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BHUTAN DEVELOPMENT REPORT

January 2019

A Path to Inclusive and Sustainable Development

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Macroeconomics, Trade, and Investment
Global Practice



WORLD BANK GROUP

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Government Fiscal Year: July 1–June 30
Currency Equivalent: Exchange Rate Effective as of January 7, 2019
Currency Unit = Ngultrum (Nu)
US\$1 = Nu 70
Weights and Measures: Metric System

ABBREVIATIONS AND ACRONYMS

ADA	Austrian Development Agency
BCCI	Bhutan Chamber of Commerce and Industry
BDBL	Bhutan Development Bank Ltd
BFAL	Bhutan Ferro Alloys Ltd
BIT	Business Income Tax
CDCL	Construction Development Corporation Limited
CIB	Credit Information Bureau
CIT	Corporate Income Tax
CPIA	Country Policy and Institutional Assessment
CSI	Cottage and Small Industries
DGPC	Druk Green Power Corporation
DHI	Druk Holding and Investments
DNP	Department of National Properties
DRC	Department of Revenue and Custom
DRM	Domestic Revenue Mobilization
FDI	Foreign Direct Investment
FYP	Five-Year Plan
GDP	Gross Domestic Product
GLC	Government-Linked Companies
GOI	Government of India
GST	Goods and Services Tax
HCI	Human Capital Index
HR	Human Resource
ICT	Information and Communication Technology
IDI	ICT Development Index
IMF	International Monetary Fund
LLC	Limited Liability Company
LPI	Logistics Performance Index
MDPP	Minimum Daily Package Price
MICE	Meetings, Incentives, Conferences and Exhibitions
MoAF	Ministry of Agriculture and Forests
MSME	Micro, Small, and Medium Enterprise
MYRB	Multi-Year Rolling Budget
NBFI	Non-Bank Financial Institution
NKRA	National Key Results Area
LMO	Labor Market Observatory
O&M	Operations and Maintenance
PEMS	Public Expenditure Management System
PFM	Public Financial Management
PIT	Personal Income Tax
PlaMS	Planning and Monitoring System
PPP	Public-Private Partnership
PSMP	Power System Master Plan
RAMIS	Revenue Administration Management Information System
RGoB	Royal Government of Bhutan
RKC	Revised Kyoto Convention
RMA	Royal Monetary Authority
RNR	Renewable Natural Resources
RSEBL	Royal Securities Exchange of Bhutan
SOE	State-Owned Enterprise
TFP	Total Factor Productivity
VNR	Voluntary National Review
WWF	World Wildlife Fund

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OVERVIEW

Bhutan has a strong track record of reducing poverty and boosting shared prosperity, primarily supported by the state, which has played a large role in the country's development accomplishments. Growth has been driven mainly by the public sector through hydropower development. State dominance is also reflected in the existence of a large number of state-owned enterprises (SOEs). However, the dependence on hydropower has resulted in a weak private sector and also created macroeconomic vulnerabilities. The high import content of hydropower construction widened the external imbalance and increased indebtedness. In addition, tax collection at 14 percent of gross domestic product (GDP) in 2017/18 is low by international standards.

The government has taken important steps to develop the nascent private sector through investments in infrastructure and improvements in the investment climate. It has also invested heavily in education and health. Despite these laudable investments, available jobs remain vacant, while educated youth remain unemployed. While hydropower will remain dominant in the foreseeable future, Bhutan's demographic transition requires more concerted efforts to develop the private sector.

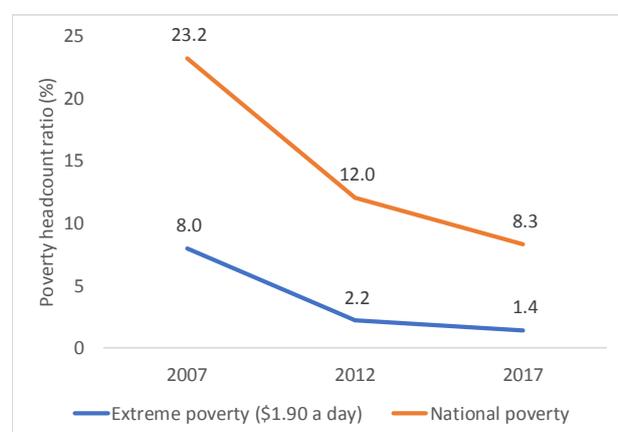
Hydropower has served the country well, but Bhutan's asset base remains undiversified. In resource-rich countries, a good way to lay the foundations for sustained private-sector-driven growth is the diversification of the country's asset base. The development of specific sectors, which is often a common ingredient of diversification strategies in certain countries, is neither necessary nor sufficient for private-sector-led growth. Macroeconomic scenarios underscore the importance to invest in physical and human capital and institutions, particularly, those which manage resource rents, provide public services and regulate the business environment. On physical capital, non-hydropower physical capital stock such as roads and information and communication technology (ICT) infrastructure remains low. On human capital, Bhutan has a long way to go given the low level of education, especially at the tertiary level, and increasing burden of both communicable and non-communicable diseases. On institutional development, further improvements in the business environment are needed and Bhutan has yet to adopt a mechanism to manage resource rents from hydropower.

With a good track record of governance and large revenues from hydropower, Bhutan is well placed to address development challenges by investing in its asset base. Resource rents from hydropower will enable the government to invest in physical and human capital. On physical capital, improvements will be needed in road and air connectivity along with ICT investments. On human capital, improvements in the health and education systems will be vital to address the emerging challenges. On institutional development, the government needs to focus on addressing state dominance of the economy, managing resource rents from hydropower, and further improving the business climate.

1. MACROECONOMIC DEVELOPMENTS

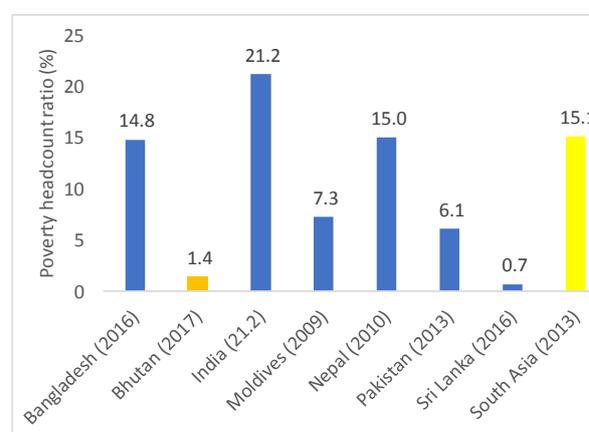
Bhutan has a strong track record of reducing poverty and boosting shared prosperity. The country has almost eliminated extreme poverty. Only 1.4 percent of the population lived on less than US\$1.90 a day in 2017. This is the second-lowest level in South Asia and substantially lower than the regional average of 15 percent (figure 1, 2). The poverty headcount ratio (US\$3.20 a day) fell from 62 percent in 2003 to 10 percent in 2017. Similarly, the national poverty rate declined from 23 percent in 2007 to 8 percent in 2017. The growth rate of consumption for the bottom 40 percent at 6.5 percent between 2007 and 2012 was the highest in South Asia. Although the growth rate slowed down to 2.4 percent between 2012 and 2017, it ranked 39 among 92 countries where data was available. Between 2000 and 2017, Bhutan’s per capita GDP increased more than four times to US\$3,100.

Figure 1. Bhutan almost eliminated extreme poverty (poverty headcount ratio, % population)...



Source. World Development Indicators.

Figure 2. ...which is the second-lowest in South Asia



Source. World Development Indicators.

Growth has primarily been driven by the public sector through hydropower development. The state-led hydropower development yielded an annual average GDP growth rate of 7.6 percent since 1981, the third-highest in the world. The country’s power generation capacity increased from 336 MW in 1990 to 1,606 MW in 2015 and has remained the same since then. During the same period, gross fixed capital formation (mainly hydropower investment) contributed to more than 60 percent of GDP growth.¹ Hydropower development is undertaken by Druk Holding and Investments (DHI), which is fully owned by the government. The sector accounted for about 40 percent of exports in 2016 and 25 percent of the total domestic revenues.² Benefits of hydropower development have been distributed to the population through increased government spending on health and education.

State dominance of the economy is also reflected in the existence of a large number of SOEs. Due to Bhutan’s small domestic market, sparse population, and high transportation costs, the risks associated with private investment are comparatively higher. For this reason, public investment in commercially oriented government-linked companies (GLCs)—that is, commercial ventures with full or partial public ownership—has played a key role in Bhutan’s development and they have a strong governance framework.³ DHI was established in 2007 to oversee the operations of GLCs. Between

¹ The result of the growth accounting exercise shows that during 2000–2015 capital stock (that is, the accumulation of investment) mainly from hydropower contributed to 63 percent of growth followed by the increase in the labor force (26 percent) and total factor productivity (TFP) (8 percent).

² After meeting their operating expenses and debt repayments, the net contribution to the government comes in the form of corporate tax, dividend, profit transfers, royalty, and interest receipts.

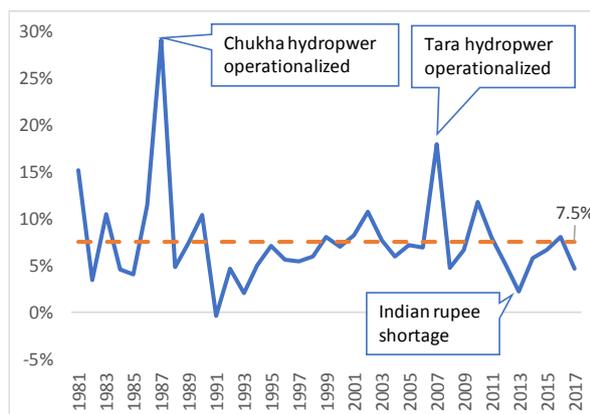
³ World Bank. Forthcoming. *Governance of SOEs in South Asia*.

2009 and 2015, DHI's assets more than tripled, growing from Nu 51 billion to Nu 173 billion.⁴ Currently, DHI has shares in 19 different companies operating in various sectors. To avoid competing with the private sector, DHI had the mandate to focus on ventures with long gestation periods and/or low returns and strategic investments with high risk, while divesting shares in companies in which the private sector can assume a greater role. However, DHI continues to operate in commercial sectors like manufacturing, energy, natural resources, financial sector, communication, aviation, trading, and real estate. This has created an unequal playing field to the detriment of private sector players.

The dominance of hydropower in the economy has resulted in macroeconomic volatility and vulnerability. The massive scale of hydropower generation projects relative to the small size of the economy generates large fluctuations in aggregate demand, both during the construction phase and when the projects become operationalized (figure 3). Taken together, the three hydropower projects currently under construction have a cost amounting to 190 percent of the country's GDP. A one-year delay of a mega-hydropower project reduces GDP growth rate by 3–4 percentage points.⁵

The high import content of hydropower construction has resulted in a large external imbalance. The current account deficit was 22 percent of GDP in 2017 and was largely financed through external borrowings. As a result, external debt reached 113 percent of GDP in 2017 (figure 4 and 5). The Government of India (GOI) is the main financier and buyer of the electricity generated by these projects—in Indian rupees (which limits exchange rate risk). As a result, a large portion of external debt—75.4 percent—is denominated in Indian rupees but they carry limited exchange rate risks. While hydropower-related spending is off-budget, the loans contracted from the GOI to finance the projects are a part of public debt. Hence, the fiscal deficit has been low but public debt is high. About 80 percent of external debt came from export-oriented hydropower projects. These hydropower projects are expected to generate substantial earnings after covering their debt obligations and therefore pose limited risks to the Government of Bhutan. Non-hydro external debt is low at 22.7 percent of GDP and comes mainly from concessional loans from multilateral financial institutions and bilateral donors. Domestic public debt is only 0.01 percent of GDP. Bhutan's external debt service to exports ratio remains manageable. Due to Bhutan's unique mitigating measures, the 2018 World Bank-International Monetary Fund (IMF) Debt Sustainability Analysis categorized Bhutan as being under moderate risk of debt distress.

Figure 3. Hydropower is the main source of macroeconomic volatility (annual GDP growth rate, %)

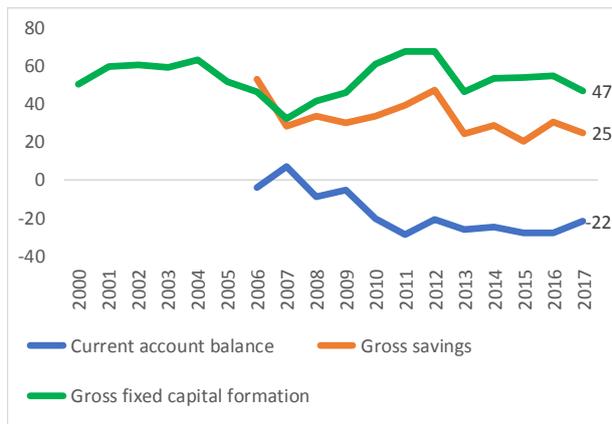


Source: National Statistics Bureau.

⁴ DHI. 2018. *Annual Report 2017*.

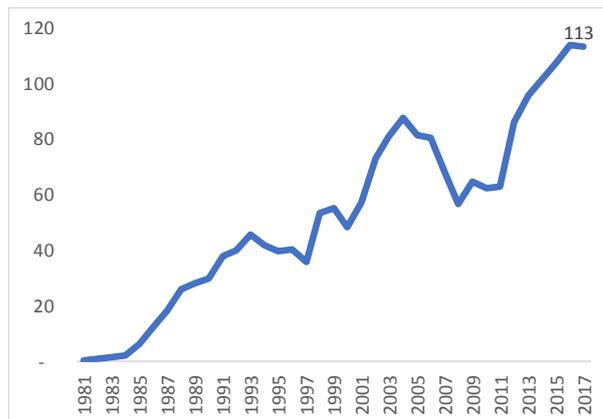
⁵ World Bank. 2017. *Bhutan Economic Update: Hydropower Sector Clouds Macroeconomic Prospect*.

Figure 4. Hydropower investment led to widen the current account deficit (% GDP)



Source. World Development Indicators.

Figure 5. As a result, external debt exceeded 110 percent of GDP (% GDP)

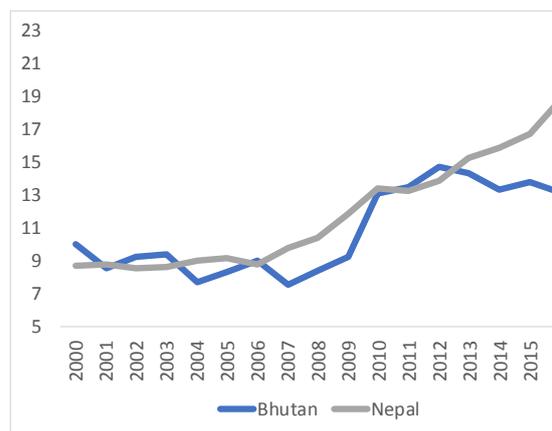


Source. World Development Indicators.

Tax collections at 14 percent of GDP in 2017/18 are low by international standards.

This is partly because hydropower, especially during construction, does not contribute to tax revenues, as well as the proliferation of tax exemptions and special tax regimes. In 2017/18, tax exemptions amounted Nu 2.8 billion, equivalent to 10 percentage points of tax revenues. These exemptions also distort actual returns on investment for the private sector. In the near-term, Bhutan will have to manage revenue pressures arising from the withdrawal of excise duty rebate from India due to the introduction of India’s Goods and Services Tax (GST) as well as the delays in the operationalization of the three hydropower projects. The comparison with Nepal shows that Bhutan’s tax revenues as a share of GDP has been stagnant since the early 2000s (figure 6).

Figure 6. Bhutan’s tax revenues have been stagnant and lower than Nepal’s (tax revenues, % GDP)



Source. World Development Indicators.

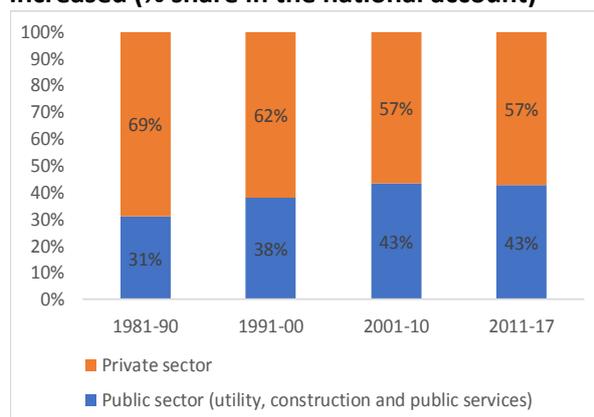
2. A NASCENT PRIVATE SECTOR

Several demand- and supply-side factors have constrained private sector development. These include skills shortages, small size of the domestic market along with limited access to foreign markets, and the lack of competition.⁶ Access to finance is also one of the repeated challenges voiced by the private sector. Skills shortages are caused by low levels of education across the population, the disproportionate recruitment of skilled workers into the public sector, and immigration restrictions on the employment of foreign workers. With a population of 735,000, logistical challenges in accessing external markets (including India), poor internet connectivity, and an appreciated exchange rate, Bhutan is not an attractive destination as a manufacturing or services hub. In addition, the existence of large SOEs in commercial sectors with preferential access to policy makers distorts the market.

⁶ World Bank. 2017. *Investment Climate Assessment for Bhutan*.

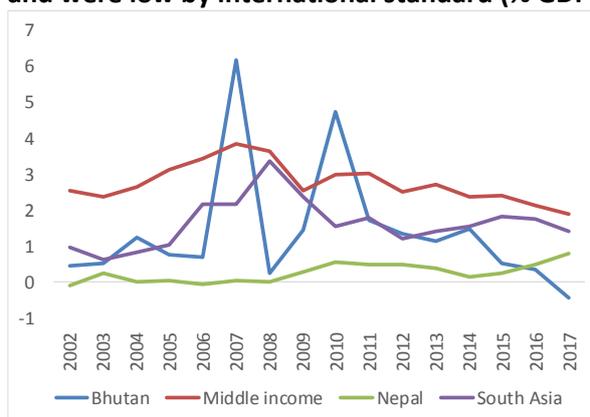
Dependence on state-led hydropower and Bhutan’s unique geography have resulted in a weak private sector.⁷ The small size of the country’s population and land area, its landlocked geography, and its mountainous topography present constraints that inhibit the exploitation of economies of scale and gains from merchandise trade. Bhutan’s history of isolation—born of the country’s geography and topography—has also inhibited the incorporation of local producers into global value chains and resulted in minimal flows of non-hydro foreign direct investment (FDI). The share of the public sector in the economy increased from 31 percent in the 1980s to 43 percent in the 2000s (figure 7).⁸ Net FDI inflows to Bhutan fluctuated because of the large size of the hydro projects compared with the economy. In the 2010s, net FDI inflows kept declining and were lower than the averages of South Asia and middle-income countries (figure 8).

Figure 7. The share of the public sector increased (% share in the national account)



Source. National Statistics Bureau.

Figure 8. Net FDI inflows to Bhutan decreased and were low by international standard (% GDP)



Source. World Development Indicators.

State dominance of the economy has led to a lack of competition. Currently, the SOEs operate in commercial sectors such as manufacturing, energy, natural resources, financial, communication, aviation, trading, and real estate sectors. The strong linkages that exist between policy makers and managers of SOEs inhibit a level playing field and may discourage private investment. The large size of some SOEs and the extent to which affiliates of such enterprises enjoy access to policy makers potentially discourages private investments and thereby limits competition.⁹ For example, the mandated role of DHI in providing feedback to the Ministry of Finance creates a de jure conflict of interest that may discourage private investment.

Efforts have been aimed at improving the investment climate. Private sector development has been a key priority since the early 2000s. Bhutan’s long-term planning document—Bhutan 2020: A Vision for Peace, Prosperity and Happiness—emphasizes the importance of private sector development. In recent years, key reforms—such as the new Licensing Policy approved by the Cabinet; digitization efforts to simplify the process of registering properties; and ongoing revisions of FDI rules and regulations—have improved the regulatory environment governing business entry and operations.

⁷ There is no single indicator to measure private sector performance. Asian Development Bank (2007) “Measuring Performance in Private Sector Development” lists (a) Global Competitiveness Index (World Economic Forum), (b) World Economic Freedom Index (Heritage Foundation), (c) Investment Climate Assessment (World Bank), (d) Doing Business (World Bank). However, these indicators measure the environment for private sector development rather than its performance. Thus, loan outstanding (% GDP), gross fixed capital formation, private sector (% GDP), and net FDI inflows are often used as indicators for private sector development.

⁸ These figures underestimate the share of the public sector. For example, there are SOEs in manufacturing, mining, and services. However, the national account does not allow us to disaggregate them.

⁹ World Bank. 2017. *Investment Climate Assessment in Bhutan*.

The government has also implemented reforms in several areas to improve access to finance, especially for cottage and small industries (CSIs). Forthcoming or proposed reforms include improving the usage of movable assets as collateral, revision of the Bankruptcy Act to strengthen legal rights for creditors and borrowers, and improvements in the existing financial infrastructure such as the Credit Information Bureau (CIB). Bhutan is ranked 81 among 190 economies in the ease of Doing Business 2019, and 82 among 137 economies in the 2017–2018 Competitiveness Report.¹⁰

The government has also taken important steps to strengthen investment in infrastructure to crowd in the private sector. These efforts have primarily aimed at improving connectivity. Since 1997, the government has built more than 6,920 kilometers of motorable roads. While Bhutanese traders enjoy low tariff barriers and increasingly efficient customs facilities, the costs of transporting goods to and from external markets in Bhutan are increased by deficiencies in infrastructure quality and logistics performance both domestically and along transit corridors. Inefficiencies at the Port of Kolkata (in India) hinder the access of Bhutanese producers to third-country markets. There is no railway network and there are only three domestic airports in Bhutan. Air connectivity is subject to frequent delays and cancellation. In addition, internet connectivity comes at a high cost and with low speed. Finally, inflows of foreign investment—which can enable access to external markets, technologies, and managerial processes—are hampered by sectoral restrictions, shortages of skilled labor, and the ad hoc nature of incentive packages. The limited use of quality certification by Bhutanese firms also inhibits access to external markets, particularly for high-value products.

3. HUMAN CAPITAL

The government has invested heavily in education. Spending on education was ramped up from 5.1 percent of GDP in FY2013 to 6.7 percent in FY2016. On a comparative scale, Bhutan’s spending on education is higher than neighboring countries.¹¹ This shows significant government commitment to investment in human capital. In the education sector, the key initiatives undertaken by the government includes teacher professional development and skills development. To compare the state of education in the country against international standards, the government took part in the Program for International Student Assessment for Developing Countries 2017, although the results are not yet available.

During the last two decades, Bhutan has achieved noteworthy improvements in health outcomes, but critical challenges remain. Although health and nutrition outcomes are among the best in South Asia (other than Sri Lanka), there remain socio-economic and geographic disparities. Infant and under-five mortality is higher in the eastern region than in the western and central regions and under-five mortality in rural areas is twice that in urban areas. The prevalence of stunting is still high, with every 5th child under age five being stunted.¹² As the country develops, significant changes in lifestyle are occurring, leading to the emergence of new health challenges. Non-communicable diseases (NCDs) are increasing and account for more than 70 percent of the reported disease burden. This poses a significant risk to people’s health in their productive years. Mental health problems including alcoholism and suicides are on the rise, owing to sociocultural changes, growing urbanization, migration and unemployment. The government has developed strategy documents such as the Multi-Sectoral National Action Plan for the Prevention and Control of NCDs (2015-2020), Mental Health Strategy and Action Plan (2015-2023) and the National Health Promotion Action Plan and their operationalization is at an early stage. Public spending on health during FY2013-16 remained at about

¹⁰ <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>

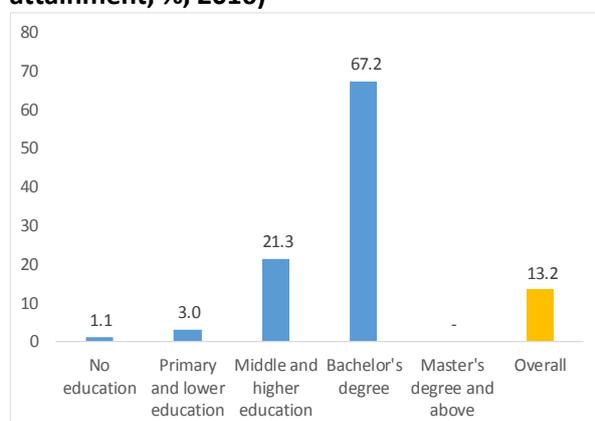
¹¹ Bangladesh (1.9 percent of GDP in 2016), India (3.8 percent of GDP in 2013), and Nepal (3.7 percent in 2015).

¹² National Nutrition Survey 2015.

2.7 percent of GDP and was largely focused on building adequate infrastructure for the delivery of health care services.

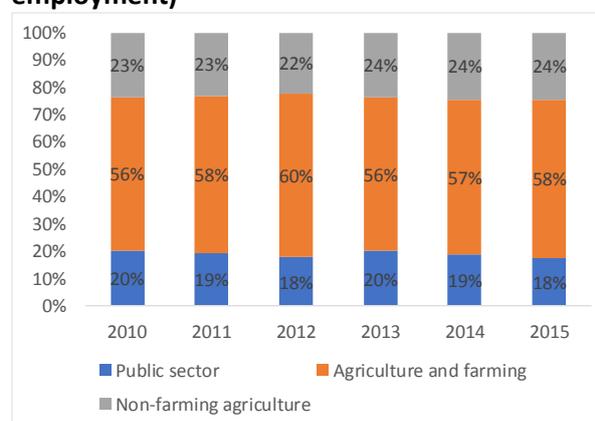
Despite these laudable investments and reforms, available jobs remain vacant, while educated youth remain unemployed. Given the capital-intensive nature of the country’s primary growth driver (the hydropower sector employs only 0.8 percent of the labor force), and extensive use of foreign labor in hydropower construction, the structure of employment remains overwhelmingly agrarian accounting for 70 percent of the jobs in the private sector. This is also reflected in lack of job opportunities for the youth, for which unemployment rate reached 13 percent in 2016. More importantly, the unemployment rate for educated youth (with bachelor’s degree) stood at 67 percent in 2016 (figure 9). Though overall unemployment rate is low at 2 percent, this low number masks pockets of unemployment and inequality. Bhutan’s public sector provides about 20 percent of the total jobs packaged with better monetary and non-monetary benefits than the private sector (figure 10).

Figure 9. Educated youth were unemployed (youth unemployment rate by education attainment, %, 2016)



Source. Ministry of Labor and Human Resources.

Figure 10. Public sector accounts for about 20% of total employment (% share in total employment)



Source. National Bureau of Statistics

Note. Public sector includes government, government agencies, SOEs, and armed forces.

4. LOOKING AHEAD

While hydropower will remain dominant in the foreseeable future, Bhutan’s demographic transition requires more concerted efforts to develop the private sector. Even in the conservative scenario, hydropower generation is likely to triple from 1,606 MW in 2017 to 5,300 MW in 2023. Hence, the capital-intensive hydropower sector will continue to play a crucial role in the economy. At the same time, the share of working-age population is projected to increase from 65 percent in 2010 to 71 percent in 2025. In other words, about 8,000 people will enter the labor market every year, and most of them will be better educated than the previous generation (figure 11). Therefore, it will be important to create good

Figure 11. In the medium term, about 8,000 people a year will enter the labor market (persons).



Source. World Bank staff calculation based on

quality jobs for the working-age population to ensure sustainable and inclusive development in the future.

In resource-rich countries, a good way to lay the foundation for sustained private-sector-driven growth is the diversification of the country's asset base.¹³ The main difference between resource-rich countries which have achieved high-income status and those which have not is that the former have managed to diversify their assets which include (a) physical capital such as infrastructure; (b) human capital embodied in its labor force; and (c) institutional capital, especially, those which govern macroeconomic management, provision of public services, and the environment for doing business. Some high-income countries, including Australia and Norway, continue to have a concentrated production and export profile. At the same time, there are other middle-income countries such as Argentina and Brazil which have diversified production through targeted investments in specific industries. International experience also suggests that barring a few exceptions, most of the high-income countries have well diversified assets. Typically, diversification of products and partners is constrained when diversification of physical, human, and institutional capital does not keep pace. Diversification of assets has enabled countries to achieve prosperity, high living standards, and a good international standing. However, countries which have largely focused their efforts on diversifying their products and exports have not been particularly successful.

The development of specific sectors, which is often a common ingredient of diversification strategies in many countries, is neither necessary nor sufficient for private-sector-driven growth. Development of specific sectors could take the form of production subsidies, fiscal incentives, subsidized credit, and trade protection. Such policies have been successful in some countries and not so in others. Even within countries, some policies have paid off while others have not. Typically, success has been higher if such policies have been accompanied by diversification of asset base. However, countries which have pursued these policies in isolation have not been successful without diversifying their assets in developing their economies. In addition, such targeted policies generally work when they are well-aligned with a country's asset base. Hence, the focus needs to be on diversifying asset base (physical and human capital and institutions), while policies aimed at developing specific industries need to be minimized.

The government has started making progress on diversifying its asset base, but there is room to do more. While access to public health and education services has improved, quality remains a concern. Similarly, there is significant room to improve access to infrastructure services and develop institutions. Unlike many other developing resource-rich countries, a huge positive for Bhutan is strong governance (for example, low level of corruption and security), development philosophy of Gross National Happiness, and a stable political environment.

The non-hydropower physical capital stock is low. Bhutan's capital stock was 270 percent of GDP in 2015, the highest in South Asia.¹⁴ However, hydropower accounted for more than 60 percent of the total capital stock.¹⁵ Non-hydropower physical capital stock is comparatively low in Bhutan (figure 12). Moreover, capital stock from government investment has been declining since the 1980s (figure 13). The weak physical capital stock is reflected in Bhutan's low score in the Logistics Performance Index (LPI). Bhutan's overall LPI score fell between 2012 and 2018, from 2.52 to 2.17 (with 5 being the most efficient). Bhutan ranked 149 out of all 160 economies in 2018. Bhutan underperforms both the regional average and lower-middle-income countries in most indicators, but particularly in

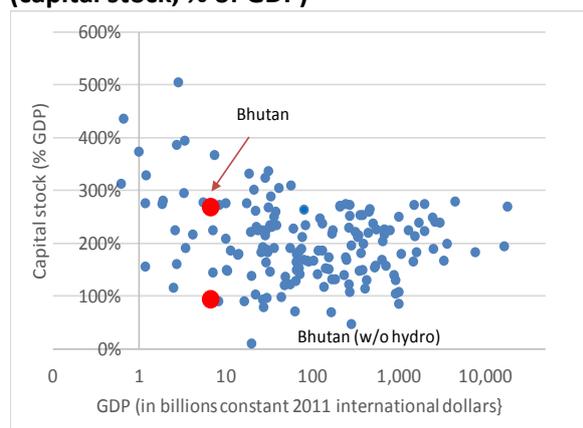
¹³ Annex 1 includes the summary of literature review on economic diversification.

¹⁴ IMF. 2017. *Investment and Capital Stock Dataset, 1960–2015*.

¹⁵ Majority of private investment is considered as hydropower investment.

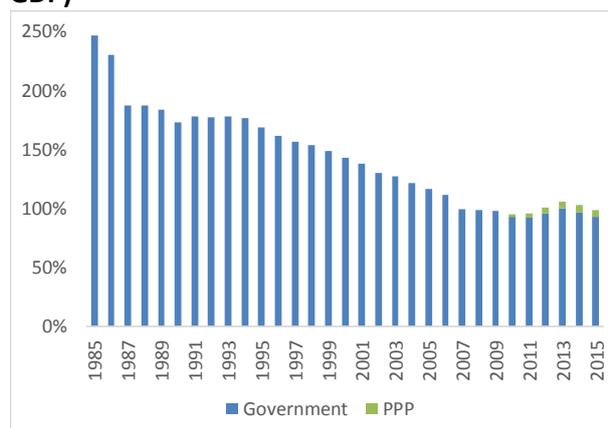
infrastructure, logistic competence, and the ability to track and trace consignments.¹⁶ There is no railway network in Bhutan. Air connectivity is limited with only three domestic airports being available and flights subject to frequent delays and cancellation. Anecdotal evidence suggests that it takes about two days from Thimphu to Trashigang (the main district in the east), 550 km using the East-West Highway. Similarly, although Bhutan's information and communication technology (ICT) sector has made significant progress over time, it has remained weak compared to the rest of the world. Mobile phone subscriptions increased from 4 (per 100 inhabitants) in 2004 to 94 in 2017. Internet subscribers increased from 1 (per 100 inhabitants) in 2007 to 93 in 2016. However, Bhutan ranked 121 among 178 countries in the 2017 ICT Development Index.

Figure 12. Bhutan's non-hydro capital stock is low
(capital stock, % of GDP)



Source. IMF, World Bank staff.

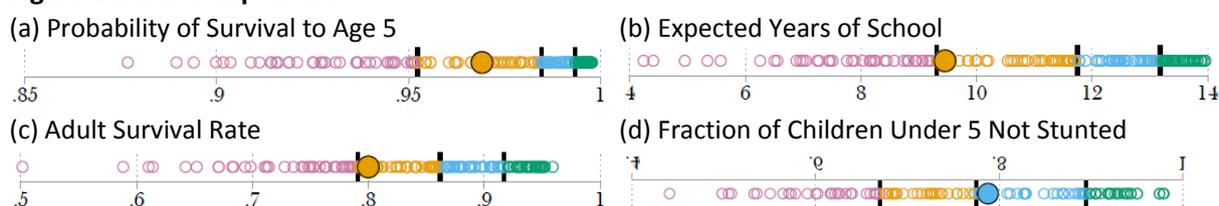
Figure 13. Non-hydropower capital stock is not only low, but also declining since the 1980s (% GDP)



Source. IMF, World Bank staff.

Bhutan has room to improve its human capital. Although the overall Human Capital Index (HCI) for Bhutan is not available due to data constraints,¹⁷ both education and health sub-indices suggest room for improvement (figure 14). Three sub-indicators (probability of survival to age 5, expected years of school, and adult survival rate) show that Bhutan is in the third quartile and one sub-indicator (fraction of children under 5 not stunted) is close to the third quartile. Especially, Bhutan's expected years of schooling (those who have completed 9.4 years of schooling by the age of 18 years) is lower than what would be expected for its income level (figure 15). This has been reflected in Bhutan's low gross tertiary enrollment rate compared to neighboring countries (figure 16). As of 2016, 63 percent of Bhutan's labor force lacked formal education and only 5 percent completed some form of tertiary education.

Figure 14. HCI Components



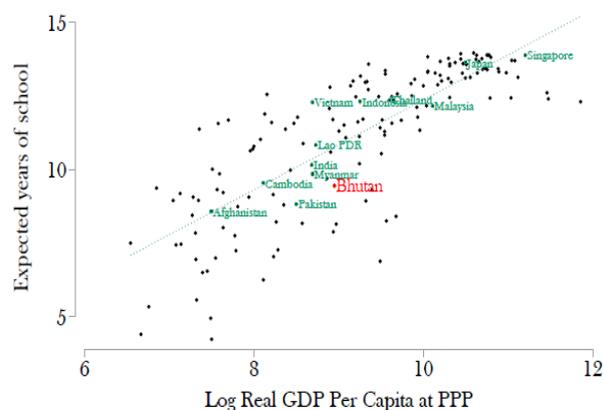
Source. World Bank.

¹⁶ Bhutan's logistical performance resembles that of other landlocked countries in the region, including Afghanistan, which ranked 160 in 2018, and Nepal, which ranked 114.

¹⁷ The HCI measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health. For Bhutan, data on harmonized test scores and learning-adjusted years of schooling are not available. Annex 2 includes the summary of Bhutan's HCI.

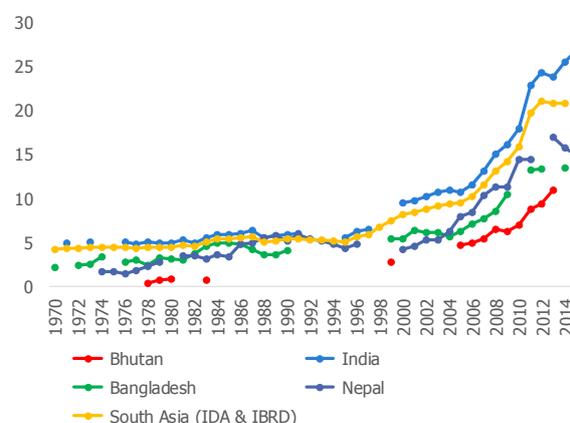
Note. Large circle represents Bhutan; small circles represent other countries; thick, vertical lines and color of circles reflect quartiles of the distribution.

Figure 15. Expected years of school in Bhutan is lower than what would be expected for its income level



Source. World Bank.

Figure 16. Bhutan lags its neighbors in tertiary education (gross enrolment ratio, tertiary, %)



Source. World Development Indicators.

On institutional development, Bhutan’s unique endowments and development challenges require further improvement. Bhutan is recognized as one of the most reform-minded countries in the world. Bhutan was ranked 3 among 74 countries in the world in the World Bank’s Country Policy and Institutional Assessment (CPIA) in 2017.¹⁸ Despite the progress, Bhutan’s unique endowments (for example, abundant natural resources especially hydropower) and development challenges require further institutional development especially in the following areas: (a) improving the business environment, and (b) maintaining fiscal sustainability.

- **Improving the business environment.** Despite the emphasis on private sector development, a public-sector-driven development mindset has persisted. This mindset has led to the formation of a large number of SOEs that have crowded out the private sector. Also, the private sector remains less attractive compared to the public sector due to the significant gap in compensation and benefits package between the two sectors. As a result, the private sector has created limited numbers of quality jobs for educated youth. Currently, there is no overarching policy to define the role of SOEs in private sector development. Also, the existing mechanism for public-private dialog (through the Better Business Council) has not been effective in catalyzing reforms. In addition, the private sector is also constrained by skills shortages, the small size of the domestic market, limited access to foreign markets, challenges of connectivity (both physical and ICT), and limited access to finance.
- **Maintaining fiscal sustainability.** Hydropower revenues are likely to plateau over the medium to long term. Given the large unmet development needs, it will be important for the government to raise its tax revenues which have been stagnant since 2010. In addition, tax expenditures which have proliferated in the past and account for 10 percent of tax revenues, have eroded the tax base and need to be revisited. On the expenditure side, the government needs comprehensive fiscal rules which can limit pro-cyclical fiscal policy. The existing rules have led to large expansions in government spending and the size of the public sector whenever hydropower projects have been operationalized. The government has started working on the GST to be implemented in 2020 while tax expenditures have been streamlined in the 2017 Fiscal Incentive Act. The government has also

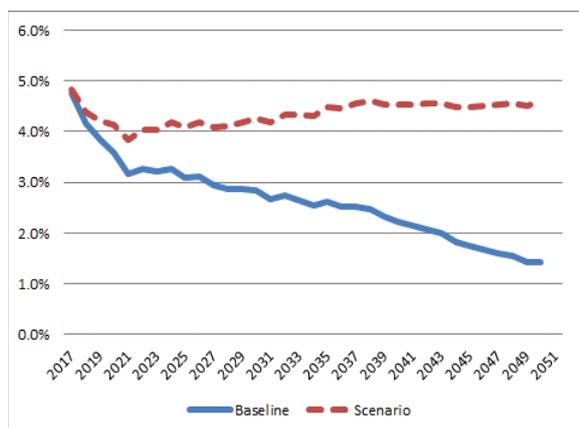
¹⁸ The World Bank’s CPIA assesses the conduciveness of a country’s policy and institutional framework to poverty reduction, sustainable growth, and the effective use of development assistance. Bhutan’s overall rating is 3.9 (1 = lowest, 6 = highest), which is higher than Bangladesh (3.2), Nepal (3.4), and the overall average (3.2).

committed to develop financing strategies¹⁹ which aim to identify potential financing sources including domestic, donor financing, and other means of financing.

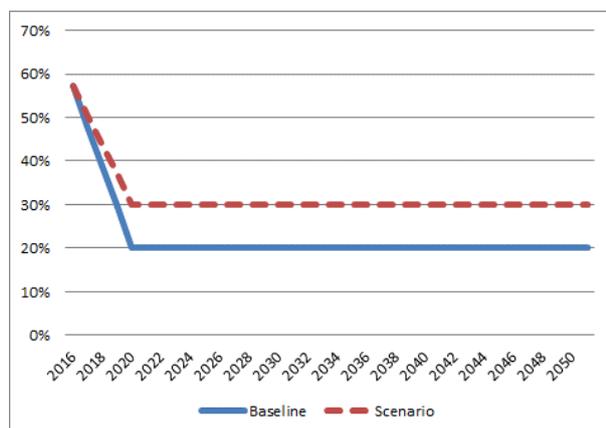
Growth projections under alternative scenarios underscore the importance of investing in physical and human capital (figure 17).²⁰ A baseline scenario suggests that annual average growth rate will decelerate to 2.6 percent per year during 2017–50. The baseline scenario assumes that the growth rate of human capital and TFP will remain the same as the current scenario. However, the investment to GDP ratio will decline from about 60 percent in 2017 to 20 percent after the 2020s due to the completion of major hydropower projects. Consequently, GDP growth rate is likely to decelerate from 5 percent in 2017 to 1.5 percent in 2050. Maintaining the growth rate at 4–5 percent requires the combination of higher investment rate, increase in productivity and further investments in human capital. This is illustrated in an alternative scenario which assumes that TFP growth rate will accelerate from 1 to 3 percent; HCI annual growth rate will accelerate from 1 percent in 2017 to 2 percent; and the investment to GDP ratio will remain at 30 percent rather than the 20 percent in the baseline scenario. These assumptions imply that Bhutan will have to invest significantly in both physical and human capital to accelerate productivity and this outcome is consistent with international experience.

Figure 17. Results of the Long-Term Growth Model (growth rate, %)

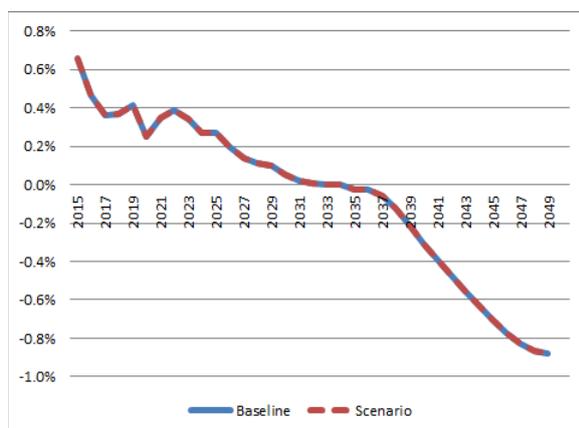
Panel A. Real GDP growth rate



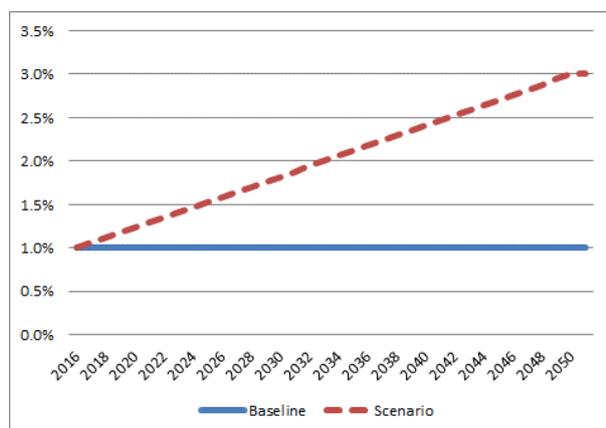
Panel B. Investment to GDP ratio



Panel C. Growth of ratio of working-age to total population



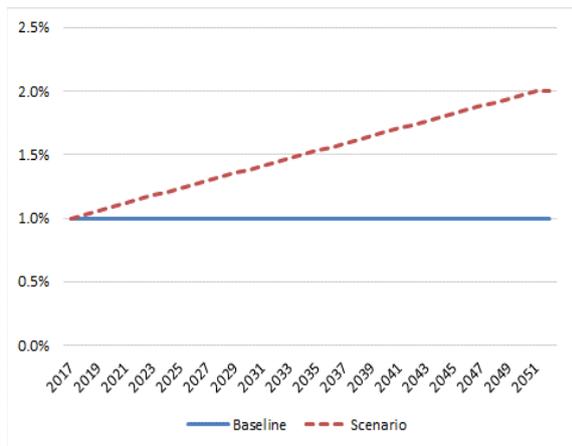
Panel D. TFP growth rate



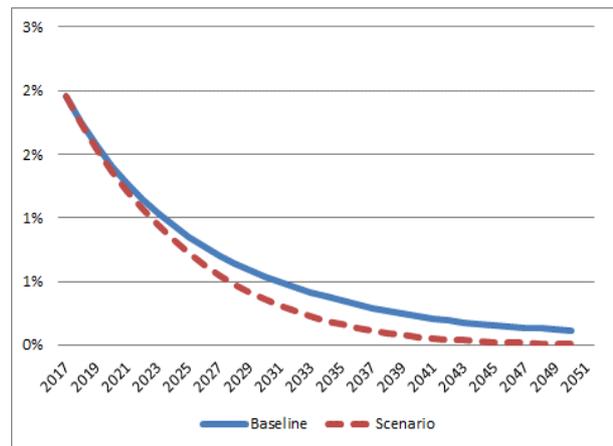
¹⁹ The Royal Government of Bhutan. 2018. *Bhutan's Voluntary National Review Report on the Implementation of the 2030 Agenda for Sustainable Development*.

²⁰ This scenario is based on World Bank's Long-Term Growth Model. Assumptions on human capital, TFP, labor market, and investment generate growth paths.

Panel E. HCI annual growth rate



Panel F. Poverty headcount rate



Source: World Bank staff based on long-term growth model 4.0.

With a strong track record of good development performance, the government is invited to consider the following policy options. These recommendations (table 1) also draw from the background notes that were prepared for this report and are annexed.

Table 1. Policy Options
(1) Institutional development

Issue	Challenge	Reform status	Policy options	Expected results
Addressing state dominance of the economy	<ul style="list-style-type: none"> ▪ Large number of SOEs crowd out the private sector ▪ Public-sector-driven development mindset ▪ Significant gap between public and private sectors in terms of compensation and benefits 	<ul style="list-style-type: none"> ▪ No overarching policy to define the role of SOEs ▪ Existing mechanisms (like the Better Business Council) not able to stimulate public-private sector dialogue ▪ Drafting a pension policy to cover the private sector in the existing formal social protection system 	<ul style="list-style-type: none"> ▪ Formulate an SOE policy to redefine the role of SOEs to enable private sector development ▪ Reinvest in a platform to stimulate public-private dialogue ▪ Align public sector compensation and benefits with the private sector 	<ul style="list-style-type: none"> ▪ Public sector plays a catalytic role for private sector development ▪ Policies reflect views from the private sector
Managing resource rents from hydropower	<ul style="list-style-type: none"> ▪ Lack of mechanism to manage resource rents and current framework (recurrent expenditures < domestic revenues) results in pro-cyclical fiscal policies ▪ No comprehensive financing strategies ▪ Hydropower is off-budget 	<ul style="list-style-type: none"> ▪ Established the stabilization fund (but only for a fraction of hydropower revenues) ▪ Formulated the 2016 Debt Policy ▪ Committed to establish financing strategies to fund development spending 	<ul style="list-style-type: none"> ▪ Formulate a comprehensive fiscal rule to ensure fiscal sustainability and counter-cyclical fiscal policies ▪ Formulate an overarching financing strategy including various financing instruments ▪ Prioritize human/physical capital investment using hydropower revenues ▪ Bring hydropower investment on-budget 	<ul style="list-style-type: none"> ▪ Hydropower revenues are effectively used to invest in human and physical capital and contribute to macroeconomic stability
Enhancing domestic revenue mobilization	<ul style="list-style-type: none"> ▪ Low tax revenues ▪ Significant tax expenditures ▪ Limited tax instruments 	<ul style="list-style-type: none"> ▪ Formulating GST regime ▪ 2017 Fiscal Incentive Act 	<ul style="list-style-type: none"> ▪ Accelerate GST implementation with social protection measures ▪ Phase out tax expenditures which are ineffective 	<ul style="list-style-type: none"> ▪ Increase in tax/GDP ratio and ensuring long-term fiscal sustainability

(2) Physical capital

Issue	Challenge	Reform status	Policy options	Expected results
Strengthening the quality of connectivity	<ul style="list-style-type: none"> ▪ Low LPI for Bhutan ▪ Market access is a binding constraint for private sector development 	<ul style="list-style-type: none"> ▪ No comprehensive needs assessment to improve connectivity ▪ No major ICT or other multi-modal infrastructure investment planned 	<ul style="list-style-type: none"> ▪ Carry out a connectivity infrastructure needs assessment followed by implementation ▪ Invest in critical ICT infrastructure ▪ Improve public investment management ▪ Include operating and maintenance costs in the medium-term fiscal framework 	<ul style="list-style-type: none"> ▪ Improvement in physical capital to harness private sector development

(3) Human capital

Issue	Challenge	Reform status	Policy options	Expected results
Improving the human capital base	<ul style="list-style-type: none"> ▪ Low expected years of schooling ▪ Poor quality and limited intake in tertiary education ▪ Poor learning outcomes ▪ Increasing incidence of NCDs and inefficient spending 	<ul style="list-style-type: none"> ▪ No comprehensive policy to handle human capital ▪ Limited participation of the private sector in the education and health sectors ▪ Few collaborations between private sector and colleges 	<ul style="list-style-type: none"> ▪ Improve availability and quality of data ▪ Formulate a comprehensive human capital strategy followed by implementation ▪ Improve learning outcomes through improved teacher quality, expansion of central schools and a strengthened system of learning assessment ▪ Improve the governance of educational institutions and enhance their quality and relevance ▪ Expand coverage for prevention and control of NCDs and improve efficiency of health spending ▪ Develop the required regulatory framework for private sector participation in health. 	<ul style="list-style-type: none"> ▪ Reduction of unemployed youth with tertiary education

ANNEX 1. ECONOMIC DIVERSIFICATION: A LITERATURE REVIEW

International experience shows that countries facing macroeconomic instability, lack of job creation, and poor growth performance have attempted economic diversification to address these challenges. These countries expect that economic diversification reduces macroeconomic instability (so that they are not affected by the changes in demands and prices of one or a few commodities); creates jobs in new sectors; and improves growth performance through increasing productivity in new sectors.

Table A1.1. Economic Diversification - Summary of International Experience

Subject	Explanation
Definition	Produce and export a wider range of products than in the initial position.
Measurement	Exports, products, and assets.
Expected results	(a) Lower volatility, (b) higher employment, and (c) increased productivity
International Experience	<ul style="list-style-type: none"> ▪ No clear consensus on whether economic diversification is a useful framework. ▪ Economic diversification is not an end, but a means, to address development challenges.
How to Diversify	A country is not advised to proceed with economic diversification before getting the fundamentals right.
Application of Economic Diversification to Bhutan	Potential framework for Bhutan to (a) address Bhutan's challenges, (b) provide a strong basis for getting the fundamentals right, (c) be consistent with Bhutan's policy direction, and (d) create a track record of economic diversification.

Source: World Bank staff.

ANNEX 2. BHUTAN'S HUMAN CAPITAL INDEX AND COMPONENTS

Bhutan Human Capital Index

THE HUMAN CAPITAL INDEX (HCI) AND ITS COMPONENTS

The HCI measures the amount of human capital that a child born today can expect to attain by age 18. It conveys the productivity of the next generation of workers compared to a benchmark of complete education and full health. It is constructed for 157 countries.

It is made up of five indicators: the probability of survival to age five, a child's expected years of schooling and harmonized test scores as a measure of quality of learning, the adult survival rate (fraction of 15-year olds that will survive to age 60), and the proportion of children that are not stunted.

Globally, 56 percent of all children born today will grow up to be, at best, half as productive as they could be; and 92 percent will grow up to be, at best, 75 percent as productive as they could be.

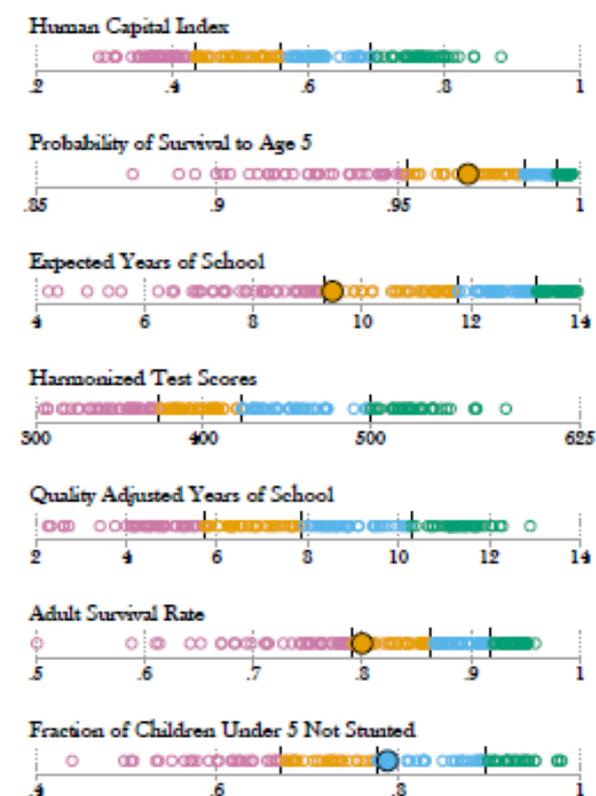
WHAT IS THE STATE OF HUMAN CAPITAL IN BHUTAN?

- **Human Capital Index.** There are no available data to calculate the HCI for Bhutan.
- **Probability of Survival to Age 5.** 97 out of 100 children born in Bhutan survive to age 5.
- **Expected Years of School.** In Bhutan, a child who starts school at age 4 can expect to complete 9.4 years of school by her 18th birthday.
- **Harmonized Test Scores.** In Bhutan, there are no available data to calculate the value for Harmonized Test Scores.
- **Learning-adjusted Years of School.** In Bhutan, there are no available data to calculate learning-adjusted years of school.
- **Adult Survival Rate.** Across Bhutan 80 percent of 15-year olds will survive until age 60. This statistic is a proxy for the range of fatal and non-fatal health outcomes that a child born today would experience as an adult under current conditions.
- **Healthy Growth (Not Stunted Rate).** 79 out of 100 children are not stunted. 21 out of 100 children are stunted, and so at risk of cognitive and physical limitations that can last a lifetime.

ARE THERE GENDER DIFFERENCES IN HCI?

In Bhutan, lack of data prevents comparison of HCI by gender. Table 1 shows gender disaggregation for each of the HCI components, where available.

Figure 1. HCI and Components



Note:

- Large circle represents Bhutan
- Small circles represent other countries
- Thick, vertical lines and color of circles reflect quartiles of the distribution

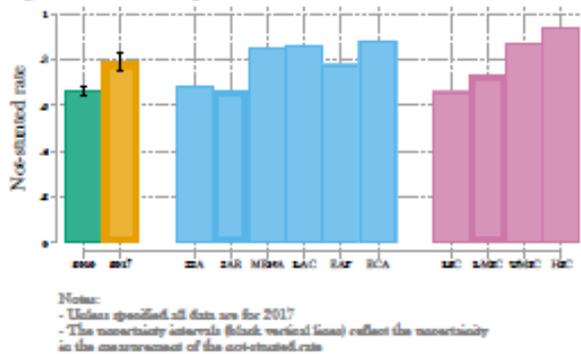
Table 1. HCI by Gender

Component	Boys	Girls	Overall
HCI	-	-	-
Survival to Age 5	0.97	0.97	0.97
Expected Years of School	9.0	9.8	9.4
Harmonized Test Scores	-	-	-
Learning-adjusted Years	-	-	-
Adult Survival Rate	0.80	0.80	0.80
Not Stunted Rate	-	-	0.79

Note:

- When shown, hyphen denotes data are unavailable
- All values are rounded
- The gender disaggregated HCI is calculated using only adult survival rates if gender disaggregated stunting data are not available.

Figure 2. Benchmarking not-stunted rate

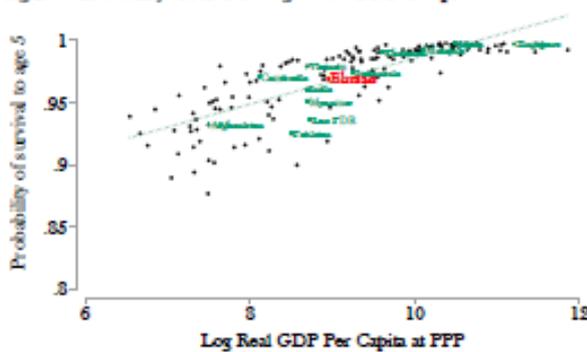


HOW DOES BHUTAN'S NOT STUNTED RATE COMPARE?

Between 2010 and 2017, the not stunted rate for Bhutan went up from 0.66 to 0.79 (Figure 2).

In 2017, Bhutan's not stunted rate is higher than the average for its region and its income group.

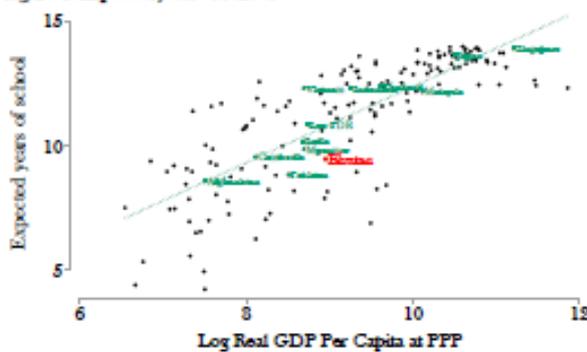
Figure 3. Probability of survival to age 5 vs GDP Per Capita



IS BHUTAN'S PROBABILITY OF SURVIVAL TO AGE 5 IN LINE WITH WHAT IS EXPECTED FOR ITS INCOME LEVEL?

In Bhutan, the probability of survival to age 5 is 0.97. This is higher than what would be expected for its income level (Figure 3).

Figure 4. Expected years of school



IS BHUTAN'S EXPECTED YEARS OF SCHOOL IN LINE WITH WHAT IS EXPECTED FOR ITS INCOME LEVEL?

In 2017, a child who starts school at age 4 in Bhutan can expect to complete 9.4 years of school by her 18th birthday. This value is lower than what would be expected for its income level (Figure 4).

THE HUMAN CAPITAL PROJECT

The Human Capital Project seeks to raise awareness and increase demand for interventions to build human capital. It aims to accelerate better and more investments in people. The Project has three elements (i) the Human Capital Index, (ii) a program to strengthen research and measurement on human capital; and (iii) support to countries to accelerate progress in raising human capital outcomes.

For more information on the Human Capital Project please visit www.worldbank.org/humancapitalproject

 #investinPeople

ANNEX 3. SUMMARY OF THE BACKGROUND PAPERS

A. Information Communication Technology (ICT)

1. Status

- Over the past 15 years, the Royal Government of Bhutan (RGoB) has outlined the country's ICT policy based on the vision of *an ICT-enabled knowledge-based society as the foundation for Gross National Happiness*.
- Bhutan's global rank on the International Telecommunication Union's ICT Development Index (IDI) was 117 in 2016 out of 175 countries.
- At present, ICT contributes to only 3.5 percent of the country's labor force and 3.7 percent of its GDP. Bhutan is therefore positioned to reap the benefits of a late starter in the technology space by not have any legacy systems, access to cost-effective technologies, and manageable amounts of data.

2. Opportunities

- **Overall.** Bhutan is well-positioned to take advantage of the lessons learned from countries around the world without having to address legacy systems and outdated approaches to ICT. Bhutan has a beneficial landscape for a thriving ICT-driven ecosystem because of its political stability and good governance, relatively small population, low levels of crime and corruption, access to electricity, and growing telecommunications network.
- **Economic growth.** A World Bank study concluded that a 10 percent increase in broadband penetration results in a 1.38 percent increase in annual GDP growth in developing countries.
- **Private sector development.** A World Bank Study showed the effect of ICT use on enterprise performance in developing countries to lead to 5.1 percent more profitability, and 1.2 percent employment growth.
- **Poverty reduction.** By providing access to information through broadband access ICT development can equalize opportunities across regions and contribute to pro-poor market developments within the digital economy.
- **Job creation.** Local ICT service industries create jobs and promote trade and competitiveness through exports.
- **Agriculture.** Through ICT, farmers and agricultural producers can more easily access relevant and timely information—from the acquisition of quality seeds, credit and insurance, water supply for irrigation, to livestock care and market prices.
- **Energy/hydropower.** ICTs can benefit the energy sector by increasing the rate of development and diffusion of energy solutions, encouraging the market dissemination of efficient systems and best practices, and by improving energy efficiency through real-time monitoring of production and consumption. ICTs can help collect, monitor, and disseminate critical environmental data to better plan for energy security and efficiency.
- **Mining/manufacturing.** ICT can be utilized for production planning, supply chain management, and monitoring business performance more effectively. Computer use, internet access, and web presence in manufacturing firms are associated with significantly higher sales and labor productivity.
- **Tourism.** ICTs benefit the tourism industry as a marketing tool and facilitator of e-commerce. The ability to reach a global audience, obtain instant market information, and conduct electronic business transactions has increased economic efficiency and has opened markets for tourism goods and services, including hotels, restaurants, airlines, weather and traffic

conditions, transportation, historical and cultural heritage guides, currency conversion, and translation.

3. Challenges

- Much of the private sector is still unaware of the potential of ICT to improve and scale their operations, or do not have the capital to invest in ICT solutions.
- Major ICT skills and expertise gaps, and the cost of access to broadband remains high, resulting in low levels of ICT utilization.

4. Recommendations

- **Financing.** The RGoB is required to identify funding sources and make concerted efforts in soliciting financial supports from all possible sources.
- **Human capacity development.** Government officials and citizens should be prepared to accept changes in the way they do their daily businesses: (a) cultivating digital mind and (b) developing capacity-building program for government officials and citizens.
- **Access to technology.** Universal access to technology should be ensured for all people. For example, the government and the national regulatory authority should establish a Universal Service Fund with sophisticated design not to distort the market but to promote market forces.
- **Legal framework.** The RGoB should ensure a comprehensive legal structure for ICT development and applications, contributing to the quality of life for the nation by prescribing ICT initiatives necessary for private sector development.

B. Tourism

1. Status

- The tourism sector generates more than US\$280 million annually in visitor spending and accounts for more than 20 percent of non-hydro exports.
- Bhutan ranks 78 out of 136 countries in the World Economic Forum Travel and Tourism Competitiveness Index for its 'enabling environment'.

2. Opportunities

- The number of royalty-paying visitors could increase from 55,000 to 110,000 by attracting more visitors during lean seasons. Arrivals could be doubled (from 110,000 to 220,000) by spreading the geographic distribution of visitors more evenly across the country, into areas that have significant tourism assets but currently receive very few visitors.
- **Job creation.** Given that Bhutan's goods and services are consumed at the site of production, tourism requires relatively low levels of capital investment, it is labor intensive, it accommodates low skill levels, and it can contribute to diversifying local (especially rural) economies. Tourism is responsible for one in eleven jobs globally and, worldwide, tourism employment consists of 50 percent youth under 25 years of age. The sector also presents important job creation opportunities for women. Globally, tourism employment consists of 70 percent women and the sector has almost twice as many women employers as the average in other sectors.
- **Manufacturing and hotel goods supply.** Three-star hotels, which account for 70 percent of the country's hotel stock, import furniture, décor, fixtures, fittings, soft goods, and so on. Some of these goods could be produced within Bhutan. Other hotel-related manufactured products that are often imported and must be frequently replaced include textiles and soft goods, such as bedding, towels, napkins, and curtains.
- **Agriculture and diversification of restaurant offers.** As tourism grows, the demand for locally produced agricultural products should also increase.

3. Challenges

- (a) Seasonality of visitor arrivals and spending, (b) the geographic concentration of tourism-related economic activity, and (c) the highly regulated nature of the sector, which limits competition, investment, and innovation.

4. Recommendations

- **Enhance the Visitor Experience:** (a) Provide technical assistance and create incentives for development and use of locally produced furniture and décor; (b) Create alternative Minimum Daily Package Price (MDPP) for packages that do not include meals and provide incentives to promote development of the country's restaurant sector.
- **Improve Geographic Spread:** (a) Build consensus around ideas presented in the Austria Development Agency (ADA) Development Plan for Eastern Bhutan and World Wildlife Fund for (WWF) Ecotourism Strategy for Southern Bhutan; (b) Create circuit development and marketing incentives to promote rural tourism focused primarily on Eastern and Southern Bhutan.
- **Reduce Seasonality:** (a) Continue experimenting with Friendship Offers; (b) Create a targeted package of incentives and marketing support, and strategy for promotion of lean season arrivals (including reviewing MDPP in lean season and for children).

- **Expand Destination Marketing and Promotion:** Develop in-house capabilities and partnerships with large hotels to market and actively sell conventions, meetings, and events (Meetings, Incentives, Conferences and Exhibitions (MICE) tourism).

C. Financial Sector

1. Status

- Although the financial sector is at an early stage of development, it has been growing and diversifying rapidly over the past decade. The private sector credit/GDP ratio increased from 18 percent in 2005 to 63 percent in 2017.

2. Opportunities

- A stable, efficient, and inclusive financial sector is a critical element for achieving several of the National Key Results Areas (NKRAs), including (a) macroeconomic stability; (b) enhanced economic diversity and productive capacity; and (c) poverty eradication and the reduction of inequality. Through its current and potential role in housing finance, it also contributes to NKRAs on improving the livability, safety, and stability of human settlements.

3. Challenges

- Critical deficiencies in the legal and regulatory framework and in financial sector infrastructure remain.
- Credits not allocated to productive sectors. The credit outstanding growth rate of the agriculture sector has been the fastest over the past six years but remains relatively small and concentrated on the books of Bhutan Development Bank Ltd (BDBL), which was initially an agricultural development bank. Despite the rapid growth in credit, it is noteworthy that enterprises—particularly microenterprises—cite access to finance as a major constraint to investment.

4. Recommendations

- **Promoting financial inclusion and literacy** contributes to the government's priorities of reducing inequality and creating productive and gainful employment through:
 - (a) Measures designed to improve and expand mobile and agent banking to reach customers throughout the country in a cost-effective manner.
 - (b) Promoting agricultural and micro, small, and medium enterprise (MSME) lending by addressing problems on both the supply and demand side, strengthening credit information, and the secured transactions framework.
 - (c) Measures to build financial literacy so that Bhutanese can use financial services knowledgeably and responsibly.
- **Strengthening banking and banking regulation and supervision**
 - (a) Capacity building of both the sector and supervisory staff
 - (b) Strengthening asset-liability management
 - (c) Modernizing supervision in line with international standards, including implementing risk-based supervision
 - (d) Strengthening prudential norms and accounting and auditing standards
- **Strengthening insurance, pensions, and regulation and supervision of non-bank financial institutions (NBFIs)**, as they have an important economic role to play in providing long-term financing for investment needs such as infrastructure and housing.
 - (a) Enacting appropriate legislation, regulations, and investment guidelines for NBFIs
 - (b) Broadening pension coverage
 - (c) Developing curricula and providing training to industry personnel

- **Strengthening Financial Markets**
 - (a) Develop a new debt management policy which would allow for issuance of Treasury bills for use in monetary policy operations, and to contribute to financial market development, independent of government borrowing needs.
 - (b) Modest longer-term bond issuance by government and DHI, and more flexible and responsive bond regulations.
 - (c) DHI may also help promote stock market development by considering selling minority equity stakes in some of its companies through the Royal Securities Exchange of Bhutan (RSEBL).
- **Strengthening the Royal Monetary Authority (RMA)**
 - (a) A new human resource (HR) strategy to increase staffing levels and develop skills.
- **Strengthening Financial Sector Infrastructure**
 - (a) Improving crisis management
 - (b) Strengthening the payments system
 - (c) Improving the environment for debt recovery by strengthening credit information and the secured transactions regime for movable and immovable collateral
 - (d) Creating an internationally accredited accounting body and finalizing implementation of International Financial Reporting Standards
 - (e) Establishing a dedicated financial ombudsman within the Office of Consumer Protection

D. Hydropower Sector

1. Status

- The Power System Master Plan (PSMP), last updated in 2004, estimates the overall hydropower potential at 30,000 MW. To date, the RGoB has identified individual projects with a total projected installed capacity of more than 25,000 MW, of which some 21,000 MW have already been constructed, initiated, or studied in more detail.
- The favorable conditions make the average cost for the hydropower to about US\$1 million per MW, which is lower than most other countries. Current plants in operation and under construction will add up to 5,260 MW of installed capacity in 2023/24.

2. Opportunities

- **Economy and revenues.** The revenues from hydropower through taxes, dividends, and royalty energy will reach Nu 26 billion, or 36 percent of the total governmental revenues, at the end of the 12th Five-Year Plan (FYP). Gross value added to the economy will be Nu 65 billion, or 35 percent of GDP.
- **Job creation.** Higher-level jobs are created through project management, engineering, and operation of hydropower. The Druk Green Power Corporation (DGPC), which operates the existing five hydropower plants has about 1,700 employees, many of them with higher education levels. Another 2,100 are employed in the project management and engineering of the ongoing projects. These numbers of employees in Bhutan is in line with the international average. This means that in the conservative scenario, it is likely that the hydropower industry will even out at the current number of about 4,000 permanent high-level positions directly employed by the sector.
- **Engineering and construction industries.** The Bhutanese contractor Construction Development Corporation Limited (CDCL) is fully involved in the construction of the 3.1 km headrace tunnel for Nikachhu hydropower project. Local Bhutanese contractors are also involved in the extensive field surveys and drifting for new hydropower projects.
- **Use of cheap and reliable power.** Many countries with abundant hydropower resources, such as Iceland, Cameroon, and Tajikistan, have attracted large industries, often related to mining and metallurgy, because hydropower could guarantee cheap power. It is, however, unclear how this subsidy has contributed to business growth.

3. Challenges

- Investments in hydropower build up large debt/GDP ratio.
- Management of hydropower revenues creates fiscal challenges.
- Technical challenges during construction and uncertainties in export markets create insecurity in future cost and revenues.
- Hydropower's dominance in the economy for governmental revenues may lead to underinvestment in other sectors, too optimistic public-sector spending, and vulnerability to climate fluctuations and natural disasters.
- Direct job creation by hydropower sector is limited.
- The main choice of the RGoB is, therefore if they see hydropower as a threat to diversification, or as a vehicle for diversification.

4. Recommendations

- The RGoB needs to streamline and strengthen the governmental and regulatory agencies to increase requirements and competitiveness of the Bhutanese hydropower.
- The RGoB must include reforms to gradually outsource parts of the services provided by state-owned utilities, and to favor national private companies to be part of Bhutan hydropower development.
- The RGoB should negotiate with neighboring countries on an expansive and long-term hydropower development for power export, with the openness of potential change in the financing and royalty energy models.
- In the longer term, the RGoB needs to include reforms to invest the additional hydropower revenues to support private sector development and diversification of other sectors.

E. Domestic Revenue Mobilization

1. Status

- Bhutan Domestic Revenue Mobilization (DRM) represents around 20 percent of GDP. Domestic revenue finances the entire current expenditure and around 22 percent of capital expenditure of the government in 2016/17.
- The government also announces fiscal incentives to stimulate and diversify the economy. Fiscal incentive represents a fiscal cost in terms of forgone revenue of 1.7 percent of the GDP in 2016/17.

2. Opportunity

- The DRM supports the poverty reduction and job creation through the distributive purpose of taxation and the business climate improvement. The distributive function of taxation is reflected in the budget of the country.

3. Challenges

- The cessation of the GOI reimbursement of imported Indian goods which is equivalent to 2 percent of the GDP.
- The delay in the hydropower projects that also could represent another 2 percent of the GDP.
- Tax instruments might be restricted to: (i) the Corporate Income Tax (CIT), the Business Income Tax (BIT), and Personal Income Tax (PIT) improvement; (ii) indirect taxation including Customs duties and excise; and (iii) property taxes.
- Tax policy improvement for developing countries depends on the available instruments.

4. Recommendations

- In CIT, BIT, and PIT, the focus of reforms should be to (i) confirm at an early stage the political will from the government and the Department of Revenue and Custom (DRC) to develop and implement a PIT reform; (ii) review the rates and slabs to ensure that they are progressive; (iii) ensure that in BIT and CIT capital gains are taxed and in PIT capital gains are non-taxed; (iv) improve the information and intelligence collection about consultants and professionals in general (there is no tax withholding for individuals); (v) implement a risk-based approach for audits and assess the outcomes; (vi) produce an annual audit plan, risk based, considering the workload of auditors; (vi) collect systematically the feedback from taxpayers for enriching the risk criteria and review the main causes for appealing the tax administration decisions and the main factors explaining the collection of fines and penalties; (vii) enhance the HR capacity of the Income Tax Division, and in general for DRC.
- The government should continue pursuing the modernization and reform of property taxation.
- Indirect taxation needs to be improved and one option is the introduction of the GST.

F. Jobs

1. Status

- Bhutan's current labor market conditions appear favorable compared to those in many other lower-middle-income countries. This difference in labor force participation rates between genders is significant but relatively small compared to the average for lower-middle-income countries.
- The public-sector accounts for about a fifth of all jobs and almost half of the jobs outside agriculture.

2. Opportunities

- Bhutan's labor market is also aided by a well-educated workforce. Recent trends point toward almost universal enrollment in primary education and rapidly increasing enrollment rates in secondary and tertiary education.
- Now is the time for Bhutan to choose between three very different development paths: public-sector-led, private-sector-led, or balanced.
- Hydropower development also creates a window of opportunity to set out on an alternative, more balanced development path.

3. Challenges

- Declining labor participation rate, pockets of unemployment, and widespread informality.
- The barriers to private sector employment include (i) high cost base, (ii) competition with the public sector, (iii) stringent labor market regulations constraining the availability of foreign labor, (iv) skills mismatches between employers and jobseekers, and (v) limited growth opportunities for MSMEs.
- One outcomes of the dominance of the public sector in the labor market is the queuing for public sector jobs.
- Labor regulations, particularly on hiring foreign workers have made labor scarcer by limiting private sector's access to labor outside of Bhutan.
- A significant portion of Bhutan's workers do not have the skills, knowledge or aptitude required by private employers.

4. Recommendations

- Use PIT data for tracking jobs.
- **Improve labor demand in the private sector.** (a) Redefine the balance between the public and private sectors by providing demand-side opportunities for the private sector to grow. (b) New approaches to procurement of infrastructure building and maintenance can serve as an important entry point for private sector job creation. (c) Recent cross-country experience with public-private partnerships (PPPs), with varied degrees of risk taken by the private and public sectors, can offer relevant lessons for stimulating private sector job growth. (d) Improving the private sector's access to labor, both unskilled and skilled, is paramount. (e) Bhutan's nonfarm private sector needs more predictable, systematic access to foreign labor to compensate for the shortage of domestic labor, both skilled and unskilled. (f) Slowing the growth of public sector compensation packages would help to make private sector jobs as attractive as public-sector jobs. (g) Bhutan's generous pension scheme is a major factor skewing the compensation balance toward employment in the public sector. (h) An income support program could contribute to a "flexicurity" approach that protects and fosters formalization and nonfarm private sector jobs.

- **Improve labor supply by reducing skills shortages and mismatches.** (a) Well-designed and properly targeted active labor market programs have two basic objectives: economic (making it more likely that the unemployed find jobs) and social (improve inclusion and participation rates for productive employment). (b) Strengthen public employment services. (c) Systematize monitoring and evaluation of active labor market programs and complement training and entrepreneurship support programs by more thorough and tailored employment services. (d) Establish a labor market observatory (LMO).

G. Mining

1. Status

- The sector accounts for about 3 percent of GDP. Approximately 1,500 people worked directly in mining companies in 2015.

2. Opportunity

- To further contribute to the economy, the mining sector needs to strengthen linkages with the construction and hydropower sectors.

3. Challenges

- There are concerns that the benefits from the mining sector have not been shared widely with the society due to poor governance, insufficient investments, and corruption.
- **Hydropower sector.** Hydropower construction creates demands on aggregates, sand, stone boulders, cement, micro silica, timbers, and iron. Most of these materials can be supplied locally. However, hydropower projects have their own mining licenses to meet their demands.
- **Financial sector.** The financial sector should play a key role in the development of the mining sector. Most miners are small private entrepreneurs, who use financial institutions for funding their businesses. However, the cost of financing especially bank borrowing is relatively high compared to other countries in South Asia.
- **ICT.** Geographical information system is an important aspect of mapping mineral deposits. It will enable small mining industries in remote areas to access ICT facilities and benefit the local communities in gaining skills that can enable people to be employed gainfully elsewhere. For instance, the development of mineral-based industries such as Bhutan Ferro Alloys Ltd (BFAL) and Bhutan Chamber of Commerce and Industry (BCCI) in Pasakha has developed this remote place into a thriving industrial town. The development of ICT infrastructure to enable proper connectivity in terms of broadband internet, usage of cell phones by miners in remote areas will benefit other users in the area.

4. Recommendations

- Enhancing geological information and grassroots exploration by making the mining sector more attractive to foreign investors.
- Putting in place a modern mineral leasing regime that can be efficiently administered and that avoids potential barriers that are detrimental to attracting private sector investment; as well as implementing an effective and efficient approach on institutional arrangements to separate the role of policy making and granting permits and leases from the role of monitoring/enforcement of lease conditions.
- Applying the local content policy to construction materials such as minerals for the construction of hydro plants.
- Ensuring that the industry operates in an environmentally and socially sustainable manner with sound benefit sharing.
- Increasing the robustness of the sectoral governance framework by strengthening transparency, accountability, and scrutinizing provisions, preventing wrongdoings or corruption in the management of minerals.

H. Investment Climate / Private Sector Development

1. Status

- Bhutan ranks 81 out of 192 countries in the 2019 overall ease of doing business, the second highest in South Asian economies
- Firms are small, geographically concentrated, and typically single proprietor. Out of an estimate of 28,000 businesses, more than 92 percent are micro firms and more than 96 percent are sole proprietors (Census 2010). Firms are highly concentrated in four regions: Thimphu/Paro, Chukha, Saprang, and Samdrup Jongkhar. The share of Limited Liability Companies (LLCs) is extremely low at 2 percent, and the stock of LLCs is stagnated also at 2 percent.
- Bhutanese firms rarely export directly. In 2015, only 3.4 percent of Bhutanese businesses engaged in direct exports. (Given low and stagnating productivity in manufacturing, it is perhaps not surprising that Bhutanese firms are not competitive in product export markets.)
- Most formal jobs that exist in Bhutan are concentrated in large firms and in the services sector.

2. Opportunities

- Bhutan's private sector benefits from the country's strong institutions. Unlike other countries in South Asia, firms in Bhutan are far less likely to worry about political instability, corruption, and courts' inefficiencies.
- **Agriculture.** Bhutan has several potential niche crops—non-commoditized products with low volumes of international trade—that could command high value in export markets like Bangkok, Singapore, and Dubai. These products are not produced in volumes comparable to commodities such as grains, but their potential is significant. With good branding, packaging, and the right market linkages, Bhutan could realize greater value addition in such products.

3. Challenges

- (i) Access to finance; (ii) access to skilled labor; (iii) taxation; (iv) transport, infrastructure, logistics, and higher costs of trade; and (v) lower entrepreneurship, innovation, and competition.
- Labor productivity at the firm level is strongly correlated with indicators on skills of its owners and workers. Bhutan's private sector is not attracting a high share of workers with postsecondary education.

4. Recommendations

- Bhutan must further diversify into high-value niches that respond to the country's latent advantage such as medical and educational tourism and agro-products subject to denomination of origin schemes which can upgrade their export value.
- **Access to finance.** Encourage competition among banks, promote the expansion of NBFIs, deepen the credit information system, bolster the restructuring and insolvency system, further develop the collateral registry, and increase financial literacy.
- **Access to skilled labor.** The RGoB should allocate additional resources to upskilling the population, undertake measures to lessen the differentials in compensation between the public and private sectors, and relax restrictions on the recruitment of foreigners with skills in demand by Bhutanese firms.
- **Taxation.** The RGoB must complete the integration of Revenue Administration Management Information System (RAMIS), provide targeted training on taxes and accounting standards,

and direct policy action toward ameliorating the supply and demand side of the missing required skills.

- **Trade, transportation, and logistics.** The RGoB must promote the use of online platform business strategies, align its customs legislation and practices with the Revised Kyoto Convention (RKC), and introduce risk-based inspections and clearances.
- **Competition and innovation.** The RGoB must create a legal framework that prevents anticompetitive practices and promote new FDI.

I. Agriculture

1. Status

- The agriculture sector plays a vital role in Bhutan's economy by providing food security, contributing to the country's GDP, providing the largest proportion of employment, and producing raw material for Bhutan's agribusiness industry.
- Rural poverty is 16.7 percent while urban poverty is 1.8 percent. The Bhutan Poverty Assessment (2014) identified primary drivers for the rapid reduction of poverty such as the accelerating commercialization of agriculture, the rapid development of rural infrastructure (roads, schools, health centers, and electrification), and the spillovers from the new construction of massive hydroelectric projects.
- In 2015, the labor force participation rate was 63.1 percent and the employment rate in the agricultural sector was 97.5 percent; among those employed in Bhutan, 58 percent were employed in the Renewable Natural Resources (RNR) sector. The agriculture sector had the largest share of employment among all sectors. Most of Bhutan's population in agricultural farming was in the rural sector, and most women (65.7 percent) were in agricultural farming as compared to 51.3 percent of men.

2. Opportunities

- Due to the trade deficit and global increase in food prices experienced in the past decade, the RGoB has placed the agriculture sector at the center of its development agenda.
- Bhutan has invested significantly in infrastructure to boost agricultural production.
- A few successful private sector agribusiness ventures such as the Mountain Hazelnuts Project provide good examples for emulation and replication.
- **Financial sector.** Low access to credit and other financial services are serious constraints to agricultural production. Only 20 percent of farmers have access to credit from formal financial institutions.
- **ICT.** Poor research-extension linkages have also led to weak capacity for transferring available technologies that could improve innovation and productivity. Therefore, information flow and linkage mechanisms between the extension service and central-level programs and centers are not adequate but could benefit from the development of ICT investment and systems to improve the information flow. Linkage to the ICT sector could help farmers and agribusinesses improve their productivity, marketability, and profitability. Weather, water, and climatic changes play a crucial role in agricultural production. In 2015, the RGoB implemented an ePest surveillance system, ePest Apps, in which Android-based gadgets were being used to capture field information on pests.
- **Tourism.** The linkage between the agricultural sector and tourism is yet to be explored. Ecotourism, a trend that is now emerging in Nepal, Kenya, and Costa Rica, offers responsible travel while conserving the environment and improving the well-being of local people. For instance, if hotels and lodges are built in identified areas, farmers and agribusinesses can supply fresh produce and livestock produce to the hotels, thus creating a market for local farmers and agribusinesses.

3. Challenges

- The agriculture sector, while being the largest employer, lags its regional neighbor's in terms of productivity and competitiveness.
- A marked reduction in labor availability, increasing feminization of agriculture, lack of mechanization, low and apparently inefficient input use, and wildlife depredation have held back advances in productivity.
- The loss of agriculture land, declining productivity, human wildlife conflict, shortage of farm labor and irrigation facilities, pest and disease management, and weak post-harvest management and facilities.
- Agribusinesses tends to underperform compared to other sectors. Agribusinesses perceive their operating environment to be different from other sectors. For instance, the biggest obstacles to the operation of agribusinesses include access to finance, tax rates, and informal competitors.
- The recently introduced Farm Shops program further demonstrates how the public-sector crowds out local private enterprises. Marketing and value-addition activities supported by the Ministry of Agriculture and Forests (MoAF), usually the domain of the private sector, are instead channeled through various public agencies.
- Mistargeted subsidies being provided to the agribusiness sector lower the incentives for farmers to diversify and innovate.

4. Recommendations

- Infrastructure is essential for connecting farmers and agribusiness owners to markets. Short lengths of access roads could open doors for significant production potential.
- Encouraging diversification of crop farming and livestock production would help mitigate the risk associated with poor harvests and other hazards.
- Implement measures that would increase farming productivity. Adoption of technology can increase productivity through farm mechanization that can replace shortage of labor. Also, improved technology can provide sustainable approaches to managing pests and wildlife. Further, improvements in the quality of inputs and seeds based on research would produce higher and better-quality yield suitable for both domestic and international markets. Also, increasing access to rural areas and markets would encourage agricultural productivity. In addition to access to better infrastructure, agricultural production would also benefit from access to credit and technology, which can enable farm mechanization.
- Implement policies to ensure protection of agricultural workers in the informal economy particularly in small scale and subsistence agriculture.
- Currently, the public sector is crowding out the private sector in Bhutan. For instance, when the government provides power tillers to farmers for free, it crowds out the private sector which could have sold the power tillers while benefiting the Bhutanese economy through employment, taxes, and other aspects. The MoAF has to encourage geographical specialization of crop production as some areas have a higher yield per acre for specific crops than others. Also, planned reforms by the government for the agribusiness sector such as trade logistics, investment, access to finance, innovation, and market access, are needed to boost agricultural productivity.

J. Public Financial Management

1. Status

- A well-performing public financial management (PFM) system is considered as a platform for efficient management of a country's scarce resources and promotes transparency and accountability to citizens on how public expenditures are executed in accordance with development goals.
- The 2016 PEFA shows the progress between 2010 and 2015.
- There is a strong linkage between corporate governance and economic development. SOEs in Bhutan have become one of the major sources of revenue for the government and they contributed more than 40 percent of the total domestic revenue in 2014 in the form of taxes and dividends.

2. Opportunities

- **Private sector development.** Sound PFM systems and corporate governance facilitate private sector development and job creation in Bhutan. Accurate and timely information on government spending instills greater confidence in the private sector that the budget is executed as planned and there is certainty in government spending. Private investors also welcome reforms in public procurement including simplification of processes and the introduction of e-Procurement. These reforms could contribute to achieving substantial savings in expenditure, making more funds available for social sector and development, and bringing more predictability in government spending. Private sector participation can also be promoted by establishing an administrative structure and operationalizing a legal and regulatory framework for PPP, and a uniform GST environment which will mainstream Bhutan with its neighbors.
- **ICT.** The RGoB has recognized the importance of ICT and is pursuing many initiatives. These include the integration of Planning and Monitoring System (PlaMS), Public Expenditure Management System (PEMS), and Multi-Year Rolling Budget (MYRB); development of a Government Performance Management System; a web-based inventory system that is under development by the Department of National Properties (DNP); the web-based RAMIS and a separate intelligence and investigation unit to strengthen revenue collection (implemented by the Department of Revenue and Customs); a dialogue on the integration of the Civil Service Information System with the payroll system in PEMS and the development of a central procurement management system.

3. Recommendations

- **Moving to a unified budget.** Bhutan maintains a dual budget, with separate resource envelopes, procedures, and classifications for recurrent and capital expenditures. The rationale for dual budgeting is based on the false premise that only capital projects are productive, so recurrent expenditure must be squeezed to allow more resources to go into investment. The result is the under-funding of O&M, low utilization of existing capital assets, and under-spending of optimistic capital budgets.
- **Promoting the accounting profession.** Professional (or Chartered) Accountants contribute to private sector development. As the economy grows, there is an increased demand for qualified accountants in both private and public sectors.
- **Scaling up PFM reforms for health and education.** While lot of work had been done or is in progress on PFM, there is clearly an opportunity to carry out some analytical work in these two sectors to identify any opportunities for strengthening systems in these two sectors so that more funds become available to the final beneficiaries.

- **Sequencing reforms.** Subsequent PFM reforms should be sequenced along three tracks: further improving compliance; a progressive move from annual to medium-term budget planning; and a staged move from traditional line-item budgeting to program budgeting, and eventually performance budgeting.
- **Using ICT for bringing transformational challenges.** Several governments across the globe are harnessing cutting edge ICT technologies for strengthening governance and PFM environment in their jurisdiction. Bhutan can also benefit and should explore use of technologies such as big data, data analytics, and mobile technologies, using appropriate caution in light of constraints on skills and ICT infrastructure.

