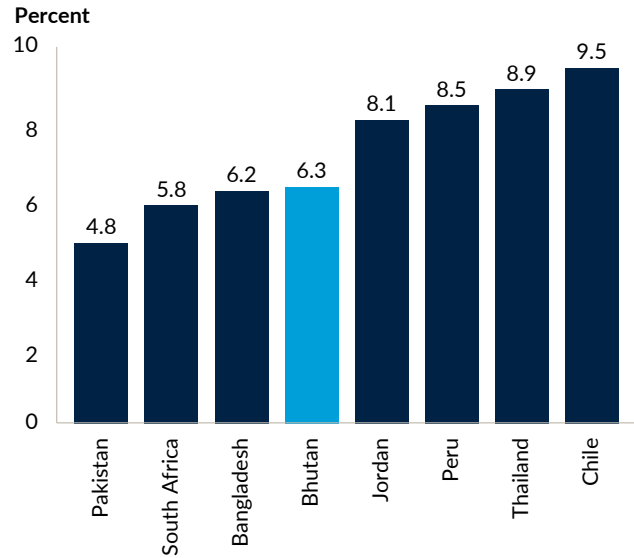
a. Pre-primary enrollment, Bhutan and LMICs



Source: World Bank 2020b.

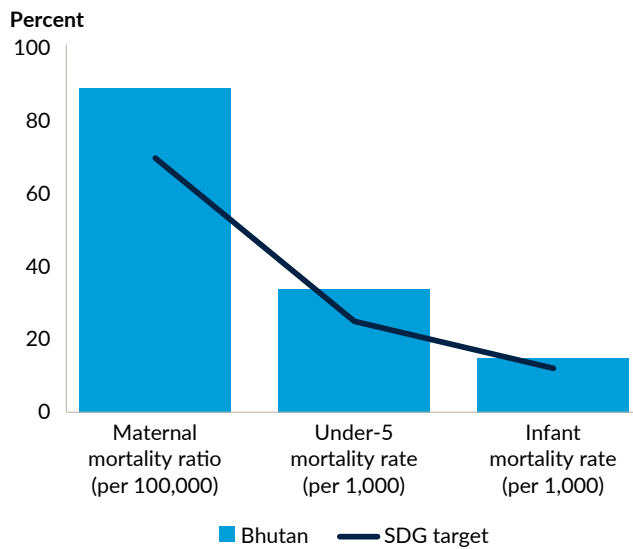
Note: LMICs = low- and middle-income countries.

b. Learning-adjusted years of schooling, Bhutan and selected countries



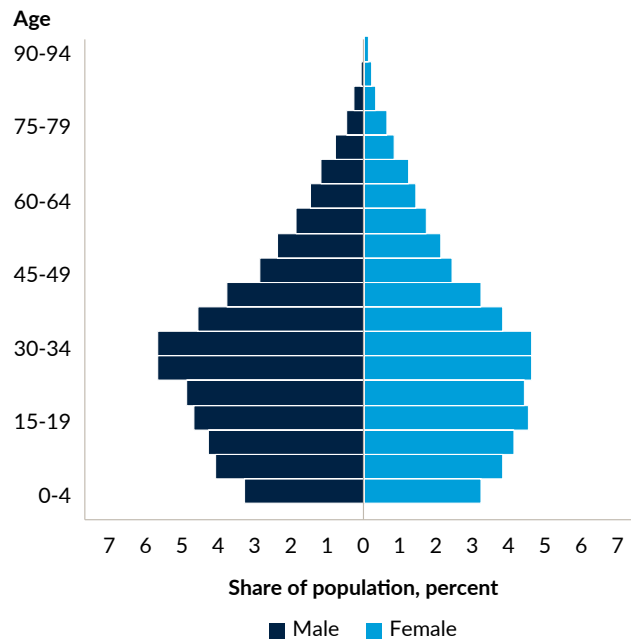
Source: World Bank 2020b.

c. Maternal and child health outcomes, Bhutan



Source: Annual health bulletin, 2020.

Figure 1.8. Population pyramid, Bhutan



Source: UNDESA 2022.

1.1 Objectives of the report

With a renewed push to address these structural challenges, the RGoB is currently working on its 13th FYP, and strategies related to improving employment outcomes and productivity will likely be at its forefront.

The objective of this report is to support the RGoB labor market agenda and inform the design of the programs, policies, and strategies associated with the 13th FYP. To this end, the report provides an update on the labor market in Bhutan that reflects the impact of various shocks in recent years.⁷ It examines the labor market before, during, and after the pandemic to improve understanding of the most pressing challenges at the recovery stage, and it looks at ways to mitigate them. The report also assesses Bhutan's employment systems

and programs aimed at addressing some of the challenges faced by workers and firms.

The report uses three data sources: (1) yearly cross-sectional, nationally representative data (2013–22) from the Bhutan Labor Force Survey (BLFS), conducted by the Bhutan National Statistics Bureau; (2) the nationally and regionally representative Establishment Survey (ES) conducted in 2022 by the Ministry of Labor and Human Resources (MoLHR);⁸ and (3) administrative program-level data from the Ministry of Education and Skills Development (MoESD) and the Ministry of Industry, Commerce, and Employment (MoICE). Data are analyzed by applying statistical methods that are mostly standard in microeconomic research. The report also synthesizes the existing literature for Bhutan and draws on published statistics for the country, such as the 2022 National Accounts Statistics and 2018 Economic Census, among others. Appendix A provides information on the two primary data sources, the ES and BLFS.

This report has three limitations. First, it does not address granular, firm-level productivity and its relationship to the capacity of firms to create more, better, and more inclusive jobs in view of the absence of productivity data in the ES. Second, it does not include a review of Bhutan's labor regulations and their effects on the capacity of the private sector to create jobs. Although chapter 3 looks at firms' perceptions of the extent to which labor regulations act as a barrier to growth, a deeper review entails a separate, stand-alone assessment. And, third it does not include a detailed analysis of economywide or sector-specific constraints to job creation related to connectivity and logistics, liberalization of trade and foreign direct investment, land policies, and distortive subsidies because this report does not aim to be exhaustive in its review of all job creation constraints.

7. The last update on the labor market was prepared by the World Bank in 2016 (World Bank and MoLHR 2016).

8. The 2022 ministerial reform led to the dissolution of the Ministry of Labor and Human Resources (MoLHR) in January 2023. The Departments of Labor, Employment, and Entrepreneurship were moved to the newly established MoICE and the Department of Skills to MoESD.

1.2 Structure of the report

Chapter 2 uses 10 waves of the BLFS to analyze the evolution of labor supply from 2013 to 2022 with a focus on labor force participation, skills composition, unemployment, and employment. It also addresses constraints to labor force participation and highlights the unemployment challenges facing youth and educated workers. The chapter concludes with an assessment of employment quality from the perspective of hours worked, wages, and informality and the extent of worker mobility in Bhutan.

Chapter 3 explores the degree to which the challenges facing workers stem from limited productive opportunities created by the private sector. It analyzes the characteristics of registered firms in Bhutan as well as past patterns of job creation and destruction. It also examines key occupation and education categories expected to be in demand in the near future and compares them with the profile of the labor force discussed in chapter 2. In doing so, it highlights potential skill mismatches in the labor market, and as a result, the hiring difficulties and supply shortages faced by firms. Finally, the chapter looks into firm business management practices and the difficulties firms encounter in expanding their growth.

Chapter 4 examines the extent to which programs and delivery systems are effective in addressing some of the challenges outlined in chapters 2 and 3 facing both workers and firms. The chapter considers four key components in its review:

1. Active labor market programs (ALMPs), which aim to bring inactive women into employment and engage employers more strongly with job-seekers. These typically include skilling programs, on-the-job training, and hiring incentives for employers such as wage subsidies.
2. Technical and vocational education and training (TVET), which has an important role in training workers at the postsecondary level and delivering high-quality courses that are certified and strongly linked to private sector demand.
3. Employment services centers (ESCs), which serve as the bridge between labor supply and labor demand by actively aiding in job placement, job matching, and implementing some ALMPs.
4. A well-functioning and up-to-date labor market information system (LMIS) that can both support evidence-based policy making on workforce training needs and employment promotion services. It can also support better matches between labor demand and labor supply by producing data on the profile of workers, as well as on the skills and occupations demanded by the private sector.

Chapter 5 concludes the report by offering directions for orienting public policies and programs to address the constraints facing workers and employers in Bhutan.

Finally, the appendixes provide details on the sources of data used in this study, supplementary figures and tables for chapter 2, and additional information on the public-private wage differential in Bhutan.

Chapter 2

Profile and Challenges Facing Workers in Bhutan

Laurine Martinoty and Jumana Alaref

Introduction

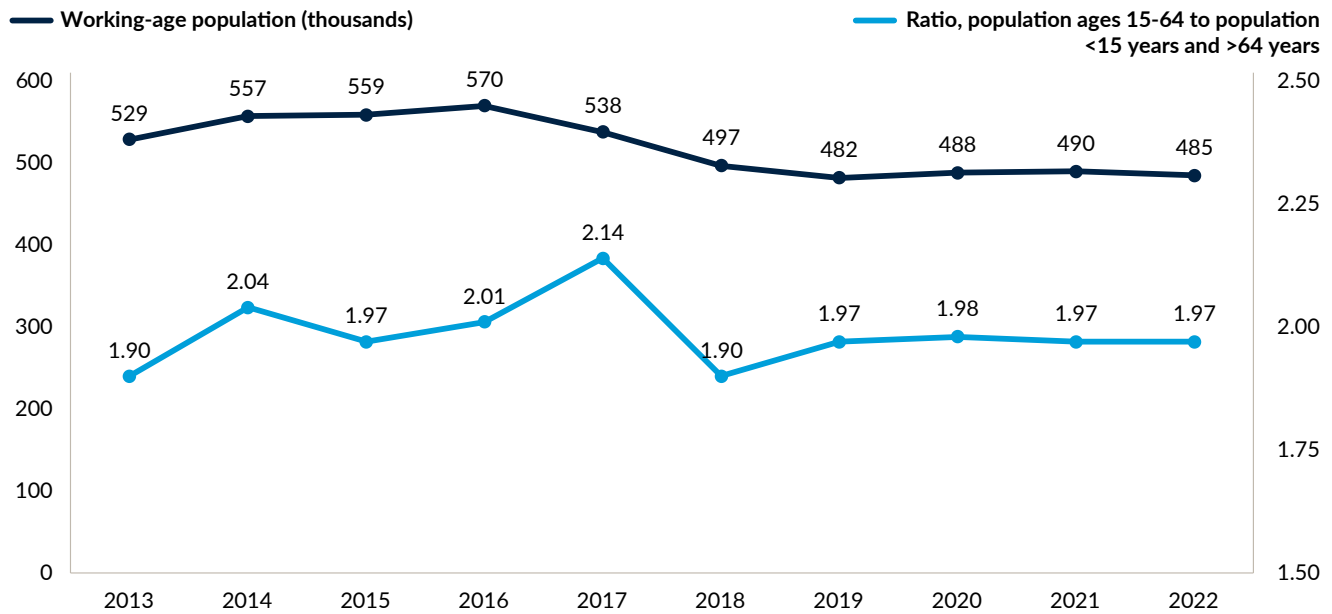
In this chapter, 10 waves of the Bhutan Living Standards Survey (BLFS) are used to analyze the evolution of Bhutan's labor supply from 2013 to 2022. Section 2.1 discusses trends in key labor market indicators over the last 10 years, covering the COVID-19 pandemic and its aftermath. These indicators include the growth of Bhutan's working-age population in terms of size and education gaps, labor force participation, unemployment, and employment. Section 2.2 focuses on current labor force participation over the full life cycle of men and women, and it explores the differences by gender, age, and location. Section 2.3 examines the unemployment challenges among young and educated workers and the drivers of them. Sections 2.4 and 2.5 detail the current sectoral and occupational composition of Bhutan's employment and measures the quality of employment in terms of hours worked, wages, and informality. Lastly, section 2.6 explores the extent of worker mobility in Bhutan to help promote better employment opportunities.

2.1 Evolution of the labor market over the last 10 years

Since 2013, the size of the working-age population has fallen, but the demographic dividend has remained the same.

Although the size of the working-age population has been decreasing since 2013, the number of individuals ages 15–64 in the workforce relative to the number of dependents under age 15 or above age 64 has remained stable. According to figure 2.1, in 2013, 529,000 persons were of working age, declining to roughly 485,000 in 2022. At the same time, the demographic dividend—that is, the share of the working-age population relative to younger or older dependents—remained stable over the years.

Figure 2.1. Working-age population and ratio of individuals ages 15–64 to dependents under 15 and above 64, 2013–22



Source: Bhutan Labor Force Survey, 2013–22.

Over the years, the skill level of working-age men and women has increased rapidly, faster in urban areas than in rural areas.

The skill level of the working-age population, both men and women, increased rapidly between 2013 and 2022. Figure 2.2, panel a, displays the distribution of education levels by sex and birth cohort in 2022 and suggests that the closing of the gender gap in education is a slow but positive phenomenon. Men born in 1950–59 and 1960–69 were six times and four times more likely, respectively, to be educated than women of the same generation. For men born in 1970–79 and 1980–89, this relative chance decreases—they are 2.4 and 1.5 times more likely, respectively, to graduate than women of their generation. Men and women of the most recent cohort have almost the same chance of

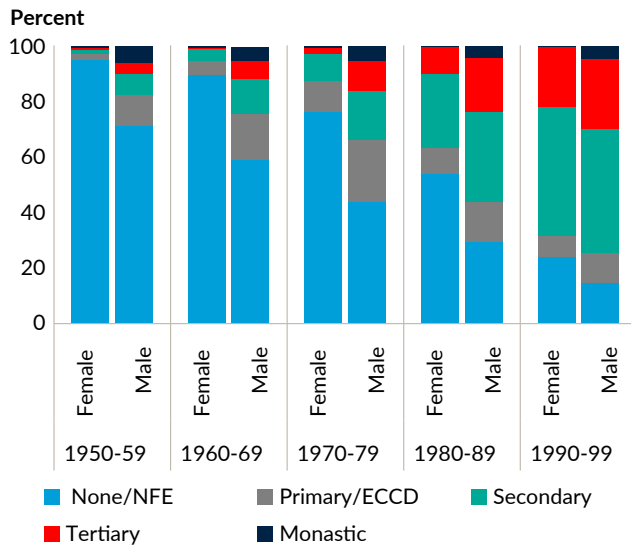
accessing education: the odds ratio for 2022 is only 1.2 for men and women ages 23–32. Figure B.1 in appendix B shows that between 2013 and 2022 the share of men and women without a diploma fell by 10 percentage points, while the share of those with a tertiary degree rose by a factor of two.

The rural-urban gap in education persists, with rates in urban areas rising faster than in rural areas. Figure 2.2, panel b, reveals that the share of uneducated men and women was originally higher in rural areas (87 percent) than in urban areas (67 percent) with a relative risk of 1.3 for rural dwellers born between 1950 and 1959.⁹ This share declined at a slower pace in rural areas (28 percent in rural areas versus 11 percent in urban areas for the birth cohort 1990–99, with an increased relative risk of 2.5). The education gap has closed for the

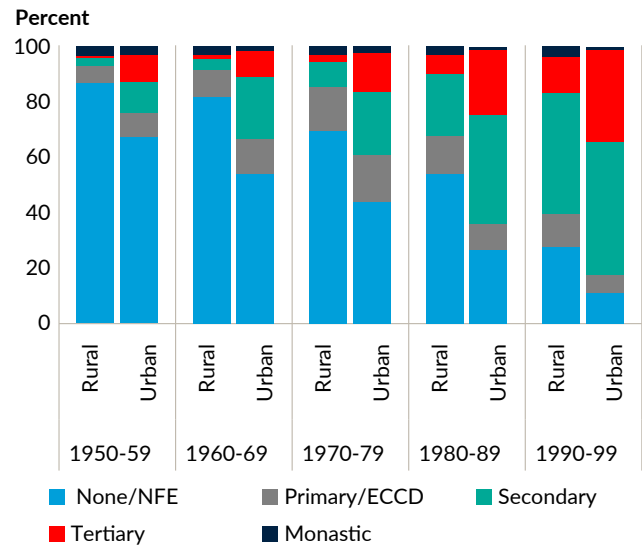
9. The relative risk is the ratio of the probability of an outcome in a group to the probability of an outcome in another group. Presented here is a comparison of the probability of rural and urban dwellers being uneducated at different points in time: $0.87/0.67 = 1.3$ for the older cohort and $0.28/0.11 = 2.5$ for the younger cohort. A relative risk above 1 indicates that rural dwellers are more uneducated than urban dwellers, and the fact that the relative risk increases over time shows that the gap in relative education increased between these two groups, even though the probability of being uneducated decreases in time for both rural and urban men and women.

Figure 2.2. Education level of the working-age population, 1950–99

a. By gender and birth cohort



b. By rural/urban location and birth cohort



Source: Bhutan Labor Force Survey.

Note: ECCD = early childhood care and development; NFE = nonformal education.

middle-skill level as evidenced by the young cohort, whose rural and urban members are almost equally likely to be high school graduates. However, even for this young cohort, the proportion of individuals with only a primary school diploma remains twice as high in rural areas as in urban areas, and they are two to three times less likely to be university graduates.

During the pandemic, labor force participation rose, driven mostly by the entry of women in both urban and rural areas. In 2022, the participation rate dropped back to its pre-2019 level.

Between 2013 and 2018, the labor force participation rate¹⁰ in Bhutan was stable at 63–65 percent, followed

by a rapid increase from 2019 to 2021 and a decline in 2022. The labor force participation rate in Bhutan trended upward from 2013 to the height of the pandemic, after which it dropped from 69 percent in 2021 to 63 percent in 2022.

The rising labor force participation rate between 2019 and 2021 and its decline in 2022 was mostly driven by women. According to figure 2.3, panel b, the male labor force participation rate grew slowly but steadily from 2013 to 2022. The female labor force participation rates ebbed and flowed between 2013 and 2018, ranging between 54 and 59 percent, and increased to 65 percent in 2021. In 2022, 53 percent of women in Bhutan were in the labor force, compared with 73 percent of men. The gap between women’s and men’s labor supply declined between 2019 and 2021, as

10. The definition of labor force participation rate does not exclude subsistence activities for household consumption. The 2021 BLFS includes a new question for households in agricultural farming (“Are these products intended mainly for sale or for family consumption? [1] only for sale [2] mainly for sale [3] mainly for family consumption [4] only for family consumption.”) It aligns more closely with International Labour Organization (ILO) recommendations on excluding consumption activities from labor force participation. This definition is not used in this chapter because some questions around inactivity motives were not captured. The difference in participation across definitions is not significant (see figures B.2 and B.3 in appendix B).

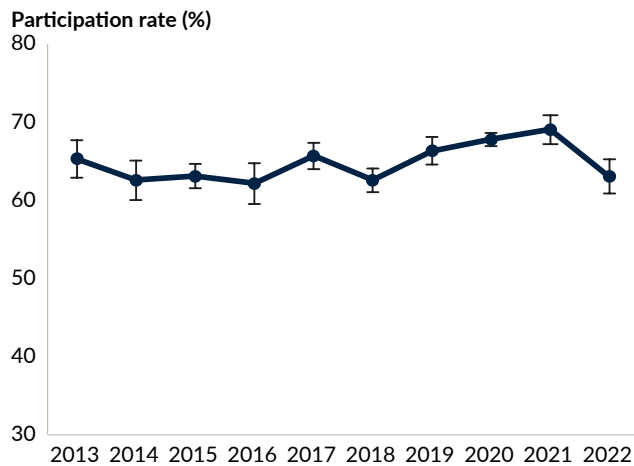
women increased their participation rates. However, the gap increased to 20 percentage points in 2022 as the supply of women's labor went down and men's remained constant at high levels.

The rise and subsequent fall of the female labor force participation rate applies to both urban and rural areas. Figure 2.3, panel c, shows that the male labor force participation rate in rural and urban areas did not fluctuate significantly between 2013 and 2022. Meanwhile, the gap in participation rates between both areas fell

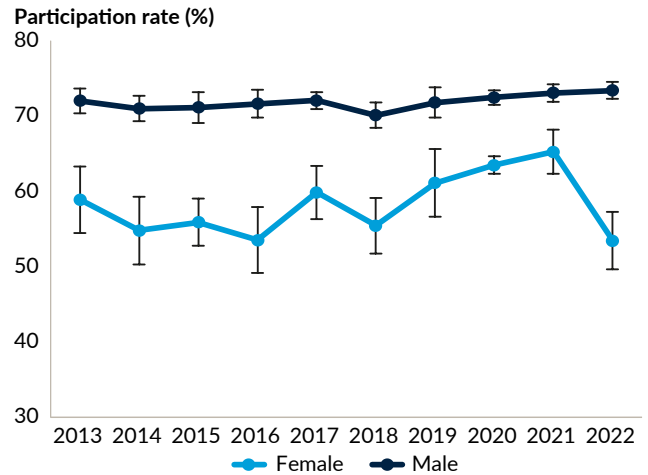
between 2019 and 2022, driven by rural men catching up with urban men and increasing their labor supply. By contrast, women's labor supply saw substantial fluctuations. The trend in the growth of women's labor supply from 2013 to 2022 followed the same pattern in both urban and rural areas, as shown in figure 2.3, panel d. Both rates increased between 2019 and 2021, although the labor supply of urban women increased at a faster rate. In 2022, women's labor supply rates in both areas fell back to their pre-2019 levels.

Figure 2.3. Labor force participation (LFP) rate, by gender and location, 2013–22

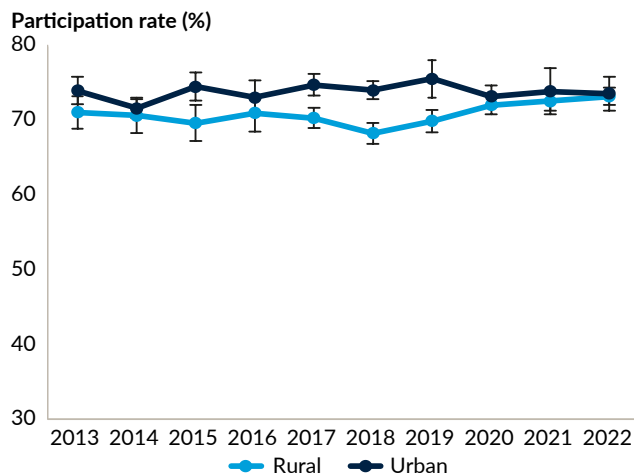
a. Overall LFP rate



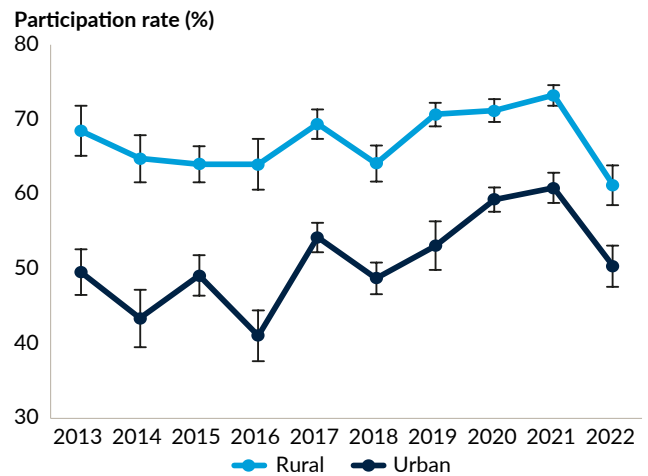
b. LFP rate, by gender



c. LFP rate, males, by location



d. LFP rate, females, by location



Source: Bhutan Labor Force Survey, 2013–2022.

Men’s labor force participation rate for all education groups trended upward from 2018 to 2022, while women’s labor force participation rate climbed for all education groups before it fell in 2022 for those with a secondary education and below. For males (figure 2.4, panel a), the labor force participation rate increased over the years at all education levels. For females (figure 2.4, panel b), the rate increased for all education groups until 2021, when it dropped back to its pre-COVID-19 levels, apart from those with tertiary education who saw their participation rate grow until 2022. This rise may indicate that highly educated women have become more attached to the labor market, whereas women with lower levels of education left the labor market in the aftermath of the pandemic.

There is limited evidence to suggest that the increase in women’s labor force participation during the pandemic stemmed from an additional worker effect—that is, an increase in the labor supply of married women after their husbands lost their jobs because of COVID-19. Data on past employment histories reveal that

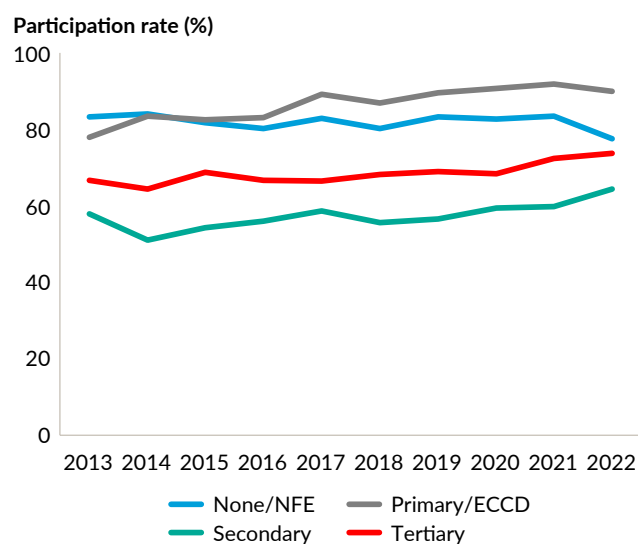
transitions from inactivity to participation accounted for 3.5 percent of total participation in 2020, compared with 2.3–2.4 percent in 2018 or 2019, suggesting an additional worker effect. However, as shown in table B.1 in appendix B, women entering the workforce in 2020 were younger, better-educated, and with fewer family responsibilities than women entering the workforce in 2018 or 2019, contradicting the additional worker hypothesis.

The employment rate between 2013 and 2022 for both men and women was similar in trends to the labor force participation rate. During the pandemic, the increase in employment was enabled by the significant increase in labor force participation.

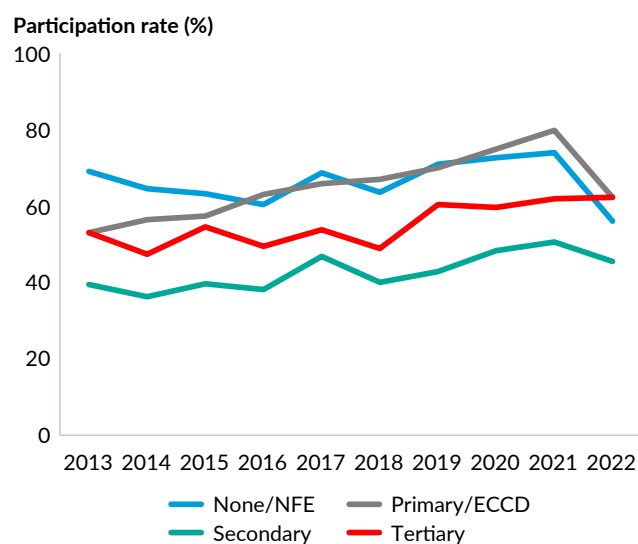
Similar to the labor force participation rate,¹¹ the employment rate among the working-age population rose during 2019–2021 before declining in 2022. Figure 2.5, panel a, shows that from 2018 to 2021 the

Figure 2.4. Labor force participation (LFP) rate, by gender and education, 2013–22

a. LFP rate, males, by education



b. LFP rate, females, by education

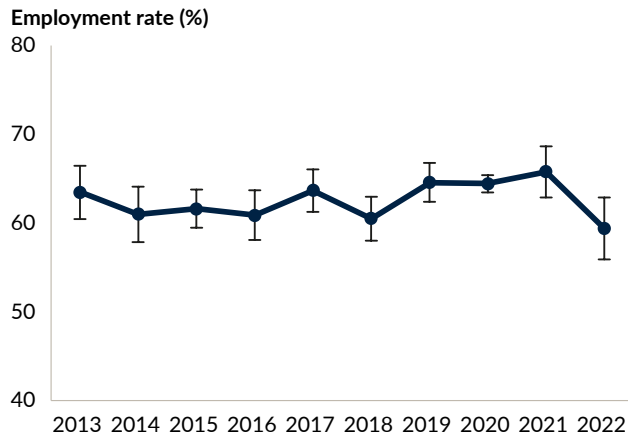


Source: Bhutan Labor Force Survey, 2013–22.

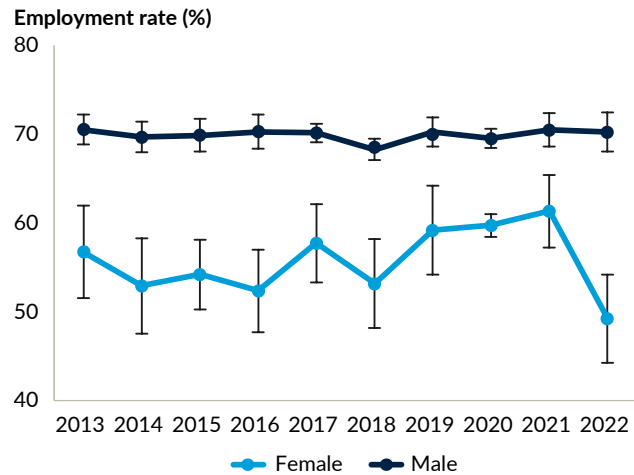
11. The labor force participation rate and the employment rate in Bhutan follow the same trends because the overall unemployment rate is not very high.

Figure 2.5. Employment rate, overall and by gender, 2013–22

a. Overall employment rate



b. Employment rate, by gender



Source: Bhutan Labor Force Survey, 2013–22.

employment rate among the working-age population increased by 5 percentage points, reaching 66 percent in 2021, before dropping to pre-2019 levels, 59 percent in 2022. Figure 2.5, panel b, shows that the male employment rate has been consistent over the years at about 70 percent, whereas the female employment rate increased during the pandemic, to almost 60 percent, and dropped back to 49 percent in 2022.

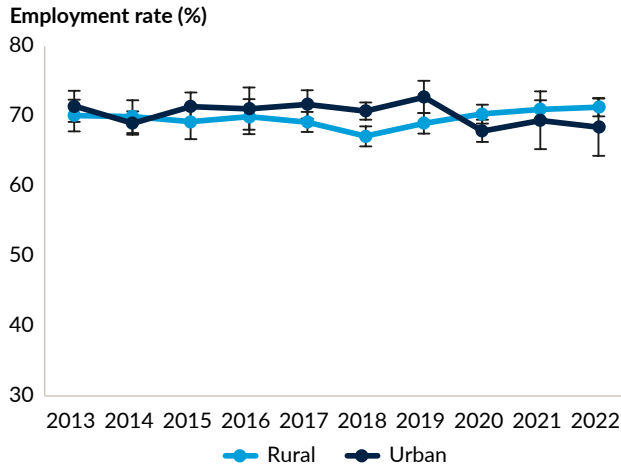
Female employment in both urban and rural areas increased between 2019 and 2021, before declining again in 2022, whereas male employment saw limited fluctuations in line with the male labor force participation rate. Figure 2.6 shows that for men, the urban employment rate went down slightly, to below 70 percent, during 2019–2021, whereas the rural employment rate remained on an upward trajectory and increased to 71 percent in 2022. On the other hand, the employment rate for women in both urban and rural areas increased between 2019 and 2021. The urban employment rate for women was 40 percent in 2022, or considerably lower than the rural employment rate for women, 55 percent.

At the intensive margin of employment, only a few adjustments were evident during the pandemic because the number of hours worked, proportion of part-time jobs, type of jobs, and monthly wages were only mildly affected.

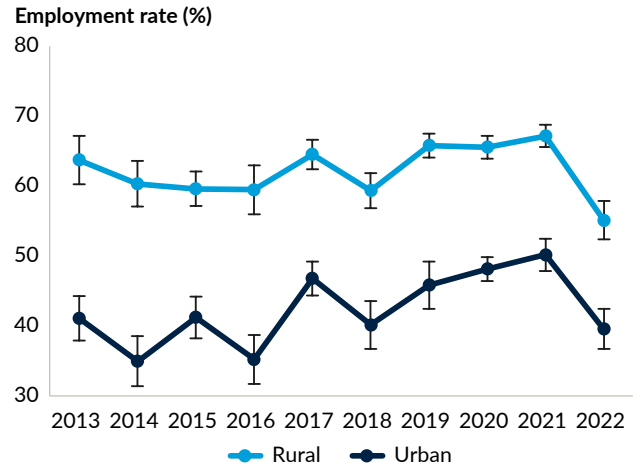
Workers adjusted slightly at the intensive margin during the pandemic (see figure B.4 in appendix B). In 2020, they worked, on average, two to three fewer hours per week than in 2019. The number of hours worked was still significantly lower in 2021 than in 2019, but the gap had declined by a half to two-thirds. The likelihood of being employed part-time (less than 35 hours a week) increased slightly at the beginning of the pandemic. As shown in figure B.5 in appendix B, the probability of working less than 35 hours increased (1–4 percentage points from 2019 to 2020) but it decreased in 2021 relative to 2019 (3–4 percentage points for women and men). On the other hand, the proportion of individuals willing to work more hours conditional on working less than 35 hours increased between 2019 and 2021, suggesting discontentment with the lower number of hours worked, particularly for men.

Figure 2.6. Employment rate, by location, 2013–22

a. Employment rate, males



b. Employment rate, females



Source: Bhutan Labor Force Survey, 2013–22.

The effect of the pandemic on employment was not uniform across job types. Self-employed workers’ share of total employment rose, whereas the shares of employers and family workers fell. In the agricultural sector, the share of self-employed workers increased relative to the share of family workers. This increase was entirely driven by the changing nature of employment for women (up 6 percentage points in the share of female self-employed workers and down 7 percentage points in the share of female family workers as shown in figure B.6 in appendix B). In nonagricultural sectors, the structure of employment also changed in favor of self-employed workers (up 2.5–3 percentage points), while the relative importance of employers decreased (down 0.7 percentage points, or a 38 percent decline from the original share of total employment in 2019), suggesting that firms shrank in size. These variations were driven by changes in the nature of jobs held by males (see figure B.7 in appendix B).

Monthly earnings increased for men in the agricultural sector during the pandemic. As shown in figure B.8 in appendix B, in 2020, in real terms, men working in agriculture earned 15 percent more (750 Nu) than in

2019. By contrast, women working outside of agriculture earned 4 percent less (450 Nu) than in 2019. These differences did not persist in 2021.

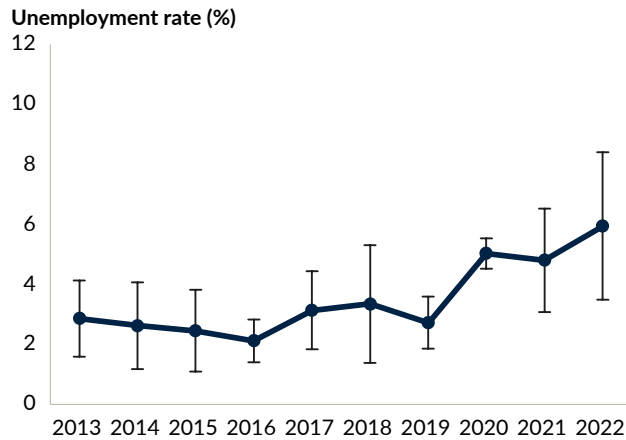
Unemployment rates were stable between 2013 and 2019, but rose during the pandemic and continued to rise in 2022.

The unemployment rate oscillated between 2 percent and 3.5 percent over 2013–19 and increased to 5 percent in 2020–21. Figure 2.7, panel a, shows that the unemployment rate was fairly stable at very low levels between 2013 and 2019, averaging 3 percent. It increased by 2 percentage points once the pandemic began and reached 5 percent in 2020 and 6 percent in 2022.

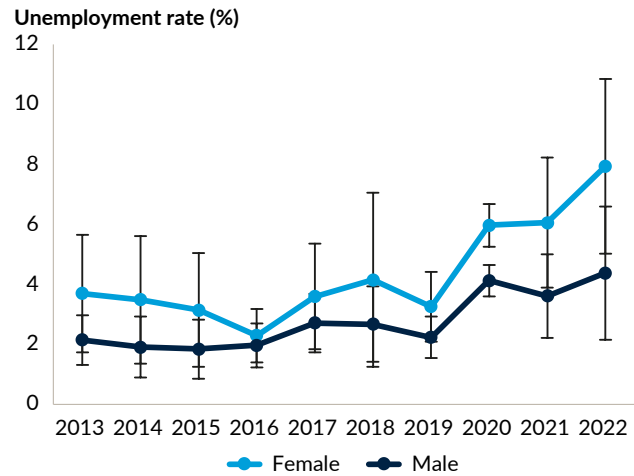
Although the unemployment rate increased during the pandemic for both women and men, women’s unemployment rate grew at a higher rate, owing in part to their higher labor force participation during that period. Figure 2.7, panel b, shows that after 2019 women’s unemployment rate increased by 5

Figure 2.7. Unemployment rate, overall and by gender, 2013–22

a. Overall unemployment rate



b. Overall unemployment rate, by gender



Source: Bhutan Labor Force Survey, 2013–22.

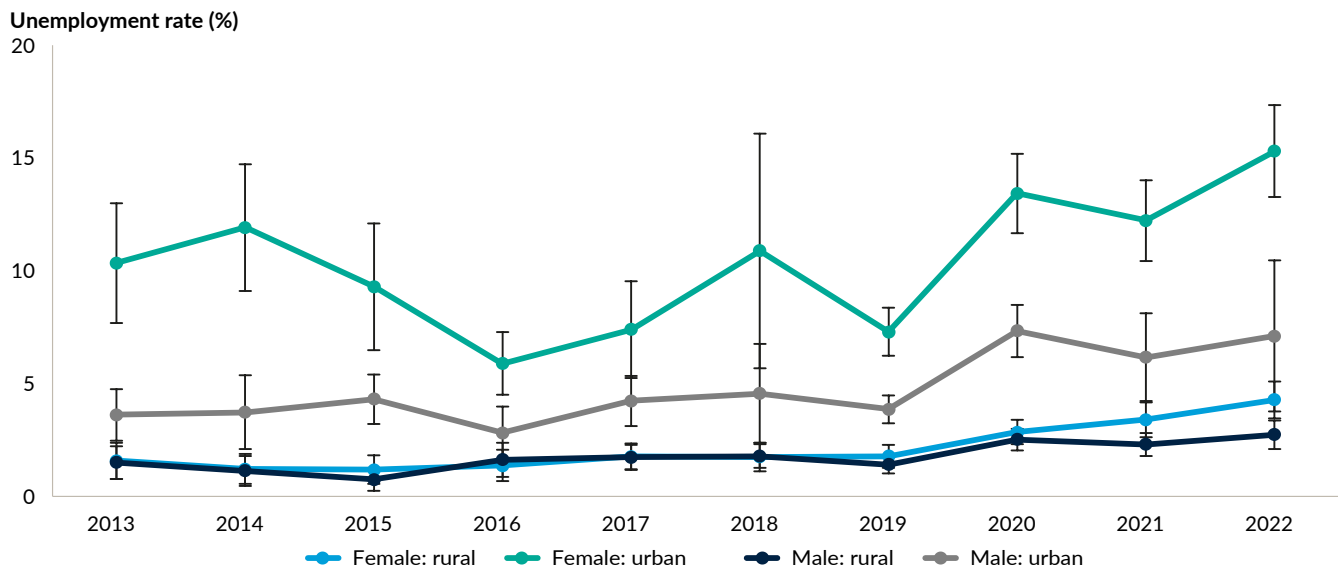
percentage points, and stood at 6 percent in 2022, a record high since 2013. The unemployment rate for men increased after 2019 by 2 percentage points and was at 4 percent in 2022, which is also a record high since 2013. The faster growth in women’s unemployment rate during the pandemic is due to the growth in their labor force participation rate as noted earlier. Figure B.9 in appendix B indicates a higher rate of unemployment among those ages 15–24 and those with tertiary education during the pandemic, which is covered in greater detail in section 2.3.

The unemployment rate continued to grow in 2022 even as the overall labor force participation rate went down, especially in urban areas, suggesting that unemployment during the recovery phase is an urban challenge. According to figure 2.8, between 2019 and 2022 the rural unemployment rate remained low overall, below 4 percent. On the other hand, the unemployment rate in urban areas increased by 5 percentage points between 2019 and 2022, driven mostly by urban women. Women in urban areas experienced an 8

percentage point increase in their unemployment rate after 2019.

Rising unemployment in 2022 could explain why labor force participation rates went down after the pandemic (discouraged worker effect). In other words, many workers (especially urban women) who joined the labor market during the pandemic may have dropped out in 2022 because they could not find jobs. Meanwhile, the fact that unemployment increased in 2022 even as labor force participation rates went back to their pre-2019 levels is indicative of job losses among workers previously employed. Table B.2 in appendix B compares the characteristics of job-seekers before and during the pandemic and documents which category of workers was particularly exposed to unemployment. The share of unemployed who had ever worked before increased sharply, from one-third of the unemployed in 2019 to half in 2020–21. In addition, conditional on having worked before, the vast majority of the unemployed were working in the private sector (two-thirds in 2019 and three-quarters in 2020). In terms of industries and occupations, the share of unemployed

Figure 2.8. Unemployment rate, overall and by location, 2013–22



Source: Bhutan Labor Force Survey, 2013–22.

from hotel and restaurants, working in services and sales, increased the most (100 percent and 30 percent, respectively). The share of administration employment in total unemployment increased sharply, from 2 percent of total unemployment in 2019 to 17 percent in 2020.

2.2 Labor force participation rates for men and women along the life cycle

The gender gap in labor force participation is pronounced across the life cycle and in both urban and rural areas.

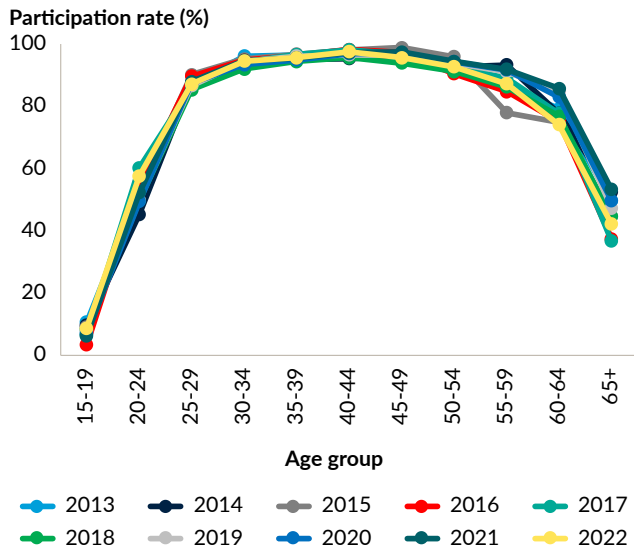
The difference in male and female labor force participation is evident across the full life cycle. In figure 2.9, panel a, the male labor force participation rate, which is highest for those between the ages of 25 and 64, remained roughly constant at high levels between 2013 and 2022. By contrast, the rate varied for women (figure 2.9, panel b). For all age groups, particularly for those

between the ages of 25 and 64, labor supply moved upward between 2019 and 2021 before it declined in 2022. Notably, for the female age groups 35–39, 40–44, and 45–49, labor force participation rates were above 80 percent between 2019 and 2021 before dropping back to below 70 percent in 2022.

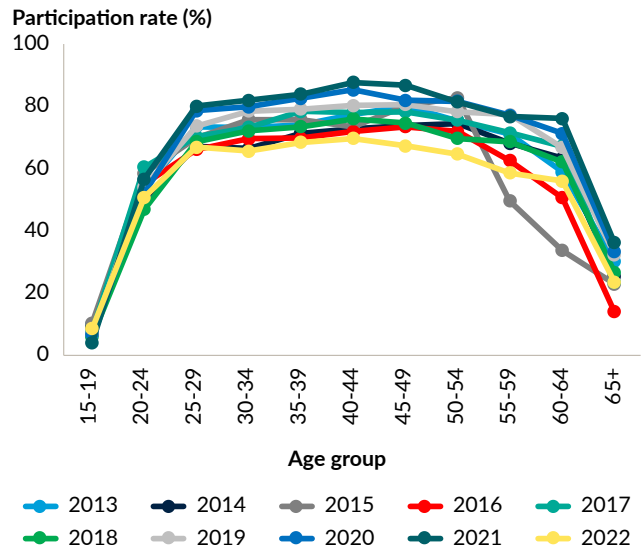
Although men in both urban and rural areas participate in the labor market in equal numbers, rural women remain more active than urban women. In 2022, there was an 11 percentage point difference in the women’s labor supply in rural areas (58 percent) and urban areas (47 percent). By contrast, 73 percent and 74 percent of rural men and urban men, respectively, participated in the labor market in 2022. An ordinary least squares (OLS) regression analysis on the determinants of labor force participation, calculated for women and men, shows that location matters much more for women’s labor supply than men’s (see tables B.3a and B.3b in appendix B). In 2022, rural women were 11–13 percentage points more likely to participate in the labor force than urban women. Rural men were also more likely to participate than urban men, but the participation gap is much lower, 2–4 percentage points.

Figure 2.9. Labor force participation rate, by gender and life cycle, 2013–22

a. Males



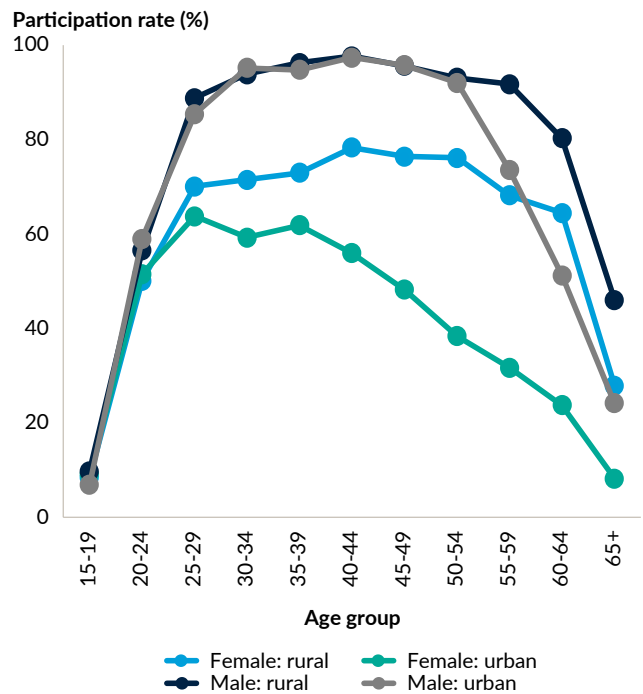
b. Females



Source: Bhutan Labor Force Survey, 2022.

The gaps in labor force participation rates by gender and location are pronounced across the full life cycle. Figure 2.10 reflects two key messages. First, young people between the ages of 15 and 24 and those older than 65 participate in lower numbers in the market, consistent with trends elsewhere—that is, most workers across both genders and location participate while in their prime age (between 25 and 54). The OLS regression analysis in figure B.10, panel a, in appendix B confirms that the inverse U shape of participation with respect to age holds when everything else is equal, so it is not driven by changes in the education or other household and local labor market characteristics. Second, urban women are the group with the lowest participation rates across the full life cycle when compared with rural women or rural men and urban men. In the 40–44 age group, there is a 42 percentage point difference between rural men and urban women, a 41 percentage point difference between urban men and urban women, and a 22 percentage point difference between rural women and urban women.

Figure 2.10. Labor force participation rate, by gender, location, and life cycle, 2022



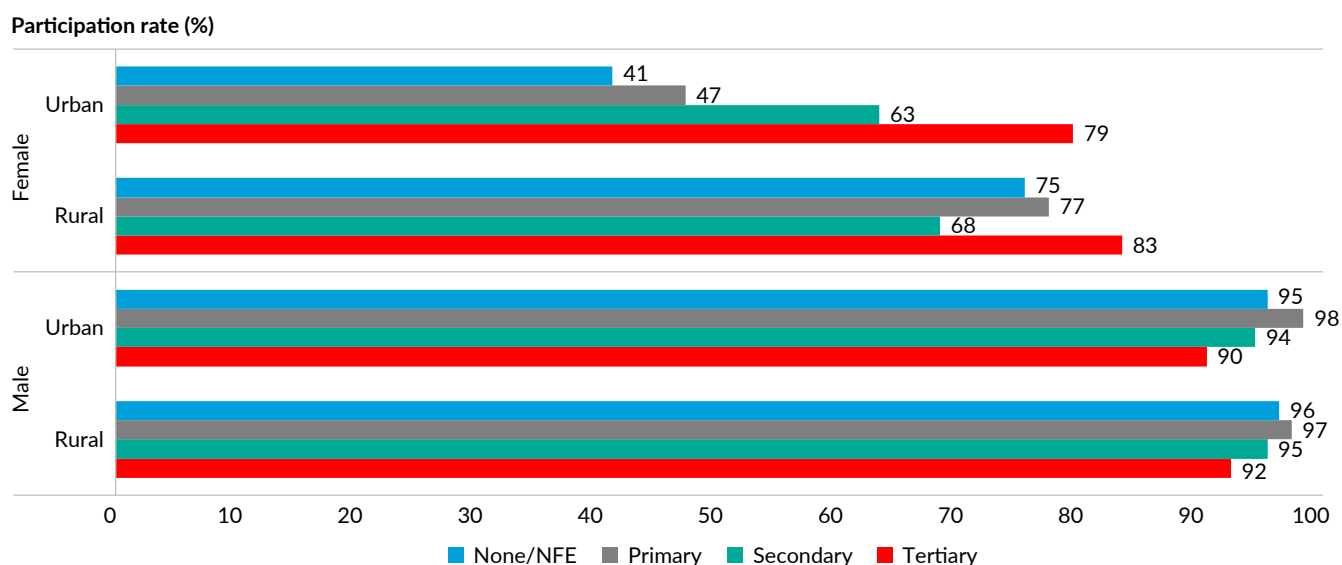
Source: Bhutan Labor Force Survey, 2022.

The labor force participation rate of prime-age individuals differs strongly by gender: male participation rate is high, whereas female participation is structured according to level of education, place of residence, family constraints, and norms.

The participation rate of prime-age men is high for all locations and education levels, whereas women are more likely to participate at higher levels of education. According to figure 2.11, male participation is lowest for the most educated in both urban and rural areas. In rural areas, it is 92 percent for tertiary-educated and 96 percent for men without an education. In urban areas, the participation gap is higher—90 percent for those with a tertiary education, compared with 95 percent for those with no education. By contrast, the highest

rate for women was recorded for those with a tertiary education—79 percent in urban areas and 83 percent in rural areas. In urban areas, women tend to participate more if they are educated: 40 percent of women without an education participate in the labor market, but their participation increases by 7 percentage points if they graduated from primary school and by another 16 percentage points if they are secondary school graduates. Education matters less for participation in rural areas: about three out of four women participate in the labor market, regardless of the highest degree attained (excluding tertiary education).¹² The OLS estimates reported in figure B.10, panel b (and table B.3 in appendix B) show that women are more likely to participate at higher levels of education, whereas education has a negative correlation with male labor force participation.

Figure 2.11. Labor force participation rate of prime-age individuals (25–54), by gender, location, and education, 2022

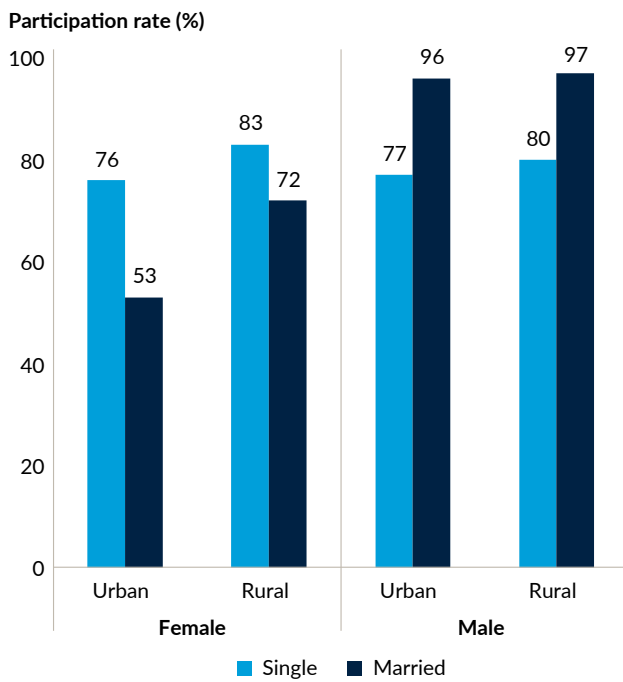


Source: Bhutan Labor Force Survey, 2022.

Note: NFE = nonformal education.

12. The important role that education plays in the labor force participation rate of prime-age women, especially in urban areas, and the small role it plays in prime-age men's, is demonstrated in the OLS regression estimates. The estimates reported in tables B.3a and B.3b in appendix B show that, compared with those having no education, women with a primary education have a 7 percentage point higher probability of participating and women with a secondary diploma an 11 percentage point higher probability of participating. Meanwhile, women with a tertiary diploma have a 16 percentage point higher probability of participating. For men, education matters less in the decision to participate in the labor market. The two are negatively correlated: all else being equal, the participation rate is lower for the most educated men. Figure B.10, panel b, in appendix B reports the predicted participation rates of men and women according to their location and diploma, based on the OLS estimates in tables B.3a and B.3b in appendix B.

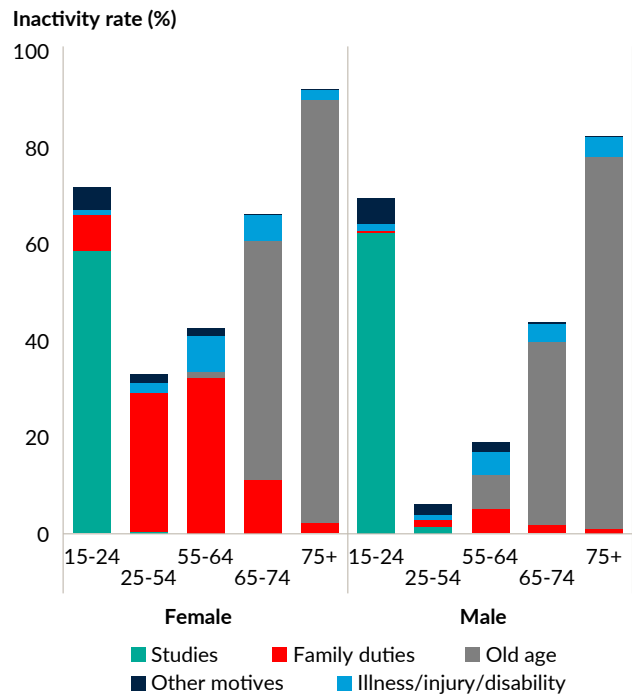
Figure 2.12. Labor force participation rate, by gender, location, and marital status, 2022



Source: Bhutan Labor Force Survey, 2022.

The female labor force participation rate is negatively affected by the presence of children in the household. Figure 2.14 compares the participation rate of women during their fertility years, according to whether they have at least one child, at least one child under age 6, children over age 6, or no children. Although all women under age 45 have a lower labor force participation when they have at least one child under age 6 (48 percent for the mothers ages 20–24 versus 70 percent for women of the same age without children), this participation gap diminishes with age and disappears at age 45, suggesting that career and family are more compatible for older, more educated women than for younger women. Mothers whose children have all reached school age are also less likely to participate in the labor market than women without any children under age 15, albeit to a smaller extent. These findings align with the OLS estimates in figure B.11 and table B.3a in appendix B, which show that having a child under age 2 decreases the probability of women’s

Figure 2.13. Motives for inactivity, by gender and age group, 2022



Source: Bhutan Labor Force Survey, 2022.

participation by 10 percentage points, and having a child ages 3–5 years decreases participation by 6 percentage points.

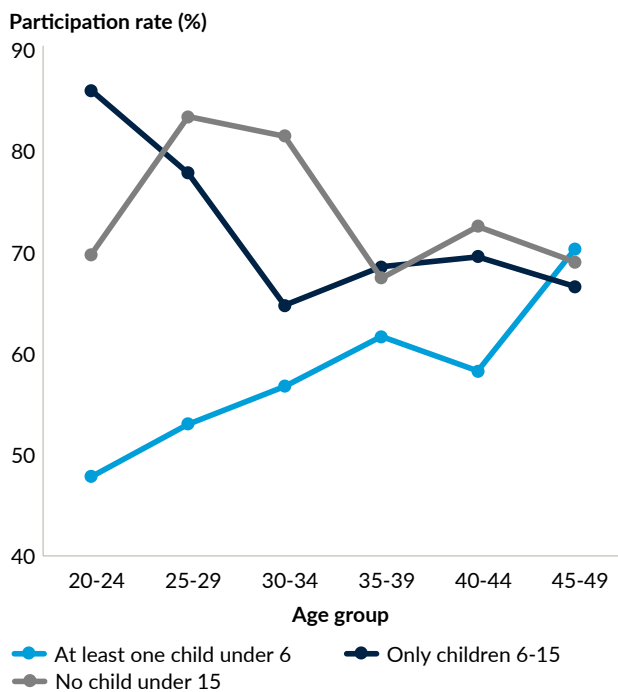
The presence of dependent adults is positively associated with female labor force participation, likely because they may help care for younger dependents. The impact of the elderly on female and male participation is an open empirical question because the elderly need care, but they can also provide care for children. Figure 2.15 plots the participation rate of prime-age women and men in the presence of dependent adults—that is, household members who report being inactive because of their old age or because of an illness, injury, or disability. The participation rate of women is significantly higher in households in which an adult is not working because of old age (76 percent versus 67 percent) or because of an illness, injury, or disability (72 percent versus 67 percent). By contrast, the participation of prime-age men is not affected by the present

of dependent adults. This finding is in line with the OLS estimates in tables B.3a and B.3b in appendix B showing that the presence of adults age 65 and over has no impact on men’s labor supply but can be linked to higher female participation (by 3.4 percentage points).

Female labor force participation is influenced by the local norms in their households and communities. In appendix B, the OLS estimates from table B.3 plotted in figure B.12 show that, everything else being equal, the higher the share of working women in the household, the higher is their probability of participating (that is, a 10 percentage point increase in the share is associated with a 0.6 percentage point higher probability of participation). In addition, women seem to be responsive to the community norms on the participation of women, even after conditioning for age, education, and region fixed effects. The higher the female inactivity in an area, the lower is the probability that

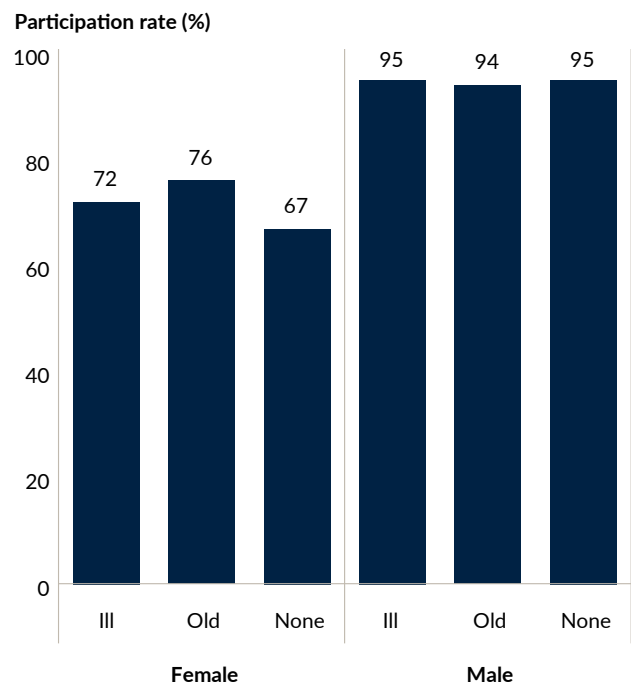
a woman enters the labor market. A 1.0 percentage point increase in the inactivity rate is associated with a 1.2 percentage point lower probability of participating. More surprising, local wages (measured at the *dzongkhag*-gender-education level) are negatively associated with female participation: a 10 percent increase in the hourly wage is associated with a 1.3 percentage point decrease in female participation. Possibly the wages of men and women are correlated, and women respond to men’s higher wages by withdrawing from the labor market. Alternatively, the decrease could be attributed to women choosing activities based on their ability, which leads to both higher wages and lower participation rates. For men, what matters is the local unemployment rate, which creates a discouragement effect: for each percentage point increase in the local unemployment rate, the inactivity rate increases by 1.4 percentage point.

Figure 2.14. Female labor force participation, by presence of children, 2022



Source: Bhutan Labor Force Survey, 2022.

Figure 2.15. Labor force participation rate, by gender and dependent household members, 2022



Source: Bhutan Labor Force Survey, 2022.

Note: III = inactive due to illness/injury/disability.

The econometric results are consistent with findings from a recent qualitative study of the constraints faced by youth and women in accessing employment opportunities (Etang and Choki, forthcoming). From focus group discussions and key informant interviews emerged the challenges and constraints to participating in the labor force and being employed. They included inadequate or mismatched education systems, lack of career guidance, gender stereotyping (cultural norms), and lack of adequate facilities and support for female employees.

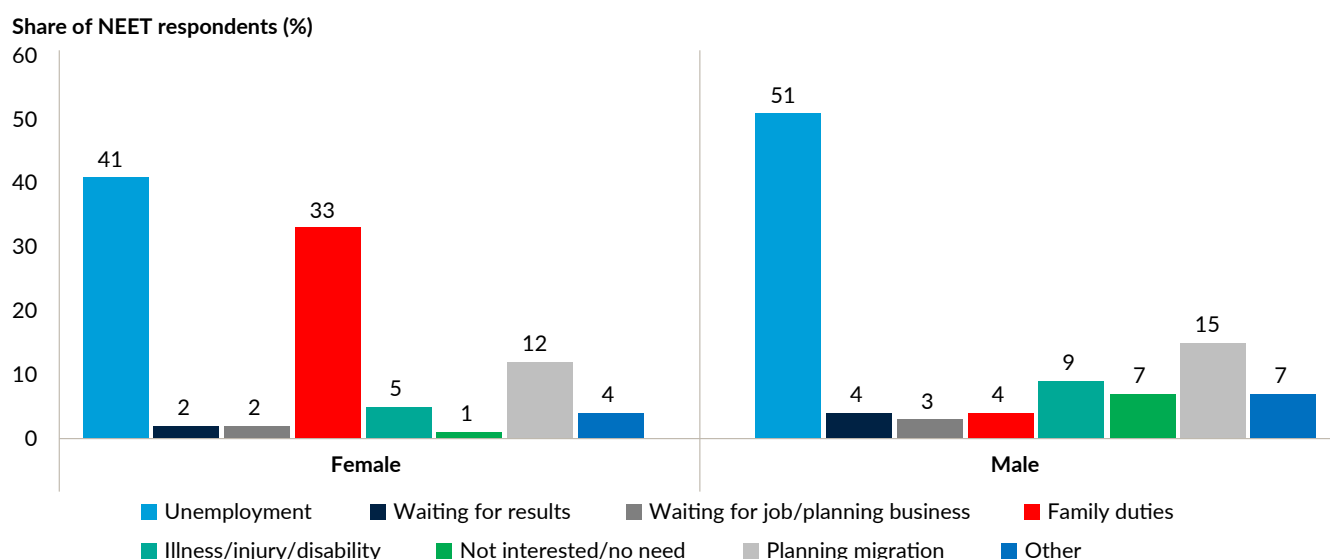
Young women are more likely than men to be not in education, employment, or training (NEET) due to household responsibilities and local norms.

The pronounced gap between men and women who are NEET underscores the extent to which young women are not building the skills they need to participate in the labor market in the future. Young women are more likely than men to be NEET—one in four

young women, compared with one in seven young men (see figure B.13 in appendix B). The proportion of NEET is also much higher in urban areas than in rural areas—15 percent of young people between the ages of 15 and 24 are NEET in rural areas, compared with 24 percent in urban areas.

Among women ages 15–24, one in three is NEET because of family duties (figure 2.16). Women in this group are also twice as less likely as men to be waiting for academic results and job interviews or planning a business. As shown in figure 2.16, only 7 percent of men are NEET because of a lack of interest in working. The majority of men in this age group attribute their NEET status to being unemployed (51 percent). The second most important reason for being NEET is plans for migration (15 percent), which applies as well to a substantial share of NEET women (12 percent). Inactivity rates increase sharply for both men and women after age 65, with retirement facilitated by the presence of other relatives in the household (see figures B.14 and B.15 in appendix B).

Figure 2.16. Reasons for being not in education, employment, or training (NEET), by gender (ages 15–24), 2022



Source: Bhutan Labor Force Survey, 2022.

2.3 Unemployment among youth and educated workers in 2022

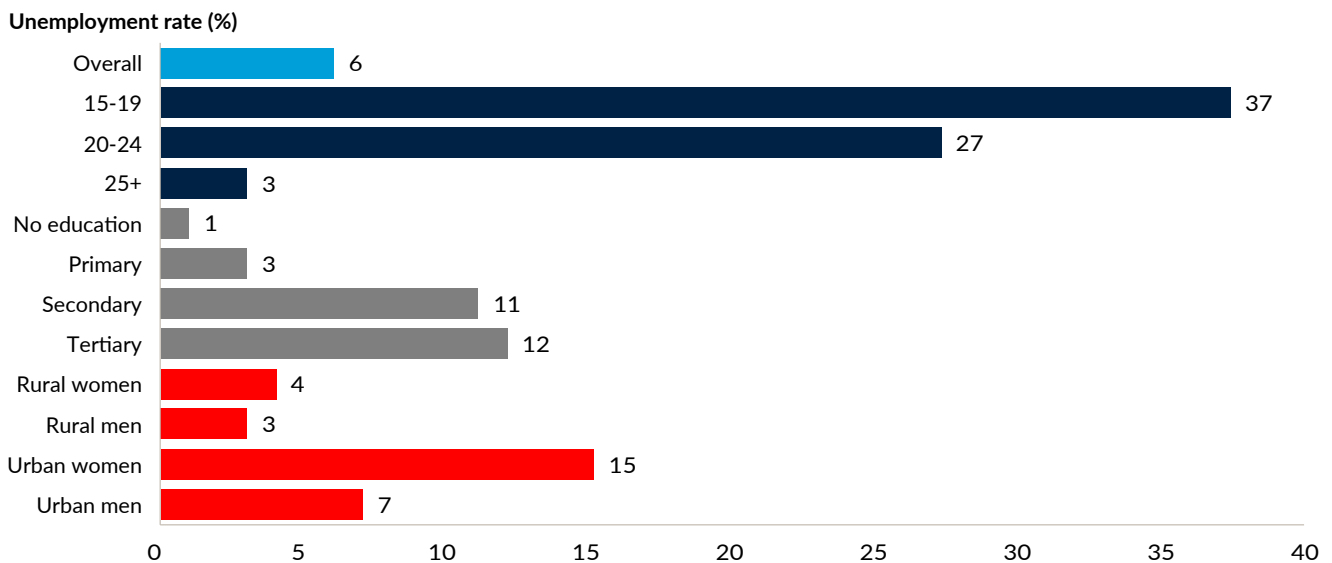
Young and educated workers suffer from unemployment rates that exceed the national average.

Prior to 2019, young workers between the ages of 15 and 24 faced a higher unemployment rate than other groups, and their unemployment rate continued to climb after 2019, as shown in figure B.9, panel a, in appendix B. The rate climbed 11 percentage points between 2019 and 2020 and by 8 percentage points between 2020 and 2022. The overall unemployment rate reached 6 percent in 2022 (figure 2.17). Unemployment in the following groups exceeded the national average: urban women (15 percent), youth (37 percent among those ages 15–19 and 27 percent among those ages 20–24), and those with a secondary education and above (12 percent).

The duration of unemployment among the youth is similar to that of prime-age workers. According to figure 2.18, similar shares of young and prime-age workers remain unemployed for one to five months, while for a higher share of prime-age workers long-term unemployment extends to more than two years. The short duration of unemployment could stem from the fact that unemployment increased sharply during the COVID-19 pandemic, and the average duration of unemployment decreased.

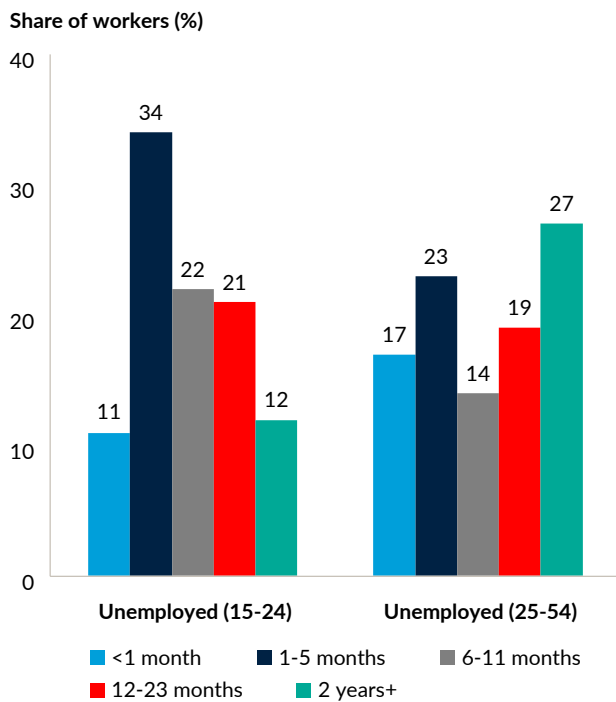
A skill mismatch is the main reason 46 percent of young job-seekers believe they are unable to find employment (figure 2.19). Recent graduation is the second most-cited reason, which is consistent with the short duration of unemployment. The reasons for unemployment evolved with the COVID-19 pandemic. During the pandemic, the mismatch in skills cited as the main reason for employment (47 percent in 2019) decreased by 10 percentage points, while unemployment due to termination of a contract (5 percent in 2019) reached 25 percent in 2020–21 (see table B.2 in appendix B).

Figure 2.17. Unemployment rate, overall and by age, education, location, and gender, 2022



Source: Bhutan Labor Force Survey, 2022.

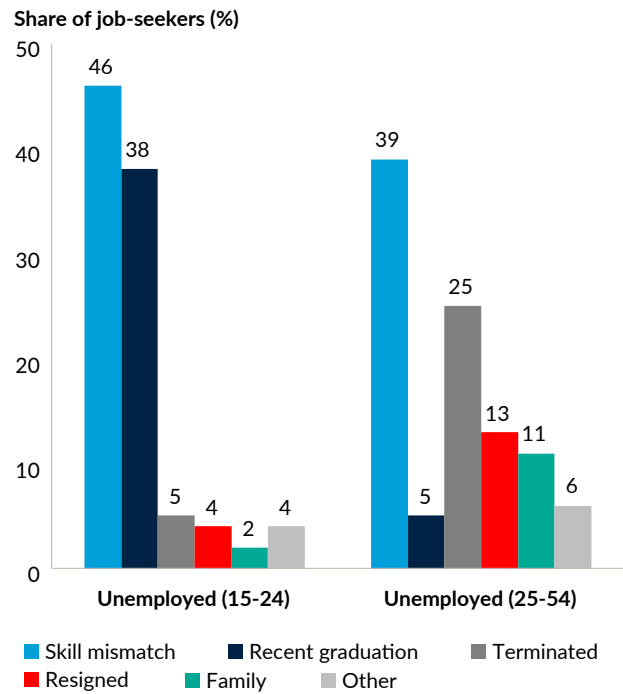
Figure 2.18. Unemployment duration, 2021



Source: Bhutan Labor Force Survey, 2022.

A skill mismatch affected more educated job-seekers because those employed are mostly low- to mid-skilled workers. Figure B.16 in appendix B displays for 2022 the share of total employment and unemployment of each educational group, as well as a breakdown of the inactive population ages 25–64 by educational group. Fifty-eight percent of job-seekers have a secondary degree, but, compared with the profile of employed workers (and the inactive population), there is a clear supply shortage of uneducated job-seekers and an oversupply of university-graduated job-seekers. For example, 10 percent of job-seekers have no education, compared with 37 percent of employed workers, and 24 percent of job-seekers are university graduates, compared with 9 percent of employed workers. Chapter 3 provides a detailed discussion of the expected labor demand and notes that it is mostly concentrated in occupations requiring a low to medium

Figure 2.19. Self-reported reason for unemployment, youth and nonyouth, 2021



Source: Bhutan Labor Force Survey, 2022.

level of education, such as services and sales, craft and related trades, and elementary occupations.

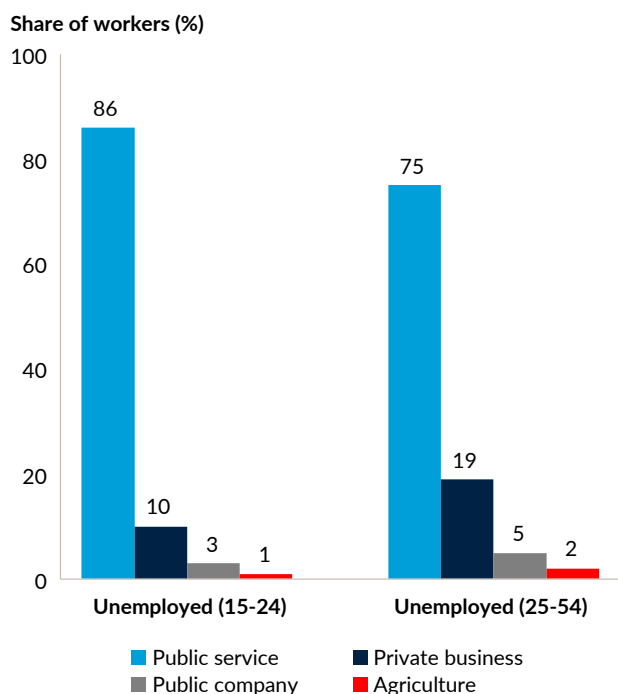
Although there is no evidence that unemployed workers have a high reservation wage (the lowest wage at which a worker is willing to accept a particular type of job), the majority prefer public sector jobs and have no positive view of private sector employment. In addition, a sizable number have migrated abroad or plan to.

Most workers prefer public sector employment, but a higher share of youth (86 percent) prefer it than non-youth (75 percent)—see figure 2.20. The reasons for preferring to work in the public sector are related to job security and working conditions (figure 2.21). Eighty-three percent of youth prioritize job security,

compared with 74 percent of prime-age workers, which could imply that queuing for public sector employment is one of the reasons for unemployment. Working conditions are the second priority for both age groups, and wages come third.¹³ The reputation of the public sector is also a critical factor, indicating that a social stigma is attached to working in other sectors (UNDP 2022a). Among youth and nonyouth, the reason for preferring private sector employment is related to personal interests, and few highlight other aspects of the job (such as reputation, job security, wages, and working conditions) as the main reason for choosing employment in the private sector, thereby suggesting that private sector employment may be negatively viewed by job-seekers.

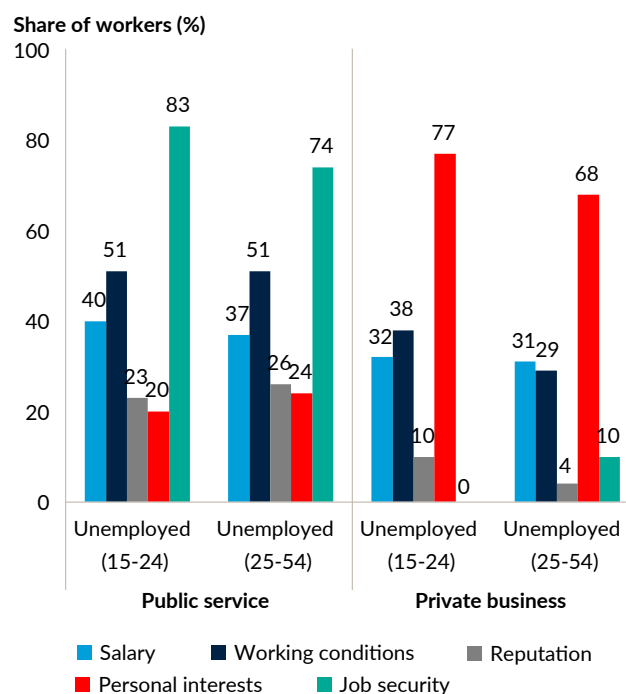
High reservation wages or unrealistic expectations about the wage unemployed individuals could earn do not explain unemployment because the average reservation wage is significantly lower than the observed monthly wage of workers in similar age and education groups. Figure 2.22 shows that the average wage expected by the unemployed is from 63 to 91 percent of the average wage of paid workers in the same age and education group. The only exception is young secondary graduates, whose reservation wage is significantly higher (855 Nu) than the real observed wage for workers with the same education. These unrealistic wage expectations may explain in part why this particular age and education group has such a high unemployment rate (11 percent in 2022).

Figure 2.20. Sector preference of job-seekers, by age group, 2021



Source: Bhutan Labor Force Survey, 2021.

Figure 2.21. Reasons for sector preference, by age group and sector, 2021

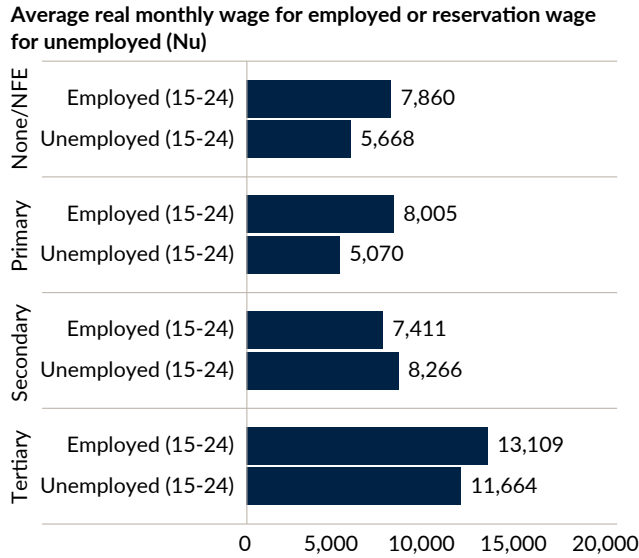


Source: Bhutan Labor Force Survey, 2021.

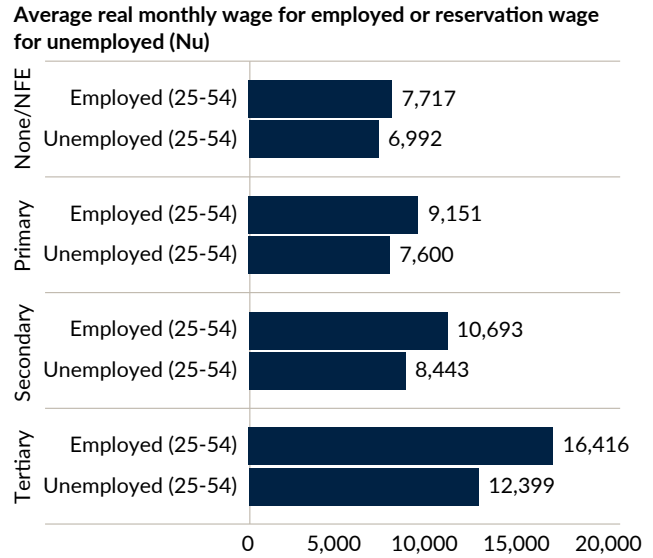
13. This finding is consistent with that described later in this chapter that the wage differential is not large between the public and private sector (for women, it is negative).

Figure 2.22. Average real monthly wage and reservation wage, by education and age, 2022

a. Youth



b. Prime-age workers



Source: Bhutan Labor Force Survey, 2021.

Note: NFE = nonformal education.

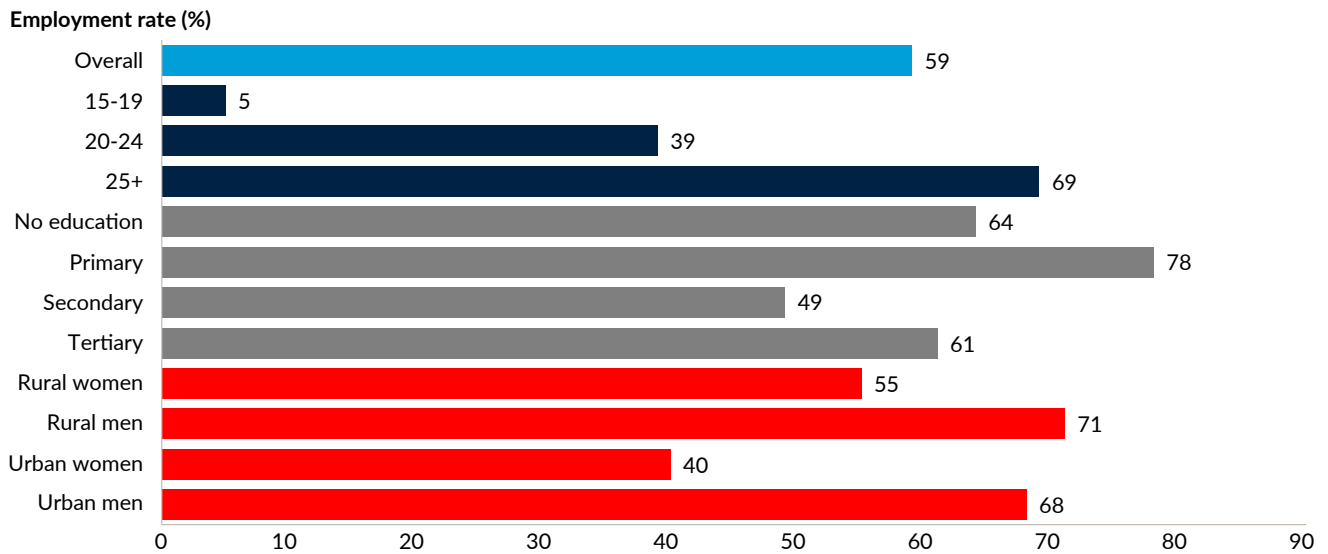
Evidence suggests that a high share of the unemployed have migrated in recent months, driven by both pull and push factors. As mentioned earlier, about 5,000 Bhutanese migrated monthly in the first part of 2023, and many workers who are NEET have plans to migrate. Australia is by far the most frequent destination. Between January 1, 2018, and March 22, 2023, 13,583 Bhutanese left for Australia through Paro International Airport. Since then, the monthly numbers have surged continually (Kuensel 2023). Many pull factors appear to be behind migration, such as higher incomes, better economic opportunities, greater financial security, and higher living standards in destination countries. Job insecurity, the negative impacts of reform, and the high cost of living appear to be among the push factors (Kuensel 2023).

2.4 Current state of employment

Women, youth, and educated workers have employment rates below the national average, highlighting a high degree of underutilization of their human capital in the labor market.

Urban women, rural women, youth, and workers with secondary education have employment rates below the national average. Figure 2.23 shows that in 2022, although the employment rate (share of the working-age population employed) reached 59 percent, the following groups had lower employment rates: rural women (55 percent), urban women (40 percent), secondary-educated workers (49 percent), and youth (39 percent of those ages 20–24).

Figure 2.23. Employment rate, overall and by age, education, location, and gender, 2022



Source: Bhutan Labor Force Survey, 2022.

The labor market in Bhutan is mostly dominated by agricultural and public sector employment, and this dichotomy persists along the lines of gender, location, and education.

Female, rural, and low-skilled workers are more likely to work in agriculture as self-employed or family workers, whereas male, urban, and high-skilled workers opt for public sector employment. According to figure 2.24, panel a, 35 percent of male workers are in the agricultural sector, and a significant share also works in the public sector (31 percent). Meanwhile, over 50 percent of women work in the agricultural sector, with the majority serving as family and self-employed workers. A much smaller share of women than men work in the public sector (18 percent). In terms of location, 45 percent of urban workers are in the public sector, followed by 25 percent in the private sector (figure 2.24, panel a). Self-employed workers in nonagricultural sectors make up 20 percent of urban workers. By contrast, over 60 percent of employment in rural areas is in the agricultural sector as self-employed workers or as family helpers.

The labor market is segmented by education levels. Workers with no education dominate agricultural employment, and workers with a tertiary education choose the public sector. Thirty-seven percent of employed workers in Bhutan have no formal schooling (figure 2.24, panel b)—a finding consistent with the dominance of agricultural employment, where over 70 percent of workers have no formal schooling. Although the majority of workers with a tertiary education choose employment in the public sector, a high incidence of tertiary- and secondary-educated workers also are private sector employees, employers, self-employed, or family workers in the nonagricultural sector.

The private sector hires workers in relatively more low- and middle-paying occupations than the public sector. Employers are mostly in high-skilled occupations, such as managers. As shown in figure 2.24, panel c, employees tend to access higher-paid occupations when they work in the public sector. The proportion of elementary occupations is almost twice as high in the private sector as in the public sector (19 percent versus 12 percent). Meanwhile, 25 percent of employees in

the public sector are professionals, compared with 10 percent in the private sector.

Self-employed workers in the nonagricultural sectors are mostly service and sales workers (41 percent), followed by workers in craft and related trades (22 percent). More specifically, self-employment outside agriculture is mostly in wholesale and retail trade and repair of motor vehicles (71 percent); transportation and storage (65 percent); and accommodation and food services (59 percent). In the remaining sectors—manufacturing, information and communication, as well as professional, scientific and technical activities—the distribution of employment types is more uniform. For example, within professional, scientific, and technical activities, 22 percent of workers are self-employed, 45 percent are employees from the private sector, and 33 percent are employees from the public sector.

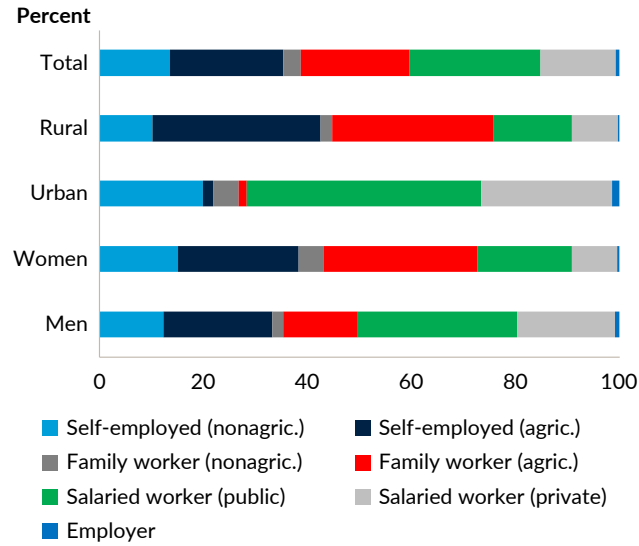
Public employment and private sector employment dominate different industries. As shown in figure 2.24, panel d, public employment dominates in public administration and defense (hereafter “Public”) human

health and social work activities, and education. Public sector employees also work in state-owned enterprises for electricity, gas, steam, and air-conditioning, as well as in water supply, sewerage, waste management, and remediation activities, and in financial and real estate activities. By contrast, private sector employment dominates construction (60 percent), administrative and support services (hereafter “Administration, 60 percent), and arts, entertainment, recreation, and other services (66 percent).

Despite the prevalence of public sector employment and the preference of youth for public sector jobs, apparently a large number of resignations among public servants are linked to outmigration. Kuensel (2023) reports that voluntary resignations rose from an average of 64 civil servants per month between January 2015 and May 2022 to 234 per month between June 2022 and February 2023. Several push factors related to the outmigration of public servants may be linked to lack of career progression, a poor system or poor working environment, a lack of recognition, a greater workload due to diminished staffing, and the negative impacts of government reform.

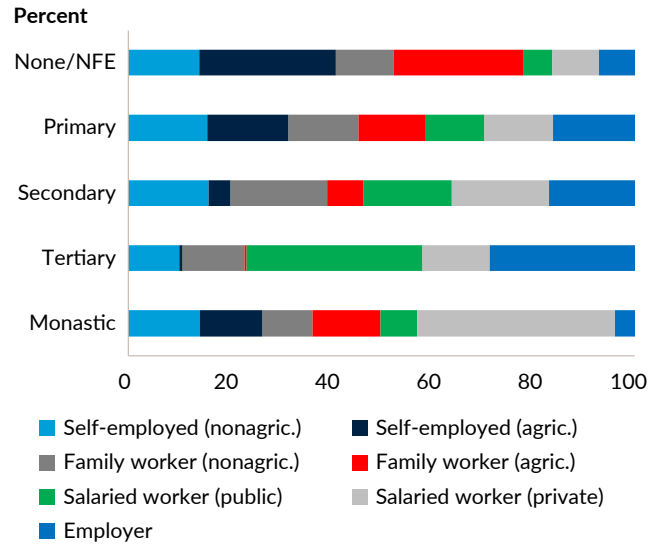
Figure 2.24. Structure of employment, 2022

a. Type of employment, by gender and location



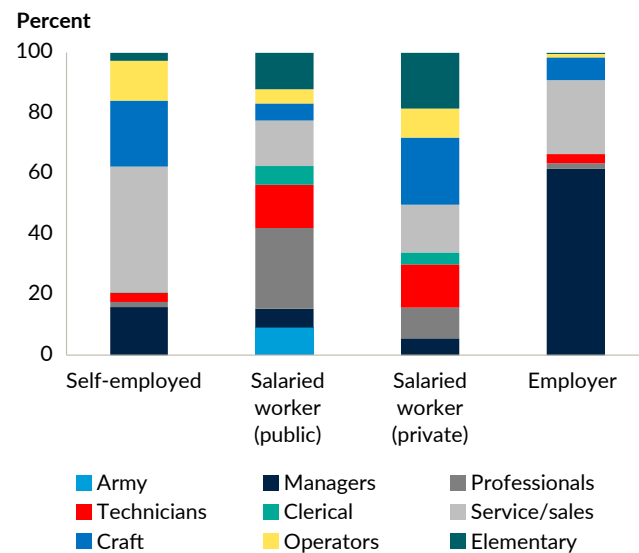
Source: Bhutan Labor Force Survey, 2022.

b. Type of employment, by education level



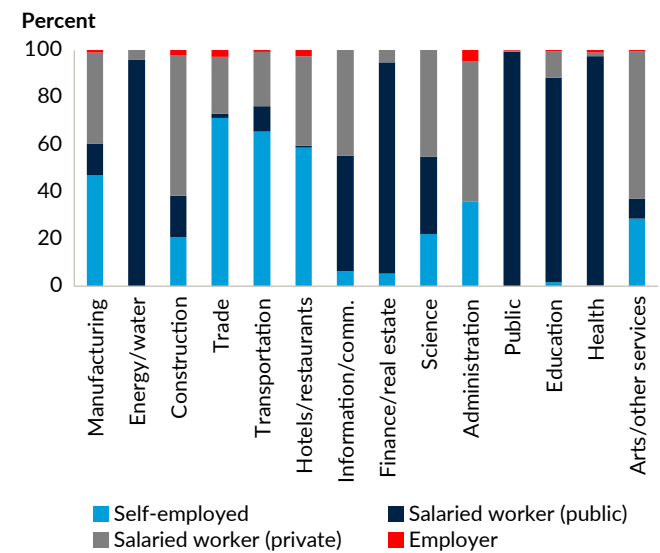
Source: Bhutan Labor Force Survey, 2022.

c. Occupation, by type of employment (excluding agriculture)



Source: Bhutan Labor Force Survey, 2022.

d. Type of employment, by sector (excluding agriculture)



Source: Bhutan Labor Force Survey, 2022.

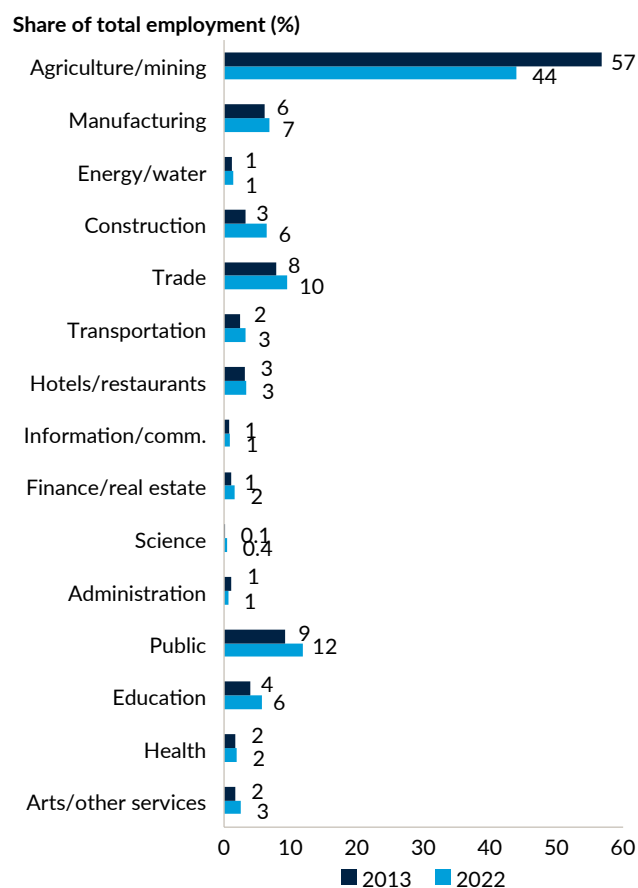
Structural transformation has been slow in Bhutan because the share of low-productivity agriculture in total employment remained high between 2013 and 2022.

Between 2013 and 2022, the structure of employment remained quite stable, with agriculture and public administration accounting for the largest share of employment. As shown in figure 2.25, which plots the share of each sector in total employment in 2013 and 2022 with its growth rate, the sectors providing most of the jobs were agriculture, forestry, mining and quarrying (44 percent in 2022 and 57 percent in 2013), and public administration and defense (12 percent in 2022 and 9 percent in 2013).

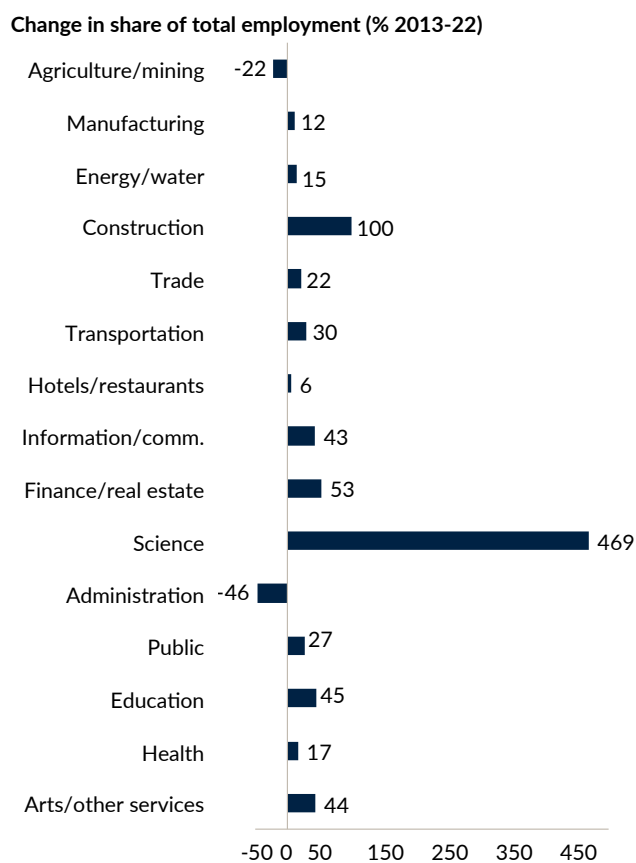
The agriculture and public administration sectors have lower than average labor productivity, and although the more productive sectors experienced rapid employment growth between 2013 and 2022, they remained very small. By merging sectoral employment from the BLFS with the most recent data from the national accounts, figure 2.26 plots how the relative growth of 12 aggregated sectors between 2013 and 2021 correlates with their productivity in 2021. Employment in agriculture clearly has negative labor productivity. With the exception of finance, insurance, real estate, and other business services, the share of the most productive sectors in total employment grew after 2013. However, they remain too small to meaningfully alter the employment landscape in Bhutan.

Figure 2.25. Average real monthly wage and reservation wage, by education and age, 2022

a. Share, 2013 and 2022

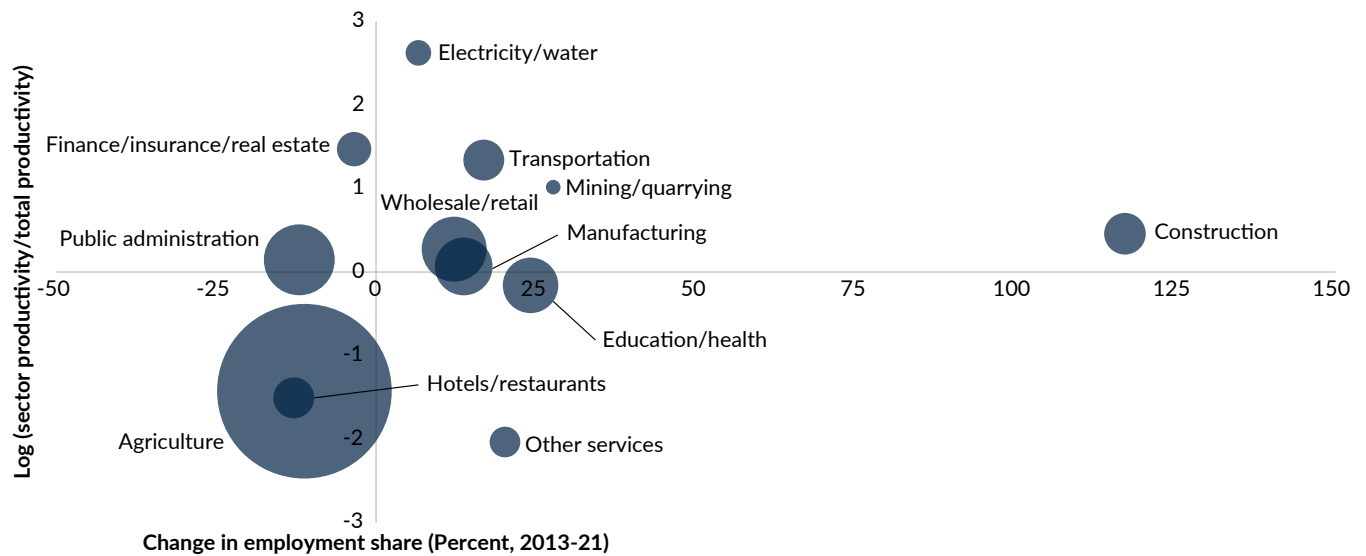


b. Share growth rate, 2013–22



Source: Bhutan Labor Force Survey, 2013–22.

Figure 2.26. Relative employment growth and productivity, 2013–21



Sources: Bhutan Labor Force Survey, 2021, and National Accounts Statistics (NAS) 2022.

Note: The size of each circle reflects sector employment in 2013. Productivity is measured as the sector-level value added per worker in 2022.

Improving agricultural productivity can accelerate structural transformation in Bhutan because the adoption of labor-saving technologies in agriculture can free excess labor for nonagricultural enterprises in the services and industry sectors. However, gaps remain large and stem primarily from inadequate access to irrigation, crop damages, labor shortages, difficult transport and export logistics, and challenging topography (World Bank, forthcoming a). Estimates show that addressing issues related to irrigation could raise average yields for paddy, rice, and maize crops by about 6 percent each, and for cardamom by 11 percent. Protecting crops from damage could raise maize and paddy yields by 15 and 9 percent, respectively. Removing the impact of labor shortages—for example, through the adoption of labor-saving technology—could increase paddy, cardamom, and areca nut yields significantly.

2.5 Quality of employment: Hours worked, wages, informality, and a job quality index

Poor quality of employment, measured by working long hours (more than 48 a week) and underemployment, is prevalent mostly in rural areas and among workers with low education.

In 2022, over 62 percent of Bhutan’s workforce reported working more than 48 hours a week, and they are mainly those with the least education (67 percent are not educated, compared with 42 percent of tertiary graduates). Regardless of the demographic profile of the worker, the primary self-reported reason for overworking is that the job requires it (see figure B.17 in appendix B). However, working longer hours

for additional income is more prevalent among individuals with low education and those living in rural areas, who are likely to have a secondary occupation. The probability of working overtime to earn more also increases with age, suggesting the presence of subsistence issues for the working elderly.

Underemployment (defined as working less than 35 hours a week) is low overall in Bhutan. Women and workers with low levels of education are more likely to work part time. Part-time employment accounts for 6 percent of all employment in Bhutan, but its prevalence is higher among women (8 percent) than men (4 percent) as shown in figure B.18 in appendix B. In addition, it is higher among workers with no education (7 percent) than among those with a tertiary education (2 percent). Part-time work allows the elderly to remain active, accounting for 13 percent of total employment for the 65+ age group. Part-time work is also more prevalent in rural areas.

Underemployment may not be a preference for some groups of workers and could likely reflect limited employment opportunities. One out of 20 individuals working part-time reported being unhappy with the number of hours worked and would prefer to work more hours (figure B.19 in appendix B). The level of dissatisfaction with hours worked is particularly important for men and for workers in urban areas. Individuals with a primary or secondary education are more likely to work part-time than individuals with a tertiary diploma (figure B.19, panel b, in appendix B) and also are more likely to want to work more hours, suggesting that a part-time job has been imposed on rather than chosen by the least educated.

Overwork is more prevalent in industries dominated by self-employment or private businesses than in the public sector.

Underemployment dominates manufacturing, whereas underemployment and overwork occur

among workers in construction, wholesale and retail trade, transportation, and accommodation and food services. Figure 2.27 shows the average number of hours worked by demographic characteristics, economic sector, employment type, and gender. The figure also presents the dispersion of hours worked around the mean (that is, the extent to which the number of hours worked varies within a given group), capturing the extent of both under- and overemployment. Although demographic characteristics have little impact on the average number of hours worked or their dispersion (figure 2.30, panel a), job characteristics matter. Workers in the financial, insurance, and real estate sector and the health sector have the shortest workweek (45 and 47 hours, respectively) and a below-average dispersion, suggesting that a short workweek is the norm in these sectors. In other public-dominated sectors, the workweeks may be longer, but are also concentrated around their average (50 hours in education, 52 hours in administrative and support service activities, 52 hours in public administration and defense), suggesting that under- and overemployment are not frequent. The workweeks are much more heterogeneous across workers in manufacturing, wholesale and retail trade, construction, and accommodation and food services. Although in manufacturing, the weekly number of hours is below average, the workweek is far longer for workers in other sectors, ranging from 56 to a maximum of 65 in wholesale and retail trade and accommodation and food services. The common feature of these sectors is that the dispersion in the number of hours worked is very large, suggesting the presence of under- and overemployment.

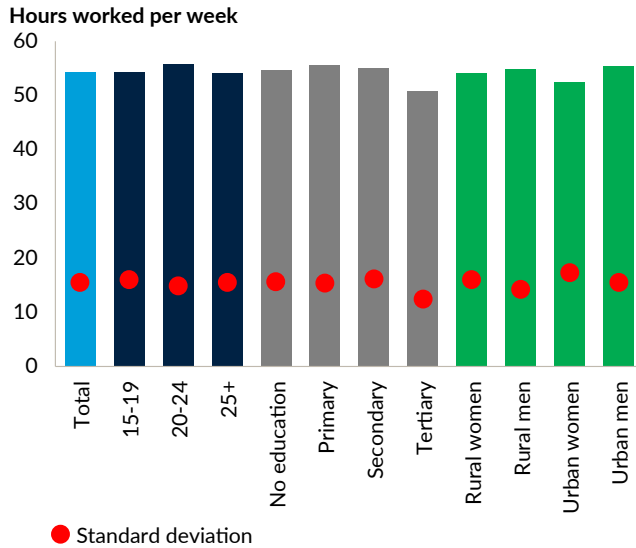
These important sectoral differences are driven by their employment composition. With 51 hours worked (and a standard deviation of 12.5 hours), salaried workers in the public sector have the shortest and most homogeneous workweek, while at the other extreme, nonagricultural self-employed and family workers work, on average, eight hours more (with a standard deviation of more than 20 hours). These differences across job types are exacerbated for women, as shown

in figure 2.27, panel d. Compared with those for men, the working hours of women who are family workers or self-employed workers are even more dispersed,

and the distribution of hours for salaried women is even more concentrated around a lower average work-week of 49 hours.

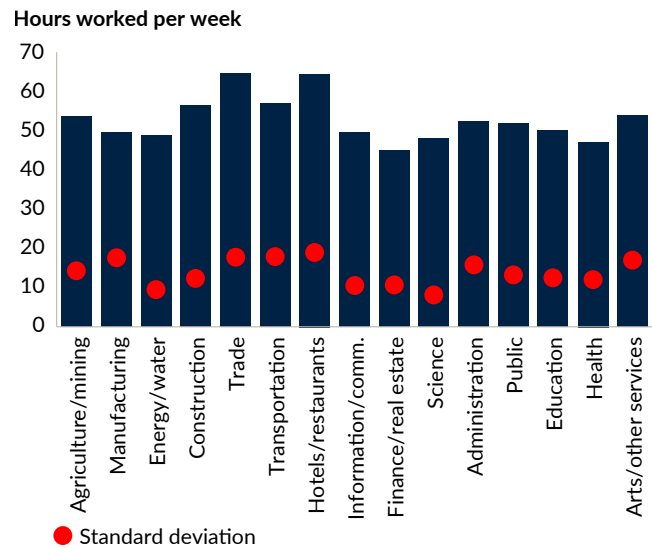
Figure 2.27. Number of hours worked and standard deviations, by demographic characteristics, economic sector, employment type, and gender, 2022

a. By demographic characteristics



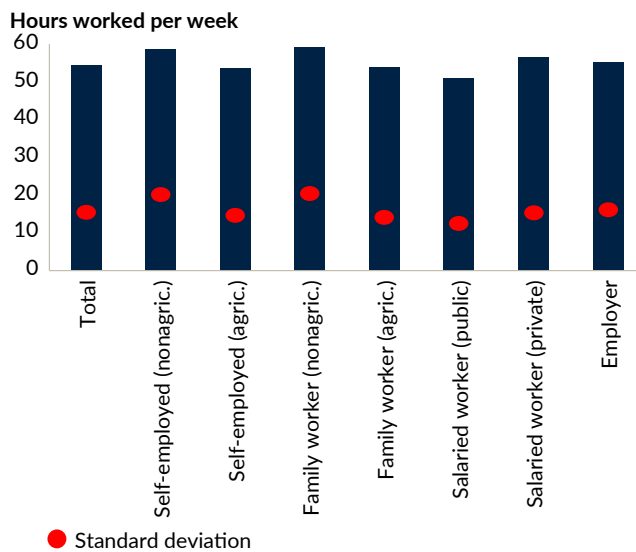
Source: Bhutan Labor Force Survey, 2022.

b. By economic sector



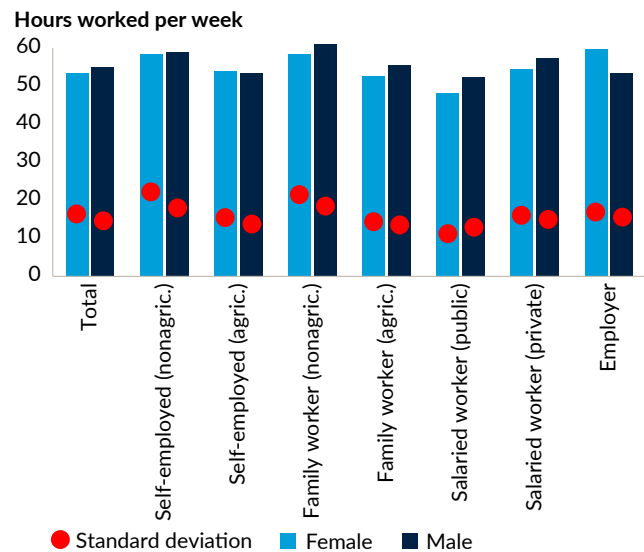
Source: Bhutan Labor Force Survey, 2022.

c. By employment type



Source: Bhutan Labor Force Survey, 2022.

d. By employment type and gender



Source: Bhutan Labor Force Survey, 2022.

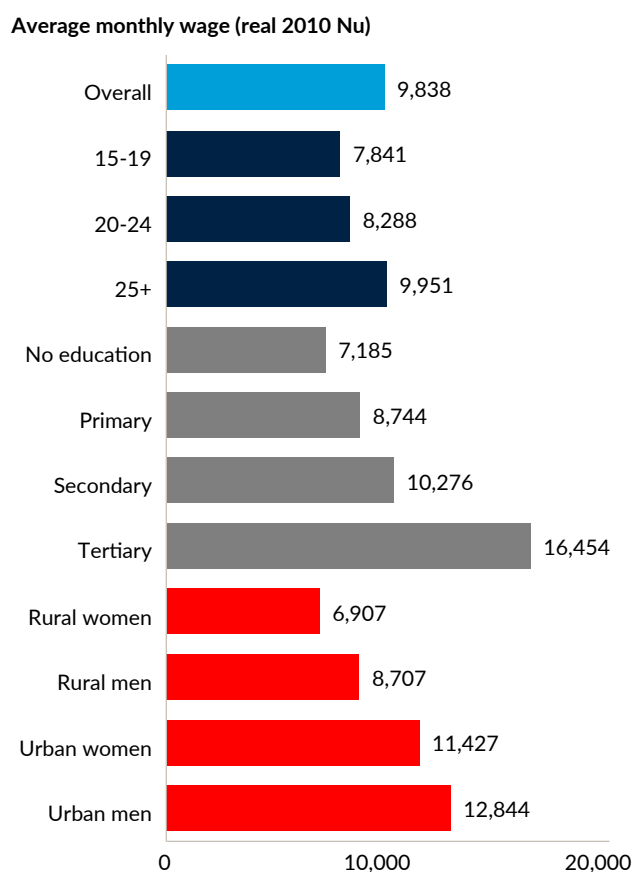
Wages increase sharply with experience and education, particularly for women and urban workers, suggesting that human capital translates into better-quality employment.

Older female and male workers and urban male workers are more likely to have quality employment, as measured by remuneration in the labor market. Figure 2.28 shows that, on average, workers over age 25 earn 27 percent more per month than those ages 15–19. Urban women and men earn 65 percent and 47 percent more, respectively, than their rural counterparts. Table B.4 in appendix B presents an OLS model on the determinants of real hourly wages for men and for women, thereby allowing examination of returns

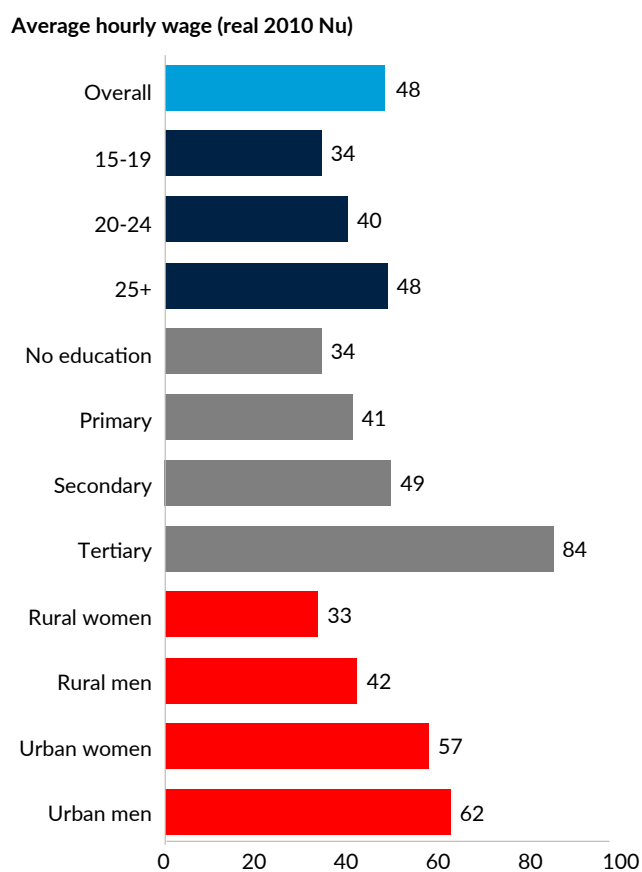
to age and location. When other characteristics such as education are held constant, location does not matter for the hourly wages of women and only slightly affects the wages of rural men. For both men and women, returns to age, which is a proxy for work experience, are nonlinear. Figure B.20 in appendix B plots the predicted log hourly wage of men and women by age. The average working woman starts with a lower hourly wage than the average young man, but her returns to experience are higher. Another possibility is that only the best-paid women remain in the labor market, so that by the age of 45 the average working woman earns almost the same hourly wage as the average working man.

Figure 2.28. Average monthly and hourly wages, overall and by education, gender, and area, 2022

a. Average monthly wage



b. Average hourly wage



Source: Bhutan Labor Force Survey, 2022.

Returns to education are very high in Bhutan for both men and women. In appendix B, figure B.21 uses the point estimates in table B.4 and reports three findings. First, returns to tertiary education for both men and women are higher than returns for secondary and primary education. Second, returns to education are somewhat higher for educated women than they are for educated men. For example, tertiary-educated men receive 46–71 percent more in wages than male workers with no education, whereas the range is higher for tertiary-educated women, who are likely to earn 46–94 percent more in wages than female workers with no education. Finally, controlling for occupations (specification 4) divides the returns to education by a third, suggesting that the most educated tend to opt for the best-paid occupations.

Wage gaps across occupations within the same sector illustrate the importance of other types of skills beyond education, age, and location. Figure B.22 in appendix B shows that the raw pay differences between services and sales workers and workers in other occupations ranged from 0 to 88 percent for men and –24 percent to 77 percent for women, which likely reflects the skill differential and worker self-selection into various occupations. Once conditioned on similar demographic (age, education, and location) and industry characteristics, pay differences between occupations decrease, but some gaps remain. For the same age and education, managers earn 29–52 percent more and professionals 38–44 percent more than services and sales workers in the same industry. This finding illustrates how other types of skills beyond education matter, giving rise to compensating wage differentials.¹⁴

Wage discrepancies among some groups of workers are not immediately explained by human capital characteristics, which may further deepen inequalities in the labor market.

Even conditioning for education, age, occupation, and locality, some industries pay better than others. Figure B.23 in appendix B shows the raw hourly wage gap for the manufacturing sector, together with the wage gap estimated by the OLS regression in tables B.4a and B.4b in appendix B. For men, the large pay gaps observed when comparing hourly wages in manufacturing with wages in science, information, finance, real estate, and education disappear when controlling for education, age, localization, and occupation. However, a large unexplained gap appears between workers in manufacturing and workers in accommodation and food services (–40 percent), as well as workers in arts or other services (–29 percent). On the other hand, compared with their wages in the manufacturing sector, men are relatively better paid in the energy and water sectors (+22 percent) and in the construction sector (+20 percent). Women working in the manufacturing sector receive a significantly lower hourly wage than those working in most of the sectors (the wage penalty ranges from 30 to 54 percent), except for transportation, accommodation and food services, science, and administration, where the hourly wage is statistically similar.

Women are also less likely to receive wages comparable to those of men with similar characteristics. This gap is mostly driven by the differential impact of marriage on men and women. The raw wage gap between men and women of working age is 12 percent (excluding family workers). According to table B.5 in appendix B, women and men have different productive characteristics and are oriented toward different types of jobs.

14. These pay gaps between industries and occupations persist in sign and magnitude after controlling for the sector of employment (public/private). All else being equal, and notably within a given industry and occupation, women earn, on average, 12 percent less per hour in the private sector than in the public sector. By contrast, men working in the private sector earn 13 percent more per hour than in the public sector.

Based on the Blinder-Oaxaca decomposition methodology described in box 2.1, the first panel in table B.5 in appendix B shows that differences in worker characteristics contribute in part to the gender gap in wages. For example, working women elect to work in slightly better-paid locations, which reduces the gender gap in wages. If these women lived in the same places as men, the wage gap would be higher. The observed differences in education between women and men also help mitigate a gender wage gap, which would be higher if both had the same education level. Differences in living arrangements (marriage, household composition) partly explain the observed wage gap. Finally, it seems that working women choose to work in the worse-paying industries (setting the industry choice of women to that of men would lead to a decrease in the gender wage gap of 6.6 percentage points), but in slightly better-paid occupations than men (setting occupation choice of women to that of men would lead to a 2.4 percentage point increase in the explained gender gap). However, three-quarters of the gross gender wage gap is unexplained because of the differing returns to worker characteristics of men and women. Most of the unexplained portion is, in fact, driven by

the gender-differentiated impact of marriage on labor outcomes. All else being equal, the gender pay gap is 8 percentage points lower for unmarried women and men than married women and men. This is further evidence of the high constraints and expectations that married women and men face in the work and family sphere.¹⁵

Workers in state-owned enterprises are more likely to receive higher wages than workers with similar characteristics in the private sector. According to 2022 data, the raw hourly wage gap between the public sector (including SoEs) and private sector is 24 percent in favor of the public sector. Using the same Blinder-Oaxaca decomposition methodology, the gap is fully explained when taking into account gender and age, but, even more important, education and occupations. However, in a comparison of the wages of workers in private companies and those of workers in SoEs (where jobs are possibly the most comparable), the wage gap is much higher, 38 percent. Half of the gap remains unexplained after taking into account age, gender, location, and education. The decomposition suggests that differences across workers in terms of education

Box 2.1. Blinder-Oaxaca decomposition methodology

The Blinder-Oaxaca decomposition is a statistical econometric method for explaining observed wage differences between two groups (here, between working-age Bhutanese women and men, as well as between workers in state-owned enterprises and private sector workers). The observed average difference in the hourly wage is decomposed into a part that can be explained by differences in characteristics, with the remainder due to differences in returns to characteristics (the unexplained part). For example, Bhutanese women have a significantly lower employment rate than men and earn significantly less. Do they have less access to employment because they are less educated than men? Or do they have different returns for the same characteristics—for example, does having young children penalize them differently in accessing employment?

15. This finding is consistent with the employment gap between men and women. In 2022, the employment rate of working-age women was 21 points lower than men's, a difference that cannot be attributed to any observed difference in characteristics and is essentially driven by the differential employment impact of marriage on women and men. Table B.5 in appendix B shows that most of the employment gap is, in fact, driven by the gender-differentiated impact of marriage on employment, which accounts for two-thirds of the gender employment gap.

and occupation account for half of the gap, whereas differences in returns to these characteristics explain the other half of the gap (see appendix C for a detailed discussion).

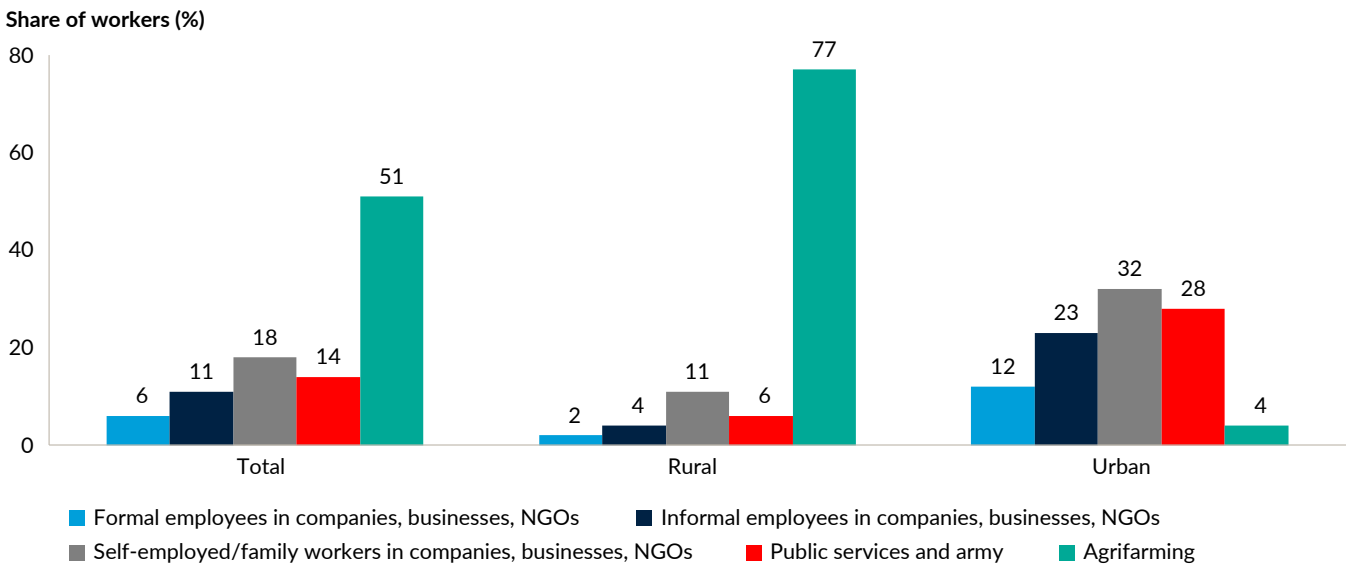
Recent salary hikes announced for public sector and SoE employees will likely further exacerbate the pay gap with private sector employees. In July 2023, a pay revision for civil servants was announced to compensate for the rising cost of living. The announced pay increase was between 55 and 74 percent. In October 2023, SoEs also announced salary increases of between 46 and 72 percent of the minimum basic pay. With the revision, a fresh graduate in grade 8 working at one of Bhutan's SoEs (Druk Holding and Investment and its companies, DHI) would receive a gross monthly salary of Nu 46,908, which is Nu 6,308 higher than the gross

monthly salary of Nu 40,600 of a civil servant at the same level (Zangpo 2024).

Although informal employment is widespread, mostly in manufacturing, construction, wholesale and retail trade, and accommodation and food services, the informality premium applies only to those with low education.¹⁶

Informal employment accounted for a considerable share of total employment in 2017. As shown in figure 2.29, 11 percent of all workers are employed without a written contract—that is, about 32 percent of all workers in companies, businesses, and nongovernmental organizations (NGOs)¹⁷ or 67 percent of employees when excluding the public sector and armed forces.

Figure 2.29. Distribution of total employment types, by location, 2022



Source: Bhutan Labor Force Survey, 2022.
 Note: NGOs = nongovernmental organizations.

16. Informal employment is defined as wage employment without a written contract. In the BLFS, this question is posed only to employees in public and private companies, private businesses, or NGOs, and so the share of informal employment is computed either over total employment or over employment in the same type of enterprises. BLFS 2017 was the last BLFS wave to collect data on informal work.
 17. The Bhutan 2022 Establishment Survey includes an employee module, and, based on another definition of the share of employees without a provident (retirement) fund, the incidence of informality is 43 percent.

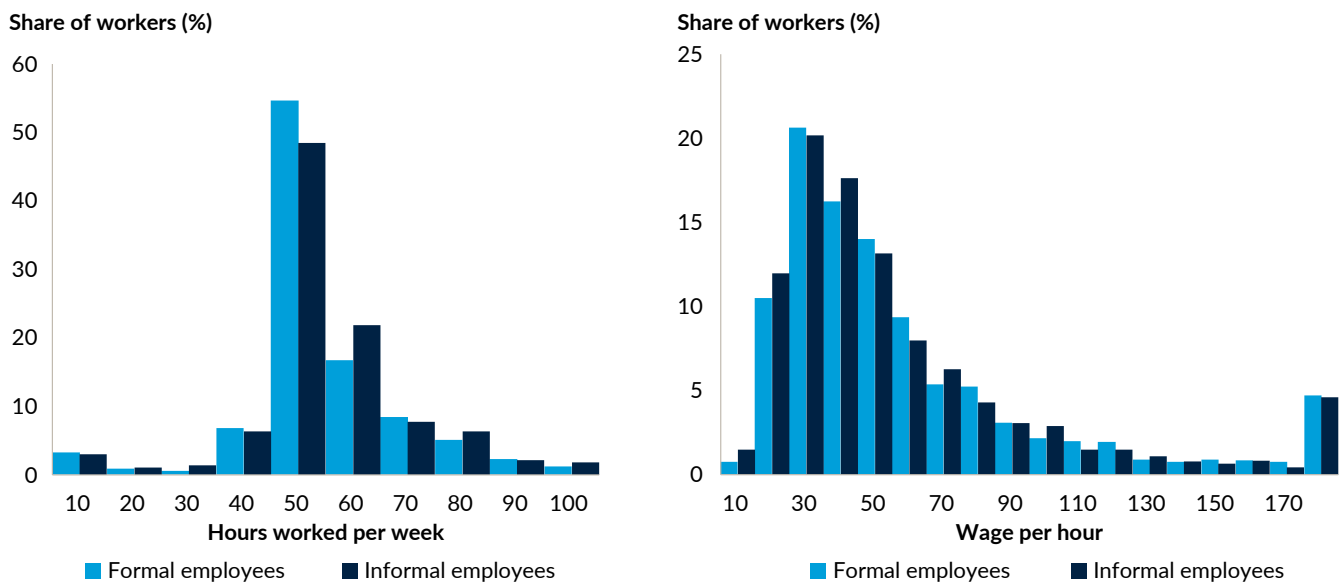
The share of informal employment in total employment is much higher in urban areas (23 percent) than in rural areas (4 percent), but the share of informal employment among wage earners in companies, businesses, and NGOs is somewhat higher in rural locations (70 percent) than in cities (66 percent).

Informal wage earners and formal wage earners working in the same type of enterprises (that is, companies, businesses, and NGOs) are similar. Table B.6 in appendix B shows that much like formal wage earners, 67 percent of informal wage earners are men; 25 percent are under age 25; 75 percent live in an urban area; and 41 percent operate in the Thimphu region. The only significant difference between wage earners who are formally employed and informally employed is their diploma. Wage earners without a written

contract are less educated—for example, 23 percent do not have a degree, compared with 16 percent of formal employees, and only 13 percent have a tertiary diploma, compared with 19 percent of formal employees. Also, wage earners without a written contract are slightly more likely (5 percentage points) to live in the poorest households.¹⁸

Informal wage earners and formal wage earners have very similar jobs in terms of hours worked and hourly wage. As shown in figure 2.30, the average number of weekly hours for formal employees is 49 versus 50 for informal employees, and the average hourly wage is also very close (55 Nu and 53 Nu an hour in real 2010 Nu, respectively). The hours and wage distributions are also very similar.

Figure 2.30. Weekly working hours and real hourly wages of employees in companies, businesses, or nongovernmental organizations, by formality status, 2017



Source: Bhutan Labor Force Survey, 2017.

18. Table B.7 in appendix B presents the determinants of having an unwritten contract, along with the determinants of not having provident funds, which is how informality can be determined using the 2022 Establishment Survey (ES). In the table, columns (1)–(3) rely on the 2017 BLFS, and column (4) relies on the 2022 ES with similar controls. The determinants of having a written contract are not the same as the determinants of having a provident fund—education, location, and age matter much more in the access to a provident fund than to a written contract. The results obtained using the 2022 ES and the results obtained with the 2017 BLFS are quite comparable, as evident in columns (3) and (4), notably regarding the negative effect of education on the likelihood of not having a provident fund. The magnitude of the effect of education is much higher when using the BLFS than when using the ES, which can be explained by the fact that ES contains only registered firms, where the least educated have a greater chance of benefiting from a provident fund.

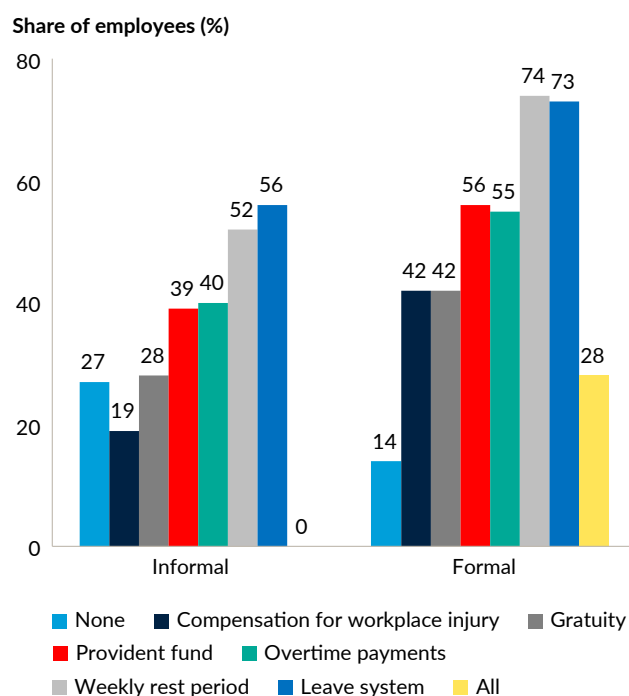
The informality premium exists only for uneducated workers, who earn 23 percent more when they do not have a written contract. Column (1) in table B.7 in appendix B confirms that there are no differences in the hourly wage when comparing employees from private firms with or without a written contract. Column (2) indicates that this finding cannot be explained by a different distribution of informal and formal jobs in location in which informal jobs would be concentrated in urban areas, which also happen to pay more. Column (3) highlights that only the least educated benefit from an informality premium of 22 percent on average, which allows them to reach almost the same wage rate as formal or informal workers with a primary school degree.¹⁹ Column (4) controls for industry and occupation fixed effects to show that the heterogeneous effect of informality on wages for the uneducated cannot be explained by the fact that informal workers would move into industries or occupations that also pay more.

Taken together, manufacturing, construction, wholesale and retail trade, and accommodation and food services account for 55 percent of the unwritten contracts in 2017 in Bhutan. As shown in table B.8 in appendix B, informal workers are 2.5 percentage points more likely to work in wholesale and retail trade or in arts and other services than formal workers in the same types of jobs and are 2 percentage points less likely to work in the education sector. Also, informal contracts are more likely to apply to the unskilled. Professionals and technicians are underrepresented and craft workers and plant operators are overrepresented in the pool of workers without a written contract.

Finally, written employment contracts tend to come with different types of job benefits, but this relationship is far from deterministic. Figure 2.31 indicates

that 14 percent of formal employees do not receive any benefits, and 27 percent of informal employees report having no access to employment benefits. The most frequent benefit for informal employees is access to a leave system or a weekly rest period, followed by overtime payment and access to a provident fund. Access to compensation for a work-related injury, disability, or death is the benefit for which the gap between employment statuses is the largest (19 percent for informal employees versus 42 percent for formal ones). In figure 2.31, overall 28 percent of formal employees have access to all the benefits listed, but none of the informal employees do.

Figure 2.31. Formal and informal jobs and attached benefits, 2017



Source: Bhutan Labor Force Survey, 2017.

19. The marginal effect of informality on the wage is nonlinear. Derivation of the econometric specification in table B.7 in appendix B indicates that the marginal effects of being informal for each educational level are as follows: uneducated (ref. category): 23 percent (informality premium); primary: 22–17 percent, -0 effect (not significant); secondary: 23–20 percent, -0 effect (not significant); tertiary: 23–16 percent, -0 effect (not significant). Informality matters only for the uneducated; the premium is offset for the rest.

Aggregating many of the dimensions associated with quality of employment into one index presents consistent results on the widening gaps between urban and rural areas and between male and female workers.

Job quality seems to have increased over time in recent years and stalled in 2022, with urban and male workers exhibiting better job quality than their rural and female counterparts. The job quality index (JQI) is used to evaluate the job quality associated with the current week’s principal activity based on the number of hours in the current week from BLFS (see box 2.2). Figure 2.32 suggests that job quality increased from 2018 through 2021 and remained the same in 2022. Workers in urban areas appear to have had better job quality than rural

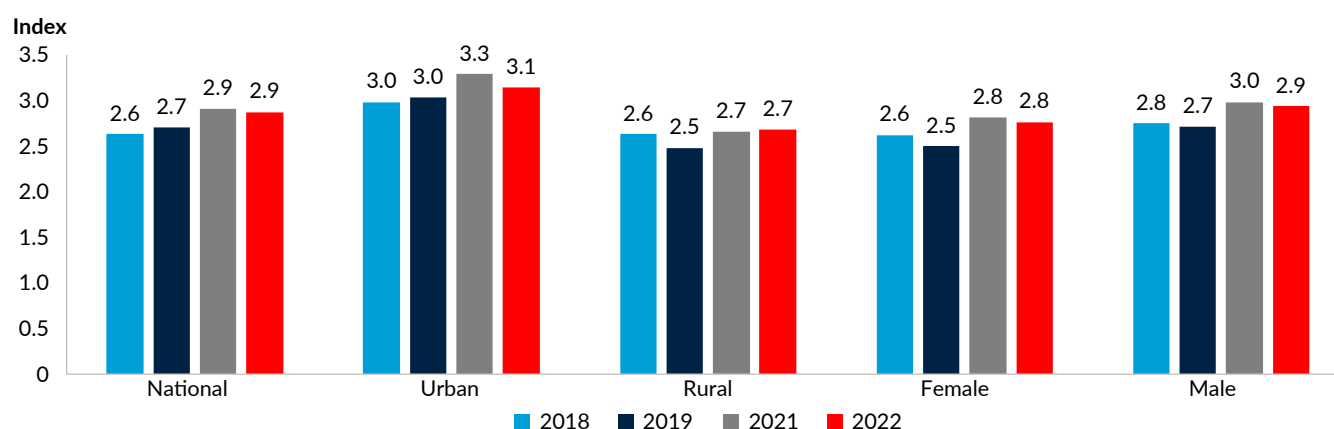
workers. Although the gender differences are not too wide, male workers enjoyed better job quality than female workers.

2.6 Internal mobility

Internal mobility in the labor market is prevalent and can support workers in finding better-quality employment.

Over one-third of the working-age population born in Bhutan has lived at least once in a *dzongkhag* other than their current *dzongkhag* of residence. This proportion is highest in urban areas, where more than

Figure 2.32. Job quality index, by location and gender, 2018–22



Source: World Bank, forthcoming b (based on BLFS).

Box 2.2. Job quality index—dimensions and methodology

The job quality index (JQI) is defined for the principal activity in the current week. It has the following dimensions: (1) benefit: the Bhutan government offers free health insurance countrywide; (2) satisfaction: the worker did not work excessive hours (more than 48 hours per week in the principal activity), does not have a second paid job, and either works full-time (less than 40 hours a week in the principal activity) or works part-time but does not want to work more; (3) stability: the worker has been working in the occupation for more than three full years. Income is compared with the US\$3.65 per day international poverty line times the national average dependency ratio. The JQI is calculated as the average sum of the dimensions.

one of every two working-age individuals has lived at least once in a *dzongkhag* other than their current *dzongkhag* of residence. Only 1 percent of individuals born and currently living in Bhutan have ever lived abroad. Working-age men and women born in Bhutan have the same probability of having experienced internal or external migration (see figure B.25 in appendix B). Meanwhile, education increases the probability of internal and external migration—for example, individuals with no education are two times less likely to have moved across *dzongkhags* than individuals with a tertiary diploma.

Of the working-age Bhutanese with a migration background, half currently live in a district different from their district of birth, but similar to the one in which they previously lived. According to figure B.26 in appendix B, a significant share of migrants live in a district different than the one in which they were born or in which they previously lived, suggesting multiple migrations. This finding is particularly true for working-age individuals currently living in urban areas (42 percent versus 30 percent for rural dwellers). Return migrants—that is, migrants who currently live in the

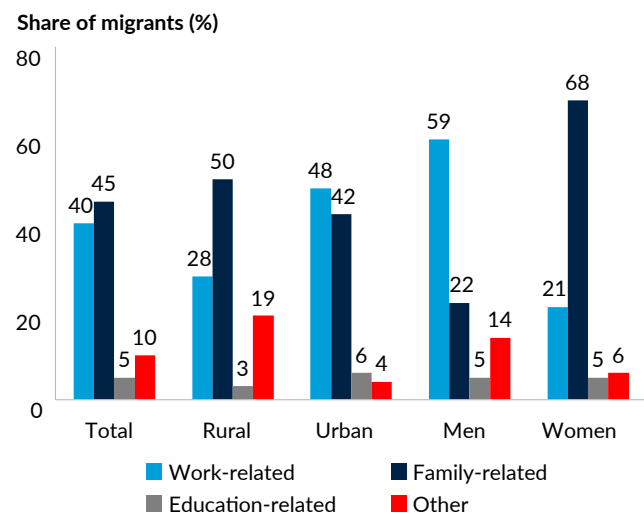
place in which they were born—are a minority, albeit overrepresented in migrants currently living in rural areas (23 percent, compared with only 7 percent of the migrants in urban areas).

Surprisingly, internal migration flows are not driven by urbanization. Figure B.27 in appendix B shows that 45 percent of individuals who ever migrated across *dzongkhags* were previously living in an urban area, compared with 54 percent who had lived in a rural area. In terms of location choices, urban areas appear to be more attractive—60 percent of internal migrants end up living in an urban area. The urban–urban flow is almost as important as the rural–urban flow (28 percent versus 32 percent).

Overall, the main reasons for deciding to move are work and family, but these numbers mask important gender and location differences. Six in 10 migrant men move for work reasons, whereas almost seven in 10 migrant women change *dzongkhag* for family reasons (figure 2.33). Family reasons dominate for those currently residing in rural areas (50 percent), whereas work reasons dominate for those who have moved to

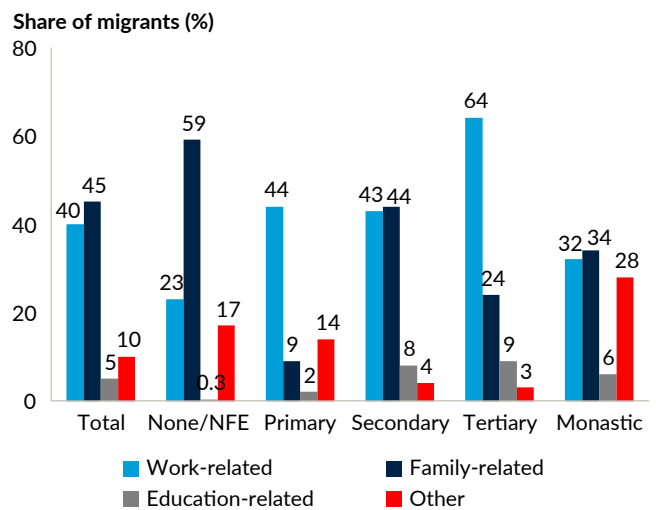
Figure 2.33. Reason for moving reported by Bhutan-born working-age individuals, 2019

a. By location and gender



Source: Bhutan Labor Force Survey, 2019.
Note: NFE = nonformal education.

b. By education level



Source: Bhutan Labor Force Survey, 2019.
Note: NFE = nonformal education.

urban areas (48 percent). The higher the level of education, the higher is the probability that a migrant moved for work (64 percent for the most-educated migrants, compared with 23 percent for the least-educated migrants).

The current labor market status of migrants suggests internal mobility can help workers improve their labor market outcomes. Only 1 percent of migrants who moved for work are currently unemployed, and 5 percent are inactive. Half of the migrants who had family reasons or education reasons to migrate are currently inactive, most likely due to family duties or studies (figure 2.34). Interestingly, moving across *dzongkhags* allows a change in labor market status: of the individuals unemployed in their previous location, 45 percent are now employees, and 21 percent are self-employed or family workers. The same type of transitions can be observed when looking at previously inactive individuals, 29 percent of whom became employees and 21 percent of whom became self-employed or family workers.

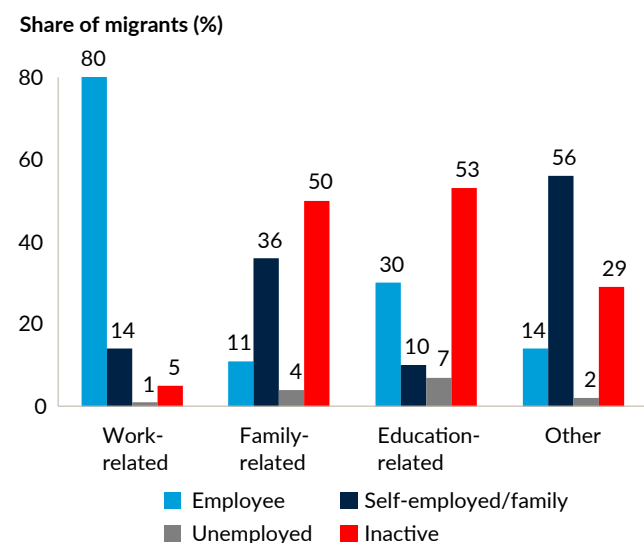
Summary

An analysis of 10 waves of the BLFS reveals that since 2013 the size of the working-age population has declined, but the demographic dividend has remained stable, and the skill level of working-age men and women has increased rapidly. The pandemic affected the labor market, most notably driving women's labor force participation, and subsequently female unemployment, to increase in 2020 and 2021. In 2022, the recovery was uneven as labor force participation rates for women dropped to pre-pandemic levels.

Chapter 2 finds that the main challenges facing workers in Bhutan are the limited inclusion of women in productive employment; the high unemployment rates among educated youth in urban areas; the segmentation of the labor market into low-productivity agricultural and public sector employment; and the low quality of employment in the private sector.

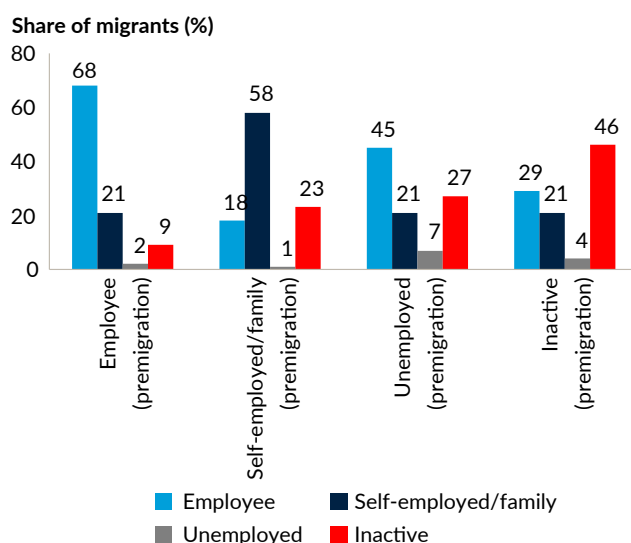
Figure 2.34. Current labor market status of Bhutan-born working-age migrants, 2019

a. By migration motive



Source: Bhutan Labor Force Survey, 2019.

b. By labor market status in origin *dzongkhag*



Source: Bhutan Labor Force Survey, 2019.

Women face challenges in engaging in meaningful and quality employment. The participation of prime-age women is strongly affected by their marital status, the presence of young children, as well as the labor market participation of other women in their family and community. In the labor market, women tend to work in low-productivity sectors such as agriculture, manufacturing, or services as self-employed or family workers, and they have limited access to private employment or public sector jobs. Decomposition analysis finds that gender pay and employment gaps in the labor market are driven by the differential impact of marriage on women and men. This finding is further evidence of the large constraints and high expectations that married women and men face in the work and family sphere.

The alarmingly high unemployment rates among young and educated urban workers remain a challenge. The reservation wages of the unemployed are 60–90 percent below the wages observed for workers of similar age and education. And yet the unemployed express a strong preference for public sector jobs and believe that a mismatch between their qualifications and the available positions in the private sector is a key reason for their unemployment.

The labor market in Bhutan is mostly dominated by agricultural employment, followed by public sector employment, and it is segmented along the lines of gender, location, and education. Men and high-skilled workers in urban areas dominate public sector employment, while women are more likely to remain employed in agriculture and work as self-employed or family workers. Structural transformation happens slowly, with the share of agriculture remaining high.

An assessment of job quality through the lens of hours worked, wages, and informality indicates that significant gaps linger in hours worked and wages across industries. Informality is still widespread, especially in urban areas and industries in which overwork dominates—namely, construction, wholesale and retail trade, transportation, and accommodation and food services. Those with high education and skills are more likely to have better quality employment through better wages. However, hourly wage gaps persist across industries, even after controlling for returns to education and experience. Cross-*dzongkhag* mobility for work reasons is widespread (mobility within urban areas accounts for a large share), which could improve the quality of employment opportunities in Bhutan.

Chapter 3

Firm Dynamics in Bhutan and Its Alignment with Labor Supply

Mariana Viollaz and Jumana Alaref

Introduction

Chapter 3 explores the extent to which the challenges facing workers highlighted in chapter 2 stem from the limited productive opportunities created by the private sector. Section 3.1 analyzes the characteristics of registered firms in Bhutan by sector, region, size, and characteristics of their workforces. It also examines patterns in job creation and destruction and explores whether these patterns are related to sectoral productivity. Section 3.2 takes a look at the key occupation and education categories expected to be in demand in the near future and compares them with the profile of the labor force discussed in chapter 2 to uncover any potential skill mismatches in the labor market. This section also discusses the hiring difficulties and supply shortages that firms encounter, which could arise from some skill and spatial mismatches in the labor market. In addition, the section explores the hiring of foreign workers to fill vacant positions and discusses firm and employee access to training support as a way to improve worker productivity and align labor demand and supply. Section 3.3 then looks into firm business management practices and perceptions of the difficulties firms encounter in expanding their growth.

3.1 Profile of firms in Bhutan

The private sector is dominated by low-productivity microenterprises concentrated in a few economic sectors that do not grow and employ mostly low- to semi-skilled workers.

Over 95 percent of firms in Bhutan have, on average, fewer than five employees, and they capture only 37 percent of all employment (figure 3.1, panels c and d). Ninety-five percent of firms have fewer than five employees (cottage firms), followed by firms with 5–19 employees (small firms that represent 3 percent of the total). Cottage firms employ 37 percent of all workers in Bhutan. By comparison, large firms, which make up only 0.3 percent of firms in the country, employ 32 percent of all workers. The vast majority of firms (97 percent) are individual proprietorships.

Most firms in Bhutan are geographically concentrated in three regions and are concentrated in a few economic sectors with low labor productivity (figure 3.1, panel b). In 2022, 69 percent of firms were located in the regions of Gelephu (31 percent), Thimphu (23 percent), and Punakha (15 percent). The distribution of firms by their main economic activity indicates that 80 percent of them are in the wholesale and retail trade sector (56 percent) and the accommodation and food

services sector (24 percent), both of which have low labor productivity. Indeed, the accommodation and food service sector suffers from negative labor productivity. A comparison of the 2018 Economic Census and the 2022 Establishment Survey (ES) indicates that between 2018 and 2022 firms in Bhutan became more geographically concentrated and diversified in terms of economic activity (see figure D.1 and table D.1 in appendix D).²⁰

Firm dynamism in Bhutan is limited. In 2022, 3 percent of firms were new (less than one year of operation), and 26 percent were long-established (10 or more years). Almost 75 percent of firms with fewer than five employees have been operating for 1–9 years, whereas 25 percent are long-established firms. This finding suggests there is limited firm dynamism in Bhutan: very small firms remain small, and inefficient ones do not exit the market.

The majority of firms employ low- to semi-skilled workers, with up to medium level of education (see table D.2 in appendix D). An analysis of the individual characteristics of the workforce reveals that in 2022, 61 percent had a primary or secondary education; almost 20 percent had no education; and 30 percent of workers had vocational qualifications. Ten percent of workers had less than one year of experience working at their firm, suggesting some level of employee churn. Also in 2022, 3 percent of workers were foreign-born, and 47 percent were women. Finally, the majority of the workforce consisted of regular employees (91 percent) followed by casual employees (6 percent).

Higher-order skills related to the use of digital technologies are rarely utilized by firms. In 2022, 89 percent of firms reported using e-payment. As for other digital technologies, the percentage of firms that use them is low, ranging from 19 percent for social media to 0.6 percent for outsourced data centers. When disaggregated by economic sector, the data reveal that the use of e-payment is high in all of them. Firm websites are used widely in the education sector (55 percent of firms) and financial services (44 percent). These two sectors stand out as those with the highest usage of social media (89 percent of firms in the education sector and 91 percent in financial services). Over 50 percent of firms in the construction, education, mining, and financial services sectors use accounting systems.

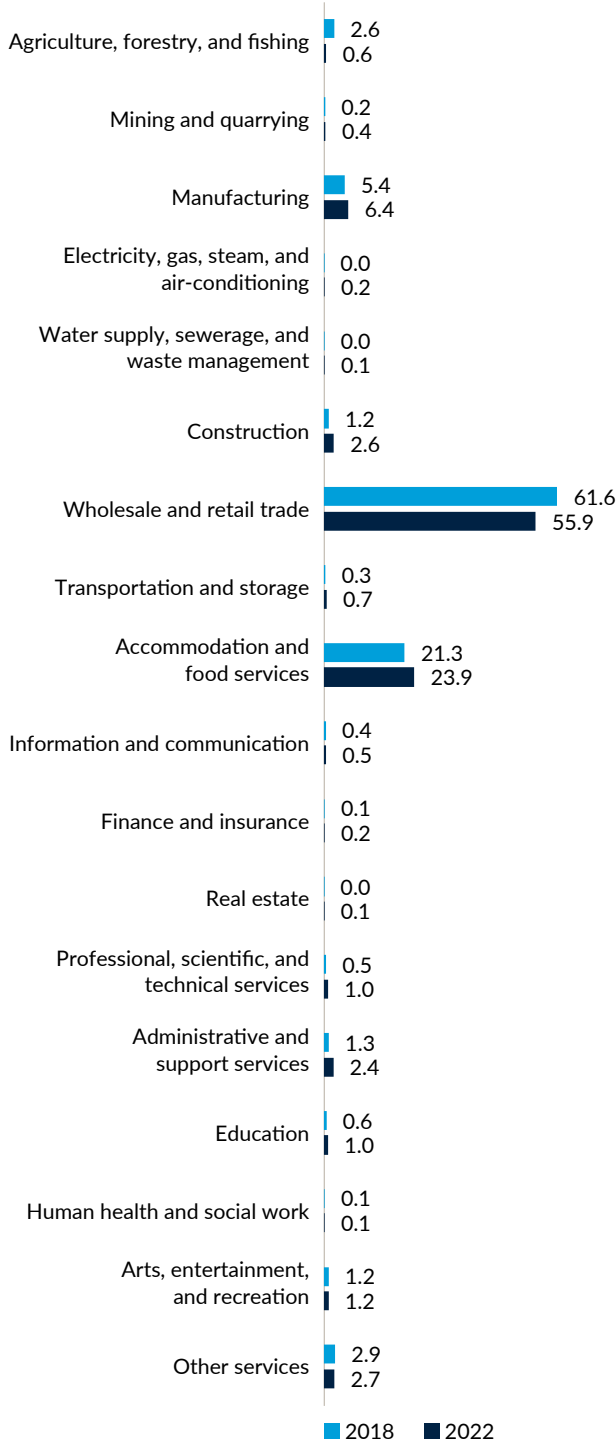
Job creation is prevalent in the more productive sectors, which tend to hire more skilled workers. However, these sectors remain very small and are unlikely to absorb the rising number of high-skilled workers on their own.

An analysis of past patterns of job creation and destruction indicates that both declined when comparing the pre- and post-pandemic periods and that, on average, job creation was always higher than job destruction (see figure 3.2 and table D.3 in appendix D). In 2019, the average number of workers hired across all firms was 1.1, and this number declined to 0.7 in 2020 and 2021. The average number of workers leaving firms fell from 0.6 in 2019 to 0.5 in 2020 and 0.4 in 2021. According to the firms, the main reason for worker exit was voluntary resignation (58 percent of firms), followed by layoff due to the pandemic or other reasons (42 percent of firms).

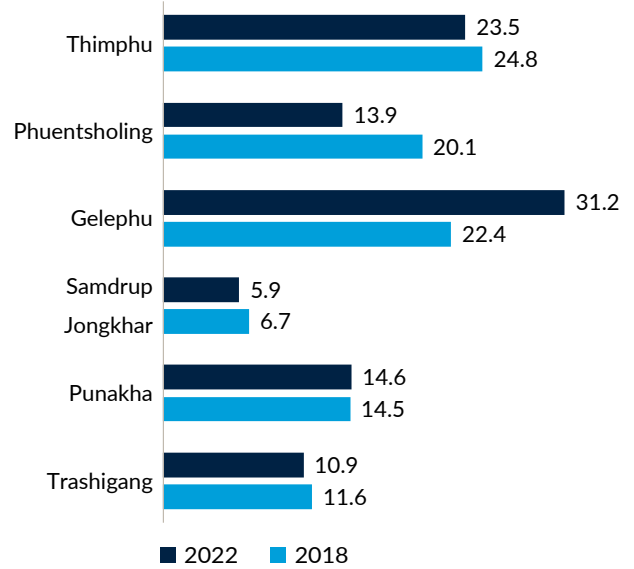
20. In 2018, 62 percent of firms were located in the regions of Thimphu, Gelephu, and Punakha (versus 69 percent in 2022). The wholesale and retail trade and accommodation and food services sectors accounted for 83 percent of firms in 2018, whereas in 2022 these sectors represented 80 percent. This difference is explained mainly by the increase in the share of manufacturing (5–6 percent), construction (1–3 percent), and administrative support services (1–2 percent).

Figure 3.1. Profile of firms by economic sector, region, size, and employment share, 2018 and 2022

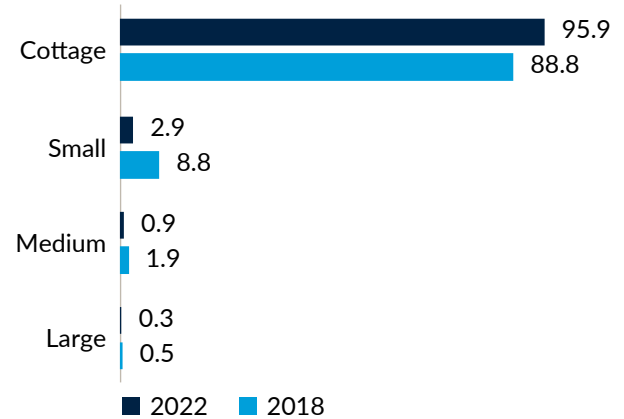
a. By economic sector



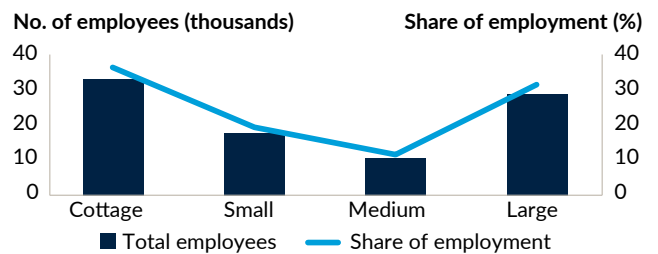
b. By region



c. By size



d. By share of employment and firm size, 2022



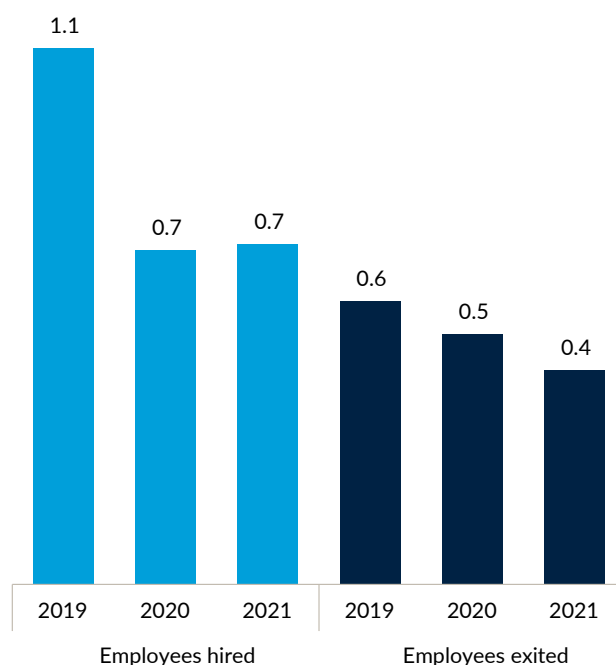
Sources: 2022 Establishment Survey and 2018 Economic Census.

Note: Panels a, b, and c are showing percentages. In panels c and d, cottage firms have fewer than five employees; small firms between five and 19 employees; medium firms between 20 and 99 employees; and large firms 100 employees or more.

When disaggregated by firm size, all firm categories exhibited positive net job creation—that is, more jobs were created than abolished (table D.3 in appendix D). The average number of workers hired was greater than the average number of workers laid off regardless of firm size. The value of net job creation had a positive relationship with the size of the firm. In addition, firms experiencing positive job creation during the pandemic were more likely to report a positive financial performance.²¹

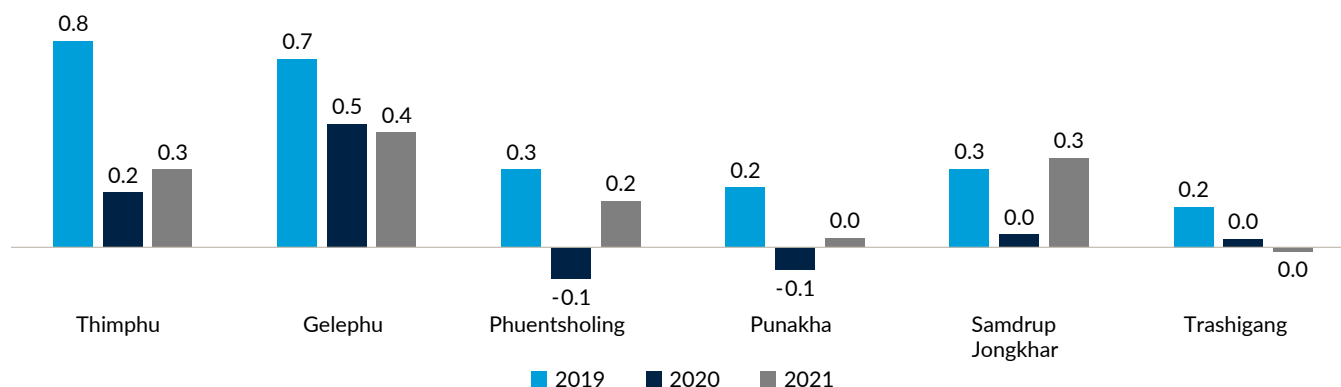
Disaggregation by region reveals a more heterogeneous trend, with some regions having negative net job creation and others showing positive rates even during the pandemic (see figure 3.3 and table D.3 in appendix D). Before the pandemic, the regions of Thimphu and Gelephu were more dynamic in terms of having higher job creation than destruction compared with other regions. In Thimphu and Gelephu, the average number of workers hired in 2019 surpassed the average number of workers leaving firms by 0.8 and 0.7, respectively (in the other regions, the numbers were between 0.2 and 0.3). In 2020, Thimphu and Gelephu were the only regions with positive net job creation—a distinction that continued in 2021.

Figure 3.2. Average number of workers hired and exiting firms, 2019–21



Source: 2022 Establishment Survey.

Figure 3.3. Net job creation, by year and region, 2019–21



Source: 2022 Establishment Survey.

Note: Net job creation is the average number of workers hired by firms minus the average number of workers exiting firms.

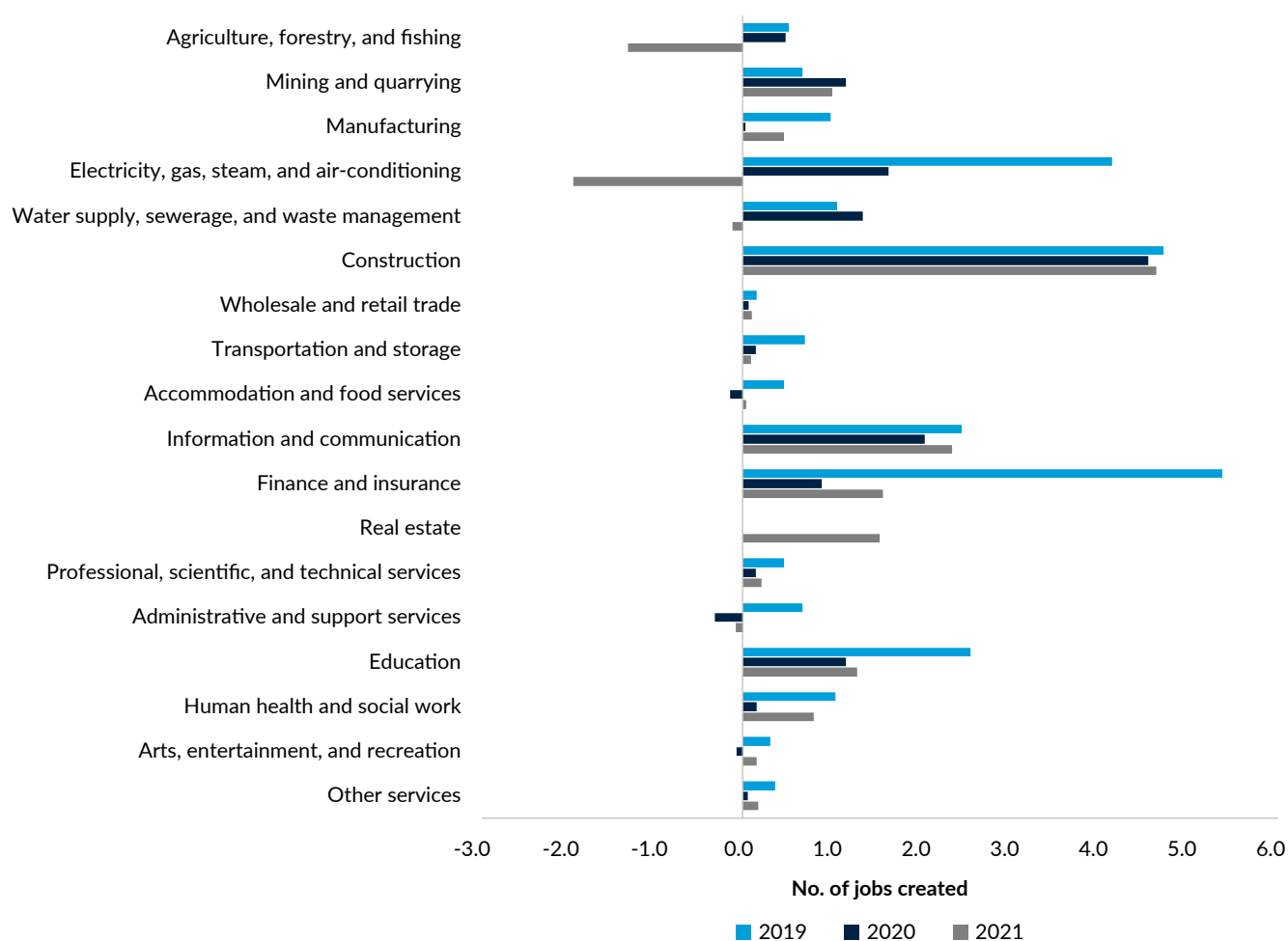
21. In 2019, 29 percent of firms were operating at a loss, which increased to 61 percent in 2020 and 2021. On the other hand, the percentage of firms breaking even or operating at a profit declined over time. In terms of correlation between experiencing a loss and hiring in 2020, the net job creation rate was only 0.08 for firms operating at a loss, 0.224 for firms breaking even, and 1.02 for firms making a profit.

Analysis by economic sector reveals different patterns in some sectors, especially the smaller ones that had positive net job creation even during the pandemic (see figure 3.4 and table D.3 in appendix D). In 2019, all sectors hired more workers than the average number they laid off. The sectors with higher net job creation were those having a smaller share of firms in the market. They include financial and insurance activities, where the average number of workers hired was 5.4 higher than the number of workers leaving firms; construction with a net job creation of 4.7 workers; and electricity, gas, steam, and air-conditioning, where the net job creation reached 4.2 workers, on average. In 2020, most sectors continued to enjoy positive net job

creation. However, in 2021 some sectors experienced negative net job creation, such as agriculture, forestry, and fishing; electricity, gas, steam, and air-conditioning; water supply, sewerage, and waste management; and administrative and support services.

In 2021, the relatively more productive sectors hired more workers, while the least productive ones hired fewer (figure 3.5). A comparison of net job creation rates by economic sector and sectoral labor productivity in 2021—measured as GDP per worker—reveals that some of the sectors with the highest job creation rates in 2021 were also among the most productive: financial, insurance, and real estate activities; transportation,

Figure 3.4. Net job creation, by year and economic sector, 2019–21



Source: 2022 Establishment Survey.

Note: Net job creation is the average number of workers hired minus the average number of workers exiting firms.

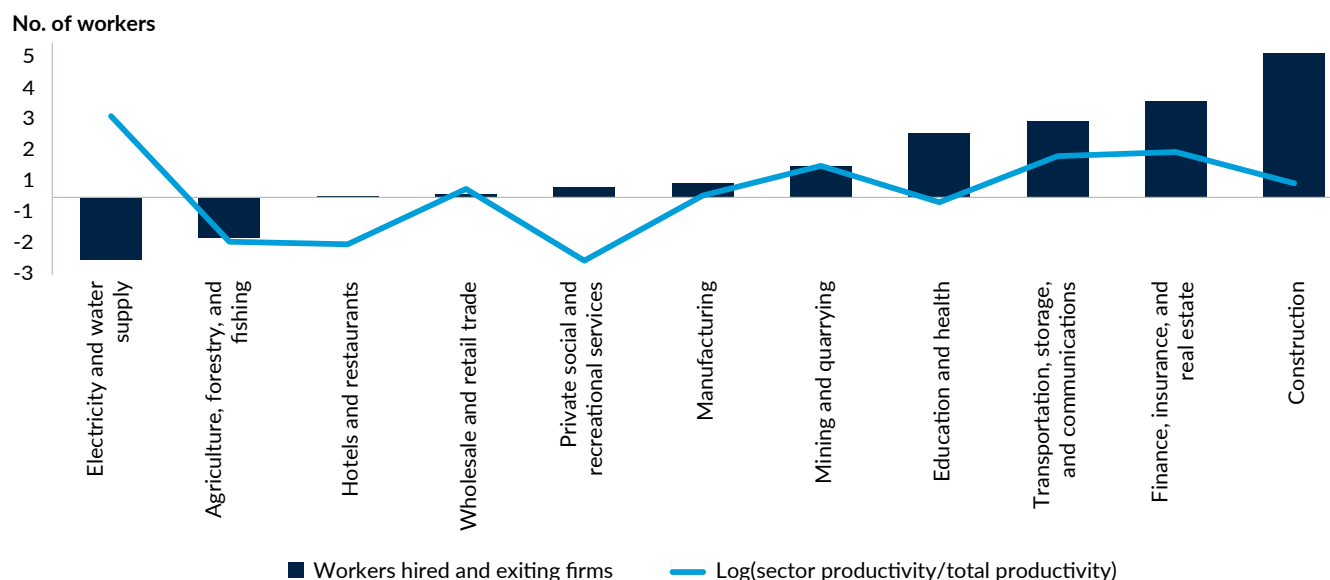
storage, and communications; and mining and quarrying. On the other hand, the three sectors with low net job creation rates exhibited lower levels of labor productivity: agriculture, forestry, and fishing; hotels and restaurants; and wholesale and retail trade. The two exceptions were the electricity and water supply sector, which exhibited a negative job creation rate in 2021 despite its above-average labor productivity, and the construction sector, which created the most jobs despite its lower productivity when compared with the other sectors, such as transportation, storage, and communication, and mining and quarrying.

This finding is consistent with how sectoral employment grew over a longer time period, from 2013 to 2021. Figure 2.26 in chapter 2, which merged sectoral employment data from the Bhutan Labor Force Survey (BLFS) with recent data from the national accounts to capture labor productivity at the sector level, shows that the share of the more productive sectors of total employment grew after 2013. Symmetrically, the sectors that shrank the most are also the least

productive sectors, such as agriculture and hotels and restaurants.

Fast-growing sectors hire high-skilled workers. Figure D.1, panel a, in appendix D shows that, compared with the historically large sectors, small but faster-growing sectors hire workers with very different education levels, and many of them hire a substantial share of workers with a tertiary diploma. In 2022, the main providers of high-skilled jobs for university graduates were the education and public administration and defense sectors (figure D.1, panel b, in appendix D), which is in line with the finding in chapter 2 that the public sector remains the main employer. More than one in 10 university graduates worked in a small job-creating sector: 6 percent in financial, insurance, and real estate activities; 4 percent in information and communication; and 2 percent in professional, scientific, and technical services. However, these sectors remain small and unable to absorb the increasing supply of high-skilled job-seekers. Financial, insurance, and real estate sectors made up 0.2 percent of firms and 2 percent of

Figure 3.5. Labor productivity and net job creation rate, 2021



Sources: 2022 Establishment Survey (ES) and National Accounts Statistics (NAS) 2022.

Note: Labor productivity is measured as the sector-level value added per worker in 2021. Because of the different sectoral aggregations adopted by the NAS and the ES, the figure groups transportation and storage with information and communication, education with health, and art, entertainment, and recreation with other services.

employment in 2022, and the information and communication sector made up 0.5 percent of firms and 1 percent of employment. Current trends in education and labor demand prospects suggest that the oversupply of high-skilled job-seekers (and the high unemployment in this group) is likely to grow over time and will require the appropriate policies to improve productivity and job creation in high value-added industries in the private sector.

3.2 Labor demand prospects

Future vacancies in the private sector will be concentrated mostly in occupation categories requiring low to medium levels of education and some specific technical skills, and they will not match the profile of the current job-seekers.

About one-third (29 percent) of firms expect to have new vacancies in the next one or two years, mainly in services and sales (table 3.1). The distribution of new vacancies by occupation indicates that these firms will mainly need personal services workers (23 percent of the expected new vacancies) and sales workers (20 percent). These two occupational categories are followed by building and related trades workers (7 percent of the total expected labor demand); food preparation assistants (5 percent); laborers in mining, construction, manufacturing, and transportation (5 percent);

and food processing, woodworking, garment, and other craft and related trades workers (4 percent).

When looking at the education level that firms expect to demand in the future, mid-level education stands out. The expected labor demand for workers with a primary or secondary level of education is 42 percent of the total. The expected demand for workers with no education is also high, reaching 27 percent of the total. The remaining share is certificate level (17 percent), diploma (5 percent), bachelor's degree (8 percent), and master's degree and above (0.6 percent).

A comparison of the current occupational distribution of employment and the expected labor demand distribution by occupation reveals a potential increase in the shares of total employment of services and sales workers, craft and related trades workers, and elementary occupations (see figure 3.6 and table D.4 in appendix D). Although services and sales workers account for 37 percent of total employment, this occupational category accounts for 44 percent of the expected labor demand. Within this category, the expected labor demand is concentrated in personal services workers and sales workers. The share of craft and related trades workers of total employment is 11 percent, and they account for 18 percent of the expected labor demand. Within this category, major increases are expected in the building and related trades and food processing, woodworking, and garments. Finally, elementary occupations account for 6 percent of total employment and 11 percent of the expected labor demand.

Table 3.1. Distribution of expected vacancies over the next one or two years, by occupation, 2022

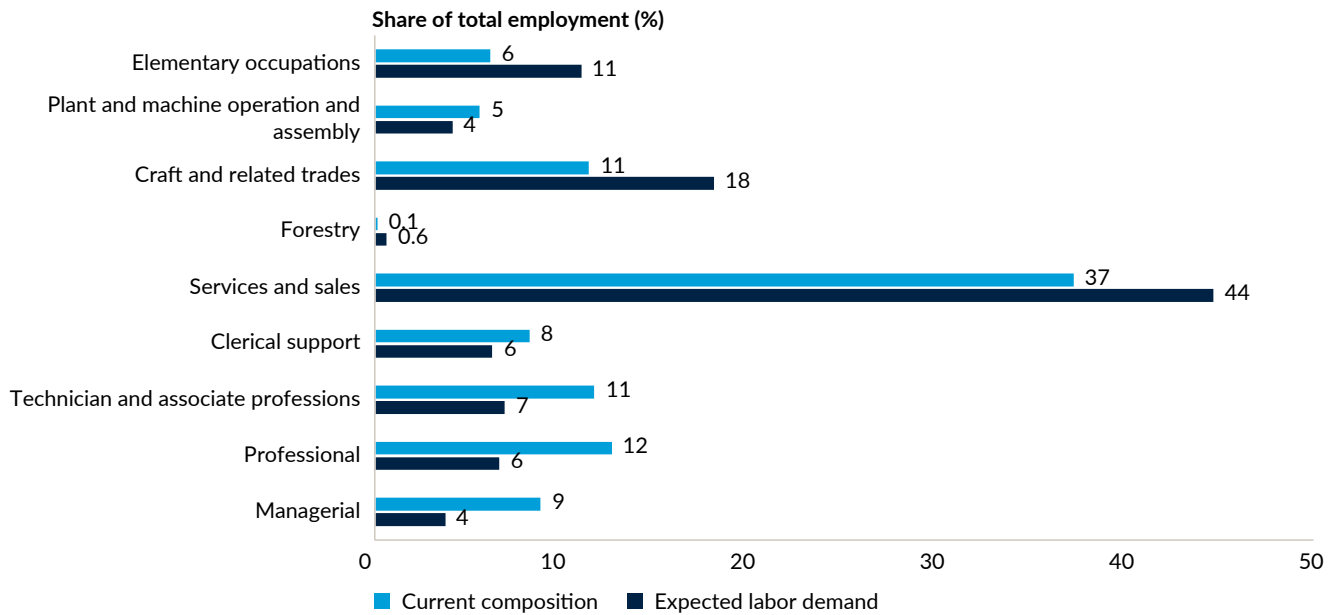
Managers	Chief executives, senior officials, and legislators	1.6
	Administrative and commercial managers	1.3
	Production and specialized services managers	0.3
	Hospitality, retail, and other services managers	0.4
Professionals	Science and engineering professionals	1.6
	Health professionals	0.2
	Teaching professionals	0.9
	Business and administration professionals	2.3
	Information and communication technology professionals	0.4
	Legal, social, and cultural professionals	1.1
Technicians and associate professionals	Science and engineering associate professionals	2.1
	Health associate professionals	0.3
	Business and administration associate professionals	0.7
	Legal, social, cultural, and related associate professionals	3.2
	Information and communications technicians	0.6
Clerical support workers	General and keyboard clerks	1.0
	Customer services clerks	1.1
	Numerical and material recording clerks	4.0
	Other clerical support workers	0.0
Services and sales workers	Personal services workers	23.3
	Sales workers	20.3
	Personal care workers	0.0
	Protective services workers	0.3
Forestry workers	Market-oriented skilled agricultural workers	0.6
Craft and related trades workers	Building and related trades workers (excluding electricians)	6.9
	Metal, machinery, and related trades workers	3.1
	Handicraft and printing workers	0.9
	Electrical and electronics trades workers	2.3
	Food processing, woodworking, garment, and other craft and related trades workers	4.5
Plant and machine operators and assemblers	Stationary plant and machine operators	1.0
	Assemblers	0.1
	Drivers and mobile plant operators	2.9
Elementary occupations	Cleaners and helpers	0.4
	Agricultural, forestry, and fishery laborers	0.3
	Laborers in mining, construction, manufacturing, and transportation	4.6
	Food preparation assistants	5.0
	Refuse workers and other elementary workers	0.4

Source: 2022 Establishment Survey.

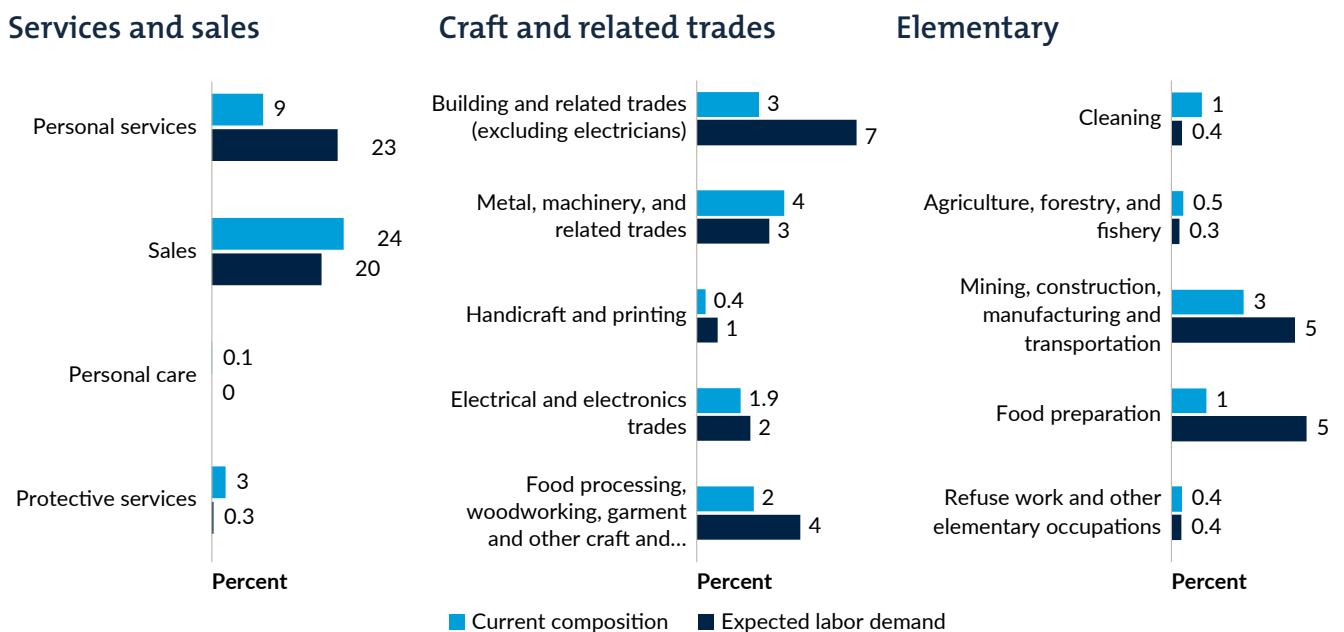
Note: Refuse workers = workers who collect, process, and recycle garbage from buildings, streets, and other public places, according to the ILO's International Standard Classification of Occupations (ISCO).

Figure 3.6. Distribution of current employment and expected labor demand, by occupation, 2022

a. Current employment



b. Expected labor demand, by occupation



Source: 2022 Establishment Survey.

Note: Refuse work = collection, processing, and recycling of garbage from buildings, streets, and other public places, according to the ILO's International Standard Classification of Occupations (ISCO).

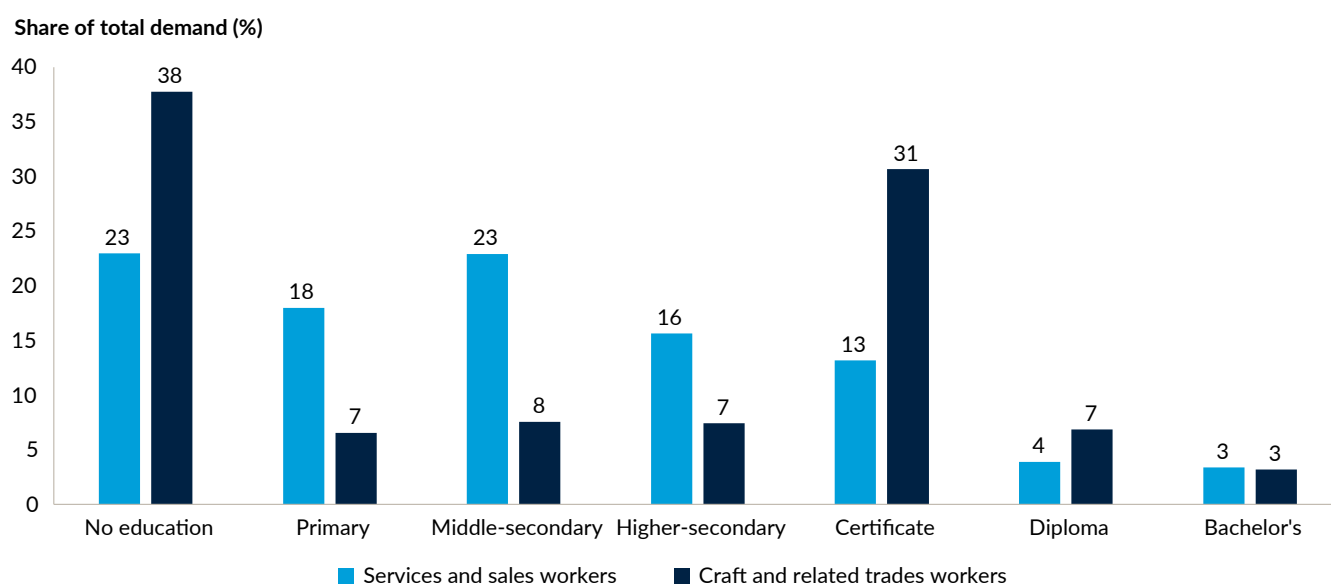
Firms expect to demand workers for services and sales and craft and related trades—the two occupations with higher expected labor demand. These occupations are characterized by low levels of education and specific technical skills at the certificate level (figure 3.7). For services and sales, the expected demand for workers with no education or with primary levels is 23 percent and 18 percent of the total demand, respectively. For craft and related trades, the pattern is more accentuated. The expected demand for workers with no education is 38 percent, while those with primary level are 7 percent of the total. A substantial share of the expected labor demand in this occupation (31 percent) is assigned to the certificate level.

In terms of the labor demand prospects of firms, the occupation category expected to grow over the next five years is services and sales. Thirty-one percent of firms expect to have new occupations in the next five years. The jobs expected to emerge correspond mainly to sales occupations (28 percent), personal services (24

percent), and building and related trades (5 percent)—see table D.5 in appendix D.

A comparison of the distribution of the expected labor demand by education and the distribution of current job-seekers points to a potential mismatch between labor demand and supply. Figure 3.8 reveals a shortage of job-seekers with low levels of education and with some specific technical skills (gained through certificates or diplomas) to fill positions mainly in services and sales and craft and related trades. This finding can be attributed in part to the high share of the working-age population with low education levels who remain outside the labor force, especially women (see figure B.16, panel c, in appendix B). According to chapter 2, 39,077 prime-age women with no education are outside the labor force, compared with only 4,076 prime-age men with no education. This finding points to the need to improve Bhutan's activation policies to increase the attractiveness and accessibility of the available low-skilled positions, targeting the

Figure 3.7. Expected labor demand for services and sales workers and craft and related trades workers, by education, 2022



Source: 2022 Establishment Survey.

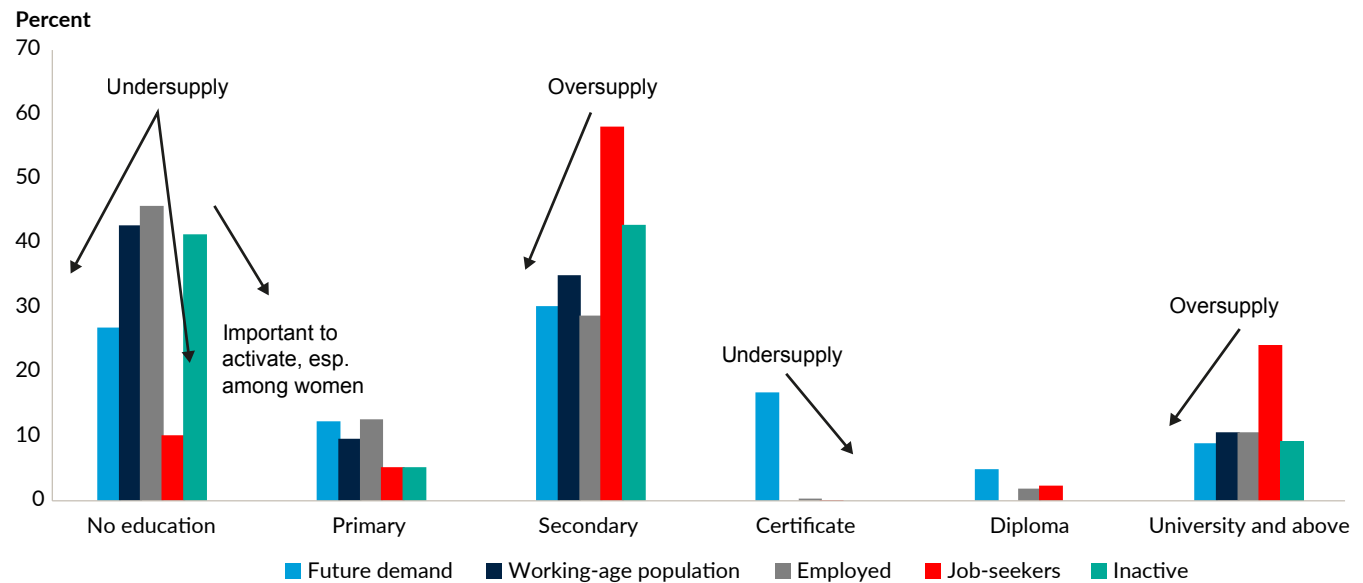
unemployed and the inactive, especially women in urban areas. A twin challenge is creating attractive jobs for the fast-growing cohorts of young university graduates. Figure 3.8 displays graphically the oversupply of secondary- and tertiary-educated job-seekers able to fill the current and expected labor demand for workers who fall in these education categories.

Firms experience labor shortages and hiring difficulties that negatively affect firm performance.

Given the observed skill mismatches in the labor market, it is not surprising that the 2022 ES found that

about a third of firms in Bhutan faced hiring difficulties in 2022 (table 3.2). The average, however, hides heterogeneous patterns by region and economic sector. More than half of firms in Samdrup Jongkhar (56 percent) and Trashigang (55 percent) reported having difficulties, together with 38 percent in Punakha, 32 percent in Thimphu, 31 percent in Phuentsholing, and 25 percent in Galephu. The agriculture, forestry, and fishing sector (45 percent of firms) and the information and communication sector (42 percent) faced the most difficulties. By contrast, only 2 percent of firms in the electricity, gas, steam, and air-conditioning sector and none of the firms in the real estate activities sector reported having difficulties hiring or retaining workers.

Figure 3.8. Comparison of the expected labor demand and the current labor force and inactive population, by education, 2022



Sources: 2022 Establishment Survey and Bhutan Labor Force Survey, 2022.

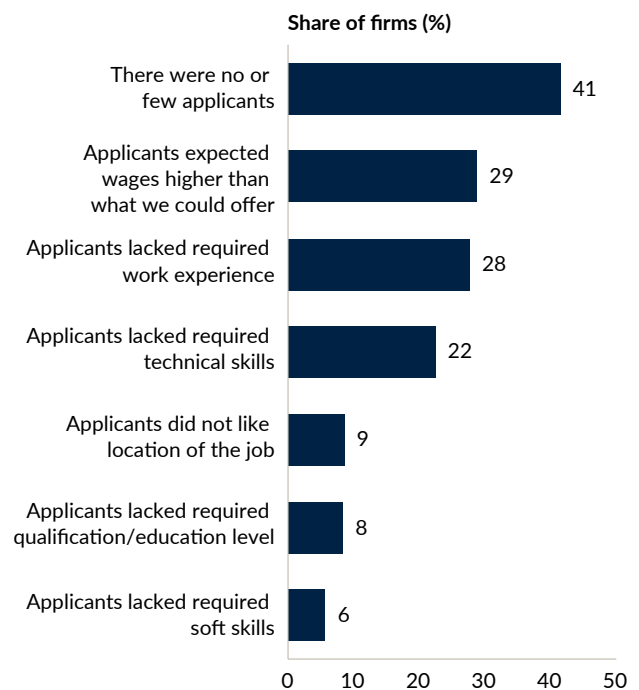
Table 3.2. Percentage of firms facing hiring difficulties, 2022

	Share of firms experiencing hiring difficulties (%)
Overall	32.87
By region	
Thimphu	32.3
Gelephu	24.8
Phuentsholing	31.3
Punakha	38.5
Samdrup Jongkhar	55.6
Trashigang	55.0
By sector	
Agriculture, forestry, and fishing	44.7
Mining and quarrying	35.8
Manufacturing	34.8
Electricity, gas, steam, and air-conditioning	2.3
Water supply, sewerage, and waste management	9.0
Construction	33.2
Wholesale and retail trade	30.7
Transportation and storage	12.9
Accommodation and food services activities	38.0
Information and communication	42.2
Financial and insurance activities	35.0
Real estate activities	0.0
Professional, scientific, and technical	18.1
Administrative and support services activities	23.6
Education	37.2
Human health and social work activities	6.2
Arts, entertainment, and recreation	33.3
Other service activities	34.0

Source: 2022 Establishment Survey.

An applicant supply shortage is the main hiring difficulty reported by firms, followed by a lack of required skills or education level (figure 3.9). In 2022, 41 percent of firms reported having no or few applicants as the main challenge in hiring. The second challenge, faced by 36 percent of firms, was related to the education level and skills of the workforce. Specifically, 22 percent of firms found applicants did not have the required technical skills; 8 percent indicated that applicants lacked the required education level; and 6 percent reported that applicants lacked the required soft skills. Other difficulties in hiring included applicants expecting wages higher than what firms can offer (29 percent) and applicants lacking the required work experience (28 percent).

Figure 3.9. Percentage of firms reporting hiring difficulties, by reason, 2022



Source: 2022 Establishment Survey.

Note: Figure shows the percentage of firms responding yes to each type of hiring difficulty.

As presented in table 3.3, the disaggregation of hiring difficulties by occupation indicates that a lack of applicants in services and sales and craft and related trades is one of the main difficulties. The lack of technical skills affects craft and related trades workers more than services and sales workers. For services and sales workers, having no or few applicants is the first or second hiring difficulty in all occupation subcategories. Applicants

expecting higher wages is also an important factor for this occupation. Among craft and related trades workers, no or few applicants is important for all occupation subcategories. And the lack of technical skills is an important reason for the difficulties facing workers in the metal, machinery, and related trades and the electrical and electronics trades.

Table 3.3. Types of hiring difficulties, by occupation, 2022

	There were no or few applicants (%)	Applicants lacked required qualification/education level (%)	Applicants lacked required technical skills (%)	Applicants lacked required soft skills (%)	Applicants expected wages higher than what we could offer (%)	Applicants did not like location of the job (%)	Applicants lacked required work experience (%)
Managers	27.7	21.5	0.0	0.0	22.7	12.3	15.9
Professionals	9.7	23.5	32.9	2.2	12.3	1.9	17.5
Technicians and associate professionals	35.2	7.1	19.3	4.3	18.8	1.2	14.1
Clerical support workers	16.9	12.5	14.0	9.5	34.0	10.7	2.4
Services and sales workers							
Personal services workers	25.0	0.9	10.9	4.0	28.3	9.4	21.4
Sales workers	42.8	3.4	5.8	6.0	14.7	8.0	19.3
Personal care workers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Protective services workers	26.6	0.0	26.6	0.0	46.8	0.0	0.0
Forestry workers	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Craft and related trades workers							
Building and related trades (excluding electricians)	31.1	3.2	20.4	2.1	12.4	4.6	26.1
Metal, machinery, and related trades	14.1	2.5	33.6	6.1	20.5	5.7	17.6
Handicraft and printing	24.6	0.0	15.5	0.0	11.1	0.0	48.8
Electrical and electronics trades	29.9	7.9	32.2	0.9	19.9	2.2	7.0
Food processing, wood-working, garment, and other crafts	24.1	2.3	15.3	4.4	16.0	10.0	27.9
Plant and machine operators and assemblers	38.3	12.3	9.8	0.0	27.7	2.1	9.8
Elementary occupations	39.9	5.9	10.2	0.5	24.2	4.6	14.6

Source: 2022 Establishment Survey.

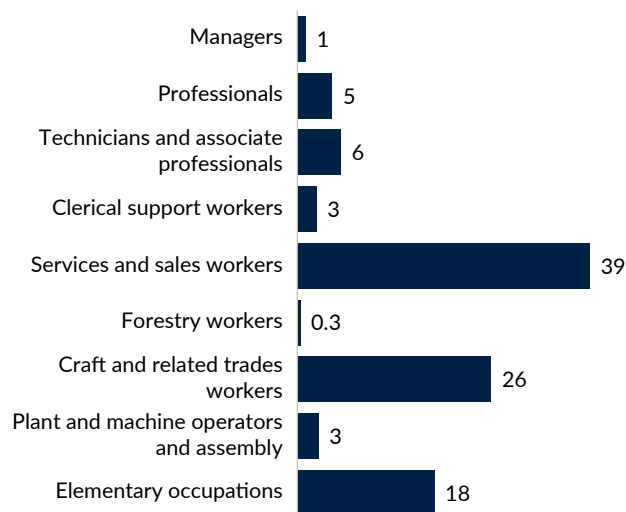
n.a. = Not available.

In 2022, 15 percent of firms reported facing worker shortages (figure 3.10). The distribution by occupation reveals that these shortages mainly affected services and sales workers (39 percent) and craft and related trades workers (26 percent). The distinction by education level shows that firms mainly face shortages of low-educated workers: 49 percent of worker shortages can be attributed to a primary education or less. This finding is in line with the earlier findings on the labor demand prospects of firms and the mismatch with the profiles of current job-seekers (see table D.6 in appendix D).

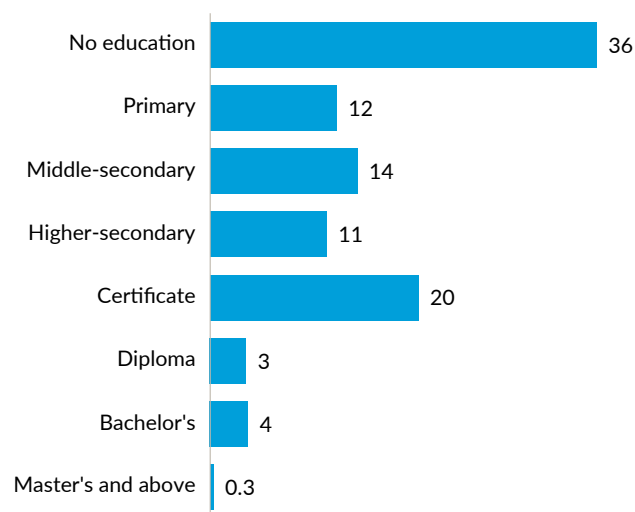
Worker shortages as experienced by firms across occupations, education levels, and regions suggest a certain degree of spatial mismatch. From a comparison of the ratio of unemployed to employed workers across regions and by education level as a measure of the tightness of the labor market, it becomes apparent that the regions reporting hiring difficulties (such as Samdrup Jongkhar and Trashigang) suffer the most from supply shortages (figure 3.11). In those regions, the ratio of unemployed to employed workers is near zero for the uneducated and graduates with a primary education—the two categories in which supply shortages and labor demand are concentrated. Chapter 2 finds that while cross-*dzongkhag* mobility is common in Bhutan, it is less common for the less educated, which could be exacerbating spatial mismatches.

Figure 3.10. Percentage of firms facing worker shortages, by occupation and education level, 2022

a. By occupation

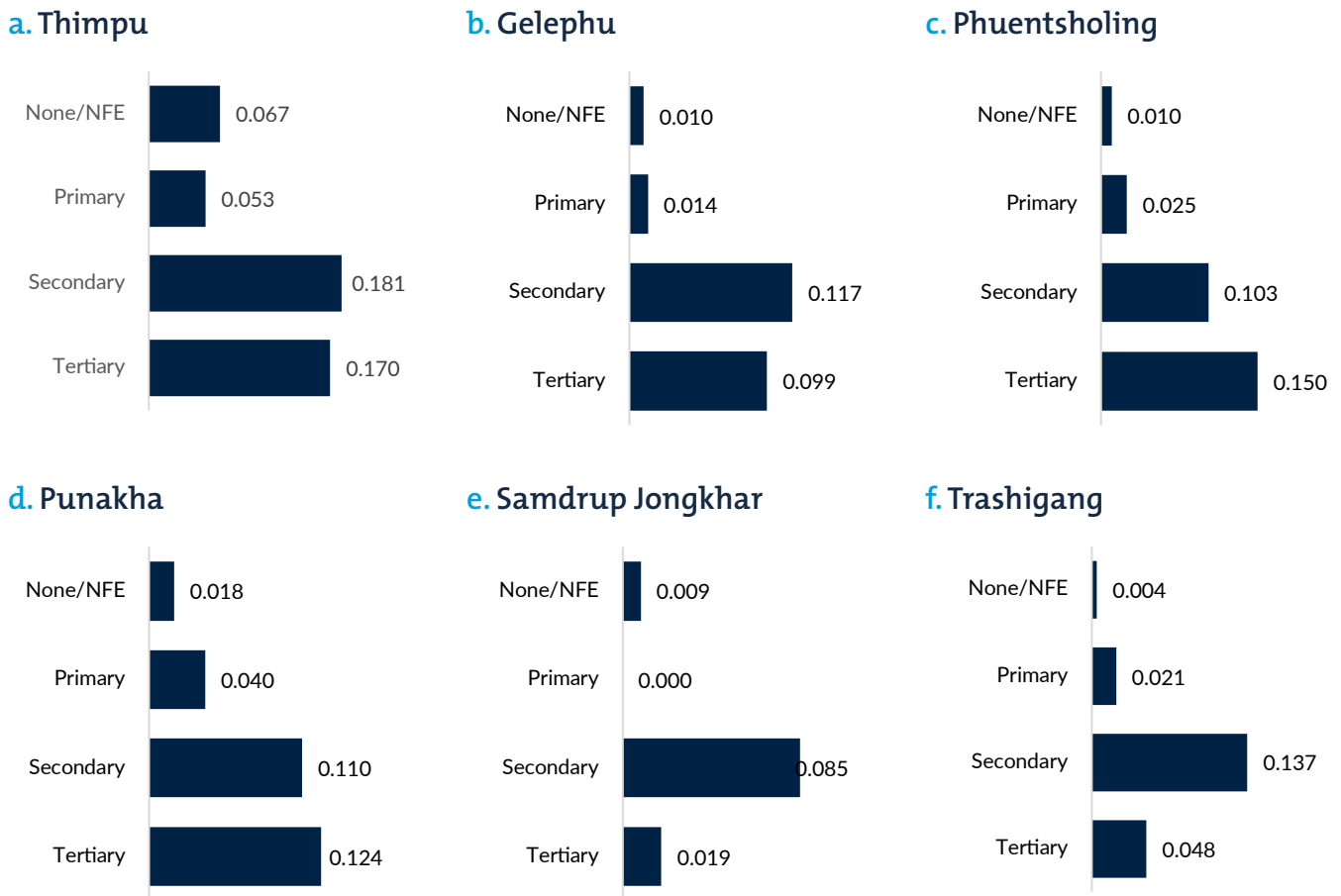


b. By education level



Source: 2022 Establishment Survey.

Figure 3.11. Ratio of number of job-seekers to number of workers, by education and region, 2022



Source: Bhutan Labor Force Survey, 2022.
 Note: NFE = nonformal education.

Worker shortages have a negative impact on firm performance (table 3.4). Sixty percent of firms indicated that worker shortages have a strong impact on the workload of the existing staff; 47 percent found that they have a high impact on the loss of productivity; and 40 percent pointed to their impact on the loss of profits or sales. Worker shortages also have a high impact on a firm’s ability to grow and diversify (40 percent of firms) and can lead to loss of markets (38 percent), lower-quality output (29 percent), and firm closure (25 percent).

Retaining workers is less of a problem for firms than hiring (see table D.7 in appendix D). Only 6 percent

of firms reported facing difficulties with retaining workers. The distribution by occupation indicates that in services and sales, retaining difficulties are more common (39 percent), followed by craft and related trades (26 percent). The hiring difficulties and labor shortages faced by many Bhutanese firms can likely be attributed to a combination of barriers. Many low-skilled women in urban areas remain outside the labor force, mostly due to household and care responsibilities. Other reasons preventing workers from moving to regions where some of those wage opportunities exist could include mobility, financial, and skill barriers. As noted earlier, for craft and related trades occupations, lack of required technical skills is one of the main

Table 3.4. Impacts of worker shortages on firm performance, 2022

Impact of worker shortages	High (% of firms)	Moderate (% of firms)	Low (% of firms)
Loss of productivity	45.7	44.4	9.9
Loss of markets	37.8	50.6	11.6
Inability to grow and diversify the establishment	39.1	49.4	11.4
Higher workload for existing staff	60.5	33.0	6.5
Firm closure/shutdown	24.7	32.8	42.5
Lower-quality output	28.6	44.4	27.1
Decrease in profit/revenue	40.3	43.8	16.0

Source: 2022 Establishment Survey.

reasons for hiring difficulties. In addition, workers may lack information on where jobs are. Chapter 4 describes how the absence of an up-to-date labor market information system leaves job-seekers with no access to timely information on the occupations most in demand. There is also evidence that some Bhutanese workers have high reservation wages for work in certain occupations, particularly in the construction sector (Kuensel 2021).

Firms do not employ a high share of foreign workers to fill in labor shortages.

Although worker shortages in the domestic labor market could lead firms to hire low-skilled foreign workers from neighboring countries, only a few firms in Bhutan hire foreign workers, and the percentage of firms doing so has declined substantially over time. According to the 2022 ES, 7 percent of firms hired at least one foreign worker in 2022, a lower share than in 2017 when 9 percent hired workers from abroad, according to the Economic Census. The percentage of foreign workers in all firms is 3 percent, but this share rises to 42 percent when conditioning on firms hiring at least one. Some heterogeneities appear across regions. The percentages of foreign workers is 4 percent in both

Samdrup Jongkhar and Phuentsholing, followed by Phunaka and Galephu, where 3 percent of workers are foreign. The lowest rates are in Thimphu (2 percent) and Trashigang (1 percent).

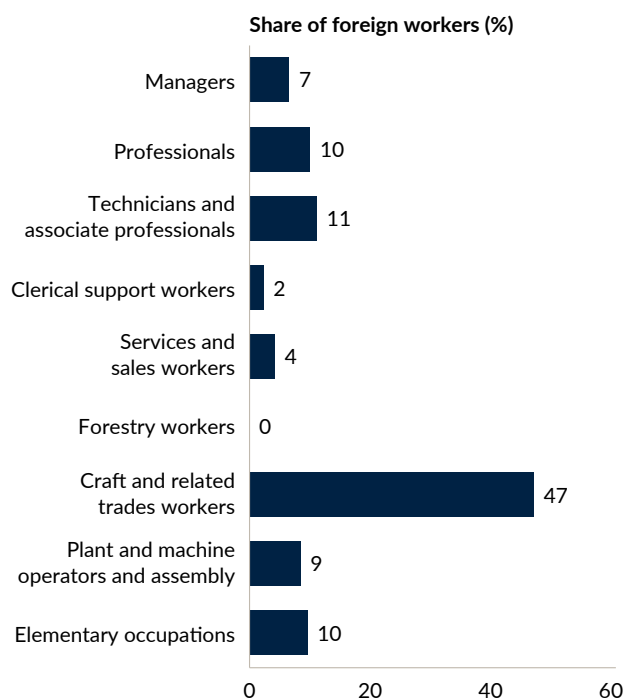
Craft and related trades have a higher presence of foreign workers—47 percent (figure 3.12). Most foreign workers in this occupation category are from India and work in the construction sector. According to a September 2023 article in *Business Bhutan*, this sector alone accounted for a staggering 84.6 percent of approved foreign labor permits. The next occupations ranked by share of total foreign workers are technicians and associate professionals (11 percent), professionals (10 percent), and elementary occupations (10 percent).

The main reason cited by 31 percent of firms for hiring foreign workers is the lack of skilled domestic workers (see table D.8 in appendix D). Because most foreign workers are employed in craft and related trades, it is likely that foreign workers are better equipped with technical skills. Foreign workers are also hired because they have better workmanship (as reported by 20 percent of firms) and better work attitudes (19 percent). Approximately 10 percent of firms reported that foreign workers are easier to manage or will accept a lower wage rate.

The private sector does not have links to training institutes to address labor shortages, despite its current training needs and positive perceptions of the value of worker training.

The majority of firms do not have links to public providers of training, which highlights the disconnect between training programs and labor demand in Bhutan. Between 79 and 91 percent of firms indicated they do not have any connections with public or private colleges in the country, public technical or vocational institutions, private training institutes, government entities, private sector associations, or external training and education institutes (table 3.5). This lack could explain the high percentages of firms planning to provide in-house training (40 percent) or planning to resort to on-the-job learning (56 percent). Fifty-seven percent of firms have provided in-house training in the past—a surprising finding given the myriad of technical and vocational education and training (TVET) programs available and administered by the Ministry of Education and Skills Development (reviewed in chapter 4). It also highlights the need for a demand-driven approach and closer collaboration between TVET institutions and employers to help address the observed skill mismatches in the labor market.

Figure 3.12. Distribution of foreign workers, by occupation, 2022



Source: 2022 Establishment Survey.

Table 3.5. Level of connection with potential partners for providing training, 2022

	Public or private colleges in the country	Public technical or vocational institutes	Private training institutes	Government sector body	Private sector association/body	External training and education institutes
No link at all	91.2	91.2	91.2	79.4	86.3	90.3
Poor link	2.1	2.0	2.7	8.0	4.0	2.7
Moderate link	1.8	1.5	1.6	7.7	4.2	2.0
Strong link	0.7	0.9	0.5	2.5	1.5	0.8
Not relevant	3.6	3.7	3.5	2.0	3.5	3.7
Plan to establish link in the future	0.5	0.8	0.6	0.4	0.5	0.5

Source: 2022 Establishment Survey.

Note: Table indicates the percentage of firms responding yes to each type of training.

In 2022, about a quarter of firms reported having training needs, mainly at the short-term training level (table 3.6). According to the 2022 ES, 27 percent of the surveyed firms indicated having training needs for the next five years. Among these firms, 69 percent reported having short-term training needs, followed by certificate level (19 percent) and diploma (6 percent). Seventy-three percent of the firms considered these training needs a high priority, and 40 percent of them have funding to provide their workforce with the needed training.

Firms also understand the value of training because past training has successfully improved workers' abilities and skills (see table D.9 in appendix D). Firms indicated that from the training provided the last three years they had obtained significant improvements in worker confidence (61 percent of firms), work productivity (61 percent), ability to work independently (59 percent), organization productivity (57 percent), job-specific technical skills (52 percent), leadership skills (51 percent), problem-solving skills (48 percent), and creative and critical thinking (45 percent).

Training needs from employees' perspectives match those reported by firms (table 3.7). In 2022, 72 percent of workers indicated that short-term training was critical for their current occupation, and 69 percent of firms said they had training needs at this level. Seventeen percent of workers reported that the level of training needed for their occupation was a diploma, bachelor's, master's, or PhD degree; 9 percent reported in-house training; and 2 percent reported online training.

Table 3.6. Training needs for the next five years, 2022

	Share of firms with training needs (%)
Overall	32.87
Level of training	
Master's	2.1
Bachelor's	4.2
Diploma	6.4
Short-term training	68.8
Certificate	18.6
Priority level	
High	73.5
Moderate	25.7
Low	0.8
Funding availability	
Firm has funding	39.9

Source: 2022 Establishment Survey.

Table 3.7. Training critical for the current occupation and funding plans, according to employees, 2022

	Share of employees (%)
Training level	
Master's/PhD	3.8
Diploma	10.8
Short-term training	71.9
Online learning	2.1
In-house training	9.0
Bachelor's	2.3
Plan to fund	
Self	8.1
My organization	40.2
Office project	1.4
Donor scholarship	13.8
No funding	36.5

Source: 2022 Establishment Survey.

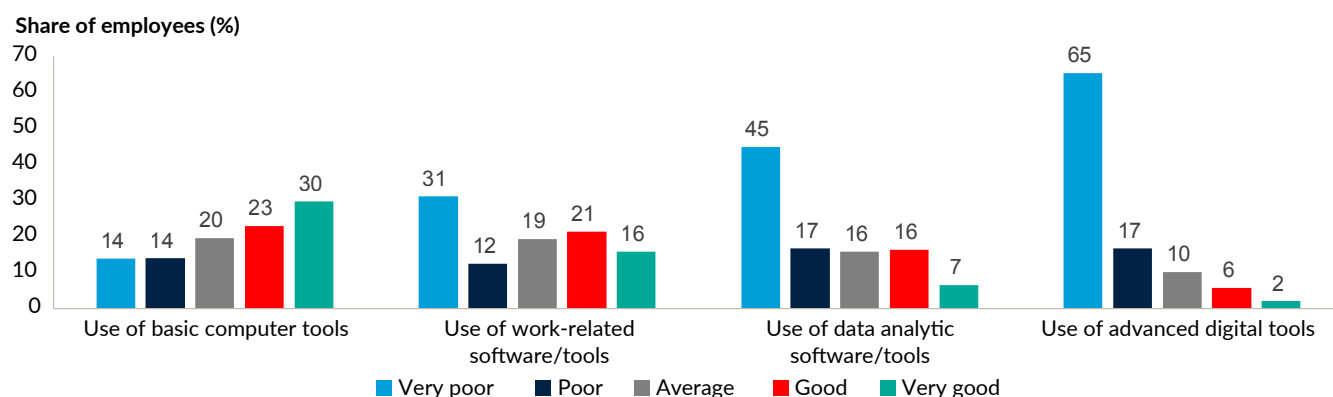
The number of workers trained has declined over time, likely because of funding constraints. The average number of workers trained in 2019 was 9.1, but that number declined to 8.9 in 2020 and to 5.6 in 2021.²² Although 40 percent of workers indicated they plan to fund training through the firm, 36 percent reported not having funding. The remaining share corresponds to self-funding (8 percent of workers) and office project (1 percent), as shown in table 3.7.

The share of firms hiring TVET or tertiary graduate workers is low. However, among those who hire TVET graduates, their perception of TVET quality is positive, which highlights the potential for expanding the collaboration between TVET and the private sector. In 2022, only 4 percent of firms hired TVET graduates and 6 percent hired tertiary graduates. The low percentage of firms hiring TVET graduates is likely related to the low number of TVET graduates each year who are unable to keep up with current demand (as discussed in chapter 4). Among the firms hiring these workers, most find that TVET and tertiary graduates have skills relevant to the job, including soft, managerial, literacy, and numeracy skills; are creative and innovative;

can work independently; and have adequate work experience.

Training in digital and information technology (IT) should receive priority in view of workers' perceptions of their own skills (figure 3.13). Specifically, 82 percent of employees indicated their use of advanced digital tools (such as software development, programming, data analysis, or cyber security) is poor or very poor. Sixty-one percent reported the same for the use of data analytic software or tools (such as SPSS, Excel, and STATA), and 43 percent for the use of work-related software or tools (such as Word, Power Point, Adobe). On the other hand, 53 percent of workers reported that their use of basic computer tools (including accessing the internet, typing, and sending emails) is good or very good. The low level of digital and IT skills reported by workers is in line with the low level of education of the workforce. The correlation between employees' perceptions of the use of basic computer tools and their educational level is 0.60 (that is, workers with higher levels of education have better perceptions of their digital skills). The correlation coefficient for the use of work-related tools is 0.65; data analytic tools, 0.55; and advanced digital tools, 0.41.

Figure 3.13. Employees' perceptions of their digital and information technology skills, 2022



Source: 2022 Establishment Survey.

22. Among workers who reported receiving any kind of training since joining their firms, 25 percent attended short-term training in specific fields, 20 percent received in-house training, and 7 percent attended online training.

3.3 Barriers to firm growth and business management practices

Firms face barriers to growth related to investment climate factors and labor regulations, although the severity of each factor varies by firm size.

In 2002, most firms reported that having human resources and favorable policies and regulations in place were important factors for business expansion or diversification (table 3.8). The fact that 69 percent of firms considered human resources important for the expansion or diversification of business is in line with the findings that a lack of access to trained labor to fill existing vacancies is negatively affecting firm growth. Meanwhile, 92 percent of firms indicated that having favorable policies and regulations in place was important for their plans. This finding aligns with existing evidence that firms spend considerable sums on checking the requirements of government regulations (World Bank 2015). Although 22 percent of firms considered access to finance important and 16 percent considered markets important, a disaggregation by

firm size shows that the share of firms noting their importance increases as firm size increases (see table D.10 in appendix D).

Policies and regulations related to the business climate are more likely to be considered a major constraint to business management and growth than labor-related regulations. In 2022, among the factors considered a major or very severe constraint to firm growth, business climate factors weighed more heavily than labor factors. Among business climate factors, access to markets, finance, and raw materials or goods were considered to be major or very severe constraints to business management (table 3.9). According to the 2017 Investment Climate Assessment, fewer Bhutanese firms had a loan or a line of credit in 2015 (47 percent) than in 2009 (59 percent). The decline likely stemmed from lack of credit information and from a complex, unpredictable, and ineffective restructuring and insolvency regime, despite the fact that the government had reduced the amount of collateral required for a loan. Access to markets was also likely hampered by trade and logistical deficiencies and limited foreign investment (Santini, Tran, and Beath 2017).

Table 3.8. Importance of factors in business expansion or diversification plans, 2022

	Least important (%) 1	2	3	Most important (%) 4
Human resources	9.8	21.1	53.4	15.7
Finance	36.0	41.5	18.7	3.8
Market	50.9	33.5	12.8	2.9
Favorable policies and regulations in place	3.5	4.1	15.1	77.4

Source: 2022 Establishment Survey.

Table 3.9. Constraints in the management of firms, 2022

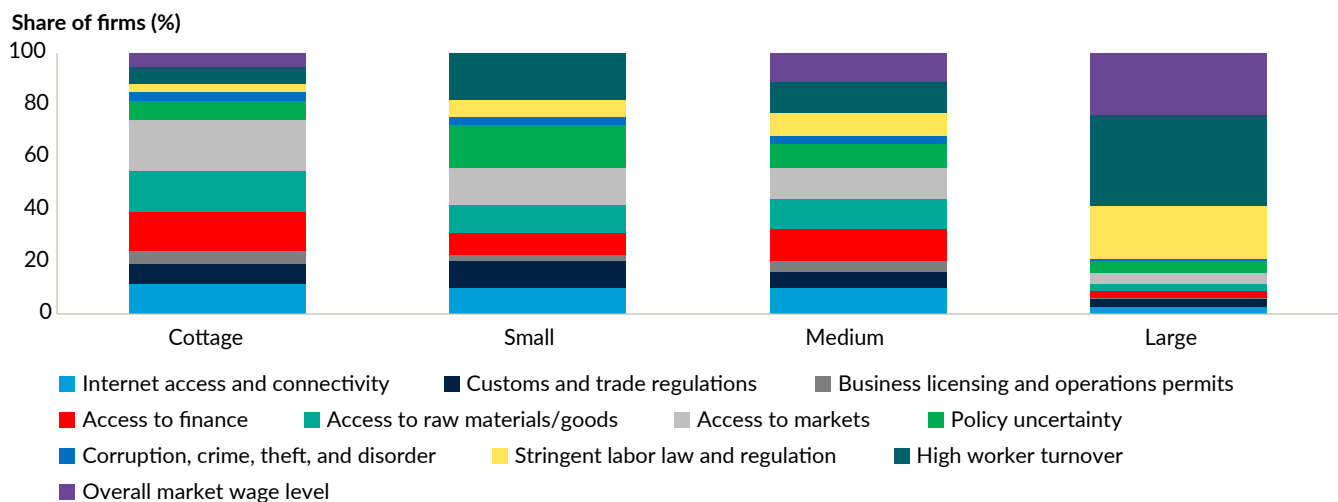
	No constraint (%)	Minor constraint (%)	Moderate constraint (%)	Major constraint (%)	Very severe constraint (%)
Business climate factors					
Internet access and connectivity	7.8	12.1	10.8	11.6	11.7
Customs and trade regulations	9.0	10.5	8.6	7.5	7.1
Business licensing and operations permits	10.0	8.3	6.4	4.8	10.5
Access to finance	8.0	10.6	10.7	14.9	10.3
Access to raw materials/goods	7.4	12.0	11.8	15.1	12.6
Access to markets	6.1	12.2	17.4	19.2	18.7
Policy uncertainty	9.0	9.6	9.4	7.4	11.3
Corruption, crime, theft, and disorder	11.4	5.6	3.3	3.4	2.8
Labor factors					
Stringent labor law and regulations	10.9	5.8	6.4	3.3	4.9
High worker turnover	10.9	5.3	4.9	7.3	5.1
Overall market wage level	9.6	8.0	10.3	5.5	4.9

Source: 2022 Establishment Survey.

Disaggregation by firm size shows that in 2022 labor-related regulations were a bigger constraint for larger firms, whereas investment climate factors were more relevant for smaller and medium-size firms. Figure 3.14 and table D.11, panel b, in appendix D show that investment climate factors were more binding for smaller firms, whereas labor-related regulations were

more likely to be considered a major constraint by larger firms. Among smaller firms, access to finance, markets, and raw materials were major constraints. For larger firms, stringent labor regulations, high worker turnover, and market wage level gained more prominence.

Figure 3.14. Major constraints to growth, by firm size, 2022



Source: 2022 Establishment Survey.

Labor-related regulations are a constraint for larger firms because they are more likely than cottage firms to comply with them. In 2022, the low level of compliance with labor regulations could be attributed to the large share of small firms in the economy and the low level of compliance among them (see table 3.10 and table D.12 in appendix D).²³ The compliance of firms with fewer than five employees ranges from 4 to 33 percent, whereas the rate among firms with 100 employees or more is over 90 percent. Although no information is available about the reasons for noncompliance, it is likely that firms with fewer than five employees cannot afford to comply with regulations because they are too costly. For larger firms, noncompliance can be considered an evasion problem—that is, firms evade the regulations to obtain a monetary benefit.

The overall findings on the investment climate and labor-related regulations are in line with the existing literature on barriers to doing business in Bhutan

(World Bank 2020a). Firms in Bhutan are burdened with administrative hurdles, including unclear and multiple licensing procedures and lack of information on licensing requirements. For example, upon opening a business an entrepreneur must undertake eight procedures at a cost of about 4 percent of the country’s income per capita. Upon closing a business, a draft Insolvency Bill must be adopted and implemented. As for labor market efficiency, the Labor and Employment Act places few restrictions on the hiring and firing of workers.

Finally, private sector activity may be hampered by competition policy that encourages the dominance of SoEs in key economic sectors and may be crowding out private sector investment. As mentioned in chapter 2, the pay gap between SoEs and the private sector is wide, and a large share of it remains unexplained by workers’ characteristics.

Table 3.10. Compliance with labor regulations, by firm size, 2022

	no. of employees			
	<5	5–19	20–99	100+
Our establishment has an Internal Service Rule (ISR).	14.7	67.7	89.0	92.7
Our Internal Service Rule (ISR) is endorsed by the Department of Labor.	11.4	52.9	79.9	89.5
We have occupational health and safety in place.	32.7	70.4	86.7	99.3
We have occupational health and safety policy in place.	19.9	58.9	78.5	98.1
We provide basic personal protective equipment (PPE) to our employees.	32.7	69.0	79.5	94.3
We have a provident fund for our employees with a recognized financial institute.	13.1	64.9	94.4	99.0
We provide overtime payment to our employees.	17.3	58.0	59.9	83.7
We provide pay slips/evidence of wages paid to our employees.	29.4	80.1	93.6	100.0
We have a written contract/term of employment for our staff and new recruits.	10.9	52.5	81.3	87.7
We issue an appointment letter at the time of appointment of new recruits.	12.6	55.9	88.7	92.9
We have clear job roles and responsibilities for our staff and new recruits.	29.2	80.7	94.0	100.0
We provide maternity leave.	25.1	72.2	93.9	100.0
We provide paternity leave.	23.5	67.9	91.4	94.0
We have a group insurance scheme (GIS) for our employees.	4.0	28.8	60.7	91.5
We have a sexual harassment policy/grievance system in place.	12.1	47.1	75.9	96.8

Source: 2022 Establishment Survey.

23. The disaggregation by sector shows that the wholesale and retail trade and accommodation and food services sectors—the two most important sectors in the country—have a compliance rate below that for the entire economy. Chapter 2 describes how low-quality employment prevails in those sectors.

Although some firms have business management practices in place, such as salary increment and employment promotion systems, such practices do not fully alleviate their constraints to hiring and accessing trained labor.

In 2022, 51 percent of firms in Bhutan reported having a salary increment system, and 18 percent had an employee promotion system (figure 3.15). Correlating these percentages with firms facing hiring difficulties, worker shortages, and retention difficulties across economic sectors indicates that

- Having a salary increment system or an employee promotion system does not correlate with hiring difficulties. This finding could be related to low entry salaries—that is, hiring difficulties do not decline when providing a salary increment or an employee promotion system because of a low entry salary.
- When firms have a salary increment or an employee promotion system, they are less likely to experience worker shortages. Once workers are hired, these systems are attractive for workers who may want to stay at the firm.
- When firms have a salary increment or an employee promotion system, they are more likely to face retention difficulties. By providing a salary increment system, firms are able to attract the best workers (in terms of their skills), and so other firms want them. The relationship could operate in the other direction as well, with firms implementing these systems to minimize retention difficulties.

Summary

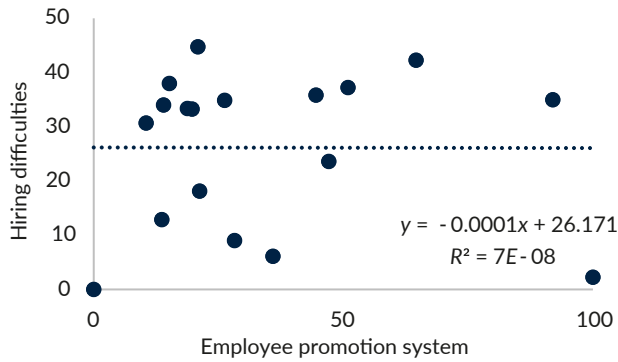
Chapter 3, using the 2022 Establishment Survey, sheds light on the extent to which lagging labor market outcomes among workers are an outcome of the type of employment opportunities created by the private sector in Bhutan. The chapter describes two important

and interrelated challenges facing the private sector development agenda in Bhutan. The first challenge is improving the quality of employment in the private sector and creating high value-added jobs for the fast-growing cohorts of young university graduates. The private sector is currently underdeveloped and is dominated by microenterprises that do not grow and are geographically concentrated in few regions. They are also not sufficiently diversified in terms of economic activity, and they mostly belong to the wholesale and retail trade and accommodation and food services sectors. Those dominant economic sectors have, on average, low labor productivity and employ mostly low- and semi-skilled workers. They also have weak employment conditions as evidenced by low compliance with labor regulations and the prevalence of nonwritten contracts as highlighted in chapter 2. Although job creation over the last few years has taken place in sectors that are relatively more productive and are likely to employ more skilled workers, those sectors remain very small and unlikely able to absorb the increasing supply of high-skilled job-seekers in light of the current education and labor demand prospects.

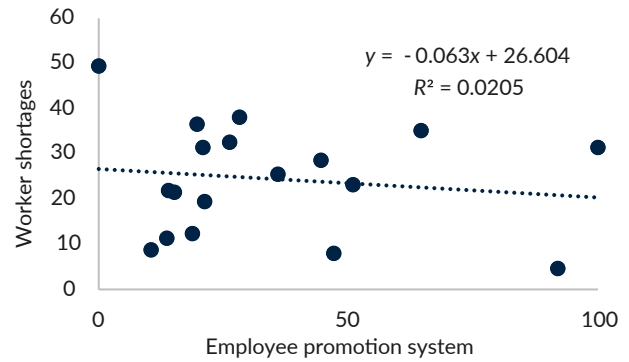
The second challenge is making the available low-skilled positions more attractive and accessible to the unemployed and the inactive, especially women in urban areas. One reason firms in Bhutan, despite rising shares of unemployment, were facing difficulties in 2022 in filling positions in services and sales and craft and related trades was few or no applicants. Labor shortages also may have a spatial dimension in which regions reporting hiring difficulties are those with very few job-seekers, especially those in the low- and semi-skilled education categories most in demand. Difficulties in accessing labor mainly stem from the high share of low-educated workers (mostly women) outside the labor force. They could, with the appropriate training and support, fill some of those vacancies. A second reason is that firms are unable to meet their need for some specific technical skills (through certificates or diplomas) because they have no links to vocational training institutes. Other reasons could

Figure 3.15. Correlations between salary increment/employee promotion systems and hiring difficulties, worker shortages, and retention challenges across economic sectors, 2022

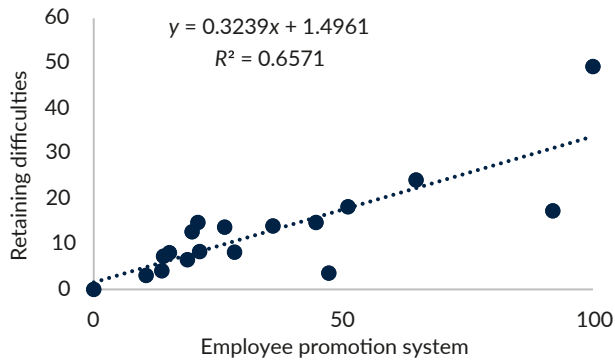
a. Employee promotion system and hiring difficulties



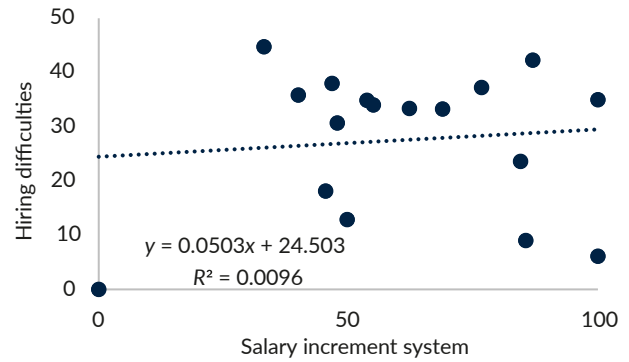
b. Employee promotion system and worker shortages



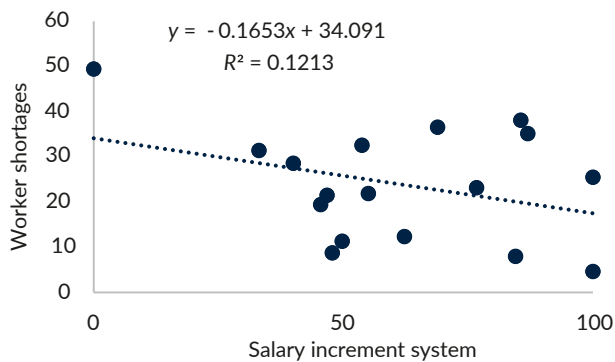
c. Employee promotion system and retention difficulties



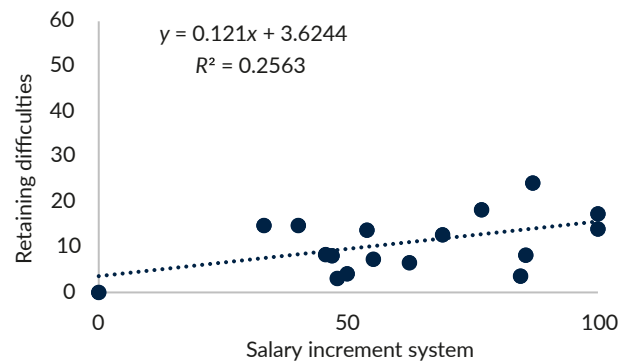
d. Salary increment system and hiring difficulties



e. Salary increment system and worker shortages



f. Salary increment system and retention difficulties



Source: 2022 Establishment Survey.

include mobility, financial, skill, or informational barriers that prevent low-skilled workers currently engaged in low-productivity livelihoods from moving to regions where some of those wage opportunities exist. Indeed, chapter 2 finds that internal mobility in the labor market among low-skilled workers is not common, with individuals with no education being two times less likely to have moved across *dzongkhags* than individuals with a tertiary diploma. Many Bhutanese workers are also unwilling to work in many vacant occupations in the construction sector.

The challenges described in this chapter are related to a myriad of other barriers to firm growth related to investment climate factors and labor regulations. The extent to which some of those barriers are binding varies by firm size, which may require a tailored approach to supporting private sector development. Among smaller firms, access to finance, markets, and raw materials appear to be major constraints. For larger firms, stringent labor regulations, high worker turnover, and market wage level are more prevalent. The dominance of SoEs in key strategic economic sectors is also distorting the playing field with the private sector.

Chapter 4

Bhutan's Employment Support Programs and Delivery System

Esther Bartl

Introduction

Chapter 4 examines the extent to which Bhutan's employment support programs and delivery systems effectively address some of the challenges facing both workers and firms. As outlined in chapters 2 and 3, those challenges include low female labor market insertion, limited worker skills and productivity, and the difficulties firms face in accessing trained labor.

Section 4.1 reviews employment support programs—active labor market programs (ALMPs) and the technical and vocational education and training (TVET) sector—specifically, their broad objectives and their rationale in Bhutan, building on the constraints identified in chapters 2 and 3. Section 4.2 assesses the extent to which Bhutan's employment delivery system, consisting of ALMPs, the TVET sector, employment services centers (ESCs), and a labor market information system (LMIS), could help address the challenges facing the labor market in Bhutan. The chapter concludes with a variety of recommendations to strengthen Bhutan's employment delivery system and programs.

4.1 Objectives of employment support programs and their rationale for Bhutan

There is a strong case for targeted employment support programs that improve the skills of vulnerable groups and support both workers and firms in Bhutan.

ALMPs are government programs aimed at helping unemployed workers find a job and improving the access of underemployed workers to better professional opportunities (Romero and Kuddo 2019). Interventions mainly include (1) training and skill development programs to enhance job-relevant skills, representing nonformal TVET; (2) job search and matching assistance such as job search training, counseling, and monitoring to help job-seekers look for jobs more effectively; and (3) private sector incentive programs that offer the unemployed microfinance schemes and wage subsidies to cover the labor costs borne by employers (Brown and Koettl 2012; Kuddo 2012).²⁴ Usually, effective programs offer opportunities

24. The definitions of AMLPs and the specific policies they entail vary in the literature. For an overview of ALMP classifications in the literature, see, for example, Romero and Kuddo (2019). Kluve (2016) refers to a fourth category of ALMPs that focus on the direct creation and provision of public works and other activities that produce public services and goods. The goal is to keep the most disadvantaged individuals in contact with the labor market and avoid loss of human capital during often prolonged periods of unemployment (Kluve 2016). This category is not explicitly outlined here as these programs are less relevant in low- and middle-income countries.

for lifelong learning and can be coordinated with other human capital programs such as early childhood programs and education programs to be especially impactful. The objectives of ALMPs are further described in box 4.1.

Similar to ALMPs, TVET programs are also instrumental in strengthening the employability of job-seekers by promoting the development of skills demanded by the labor market in Bhutan. However, TVET courses are generally geared more toward educated workers who have completed high school at a minimum, whereas ALMPs target more vulnerable groups with lower levels of education. In addition, TVET courses tend to be longer in duration and more specialized than ALMP training.

In Bhutan, a large inactive population—especially women—need targeted support programs. As described in chapter 2, the decline of labor force participation has mostly been driven by inactive young women. One in three women is not in education, employment, or training (NEET) because of family duties. During the COVID-19 pandemic, the rise in unemployment was mostly concentrated in urban areas, especially among women.

Employment support programs are needed to help reduce the extensive skill and spatial mismatches in the labor market. As illustrated in chapter 3, firms are demanding or expect to demand workers with a low to medium level of education and with some specific technical skills (through certificates or diplomas) to fill positions mainly in services and sales and craft and related trades. Seventy percent of the expected new vacancies are for workers with up to a secondary level of education, and 27 percent are for those with no

education. Meanwhile, on the labor supply side only 10 percent of job-seekers have no education, and there is a shortage of job-seekers with certificates. In addition, there are signs of a spatial mismatch in the labor market in which job-seekers with the required qualifications (particularly those with lower levels of education) are not located in regions experiencing supply shortages.

Many employers still do not sufficiently rely on TVET, although specific technical skills will be of greater importance in the future. And yet only a small percentage of individuals in the labor force have TVET qualifications. As documented in chapter 3, many firms are experiencing labor shortages. They also have training needs but have no links to potential providers of training. Among the few firms that hire TVET graduates, firms' perceptions of the quality of TVET graduates are positive.

Finally, the country's strong dependence on the agricultural sector and its vulnerability to natural disasters add to the existing weaknesses in the labor market. As shown in chapter 2, the structural transformation has remained slow. Bhutan's labor market is dominated by an agricultural sector that does not guarantee livelihoods for many rural households, leaving them in poverty. Because of the country's high risk of facing natural disasters such as flooding and landslides, Bhutanese households are vulnerable to shocks that put their incomes at risk. Climate models project a substantial increase in the likelihood of droughts and heatwaves in the future (World Bank and ADB 2021). To effectively support individuals in the job market, ALMPs and the TVET system will need to consider these vulnerabilities.

Box 4.1. Objectives of active labor market programs

Active labor market programs (ALMPs) support both the demand and supply sides of the labor market. Their interventions target labor demand by promoting self-employment and entrepreneurship. They can boost the labor supply by increasing individuals' employability through providing skills training and the means to increase one's success in finding a suitable job.

ALMPs typically cover vulnerable groups such as elderly workers, long-term unemployed, women, special-needs individuals, and youth (Castro et al. 2020). Although these programs, by design, should be suitable for large parts of the population, their main target group is disadvantaged youth such as unemployed and out-of-job youth, low-skilled youth, and school dropouts; those with limited access to education and the formal labor market; and those not in education, employment, or training, or NEETs (Kluve 2016).

Labor market training programs are the most widespread ALMPs aimed at increasing the human capital of two groups of beneficiaries, the general population of unemployed and low-income youth (McKenzie 2017). These interventions can include classroom vocational/technical training, on-the-job training, and soft skills training. According to evidence from Latin America and the Caribbean (LAC), training programs of four months or less are significantly less likely to have positive effects. The LAC study also finds that female participants and long-term unemployed tend to benefit more from programs than other groups (Kluve 2016). McKenzie (2017) suggests that in low- and middle-income countries, the strongest positive effects of ALMPs providing vocational training are on employment. A special form of this type of ALMPs is the TVET system that provides youth with vocational skills while they transition from school to work and thus aims to boost their employability.

Job search assistance programs seek to increase the efficiency of the job search process and the quality of the resulting job matches. Job search assistance programs can include job search training, counseling, monitoring, and job clubs (Kluve 2016). In randomized control trials in developing countries, no significant effects of matching and search assistance could be found on employment; their advantage is that they are much cheaper than vocational training and wage subsidies (McKenzie 2017).

Private sector incentive programs include the provision of microfinance products to the unemployed and underemployed and wage subsidies to employers. A prominent example of these programs is microfinance schemes in which microloans are offered to low-skilled individuals, often in combination with training opportunities to support business development (OECD and EC 2021). In addition, wage subsidies are provided to employers to cover part of their labor costs, which may have a lasting positive impact on employment. For example, evidence suggests that in developing countries wage subsidies may help increase the share of formally employed workers (Aşık et al. 2022). Also, workers hired as a result of wage subsidies may be able to learn on the job and increase their productivity above the minimum wage (McKenzie 2017). Wage subsidies can also help households smooth temporary shocks and boost temporary employment creation (McKenzie 2017).

Box 4.1. Continued

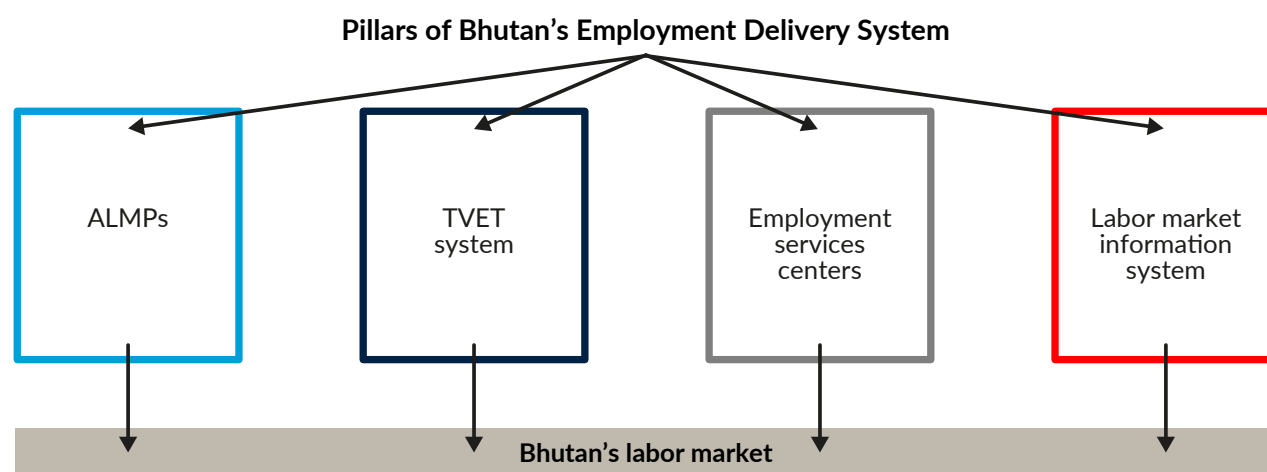
The program costs of ALMPs vary widely, with some ALMPs more cost-effective than others. Training programs have variable costs, depending on their content, length, and equipment. The cost of ALMPs that provide subsidies depends on the amount of these transfers. A country's political and economic context and wage levels usually affect these subsidies (Angel-Urdinola and Leon-Solano 2013). Evidence from Romania shows that employment services and public works programs tend to be more expensive than training programs (Rodriguez-Planas and Benus 2010).

4.2 Bhutan's employment support programs and delivery system

Bhutan spends more than any other South Asian country on ALMPs and TVET. As of 2019, 0.1 percent of the country's gross domestic product (GDP) was spent on skills development and training, with only Singapore spending more, 0.3 percent. Bhutan's ALMPs offer relatively generous benefits—the average ALMP benefit is equivalent to 26 percent of GDP per capita (ADB 2019). In addition, Bhutan has an established TVET sector through which job-seekers and workers can access a variety of training and skill development opportunities.

Bhutan's employment support programs and delivery system consist mainly of ALMPs, TVET courses, ESCs, and an LMIS (figure 4.1). A distinction is made in this chapter between ALMPs and TVET programs because their profiles of beneficiaries differ, as well as the length and type of intervention. ESCs are mandated to provide labor intermediation and help achieve quality matches between labor demand and labor supply. A well-functioning and up-to-date LMIS in which all survey and administrative-related labor market data in Bhutan could be integrated is important to support evidence-based policy making around workforce training needs and employment promotion services. An LMIS could also support policies for reducing skill mismatches in the labor market by enabling a better

Figure 4.1. Pillars of the employment delivery system in Bhutan



Source: World Bank.

Note: ALMPs = active labor market programs; TVET = technical and vocational education and training.

understanding of the profiles of workers and how they align with the skills and occupations demanded by the private sector.

The legal mandate for the provision of employment support programs is shared by two ministries and is underlined by the 12th Five-Year Plan of the Royal Government of Bhutan (RGoB).

The Ministry of Education and Skills Development (MoESD) is the primary government agency responsible for overseeing training and skills development programs. Since November 2022, the Department of Workforce Planning and Skills Development (DWPSD) in MoESD has been carrying out the majority of ALMPs and overseeing the public TVET institutions known as Technical Training Institutes (TTIs). Before government restructuring became effective in January 2023, the Ministry of Labor and Human Resources (MoLHR) was the agency in which the majority of ALMPs and the TVET programs were consolidated.

The Ministry of Industry, Commerce, and Employment (MoICE) is responsible for administering selected ALMPs and promoting the country's entrepreneurship agenda. MoICE administers a wage subsidy program known as the Youth Engagement and Livelihood Program, or YELP, and implements the Startup and Cottage and Small Industries (CSI) Development Flagship Program, which includes overseeing five business incubation centers and providing entrepreneurship training. ESCs under the Department of Employment and Entrepreneurship are mandated to connect job-seekers with employers and to provide them with referrals and job search assistance.

Although over the last decade a variety of policies have been implemented to boost employment and employability of the population, the 12th Five-Year Plan (2018–23) provided the most decisive guidelines. The plan

emphasized the importance of structural change and the importance of enhancing institutionalized skills training for the labor market (see box 4.2). In the upcoming 13th Five-Year Plan, MoESD is mandated to increase by 2029 the share of the workforce with certifications in vocational and technical skills to 80 percent (MoESD 2022). Another key policy is the 2013 National Employment Policy, which stresses the importance of ALMPs in promoting entrepreneurship and the employability of vulnerable groups in society and aims to foster stronger collaboration between industry and TTIs (National Council of Bhutan 2015).

Beginning in September 2024, the RGoB is planning to implement the Gyalsung National Service Program, envisioned to be a one-year program mandatory for all youth age 18. According to the program's webpage, it will consist of "three months of basic military training followed by National Education, Life Skills and specialized training in various fields ranging from home construction technologies, computing and entrepreneurship to focused development of skills in agriculture."²⁵ It is unclear what the mandate of either MoICE or MoESD will be in administering the program and how the program relates to ongoing training efforts.

ALMPs in Bhutan are small, fragmented, and not specifically focused on the activation of women.

The majority of ALMPs cater to vulnerable youth and provide labor market training that focuses on upskilling (table 4.1). The selected currently active ALMPs are YELP, the CSI Development Flagship Program, Special Skills Development Program (SSDP), Village Skills Development Program (VSDP), Critical Skills Training (CST) program, Critical Capability Development (CCD), and Skills Development Plan (SDP). The list of ALMPs in table 4.1 is not comprehensive because of knowledge gaps.²⁶

25. http://www.gyalsunginfra.bt/?page_id=175.

26. Summaries of the presented ALMPs appear in appendixes E and F.

Box 4.2. The 12th Five-Year Plan (2018–23)

The 12th Five-Year Plan (FYP) was aimed at promoting economic growth through sector diversification away from agriculture and toward high-productivity sectors (MoLHR 2021b). Bhutan's economy remains undiversified, with agriculture making up the largest share of the economy (17 percent), followed by electricity (16 percent), and construction (15 percent). As a major strategy to promote the diversification of the economy, the 12th FYP introduced the Startup and Cottage and Small Industries (CSI) Development Flagship Program to create new CSIs and improve the competitiveness of existing ones.

The plan acted as an important guide for policy interventions to promote skills and education as well as the employability of job-seekers. It acknowledged the current shortcomings of the TVET system such as a poor technical and institutional capacity to deliver relevant, quality programs; weak coordination among key stakeholders; and a limited intake capacity in TTIs. The plan promoted strengthening the quality, relevance, and access of vocational training programs to improve the employability of TVET graduates. In addition, the plan acknowledged that the undiversified economy has led to a concentration of jobs in a few sectors: agriculture (51 percent), wholesale and retail trade (9 percent), and public administration (8 percent). It called for mandated government agencies to promote programs to enhance the quality of and access to skill development opportunities and the employability of job-seekers.

Finally, the 12th FYP stressed the importance of decentralization—that is, the empowerment of local governments. The RGoB is seeking to achieve greater flexibility and autonomy in making choices and setting priorities in the provision of public goods and service delivery. The 12th FYP emphasized the importance of the variations across Bhutan's local labor markets and the unique regional employment characteristics. Therefore, a goal is the fair allocation of resources in *dzongkhags* that have high unemployment in agriculture.

Table 4.1. Overview of selected ALMPs

Name	Ministry	Type	Services provided	Target groups	No. of beneficiaries
Youth Engagement and Livelihood Program (YELP)	MoICE	Labor market training; private sector employment assistance	On-the-job training in various vocational fields; wage subsidy; various financial support of entrepreneurship	Youth	2,545 (2022–23)
Startup and Cottage and Small Industries (CSI) Development Flagship Program	MoICE	Labor market training; job search assistance; private sector employment assistance	Entrepreneurship training, business competitions, business incubation centers	Youth	2,079 (2022–23) (training component)
Special Skills Development Program (SSDP)	MoESD	Labor market training	Vocational training in trades such as plumbing, basic tailoring, and basic carpentry	Vulnerable groups such as armed forces, monks/nuns, juveniles and delinquents, prisoners, former gang members	938 (2022, SSDP and VSDP)
Village Skills Development Program (VSDP)	MoESD	Labor market training	Vocational skills and village-specific training such as tailoring	Rural individuals	
Critical Skills Training (CST)	MoESD	Labor market training	Vocational skills training such as baking, fashion design, and online freelancing;	Youth	506 (2022)
Critical Capability Development (CCD)	MoESD	Labor market training	Upskilling and reskilling training in private sector such as accounting, book-keeping, and e-commerce	Employees in non-civil service sector	990 (2022)
Skills Development Plan (SDP)	MoESD	Labor market training	Upskilling and reskilling courses in welding, fitting, 3D printing, entrepreneurship learning, employer matching	Laid-off employees due to COVID-19, job-seekers, overseas returnees	1,881 (2022)

Sources: MoESD 2022; YELP: MoLHR 2021a and Bhutan Today 2023; CSI Development Flagship Program: MoICE 2023a.

Note: MoESD = Ministry of Education and Skills Development; MoICE = Ministry of Industry, Commerce, and Employment.

Although women are the largest group out of the labor force, the existing ALMPs cater mostly to unemployed youth (see table F.1 in appendix F). The YELP, CST, and CSI programs focus on the employability and employment of youth. The VSDP caters to the rural population, and the SSDP focuses on other vulnerable groups. The SDP was established to increase the employability of young job-seekers and all those vulnerable individuals affected by the COVID-19 pandemic. None of these programs is gender-sensitive—that is, includes a component that specifically targets women by providing childcare support, transportation subsidies, or

safe work spaces. Such programs can play a critical role in supporting vulnerable women through job search assistance, mentorship, and affordable childcare.

All ALMPs are small programs with limited regional coverage. The plethora of programs and their fragmentation may be limiting the impact on vulnerable groups. In 2022–23, 2,545 individuals went through YELP, the largest ALMP in the country. Of the five skill development programs under MoESD, the majority had less than 1,000 beneficiaries that year. Currently, YELP is the only ALMP that provides wage subsidies, while all

other programs provide training opportunities. There are no plans to scale up YELP so that more vulnerable individuals can be supported. In fact, there are reports that the program is currently not operational because of limited funds. In addition, it is not clear how many individuals have been trained in specific locations and by private or public training providers, and where they have been working since graduation.²⁷ It appears that most beneficiaries are located in the urban centers such as Thimphu and Bumthang, limiting their impact on other vulnerable populations in rural areas. In general, many ALMPs lack sustainable mechanisms for funding, and the plethora of programs for a small country may be diluting their impact.

ALMPs do not focus sufficiently on improving links to employers and being demand-driven. YELP is the only program that provides some links to employers via on-the-job training. In addition, the vocational training offered by ALMPs does not appear to be systematically informed by employer assessments. None of the existing ALMPs offers the soft skills training that could help individuals build and maintain professional relationships, better manage their time, and solve problems (see table D.3 in appendix D). As a result, training may not equip individuals with the skills that employers need, significantly reducing the likelihood that graduates have positive labor market outcomes. Adding to the problem is the lack of transparency about where the training provided by ALMPs take place beyond TTIs.

Meanwhile, ALMPs are not rigorously evaluated. There are gaps in the data on registries, graduates' long-term labor market outcomes, and the quality of the support provided by ALMPs. No monitoring and evaluation (M&E) mechanism is in place that could reveal which ALMPs are meeting their goals. And there is no transparent mechanism to ensure that the most vulnerable individuals are selected for a specific ALMP and, at the

same time, that prevents individuals who may not be the most vulnerable from attending multiple ALMPs. Meanwhile, short- and long-term tracking of graduates' labor market outcomes has not been undertaken in a systematic way, which makes assessing training quality and relevance to the labor market difficult. To address this shortcoming, MoESD, with World Bank support, recently launched a tracking system within its existing management information system (MIS) to systematically collect employment data on all of its training graduates within two years of training completion.

Lack of system links across ALMPs mandated by different ministries may be contributing to the limited impact of these programs. It is unclear how MoESD's ALMPs are aligned with the ALMPs under MoICE. For example, there is no clear way in which trainees in the MoESD skills programs interested in entrepreneurship could be linked to or referred to training opportunities provided by MoICE's CSI Flagship Program.

The public TVET system is well established, but it remains too small to meet labor demand and is not sufficiently linked to employers.

Bhutan's TVET system complements ALMPs by providing young job-seekers with training opportunities in a variety of vocational fields (box 4.3). The average TVET student is equally male or female ages 20–24 and has a higher secondary education and a lower socioeconomic background (MoESD 2022, 2023a). According to a 2022 TVET study, 52 percent of individuals with TVET qualifications work as technicians and associate professionals. The TVET system is a means to intergenerational occupational mobility in Bhutan: 48 percent of the 2021 TVET graduates are from families that work in the agricultural sector, and 64 percent of their parents or guardians do not have any education (MoESD 2022).

27. The 2022 Tracer study is an overview of the *dzongkhags* where the training courses provided by ALMPs have been implemented.

Box 4.3. The TVET system in Bhutan

Since the 1960s, the technical and vocational education and training (TVET) system has been providing youth with training with the goal of building a modern workforce. Major objectives of the TVET system are to offer courses relevant to the Bhutanese labor market; increase the attendance at vocational training programs; provide guidance and support for vocational training programs; provide Technical Training Institutes (TTIs) with guidance and support on TVET policies, interventions, and strategies; design, develop, and review TVET curricula; develop and review guidelines for Training of Teachers and respective curricula; and provide TVET providers with capacity development programs (MoLHR 2020). The goal, then, is to achieve a globally competitive workforce and create a more cohesive society, securing stable incomes for all citizens (MoESD 2022).

Nine vocational training institutes under the direct management of the Ministry of Education and Skills Development (MoESD) provide youth with a variety of training opportunities. Currently, public TTIs are located in Chumey, Khuruthang, Rangjung, Samthang, and Thimphu. In addition, two institutes for Zorig Chusum (IZCs) specialize in training of local arts and craftsmanship: the College of Zorig Chusum (CZC) in Trashiyangtse and the National Institute for Zorig Chusum (NIZC) in Thimphu. The Jigme Wangchuck Power Training Institute (JWPTI) in Dekiling, Sarpang, and the Rural Development Training Center (RDTC) in Zhemgang offer additional vocational training (MoESD 2022). In the TTIs, regular technical training lasts from three months to two years, and at the IZCs courses last from one to six years. The entry level required to enroll in vocational courses is grade 10—that is, the final year of the basic educational (middle-secondary) level (MoLHR 2020).

In addition to the public TTIs, a growing number of TVET institutes are being set up by private promoters. In 2022, 80 percent of all private and public TVET institutions were under private ownership. To register, a private training provider must provide information on physical resources, teaching, learning, and the internal quality management system. Private training providers can complement public TVET institutions because they help meet training needs and can offer more specialized services. The registration process for private TVET providers includes an institutionalized assessment based on points for different components (MoESD 2022).

Overall, the quality of TVET programs and students' satisfaction have improved in recent years. In the past, the main reasons for student dissatisfaction with the TVET system were its limited course selection, the inadequate skills offered, and poor teacher qualifications (MoLHR 2020). According to graduate feedback in 2022, on average, 70–80 percent of graduate respondents regarded the overall course content and TVET teaching as good or very good. Most graduates have found the skills gained through TVET courses useful

in their future jobs. Almost 60 percent of respondents were satisfied with the duration of the TVET course and on-the-job training, while the rest felt it was either too short or too long (MoESD 2022).

Despite significant improvements in the TVET system, the number of individuals with TVET qualifications has remained low, not meeting the demands of the private sector. In 2022–23, 401 individuals graduated from TTIs and IZCs of whom only about one-third were female

(table 4.2). Between 2018 and 2022, the total number of TVET graduates declined from 962 to 401, and before 2022 about two-thirds of TVET graduates were female (figures 4.2 and 4.3). Among all employed individuals in Bhutan, only 2.5 percent had TVET qualifications

in 2022, lower than the share in 2021, 3.2 percent (MoESD 2022). In recent years, there has been a widening gap between the number of TVET graduates and the growing demand for vocational skills required by employers, as noted in chapter 3.

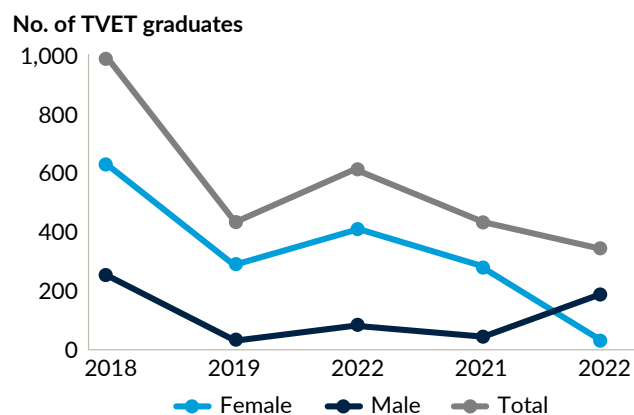
Table 4.2. Number of regular graduates in TTIs and IZCs, by year and gender

Institute	2018–19			2019–20			2020–21			2021–22			2022–23			Total		
	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
College of Zorig Chusum (CZC)	68	75	143	12	29	48	36	63	99	16	62	78	125	76	201	257	305	569
Jigme Wangchuck Power Training Institute (JWPTI)	46	101	147	18	39	57	16	50	66	12	25	37	0	0	0	92	215	307
National Institute for Zorig Chusum (NIZC)	44	97	141	2	55	57	50	76	126	39	71	110	143	57	200	278	356	634
TTI-Chumey	27	22	49	40	42	82	0	0	0	0	0	0	0	0	0	67	64	131
TTI-Khuruthang	43	45	88	18	34	52	30	59	89	24	43	67	0	0	0	115	181	296
TTI-Rangjung	56	122	178	20	55	75	23	62	85	34	68	102	0	0	0	133	307	440
TTI-Samthang	19	128	147	17	72	89	9	111	120	8	29	37	0	0	0	53	340	393
TTI-Thimphu	11	58	69	7	27	34	7	49	56	8	50	58	0	0	0	33	184	217
Total	314	648	962	134	353	494	171	470	641	141	348	489	268	133	401	1028	1,952	2,987

Source: MoESD 2023b.

Note: No data were available for the Rural Development Training Center (RDTC). F = females; IZCs = institutes for Zorig Chusum; M = males; TTI = Technical Training Institute; T = total.

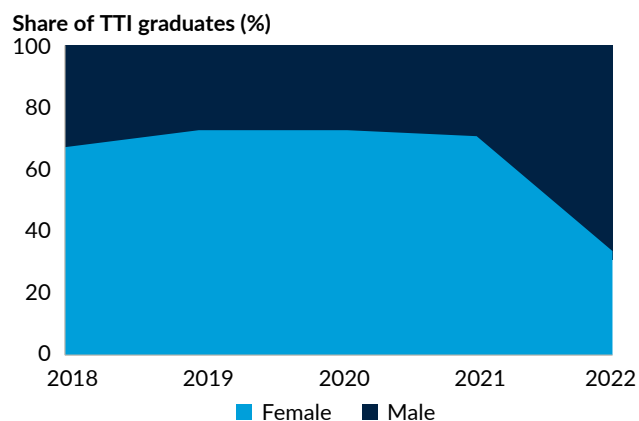
Figure 4.2. Total number of TVET graduates, by year and gender, 2018–22



Source: MoESD 2023b.

Note: The displayed years indicate the respective fiscal year. For example, 2018 refers to fiscal 2018/19. TVET = technical and vocational education and training.

Figure 4.3. Share of TTI graduates, by gender, 2018–22



Source: MoESD 2023b.

Note: The displayed years indicate the respective fiscal year. For example, 2018 refers to fiscal 2018/19. TTI = Technical Training Institute.

The TVET programs offered have not been demand-driven because links with employers have been missing, leading to high unemployment among TVET graduates. As shown in chapter 3, not many employers indicated that they had connections to public TVET institutions. In addition, there is no specific evidence that the design and delivery of TVET training are carried out in collaboration with employers. And there has been no discussion of sharing costs with employers and to what extent they could subsidize vocational training.

As a result, the unemployment rate among TVET graduates is relatively high, and those who find jobs do not work in future-oriented sectors. In 2022, only 67 percent of TVET graduates were able to find employment within a year of graduation. Among the unemployed TVET graduates, about 49 percent indicated that they needed further employment facilitation support (MoESD 2022). As discussed in chapter 3, the highest in-demand sectors in the future will be services and sales, as well as craft and related trades. Yet as of 2022, 52 percent of employed individuals with TVET qualifications worked as technicians and associate professionals, 20 percent as professionals, 9 percent in the services and sales sectors, and 7 percent in craft. It appears that TVET courses equip individuals with skills that may not be in demand in sufficiently high numbers in the future (MoESD 2022).

Public TVET institutions are not close geographically to employment opportunities. In 2022–23, the only students enrolled at public TVET institutions graduated from the College of Zorig Chusum (CZC) and Jigme Wangchuck Power Training Institute (JWPTI). No one has graduated from TTI-Chumey since fiscal 2020/21 (table 4.2). It is unclear from which regions TVET students come and whether they move after graduation. Of those in the 2021 graduate cohort, 44 percent were employed in Thimphu, followed by 13 percent in Paro (MoESD 2022). Apparently there are insufficient

employment opportunities in all the places where public TVET institutions are located. Certain areas may also have a higher demand for graduates that TVET institutions cannot meet. The importance of the geographic proximity of TVET institutions to sectors and employers has not been assessed.

Finally, the TVET system is not inclusive enough because private training providers, and thus their graduates, are mostly concentrated in Thimphu. Although the public TVET institutions are spread across the country with an emphasis on urban areas, the majority of private training providers are registered in Thimphu, with only a few in the eastern and central parts of the country (MoESD 2022). The establishment of private training providers in Thimphu seems largely driven by economic considerations as it has the highest concentration of suitable individuals and potential employers. By focusing strongly on the capital city, private training providers cannot currently target vulnerable rural individuals sufficiently and thus cannot contribute to enhancing rural economies.

ESCs are not empowered enough to play a pivotal role in job placement and matching.

ESCs play an important role in connecting job-seekers with employers and facilitating the process of job matching (MoICE 2023b). Currently, the five ESCs across the country provide job-seekers and employers with various services such as job matching and placement, information on current job vacancies, and help with arranging job interviews.²⁸ An increasing number of job-seekers have been visiting ESCs in past years, with an increase by 18 percent from fiscal 2021/22 to fiscal 2022/23.

Although more and more job-seekers use ESCs, gaps in training and staffing remain, severely limiting the services offered. Employment officers are well trained in

28. In addition to the five ESCs, two new labor and employment offices are being set up in the Trongsa and Mongar districts.

job counseling, but they are not dedicated full-time to ESCs. Currently, only ESC Thimphu has two permanent staff members, whereas all the other ESCs rely on interns, with high turnover. Due to this shortage of trained staff, mostly simple tasks such as providing basic information and online registration in the job vacancy and training portal (Bhutan LMIS-BLMIS²⁹) can be offered. Only ESC Thimphu is able to provide some individual counseling sessions due to its many years of experience. However, no data are available to ascertain the level and quality of its services.

Data on ESCs are scarce because the performance of ESCs is not monitored. Currently, the only available data are the registration of visitors in handwritten logbooks. Yet data on the visitors, job-seekers, and employers interacting with ESCs and the services offered are largely missing. Without gathering data in a systematic way, efforts to build an M&E system that could monitor, evaluate, and improve the performance of ESCs are difficult.

All ESCs except the one in Thimphu are located in government administrative buildings and lack proper equipment and resources. Apart from ESC Thimphu which has its own dedicated space, all other ESCs are located in the ministry's regional offices. Thus ESCs have to follow the rules of the administration. For example, visitors are obligated to dress formally to visit the centers, which significantly reduces the accessibility of ESCs. In all ESCs, visits are limited to the official working hours of the ministry. Computers with reliable internet access are scarce, and office space is mostly limited to one room with basic furniture. It is, then, difficult to provide more sophisticated services such as counseling.

Bhutan has a new LMIS, but it is still in its early stages and needs further development.

The four key functions of an advanced LMIS are defined by World Bank (2021) as follows: (1) job matching; (2) career and skills guidance; (3) government support; and (4) labor market intelligence. Bhutan has recently made advances in developing a LMIS to publish digestible information on the labor market and make it easily accessible to job-seekers, employers, and training institutes, as well as across ministries. By publishing updated labor market information, an LMIS can serve all labor market stakeholders by helping students, the inactive, job-seekers, and other groups make informed decisions about career choices, as well as increase their awareness of the occupations, vacancies, and skills available in the labor market. It can also inform curriculum design and the provision of training through knowledge of the most in-demand occupations.

Development of the LMIS is in its early stages. The current LMIS platform is administered by the Data Science Project on Labor Market Initiative under the supervision of Royal Office for Media.³⁰ However, it is not clear to what extent data sharing arrangements are in place between the Data Science Project and the ministries that collect and store administrative labor market data. It is also not clear whether the mandate of the Data Science Project is to only compile data on the labor market from different sources and analyze it to produce and disseminate labor market information, or whether it is required to initiate new data collection (special-topic surveys) to fill information gaps.

In addition, gaps in the published information remain. For example, the LMIS portal currently does not contain information on earnings and thus returns to education and occupational skills. There is also a lack of clarity on data sources and methodology. In addition,

29. The BLMIS platform allows each worker to create a unique profile and apply to multiple TVET training and job vacancies. It can be accessed at <https://blmis.gov.bt/>.

30. For a more detailed information about the portal, go to <https://data.bt/>.

the usefulness of some of the data presented are not necessarily obvious to the average intended users of information (that is, the general audience, including students and job-seekers).

In the future, the LMIS portal could be linked to the BLMIS job matching and training registration portal, so that students, employers, job-seekers, and training service providers can easily access and understand information about the labor market, thereby allowing them to make informed hiring decisions, as well as decisions about their careers and the use of services.

4.3 Conclusion: Ways to strengthen employment support programs in Bhutan and international best practices

This chapter describes several ways in which Bhutan's employment delivery systems could be strengthened to more effectively support all those in the labor market. First, the priority must be to tailor programs to women to move them into quality employment, build stronger links between job-seekers and employers, and boost the relevance of the TVET system for the labor market. Second, steps should be taken to cut back on the number of ALMPs and consolidate them in a way that would enable the government to scale up the impactful ones. This consolidation would help improve the allocation of spending and provide fiscal space to implement initiatives where clear gaps exist. Finally, institutional reforms such as strengthening the coordination between stakeholders and the data sharing systems, as well as promoting evidence-based programming, could help increase the efficiency of the whole system.

It is important to develop ALMPs that bring inactive women into employment and increase women's access to quality jobs. Currently, women work predominantly in agriculture and are often unpaid or underpaid,

whereas men usually work in higher-paying sectors. Chapter 2 points out that family responsibilities, especially childcare, mainly prevent women from entering the labor force and finding well-paying jobs. One solution may be to make the current ALMPs more gender-sensitive by adding offerings that are specifically tailored to women. In addition, new ALMPs could be developed that tackle the issue of work-life reconciliation by providing free or affordable childcare services, as well as job search assistance, mentorship, and counseling for women. ALMPs that provide transportation allowances targeting low-income and rural women could help to facilitate their mobility to regions or locations experiencing labor supply shortages. Efficient ALMPs could also increase women's access to quality jobs. Evidence from the Jovènes programs in Latin America has demonstrated that combining classroom and on-the-job training could significantly increase women's employment chances and boost wages (box 4.4).

Enhancement of the demand-driven nature of vocational training could be achieved through robust collaboration with employers, aligning ALMPs with sought-after skills, employers' expectations, and the prevailing market demands. To pave the way for this transformation, it is advisable that the relevant ministries engage employers as early as possible during the program design phase. This proactive partnership with employers would be pivotal in tailoring ALMPs to match precisely industry, sector, and company prerequisites. Also, ALMPs executed in cooperation with employers could ensure that the offerings effectively endow students with qualifications indispensable in the private sector. Heightened employer involvement could entail the integration of more on-the-job training opportunities and the provision of private sector employment support, including wage subsidies. This multifaceted approach would not only cultivate a more responsive vocational training landscape, but also help meet beneficiaries' aspirations and the demands of the job market.

Box 4.4. Global evidence from Latin America's Jovénes programs

Since 1991, the Jovénes programs, a comprehensive labor market intervention in Latin American countries, have improved the labor market outcomes of their participants. The goal of these programs is to increase skills and improve the employability of poor, disadvantaged, and uneducated youth ages 16–29 (Puerto 2007). A meta-analysis of Jovénes programs in Argentina, Chile, Colombia, the Dominican Republic, Panama, and Peru indicates that the programs tend to significantly increase (by 5 to 20 percentage points) an individual's employment chances, especially women's. Also, the programs appear to boost earnings, ranging from approximately 10 to 25 percentage points (Ibarraran and Rosas 2009; Kluge 2016).

A major strength of the Jovénes programs is the transparent financing and the provision of the training. Governments select training courses competitively through a process in which public and private firms or training institutions can participate, and so the training courses reflect the needs of the employers. Finally, the labor market intervention combines classroom training with subsequent work experience in firms. The training focuses on basic and specific trades, complemented with job search assistance, counseling, and information (Ibarraran and Rosas 2009).

Enhancing institutionalized certification of training courses and teacher qualifications can strengthen the quality of the TVET system. Course accreditation was made mandatory in the 12th Five-Year Plan through the Critical Skills Training program. In the future, all TVET courses and training provided through ALMPs should be certified to increase employers' recognition

of graduates' skills. Also, teacher qualifications should be regularly assessed and certified so that the teaching meets uniform standards. Bhutan could establish a governmental body similar to the Korea Skills Quality Authority (KSQA) described in box 4.5, which certifies vocational training and teacher qualifications.

Box 4.5. The Republic of Korea's TVET system

Since the 1960s, technical and vocational education and training (TVET) programs have contributed to the Republic of Korea's rapid economic growth and shock resilience. During the 1960s and 1970s, the TVET system provided training for large parts of Korean society to meet the country's quickly rising labor demands (Lee 2008). In the 1980s, the TVET system was aimed at improving the skill set of workers. In the 1990s, the TVET institutions expanded and, together with the Employment Insurance Act, helped to boost the Korean economy after the Asian financial crisis (Ra and Kang 2012). Since then, the goal has been to streamline the division of responsibilities and cooperation among TVET stakeholders (UNESCO-UNEVOC 2018).

Various ministries and research institutions have distinct responsibilities in the coordination of the TVET system. The Ministry of Education is responsible for the vocational education taught in schools. The Ministry of Employment and Labor regulates vocational training that is based on programs offered through public or private training institutes and the employment insurance fund (UNESCO-UNEVOC 2018). Founded in 1997, the Korea Research Institute for Vocational Education and Training (KRIVET) conducts research on the development and provision of TVET programs, qualification frameworks, the management of qualifications, the assessment of TVET institutes, and the provision of counseling services (KRIVET 2022).

The TVET system is well-structured within Korea's educational system, providing many professional opportunities. After six years of primary education and an additional three years of lower-secondary education, individuals can move to three years of vocational and technical training. These graduates are then able to go on to vocational colleges at the postsecondary, nontertiary level (usually two to three years). Graduates of these postsecondary, nontertiary courses are then able to go to universities at the tertiary level. Courses there last from three months to one year for nondegree courses and two years for associate degree and industrial degrees. In addition to formal TVET courses, the Ministry of Employment and Labor and the Ministry of Education offer nonformal TVET programs to promote greater access to various educational opportunities for all citizens and foster lifelong learning (UNESCO-UNEVOC 2018).

Institutionalized quality insurance ensures that the TVET programs meet the needs of Korea's modern labor market. The Ministry of Employment and Labor and KRIVET have developed and maintained over 331 National Competency Standards (UNESCO-UNEVOC 2018). The Korea Skills Quality Authority (KSQA) is responsible for ensuring the quality of the TVET system (OECD 2020). Moreover, TVET teachers must acquire national technical qualifications in their area of expertise and work experience. The educational requirement for teachers and trainers in upper-secondary TVET education is a teacher's certificate awarded by a college of education, or a master's degree from a graduate school of education, or completion of a teaching course at a university. Teachers in postsecondary, nontertiary education and tertiary TVET education are required to have a doctoral degree in their specific area (UNESCO-UNEVOC 2018).

Private sector assistance programs that provide agricultural and rural workers with microloans packaged with entrepreneurial training can help improve their productivity, connect them to markets, and upgrade their agricultural practices. The agricultural sector still dominates Bhutan's economy, and structural transformation has been slow. This factor, together with accelerated climate change leading to extended droughts that threaten harvests, place agricultural and rural workers in a vulnerable position in which they are barely able to secure sufficient household income. Best practices from Bangladesh confirm that the country's sophisticated microfinance system has been able to help the rural poor to move into

self-employment in past decades (box 4.6). In Bhutan, MoICE's CSI flagship program and business incubators have remained focused on industrial development in urban centers without a special focus on the needs of rural populations. The development of entrepreneurship programs that offer vulnerable rural populations microloans could boost job creation, which may be especially helpful to accelerate structural transformation. However, the provision of microloans should be carefully designed to mitigate the challenges faced by previous initiatives. The design process should draw lessons from the National Development Bank, which has reported a high incidence of nonperforming loans in the agricultural sector (World Bank, forthcoming a).

Box 4.6. Bangladesh's microfinance system

Grameen Bank launched the first microfinance operation in Bangladesh in 1976. In the early years, loan products targeted rural nonfarming activities to help the rural poor become productive and acquire assets (Khandker 1998). As of 2018, 750 microfinance institutions (MFIs) were providing about 3.5 million borrowers with microcredit (Microcredit Regulatory Authority 2018). Bangladesh's common microfinance model is based on the Grameen model, which assumes that group members are best able to assess each other's creditworthiness (Osmani 2016). Peer pressure then ensures that group members make installments according to the regulations of the MFI (Srinivas 2015). Weekly group meetings promote transparency and guarantee the timely repayment of installments (Halder and Stiglitz 2016).

Access by the poor to microfinance has contributed to poverty reduction in Bangladesh. Microcredit allows the poor to protect, increase, and diversify their sources of income (Littlefield, Murdugh, and Hashemi 2003). According to one study, a 10 percent increase in the average microcredit provided to females in a village led to a 0.42 percent increase in household nonland assets and a 0.47 percent increase in household net worth (Khandker and Samad 2014). Microfinance products in Bangladesh have also enabled the poor to establish microenterprises: the interest rates of microcredit are low enough that the poor can repay them and are still able to accumulate capital (Osmani 2016).

Box 4.7. Green Jobs

Green jobs and promotion of the green economy are intended to address climate change and deliver decent work for all. The concept of green jobs refers to the transformation of economies, labor markets, enterprises, and workplaces into a sustainable economy that provides decent work (ILO 2009). Such jobs, ranging from manual to highly skilled, can be found in many sectors of the economy such as transportation, construction, agriculture, recycling, and energy supply. The goal is to reduce the need for energy and raw materials, thereby minimizing pollution, avoiding greenhouse gas emissions, and protecting and restoring biodiversity and ecosystems (CEDEFOP 2009). Over the period 2009–14, the Green Jobs Initiative launched by the International Labour Organization, United Nations Environment Programme, International Organization of Employers, and International Trade Union Confederation was a global effort to provide knowledge, build partnerships, and offer governments policy advice to promote the implementation of national and sectoral policies to create green jobs (ILO 2016). Since then, many low- and middle-income countries have implemented projects to promote green jobs.

In the Philippines, the Promotion of Green Economic Development project (2013–16), implemented by the country's Department of Trade and Industry (DTI) in cooperation with the German Federal Ministry for Economic Cooperation and Development (BMZ), supported micro, small, and medium enterprises (MSMEs) in implementing environmentally friendly, climate-sensitive strategies. The project aimed to (1) provide MSMEs with information and raise their awareness of green economic development; (2) promote business matchmaking and link enterprises with green business services providers; and (3) provide a green policy framework for the DTI so it could mainstream green initiatives in its programs. The result was that more than 300 DTI employees learned to contribute to the transformation to a green economy and green jobs based on their participation in workshops, on-the-job training, and information trips (GIZ 2016).

In South Africa, the project TVET and the Promotion of Innovation for Green Employment (2015–17) supported the construction of power plants generated from renewable sources and the generation of green jobs. The project was implemented by South Africa's Department of Higher Education and Training and Department of Science and Technology in cooperation with the Germany's BMZ. It aimed to cooperate with universities, technical and vocational education and training (TVET) colleges, and technology transfer institutions to supply the experts and technologies required to operate a green economy. Hands-on training was provided for water/wastewater and waste disposal management; installing and maintaining solar water heaters and photovoltaic systems; and increasing energy and resource efficiency in production processes. A major project achievement was the integration of the module "Renewable Energy Technologies" into a course available at seven TVET colleges with 500 students. Teaching and learning materials were developed and used for this course (GIZ 2017).

Bhutan's ALMPs should also be linked to other human capital programs in the health and education sectors. As shown in chapter 2, returns to education are very high for both women and men, especially women with a tertiary education who tend to earn relatively higher wages. In the future, the DWPSD could effectively coordinate with the Ministry of Health and MoESD to expand human development programs to cover vulnerabilities along the life cycle. Programs to strengthen maternal health and infant health could play an essential role in strengthening Bhutan's labor force. In addition, ALMPs that go hand in hand with programs that boost the educational outcomes of primary and secondary schoolchildren would be important.

Strengthening coordination between stakeholders could increase the efficiency of Bhutan's employment delivery systems. Currently, the several ministries involved in the provision of ALMPs have overlapping mandates. Inter-ministerial coordination, especially between MoESD and MoICE, could be strengthened to avoid duplication and inefficiencies. It is recommended that a steering committee be formed to engage stakeholders. Members would represent the responsible ministries, the Kidu Foundation, and potentially international organizations to reach a consensus on labor market interventions, their goals, beneficiaries, and outcome tracing.

Strengthening data sharing systems can improve the coordination and ability to use ALMPs efficiently. It is critical to choose the right type of ALMP and identify

the specific design features to increase the likelihood of program success. Designing efficient ALMPs that complement each other and are coherent requires data. As discussed in this chapter, the LMIS includes a platform where workers can create their profiles and apply for TVET training. In the future, the LMIS will need to be further developed because information gaps remain. It will be important to provide accurate and timely data on ALMP performance outcomes, assessing their relevance and quality, as well as data on the selection of beneficiaries. Integrated data systems can be especially important for effective crisis responses: scale-up of existing programs or the creation of new ones requires a fast, effective response to reach newly vulnerable individuals and households.

Evidence-based programming could be promoted by introducing a M&E system to track the effectiveness of ALMPs to help fill current gaps. In addition to enhancing Bhutan's LMIS, M&E frameworks could be developed and evaluations and robust impact assessments conducted for all existing ALMPs. Results-based indicators related to the quality of the services or whether the provided services have helped to improve labor market outcomes of the beneficiaries should be tracked. An M&E department could be established to take responsibility for running large-scale randomized, controlled trials to evaluate the effectiveness of ALMPs. To complement these trials, Bhutan could introduce an online database devoted to research on global best practices by ALMPs. Examples of such databases can be found in Denmark and the United Kingdom (box 4.8).

Box 4.8. Documenting global best practices in labor interventions

Some countries are capturing and sharing information on labor market policy evaluations.

Jobeffekt (Denmark)

Jobeffekter.dk is a knowledge bank launched in 2013 by the Danish Agency for Labor Market and Recruitment. It provides a quick, accessible, and up-to-date overview of the labor market policies and programs that have had a positive effect based on more than 500 Danish and international research-based studies. Each uploaded study is assessed by researchers. Publications are available for many target groups, including those who are short- and long-term unemployed. See <https://jobeffekt.dk/>.

What Works Network (United Kingdom)

This network is made up of 13 research centers committed to increasing both the supply of and demand for evidence in their policy area, and their output is tailored to the needs of decision-makers. The available evidence contains impact evaluations and academic work. Findings are shared in an accessible way to inform policy decisions. See <https://www.gov.uk/guidance/what-works-network>.

Chapter 5

Policy Directions

Jumana Alaref

This report highlights four broad challenges in Bhutan's labor market: (1) low female labor force participation, especially among low-skilled women in urban areas; (2) the low productivity of agricultural workers, especially women in rural areas; (3) limited labor productivity and job creation in the private sector in urban areas, resulting in high unemployment among educated youth and in low employment quality outside the public sector; and (4) the difficulties facing private sector firms in accessing trained labor for low-skill vacancies, which may be one of the factors contributing to limited productivity and growth (see table 5.1).

From these challenges emerge several directions for orienting public policies and programs to address the constraints facing workers and employers in Bhutan. The policy directions are summarized in this chapter. delivery systems effectively address some of the challenges facing both workers and firms. As outlined in chapters 2 and 3, those challenges include lo

Policy direction 1: Accelerate job creation in the private sector by implementing vertical growth policies (sector-specific), as well as horizontal reforms (sector-neutral).

Bhutan's forthcoming Country Economic Memorandum (CEM) emphasizes the importance of adopting vertical policies that support the growth of specific sectors in view of limited private sector development outside the agricultural and public sectors. The labor demand prospects indicate that the current sectors most dominant within the private sector will be unable to absorb the educated working-age population in urban centers into high-value-added jobs that make use of their skills and aspirations. Selecting sectors to support their growth through government subsidies and programs requires careful analysis to mitigate risks.³¹ The CEM emphasizes that countries that implement successful vertical interventions “rely on market signals to hold themselves accountable, sustain competitive pressures, and drive innovation in the development and export of new products.”

31. The following sectors that have created jobs over the last few years, especially for skilled workers, but are currently small could be considered: financial, insurance, and real estate activities; information, communication, and technology; and professional, scientific, and technical activities. A 2022 United Nations Development Programme (UNDP) study proposed inward and outward-focused industrial propositions for three sectors: agriculture, creative, and digital (UNDP 2022b). This study could form the basis for future work by the Royal Government of Bhutan (RGoB).

Successful diversification policies also require implementing horizontal policies that support job creation and growth across all sectors. As highlighted in this report, most firms in Bhutan remain small and do not expand over time. Although young, dynamic, high-growth enterprises (sometimes referred to as “gazelles”) are increasingly recognized in the literature as critical for the creation of better-quality jobs (Farole et al. 2017; ILO 2019), some evidence suggests that it is difficult to identify firms with a high potential for growth. Policies to support firm growth are more likely to succeed if they focus instead on factors related to innovation, agglomeration and network economies, managerial capabilities and workers’ skills, global links, and financial development. These policies can, in turn, contribute significantly to increasing the probability of a high-growth episode (Goswami, Medvedev, and Olafsen 2019).

To improve innovation in Bhutan, the Ministry of Industry, Commerce, and Employment (MoICE) oversees incubation and acceleration centers under five royal colleges. These centers are mandated to support entrepreneurship development as part of an effort to boost economic growth and job creation for educated workers. However, the centers are still in their early stages and also face funding uncertainties. The quality of their incubation and acceleration services could be further strengthened to connect entrepreneurs to the broader entrepreneurial ecosystem in Bhutan. Improvements could link existing and aspiring entrepreneurs to (1) access to financing; (2) market validation; (3) business plan development; (4) research and development support; (5) mentorship; and (6) supply chains and markets.

Complementary horizontal policies that relate to labor market, private sector, and governance reforms are needed. Labor market reforms include: (1) labor regulations that can support workers’ mobility and firms’ access to labor; (2) a functional labor market information system (LMIS) that can identify skills available in the labor market and support the hiring needs of

start-ups; and (3) skill-related policies to strengthen firms’ capabilities by focusing on managerial practices and soft skills. Private sector and governance reforms are needed on the investment climate and foreign direct investment, access to finance, and the efficiency of the state-owned enterprise (SoE) sector.

Policy direction 2: Strengthen economic inclusion programs to support rural workers and help them improve their productivity and access to protections against climate change vulnerabilities.

Rural workers remain locked in low-productivity and subsistence employment, with limited access to knowledge, green skills, markets, services, and protections against climate change vulnerabilities. Improving agricultural productivity is imperative to accelerating structural transformation and to the reallocation of workers toward better-quality jobs in the services and industry sectors (World Bank, forthcoming a).

There is scope to strengthen the present skills development programs under the Ministry of Education and Skills Development (MoESD) to improve rural workers’ links with climate change adaptation and provide them with a targeted package of training. Technical training can help improve farmers’ productivity and agricultural climate-friendly practices, as well as climate resilience and mitigation. Training in critical business skills, mentoring, and psychosocial support can encourage workers to take risks and diversify their income-generating activities. Training could also focus on the skills required for green jobs to facilitate workers’ transition to the green economy.

System linkages between MoESD or MoICE and the Ministry of Agriculture and Livestock (MoAL) could allow for beneficiary referral and the provision of a coordinated package of economic inclusion services.

Those services could include technology transfer, improved inputs, microloans, and off-farm activities that connect farmers, especially youth, to urban markets.

Policy direction 3: Strengthen employment support programs to support the activation of low-skilled women in urban areas, improve the skills of vulnerable workers, and help employers with their hiring and training needs.

Although employment support programs are unlikely to have an impact on their own without addressing binding constraints on the demand side, they have an important role to play in improving the productivity and skills of the Bhutanese workforce and alleviating the skill mismatches. The institutional and policy framework for designing employment programs to address the constraints highlighted in this report sets the foundation to support workers and employers. Bhutan spends more than the average South Asian country on skills development programs, and it has a well-established technical and vocational education and training (TVET) sector. In addition, Bhutan has a network of employment services centers (ESCs) that are tasked with providing labor intermediation and matching services as set forward by the National Employment Policy of 2013.

However, a majority of the existing programs are fragmented, are too small to make a tangible impact, have very limited regional coverage, or are inadequately designed to address relevant constraints. There is scope to strengthen existing policies and programs through key reform principles: (1) improve the design of programs to improve efficiency and effectiveness; (2) introduce new design features within existing programs and strengthen system linkages to address gaps;

and (3) reduce program fragmentation and scale up programs proven to be relevant and impactful.

1. Improve the design of existing programs to improve their efficiency and effectiveness

The TVET sector can be reoriented to improve its connection with the private sector. This report finds that vocational training after secondary education (by means of certificates and diplomas) may be a promising route to employment given the growing demand for those skills and employers' own training needs. Demand-driven TVET (such as through on-the-job training) remains essential to support employers directly in meeting their training and vacancy needs. Achieving this support requires collaboration between the Department of Workforce Planning and Skills Division (DWPSD) within MoESD and employers in services and sales and craft and related trades—two occupations with the highest expected demand in the future.

The role of ESCs in providing job intermediation and matching policies remains essential, but it needs strengthening. With the appropriate resources, capacity, and investments, ESCs can establish relationships with local employers, engage in vacancy collection, and directly support vulnerable job-seekers with referrals to the appropriate employment support services and with job placement. Further support by ESCs of the unemployed and inactive can be provided to increase the attractiveness of and access to current low- and semi-skilled vacancies by providing on-the-job assistance, counseling, and mobility support to cover job search costs for vulnerable workers and place them directly in regions and sectors with wage employment opportunities. This report finds that cross-*dzongkhag* mobility is associated with improved labor market outcomes, but low-skilled and vulnerable workers are less likely to move compared to the higher-skilled.

2. Introduce new design features to existing programs and strengthen system linkages to maximize the impact of programs

Across employment support programs, strengthening the inclusion of vulnerable workers with lagging labor market outcomes is important. This effort may necessitate either introducing new design features within existing programs or strengthening system linkages across several programs to improve beneficiary referral and coordination and to maximize the impact of several programs. For example, women emerge as a clearly vulnerable group from the analysis. To improve their inclusion in TVET and support their overall labor market insertion, offering them childcare facilities is important, as well as other enabling services (such as transportation support for vulnerable women from rural areas and safe training spaces). Across active labor market programs (ALMPs), childcare subsidies can be an add-on benefit targeting women from low-income families. It is also essential that ESC resources are directed toward helping women, especially low-skilled mothers with young children in urban areas, reengage in the labor market and that these resources provide them with targeted case management, coaching, job search support, and training in relevant fields such as digital and information technology.

Many employment support programs can be linked to other human capital programs to address vulnerabilities along the life cycle of individuals. Low-income young mothers benefiting from employment support under either MoICE or MoESD could be linked to other human capital programs to strengthen maternal and infant health, most notably under the Ministry of Health's Maternal Child and Health Program. Employment support programs also need to be linked to one another to maximize impact. For example, many trainees benefiting from skills development under MoESD could be referred to entrepreneurship skill programs under MoICE if they are interested in self-employment. In addition, vulnerable trainees who are not labor market-ready after training could be linked

to further employment support, such as on-the-job training or apprenticeships.

3. Reduce program fragmentation and scale up programs proven to be relevant and impactful

For its population size, Bhutan has too many ALMPs. Most remain small and are discontinued every few years due to lack of sustainable funding. For example, most of the skills development programs under MoESD have less than 2,000 beneficiaries. The Youth Engagement and Livelihood Program (YELP) under MoICE—a scheme that combines wage subsidies with on-the-job training—supported almost 2,500 beneficiaries in fiscal 2022/23 and faces uncertain funding prospects. Both MoESD and MoICE could focus on consolidating programs and scaling up a few impactful ones. This approach could also improve the allocation of spending and create the fiscal space to fund new design initiatives where gaps clearly exist (such as in the availability of childcare and transportation subsidies for women from low-income families).

Policy direction 4: Strengthen monitoring and evaluation (M&E) in all employment promotion programs to improve their impact on labor market outcomes and inform scale-up decisions.

The M&E agenda in Bhutan remains essential to inform evidence-based policy making around employment policies. None of the available employment promotion programs has been evaluated, and monitoring data on the performance and impact of these programs are scarce and limited. In addition, Bhutan lacks the high-quality data from frequent firm-level panel surveys on productivity and occupational demand outlooks that could have an impact on its ability to

undertake evidence-based policy making to support firm growth. Real-time labor market data on workers and vacancies through online job postings could transform skills development programs to improve their connection to labor demand. Although Bhutan recently built a single intake portal for workers and firms,³² the use of data to produce labor market intelligence valuable to different users, similar to what other

countries such as Indonesia have achieved, requires important technical capacity and resources (Granata, Posadas, and Testaverde 2022). Therefore, investing in robust information systems and conducting frequent firm-level surveys are imperative as Bhutan seeks to strengthen its own workforce development and support policies for firms.

Table 5.1. Mapping of policy directions according to four broad labor market challenges

Challenge	Underlying constraint	Suggested policy direction
Low female labor force participation, especially among low-skilled women in urban areas	Childcare options to help women strike a balance between paid employment and care duties are limited.	Strengthen active labor market programs (ALMPs) in urban areas in the short term to provide childcare subsidies for low-income families with young mothers. A medium-term agenda can focus on improving early childhood care and development access and quality in both urban and rural areas.
	Social norms are associated negatively with women's labor force participation.	Offer as part of existing ALMPs or by employment services centers (ESCs) under the Ministry of Industry, Commerce, and Employment (MoICE) targeted information and awareness campaigns, as well as group training sessions on female agency, empowerment, and the benefits of women's work.
	Skill development opportunities may be more limited for young women than young men because their not in education, employment, or training (NEET) shares are higher.	Strengthen the design of skills development trainings and technical and vocational education and training (TVET) and incorporate gender-sensitive policies to engage women. Stronger outreach by ESCs is needed to support low-skilled women in their job search efforts, as well as in case management and training referrals.
Low productivity of agricultural workers, especially women in rural areas	Many workers, especially women in rural areas, are self-employed or family workers, with no prospects for improved economic mobility.	Provide a targeted, comprehensive package of economic inclusion services that includes skills training in technical areas, climate mitigation, and business and risk management practices. System linkages between multiple ministries can support the delivery of a coordinated package of services and maximize its impact.
	Agricultural workers often lack access to training to improve their productivity, to input and markets, and to protections against climate change vulnerabilities.	

32. Bhutan Labor Market Information System, <https://blmis.gov.bt/>.

Table 5.1. Continued

Challenge	Underlying constraint	Suggested policy direction
<p>Limited productivity and job creation in the private sector</p>	<p>Over 95 percent of firms in Bhutan are cottage-size firms (with an average of five employees or less). There are very few medium and large firms in size.</p>	<p>To support private sector development, productivity, and growth, implement both vertical and horizontal reforms. They include reforms to improve the quality of incubation and acceleration services provided by MolCE and implementing complementary reforms to labor regulations, investment climate, governance, as well as labor market information systems.</p>
	<p>Firms are geographically concentrated and not sufficiently diversified in terms of economic activity. The dominant economic sectors (such as wholesale and retail) are, on average, characterized by low labor productivity.</p>	
	<p>Demand is largest to fill low-skilled positions that do not match the profile of an increasingly educated workforce suffering from unemployment.</p>	
	<p>Firms face multiple binding constraints to growth. Among smaller firms, these constraints are access to finance, markets, and raw materials, and among larger firms, they are stringent labor regulations and high worker turnover.</p>	
	<p>Many workers have low-quality employment in the private sector, with no written contracts and a higher share of overwork.</p>	
<p>Difficulties facing private sector firms in accessing trained labor to fill low-skilled vacancies, which may be one of the factors contributing to limited productivity and growth</p>	<p>Many of the available low-skilled positions appear to be either unappealing or inaccessible to those who are unemployed or inactive (such as women).</p>	<p>Implement activation policies that stimulate the labor supply to address the shortage of low-skilled workers. This policy direction is tied to the earlier point on addressing constraints to women's labor force participation, because low-skilled women who could fill some of the existing vacancies are largely inactive. Another option is to hire more foreign workers to fill vacancies.</p>
	<p>Firms have no connections to the vocational or training institutes that could help them access skilled labor and address worker shortages.</p>	<p>Implement demand-driven TVET that can support employers directly with their training and vacancy needs and implement on-the-job-training schemes with a sustainable funding mechanism.</p>
	<p>Job-seekers with the educational levels most in demand are not located in the regions experiencing labor shortages.</p>	<p>Implement job intermediation and matching policies by ESCs that can support better matches between labor supply and demand. Some of those policies could promote internal mobility by providing on-the-job assistance, counseling, and transportation allowances to help vulnerable workers relocate to urban centers with wage vacancies. Vulnerable workers include self-employed (own-account) and family workers with low education and those engaged in low-quality livelihoods in rural areas.</p>

Appendixes

Appendix A: Data Sources

Bhutan Labor Force Survey (2013–22)

This report uses 10 waves of the Bhutan Labor Force Survey (BLFS) for 2013–22. The BLFS provides annual data on the labor market, including the proportion of the economically active and inactive population, the labor force participation rate, and labor force data segregated by sex, age, education, location, occupation, hours of work, etc. The data are used to project the country’s future labor supply and to inform policies and programs related to job creation and poverty reduction.

BLFS data are representative at the national level and cover both urban and rural areas across 20 (districts). Because of limited access, several hard-to-reach areas were excluded from the survey. The sample sizes are as follows: 6,000 households (2013–16); 8,010 households (2017); 9,012 households (2018–2020); and 10,130 households (2021 and 2022).

The BLFS was led by the Labor Market Information and Research Division of the Department of Employment and Human Resources between 2013 and 2017, after which the mandate for the survey shifted to the National Statistics Bureau. A key limitation of BLFS 2018–22 is that many important modules collected in the earlier rounds were removed, such as employment history, benefits attached to a job (to infer the level of informality among wage employees), and history of migration (both domestically and abroad).

Bhutan Establishment Survey (2022)

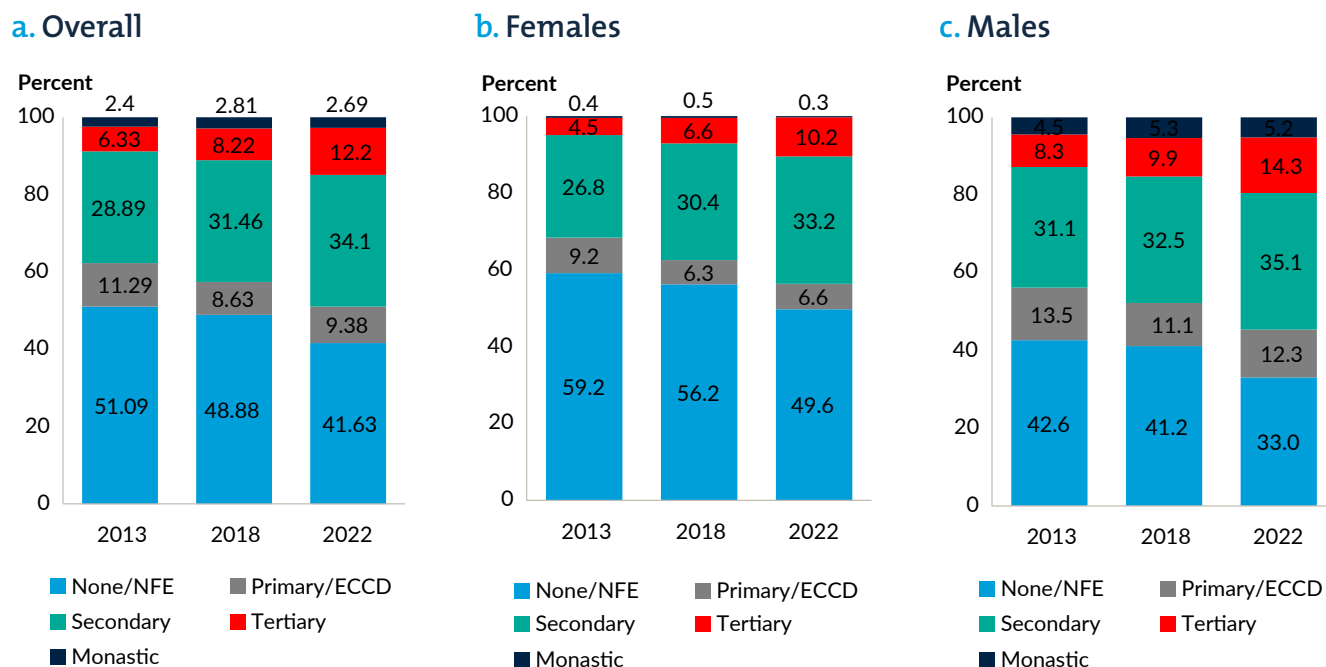
In Bhutan, 4,700 establishments responded to the 2022 Establishment Survey (ES). Survey data provide estimates representative of the national level and the six regional levels, as well as by economic sector and establishment size. The sampling frame relies on the employer-employee registration data from the Bhutan job vacancy platform of the Bhutan Labor Market Information System.

Sectors covered by the ES do not include public administration and defense, activities of households as employers, and activities of extraterritorial organizations and bodies. Also excluded are establishments not registered under the EER 2020–21, household-based businesses and household-based subsistence growing of crops and rearing of livestock, religious institutions, government agencies, and the armed forces.

The ES was led by the Labor Market Information and Research Division (LMIRD) in close coordination with the Human Resource Planning and Coordination Division (HRPCD) of the Department of National Human Resource Development (DNHRD). The World Bank provided technical assistance on design, sampling, and implementation.

Appendix B: Supplementary Figures and Tables, Chapter 2

Figure B.1. Skill composition of working-age population, overall and by gender, 2013, 2018, 2022

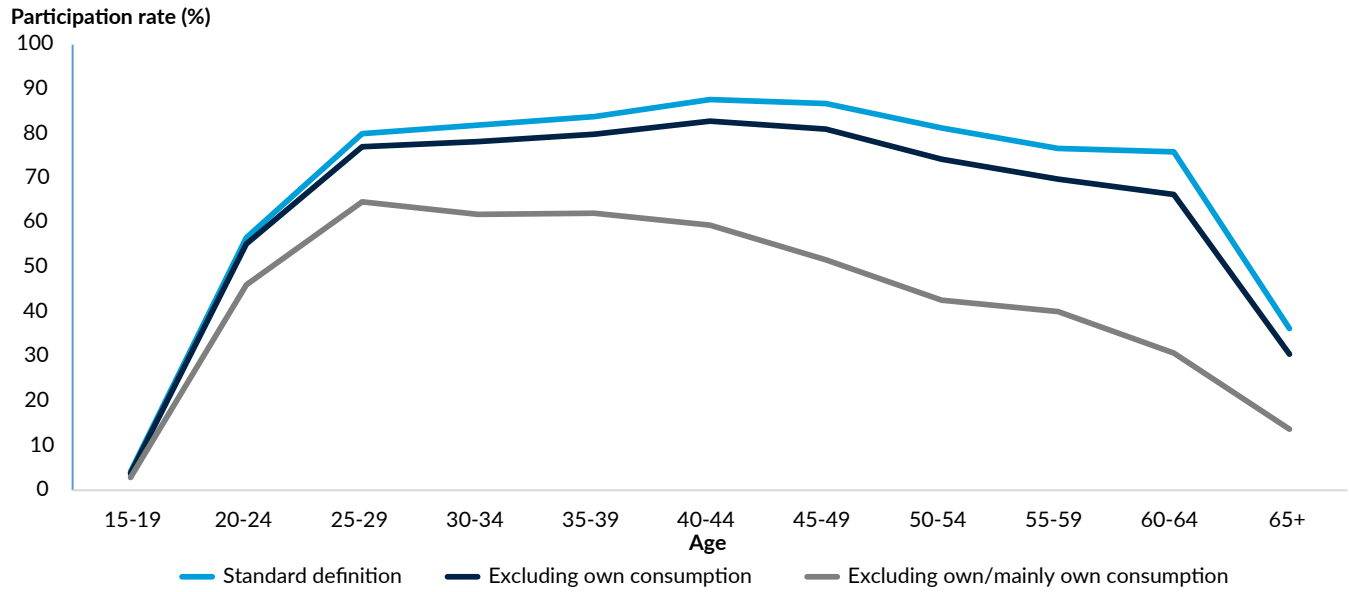


Source: Bhutan Labor Force Survey, 2022.

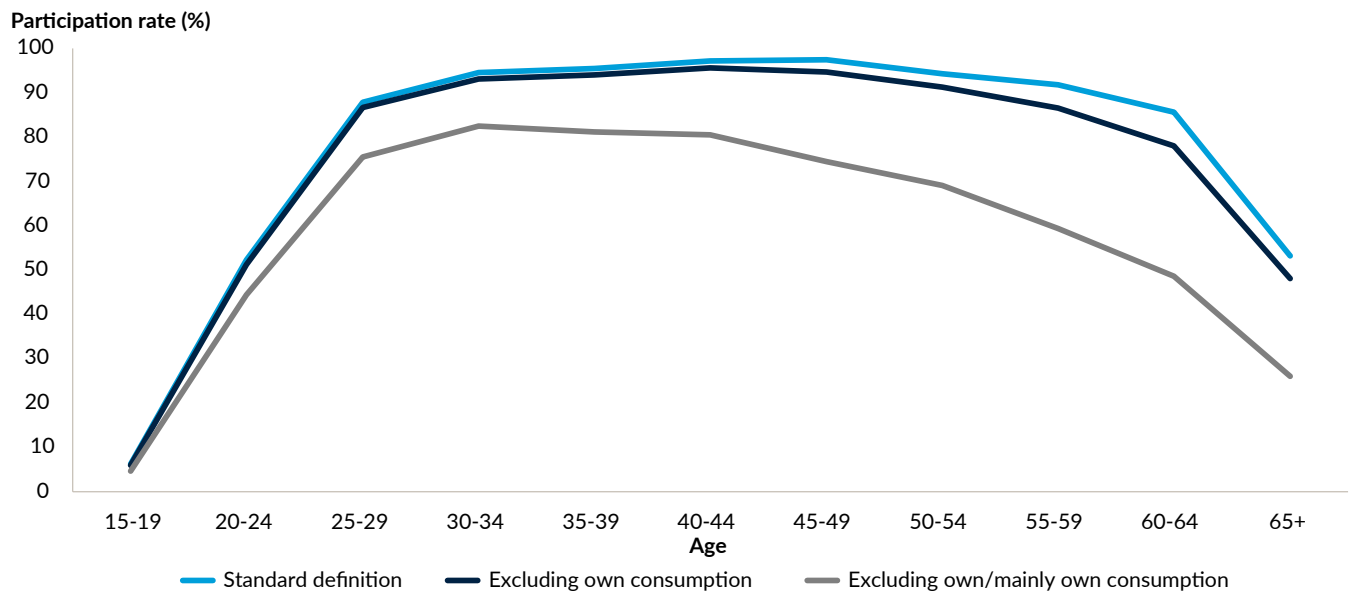
Note: ECCD = early childhood care and development; NFE = nonformal education.

Figure B.2. Labor force participation rates, by gender and age, excluding agricultural output for own consumption, 2021

a. Females



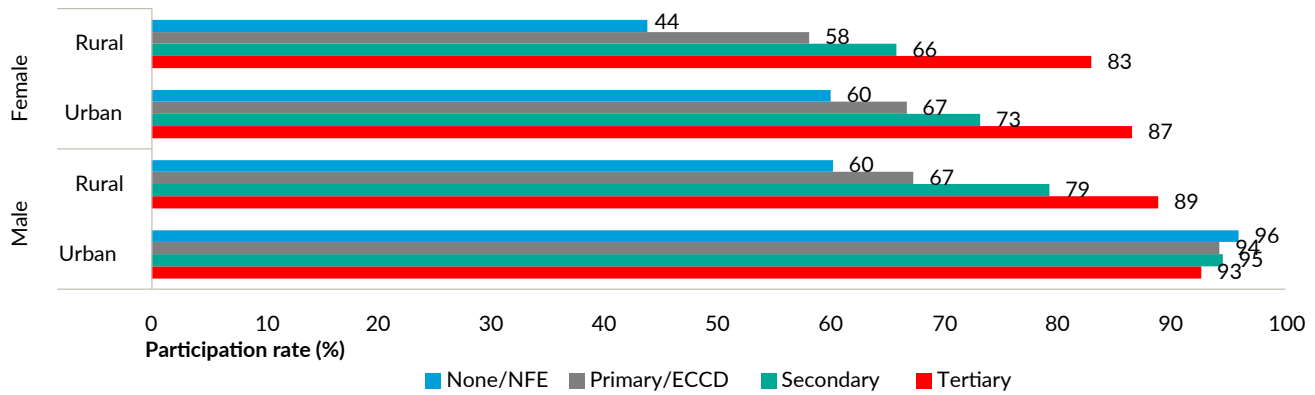
b. Males



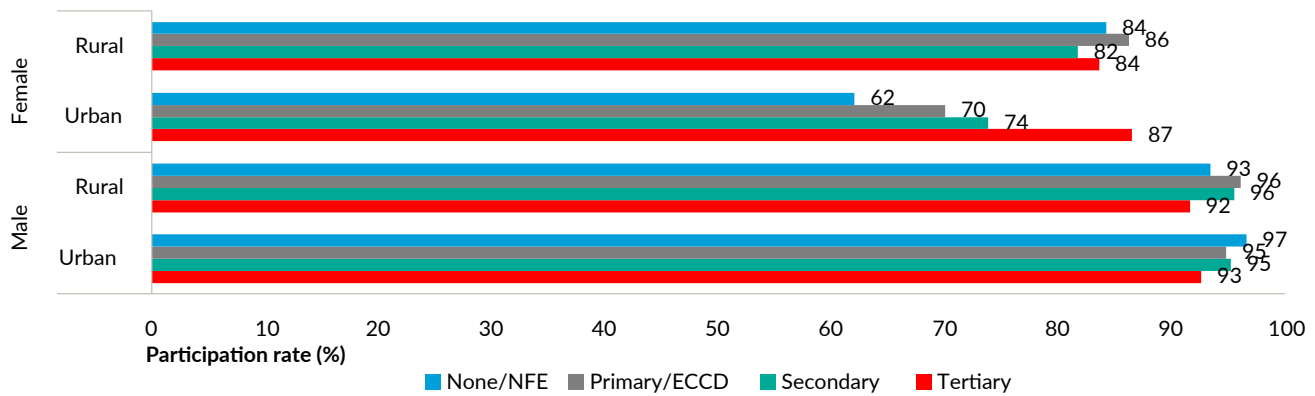
Source: Bhutan Labor Force Survey, 2021.

Figure B.3. Labor force participation, 2021

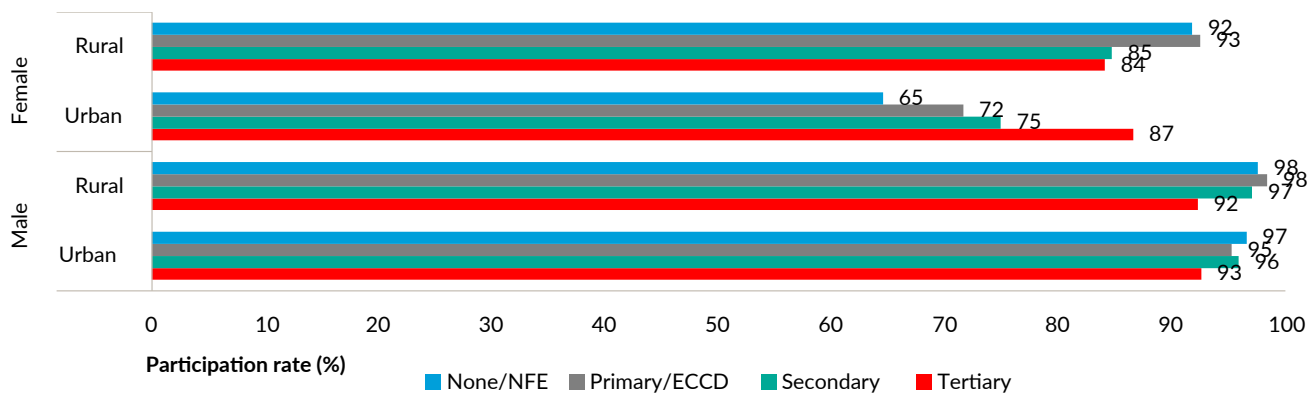
a. By gender and location, excluding own consumption/mainly own consumption



b. By gender and location, excluding own consumption



c. By gender and location, using standard definition

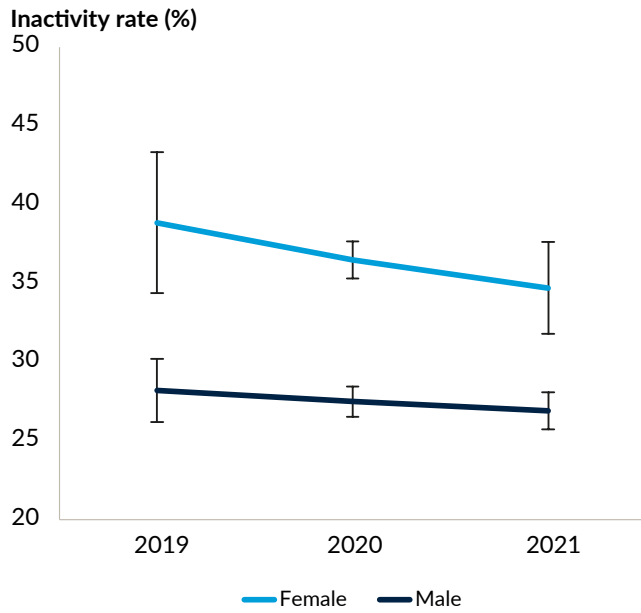


Source: Bhutan Labor Force Survey, 2021.

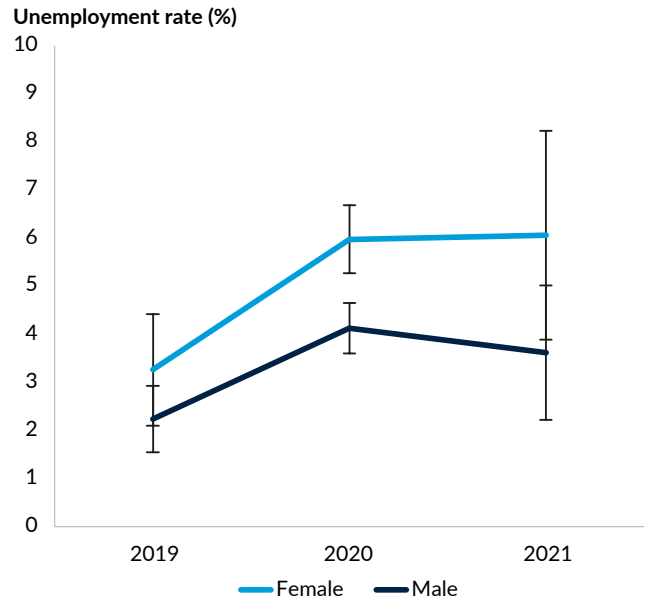
Note: ECCD = early childhood care and development; NFE = nonformal education.

Figure B.4. Extensive and intensive margins of employment during pandemic, by gender, 2019–21

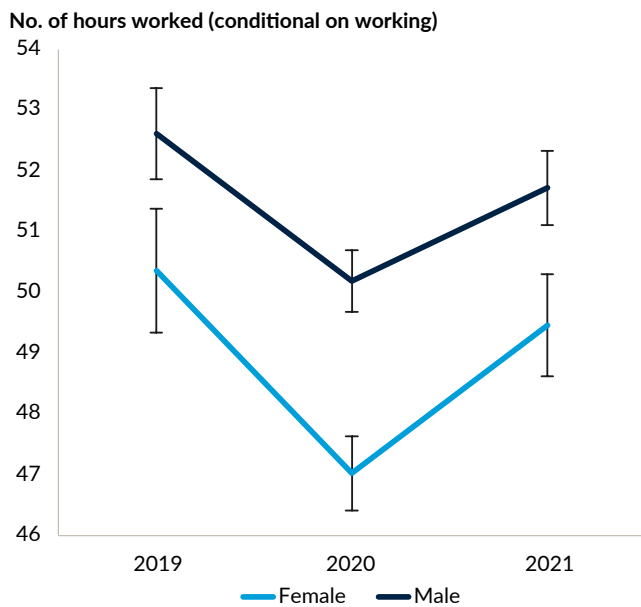
a. Inactivity during pandemic



b. Unemployment during pandemic



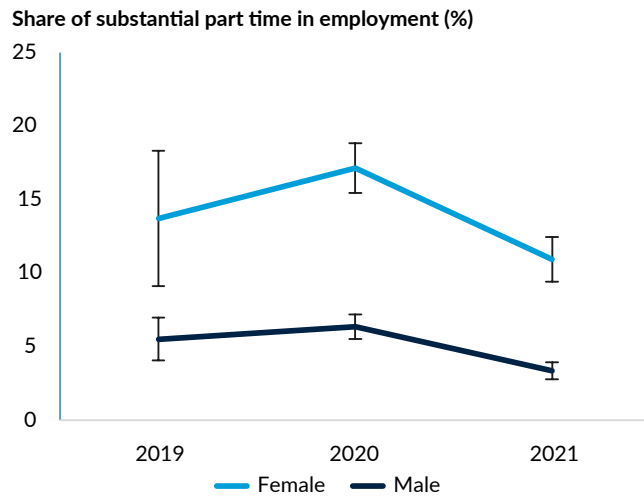
c. Hours worked per week during pandemic



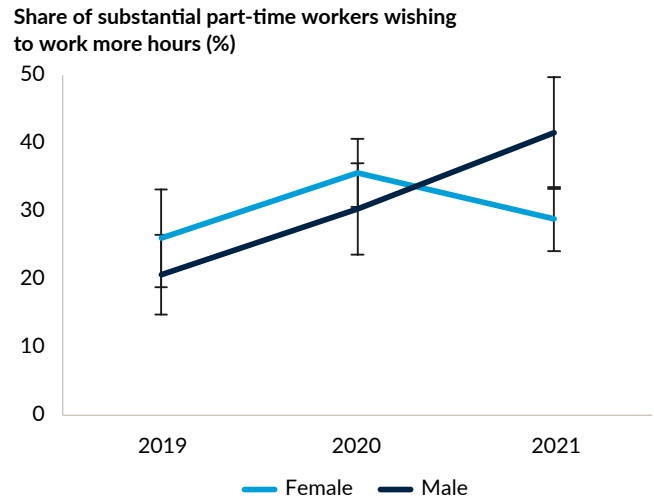
Source: Bhutan Labor Force Survey, 2019–21.

Figure B.5. Part-time work and satisfaction with part-time work during pandemic, by gender, 2019–21

a. Evolution of share of part-time work in total employment



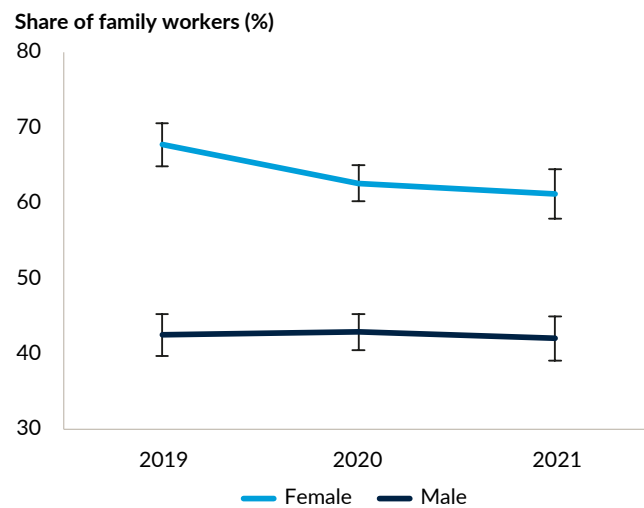
b. Evolution of the share of individuals wishing to work longer hours, conditional on working 34 hours or less (substantial part-time)



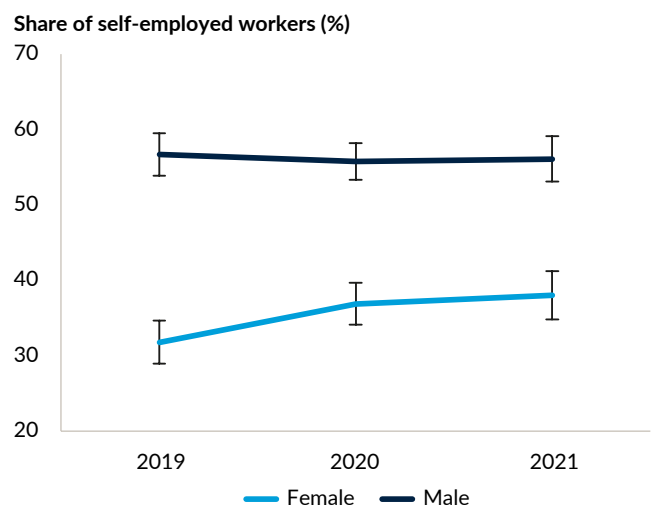
Source: Bhutan Labor Force Survey, 2019–21.

Figure B.6. Evolution of share of family workers and self-employed workers, by gender, in agriculture, 2019–2021

a. Family workers



b. Self-employed workers



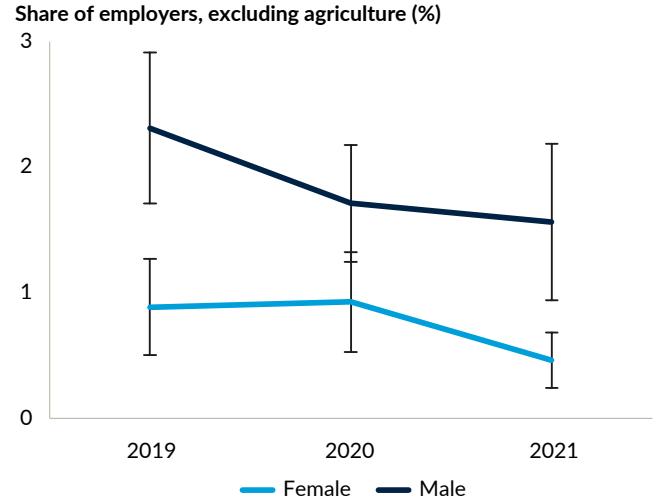
Source: Bhutan Labor Force Survey, 2019–21.

Figure B.7. Evolution of share of self-employed workers and employers, by gender, in nonagricultural sectors, 2019–21

a. Self-employed workers



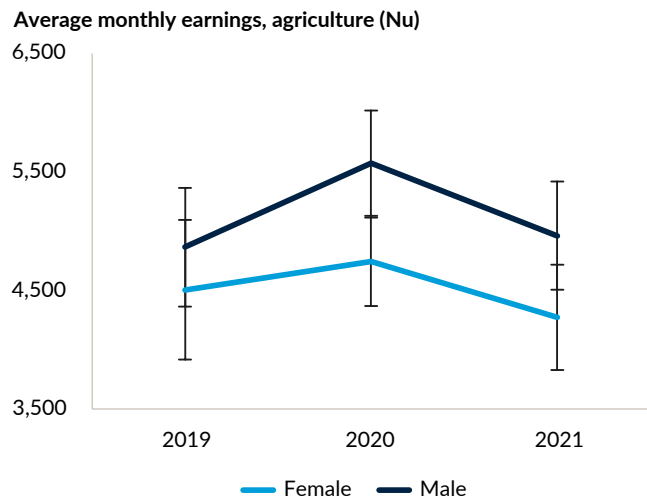
b. Employers



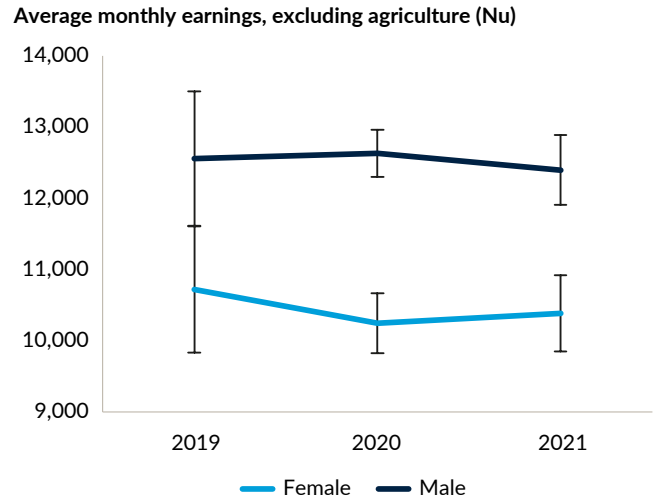
Source: Bhutan Labor Force Survey, 2019–21.

Figure B.8. Evolution of real monthly earnings, by gender and sector, 2019–21

a. Agricultural sector



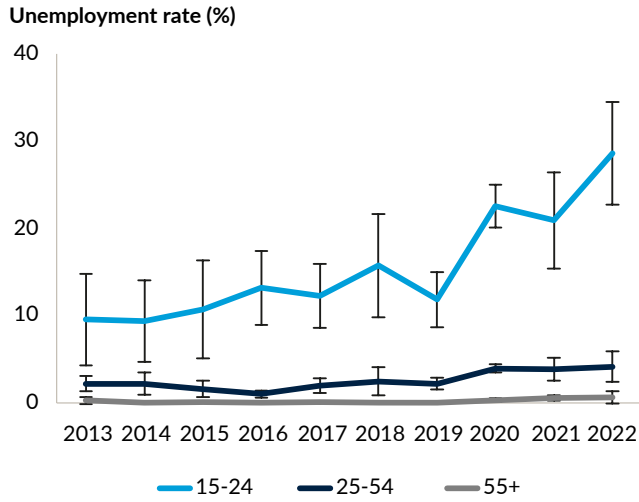
b. Nonagricultural sectors



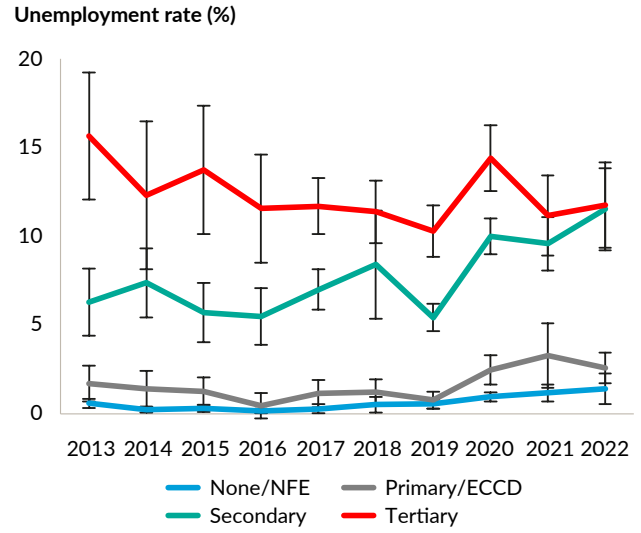
Source: Bhutan Labor Force Survey, 2019–21.

Figure B.9. Unemployment rate, by age and education, 2013–22

a. By age



b. By education



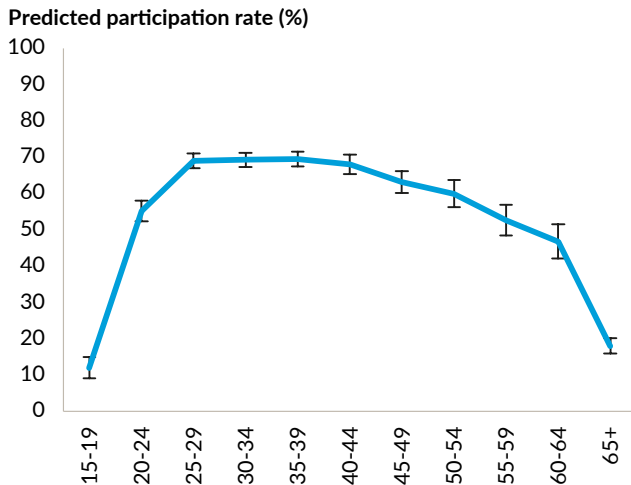
Source: Bhutan Labor Force Survey, 2019–21.

Note: ECCD = early childhood care and development; NFE = nonformal education.

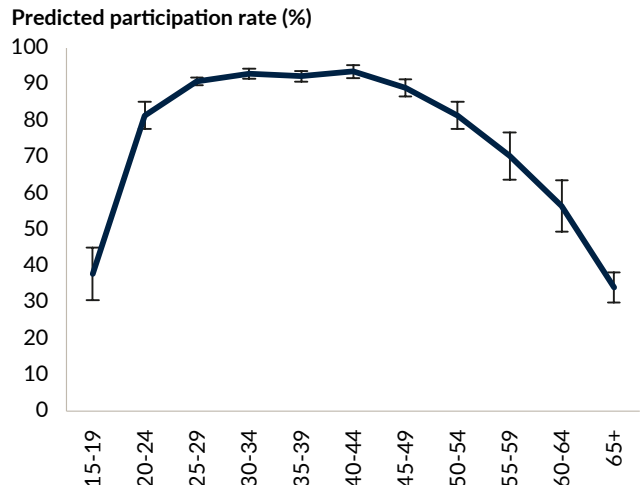
Figure B.10. Predicted labor force participation rate, by age and gender, along the life cycle and by location and education, holding constant other individual, household, and local characteristics

a. Along the life cycle

Females



Males

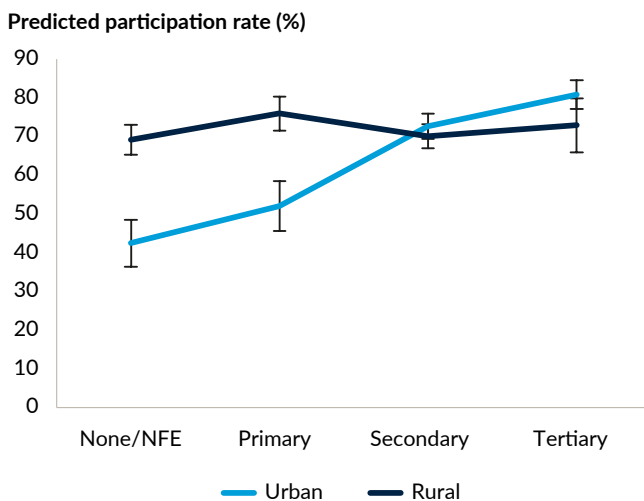


Source: Bhutan Labor Force Survey, 2022.

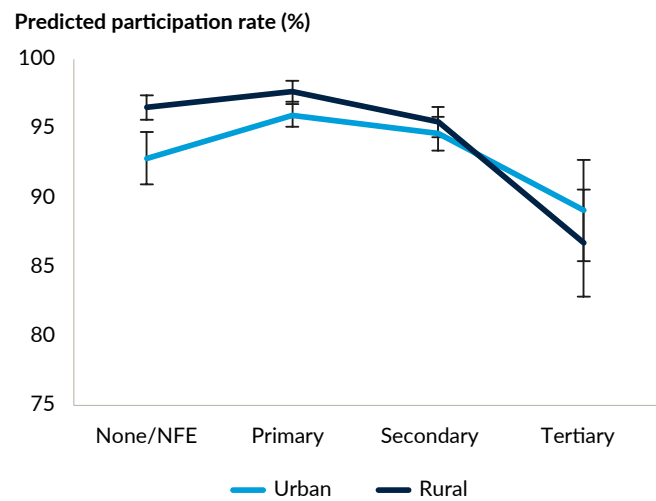
Note: The predicted participation rate is the average predicted probability of participation (95 percent confidence interval). For each observation, the predicted probability of participation is computed by setting the age group to a specific value, leaving all the other variables unchanged (using specification 3 in tables B.3a and B.3b). In a second step, the predicted probabilities are averaged. For example, it is expected that 37.8 percent of men participate in the labor market if they are ages 15–19 and have otherwise the same distribution of characteristics observed in the data.

b. By location and education (males and females, ages 25–54)

Females



Males



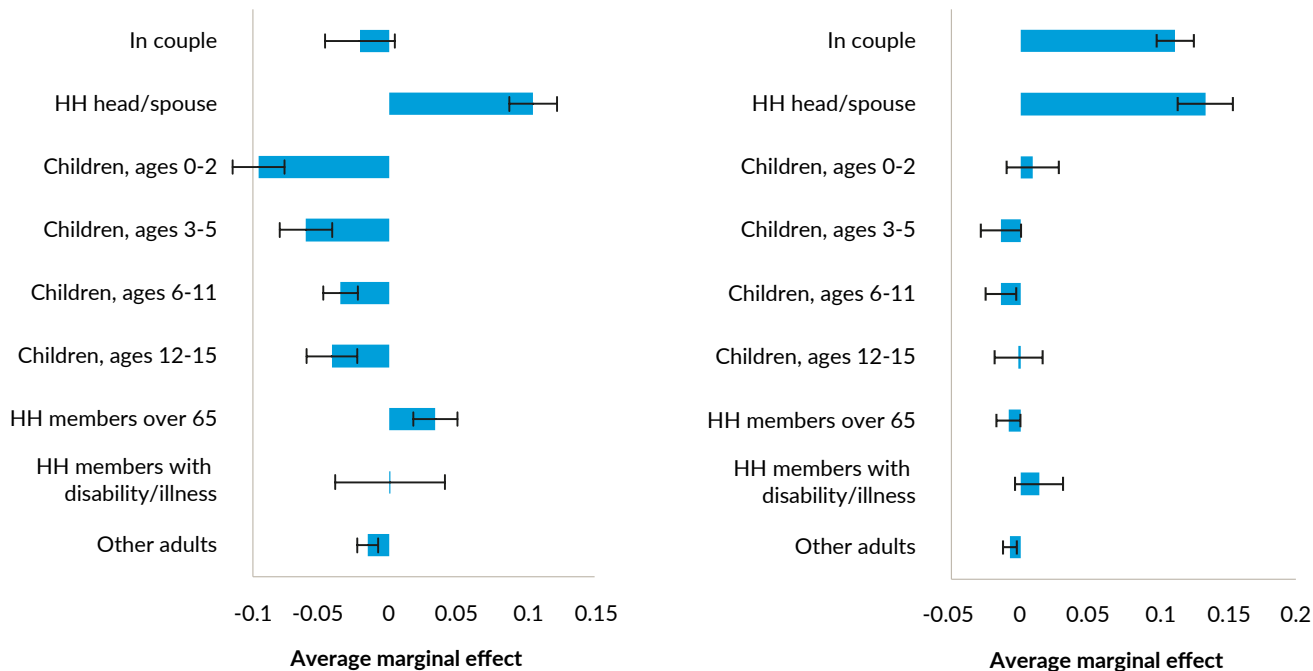
Source: Bhutan Labor Force Survey, 2022.

Note: The predicted participation rate is the average predicted probability of participation (95 percent confidence interval). For each observation, the predicted probability of participation is computed by setting the location and education level to a specific value, leaving all other variables unchanged (using specification 4 in tables B.3a and B.3b). In a second step, these predicted probabilities are averaged. For example, it is expected that 42 percent of women participate in the labor market if they are uneducated, live in an urban area, and have otherwise the same distribution of characteristics observed in the data (versus 69 percent for otherwise similar uneducated rural women). NFE = nonformal education.

Figure B.11. Average marginal effect of household demographics on labor force participation rate, by gender, holding other individual and local characteristics constant, 2022

a. Females

b. Males



Source: Bhutan Labor Force Survey, 2022.

Note: The average marginal effect of each variable is also reported in tables B.3a and B.3b, column 3. Because the dependent variable is a dummy variable, the model is estimated with a logistic specification, and the marginal effect of a variable x is not constant with the level of x . Therefore, the marginal effect of each variable is calculated for each observation in the sample using the coefficients from the logit model underlying tables B.3a and B.3b and the data. The average of these marginal effects is then calculated, giving the average marginal effect (95 percent confidence interval). For example, on average, all else being equal, a man who is a member of a couple is 11.2 percentage points more likely than a single man to participate in the labor market. HH = household.

Figure B.12. Average marginal effect of local norms on labor force participation rate, by gender, 2022

a. Females

b. Males

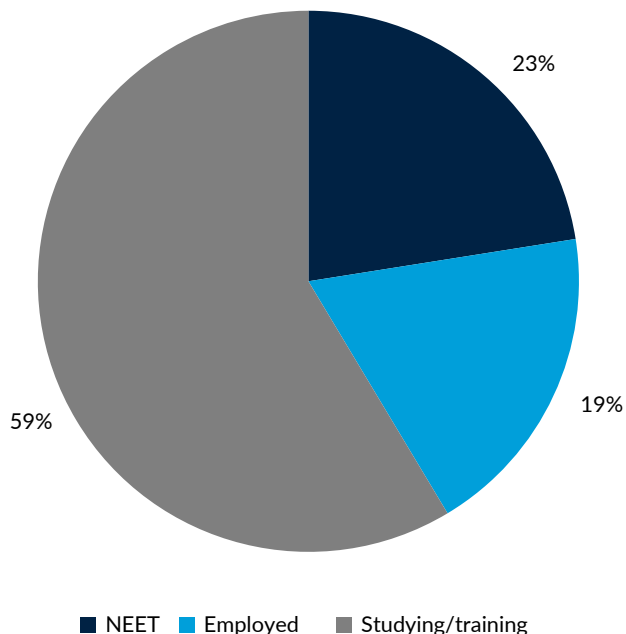


Source: Bhutan Labor Force Survey, 2022.

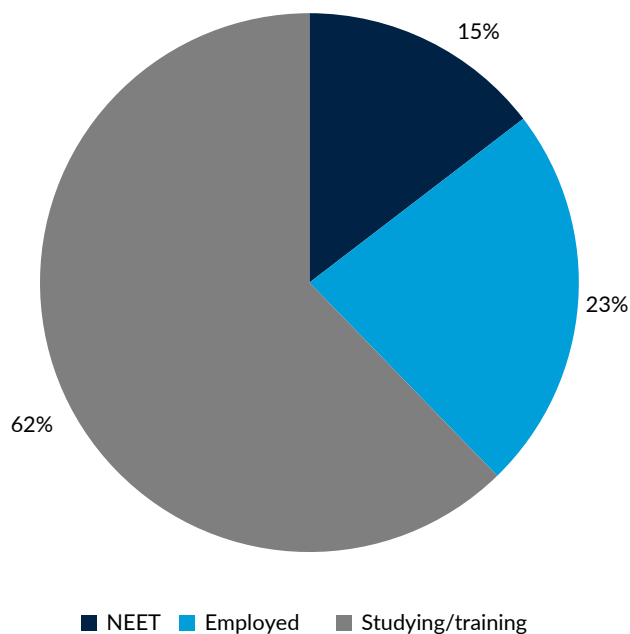
Note: The average marginal effect of each variable is also reported in tables B.3a and B.3b, column 3. Because the dependent variable is a dummy variable, the model is estimated with a logistic specification, and the marginal effect of a variable x is not constant with the level of x . Therefore, the marginal effect of each variable is calculated for each observation in the sample, using the coefficients from the logit model underlying tables B.3a and B.3b and the data. The average of these marginal effects is then calculated, giving the average marginal effect (95 percent confidence interval). HH = household.

Figure B.13. Rates of individuals not in education, employment, or training (NEET), by gender, age, and location, 2022

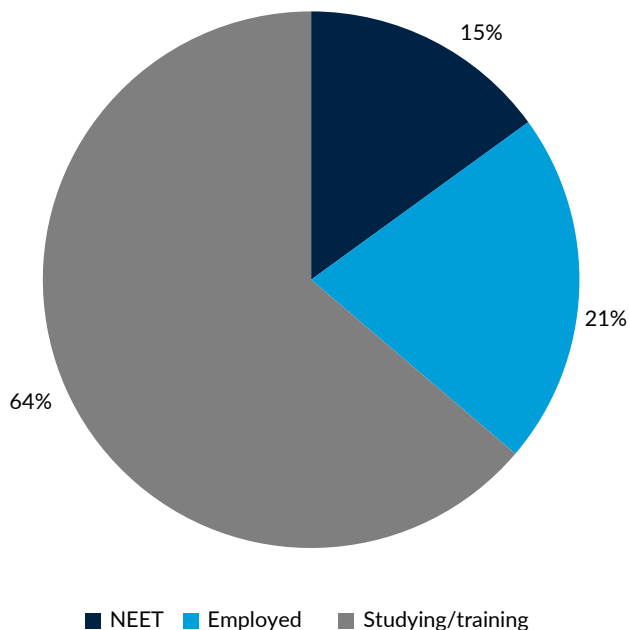
a. NEET rates, females, ages 15–24



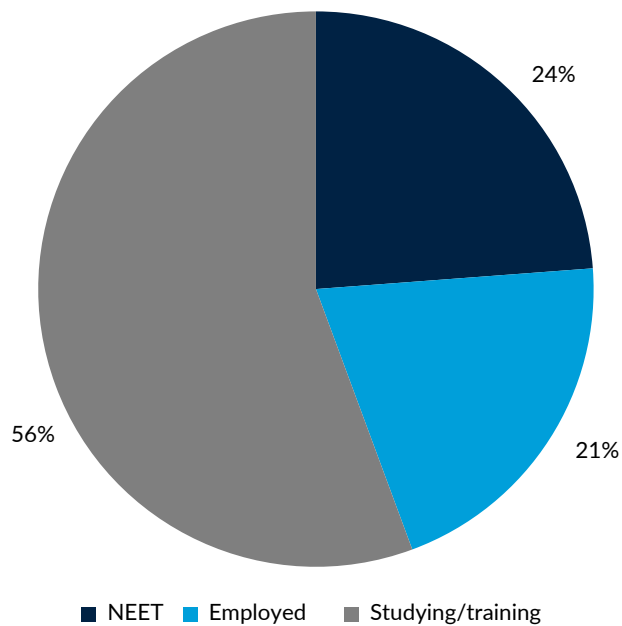
b. NEET rates, males, ages 15–24



c. NEET rates, female and male rural youth, ages 15–24



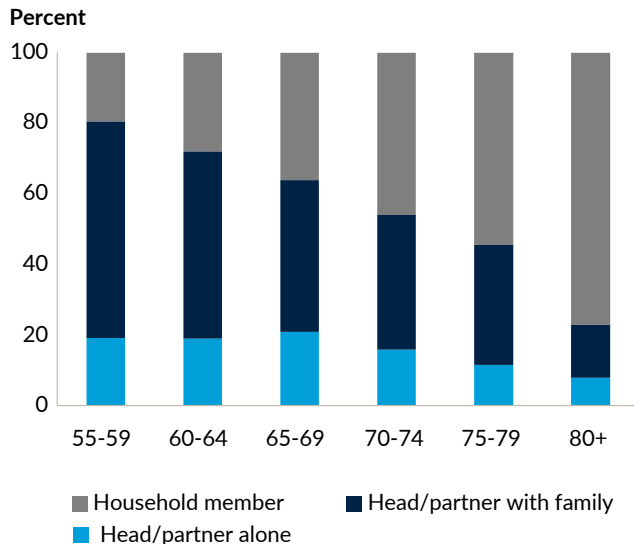
d. NEET rates, female and male urban youth, ages 15–24



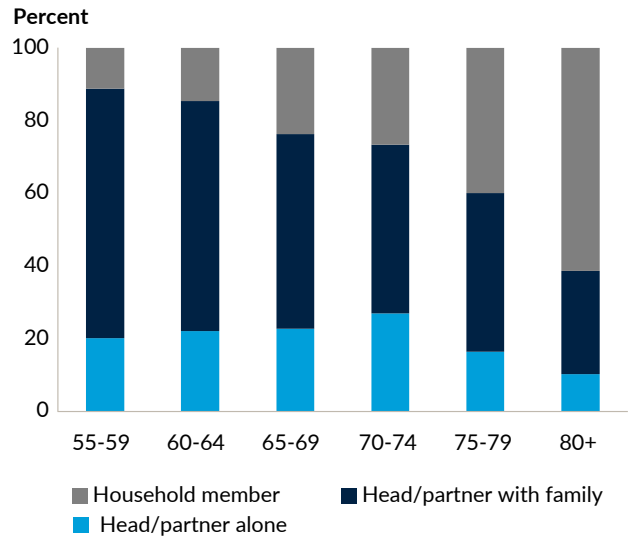
Source: Bhutan Labor Force Survey, 2022.

Figure B.14. Status of elderly in the household, by gender, 2022

a. Females

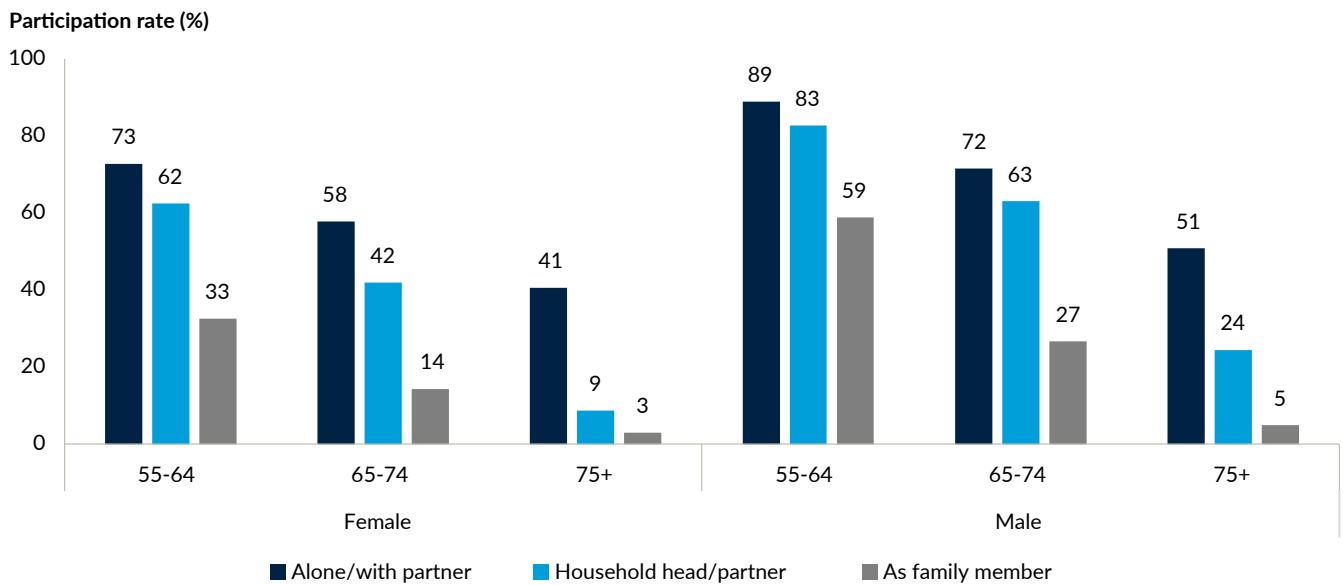


b. Males



Source: Bhutan Labor Force Survey, 2022.

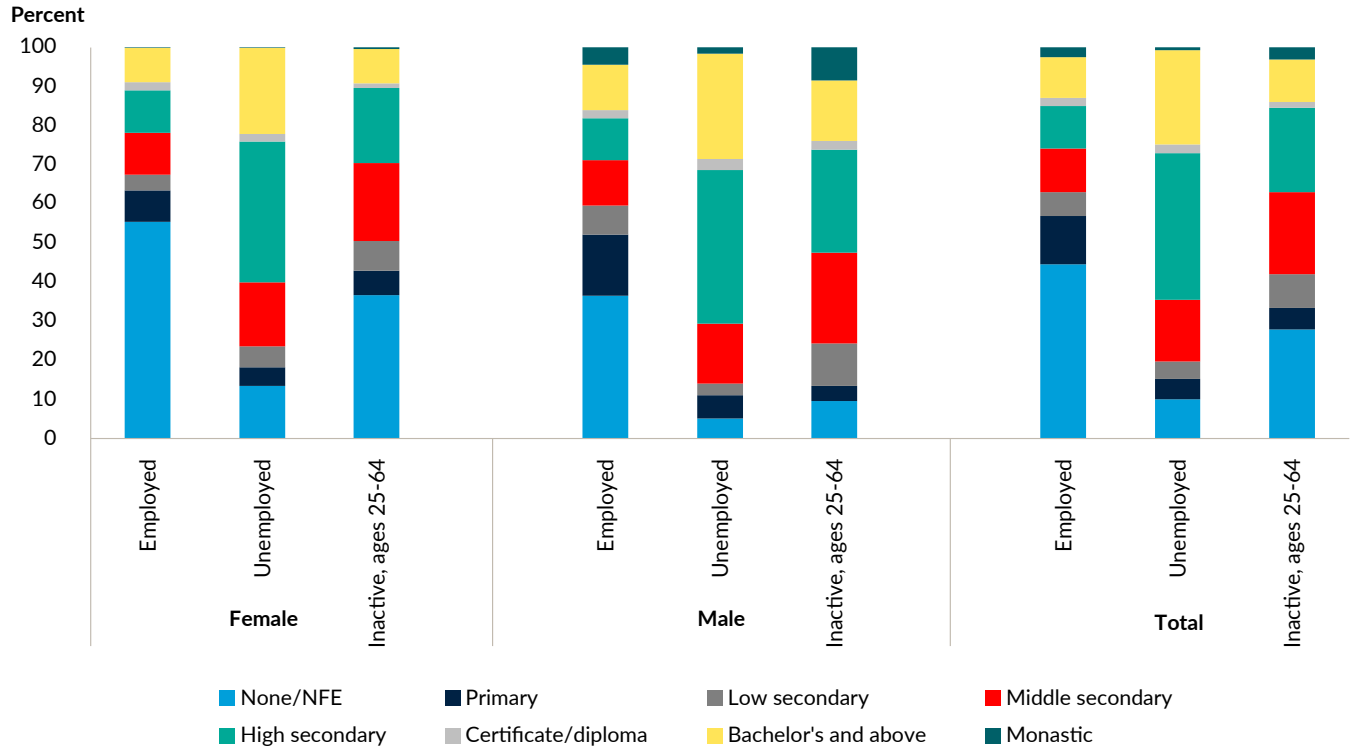
Figure B.15. Labor force participation rate of the elderly, according to status in the household, by gender and age, 2022



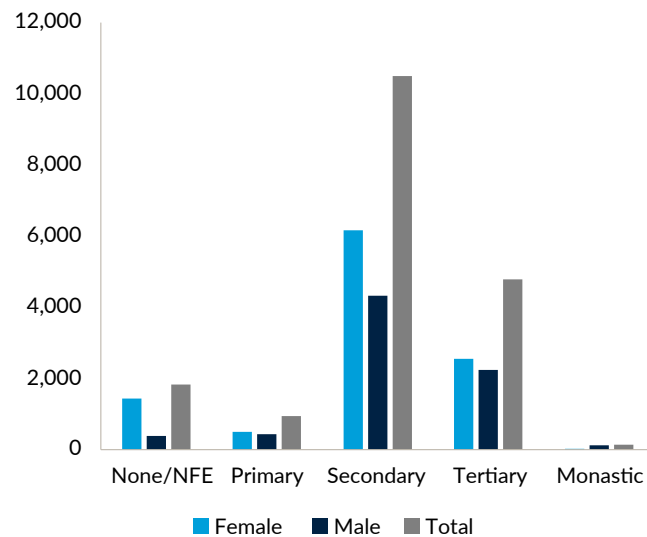
Source: Bhutan Labor Force Survey, 2022.

Figure B.16. Distribution of education levels, by current status in labor market, number of job-seekers, number of inactive, and gender, 2022

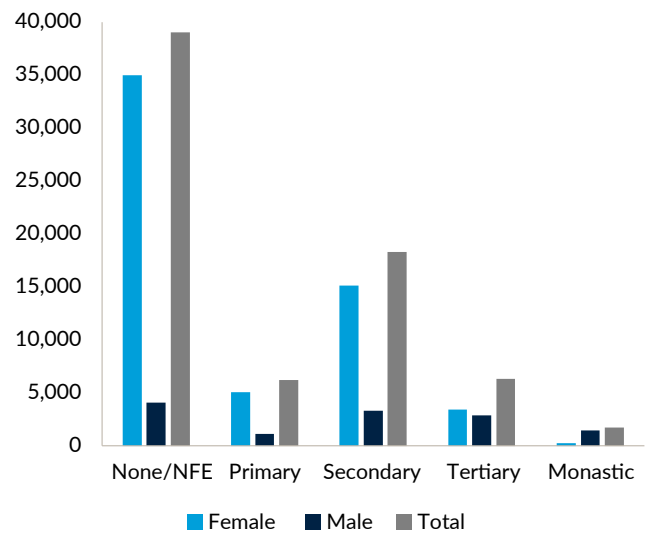
a. Distribution of education levels



b. Number of job-seekers, by education



c. Number of inactive (ages 25–64), by education

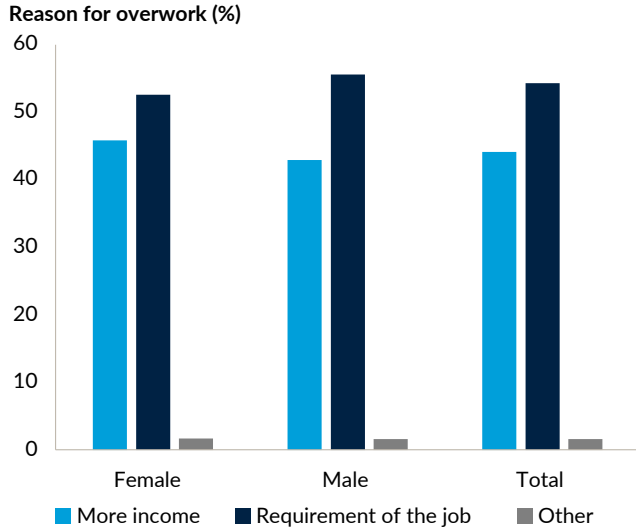


Source: Bhutan Labor Force Survey, 2022.

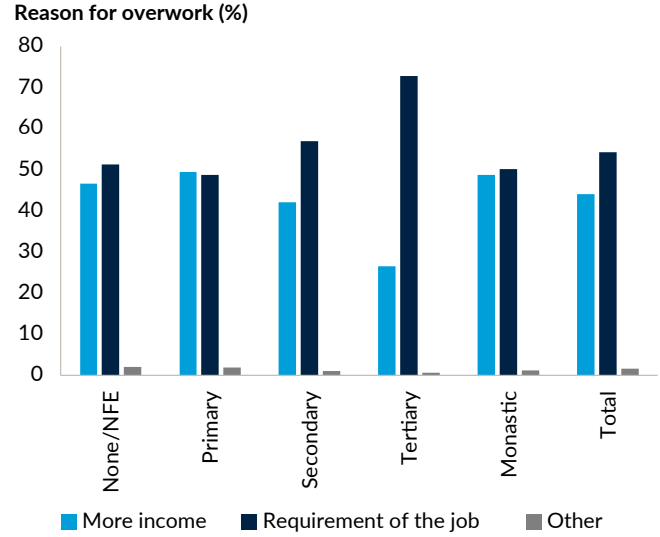
Note: NFE = nonformal education.

Figure B.17. Main reason for working more than 48 hours per week, overall and by gender, education, location, and age, 2022

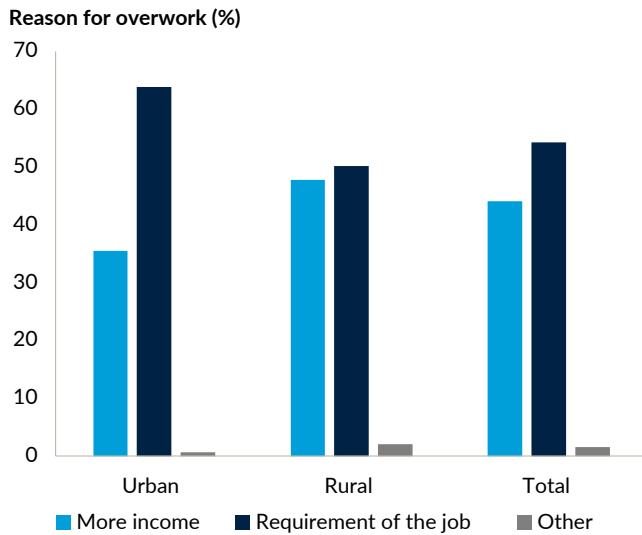
a. By gender



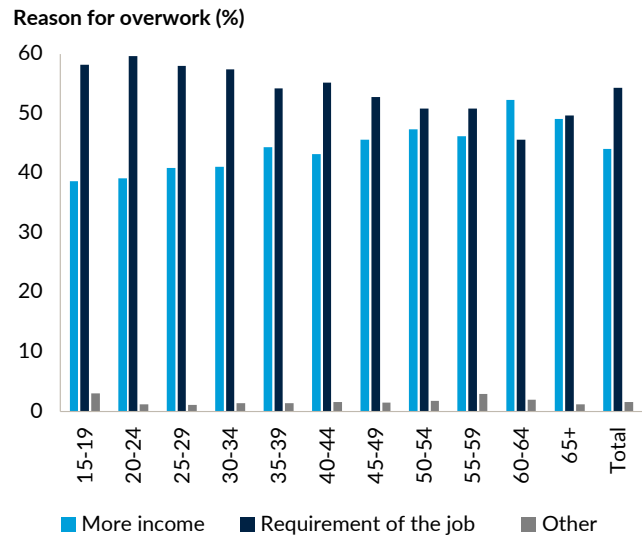
b. By education



c. By location



d. By age

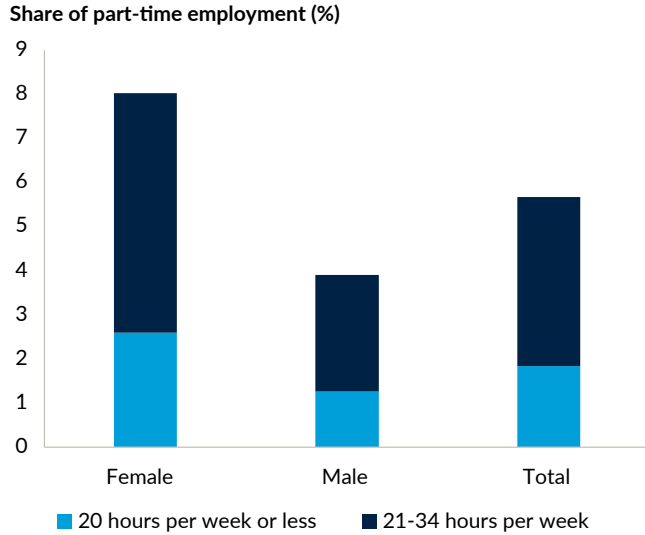


Source: Bhutan Labor Force Survey, 2022.

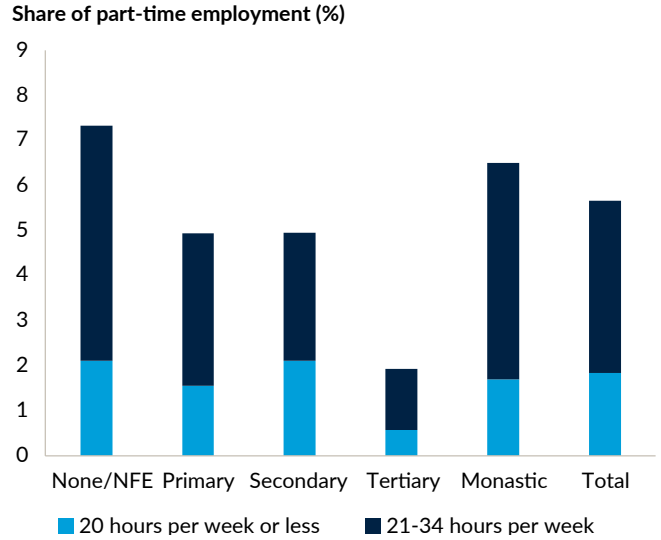
Note: NFE = nonformal education.

Figure B.18. Prevalence of underemployment, overall and by gender, education, location, and age, 2022

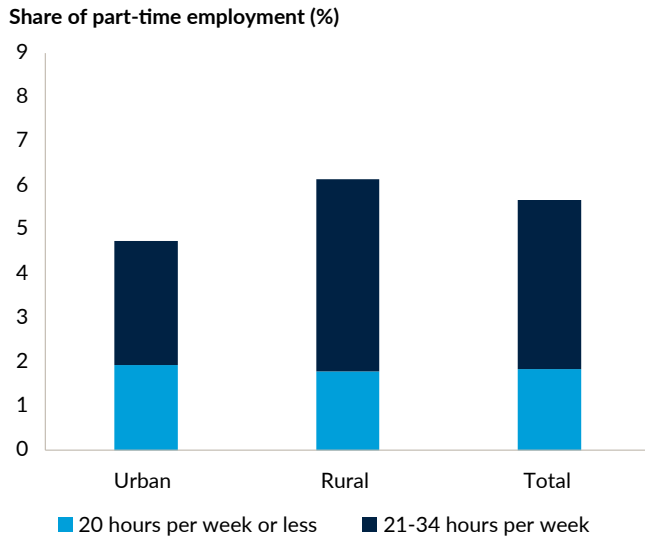
a. By gender



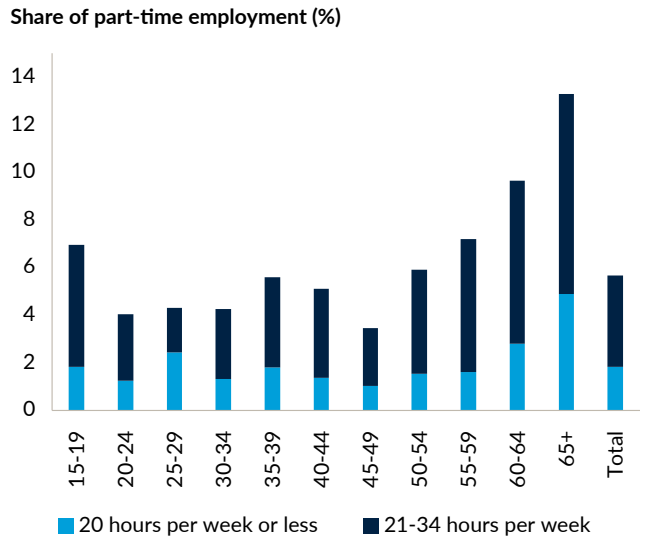
b. By education



c. By location



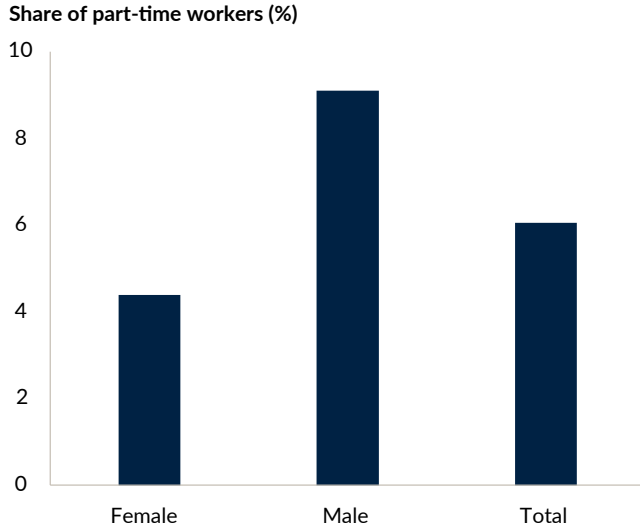
d. By age



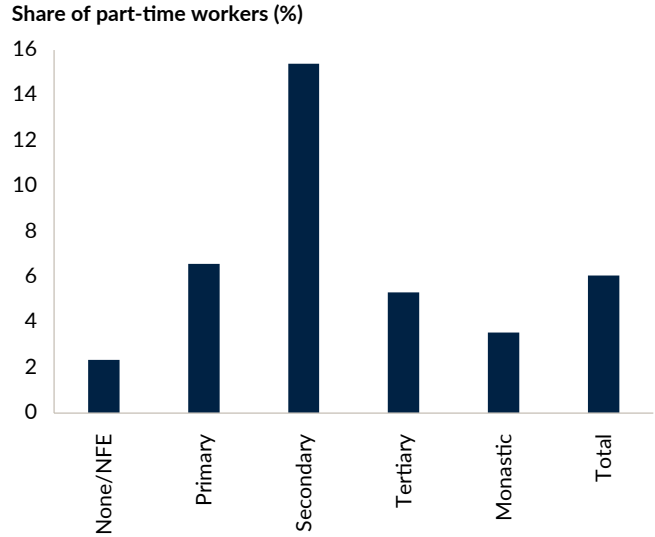
Source: Bhutan Labor Force Survey, 2022.

Figure B.19. Share of workers in part-time employment wishing to work more hours, overall and by gender, education, age, and location, 2022

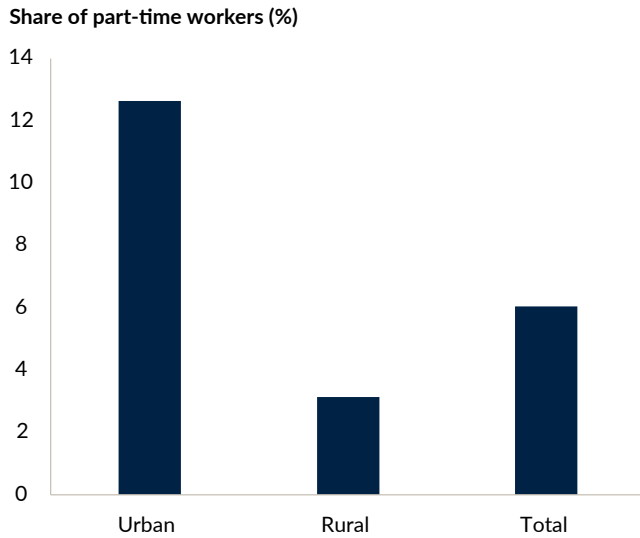
a. By gender



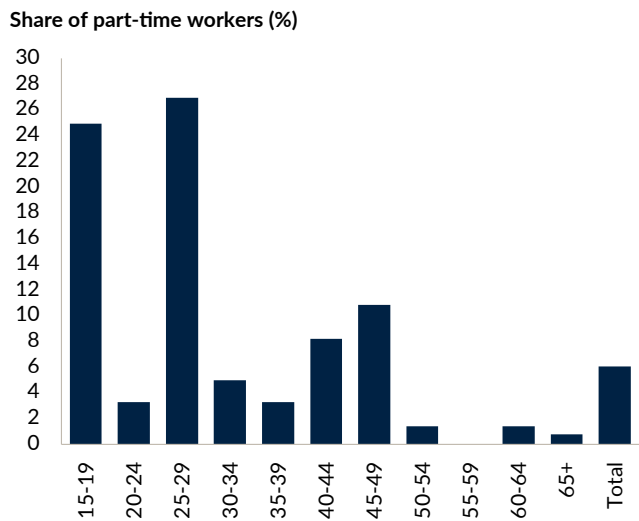
b. By education



c. By location



d. By age

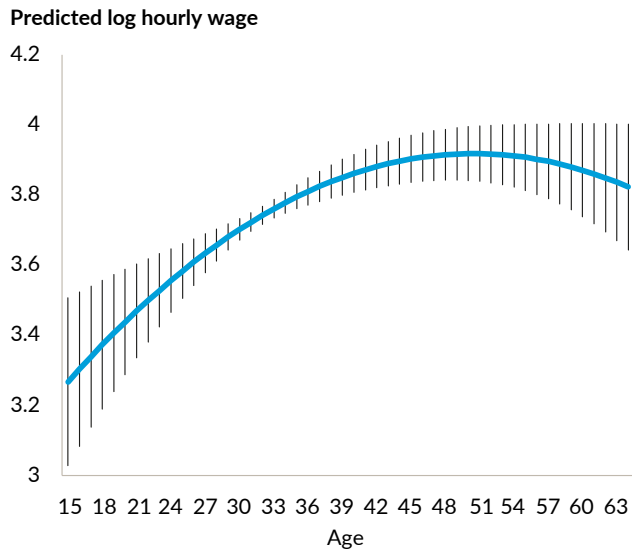


Source: Bhutan Labor Force Survey, 2022.

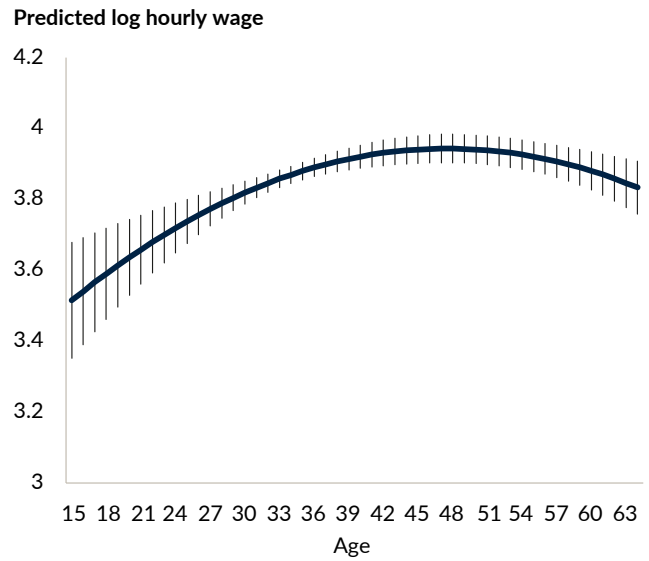
Note: NFE = nonformal education.

Figure B.20. Predicted log hourly wage, by gender and age, 2022

a. Female



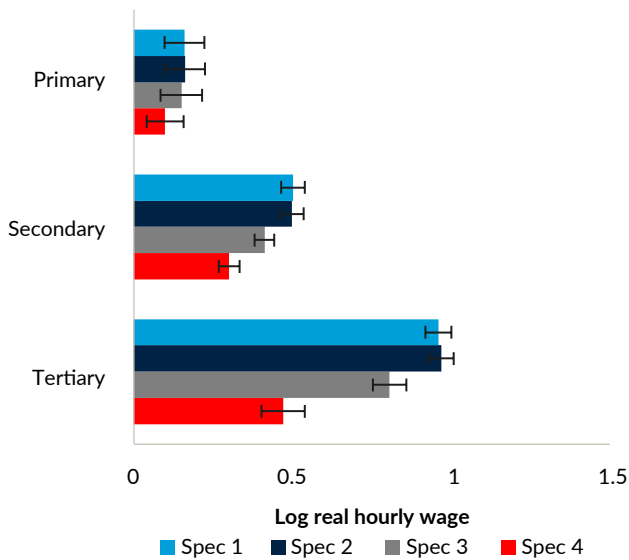
b. Male



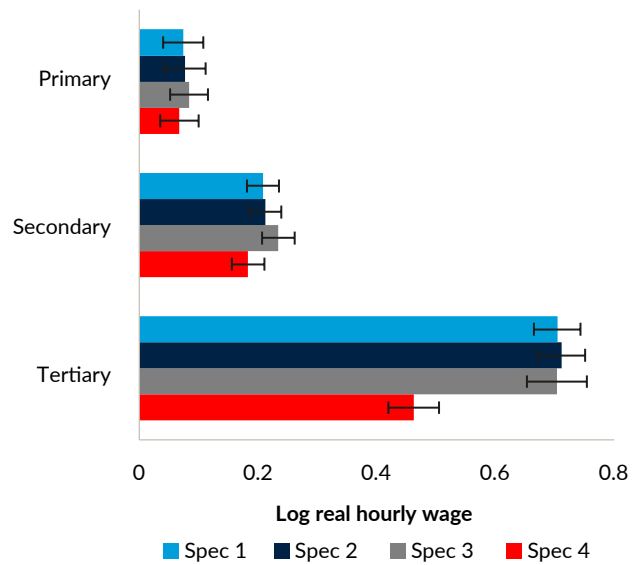
Source: Bhutan Labor Force Survey, 2022.

Figure B.21. Returns to education, by gender, 2022

a. Female



b. Male

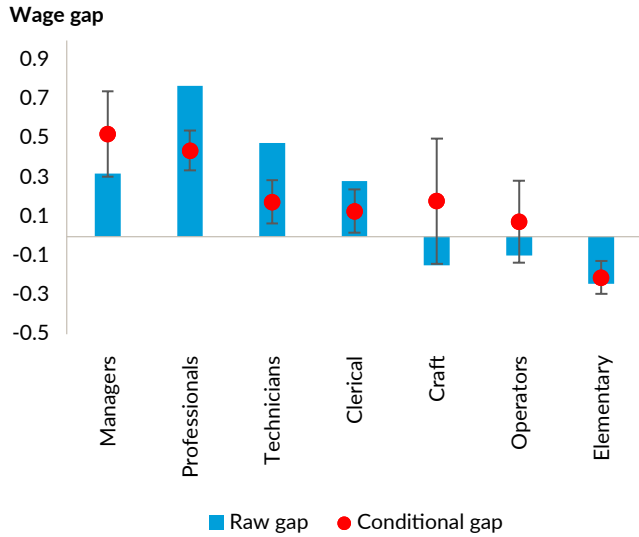


Source: Bhutan Labor Force Survey, 2022.

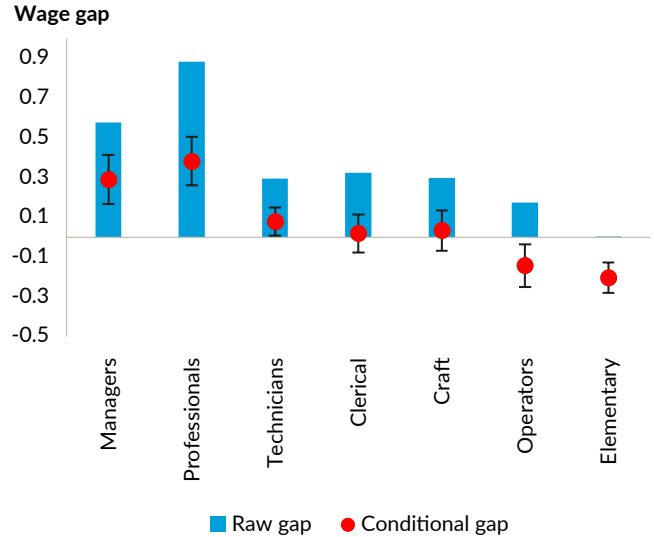
Note: The specifications in these figures are from Table B.4. The dependent variable in the specifications is log real hourly wage (base 2010).

Figure B.22. Raw and conditional log real hourly wage gap, by gender and occupation, 2022

a. Female



b. Male

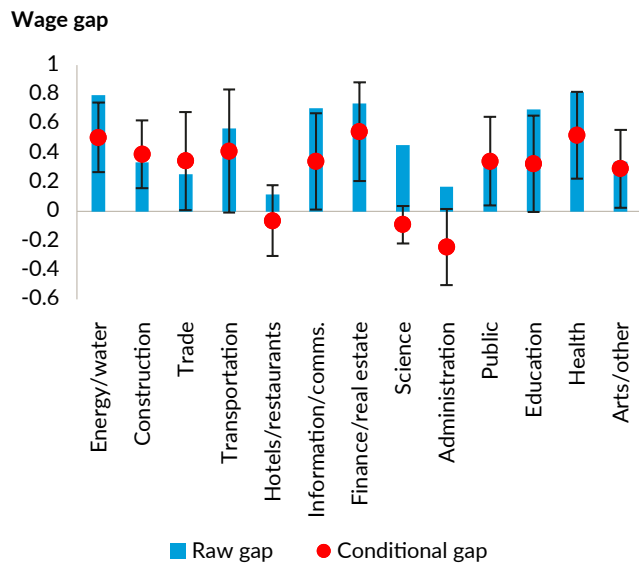


Source: Bhutan Labor Force Survey, 2022.

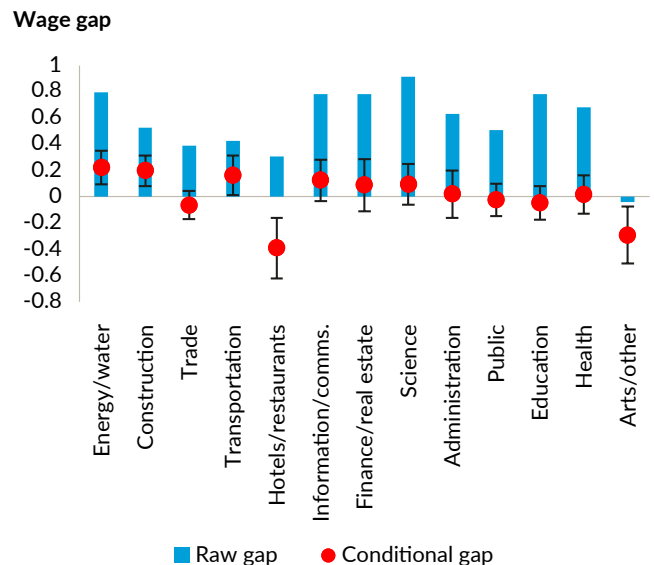
Note: The raw log hourly wage gaps are plotted in blue, the conditional gaps from specification 4 of tables B.4a and B.4b are plotted in orange, together with their 95 percent confidence interval. Reference is Services and Sales workers.

Figure B.23. Raw and conditional log real hourly wage gap, by gender and industry, 2022

a. Female



b. Male

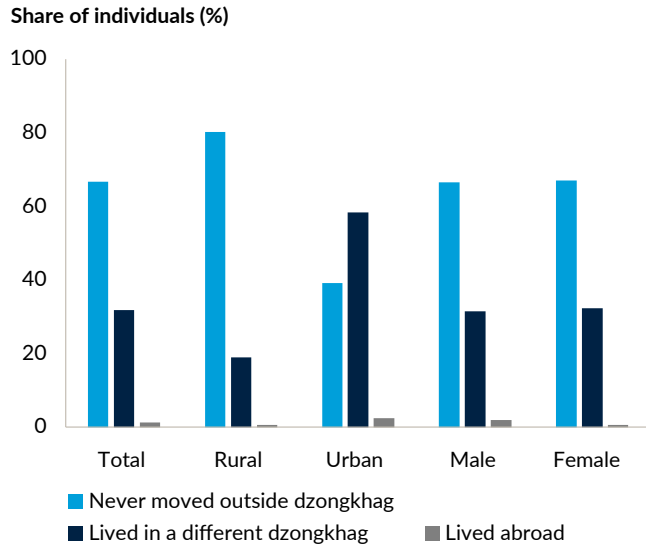


Source: Bhutan Labor Force Survey, 2022.

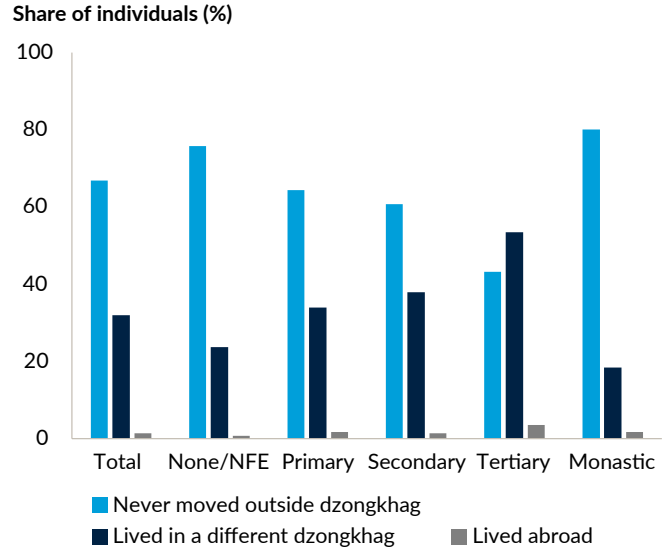
Note: The raw log hourly wage gaps are plotted in grey, the conditional gaps from specification 4 of tables B.4a and B.4b are plotted as red diamonds, together with their 95% confidence interval. Reference is Manufacturing.

Figure B.24. Share of Bhutan-born working-age individuals, by current location, gender, education, and migration status, 2022

a. By current location and gender



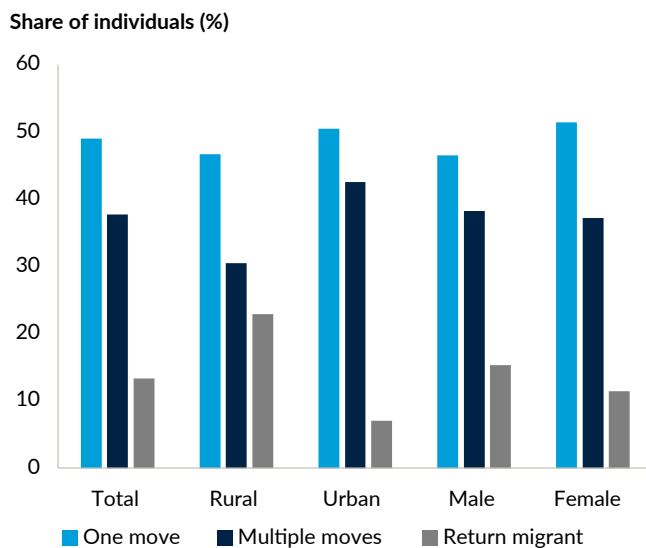
b. By education



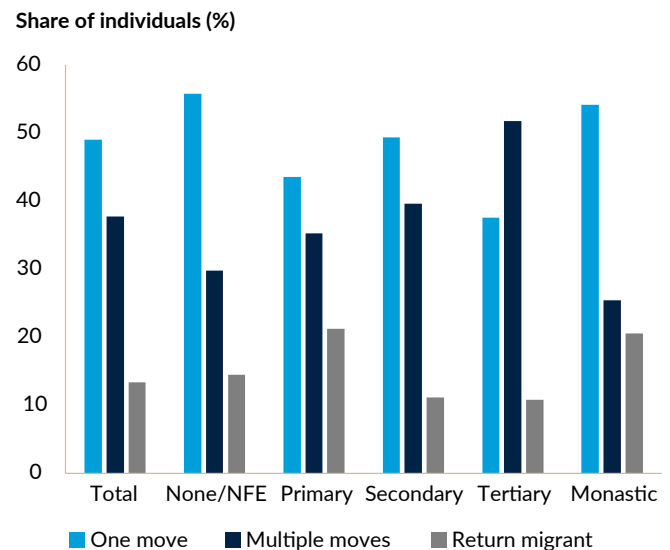
Source: Bhutan Labor Force Survey, 2022.

Figure B.25. Share of Bhutan-born working-age individuals by current location, gender, and migration profile, 2022

a. By current location and gender

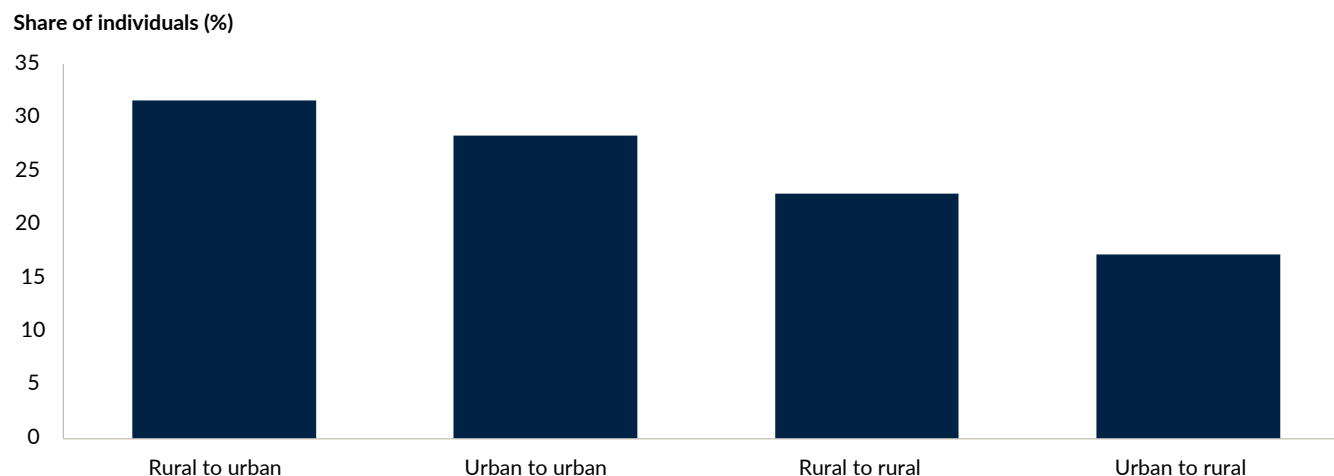


b. By education



Source: Bhutan Labor Force Survey, 2022.

Figure B.26. Distribution of Bhutan-born working-age migrants, by location of origin and destination, 2022



Source: Bhutan Labor Force Survey, 2022.

Table B.1. Change in female entrants in labor force, 2018–20

	Mean for new female entrants in 2018 and 2019	Difference for new female entrants in 2020 with respect to new entrants in 2018–19
Age	27.75 (0.631)	-3.210*** (0.743)
Education		
Uneducated	0.201 (0.0303)	-0.114*** (0.0347)
Primary	0.0703 (0.0129)	-0.0497** (0.0164)
Secondary	0.407 (0.0297)	0.0988* (0.0446)
Tertiary	0.314 (0.0362)	0.0717 (0.0486)
Monastic	0.00716 (0.00425)	-0.00641 (0.00432)
Urban area	0.606 (0.0917)	-0.0186 (0.103)
Household head/spouse of the household head	0.411 (0.0369)	-0.128** (0.0461)
Married	0.474 (0.0332)	-0.161*** (0.0436)

*p < .05, **p < .01, ***p < .001

Table B.2. Characteristics of the unemployed in 2019 and their evolution, 2020–21

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Demographic profile of unemployed		
Average age	0.664 (0.626)	27.33*** (0.544)
15–24	-0.00142 (0.0284)	0.417*** (0.0217)
25–54	-0.00578 (0.0288)	0.579*** (0.0220)
55–64	0.00721 (0.00451)	0.00368 (0.00261)
65+	0 ()	0 ()
Gender (1=male)	-0.0146 (0.0268)	0.435*** (0.0197)
Uneducated	0.00830 (0.0289)	0.113*** (0.0257)
Primary education	0.0176 (0.0288)	0.0910*** (0.0261)
Secondary education	0.0430 (0.0281)	0.412*** (0.0203)
Tertiary education	-0.0688 (0.0530)	0.384*** (0.0500)
Location (1=rural)	-0.0403 (0.126)	0.405*** (0.121)
Proportion of household head/partner	0.0613 (0.0356)	0.302*** (0.0301)
Proportion of married	0.0371 (0.0316)	0.397*** (0.0248)
Number of children, ages 02	0.0337 (0.0201)	0.108*** (0.0130)
Number of children ages 2–5	0.0392 (0.0202)	0.0871*** (0.0132)
Number of children, ages 6–12	0.0464 (0.0309)	0.200*** (0.0219)
Number of children, ages 13–15	0.0508* (0.0248)	0.131*** (0.0181)
Number of adults over 65	-0.0241 (0.0262)	0.125*** (0.0222)
Number of disabled/ill	0.0330* (0.0165)	0.0557*** (0.00947)
Number of other adults	0.0749 (0.142)	1.812*** (0.124)

Table B.2. Continued

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Region of the unemployed		
Bumthang	-0.00106 (0.00923)	0.0159* (0.00809)
Chukha	-0.0344 (0.0781)	0.133 (0.0764)
Dagana	0.00589 (0.0152)	0.0232 (0.0121)
Gasa	-0.000187 (0.00204)	0.00214 (0.00185)
Haa	-0.00391 (0.00866)	0.0154 (0.00800)
Lhuentse	-0.00287 (0.00354)	0.00548 (0.00327)
Monggar	-0.0174 (0.0197)	0.0306 (0.0189)
Paro	0.0162 (0.0510)	0.0973* (0.0469)
Pema Gatshel	-0.0258 (0.0229)	0.0475* (0.0222)
Punakha	0.0265* (0.0123)	0.0108 (0.00712)
Samdrup Jongkhar	-0.00827 (0.0239)	0.0310 (0.0232)
Samtse	-0.0184 (0.0274)	0.0529* (0.0254)
Sarpang	-0.0619 (0.0611)	0.120* (0.0598)
Thimphu	0.120 (0.199)	0.292 (0.195)
Trashigang	0.0236* (0.00959)	0.00675 (0.00516)
Trashi Yangtse	0.00480 (0.00547)	0.00592 (0.00396)
Trongsa	-0.0143 (0.0177)	0.0320 (0.0166)
Tsirang	-0.0194 (0.0145)	0.0285* (0.0141)
Wangdue Phodrang	0.0127 (0.0309)	0.0386 (0.0279)
Zhemgang	-0.00202 (0.00728)	0.0106 (0.00656)

Table B.2. Continued

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Reason for unemployment		
Skills mismatch	-0.0918* (0.0371)	0.474*** (0.0326)
Recent graduation	-0.0175 (0.0273)	0.214*** (0.0223)
Terminated	0.209*** (0.0189)	0.0487*** (0.00712)
Resigned	-0.0234 (0.0168)	0.0970*** (0.0138)
Family	0.000268 (0.0171)	0.0473** (0.0153)
Other	-0.0769** (0.0258)	0.119*** (0.0249)
Duration of unemployment		
<1 month	0.0421 (0.0294)	0.152*** (0.0231)
[1–5 months]	0.0742* (0.0356)	0.249*** (0.0303)
[6–11 months]	0.0679** (0.0232)	0.160*** (0.0170)
[12–23 months]	-0.101*** (0.0209)	0.214*** (0.0173)
2 years +	-0.0832** (0.0311)	0.224*** (0.0272)
Characteristics of the desired future job		
Public service	-0.0788** (0.0291)	0.527*** (0.0212)
Private business/company	0.0657* (0.0310)	0.359*** (0.0222)
Public company	-0.000705 (0.0177)	0.110*** (0.0131)
Agriculture	0.0138** (0.00523)	0.00313 (0.00238)

Table B.2. Continued

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Main reason for this choice		
Salary	0.0718** (0.0275)	0.143*** (0.0213)
Working conditions	-0.0287 (0.0230)	0.195*** (0.0181)
Reputation	0.0118 (0.0103)	0.0330*** (0.00695)
Personal interests	-0.0334 (0.0465)	0.426*** (0.0413)
Job security	-0.0216 (0.0251)	0.203*** (0.0195)
Reasons cited for this choice		
Concerned with salary	0.0950** (0.0306)	0.202*** (0.0235)
Concerned with working conditions	0.0174 (0.0350)	0.359*** (0.0273)
Concerned with reputation	0.0501* (0.0220)	0.130*** (0.0158)
Concerned with personal interest	0.0426 (0.0417)	0.588*** (0.0359)
Concerned with job security	0.0419 (0.0299)	0.315*** (0.0226)
Reservation wage	-0.506 (417.4)	9948.6*** (353.3)
Have worked before	0.165*** (0.0408)	0.349*** (0.0359)
Employment history		
Former sector: Public	-0.0531 (0.0364)	0.245*** (0.0297)
Former sector: Private	0.118** (0.0369)	0.666*** (0.0296)
Former sector: Agriculture	-0.0653* (0.0256)	0.0896*** (0.0243)
Former industry: Agriculture/Mining	-0.0849** (0.0258)	0.124*** (0.0237)
Former industry: Manufacturing	-0.0574 (0.0300)	0.127*** (0.0269)

Table B.2. Continued

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Former industry: Energy/Water	-0.0327	0.0608***
	(0.0188)	(0.0170)
Former industry: Construction	-0.0129	0.0993***
	(0.0254)	(0.0199)
Former industry: Trade	-0.0293	0.137***
	(0.0334)	(0.0295)
Former industry: Transportation	-0.0270	0.0646***
	(0.0218)	(0.0176)
Former industry: Hotels/Restaurants	0.120***	0.113***
	(0.0298)	(0.0198)
Former industry: Information/Communication	-0.0447	0.0613**
	(0.0240)	(0.0231)
Former industry: Finance/Real Estate	-0.00144	0.0125
	(0.0144)	(0.0129)
Former industry: Science	-0.00159	0.0119
	(0.00890)	(0.00728)
Former industry: Administration	0.156***	0.0196*
	(0.0227)	(0.00783)
Former industry: Public	-0.0271	0.0619**
	(0.0217)	(0.0192)
Former industry: Education	-0.00738	0.0684**
	(0.0265)	(0.0233)
Former industry: Health	-0.00641	0.0137
	(0.0103)	(0.00934)
Former industry: Arts/Other services	0.0561**	0.0252*
	(0.0193)	(0.0124)
Former occupation: Managers	0.0142	0.0575***
	(0.0218)	(0.0170)
Former occupation: Professionals	-0.00357	0.146**
	(0.0576)	(0.0548)
Former occupation: Technicians	0.0220	0.0941**
	(0.0346)	(0.0301)
Former occupation: Clerical	-0.0315	0.131***
	(0.0290)	(0.0242)
Former occupation: Services/Sales	0.117*	0.179***
	(0.0471)	(0.0401)
Former occupation: Agriculture	-0.0637*	0.0977***
	(0.0283)	(0.0268)

Table B.2. Continued

	(1) Effect of the pandemic	(2) Pre-pandemic means and proportions
Former occupation: Craft	-0.0429	0.101***
	(0.0305)	(0.0281)
Former occupation: Operators	0.0154	0.0737*
	(0.0325)	(0.0293)
Former occupation: Elementary	-0.0271	0.120**
	(0.0404)	(0.0371)

*p < .05, **p < .01, ***p < .001

Table B.3a. Determinants of female labor force participation

	(1) = 1 if participating	(2)	(3)
Own characteristics:			
20–24	0.414***	0.430***	0.431***
	(0.0153)	(0.0173)	(0.0184)
25–29	0.571***	0.573***	0.570***
	(0.0160)	(0.0150)	(0.0154)
30–34	0.577***	0.576***	0.573***
	(0.0134)	(0.0143)	(0.0151)
35–39	0.603***	0.579***	0.576***
	(0.0153)	(0.0154)	(0.0160)
40–44	0.619***	0.565***	0.560***
	(0.0204)	(0.0216)	(0.0218)
45–49	0.591***	0.513***	0.512***
	(0.0214)	(0.0238)	(0.0249)
50–54	0.563***	0.483***	0.480***
	(0.0257)	(0.0271)	(0.0284)
55–59	0.499***	0.409***	0.407***
	(0.0276)	(0.0300)	(0.0307)
60–64	0.444***	0.355***	0.348***
	(0.0316)	(0.0336)	(0.0334)
65+	0.127***	0.0680**	0.0605**
	(0.0205)	(0.0207)	(0.0212)
Primary	0.0475**	0.0407**	0.0686***
	(0.0148)	(0.0145)	(0.0157)

Table B.3a. Continued

	(1) = 1 if participating	(2)	(3)
Secondary	0.0496*** (0.0147)	0.0419** (0.0140)	0.109*** (0.0227)
Tertiary	0.0754*** (0.0209)	0.0492* (0.0208)	0.159*** (0.0374)
Monastic	-0.273*** (0.0616)	-0.264*** (0.0696)	-0.251*** (0.0602)
Rural	0.132*** (0.0205)	0.128*** (0.0211)	0.115*** (0.0191)
Household characteristics:			
= 1 if in couple		-0.0275* (0.0127)	-0.0216 (0.0130)
= 1 if household head or spouse		0.113*** (0.00919)	0.105*** (0.00885)
# of children 0–2		-0.0986*** (0.00982)	-0.0958*** (0.00961)
# of children 3–5		-0.0585*** (0.00940)	-0.0611*** (0.00975)
# of children 6–11		-0.0343*** (0.00671)	-0.0357*** (0.00652)
# of children 12–15		-0.0395*** (0.00957)	-0.0421*** (0.00933)
# of household members over 65		0.0367*** (0.00875)	0.0337*** (0.00823)
# of household members with disability/illness		0.00238 (0.0207)	0.000652 (0.0204)
# of other adults		-0.0144*** (0.00396)	-0.0158*** (0.00394)
Share working		-0.0570*** (0.0153)	-0.0751*** (0.0133)
Share working women		0.0752*** (0.0164)	0.0634*** (0.0149)
Local labor market characteristics:			
Local inactivity rate			-1.194*** (0.169)
Local unemployment rate			0.191 (0.303)
Local share in agriculture			-0.0853 (0.115)

Table B.3a. Continued

	(1) = 1 if participating	(2)	(3)
Local share in public sector			0.107 (0.194)
Local log hourly wage			-0.138*** (0.0397)
Region fixed effect	Yes	Yes	Yes
No. of observations	15,822	15,822	15,822

Note: Reference category is Ages 15–19, Urban, Not educated, Household member, Single. Local labor market indicators for men and women are computed at the *dzongkhag* level. In addition, the local hourly wage is calculated on the basis of prime-age men or women with the same level of education as the individual.

*p < .05, **p < .01, ***p < .001

Table B.3b. Determinants of male labor force participation

	(1) = 1 if participating	(2)	(3)
Own characteristics:			
20–24	0.537*** (0.0275)	0.431*** (0.0245)	0.436*** (0.0247)
25–29	0.797*** (0.0173)	0.523*** (0.0373)	0.530*** (0.0382)
30–34	0.862*** (0.0154)	0.544*** (0.0364)	0.551*** (0.0369)
35–39	0.868*** (0.0177)	0.537*** (0.0389)	0.544*** (0.0395)
40–44	0.884*** (0.0156)	0.550*** (0.0399)	0.557*** (0.0404)
45–49	0.860*** (0.0157)	0.505*** (0.0370)	0.512*** (0.0375)
50–54	0.825*** (0.0220)	0.430*** (0.0491)	0.436*** (0.0498)
55–59	0.757*** (0.0347)	0.316*** (0.0635)	0.324*** (0.0646)

Table B.3b. Continued

	(1) = 1 if participating	(2)	(3)
60–64	0.618*** (0.0478)	0.177** (0.0656)	0.187** (0.0670)
65+	0.292*** (0.0378)	-0.0429 (0.0520)	-0.0370 (0.0529)
Primary	0.0721*** (0.0109)	0.0418*** (0.0108)	0.0440*** (0.0110)
Secondary	0.00534 (0.0155)	-0.0101 (0.0135)	-0.00590 (0.0134)
Tertiary	-0.118*** (0.0121)	-0.127*** (0.0113)	-0.124*** (0.0230)
Monastic	-0.0945*** (0.0167)	-0.0853*** (0.0135)	-0.0891*** (0.0138)
Rural	0.0242* (0.0112)	0.0386*** (0.0107)	0.0334*** (0.00992)
Household characteristics:			
= 1 if in couple		0.110*** (0.00675)	0.112*** (0.00686)
= 1 if household head or spouse		0.137*** (0.00976)	0.134*** (0.0101)
# of children 0–2		0.00825 (0.00986)	0.00882 (0.00966)
# of children 3–5		-0.0131 (0.00740)	-0.0140 (0.00739)
# of children 6–11		-0.0136* (0.00564)	-0.0142* (0.00562)
# of children 12–15		-0.000453 (0.00889)	-0.00143 (0.00883)
# of household members over 65		-0.00766 (0.00453)	-0.00864 (0.00444)
# of household members with disability/illness		0.0152 (0.00894)	0.0136 (0.00887)
# Other adults		-0.00816** (0.00257)	-0.00776** (0.00257)
Share working		0.0352** (0.0119)	0.0294* (0.0123)
Share working women		-0.00478 (0.0139)	-0.00912 (0.0131)

Table B.3b. Continued

	(1) = 1 if participating	(2)	(3)
Local labor market characteristics:			
Local inactivity rate			-0.260 (0.148)
Local unemployment rate			-1.356** (0.409)
Local share in agriculture			0.0778 (0.0629)
Local share in public sector			0.167 (0.0985)
Local log hourly wage			0.000120 (0.0269)
Region fixed effect	Yes	Yes	Yes
No. of observations	14,535	14,535	14,535

Note: Reference category is Ages 15–19, Urban, Not educated, Household member, Single. Local labor market indicators for men and women are computed at the *dzongkhag* level. In addition, the local hourly wage is calculated on prime-age men or women with the same level of education as the individual.

*p < .05, **p < .01, ***p < .001

Table B.4a. Real log hourly wage of women

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Own characteristics:				
Age	0.0817*** (0.0168)	0.0659*** (0.0176)	0.0624*** (0.0181)	0.0523*** (0.0155)
Age # age	-0.000798*** (0.000183)	-0.000634** (0.000197)	-0.000599** (0.000206)	-0.000518** (0.000181)
Primary	0.160* (0.0630)	0.161* (0.0629)	0.150* (0.0650)	0.0987 (0.0577)
Secondary	0.501*** (0.0376)	0.498*** (0.0364)	0.412*** (0.0308)	0.300*** (0.0325)
Tertiary	0.959*** (0.0413)	0.968*** (0.0395)	0.805*** (0.0528)	0.471*** (0.0680)
Monastic	0.136 (0.379)	0.133 (0.375)	0.122 (0.374)	0.0535 (0.387)

Table B.4a. Continued

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Rural	-0.0236 (0.0299)	-0.0142 (0.0296)	-0.0198 (0.0315)	-0.00687 (0.0308)
Household characteristics:				
= 1 if in couple		0.0433 (0.0294)	0.0393 (0.0344)	0.0348 (0.0320)
= 1 if household head or spouse		0.158*** (0.0365)	0.133*** (0.0343)	0.0974** (0.0313)
# of children 0–2		-0.000184 (0.0323)	0.00165 (0.0297)	-0.000811 (0.0362)
# of children 3–5		0.0424 (0.0261)	0.0369 (0.0276)	0.0358 (0.0268)
# of children 6–11		-0.0210 (0.0223)	-0.00822 (0.0249)	-0.0121 (0.0213)
# of children 12–15		0.0319 (0.0307)	0.0386 (0.0300)	0.0407 (0.0280)
# of household members over 65		0.00986 (0.0260)	0.00677 (0.0289)	0.00950 (0.0289)
# of household members with disability/illness		0.0197 (0.0573)	0.00467 (0.0577)	0.0259 (0.0599)
# Other adults		0.0121 (0.00907)	0.0138 (0.00926)	0.0107 (0.00941)
Industry (ref. Manufacturing):				
Energy/Water			0.436*** (0.0489)	0.506*** (0.121)
Construction			0.268*** (0.0627)	0.391** (0.119)
Trade			0.196*** (0.0463)	0.344* (0.171)
Transportation			0.310** (0.103)	0.412 (0.215)
Hotels/Restaurants			0.101 (0.0543)	-0.0615 (0.123)
Information/Communication			0.308** (0.105)	0.342* (0.167)
Finance/Real Estate			0.505*** (0.0692)	0.545** (0.171)

Table B.4a. Continued

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Science			-0.0412 (0.0723)	-0.0884 (0.0652)
Administration			-0.236 (0.202)	-0.242 (0.132)
Public			0.188*** (0.0454)	0.343* (0.154)
Education			0.340*** (0.0470)	0.325 (0.167)
Health			0.433*** (0.0474)	0.520*** (0.150)
Arts/Other services			0.242***	0.292*
Occupation (ref. Services/Sales):				
Managers				0.523*** (0.111)
Professionals				0.439*** (0.0519)
Technicians				0.177** (0.0560)
Clerical				0.129* (0.0565)
Craft				0.181 (0.163)
Operators				0.0754 (0.106)
Elementary				-0.210*** (0.0429)
Constant	1.548*** (0.354)	1.706*** (0.358)	1.676*** (0.368)	1.861*** (0.414)
Region fixed effect	Yes	Yes	Yes	Yes
No. of observations	3078	3078	3078	3078

Note: Reference category is Urban, Not educated, Household member, Single, Working in Manufacturing as Services and Sales Worker.

*p < .05, **p < .01, ***p < .001

Table B.4b. Real log hourly wage of men

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Own characteristics:				
Age	0.0613*** (0.00827)	0.0466*** (0.00769)	0.0449*** (0.00924)	0.0385*** (0.00946)
Age # Age	-0.000630*** (0.0000837)	-0.000491*** (0.0000847)	-0.000456*** (0.000102)	-0.000406*** (0.000105)
Primary	0.0735* (0.0337)	0.0764* (0.0347)	0.0835** (0.0321)	0.0669* (0.0323)
Secondary	0.208*** (0.0266)	0.212*** (0.0270)	0.234*** (0.0275)	0.183*** (0.0277)
Tertiary	0.704*** (0.0391)	0.711*** (0.0395)	0.703*** (0.0503)	0.462*** (0.0424)
Monastic	-0.123 (0.0825)	-0.0969 (0.0786)	0.0130 (0.0573)	-0.0285 (0.0575)
Rural	-0.0605* (0.0266)	-0.0464 (0.0269)	-0.0615* (0.0275)	-0.0615* (0.0297)
Household characteristics:				
= 1 if in couple		0.129*** (0.0345)	0.115*** (0.0334)	0.114*** (0.0305)
=1 if household head or spouse		0.0920 (0.0547)	0.0965* (0.0480)	0.0804 (0.0468)
# of children 0–2		-0.0192 (0.0208)	-0.00748 (0.0193)	-0.0178 (0.0187)
# of children 3–5		-0.00892 (0.0246)	-0.00420 (0.0230)	-0.0107 (0.0228)
# of children 6–11		0.00387 (0.0192)	0.00268 (0.0238)	0.000316 (0.0203)
# of children 12–15		0.0115 (0.0204)	0.0161 (0.0246)	0.0159 (0.0256)
# of household members over 65		-0.0394 (0.0240)	-0.0344 (0.0216)	-0.0343 (0.0225)
# of household members with disabilities/illness		-0.0442 (0.0477)	-0.0316 (0.0463)	-0.0300 (0.0483)
# Other adults		0.0266* (0.0117)	0.0250* (0.0107)	0.0307** (0.00982)

Table B.4b. Continued

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Industry (ref. Manufacturing):				
Energy/Water			0.221**	0.223***
			(0.0717)	(0.0655)
Construction			0.169**	0.199***
			(0.0626)	(0.0592)
Trade			-0.0663	-0.0640
			(0.0545)	(0.0547)
Transportation			0.0315	0.164*
			(0.103)	(0.0777)
Hotels/Restaurants			-0.290*	-0.390***
			(0.118)	(0.117)
Information /Communication			0.217*	0.126
			(0.0920)	(0.0803)
Finance/Real Estate			0.127	0.0891
			(0.0975)	(0.102)
Science			0.180	0.0953
			(0.0963)	(0.0788)
Administration			-0.0217	0.0216
			(0.0978)	(0.0921)
Public			-0.0179	-0.0246
			(0.0641)	(0.0628)
Education			0.0691	-0.0460
			(0.0649)	(0.0641)
Health			0.0453	0.0162
			(0.0800)	(0.0742)
Arts/Other services			-0.201	-0.290**
			(0.119)	(0.111)
Occupation (ref. Services/Sales):				
Managers				0.291***
				(0.0637)
Professionals				0.383***
				(0.0621)
Technicians				0.0796*
				(0.0361)
Clerical				0.0187
				(0.0495)
Craft				0.0336
				(0.0523)

Table B.4b. Continued

	(1) Log real hourly wage (base=2010)	(2)	(3)	(4)
Operators				-0.143** (0.0545)
Elementary				-0.205*** (0.0391)
Constant	2.362*** (0.175)	2.470*** (0.162)	2.472*** (0.174)	2.652*** (0.171)
Region fixed effect	Yes	Yes	Yes	Yes
No. observations	5,620	5,620	5,620	5,620

Note: Reference category is Ages 15–19, Urban, Not educated, Household member, Single, Working in Manufacturing as Services and Sales Worker.

*p < .05, **p < .01, ***p < .001

Table B.5. Blinder-Oaxaca decomposition of the gender hourly wage gap

	(1)	(2)	(3)	(4)	(5)	(6)
Log hourly wage of males, excluding family workers (A)	3.870*** (0.0448)	3.870*** (0.0460)	3.870*** (0.0459)	3.870*** (0.0457)	3.870*** (0.0456)	3.870*** (0.0474)
Log hourly wage of females, excluding family workers (B)	3.749*** (0.0604)	3.749*** (0.0587)	3.749*** (0.0616)	3.749*** (0.0617)	3.749*** (0.0623)	3.749*** (0.0624)
Raw log hourly wage gap (A – B)	0.121*** (0.0207)	0.121*** (0.0191)	0.121*** (0.0213)	0.121*** (0.0215)	0.121*** (0.0220)	0.121*** (0.0208)
Explained	0	-0.0224*** (0.00427)	-0.0338** (0.0121)	-0.0137 (0.0131)	0.0295 (0.0198)	0.0342 (0.0185)
Unexplained	0.121*** (0.0207)	0.144*** (0.0175)	0.155*** (0.0163)	0.135*** (0.0165)	0.0918*** (0.0154)	0.0871*** (0.0146)
a. Explained part of the gap (due to differences in the following characteristics): decomposition						
Dzongkhags		-0.0138*** (0.00367)	-0.00824** (0.00283)	-0.00873** (0.00280)	-0.00798** (0.00278)	-0.00735** (0.00271)
Area		-0.00865** (0.00284)	-0.00393* (0.00195)	-0.00339 (0.00186)	-0.00425* (0.00196)	-0.00335 (0.00189)
Age			0.0114* (0.00462)	0.00770 (0.00399)	0.00903* (0.00357)	0.00450 (0.00330)
Education			-0.0330** (0.0110)	-0.0335** (0.0113)	-0.0278** (0.00999)	-0.0216** (0.00696)
Married				0.0223*** (0.00324)	0.0206*** (0.00297)	0.0184*** (0.00267)

Table B.5. Continued

	(1)	(2)	(3)	(4)	(5)	(6)
Household composition				0.00193*	0.00178*	0.00120
				(0.000964)	(0.000875)	(0.000775)
Industry					0.0381***	0.0663***
					(0.0113)	(0.0131)
Occupation						-0.0238*
						(0.0101)
b. Unexplained part of the gap (baseline difference and difference in returns to the same characteristics): decomposition						
Dzongkhags		-0.0478*	-0.0314**	-0.0304*	-0.0298*	-0.0344**
		(0.0204)	(0.0120)	(0.0121)	(0.0118)	(0.0123)
Area		0.0254	0.00810	0.00393	0.00638	0.0156
		(0.0203)	(0.0184)	(0.0187)	(0.0186)	(0.0183)
Age			0.0535	0.0473	0.0351	0.0193
			(0.0662)	(0.0697)	(0.0658)	(0.0659)
Education			0.0292	0.0238	0.0200	0.0267
			(0.0771)	(0.0713)	(0.0715)	(0.0735)
Married				0.0668	0.0689*	0.0805**
				(0.0342)	(0.0274)	(0.0249)
Household composition				-0.0150	-0.0151	-0.0242
				(0.0135)	(0.0138)	(0.0136)
Industry					-0.0308	-0.0635**
					(0.0199)	(0.0201)
Occupation						0.0302
						(0.0205)
Constant	0.121***	0.166***	0.0957	0.0385	0.0371	0.0369
	(0.0207)	(0.0221)	(0.102)	(0.107)	(0.104)	(0.103)
No. of observations	9,056	9,056	9,056	9,056	9,056	9,056

Note: Because alternative reference groups yield different estimates of the contribution of each factor variable to the unexplained part of the gap, this analysis follows Yun (2005) and measures the true contribution of a factor variable as the average effect for every possible specification changing the reference category (following a normalized regression approach).

*p < .05, **p < .01, ***p < .001

Table B.6. Comparison of the demographic characteristics of informal and formal employees working in companies, businesses, or nongovernmental organizations, 2017

	Share in informal contracts (nonwritten)	Difference with share in formal contracts
Gender		
Females	0.307	0.0263
	(0.0331)	(0.0213)
Males	0.693	-0.0263
	(0.0331)	(0.0213)
Age group		
15–24	0.224	0.00607
	(0.0222)	(0.0227)
25–54	0.748	0.000137
	(0.0204)	(0.0218)
55+	0.0277	-0.00621
	(0.00390)	(0.00511)
Education		
None/NFE	0.233	-0.0743**
	(0.0303)	(0.0229)
Primary/ECCD	0.107	-0.0347**
	(0.00748)	(0.0125)
Secondary	0.501	0.0710*
	(0.0152)	(0.0280)
Tertiary	0.135	0.0531**
	(0.0254)	(0.0194)
Education		
1 (0–8 items)	0.206	-0.0517**
	(0.0167)	(0.0196)
2 (9–10 items)	0.209	0.0217
	(0.0113)	(0.0365)
3 (11–12 items)	0.225	-0.00345
	(0.0121)	(0.0162)
4 (13–14 items)	0.167	0.0186
	(0.0106)	(0.0168)
5 (15+ items)	0.193	0.0149
	(0.0227)	(0.0259)
Education		
Rural	0.265	-0.0332
	(0.0998)	(0.0308)
Urban	0.735	0.0332
	(0.0998)	(0.0308)

Table B.6. Continued

	Share in informal contracts (nonwritten)	Difference with share in formal contracts
Region		
Thimphu	0.406	-0.0274
	(0.223)	(0.0213)
Gelephu	0.132	-0.0524
	(0.0601)	(0.0300)
Phuentsholing	0.187	-0.00163
	(0.105)	(0.0217)
Punakha	0.128	0.0956*
	(0.0603)	(0.0454)
Samdrup Jongkhar	0.0740	0.00417
	(0.0428)	(0.0117)
Trashigang	0.0728	-0.0184
	(0.0334)	(0.0154)

Note: ECCD = early childhood care and development; NFE = nonformal education.

*p < .05, **p < .01, ***p < .001

Table B.7. Determinants of the real log hourly wages for employees for private businesses

	(1)	(2)	(3)	(4)
Informality				
No written contract	-0.0350	-0.0159	0.229*	0.228*
	(0.0569)	(0.0621)	(0.108)	(0.104)
Education (ref.: No education/NFE)				
Primary			0.297***	0.255***
			(0.0760)	(0.0748)
Secondary			0.579***	0.435***
			(0.0547)	(0.0685)
Tertiary			1.192***	0.827***
			(0.0606)	(0.0700)
Informality and education				
Primary # No written contract			-0.175*	-0.169
			(0.0886)	(0.0865)
Secondary # No written contract			-0.217**	-0.205*
			(0.0763)	(0.0834)
Tertiary # No written contract			-0.168*	-0.158
			(0.0818)	(0.0974)

Table B.7. Continued

	(1)	(2)	(3)	(4)
Gender				
Male			0.178***	0.145**
			(0.0507)	(0.0457)
Informality and gender				
Male # No written contract			-0.0407	-0.0331
			(0.0795)	(0.0755)
Geographic controls	No	Yes	Yes	Yes
Demographic controls	No	No	Yes	Yes
Job controls	No	No	No	Yes
No. of observations	2,636	2,636	2,636	2,636

Note: Geographic controls include region fixed effects and a urban/rural dummy. Demographic controls include age, age-squared, and gender. Job controls include industry and occupation fixed effects.

*p < .05, **p < .01, ***p < .001

Table B.8. Comparison of the job characteristics of informal and formal employees working for companies, businesses, or nongovernmental organizations

	Share in informal contracts (nonwritten)	Difference with share in formal contracts
Manufacturing	0.200	-0.0167
	(0.0551)	(0.0243)
Energy/Water	0.0676	0.0167
	(0.0193)	(0.0178)
Construction	0.151	0.0205
	(0.0223)	(0.0309)
Trade	0.109	-0.0249*
	(0.0185)	(0.0116)
Transportation	0.0484	0.00972
	(0.00684)	(0.0119)
Hotels/Restaurants	0.108	0.0143
	(0.0228)	(0.0223)
Information/Communication	0.0543	0.00179
	(0.0193)	(0.00897)
Finance/Real Estate	0.0648	0.0102
	(0.00751)	(0.0133)
Science	0.00574	-0.000325
	(0.00325)	(0.000718)

Table B.8. Continued

	Share in informal contracts (nonwritten)	Difference with share in formal contracts
Administration	0.0663	-0.000493
	(0.0184)	(0.00900)
Education	0.0266	0.0215*
	(0.00619)	(0.0109)
Arts/Other services	0.0540	-0.0289***
	(0.00937)	(0.00654)
Managers	0.0683	0.00411
	(0.0118)	(0.0141)
Professionals	0.117	0.0315*
	(0.0189)	(0.0137)
Technicians	0.122	0.0382*
	(0.00908)	(0.0177)
Clerical	0.0917	0.00492
	(0.00732)	(0.0120)
Services/Sales	0.151	0.0299
	(0.0160)	(0.0226)
Craft	0.153	-0.0540***
	(0.0141)	(0.0163)
Operators	0.165	-0.0387*
	(0.0249)	(0.0167)
Elementary	0.131	-0.0158
	(0.0137)	(0.0229)

*p < .05, **p < .01, ***p < .001

Table B.9. Determinants of informality employees in public and private businesses

	(1)	(2)	(3)	(4)
	Bhutan Labor Force Survey, 2017			2022 Establishment Survey
	= 1 if no written contract	= 1 if no provi- dent funds		= 1 if no provi- dent funds
Demographic characteristics				
Male	-0.00818 (0.0193)	0.00594 (0.0309)	-0.0165 (0.0325)	
Female				0.00942 [0.0143]
Age	0.00459 (0.00690)	-0.0285*** (0.00538)		
Age-squared	-0.0000374 (0.0000878)	0.000299*** (0.0000707)		
Primary	0.00256 (0.0441)	-0.0706* (0.0355)	-0.0632 (0.0355)	-0.0469 [0.0301]
Secondary	-0.0692* (0.0345)	-0.158*** (0.0309)	-0.162*** (0.0315)	
Middle secondary				-0.061 [0.0253]**
Higher secondary				-0.0212 [0.0263]
Tertiary	-0.105* (0.0403)	-0.272*** (0.0662)	-0.317*** (0.0410)	-0.0815 [0.0265]***
Master's and above				-0.0515 [0.0426]
Geographic controls (ref.: Thimphu/rural areas)				
Gelephu	0.0745 (0.0401)	0.0196 (0.0386)	0.0535 (0.0423)	0.229 [0.0253]***
Phuentsholing	-0.0428* (0.0207)	-0.263*** (0.0416)	-0.300*** (0.0366)	-0.001 [0.0207]
Punakha	-0.156*** (0.0385)	-0.123 (0.0719)	-0.102 (0.0666)	-0.0358 [0.0238]
Samdrup Jongkhar	-0.0587 (0.0451)	-0.233** (0.0810)	-0.263** (0.0888)	-0.0207 [0.0322]
Trashigang	0.0193 (0.0541)	-0.212*** (0.0484)	-0.178** (0.0551)	0.179 [0.0292]***
Urban (ref.: Rural)	-0.0368 (0.0331)	-0.0883* (0.0436)		

Table B.9. Continued

	(1)	(2)	(3)	(4)
	Bhutan Labor Force Survey, 2017			2022 Establishment Survey
	= 1 if no written contract	= 1 if no provi- dent funds		= 1 if no provi- dent funds
Industry (ref.: Agriculture):				
Manufacturing	-0.155* (0.0607)	-0.0303 (0.0868)	-0.00267 (0.0925)	-0.0126 [0.0445]
Energy/Water	-0.213** (0.0795)	-0.157 (0.0862)	-0.210* (0.0832)	-0.175 [0.0459]***
Water				0.0434 [0.145]
Construction	-0.212** (0.0652)	0.0931 (0.0856)	0.0834 (0.0870)	0.162 [0.0500]***
Trade	-0.0985 (0.0770)	0.198* (0.0812)	0.233** (0.0771)	0.0657 [0.0479]
Transportation	-0.204** (0.0754)	0.212* (0.0956)	0.165 (0.0951)	0.0148 [0.0562]
Hotels/Restaurants	-0.128 (0.0742)	0.129 (0.101)	0.142 (0.0976)	0.131 [0.0466]***
Information/Communications	-0.157 (0.0799)	-0.0245 (0.0849)	-0.0726 (0.0815)	-0.0574 [0.0512]
Finance/Real Estate	-0.164* (0.0798)	-0.160 (0.109)	-0.219* (0.105)	-0.0603 [0.0428]
Real estate activities				0.338 [0.0526]***
Science	-0.107 (0.0763)	0.226* (0.104)	0.147 (0.0933)	0.0907 [0.0809]
Administration	-0.112 (0.0838)	0.284** (0.0915)	0.258** (0.0845)	0.0303 [0.0604]
Public	-0.246* (0.120)	-0.0574 (0.122)	-0.123 (0.138)	
Education	-0.240* (0.105)	0.0342 (0.0985)	-0.00872 (0.0885)	-0.0949 [0.0471]**
Health	0.291*** (0.0678)	0.194* (0.0841)	0.220** (0.0815)	-0.0624 [0.0981]
Arts/Other services	-0.0566 (0.0867)	0.285** (0.0850)	0.276*** (0.0792)	0.242 [0.0713]***
Other services				-0.0491 [0.101]

Table B.9. Continued

	(1)	(2)	(3)	(4)
	Bhutan Labor Force Survey, 2017			2022 Establishment Survey
	= 1 if no written contract	= 1 if no provi- dent funds		= 1 if no provi- dent funds
Occupations (ref.: Managers)				
Professionals	-0.0177 (0.0520)	-0.0390 (0.0411)		
Technicians	-0.0586 (0.0350)	-0.0340 (0.0501)		
Clerical	0.0114 (0.0530)	-0.0698 (0.0513)		
Services/Sales	-0.0434 (0.0592)	0.0162 (0.0531)		
Agriculture	-0.226 (0.254)	0.00581 (0.234)		
Craft	0.0417 (0.0567)	0.150* (0.0605)		
Operators	0.0420 (0.0495)	-0.0336 (0.0490)		
Elementary	0.0107 (0.0687)	0.0826 (0.0633)		
Constant	0.834*** (0.140)	1.347*** (0.149)	0.747*** (0.0862)	0.714 [0.0511]***
No. of observations	2,636	2,636	2,636	3,920

*p < .05, **p < .01, ***p < .001

Table B.10. Blinder-Oaxaca decomposition of the gender employment gap

	(1)	(2)	(3)	(4)
Employment rate of men ages 15+ (A)	0.702***	0.702***	0.702***	0.702***
	(0.0113)	(0.0112)	(0.0110)	(0.0113)
Employment rate of women ages 15+ (B)	0.492***	0.492***	0.492***	0.492***
	(0.0248)	(0.0254)	(0.0251)	(0.0249)
Raw employment gap (A – B)	0.210***	0.210***	0.210***	0.210***
	(0.0179)	(0.0175)	(0.0175)	(0.0171)
Explained	0	-0.00164	-0.00877	-0.00360
		(0.00107)	(0.00578)	(0.00552)
Unexplained	0.210***	0.212***	0.219***	0.214***
	(0.0179)	(0.0169)	(0.0152)	(0.0148)
a. Explained part of the gap (due to differences in the following characteristics): decomposition				
Dzongkhags		-0.00177*	-0.00225*	-0.00233*
		(0.000891)	(0.00104)	(0.00106)
Area		0.000123	0.000183	0.000180
		(0.000334)	(0.000495)	(0.000488)
Age			-0.00414	-0.00446
			(0.00296)	(0.00263)
Education			-0.00256	-0.00124
			(0.00435)	(0.00424)
Married				0.00263**
				(0.000895)
Household composition				0.00163***
				(0.000356)
b. Unexplained part of the gap (baseline difference and difference in returns to the same characteristics): decomposition				
Dzongkhags		0.0242*	0.0300**	0.0310**
		(0.00958)	(0.00940)	(0.00956)
Area		0.0416**	0.0443**	0.0339*
		(0.0151)	(0.0162)	(0.0132)
Age			0.0296**	0.0204*
			(0.00978)	(0.0100)
Education			-0.0290*	-0.0291*
			(0.0138)	(0.0136)
Married				0.151***
				(0.0118)
Household composition				0.00289
				(0.00502)
Constant	0.210***	0.146***	0.144***	0.00342
	(0.0179)	(0.00825)	(0.0203)	(0.0251)
No. of observations	30,357	30,357	30,357	30,357

Note: Because alternative reference groups yield different estimates of the contribution of each factor variable to the unexplained part of the gap, this analysis follows Yun (2005) and measures the true contribution of a factor variable as the average effect of every possible specification changing the reference category (following a normalized regression approach).

*p < .05, **p < .01, ***p < .001

Appendix C: Public-Private Wage Differential in Bhutan

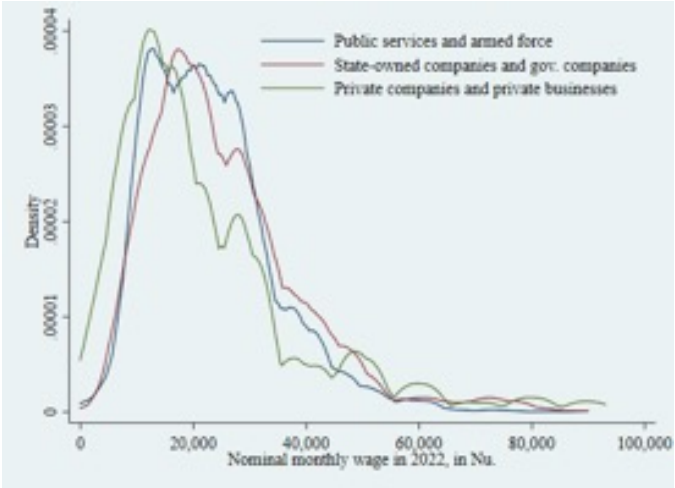
Definitions

This analysis uses the 2022 Bhutan Labor Force Survey. It includes workers ages 15 and over in both the public and private sectors, and it excludes workers in agricultural occupations as well as family workers (mainly women, for which wages are unavailable).

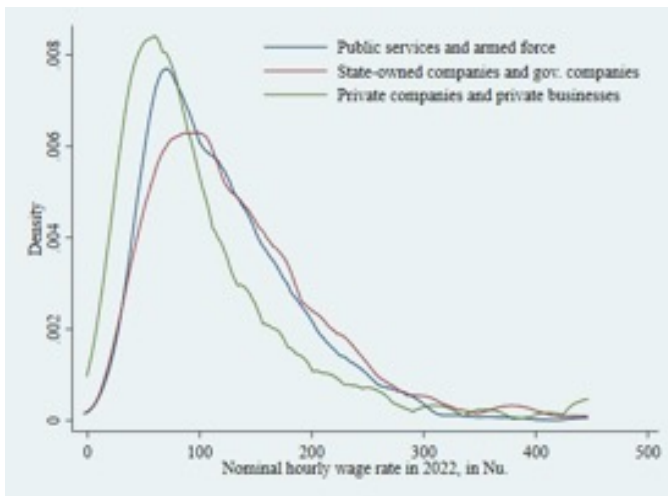
The public sector includes civil servants and the armed forces. The private sector includes workers in private companies and in private businesses. State-owned enterprises (SoEs) include SoEs and government firms.

Figures

Wages are nominal monthly wages in 2022 for the primary occupation (corresponding to the sector). They are truncated at 1 percent (top only).



Hourly wages are nominal monthly wages in 2022 divided by four times the number of weekly hours worked in 2022. They are truncated at 1 percent (top only).



Main findings

Wage gap between the public sector (excluding SoEs) and the private sector

The raw hourly wage gap between the public sector (excluding SoEs) and the private sector is 24 percent in favor of the public sector. This gap is explained when taking into account gender and age, but, even more important, education and occupations. This means that wages are higher in the public sector because the sector has relatively more men (who are better paid than women), more experienced workers, and a higher proportion of skilled workers and highly paid occupations than the private sector.

The gap at the baseline remains positive, but it is offset in total by the better returns to being a man and being experienced (age) in the private sector than in the public sector (table C.1).

Wage gap between the public sector (including SoEs) and the private sector

Unsurprisingly, the results are not very different because employment in SoEs and government firms constitutes 20 percent of total public employment. The average raw gap is now 26 percent because wages in SoEs are higher on average. In terms of the decomposition, the same conclusions prevail (table C.2).

Wage gap between SoEs and the private sector

This decomposition compares workers in private companies with workers in public companies (SoE + gov. firms), with the idea that this is where jobs are most comparable. The sample size is much smaller— $N = 1,291$ versus $N = 8,987$ when looking at the wage differential between the public (including SoEs) and private sectors. The hourly wage gap is very high, and 38 percent and 50 percent of it remain unexplained after taking into account age, gender, location, education, and location. The decomposition suggests that differences across workers in terms of education and occupation account for half of the gap, whereas differences in returns to these characteristics explain the other half of the gap (table C.3).

Table C.1. Blinder-Oaxaca decomposition of wage gap between public sector (excluding SoEs) and private sector

Log hourly wage of workers in the public sector, excluding SoEs (A), N = 3,342	3.946*** (0.0299)	3.946*** (0.0300)	3.946*** (0.0322)	3.946*** (0.0349)
Log hourly wage of workers in the private sector (B), N = 4,789	3.708*** (0.0534)	3.708*** (0.0533)	3.708*** (0.0547)	3.708*** (0.0544)
Raw log hourly wage gap	0.238*** (0.0309)	0.238*** (0.0313)	0.238*** (0.0317)	0.238*** (0.0299)
Explained		-0.000580 (0.00646)	0.161*** (0.0195)	0.208*** (0.0320)
Unexplained	0.238*** (0.0309)	0.239*** (0.0312)	0.0770** (0.0254)	0.0305 (0.0284)
a. Explained part of the gap (due to differences in the following characteristics)				
Dzongkhags		-0.00314 (0.00641)	-0.00184 (0.00586)	-0.00277 (0.00582)
Area		0.00256 (0.00293)	0.00143 (0.00175)	0.00116 (0.00147)
Sex (1=male)			0.0107*** (0.00308)	0.0113*** (0.00324)
Age			0.0146** (0.00455)	0.0133*** (0.00374)
Education			0.136*** (0.0189)	0.0915*** (0.0152)
Occupation				0.0931*** (0.0184)
b. Unexplained part of the gap (baseline difference and differences in returns to the same characteristics)				
Dzongkhags		-0.0456 (0.0337)	-0.0186 (0.0337)	-0.0120 (0.0286)
Area		0.0165 (0.0240)	0.0184 (0.0208)	0.0208 (0.0210)
Sex (1=male)			-0.0909*** (0.0225)	-0.140*** (0.0208)
Age			-0.0778 (0.0457)	-0.129** (0.0445)
Education			0.0186 (0.0350)	0.0397 (0.0346)
Occupation				-0.00866 (0.0143)
Constant	0.238*** (0.0309)	0.268*** (0.0300)	0.227*** (0.0622)	0.260*** (0.0733)
No. of observations	8,131	8,131	8,131	8,131

Note: Real log hourly wage in 2010 Nu.; winsorized at 1 percent (top only).

*p < .05, **p < .01, ***p < .001

Table C.2. Blinder-Oaxaca decomposition of wage gap between public sector (including SoEs) and private sector

Log hourly wage of workers in the public sector, including SoEs (A), N = 4,198	3.970*** (0.0398)	3.970*** (0.0387)	3.970*** (0.0409)	3.970*** (0.0439)
Log hourly wage of workers in the private sector (B), N = 4,789	3.708*** (0.0534)	3.708*** (0.0533)	3.708*** (0.0547)	3.708*** (0.0544)
Raw log hourly wage gap	0.262*** (0.0209)	0.262*** (0.0226)	0.262*** (0.0222)	0.262*** (0.0210)
Explained		0.00454 (0.00598)	0.170*** (0.0173)	0.204*** (0.0278)
Unexplained	0.262*** (0.0209)	0.258*** (0.0228)	0.0922*** (0.0224)	0.0588* (0.0271)
a. Explained part of the gap (due to differences in the following characteristics)				
Dzongkhags		-0.00110 (0.00585)	-0.000989 (0.00534)	-0.00143 (0.00535)
Area		0.00565 (0.00320)	0.00313 (0.00213)	0.00257 (0.00192)
Sex (1=male)			0.00891* (0.00358)	0.00946* (0.00376)
Age			0.0169*** (0.00472)	0.0153*** (0.00378)
Education			0.142*** (0.0159)	0.0965*** (0.0149)
Occupation				0.0813*** (0.0136)
b. Unexplained part of the gap (baseline difference and differences in returns to the same characteristics)				
Dzongkhags		-0.0399 (0.0256)	-0.0155 (0.0299)	-0.0103 (0.0270)
Area		0.0217 (0.0227)	0.0209 (0.0198)	0.0252 (0.0199)
Sex (1=male)			-0.0954*** (0.0242)	-0.140*** (0.0222)
Age			-0.0756 (0.0431)	-0.119** (0.0414)
Education			0.0309 (0.0353)	0.0535 (0.0340)
Occupation				-0.0165 (0.0125)
Constant	0.262*** (0.0209)	0.276*** (0.0287)	0.227*** (0.0576)	0.266*** (0.0723)
No. of observations	8,987	8,987	8,987	8,987

Note: Real log hourly wage in 2010 Nu; winsorized at 1% (top only).

*p < .05, **p < .01, ***p < .001

Table C.3. Blinder-Oaxaca decomposition of the wage gap between SoEs and private sector

Log hourly wage of workers in SoEs (A), N = 856	4.062***	4.062***	4.062***	4.062***
	(0.0799)	(0.0790)	(0.0799)	(0.0817)
Log hourly wage of workers in private companies (B), N = 435	3.684***	3.684***	3.684***	3.684***
	(0.0791)	(0.0845)	(0.0842)	(0.0834)
Raw log hourly wage gap	0.377***	0.377***	0.377***	0.377***
	(0.0337)	(0.0408)	(0.0365)	(0.0362)
Explained		0.0815**	0.154***	0.173***
		(0.0309)	(0.0256)	(0.0325)
Unexplained	0.377***	0.296***	0.224***	0.205***
	(0.0337)	(0.0464)	(0.0387)	(0.0256)
a. Explained part of the gap (due to differences in the following characteristics)				
Dzongkhags		0.0853**	0.0452*	0.0234
		(0.0298)	(0.0180)	(0.0159)
Area		-0.00381	-0.00121	-0.000248
		(0.0118)	(0.00391)	(0.00128)
Sex (1=male)			-0.00640	-0.00607
			(0.00403)	(0.00356)
Age			0.0349**	0.0221**
			(0.0117)	(0.00749)
Education			0.0810***	0.0364**
			(0.0165)	(0.0118)
Occupation				0.0972*
				(0.0390)
b. Unexplained part of the gap (baseline difference and differences in returns to the same characteristics)				
Dzongkhags		-0.0466	0.0322	0.0287
		(0.0554)	(0.0500)	(0.0360)
Area		0.0425	0.0606	0.0586
		(0.0800)	(0.0599)	(0.0463)
Sex (1=male)			-0.0579	-0.0261
			(0.0347)	(0.0451)
Age			0.219*	0.152*
			(0.0858)	(0.0610)
Education			0.216***	0.166***
			(0.0342)	(0.0415)
Occupation				0.0684*
				(0.0281)
Constant	0.377***	0.300***	-0.247**	-0.243***
	(0.0337)	(0.0736)	(0.0771)	(0.0670)
No. of observations	1,291	1,291	1,291	1,291

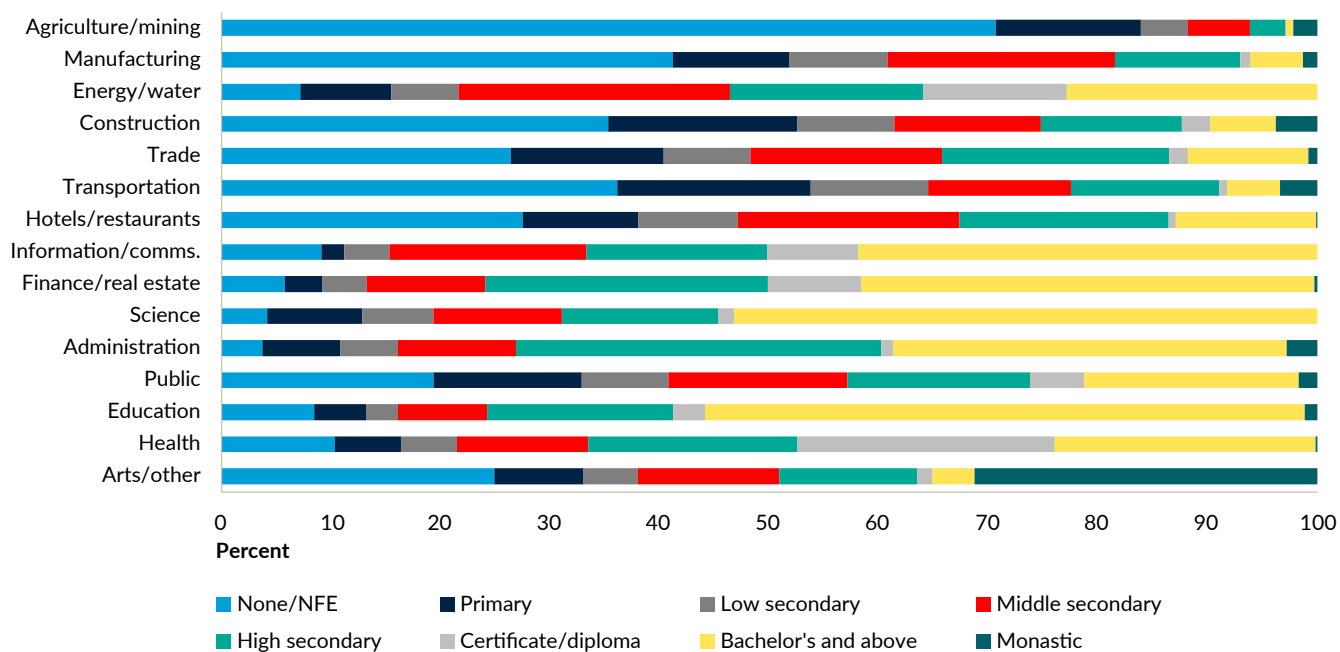
Note: Real log hourly wage in 2010 Nu; winsorized at 1% (top only).

*p < .05, **p < .01, ***p < .001

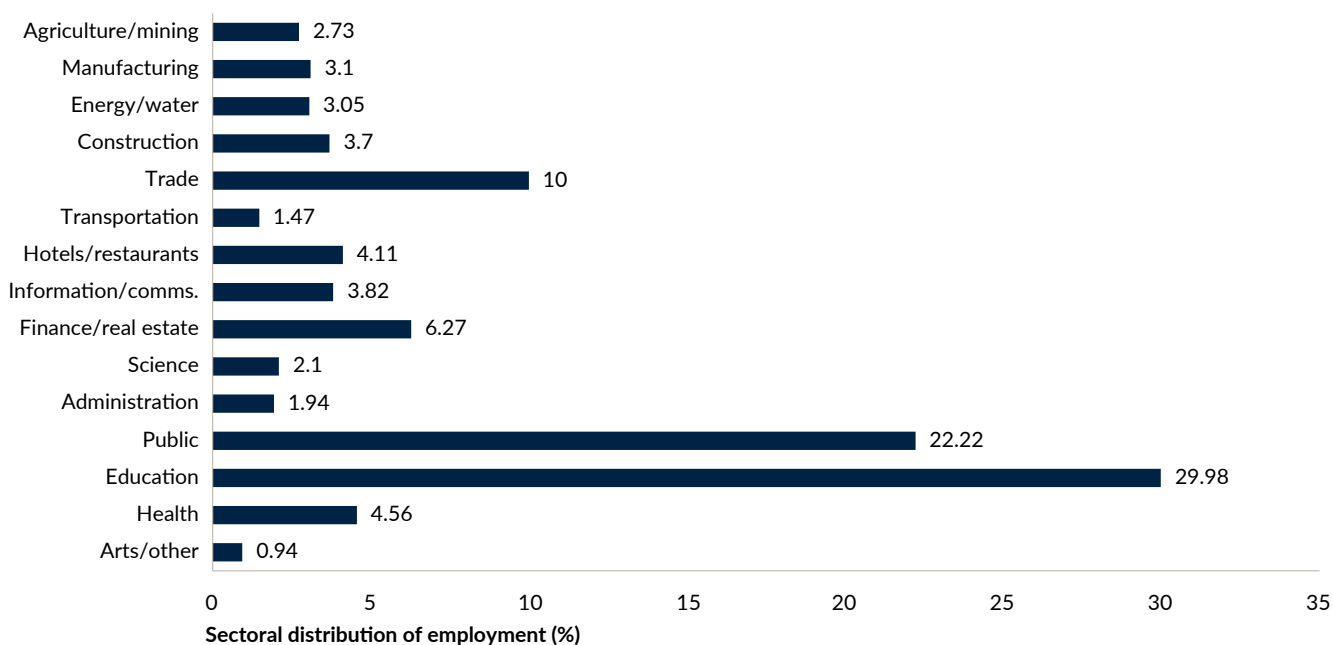
Appendix D: Supplementary Figures and Tables, Chapter 3

Figure D.1. Education and sectoral employment, 2022

a. Share of each education level, by sector



b. Share of each sector in employment of high-skilled



Source: Bhutan Labor Force Survey, 2022.

Table D.1. Profile of firms in Bhutan, 2018 and 2022

	2018		2022		
	N	%	N	Weighted N	%
Geographic distribution					
Thimphu	3,508	24.8	1,295	6,230	23.5
Phuentsholing	2,843	20.1	863	3,701	13.9
Gelephu	3,160	22.4	848	8,275	31.2
Samdrup Jongkhar	940	6.7	322	1,567	5.9
Punakha	2,051	14.5	758	3,878	14.6
Trashigang	1,632	11.6	614	2,890	10.9
Firm age					
Less than 1 year	403	3.2	119	702	2.7
Between 1 and 9 years	9,244	72.9	3,257	18,935	71.4
10 years or more	3,030	23.9	1,323	6,897	26.0
Economic sector					
Agriculture, forestry, and fishing	363	2.6	25	152	0.6
Mining and quarrying	33	0.2	31	105	0.4
Manufacturing	753	5.4	565	1,695	6.4
Electricity, gas, steam, and air-conditioning	3	0.0	13	48	0.2
Water supply, sewerage, and waste management	5	0.0	7	38	0.1
Construction	168	1.2	151	690	2.6
Wholesale and retail trade	8,523	61.6	1,856	14,828	55.9
Transportation and storage	45	0.3	78	177	0.7
Accommodation and food services activities	2,946	21.3	1,359	6,331	23.9
Information and communication	57	0.4	53	132	0.5
Financial and insurance activities	17	0.1	20	43	0.2
Real estate activities	3	0.0	3	13	0.1
Professional, scientific and technical	71	0.5	67	276	1.0
Administrative and support services activities	173	1.3	143	647	2.4
Education	86	0.6	94	275	1.0
Human health and social work activities	19	0.1	15	35	0.1
Arts, entertainment, and recreation	172	1.2	113	327	1.2
Other service activities	402	2.9	107	728	2.7
Economic sector					
Sole proprietorship	13,681	96.8	4,371	25,742	97.0
Partnership	79	0.6	103	355	1.3
State-owned enterprise (SOE)	28	0.2	17	19	0.1
Private limited company	157	1.1	124	286	1.1
Public limited company	16	0.1	26	32	0.1
Foreign direct investment (FDI) business	31	0.2	18	39	0.2
Civil society organization (CSO)/ NGO	21	0.2	22	44	0.2
Public organization			17	20	0.1

Table D.1. Continued

	2018		2022		
	N	%	N	Weighted N	%
Cooperatives and groups	116	0.8	1	2	0.0
Others (specify)	5	0.0	1	2	0.0
Size					
Cottage	12,553	88.8	4,060	25,448	95.9
Small	1,243	8.8	409	777	2.9
Medium	261	1.9	168	227	0.9
Large	77	0.5	63	88	0.3

Sources: 2022 Establishment Survey and 2018 Economic Census.

Table D.2. Characteristics of workers in Bhutanese firms, 2022

	N	Weighted N	%
Gender composition			
Share of female employees	1,994	8,259	47.4
Nationality composition			
Share of foreign workers	1,994	8,259	2.8
Type of employment			
Regular employees	1,994	8,259	91.4
Contract employees	1,994	8,259	2.5
Casual employees	1,994	8,259	6.1
Educational level			
No education	1,476	15,825	18.6
Primary and secondary	4,050	16,948	61.5
Degree and above	1,101	16,948	19.9
Experience at the firm			
Less than 1 year	450	6,821	10.3
Between 1 and 9 years	2,747	46,720	70.2
10 years or more	709	12,989	19.5
Vocational qualification			
Share of employees with vocational qualification	6,627	85,122	30.7

Sources: 2022 Establishment Survey and 2018 Economic Census.

Table D.3. Average number of workers hired and workers who exited firms, by year, region, economic sector, size, and legal status, 2019–21

	Workers hired			Workers exited			Net rate: workers hired – workers exited		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Geographic region									
Thimphu	1.5	0.9	0.8	0.7	0.7	0.5	0.8	0.2	0.3
Gelephu	1.3	1.0	1.0	0.6	0.5	0.6	0.7	0.5	0.4
Phuentsholing	1.0	0.5	0.6	0.7	0.7	0.4	0.3	-0.1	0.2
Punakha	0.6	0.3	0.2	0.4	0.3	0.2	0.2	-0.1	0.0
Samdrup Jongkhar	0.6	0.3	0.6	0.3	0.3	0.3	0.3	0.0	0.3
Trashigang	0.5	0.3	0.2	0.4	0.2	0.2	0.2	0.0	0.0
Economic sector									
Agriculture, forestry, and fishing	1.2	1.0	0.4	0.7	0.5	1.7	0.5	0.5	-1.3
Mining and quarrying	2.3	2.4	2.3	1.6	1.2	1.3	0.7	1.2	1.0
Manufacturing	2.4	1.3	1.4	1.4	1.3	1.0	1.0	0.0	0.5
Electricity, gas, steam, and air-conditioning	10.5	4.8	4.4	6.4	3.1	6.3	4.2	1.6	-1.9
Water supply, sewerage, and waste management	2.4	1.6	0.0	1.3	0.2	0.1	1.1	1.4	-0.1
Construction	12.0	10.2	10.8	7.2	5.6	6.1	4.7	4.6	4.7
Wholesale and retail trade	0.3	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1
Transportation and storage	1.0	0.5	0.4	0.3	0.3	0.3	0.7	0.1	0.1
Accommodation and food services activities	0.8	0.3	0.3	0.4	0.4	0.2	0.5	-0.1	0.0
Information and communication	4.6	3.9	4.5	2.2	1.9	2.1	2.5	2.0	2.4
Financial and insurance activities	12.0	4.6	4.9	6.6	3.7	3.3	5.4	0.9	1.6
Real estate activities	0.0	0.9	1.5	0.0	0.9	0.0	0.0	0.0	1.5
Professional, scientific and technical	1.0	0.4	0.6	0.5	0.3	0.4	0.5	0.1	0.2
Administrative and support services activities	1.7	0.8	0.6	1.0	1.1	0.7	0.7	-0.3	-0.1
Education	3.8	2.2	2.6	1.3	1.0	1.4	2.6	1.2	1.3
Human health and social work activities	1.2	0.4	1.3	0.2	0.3	0.5	1.0	0.2	0.8
Arts, entertainment, and recreation	0.7	0.4	0.3	0.4	0.4	0.1	0.3	-0.1	0.2
Other service activities	0.5	0.2	0.4	0.2	0.2	0.2	0.4	0.1	0.2
Economic sector									
Cottage	0.5	0.3	0.3	0.2	0.2	0.2	0.3	0.1	0.1
Small	5.4	2.9	3.2	2.3	2.3	1.5	3.1	0.7	1.7
Medium	9.9	6.7	7.2	5.4	6.0	4.9	4.5	0.7	2.4
Large	75.7	67.9	66.7	56.0	51.7	55.2	19.7	16.1	11.5
Legal status									
Sole proprietorship	0.7	0.4	0.4	0.3	0.3	0.2	0.4	0.1	0.2
Partnership	3.2	1.5	1.6	1.0	1.0	0.9	2.2	0.5	0.7
State-owned enterprise (SOE)	11.8	13.4	11.9	22.2	11.0	7.4	-10.5	2.4	4.5
Private limited company	22.9	20.1	20.8	14.5	14.7	14.8	8.5	5.4	6.0
Public limited company	24.1	15.4	17.8	18.7	16.8	15.9	5.5	-1.4	1.9
Foreign direct investment (FDI) business	21.2	14.7	14.1	14.7	13.6	15.0	6.5	1.1	-0.9

Table D.3. Continued

	Workers hired			Workers exited			Net rate: workers hired – workers exited		
	2019	2020	2021	2019	2020	2021	2019	2020	2021
Civil society organization (CSO)/NGO	2.0	1.6	3.6	0.4	0.6	2.1	1.6	1.0	1.5
Public organization	13.4	11.5	14.9	7.8	8.2	9.5	5.6	3.3	5.4
Cooperatives and groups	.	.	2.0	.	.	1.0			1.0
Other (specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Source: 2022 Establishment Survey.

Table D.4. Distribution of current employment and expected labor demand, by occupation, 2022

	Current composition	Expected labor demand
Managers	8.7	3.6
Professionals	12.4	6.5
Technicians and associate professionals	11.5	6.8
Clerical support workers	8.1	6.1
Services and sales workers	36.6	43.9
Personal services workers	9.48	23.3
Sales workers	24.35	20.3
Personal care workers	0.11	0.0
Protective services workers	2.61	0.3
Forestry workers	0.1	0.6
Craft and related trades workers	11.2	17.7
Building and related trades workers (excluding electricians)	2.68	6.9
Metal, machinery, and related trades workers	3.78	3.1
Handicraft and printing workers	0.39	0.9
Electrical and electronics trades workers	1.9	2.3
Food processing, woodworking, garment, and other craft and related trades workers	2.46	4.5
Plant and machine operators and assemblers	5.5	4.0
Elementary occupations	6.0	10.7

Source: 2022 Establishment Survey.

Table D.5. Share of firms expecting redundant occupations or emerging occupations in the next five years, by region and economic sector, 2022

	Share of firms expecting redundant occupations (%)	Share of firms expecting new occupations (%)
All firms	0.7	30.6
By region		
Thimphu	1.3	34.0
Gelephu	0.5	42.1
Phuentsholing	0.2	17.8
Punakha	0.4	30.0
Samdrup Jongkhar	1.6	20.4
Trashigang	0.2	12.7
By sector		
Agriculture, forestry, and fishing	1.0	43.3
Mining and quarrying	3.1	54.1
Manufacturing	0.7	44.7
Electricity, gas, steam, and air-conditioning	30.4	44.3
Water supply, sewerage, and waste management	0.0	42.1
Construction	2.3	60.1
Wholesale and retail trade	0.6	23.5
Transportation and storage	1.4	30.6
Accommodation and food services activities	0.4	33.4
Information and communication	1.8	58.1
Financial and insurance activities	4.7	26.2
Real estate activities	0.0	80.2
Professional, scientific and technical	0.0	46.6
Administrative and support services activities	0.9	42.1
Education	2.3	64.6
Human health and social work activities	4.3	38.3
Arts, entertainment, and recreation	0.0	27.7
Other service activities	0.2	47.7

Source: 2022 Establishment Survey.

Table D.6. Main reasons for worker shortages, 2022

	All (%)	Services and sales workers (%)
Skills are not available in Bhutan	12.4	6.9
Skills are not available in my business region/dzongkhag	11.4	9.2
High demand for these skills in Bhutan	5.9	5.6
Lack of resources/business not doing well	7.5	8.5
Recruitment restricted by other agency or higher authority	1.1	0.9
Workers demand wages that are too high/wage rate lower than market rate	28.5	33.6
Applicants lack required experience	22.7	21.3
Other	10.5	14.1

Source: 2022 Establishment Survey.

Table D.7. Firms facing retainment difficulties, total and by occupation, 2022

	Share of firms facing retaining difficulties (%)
All firms	5.97
By occupation	
Managers	1.2
Professionals	3.8
Technicians and associate professionals	7.7
Clerical support workers	1.8
Services and sales workers	39.1
Forestry workers	
Craft and related trades workers	25.7
Plant and machine operators and assemblers	4.9
Elementary occupations	15.7

Source: 2022 Establishment Survey.

Note: Table shows the distribution of the total number of firms facing retainment difficulties by the occupation for which they face difficulties.

Table D.8. Reasons for hiring foreign workers, 2022

Lack of skilled Bhutanese workers	31.2
Cheap wage rate	10.5
Easy to manage	11.4
Better work attitude	19.0
Better workmanship (highly skilled)	20.5
Easy access to foreign workers	4.8
Other (specify)	2.6

Source: 2022 Establishment Survey.

Table D.9. Outcomes obtained from training in the last three years, 2022

	No improvement	Moderate improvement	Significant improvement
Confidence	4.5	34.8	60.7
Work productivity	5.1	34.2	60.8
Organization productivity	5.4	37.7	56.9
Ability to work independently	6.3	34.4	59.3
Leadership skills	9.7	39.2	51.2
Creative and critical thinking	9.0	46.3	44.7
Problem-solving skills	8.0	43.8	48.2
Job-specific technical skills	7.9	40.4	51.7

Source: 2022 Establishment Survey.

Table D.10. Importance of factors for business expansion or diversification plans, by firm size, 2022

	Least important 1	2	3	Most important 4
Cottage				
Human resources	9.3	20.7	54.1	15.9
Finance	36.2	41.9	18.4	3.5
Market	51.4	33.7	12.3	2.5
Favorable policies and regulations in place	3.3	3.8	15.1	77.7
Small				
Human resources	20.6	31.1	40.2	8.2
Finance	35.0	32.2	24.0	8.8
Market	38.0	27.7	23.7	10.6
Favorable policies and regulations in place	6.6	9.1	12.0	72.4
Medium				
Human resources	23.0	28.7	35.5	12.8
Finance	29.8	33.2	28.2	8.9
Market	39.6	30.4	20.8	9.2
Favorable policies and regulations in place	8.3	7.4	15.2	69.0
Large				
Human resources	36.7	36.8	20.1	6.4
Finance	21.2	20.3	32.0	26.5
Market	28.2	22.4	28.4	21.1
Favorable policies and regulations in place	13.8	20.6	19.6	46.0

Source: 2022 Establishment Survey.

Table D.11. Constraints in the management of firms, by firm size, 2022

a. Distribution of firms by severity level for each factor (%)					
	No constraint	Minor constraint	Moderate constraint	Major constraint	Very severe constraint
Cottage					
Business climate factors					
Internet access and connectivity	58	23	10	7	2
Customs and trade regulations	67	20	8	4	1
Business licensing and operations permits	74	16	6	3	2
Access to finance	59	20	10	9	2
Access to raw materials/goods	55	23	11	9	2
Access to market	45	24	16	12	3
Policy uncertainty	67	18	8	4	2
Corruption, crime, theft, and disorder	84	10	3	2	0
Labor factors					
Stringent labor law and regulation	81	11	6	2	1
High worker turnover	82	10	4	4	1
Overall market wage level	72	15	9	3	1
Small					
Business climate factors					
Internet access and connectivity	40	18	14	12	16
Customs and trade regulations	31	35	19	12	3
Business licensing and operations permits	71	10	14	3	2
Access to finance	50	23	14	10	3
Access to raw materials/goods	33	22	16	13	16
Access to market	38	21	15	17	9
Policy uncertainty	18	38	17	20	7
Corruption, crime, theft, and disorder	46	32	15	4	3
Labor factors					
Stringent labor law and regulation	48	25	16	8	3
High worker turnover	15	39	13	21	11
Overall market wage level	30	34	21	8	7
Medium					
Business climate factors					
Internet access and connectivity	33	22	20	13	11
Customs and trade regulations	41	35	15	8	1
Business licensing and operations permits	64	23	6	5	3
Access to finance	43	23	13	16	6
Access to raw materials/goods	43	20	18	15	4
Access to market	36	21	23	15	5
Policy uncertainty	37	19	19	12	14
Corruption, crime, theft, and disorder	69	17	7	4	2

Table D.11. Continued

a. Distribution of firms by severity level for each factor (%)					
	No constraint	Minor constraint	Moderate constraint	Major constraint	Very severe constraint
Labor factors					
Stringent labor law and regulation	45	26	12	11	6
High worker turnover	38	27	14	16	5
Overall market wage level	46	18	16	14	5
Large					
Business climate factors					
Internet access and connectivity	40	18	14	12	16
Customs and trade regulations	31	35	19	12	3
Business licensing and operations permits	71	10	14	3	2
Access to finance	50	23	14	10	3
Access to raw materials/goods	33	22	16	13	16
Access to market	38	21	15	17	9
Policy uncertainty	18	38	17	20	7
Corruption, crime, theft, and disorder	46	32	15	4	3
Labor factors					
Stringent labor law and regulation	55	21	12	10	2
High worker turnover	39	21	17	17	6
Overall market wage level	40	26	18	11	4
b. Distribution of factors for each specific constraint level (%)					
Cottage					
Business climate factors					
Internet access and connectivity	8	12	11	12	11
Customs and trade regulations	9	10	9	7	8
Business licensing and operations permits	10	8	6	5	11
Access to finance	8	11	11	15	11
Access to raw materials/goods	7	12	12	15	13
Access to market	6	12	18	20	20
Policy uncertainty	9	10	9	7	11
Corruption, crime, theft, and disorder	11	5	3	3	3
Labor factors					
Stringent labor law and regulation	11	6	6	3	5
High worker turnover	11	5	4	7	4
Overall market wage level	10	8	10	5	4
Small					
Business climate factors					
Internet access and connectivity	9	6	8	9	20
Customs and trade regulations	7	12	11	10	4
Business licensing and operations permits	17	3	8	2	3

Table D.11. Continued

b. Distribution of factors for each specific constraint level (%)					
	No constraint	Minor constraint	Moderate constraint	Major constraint	Very severe constraint
Access to finance	12	8	8	8	3
Access to raw materials/goods	8	7	9	10	20
Access to market	9	7	9	13	11
Policy uncertainty	4	13	10	16	8
Labor factors					
Stringent labor law and regulation	11	9	9	6	3
High worker turnover	4	13	8	17	14
Overall market wage level	7	11	12	6	9
Medium					
Business climate factors					
Internet access and connectivity	7	9	12	10	19
Customs and trade regulations	8	14	9	6	2
Business licensing and operations permits	13	9	4	4	4
Access to finance	9	9	8	12	9
Access to raw materials/goods	9	8	11	12	6
Access to market	7	8	14	11	9
Policy uncertainty	7	8	11	9	22
Corruption, crime, theft, and disorder	14	7	4	3	4
Labor factors					
Stringent labor law and regulation	9	11	7	8	9
High worker turnover	8	11	9	12	8
Overall market wage level	9	7	10	11	9
Large					
Business climate factors					
Internet access and connectivity	3	2	3	3	9
Customs and trade regulations	2	4	3	3	2
Business licensing and operations permits	5	1	3	1	1
Access to finance	3	3	3	2	2
Access to raw materials/goods	2	3	3	3	9
Access to market	3	3	3	4	5
Policy uncertainty	1	5	3	5	4
Corruption, crime, theft, and disorder	3	4	3	1	2
Labor factors					
Stringent labor law and regulation	32	23	20	20	11
High worker turnover	23	23	28	35	32
Overall market wage level	24	29	29	24	22

Source: 2022 Establishment Survey.

Table D.12. Compliance with labor regulation, by economic sector (percent), 2022

	Our establishment has an Internal Service Rule (ISR).	Our Internal Service Rule (ISR) is endorsed by the DoL.	We have occupational health and safety in place.	We have occupational health and safety policy in place.	We provide basic personal protective equipment (PPE) to our employees.
Agriculture, forestry, and fishing	14.4	12.6	31.1	27.7	31.1
Mining and quarrying	32.9	32.0	43.3	41.4	52.2
Manufacturing	32.3	23.3	45.1	31.4	49.2
Electricity, gas, steam, and air-conditioning	100.0	100.0	72.7	72.7	93.9
Water supply, sewerage, and waste management	8.0	46.1	57.9	36.5	36.5
Construction	22.2	21.0	45.1	35.3	70.2
Wholesale and retail trade	13.7	9.6	32.4	21.7	27.4
Transportation and storage	18.4	10.8	14.2	9.4	10.7
Accommodation and food services activities	15.6	16.4	33.7	18.8	39.1
Information and communication	60.0	40.2	67.9	48.2	59.3
Financial and insurance activities	100.0	94.7	100.0	94.7	56.8
Real estate activities	100.0	0.0	0.0	0.0	0.0
Professional, scientific and technical	39.9	27.8	35.5	32.0	31.2
Administrative and support services activities	72.8	53.3	73.6	52.6	55.3
Education	71.3	47.1	75.6	62.8	35.6
Human health and social work activities	69.7	65.9	72.9	77.2	47.3
Arts, entertainment, and recreation	30.1	19.6	52.1	24.3	37.6
Other service activities	18.1	8.6	32.3	14.5	37.0

Source: 2022 Establishment Survey.

Table D.12. Continued

	We have a provident fund for our employees with a recognized financial institute.	We provide overtime payment to our employees.	We provide pay slips/evidence of wages paid to our employees.	We have a written contract/term of employment for our staff and new recruits.	We issue an appointment letter at the time of appointment of new recruits.
Agriculture, forestry, and fishing	15.5	15.4	30.9	10.8	19.8
Mining and quarrying	34.3	42.3	47.4	43.3	48.0
Manufacturing	24.5	40.1	42.9	21.3	23.7
Electricity, gas, steam, and air-conditioning	90.0	35.9	90.0	100.0	93.9
Water supply, sewerage, and waste management	8.0	14.3	51.5	40.5	40.5
Construction	50.2	67.2	77.5	32.8	29.0
Wholesale and retail trade	14.7	17.0	27.8	10.5	11.5
Transportation and storage	37.2	12.4	22.3	10.9	13.6
Accommodation and food services activities	8.9	11.2	24.8	9.4	11.3
Information and communication	60.3	55.9	77.4	57.3	63.5
Financial and insurance activities	100.0	72.8	100.0	100.0	100.0
Real estate activities	0.0	0.0	0.0	0.0	0.0
Professional, scientific and technical	36.5	23.1	57.9	32.4	44.2
Administrative and support services activities	62.5	31.5	80.0	44.3	53.7
Education	56.4	32.0	82.9	58.5	71.1
Human health and social work activities	69.7	33.8	92.5	56.0	64.0
Arts, entertainment, and recreation	19.5	20.7	35.1	21.5	12.7
Other service activities	15.5	13.0	23.4	13.5	21.8

Source: 2022 Establishment Survey.

Table D.12. Continued

	We have clear job roles and responsibilities for our staff and new recruits	We provide maternity leave.	We provide paternity leave.	We have Group Insurance Scheme (GIS) for our employees.	We have a sexual harassment policy/ grievance system in place.
Agriculture, forestry, and fishing	29.4	24.2	29.3	5.3	5.9
Mining and quarrying	50.3	57.4	46.6	21.6	34.2
Manufacturing	44.7	37.8	35.3	11.5	20.2
Electricity, gas, steam, and air-conditioning	93.9	93.9	93.9	84.1	91.8
Water supply, sewerage, and waste management	12.3	4.0	8.3	8.0	18.3
Construction	58.9	36.8	59.8	13.3	22.1
Wholesale and retail trade	25.5	23.7	22.2	4.8	11.9
Transportation and storage	31.0	26.1	19.5	2.8	12.7
Accommodation and food services activities	29.4	28.3	22.2	3.3	14.4
Information and communication	76.6	72.7	76.7	23.6	40.5
Financial and insurance activities	100.0	100.0	100.0	94.1	86.7
Real estate activities	0.0	0.0	0.0	0.0	0.0
Professional, scientific and technical	56.6	32.0	37.0	13.6	21.8
Administrative and support services activities	79.8	65.5	66.6	40.6	42.9
Education	85.4	74.7	63.4	23.8	61.8
Human health and social work activities	92.5	69.7	64.0	49.6	65.2
Arts, entertainment, and recreation	33.2	27.8	31.4	13.5	17.3
Other service activities	36.6	44.2	26.4	17.1	12.7

Source: 2022 Establishment Survey.

Appendix E: Overview of Selected ALMPs

Youth Engagement and Livelihood Program (YELP)

Launched by the Ministry of Industry, Commerce, and Employment (MoICE) in 2019, YELP helps unemployed youth find regular employment by offering training and work experience. The school-to-work transition program provides job-seekers ages 18–29 with various opportunities to gain on-the-job skills and work experience to enhance their employability across sectors such as construction, agriculture, tourism, hydropower, and hospitality. In this scheme, job-seekers are connected with employers to minimize the burden on both the employee and employer, and the ministry provides a monthly allowance of Nu 5,000 as a wage subsidy. The duration of the support ranges from three to 24 months. In addition, in recent years the government has begun to financially support youth who decide to start a business after completing the program (Kuensel 2023). In fiscal 2022/23, 2,545 individuals went through YELP (Bhutan Today 2023).

Startup and Cottage and Small Industries (CSI) Development Flagship Program

The Startup and Cottage and Small Industries (CSI) Development Flagship Program carried out by MoICE promotes entrepreneurship and innovation among youth. To boost the creation of start-ups, the program provides start-up entrepreneurship training and competitions for business ideas for those who would like to become entrepreneurs (MoICE 2023a). As pivotal part of the CSI Flagship Program, five business incubation centers under the Royal University of Bhutan (RUB) Colleges have been established to serve as hubs for entrepreneurship, economic development, and innovation. The training offered by the five incubation centers consists of mentorship, networking opportunities, and information sessions (RGoB 2022). In addition, “Fablabs” have been established to allow aspiring entrepreneurs to showcase their products and ideas to investors. CSIs are supported by the provision of soft and hard skills training with the goal of enhancing their competitiveness and expanding their business. The project goal is to increase employment and enhance Bhutan’s overall economic growth (MoICE 2023a). In fiscal 2022/23, 2,079 individuals benefited from the entrepreneur training, and 10 start-up events were hosted (MoICE 2023a).

Community Skills Training—SSDP and VSDP

Founded in 1996, the Special Skills Development Program (SSDP) provides disadvantaged individuals with skills and vocational training. Although the program was originally geared toward developing the skills of the armed forces in vocational professions, it later expanded to other vulnerable groups such as monks and nuns, juveniles and delinquents, prisoners, and former gang members. The training is offered in coordination with organizations such as the Royal Bhutan Police and the Royal Bhutan army.

Launched in 1984, the Village Skills Development Program (VSDP) provides rural communities with skills training and capacity building. The goal is to improve the quality of life in rural communities by promoting skills training, capacity building, reviving and preserving traditional crafts and arts, and discouraging rural to urban migration.

In particular, the VSDP offers skills training such as haircutting, home appliance repair, and tailoring. Village-specific skills training is offered to villages identified as able to produce certain goods with the goal of creating jobs and establishing a reputation for producing quality goods (MoLHR 2019). In 2022, a total of 24 trainings were implemented for 938 beneficiaries of both the SSDP and VSDP. Both programs were implemented across 11 *dzongkhags* (MoESD 2022).

Critical Skills Training (CST)

The CST program addresses the short-term needs of the labor market to provide young job-seekers and the unemployed in the private sector with employable skills. Training opportunities are offered in food production, tailoring, fashion design, hair and beauty, massage therapy, and home appliance repair. Courses range in length from 15 days to 12 months. The program has been implemented in cooperation with registered private and public training providers. It is complemented by an entrepreneurship component to enable self-employment. As of 2022, 506 individuals were trained under the CST, of whom 58 percent were females (MoESD 2022).

Critical Capability Development (CCD)

The CCD program provides continuous learning opportunities for employees outside the civil service sector. The mandate of this program is to provide lifelong learning through reskilling and upskilling support in the private sector. It offers short-term courses of six months or less and long-term courses of more than six months. The fellowships offered are in various sectors such as public management, human resources management, and food science and technology. The training programs have been largely implemented by means of fellowship offers from multilateral and bilateral donors. Examples are the Australian Awards Scholarship offered by the Australian government and the Diploma in Hospitality and Tourism offered by the Austrian government. In 2022, 990 individuals were trained under the CCD, of whom 62 percent were female candidates (MoESD 2022).

Skills Development Plan (SDP)

In 2021, the Skills Development Plan (SDP) was launched to provide skills training to job-seekers and those affected by the COVID-19 pandemic. Among the services provided were easy and diverse access to skills training; the promotion of entrepreneurship; and the linking of individuals to professional opportunities. Eligible individuals are employees laid off during the COVID-19 pandemic, registered job-seekers, and overseas returnees. The 108 courses provided under the SDP are completed in nine sectors such as agriculture, business and services, computing and information technology, construction, and creative arts and design. The courses last from one to seven months (MoLHR 2021c). All courses are complemented by two weeks of entrepreneurship learning to foster self-employment. Course participants receive a monthly stipend of Nu 3,500 (approximately US\$45). As of 2022, 1,881 beneficiaries had been trained, of whom only 35 percent were female (MoESD 2022).

Appendix F: Supplementary Tables, Chapter 4

Table F.1. ALMPs and gaps by target

Program	Urban/rural	Women	Youth	Other vulnerable groups
Youth Engagement and Livelihood Program (YELP)			✓	
Startup and Cottage and Small Industries (CSI) Development Flagship Program			✓	
Special Skills Development Program (SSDP)				✓
Village Skills Development Program (VSDP)	✓			
Critical Skills Training (CST)			✓	
Critical Capability Development (CCD)				✓
Skills Development Plan (SDP)				✓

Source: Own elaboration.

Table F.2. ALMPs and gaps by ALMP classification

Program	Labor market training	Job search assistance	Private sector employment assistance
Youth Engagement and Livelihood Program (YELP)	✓		✓
Startup and Cottage and Small Industries (CSI) Development Flagship Program	✓	✓	✓
Special Skills Development Program (SSDP)	✓		
Village Skills Development Program (VSDP)	✓		
Critical Skills Training (CST)	✓		
Critical Capability Development (CCD)	✓		
Skills Development Plan (SDP)	✓		

Source: Own elaboration.

Table F.3. ALMPs and gaps by type of training

Program	Upskilling	Reskilling	On-the-job training	Soft skills
Youth Engagement and Livelihood Program (YELP)	✓		✓	
Startup and Cottage and Small Industries (CSI) Development Flagship Program	✓	✓		✓
Special Skills Development Program (SSDP)	✓			
Village Skills Development Program (VSDP)	✓			
Critical Skills Training (CST)	✓			
Critical Capability Development (CCD)	✓	✓		
Skills Development Plan (SDP)	✓	✓		

Source: Own elaboration.

Note: Upskilling helps employees acquire more skills and competencies in their current position. Reskilling equips employees to change jobs across different sectors or organizations.

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