

Bhutan

Country analysis and economic overview



Prepared for International Think Tank for LLDCs
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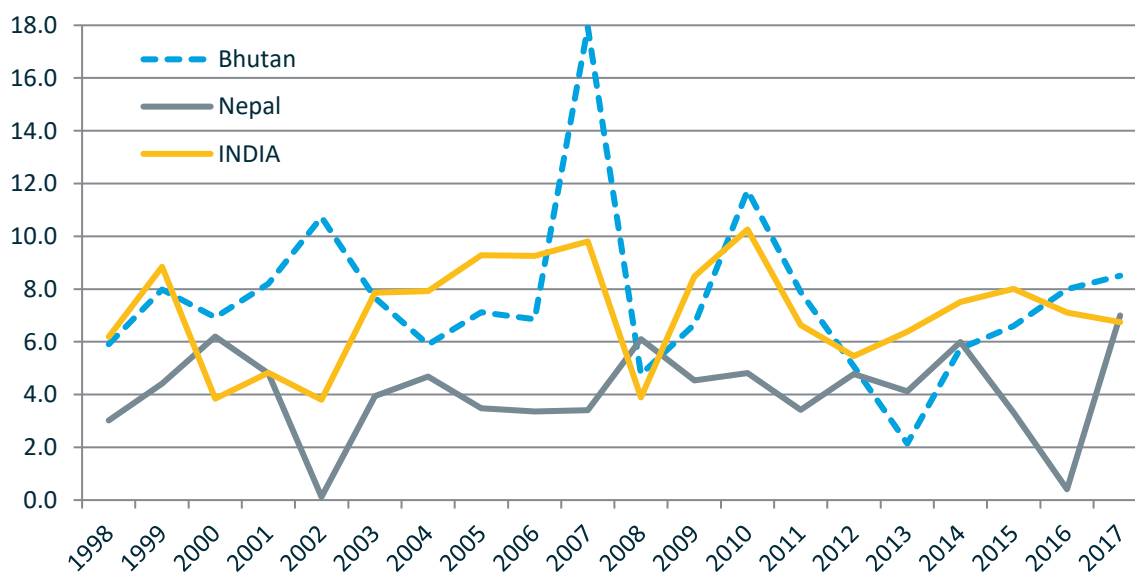
Bhutan

Country analysis and economic overview

Bhutan's economy has boomed on the back of the installation of hydropower plants over the last thirty years and the subsequent development of electricity exports to India. For one of the world's smallest countries (less than a million people), which is effectively landlocked with few neighbours, hydropower/infrastructure investment has transformed the economy. It now has the highest GDP per capita of any country in South Asia and has recorded one of the fastest rates of GDP growth in the world over the last decade. Per capita GDP in 2016 was 2,800 US dollars at current market prices, and almost 9,000 dollars at PPP (purchasing power parity) according to a World Bank estimate.

The average annual rate of GDP growth for 2007-2016 was just below 8%, above India's rate of 7.4% and only a percentage point below the 9% achieved by China during this period. This performance also contrasts with neighbouring Nepal, where growth was just over 4% over the same decade. Figure 1 below compares the performance of these countries and shows the relatively similar pattern of growth in Bhutan and India. Volatility in Bhutan is also linked to the timing of hydro installations.

Figure 1: GDP growth across Bhutan, India and Nepal (% per annum)



Source: World Bank, WDI database and recent reports on 2017 growth

The principal driving force behind growth has been the construction of hydropower plants that support not just the supply of power within Bhutan but the exporting of electricity to India. The development of hydropower has had a major impact on the composition of Bhutan's GDP. In addition to raising the production of electricity, it has also spawned the growth of energy intensive industries such as ferro-alloy (and other steel and cement) industries that make use of cheap power. The peaks in Bhutan's GDP growth performance coincide with the opening of new

hydropower plants. Four new plants are currently under construction, two of which are behind schedule having encountered geological and technical challenges. When they come online (notionally by 2020), GDP growth is expected to surge back to 11+%¹ while the share of the power sector in GDP will again exceed 20%, as it last did in 2006/07.

Table 1: Industry shares in GDP (%)

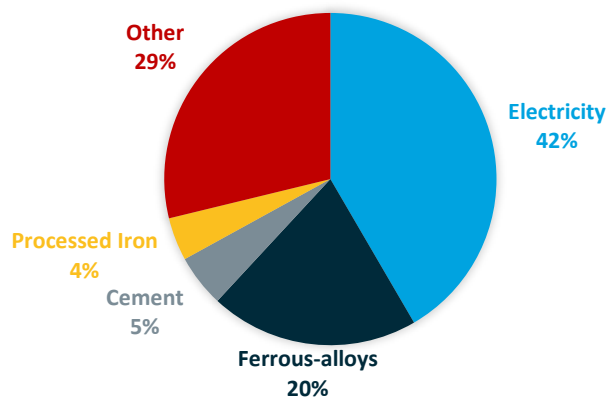
	2005	2010	2015
Manufacturing	7.0	8.7	7.9
Electricity and water	10.0	17.6	14.5
Construction	17.0	14.2	15.6

Source: Royal Government of Bhutan: National Account Statistics 2016

Exports

In 2016, total exports of goods and services were close to 700 million US dollars, equivalent to some 30% of GDP (just over 2,200 million US dollars) and this trade was heavily concentrated on the power industry and related (energy intensive) industrial products.

Figure 2a: Exports of merchandise goods 2016 (by value)



Source: Royal Government of Bhutan, Trade Statistics 2016

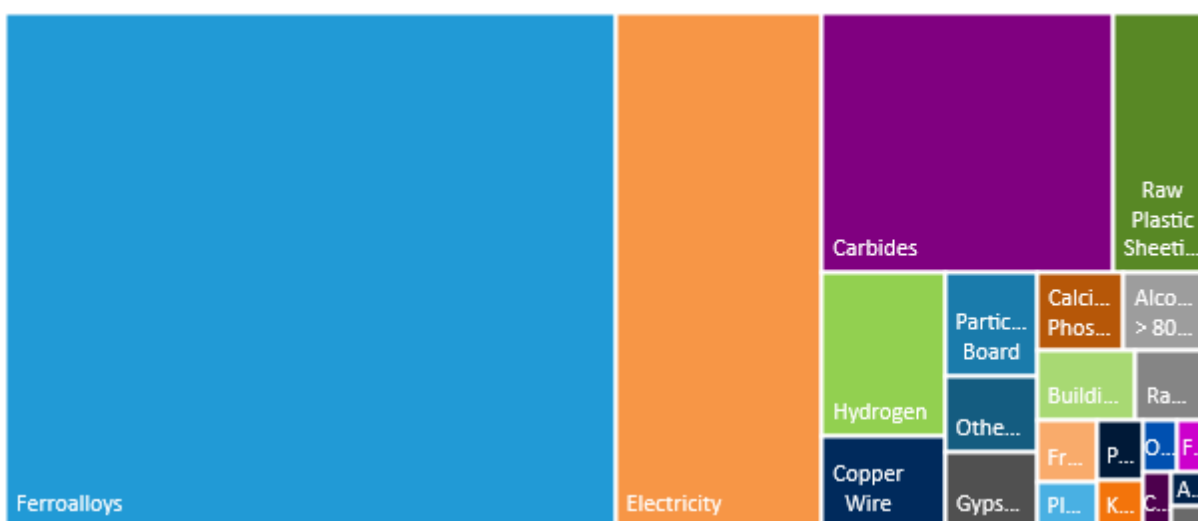
Small, traditional export industries have long existed in mining, forest timber and fruit farming but they remain very limited in scale and potential. Efforts have been made to diversify into services, especially IT software, but the level of achievement so far has been modest. Nevertheless, transport and tourism have boosted services exports, which all together

¹ World Bank Group. 2017. *Global Economic Prospects, January 2017: Weak Investment in Uncertain Times*. Washington, DC., p158; also IMF: *Bhutan Staff Report, Debt Sustainability Crisis*, June 8 2016

accounted for about 150 million US dollars in revenues (nearly a quarter of total exports) in 2016-17.

In effect, Bhutan’s export markets are dominated by the production and utilisation of electricity and remain relatively undiversified. In 2009 and 2012, World Bank applications of the Hirschman-Herfindahl Index (HHI) registered scores of 0.86 and 0.75 respectively – at the high end of concentration rates.² Nevertheless, new estimates of concentration calculated by Oxford Analytica suggest that diversification may not be so poor if a more appropriate selection of mostly small, developing economies is used as the comparator base. Very large and/or advanced economies are likely to support far more diversity in their products and markets and may therefore be seen as inappropriate comparators.

Figure 2b: Export structure



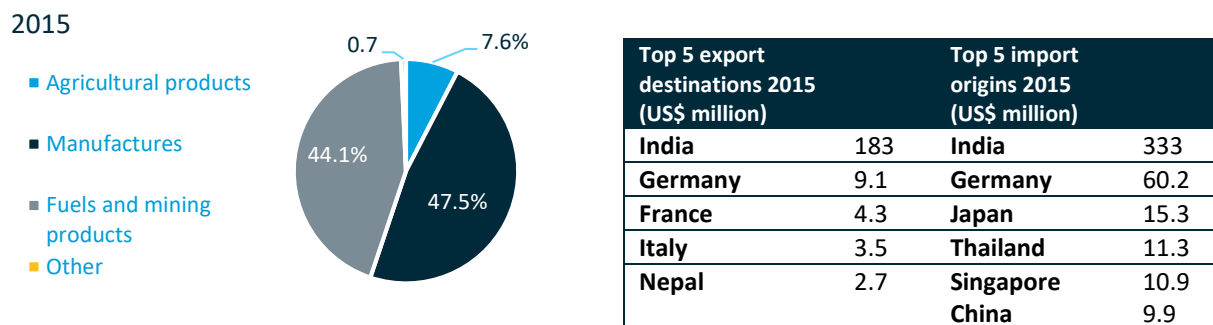
Source: The Observatory of Economic Complexity (2015 data)

Export destinations

While a small share of Bhutan’s trade is with neighbouring Bangladesh, Nepal and others, the country is dependent on India (the destination of some 90% of its exports). India is also the origin of most of its imports of goods and services, which in 2016 totalled about 1,175 million US dollars (which equates to about 53% of Bhutan’s GDP). Overall, 85-90% of Bhutan’s trade is with India, which currently takes practically all its surplus power and 80% of its ferrous alloys (the rest of these metal products going largely to European countries such as Italy).

² World Bank: WITS

Figure 2c: Total exports by main commodity group and partner

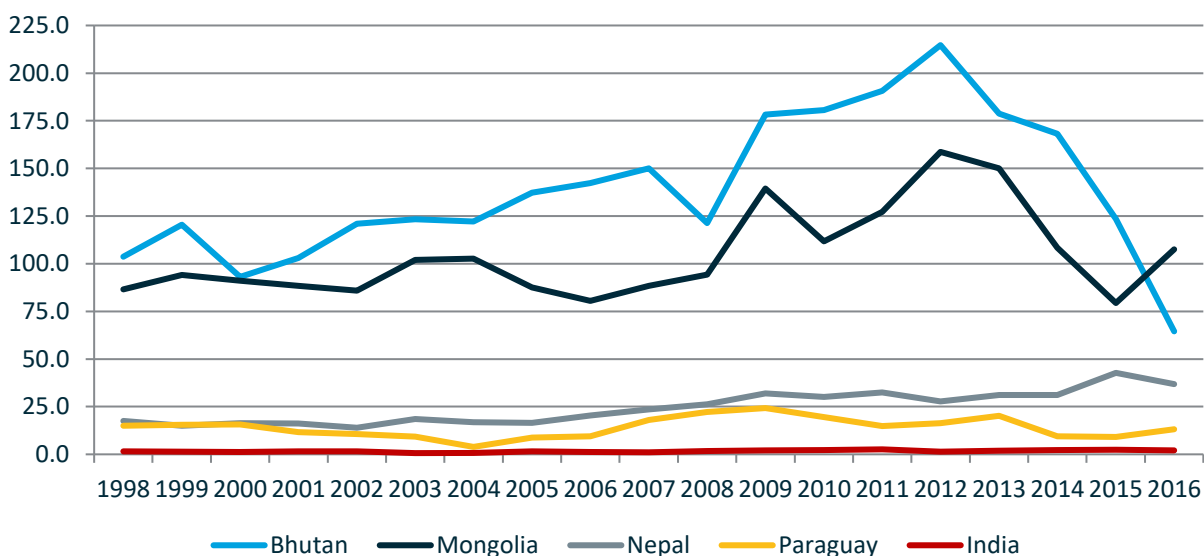


Source: World Trade Organization Country Profiles

India is also the principal source of investment for the power industry. From the mid-1980s, hydropower plants were financed by government-to-government grants and loans. Latterly, the loan element has increased, and in the case of one new plant a minority stake is held by a private Indian company, Tata. Under India’s Central Electricity Authority rules, any new privately-owned power plant selling to India must be 51% Indian-owned.³

Bhutan has also received substantial Overseas Development Assistance (ODA) over more than twenty years. Indeed, in recent years prior to 2016 (when receipts dropped sharply), it has benefited more from ODA (on a per capita basis) than any other South Asian country with the exception of war-torn Afghanistan.

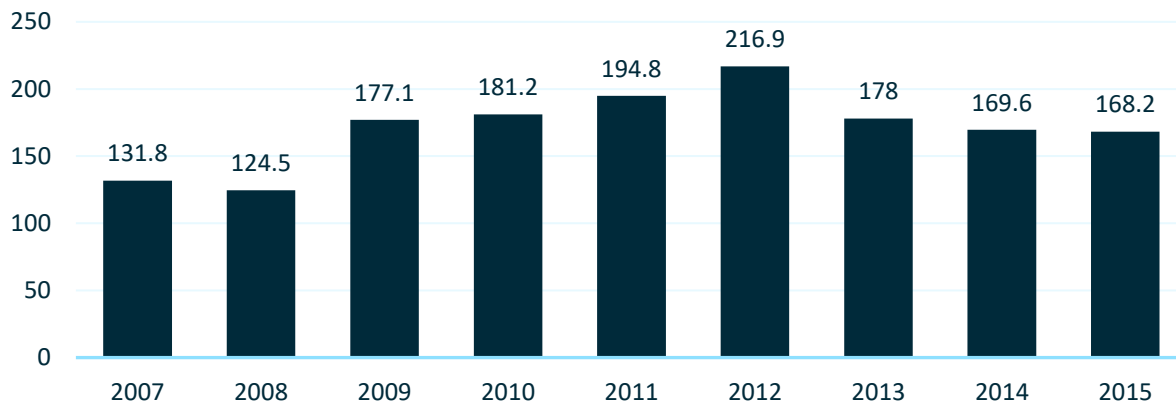
Figure 3: Net ODA received per capita (current US dollars)



Source: World Bank WDI database

³ “India’s CEA declines Bhutan’s request on CBTE”, *The Bhutanese*, 8 December 2017

Figure 4: Bhutan ODA per capita (US dollars)



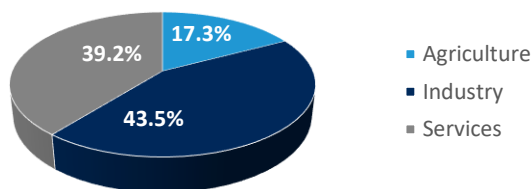
Source: World Bank

However, there are some risks attached to a growth strategy that is so strong linked to power exports, including a growing dependency on India. In spite of significant support from the World Bank, Japan, the EU and Asian Development Bank, the bulk of ODA to Bhutan comes from India. Between 2005 and 2015, support for Bhutan absorbed 63% of India’s total aid budget and grants from India covered 25% of Bhutan’s government spending, equating to 10% of its GDP.⁴ These aid flows cover the monetary consequences of what would otherwise be a massive annual trade deficit with India equivalent to a quarter of Bhutan’s GDP. The Bhutan ngultrum is also pegged to the Indian rupee.

Value-added contributions and concentration

By South Asian standards, the value-added contribution made by industry (43.5%) is exceptionally high and that of services (17.3%) is relatively low. Comparable figures for India show industry at 28.8% and services at 53.8%. However, a very large part of industry’s contribution in Bhutan comes simply from electricity generation followed by metals and cement processing. The value-added of manufacturing is only around 8% and has remained more or less constant for at least twenty years. The figure for India is currently 16.5% while Mongolia is on a par with Bhutan at 8% and Nepal trails at just 6%.

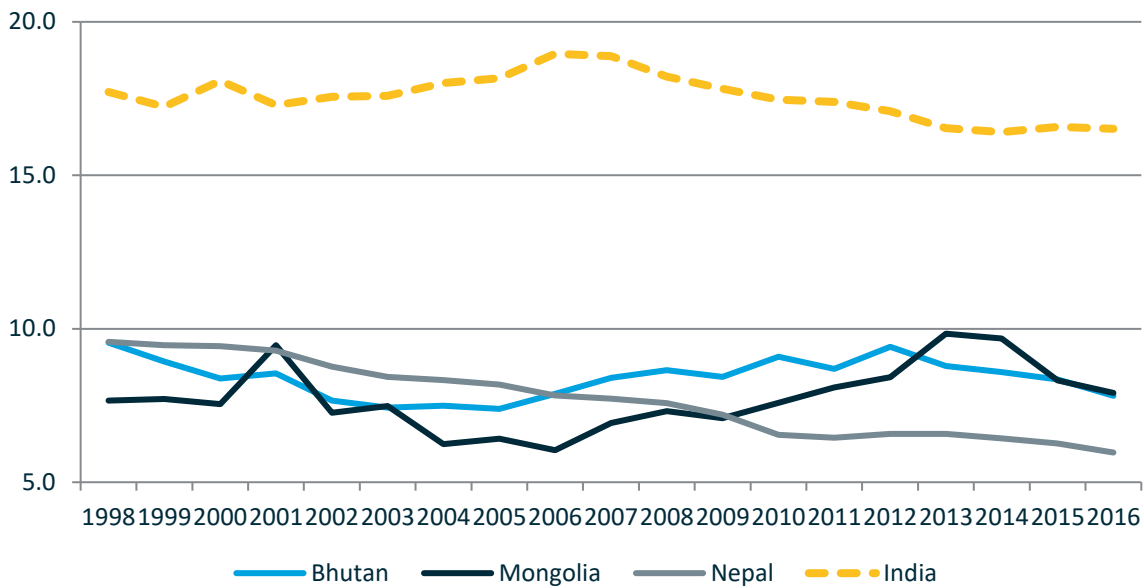
Figure 5: Value-added 2016



Source: World Bank: National Accounts Data, Bhutan 2017

⁴ Government of India: ‘Notes on Demands for Grants’ for Ministry of External Affairs in Union Budgets 2001-02 to 2017-18’

Figure 6: Share of manufacturing value added in GDP (%)

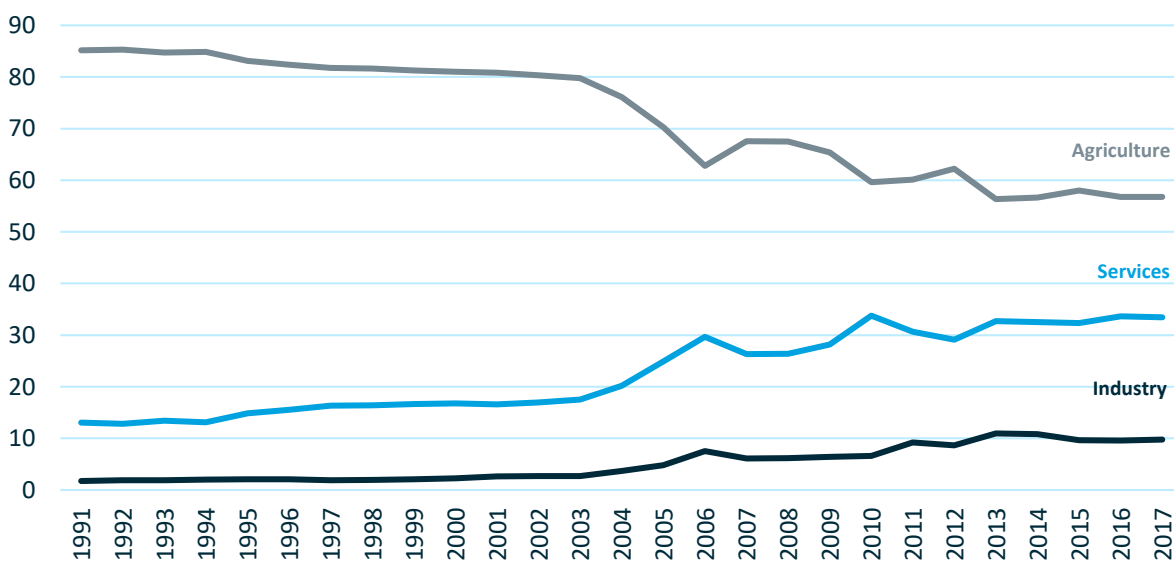


Source: World Bank WDI database

Labour force

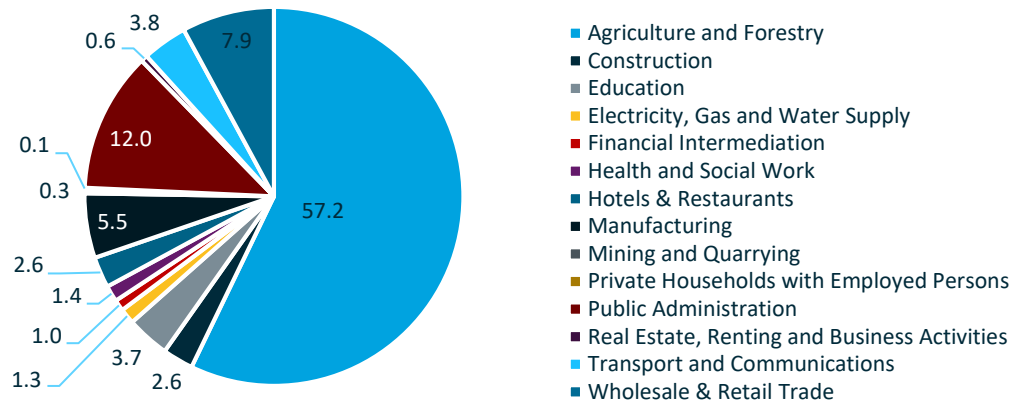
The implications of the low level of value-added in manufacturing are to be seen in the statistics on employment.

Figure 7.1: Employment in key sectors (% of total employment)



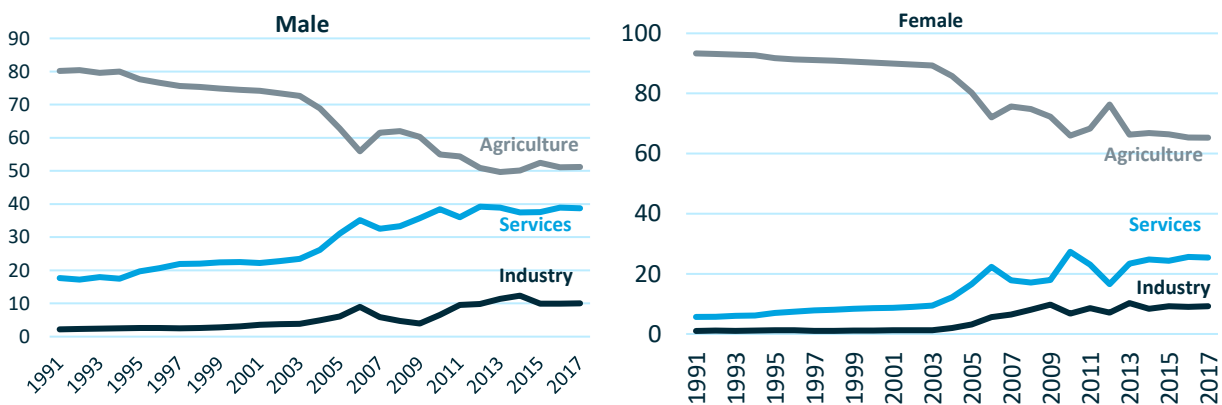
Source: World Bank WDI (modelled ILO estimate)

Figure 7.2: Employment in key sectors (% of total employment)



Source: National Statistics Bureau, Government of the Kingdom of Bhutan

Figure 8: Gender division of labour force participation (% of male or female employment)



Source: World Bank WDI (modelled ILO estimate)

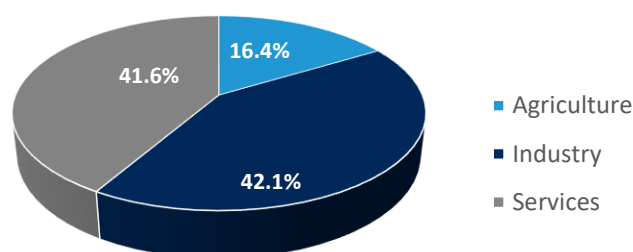
While there has been a significant shift away from agriculture in both its GDP contribution and value-added share since the first hydropower plant construction in 1987, this shift has been much less pronounced in the employment data. In 1986, when agriculture was responsible for 44% of GDP, the sector employed 75% of the workforce. Now, agriculture represents just over 16% of GDP (17% of value added) but it still involves 58% in the labour force. Industrial employment has grown but not quite at the same pace as industry’s share of GDP. In 1986, when industry contributed 19.8% of GDP, industrial workers constituted 11% of the workforce: now, these shares are 42% and 20% respectively. In contrast, the same shares for services have seen more gains in jobs than output: services value added in GDP has risen from 36% to 42% while the employment share has grown faster, from 14% to 22%.

Also, outside agriculture, the public sector continues to figure importantly among employment destinations. In 2009, 24.6% of non-farm employment was in the private sector and 19.3% in the public sector. By 2015, these figures had shifted only slightly to 24.4% and 18.9%, respectively. [World Bank: Investment Climate in Bhutan, September 2017]

In effect, Bhutan's pattern of development has kept employment outside of agriculture and the public sector as a key problem within the economy: it needs more and better quality private sector jobs. Although official statistics indicate a very low overall rate of unemployment (2.2% in 2012), they mask serious difficulties in particular sectors.

Urban unemployment stood at 6.3% in 2012. Also, youth unemployment (9.5%) was reported to be higher than the overall official rate, which is significant in a context where nearly half the population (49.2% in 2016) is under the age of 25. A subsequent survey has noted that the youth unemployment rate has increased from 7.3% (on its reckoning) in 2012 to 13.2% in 2016.⁵ Where the two problems come together, urban youth unemployment (for the 15-24 age group) appears to be high -- touching 23.7% for men and 23% for women in 2016, according to the National Statistics Bureau of the Kingdom of Bhutan. This acquires added significance in a context where rates of participation in the labour force are increasing – from 56.5% in 2001 to 66.4% in 2012.⁶

Figure 9: Contribution to GDP by sector in 2015



Source: CIA: World Fact Book 2016

Productivity

In 2014, the Asian Development Bank (ADB) calculated that productivity in industry had increased threefold over the previous 13 years. This was largely the result of capital-intensive investment strategies related to the energy industry. Manufacturing had a different progression.⁷

A 2017 World Bank study of the Bhutan corporate sector estimated that, while output per corporate employee nearly doubled between 2009 and 2015 (from 5,700 to 10,000 US dollars), it almost halved in the manufacturing sector where it stood at just 1,500 US dollars in 2015.⁸ All the productivity increases were concentrated in services, where output per worker rose from 6,300 to 12,700 US dollars.⁹

⁵ RGoB, Labour Force Survey 2016, p34

⁶ UNDP: Problems of Youth Unemployment in Bhutan, 2013

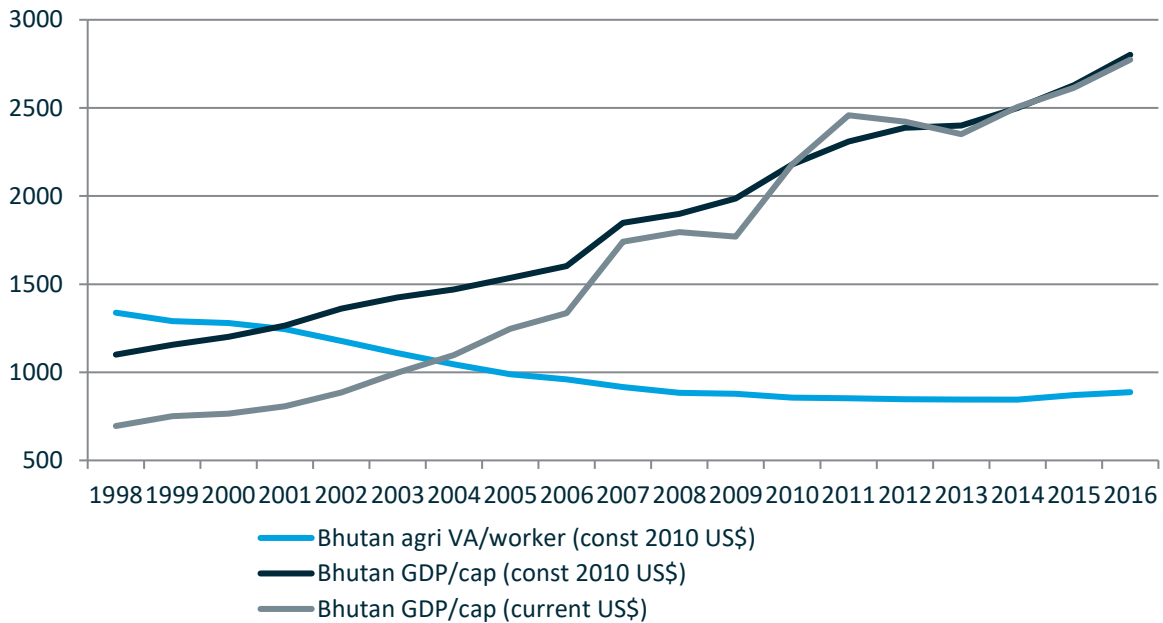
⁷ Asian Development Bank, *Unlocking Bhutan's Potential: Measuring Potential Output for the Small, Landlocked Himalayan Kingdom of Bhutan*. (South Asian Working Papers #32), November 2014

⁸ World Bank: *Investment Climate Assessment of Bhutan: Removing Constraints to Private Sector Development to Enable the Creation of More and Better Jobs*. (Washington D.C., 2017)

⁹ World Bank: *Investment Climate in Bhutan*, September 2017

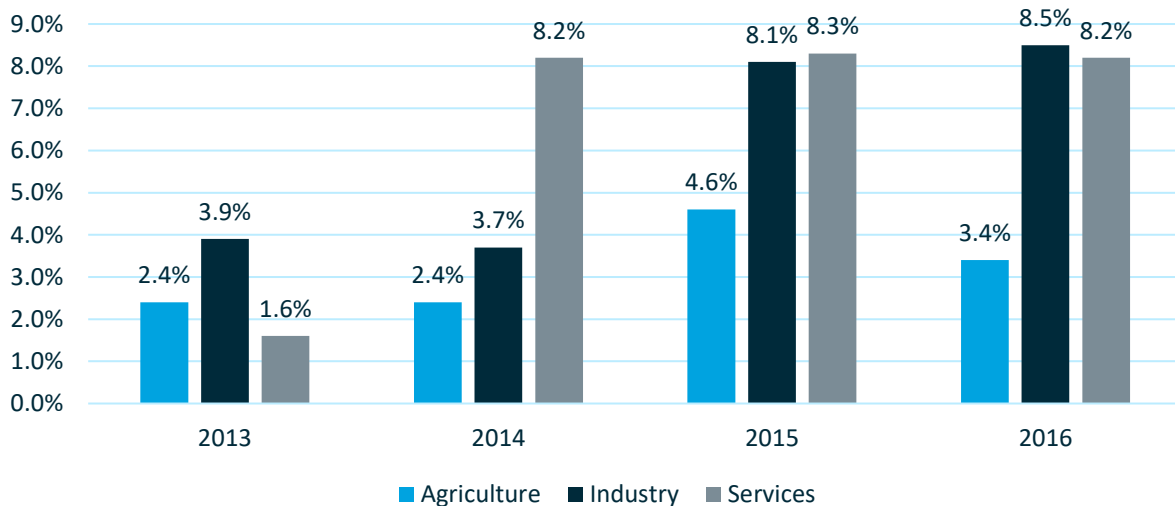
Productivity in agriculture has been characteristically weak, as shown by the decline in value-added per worker (measured in 2010 constant prices, US\$). This contrasts sharply with the gains in GDP/capita.

Figure 10: Agricultural VA per worker at 2010 constant prices (real terms) compared with GDP/capita at 2010 constant prices and GDP/capita at current prices (all in US\$)



Source: World Bank WDI database 2017

Figure 11: GDP growth by sector 2013-16 (%)



Source: World Bank: Bhutan Economic Update December 2016

Nature and trends of economic diversification

Since the mid-1980s, but especially from the turn of the millennium, Bhutan has enjoyed significant economic benefits from its close association with India. The development of hydropower resources has contributed to Bhutan's GDP and per capita income which rose to the highest levels in South Asia, while ODA has helped to advance its social sectors.

A large part of the resulting bounty has been invested in social assets. In this respect, the Royal Government of Bhutan government has become world-renowned for creating a Gross National Happiness (GNH) index to set alongside its Gross Domestic Product index.

- Poverty alleviation has been highly successful, reducing the poverty rate from 23% in 2001 to 8.2% by 2017.¹⁰
- High levels of expenditure have been devoted to public health (3.6% of GDP in 2014) and education (7.14% in 2015).¹¹
- Bhutan's literacy rate has risen from 42% in 2000 to 63.9% in 2015, and life expectancy rose from 62.33 years to 69.7 years over the same period.

These statistics contrast with the position in the rest of South Asia, not least India where the poverty rate still stands at 22% and spending on public health and education reached only 1.4% and 4.1% of GDP, respectively, in 2016.

However, Bhutan has been much less successful at diversifying its economy away from heavy dependence on the electricity industry and a single export market. Indeed, when the latest hydropower facilities become operational from around 2020, this dependency will be even greater.

Such concentration creates the possibility that Bhutan could come to suffer from 'Dutch disease' – other business growth could become increasingly stunted and uncompetitive. However, in Bhutan's case, it started its power sector journey some thirty years ago, starting from an initial position in which it was suffering from a severe lack of export and growth opportunities. Looking at Nepal across the border clearly points to the benefits Bhutan has enjoyed and the struggle that it would otherwise have faced to grow industries and trade.

Nevertheless, the capital-intensive nature of the hydropower industry means that it creates few direct jobs, which may make it unpopular in a country where youth unemployment (outside agriculture) is a major problem. This may be a naive view – new jobs can be linked indirectly to the impact of the power industry if not directly – but it adds to the reasons for the population becoming wary of further expansion in the sector.¹² Furthermore, while Bhutan has benefited

¹⁰ Royal Government of Bhutan: National Statistical Office

¹¹ World Health Organisation, Bhutan; Royal Government of Bhutan: National Accounts Statistics

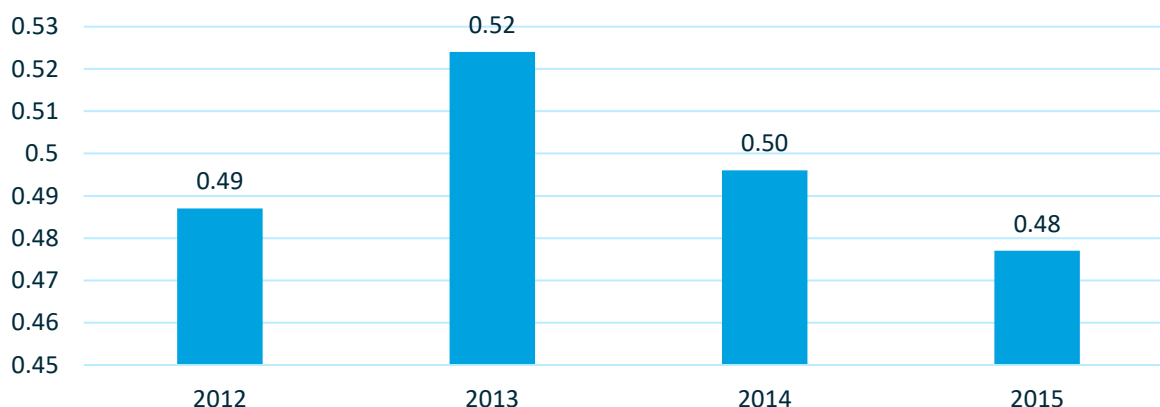
¹² RGoB, *Eleventh Five Year Plan 2013-18*. (Thimphu, 2013): "lack of economic diversification has resulted in a situation of high growth rates driven by the hydropower sector without a commensurate increase in gainful employment for a rapidly growing and educated labour force, which poses significant

from its relationship with India and appears keen to extend this friendship, it will need to further diversify its network of partners.¹³

Gender equality and participation in the labour force

In terms of gender relations, Bhutan starts from a position of greater equality than most of South Asia. Inheritance systems in western and central Bhutan are predominantly matrilineal and women own a large amount of landed property. This contrasts with the position in the southern provinces close to the Indian border, where women are traditionally property-less.

Figure 12: Gender inequality index (0=perfect equality; 1=extreme inequality)



Source: United Nations Development Programme Human Development Reports

The female literacy rate has risen from 42% in 2001 to 59% by 2016. The enrolment of females in primary school education is now above 96% and the dropout rate (7%) is lower than that for males. This is true also of secondary schooling (26%) although female dropouts in both sectors among groups of rural dwellers and the poor, respectively, are significantly higher than males (10% and 15%; 31% and 42%).¹⁴

In health, Bhutan's fertility rate has fallen from 5.64 in 1990 to 1.98 in 2015.¹⁵ The infant mortality rate has fallen from 110.99 in 2000 to 32.9 in 2017.¹⁶ Female life-expectancy has risen from 53.3 years in 1990 to 70.0 years in 2015.¹⁷

One consequence has been a sharp increase in the female labour market participation rate. This is difficult to calculate precisely because of changes in the categories of enumeration: according to Royal Government of Bhutan figures, the increase has been from 38.4% in 2001 to 63.2% in

macroeconomic challenges.”; also “Hydro-Power in Bhutan: Time for a Re-think” by Sripad Dharmadikhari, *International Rivers*, 1 August 2015

¹³ Lakshmi Premkumar, *A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan*. (Vasudha Foundation, New Delhi, 2016)

¹⁴ World Bank: Bhutan National Education Update 2014

¹⁵ Indexmundi

¹⁶ Ibid

¹⁷ Knoema World Atlas

2012, which is unrealistic and must discount much family farm labour at the earlier date.¹⁸ But its measure may be gauged from more recent data indicating a rise from 53.9% to 63.2% just between 2006 and 2012 alone.¹⁹

However, progress in terms of quality of employment has been much less marked. Agriculture's role in the economy has been shrinking and its share of GDP declining, reaching just 17% in 2016. But the labour leaving farming (for the towns which are growing rapidly) is predominantly male. Much female labour is tied to the land by social obligation and hence is increasingly responsible for sustaining the sector with the lowest value-added ratio in the economy. In 2012, women represented 61.6% of the agricultural labour force. The latest Five-Year Plan has described the change as leading to a 'feminisation' of agriculture with consequences for productivity stagnation. It also means that large numbers of 'working' women are effectively unpaid since they are not directly rewarded for their work on family farms. In 2012, 56.2% of all women workers were 'unwaged' in this way.²⁰

Female workers are also over-represented in the manufacturing sector, where they outnumber male employees 3:2. However, manufacturing in Bhutan is another stagnant sector (largely comprising small handicraft workshops). Women represent 30% of owners/managers in the SME sector but are reported to struggle because of lack of access to finance. Although women in western and central Bhutan have a tradition of property ownership, it has also been a tradition to deny them the right to credit based on the collateral of that land.²¹

By contrast, women are heavily under-represented in the more dynamic sectors of the economy. Their ratio of employment to men in the electricity and construction industries (where employment for the Bhutaneese is limited anyway) was 1:3 and 1:5 respectively in 2015. In government agencies it was 1:4, in finance 2:5 and even in health 2:3.

The most promising areas for female employment were tourism, where there were marginally more female employees than male, and education, where there were only marginally less. Female participants in the labour force also had significantly higher rates of unemployment than males in all sectors of the workforce – by age, education and rural/urban location.²²

Exploring policy measures (national policy documents)

In response to these problems and while maintaining prime emphasis on the development of hydropower and public (social) services, the current 11th Five-Year Plan (2013-18) has given increased priority to promoting diversification in employment and exports. This has involved:

¹⁸ Bhutan National Commission for Women and Children: Gender and Employment Challenge 2013 – hereafter NCWC

¹⁹ Ibid

²⁰ Royal Government of Bhutan: 11th Five-Year Plan 2013-18

²¹ Karma Yoezer, "Access to Credit by the Women of Rural Bhutan", Royal Institute of Management Bhutan, 7 December 2015; see also Asian Development Bank, *Gender Equality Results: Case Study Bhutan* (2011), p3

²² Japan International Co-operation Agency: Survey of Country Gender Profile, Royal Kingdom of Bhutan, February 2017

- a Rapid Investment in Selected Sector (RISE) Programme to provide credit to SMEs in key areas;
- promotion of agro-processing business and diversification in cropping patterns (hazelnuts, oranges) to increase exports;
- expansion of the tourist industry by re-examining restrictive policies towards FDI and tourist numbers;
- investing in transport infrastructure especially roads and Paro airport;
- laying out four SEZs and two science parks – the latter to develop an ICT industry; and
- applying principles derived from the VPoA on connectivity by opening a ‘dry port’ and improving links and facilities for international trade.

However, progress in all these areas over the last five years posed new problems. Undoubtedly, the greatest achievements have been in the tourist industry where the number of ‘landings’ had doubled to 213,000 by 2016 and local employment opportunities risen proportionately to 40,000. FDI has also been attracted by the opening of five-star hotels to 100% foreign ownership and of four-star to 74%. Yet the increase in numbers has brought a change in the character of tourism with fewer ‘dollar-paying’ high spenders and more regional visitors on cheaper programmes. Between 2012 and 2016, the average ‘spend’ per tourist dropped by 24%.

With regard to ICT, the Five-Year Plan itself noted: “The key issues and challenges of this sector include the significantly higher telecommunication tariffs than those in the region which negates the other comparative advantages; lack of international redundancy and a shortage of qualified ICT professionals.” (Five-Year Plan: para 39). These issues have not been resolved in the interim and growth in the industry continues to unspectacular.

The RISE programme has contributed to the progress by invigorating credit growth in the private sector that has been prodigious (in excess of 30% a year). The main beneficiaries were the housing and construction industries where an urban boom has been promoted by the shift of population from countryside to town as in most developing economies. The 2017 World Bank report on Bhutan’s business climate noted that while progress had been made, the flow of credit to small businesses remained tight.

The move made in the 1970s -- to develop an export-oriented hydropower industry and lower the trade barriers between Bhutan and the rest of the world -- can be seen to have had limited intentions. The goal was to raise the living standards and resources available to members of the Bhutanese nation – who, then, were among the poorest in the world (per capita income was just 290 dollars in 1980). Moreover, this was to be accomplished through close government-to-government relations with India, which supported the process through the public sectors of both countries.

Growing prosperity has led to increased education, more intensive urbanisation, rising demands for consumer goods and expanded immigration. The negative side of the coin -- which, however,

is not unique to Bhutan but is a more widespread phenomenon for developing countries -- created problems in a swelling import bill, worsening urban congestion and pollution and, most notably, the threat of large-scale unemployment (especially among youth).

Since the turn of the millennium, government policy has responded with reforms aimed at addressing these issues. A number of policies have been adopted which also aim to promote economic diversification to overcome the challenges of a single-sector, single-market dependent landlocked economy. Among these policies a few stand out, including the Economic Development Policy (2010 & 2016), the Fiscal Incentives (2010 & 2017), the Public Debt Policy (2016), the Public Private Partnership Policy (2016), the FDI Policy (2010 & 2017), the National Employment Policy (2013), the Mineral Development Policy (2017). However, it is yet early to assess the measurable progress made by these policies given the data limitations.²³

Macro-economic management

Bhutan has been persistently suffering from macro-economic imbalances which, however, are closely monitored by the Royal Government of Bhutan government as well as various international agencies (notably the IMF, World Bank and Asian Development Bank) and the Government of India. Income related to hydropower exports to India accounts for 40% of total revenues for the Royal Government of Bhutan and (public sector, Indian-origin) FDI into hydropower more than covers the country's current account payments. Indeed, Bhutan presently possesses forex reserves in excess of 1 billion dollars, equivalent to two years' imports.²⁴

Although the current account deficit is close to 25% of GDP and the public debt has nearly doubled since 2010 and is now close to 120% of GDP, the Royal Government of Bhutan is confident that the current account deficit and high public debt are largely because of the hydropower projects that are under construction; once the projects are completed, it expects them to fall.

While the hydropower industry continues to develop, it is difficult to see why Bhutan's macro-economic position should become critical. However, the reliance on India also carries problematic implications and may, itself, be in the process of changing.²⁵ The Bhutan ngultrum is effectively pegged to the Indian rupee and monetary problems in the latter can convey themselves to the former. Moreover, terms and conditions in the Indo-Bhutan hydropower relationship have started to shift against Bhutan.

- In course of negotiations for the latest (2005-10) round of projects, the formula for financing moved from a 60:40 to a 30:70 balance between (non-repayable) grants to (repayable) loans.

²³ Thierry Mathou, *How to Reform a Traditional Buddhist Monarchy*. (Thimphu, 2008); Dhurba Rizal, *The Royal Semi-Authoritarian Democracy of Bhutan*. (Lexington, 2015)

²⁴ IMF: "Bhutan Staff Report, Debt Sustainability Crisis", June 8 2016; World Bank, "How Much Should Bhutan Worry about its Public Debt", Bhutan Office 25 July 2017

²⁵ Lakshmi Premkumar, *A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan*. (Vasudha Foundation, New Delhi, 2016)

- Private capital has begun to displace what had previously been relations between governments and public-sector entities with a consequent redirection in ownership and lease conditions. Private Indian power companies (such as Tata) can now hold equity in particular plants and/or retain revenue-sharing rights for at least 30 years.²⁶ Power purchase agreements have also been signed with India under the rules of its Central Electricity Authority that stipulate that if power is purchased from private producers located overseas, the plants must be 51% Indian-owned.²⁷
- Also, in recent years, India has rapidly raised its own levels of domestic power generation, with prime minister Narendra Modi now claiming even to have created a surplus. Fast expanding renewables (in solar and wind) as well as improved distribution systems have helped to cut back what was once a glaring deficit. The urgent need for power that drove Indian power agencies into the Himalayas even a decade ago is steadily diminishing.²⁸

Yet another risk is that India's new Goods and Services Tax (GST), introduced in July 2017, looks likely to put further pressure on the trade imbalance. It is set to make Bhutanese goods and electricity more expensive in Indian markets, while cutting the cost of Indian exports to Bhutan.

In other areas, questions are being raised both about the 'clean-ness' of Bhutan's hydropower and about the deeper geological effects of developing it. The newest projects rely more on lakes than rivers, but these ferment high levels of methane gas. Also, unforeseen geological problems have arisen with at least two of the new plants, causing long-term delays.²⁹

A 2016 IMF report anticipated that new hydropower facilities would become operational (and start earning revenues) by 2017 – when it projected a rise in GDP growth to at least 8%, and possibly 11%.³⁰ However, 2017 passed with no such outcome and there is little reason to think that matters will improve during 2018. To counteract the rising levels of public debt, the Royal Government of Bhutan has adopted the Public Debt Policy in 2016 specifying acceptable levels of debt thresholds. Given that Bhutan's macro-economic balances are presently sustained by its close relationship with India, the government will need to push rigorously for its policy goals ensuring manageable debt levels and diversification of sources to avoid contingencies.

Industry and services

Although the Royal Government of Bhutan possesses an industrial strategy, designed to promote private-sector manufacturing, it has not been very successful (apart from ferro-alloys).³¹ Four Special Economic Zones (SEZ) were designated in 2013. However, they still lack basic

²⁶ IMF: Bhutan Staff Report, Debt Sustainability Crisis, June 8 2016

²⁷ "India's CEA declines Bhutan's request on CBTE", *The Bhutanese*, 8 December 2017

²⁸ Lakshmi Premkumar, *A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan*. (Vasudha Foundation, New Delhi, 2016)

²⁹ Supriya Roychoudhury & Shashank Srinivasan, 'India's Hydropower Investments in Bhutan: Environmental Impacts and the Role of Civil Society'. Center for the Advanced Study of India, University of Pennsylvania, 25 April 2016; also "Will Mega Dams turn Bhutan's Happiness Sour", *Guardian* (London) 20 May 2015

³⁰ IMF: Bhutan Staff Report, Debt Sustainability Crisis, June 8 2016

³¹ IPA Journal, "Bhutan Non-Progressive on FDI", 3 August 2011

infrastructure and have attracted little investment. Meanwhile, manufacturing has stagnated, and productivity declined in recent years.

By contrast, the government has focused more on the services sector where it has built science parks and CIT hubs near the capital, Thimphu. Yet these also struggle in a context where infrastructure and facilities are poor. Bhutan banned television and non-fixed line telecoms until as late as 1999, leaving a vast gap to catch up. Also, its mountainous terrain inhibits connectivity. When internet communications first became available, they grew rapidly to reach 30% national penetration by 2013. But they have expanded more slowly subsequently.³² Partly in consequence, ICT-related service industries have made limited progress; the negative US 12.5-million-dollar FDI outflow in 2016 represents the withdrawal of two foreign IT companies.

Tourism, which has most potential in the services sector, also faces constraints. The government imposes a 'high value/low impact' strategy designed to protect the environment, but this has the effect of appealing to wealthier, mostly Western tourists who are relatively few in number. Restrictions on FDI (which previously inhibited hotel ownership by non-Bhutanese) were eased in 2010 and 2015 to broaden the base of the industry. But foreign investment in the sector is tightly controlled³³ and, while growth has picked up over the last five years (as demonstrated by revenues from services exports), it remains far below potential.

Public sector preference

A second major problem is competition between the private and public sector. The public sector in Bhutan has grown to keep pace with the expansion of the economy, but also to intrude into ever more areas of it. The public sector has started to scale back its operations in recent years through divestments and creating fiscal incentives to boost private sector growth. However, the government continues to rely heavily on the public sector to advance its modernisation plan.

In addition to the expansion of personnel associated with ever more elaborate systems of administration and welfare, as well as fast-expanding education and health services, the public sector has also ventured into the marketplace itself. Public sector enterprises bearing the national label 'Druk Holding Company' now operate across a range of activities from power to manufacturing to food processing. 'DHC' company revenues have trebled in the last five years and, in 2016, contributed 22% of total government income.³⁴

In effect, the size and expansion of the public sector bears down heavily on prospects for the growth of a private sector. The World Bank investment survey noted conditions of employment (wages and, especially, benefits) to be significantly better in the public than the private sector. Workers also clearly preferred it: one reason given for the high rate of urban 'unemployment' is that workers are prepared to wait for a vacancy in public sector employment rather than take a less well-rewarded job in the private sector.³⁵

³² 'Internet Penetration Rate in Bhutan 2005-16', *Statistica*

³³ RGoB, "Foreign Direct Investment Rules and Regulations", Schedule II, #3

³⁴ Royal Government of Bhutan: 2017 Budget.

³⁵ World Bank: Bhutan Labour Market Towards Gainful Employment for All, 2016.

Most critical for market growth, this preference increases in strength with rising levels of education and skill. Of tertiary-educated workers, 66% of those interviewed expressed preferences for public sector employment. Moreover, the public sector delivers what it promises. Of all Bhutanese workers with tertiary education, 56% work in the public sector, as do 36% of all those with higher secondary education qualifications.

In a context where skilled labour is short and foreign immigration restricted, the public sector's growth may be at the expense of the private sector's fortunes.

Financial constraints

In many ways, the public sector is also responsible for a third set of constraints noted by private corporations -- shortage of finance. While the provision of bank credit has grown at 30-40% over the last five years, interest rates remain high and most credit is directed towards household and retail finance. The Royal Government of Bhutan hopes that the introduction of a minimum lending rate in 2017 may help bring rates down. However, small businesses, in particular, have a very high rate of failure³⁶ and Bhutan is distinguished within South Asia for the high proportion of employment in large-scale enterprises.

Credit provision takes place in a context where the financial sector is dominated by two banks in the public sector and one which is part-privatised³⁷ and conditions for the entrance of fully-private-sector banks remain tight. Bhutan has licensed two such private banks, but their share of business has actually fallen in the last three years; it has also licensed two private insurance companies.³⁸

Transport and infrastructure

Further problems arise with transport infrastructure, which especially inhibits the access of businesses to external markets. Since the 1960s when it had no paved roads, Bhutan has developed an important network of highways, now totalling 4100 kilometres with a further 4000 kilometres of single track. In particular, it has invested in an East-West motorway integrating the key valleys comprising the nation. However, external connections are still limited to a handful of highways to the south connecting to India.

Also, the country has no railway connection. Formal plans to extend a link to the Indian rail system (and thence to Bangladesh) have existed on paper since the 1990s and achieved government approval in 2005 when an MOU was signed with the Indian government and Indian railways. At the beginning of 2017, the plans were revived both by India and Bangladesh (which, itself, is in the process of repairing long-broken rail connections with India). Currently, plans are under consideration for two infrastructure plans of a rail network and BBIN road link connecting a broad sub-Himalayan tract stretching through Nepal, Bhutan, India and Bangladesh.

³⁶ Tshewang Dorji, *Privatisation Gap in Bhutan. A Study of Small and Medium Enterprises in Bhutan*. (Grin Publishing, 2017).

³⁷ R. Cole et al., *Banking in Bhutan: An Assessment of Financial Sector Development in Bhutan*. (Asian Development Bank, January 2017, p421

³⁸ World Bank; Investment Climate Assessment in Bhutan, 2017

If the network is ever built and does reach southern Bhutan, it could act as a major stimulus to industrial development. Freight charges on trade between Thimphu and Kolkata (Bhutan's principal conduit to the world beyond India) are high (US 1,300 dollars per container in 2015) and have not fallen in recent years. This limits Bhutan's trade beyond South Asia only to high value goods.³⁹ However, a continuing inhibition on external trade beyond India is the 'red-tape' associated with the need to gain permissions and clearances from two bureaucracies. Since 2006, there has been no change in the amount of time nor number of documents required to import or export goods via Kolkata to Bhutan.⁴⁰

Strengthening governance structures and institutions

Against this background, an important question is whether governance (or, at least, government) needs to be strengthened, or whether in fact it should be weakened to allow for a further growth of the civil society which the RGoB has in recent years has made an effort to boost more persistently. Reflecting the ideal of service to the nation captured in the concept of Gross National Happiness, government in Bhutan is rated by far the most disciplined and least 'corrupt' in South Asia. It stands 27th of 176 in Transparency International's Index of least-corrupt nations (India is 79th; Nepal 131st; Bangladesh 145th). It has brokered the government-to-government hydropower contracts raising GDP growth to an average of 7.95% over the last decade. Since 2000, its record in delivering services and welfare has been outstanding, raising the literacy rate by 20% and life expectancy by 7.6 years.

Yet, in other ways, it does possess weaknesses. The state's share of revenue-to-GDP is low even by South Asian standards – 13.2% (2016) compared to 16.6% in India and 18.7% in Nepal.⁴¹ A quarter of state spending is supplied via ODA, which may not be sustainable and creates dependency. To be more self-sustaining, Bhutan needs to raise its revenue-to-GDP ratio even if this affects the government's popularity.

More broadly, the institutional structures supporting a market economy and promoting a positive business environment are weak. A secure land registry and full cadastral survey, to underpin private and marketable rights in land, was established only in 2007 and has much work to do. As discussed earlier in this report, bureaucracy and 'red-tape' are two of the key constraints on trade policy.

In its latest survey of 'ease of doing business' report, the World Bank faulted Bhutan in two particular areas: resolving bankruptcy (168th place out of 190 countries) and protecting the rights of minority shareholders (124th).⁴² Both areas may reflect the Bhutan government's attitude towards opening its borders to foreigners and immigrants and creating an 'identity-neutral' market place for all actors. How far it is prepared to go in establishing a more even playing field remains to be seen – and is a matter to be decided by politics.

³⁹ ODA (UK): Disentangling Transit Costs and Time in South Asia, 2015

⁴⁰ ODA (UK): Disentangling Transit Costs and Time in South Asia, 2015

⁴¹ World Bank: Revenue-GDP Datasheet

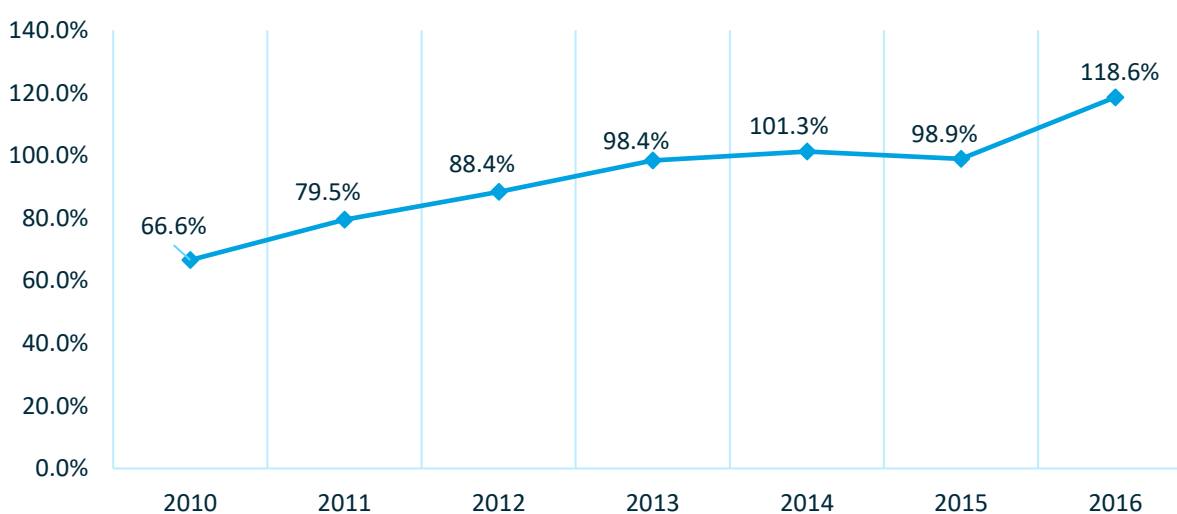
⁴² World Bank: Doing Business – Bhutan, 2017

Investment

Foreign Direct Investment

Bhutan's largest flow of externally-sourced investment has been aimed at the hydropower industry. Taking the form of grants and loans to the Royal Government of Bhutan from the Government of India (traditionally on a 60:40 grant:debt ratio) and tied to power purchase contracts, it is expressed more clearly in statistics on public debt than external liabilities (where 92% of Bhutan's total public debt is held by foreign investors). With a new programme of hydropower construction launched after 2010, Bhutan's public debt has been growing quickly.

Figure 13: Bhutan: Public debt as % of GDP



Source: World Bank

In light of the rise, the IMF re-examined Bhutan's public and external indebtedness in a special June 2016 report, in which it pronounced itself satisfied that stability would be restored once the new hydropower plants became operational and flows of electricity exports and revenue payments expanded. However, geological problems and technical delays continue to hold up completion of two plants. Also, changing fiscal and financial circumstances in India are beginning to put strains on the industry, highlighting the multitude of risks that emanate from Bhutan's heavy dependence on India.⁴³

In comparison to 'public debt' flows, other forms of FDI (notably in the private sector) are trivial. The total stock of private-sector FDI amounts to the equivalent of 10% of Bhutan's GDP (190 million US dollars) and, in 2016, flows even turned negative (at -12.5 million dollars).⁴⁴ In 2010 and 2015, the government launched initiatives to 'liberalise' parts of the economy and attract greater inflows. However, responses have been muted and – 2016 apart – FDI has been running at only 10-18 million US dollars a year.⁴⁵ It is worth noting that Bhutan has to compete with other

⁴³ "Bhutan's hydro basket gets smaller as India becomes power surplus and tariff rates drop", The Bhutanese, 22 July 2017

⁴⁴ UNCTAD, World Investment Report 2017, Country Fact Sheets 'Bhutan'

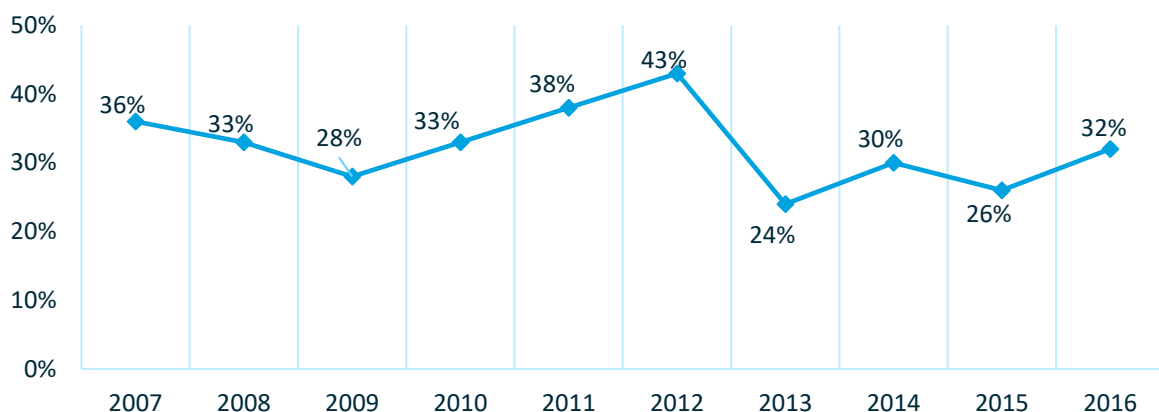
⁴⁵ IMF: Index Mundi, FDI

more advanced economies in the region for investments. Being a landlocked least developed country further exacerbates the already inherent challenges that the country faces in terms of attracting investments.

Investment levels

Bhutan has a high domestic savings rate (by South Asian standards) but one given to sharp fluctuations:

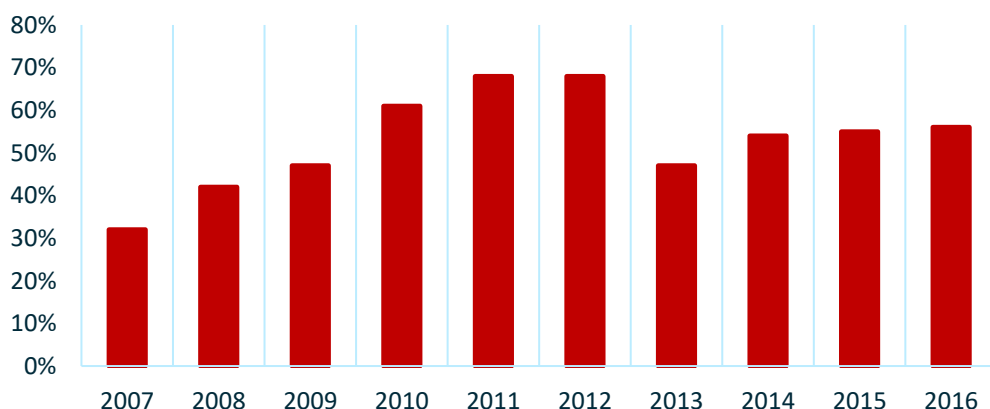
Figure 14: Domestic savings as % of GDP



Source: World Bank

However, only a small part of Bhutan’s domestic savings contributes to gross capital formation (GCF) which, in recent years, has been dominated by investment grants and loans in the hydropower sector coming from India. As a result, GCF rates have been very high but also sharply oscillating in relation to particular hydropower projects, whose schedules are not determined by the performance of other parts of the Bhutan economy.

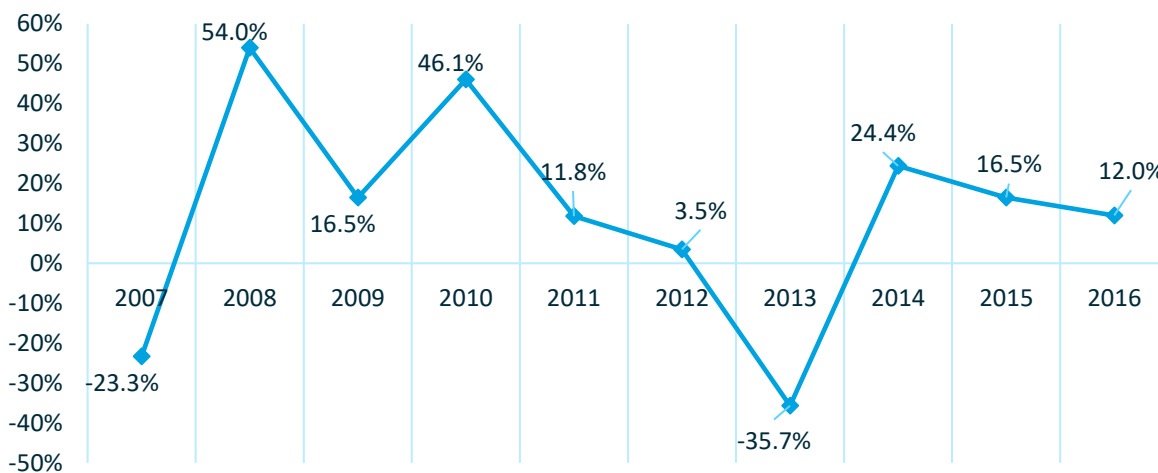
Figure 15: Gross capital formation as % GDP



Source: World Bank

While it is difficult to estimate the contribution of investment (and gross capital formation) to each of the different sectors of the economy, it is obvious that industry, specifically the power sector, has absorbed the largest share. However, data on the contribution of gross capital formation to GDP growth across the whole economy also indicate high levels of volatility from year to year – again suggesting how important, but also how unstable, the dominant hydropower industry is.

Figure 16: Gross capital formation as % GDP growth



Source: World Bank

Private sector

As indicated previously, the most successful area of private-sector development has been tourism. Since the start of the current Five-Year Plan both the number of tourist landings and of jobs in the industry have doubled (to 213,000 and 40,000 respectively). FDI has also been attracted into the sector from India and Singapore. However, with a downturn in the 'quality' of visitors and a shift from international to regional tourists, the limits of expansion may soon be reached unless the 'high-price/low-impact' strategy is modified.

While the construction of hydropower plants has been dominated by foreign companies and the public sector, the rapid growth of house construction in the main towns has given a strong push to smaller, domestic construction companies. Construction is one of Bhutan's fastest-moving sectors with 15% average growth in recent years. Nonetheless, shortage of indigenous skills means that the majority of entrepreneurs and workers in the sector remain immigrants from India.

The private sector has participated in the development of financial services. Since 2010, three new banks and two new insurance companies have been licensed in Bhutan. Of these, T-Bank and Bhutan Insurance are wholly private-sector enterprises. Druk Bank is partly private sector although majority-owned by India's Punjab National Bank, which is itself a public-sector enterprise. State Bank of India and the Asian Development Bank have also taken leading roles in expanding Bhutan's financial sector.

The four SEZ proposed in the 11th Five-Year Plan have made little progress and one of the proposed science parks (Education City) has already closed. However, IT-Park near Thimphu has established itself and begun to attract FDI into the ICT sector from a range of Canadian, Australian and Swiss companies.

Agricultural exports have grown by an average 9% a year since 2000. Bhutanese oranges are famous in the region and exports regularly exceed 25,000 tonnes a year. The hazelnut promotion scheme outlined in the 11th Five-Year Plan had reached 10,000 growers by 2017.

Integrating the principles of the Vienna Programme of Action

Transit

Bhutan's Customs Act 2015 (passed in 2016) seeks to bring its customs rules and regulations into line with best international practice as recommended under the VPoA. A small 'dry port' facility is also to be built at Phuentsoling to speed up the transit of goods. Bhutan is now implementing an Automated Customs System allowing the electronic declaration of goods and advanced paper management. Yet a variety of issues stand in the way of a radical improvement in transit regulation.

In 2016, the Royal Government of Bhutan proposed signing the Bhutan-Bangladesh-India-Nepal (BBIN) Motor Vehicle Agreement easing restrictions on cross-border vehicular transport. However, the National Council (upper house of parliament) refused to ratify the agreement.⁴⁶ The government hopes to re-introduce the agreement after the 2018 general election.

Bhutan's access to third-nation countries beyond India, which dominates its borders, will benefit under the latest India-Bhutan bilateral trade treaty signed in July 2017. The treaty permits a wide range of Bhutanese goods destined for third-party markets to transit India without paying Indian duties.

Also, plans continue for a variety of projects improving trade links between Bhutan, India, Nepal and Bangladesh across the north-east of the Indian sub-continent. For example, Bhutan has become a member of BIMSTEC (Bay of Bengal Initiative for Multi-sectoral Technical and Economic Co-operation). Bhutan has signed Trade and Economic Co-Operation Agreements in Nepal and Bhutan.

Bilateral talks are particularly advanced with Bangladesh. These are intended not only to deepen trade, but also to give Bhutan better access to Chittagong and Mongla ports, which are closer than India's Kolkata. In addition, Bangladesh has proposed making a one-billion-dollar investment in the Bhutan power industry in return for a long-term sales agreement. It is also seeking to improve Bhutan's access to waterways connected to the Brahmaputra river, which could link it directly to Chittagong (where it has had formal permission from India to trade since 2012). In further moves, Bhutan may acquire a railway connection as part of an extended rail transport system linking the four 'north-eastern' countries together.

⁴⁶ "National Council Rejects BBIN", *Business Bhutan*, 31 December 2016.

However, India's newest cross-border electricity trading regulations specifically confine imports to bilateral relationships, frustrating Bangladesh's plans. India has also done nothing to facilitate the notional access that it granted Bhutan in 2012 to trade through third-party (i.e., Bangladesh) ports.⁴⁷

Infrastructure

By far Bhutan's largest investment in infrastructure has been in the (export-oriented) hydropower industry with four new plants due to become operational in the next few years, boosting GDP growth by upwards of 5%. Elsewhere, the country has long observed the VPoA's protocols on connectivity. It has invested heavily in roads and rural electrification. In addition to the main east-west and north-south highways (the latter linked to India), since 2003 it has built 1,500 kilometres of 'farm' roads that connect villages together. It has also brought electricity to 99% of the population (from 60% in 2003).

The principal domestic infrastructure projects outlined in the latest Five-Year Plan (2013-18) concern the improvement and maintenance of existing systems – particularly widening the major highways to carry heavier traffic.⁴⁸ Also, there are ambitions to improve air transport with a view of the serving the tourism industry. If the long-considered regional railway connection ever gets the green light, this too would represent a significant new investment.

Reflecting the VPoA's concerns with economic diversification, the government set up four Special Economic Zones (SEZ) in 2013. However, it expressed little interest in developing 'mass' manufacturing, an area in which it doubted Bhutan could compete with neighbouring China and India. Perhaps as a result, the SEZ (and manufacturing) have not developed strongly.

Rather, the government has looked to the services sector for new sources of growth. It has built two science parks (Education City and Tech-Park, Thimphu, although the former has now closed)) and strongly emphasised the IT industry. Initially, responses were muted – not least because of technical problems. However, there has been some recent growth and prospects may be improving. Bangladesh has offered to sell Bhutan much-needed wireless and broadcast spectrum. Financial services have also grown, not least with the licensing of foreign banks, as has tourism.

The emphasis on services also partly responds to the priority that Bhutan has given to developing human over physical infrastructure since the 1990s. In education and health its achievements have been striking and are steadily raising the quality of its human capital.

⁴⁷ Arvind Gupta, et al., "Does India have a Neighbourhood Policy", *Journal of Institute for Defence Studies and Analyses*, March 2012; Bhim Burtel, "India's myopic 'muscular' neighbourhood policy", *Asian Times*, 2 July 2018.

⁴⁸ "The main thrust of the roads and bridges sector in the Eleventh Plan will be to complete the national highway grid using environment friendly technology, construction and upgradation of roads connecting to hydro-power projects and to enhance the safety, reliability and quality of roads." RGoB, Eleventh National Plan (2013-18), p206

International trade

Bhutan's foreign trade is dominated by India and is likely to remain so. However, it is continuously renegotiating its several treaties with India and, in light of VPoA protocols, has recently gained additional trading freedoms. In particular, a clause signed in the bilateral treaty of July 2017, permitting its goods destined for third-parties to have duty-free passage through India, opens wider possibilities. Nonetheless, the latest contract positions in the vital hydropower industry do Bhutan few favours. The shift in financial arrangements with India from a *loan:grant* ratio of 40:60 to 70:30 puts the risk factor more firmly on Bhutan.

Elsewhere, Bhutan's principal foreign trade ambitions lie in its participation in the 'north-eastern' trading axis embracing Bangladesh and Nepal as well as India. Potentially, this could cover transport, power and goods.

Regional integration

Tied down by the distributional implications of its principal electricity export, Bhutan's international trade ambitions are, in effect, conditioned by its integration into its surrounding region. It is a member of the South Asian Association for Regional Co-operation (SAARC) which, since 2004, has operated a South Asian Free Trade Area (SAFTA) embracing most of the region's economies. However, SAFTA and SAARC are not strong organisations.

Countries participating in SAFTA are permitted generous terms to interdict free trade on particular items – which can stretch to uncomfortably long lists. Nepal, for example, protects 1,343 separate items. As of 2016, inter-regional trade within SAFTA was still only 5-6% of its members' total foreign trade.

The historical context of tensions in the region also to some extent constrains the growth in cross border relations. Moreover, some of the regional economies produce the same basket of goods, limiting complementarities. Bhutan's hydropower industry makes it exceptional in this regard. However, distributional issues restrict its potential customers and, in other areas of trade apart from ferro-alloys, it has no competitive advantage.

Notionally, China's presence on its northern border could offer Bhutan access to a wholly different and expansive trading world. Especially since the announcement of its 'One Belt One Road' (OBOR) strategy, China has become pivotal to plans for trade and economic development across a broad swathe of central Asia, touching Pakistan. It is seeking to draw Nepal and even Bangladesh into this project and has hinted that it would welcome the participation of Bhutan as well. However, the historical rivalry between Delhi and Beijing at times puts further pressure on VPoA protocols on regional integration.

Structural economic transformation

Bhutan has certainly undergone a major economic transformation since the 1990s. The proportion of the population living in the countryside has fallen from 80% to 60% and of the workforce engaged in agriculture from 75% to 57%. Measures of literacy, longevity and infant mortality have all shown strong improvement. GDP growth has been rapid and has moved the country from the poorest to the richest in South Asia.

However, the driving forces behind the change have principally been the public sector and the export-oriented electricity industry. In this sense, development has not leaned heavily on the private sector and processes of economic diversification as emphasised under the VPoA. Nonetheless, in response to perception of future vulnerabilities and problems, Bhutan has begun to move in the latter directions.

Connectivity has improved, especially internally, with emphasis not only on major trunk roads but on inter-linking villages to overcome the debilities of communication in a mountainous terrain. Rural electrification has also proceeded apace to put over 80% of the country on the grid. External communications have also improved, if less rapidly, and the passage of goods has been facilitated by the introduction of automated customs posts and 'dry' ports.

While the latest Five-Year Plan (2013-18) has not anticipated much progress in manufacturing (apart from ferro-alloys), it has put weight behind the growth of the services sector. Tourism, in particular, is being given a significant boost with the industry doubling in size in the last five years -- although the policy of 'low-impact, high-value' remains in place which, however, may result in a political backlash.

Other areas of growth have been IT and, also, financial services (not least, with the licensing of new private-sector banks). The growth in financial services also serves important needs where lack of access to finance has been a major brake on the private sector. The small and medium enterprise (SME) sector has been developing quickly – unusually, more in services than manufacturing. Between 2006 and 2012, the proportion of the workforce registered as 'self-employed' near doubled from 16.5% to 29.5% of the total.

Agriculture, which is essentially in the hands of small farmer-producers, has also been on the move with a stronger emphasis on commercial crops with export potential, such as hazel nuts and oranges.

However, the private sector exists under the shadow of a public sector which, itself, has continued to grow through commercial enterprise as much as administration. According to the 2016 World Bank Report "Bhutan's Labour Market: Gainful Employment for All",⁴⁹ 44.1% of all jobs outside agriculture remain in the public sector. Efforts to vitalise the private sector are continuing and institutional and regulatory reforms have seen Bhutan rocket from 128th in the World Bank's 'Ease of Doing Business' Survey in 2013 to 73rd in 2016. Nonetheless, growth of the private sector remains sluggish. The political goals behind the structural transformation make this likely to continue for some time.

Means of Implementation

As per VPoA recommendations, Bhutan has been raising its tax revenue to GDP ratio – from 8.8% in 2008 to 13.2% in 2016. However, the rise has not been consistent, and the ratio remains well

⁴⁹ Bhutan's Labour Market: Gainful Employment for All, <https://openknowledge.worldbank.org/handle/10986/25703>

below the VPoA ‘threshold’ of 20%. Government expenditures also draw on the profits of public sector enterprise, which equated to 22% of total spending in 2016.⁵⁰

In addition, Bhutan has been slow to run down its dependence on ODA, which remains above the levels received at the start of the decade although lower than in 2011-12. The recent decline partly reflects changing priorities in India’s aid spending, where Afghanistan has come to figure larger. However, ODA flows (especially from India) remain critical to Bhutan since they help to cover a current account deficit which exceeds 25% of GDP and would otherwise be unsustainable. Bhutan is also dependent on India for financing its external debt, which stands close to 120% of GDP and is 92% externally held.

In terms of expenditure, the Royal Government of Bhutan continues to invest primarily in social sectors and has not strongly re-directed spending towards physical infrastructure and economic facilitation, as recommended in the VPoA.

New measure of diversification

Oxford Analytica has developed a methodology for measuring diversification in small developing countries, which employs a system of assessing diversification rates across a suitably selected peer group (of comparator countries) rather than across all countries. In Figure 17, we summarise some of the findings of this study based on the four countries under review and a select group of 77 developing countries with 2018 per-capita GDP between 500 and 5000 US dollars.

The assessment includes five dimensions of economic diversification: **export products, export markets, origin of FDI inflow stocks, diversification across production sectors** and **diversification within production sectors**. In all cases except for ‘within-sector’ diversification, we report two measurements of diversification: a Hirschman Herfindahl index (HHI) and a count. The measurement of ‘within-sector’ diversification, discussed below, is unique to this report. All indices used were compiled by Oxford Analytica and are likely to be the most recent examples of any such data compiled anywhere. The exception is the IMF/DFID Export Diversification Index (EDI), which is reported for comparison purposes.

In this context, Bhutan fares relatively well in a comparator group. The standard proxy measure of diversification is concentration of export product lines, using a Herfindahl-Hirschman (HH) index, Theil index or other measure of concentration. Bhutan’s HH index for export-product lines is 0.21, compared to the 77-country group average of 0.25 (higher numbers indicating higher concentration of exports).

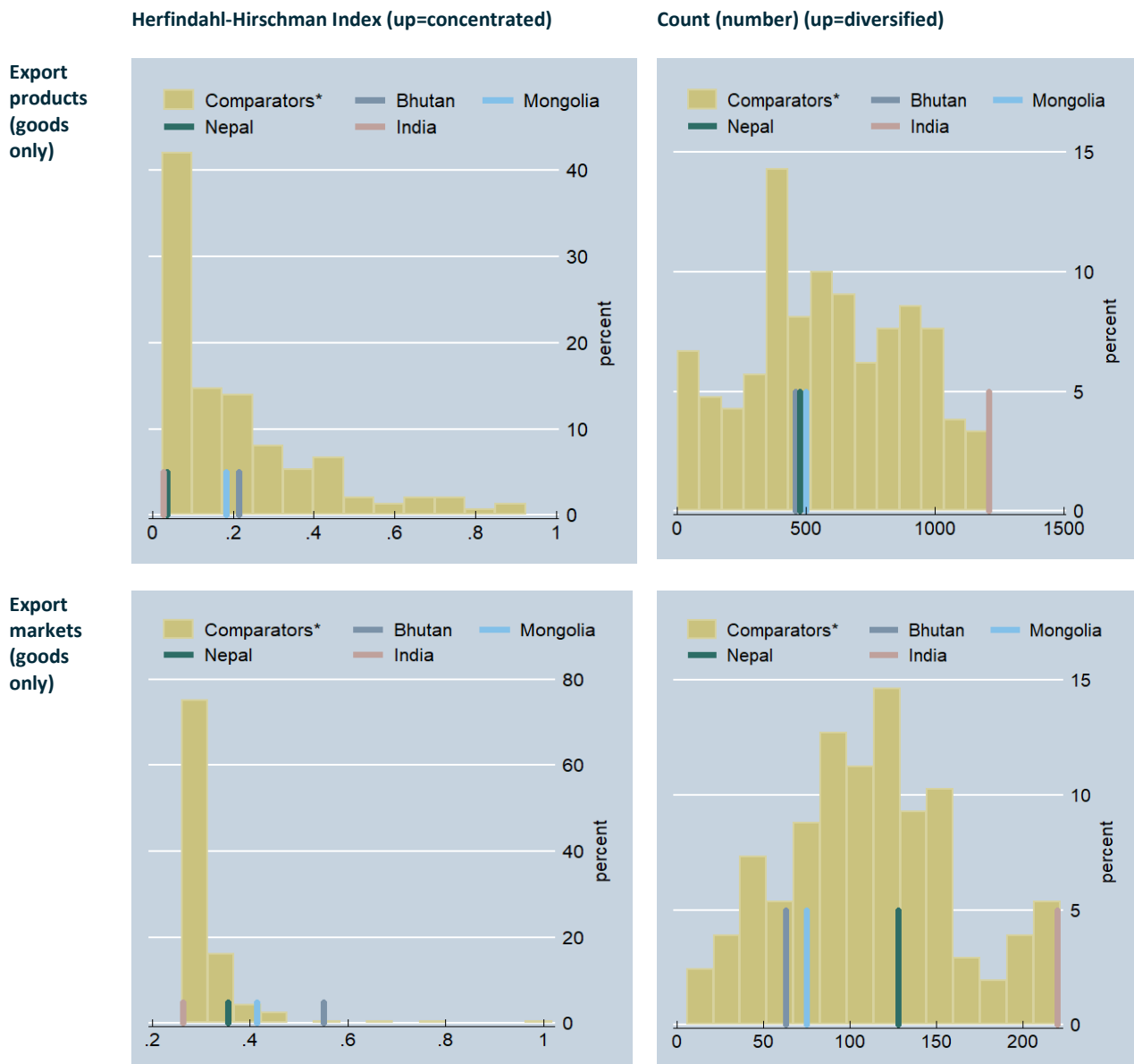
An alternative to such concentration measures is to count the number of export lines active. Bhutan’s export lines, at 461, are below the 77-country average (577) but firmly in line with regional comparators Nepal and Mongolia. Another proxy is diversification in terms of value-added production. Here, too, Bhutan fares better than the comparator group (0.11 vs 0.13 respectively) and is in step with regional peers.

⁵⁰ Bhutan National Account Statistics, 2016

Bhutan relies on few export markets, however. Its market-concentration HH index (0.55) is above that of its neighbours and the larger peer group (averaging 0.29).

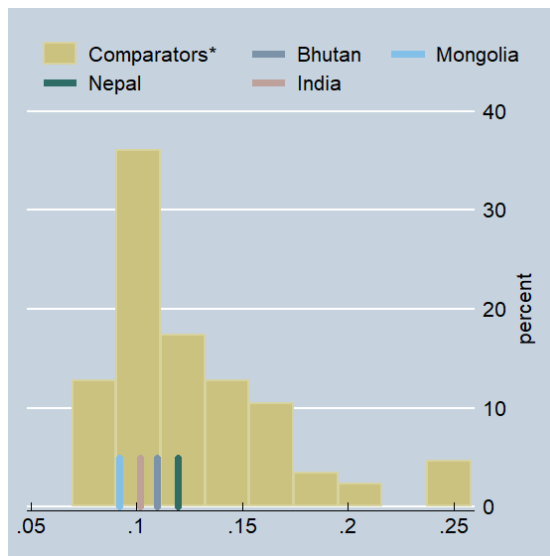
Finally, Bhutan has an undiversified portfolio of external investors. Its HH index for sources of inward FDI (0.6) is markedly higher (thus more concentrated) than the comparator group (0.48) though not dissimilar to Nepal (0.51).

Figure 17: Diversification indices



Herfindahl-Hirschman Index (up=concentrated)

Production (value added)

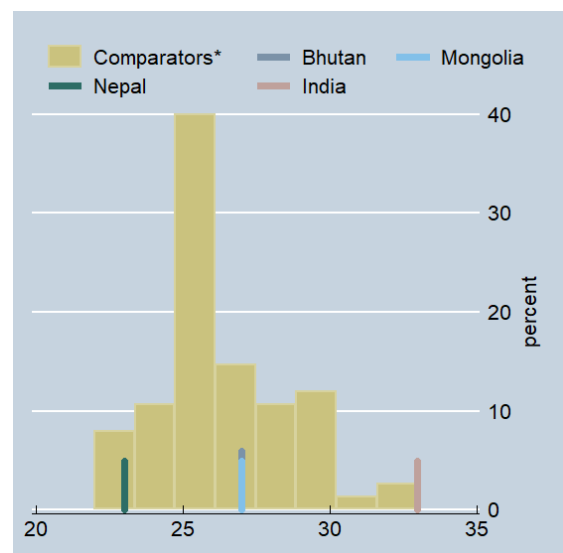
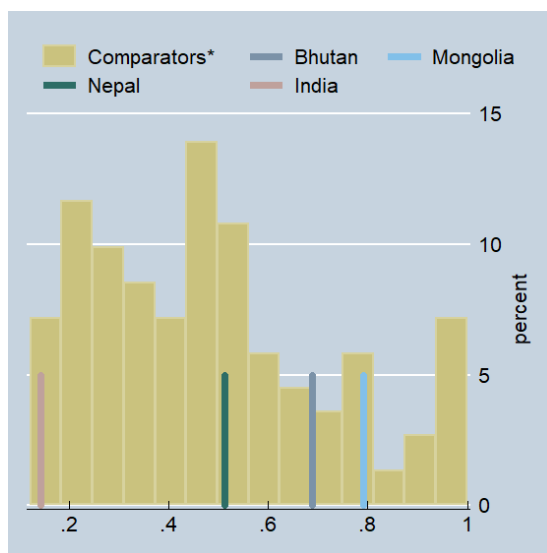


Count (number) (up=diversified)

(Not applicable. Count of value-added activities would be the same for all countries, as it uses aggregations by sector of economy.)

* 77 economies with 2018 per-capita GDP between 500 and 5000 US dollars.

FDI source



Challenges and opportunities

Strategic, political, geographic and ecological constraints pose practical limits to the possibilities of Bhutan. To mitigate the challenges and capitalise on the opportunities, Bhutan could consider policies and initiatives to improve its performance.

Developing the SME sector and extending the financial system to rural areas

Within structural constraints, it is nonetheless possible to see some ways in which Bhutan can progress. Access to finance is clearly a key but has been difficult to harness to private entrepreneurship, especially in the SME sector. The licensing of three new banks is now beginning to help. However, currently their activities are very urban-centred where each has only a handful of branch offices. Yet 60% of the population still lives in the countryside and is largely ‘unbanked’. Clearly, an initiative to carry the financial system into rural areas remains

necessary and could pay dividends in opening up multiple opportunities. India already has experience of this process and both State Bank of India and Punjab National Bank already have stakes in the Bhutan financial system.

Agro-processing and improved farming

Agro-processing is important in maximising the returns to farming. Beside the direct export of fruits and vegetables, agro-processing industries have started to develop, especially with the support of the Danish International Development Agency. Similar NGO support could help expand the industry.

Harnessing highly skilled technology specialists

If the ICT industry is to succeed, it needs access to highly qualified personnel. At present, these are in short supply in Bhutan where tertiary education has only developed in the last fifteen years. Close connections with universities and colleges of tertiary education would help to co-ordinate educational programmes with ICT needs and create a pool of skilled labour.

Encouraging trade and investment with third parties

Surrounded by Indian territory on three sides (and by interdicted Chinese space on the fourth) Bhutan struggles to make connections for trade and investment with third parties. It may need to give greater priority to negotiating ‘passage’ in various forms for its goods and services. Clearing a water-way route to Bangladesh’s ports is an obvious priority. Pressing India to facilitate the sale of Bhutanese electricity to third parties is another. Finally (after twenty years) completing a long-promised connection to the Indian (and inter-regional) railway system is a third. However, all these options depend on the goodwill and co-operation of Indian (and, to an extent, Bangladeshi) authorities, which cannot be guaranteed.

Gradually replacing foreign labour with local talent

With regard to capability gaps, these are multiple and reflect Bhutan’s weak development until the last twenty years. They are currently filled – in so far as they are – by the import of foreign labour and skills largely from India, especially in the hydropower and construction sectors. The displacement of foreign by indigenous labour is a priority of the state and is steadily being pursued through the expansion of literacy and education. Shortages of skilled labour should prove temporary. However, in the interim, tensions between necessary immigrant and indigenous labour are considerable and put a brake on development in the short term. State policies need to pay close attention to finding appropriate balances, which they have yet to do in sectors outside hydropower and construction.

Intra-sector diversification

Economic diversification research has typically focused on broadening economic activity across disparate sectors. This is gradually changing, in recognition of the fact that national authorities are also keen to exploit comparative advantages in sectors that have already established themselves.

This means not necessarily shifting *out* of the sector but expanding the depth of engagement *within* it. In particular, the aim is to increase the amount of *value-added* within the sector, beyond what would accrue from a proportionate increase in output.

The implication for Bhutan is to ensure that credit remains available to established producers but encourage its use to enhanced value-added content in production. For Bhutan, this means ensuring adequate credit to – and in some cases external advisory support for – firms located in the sectors reported in **Table** .

- **Agriculture** only accounts for three of the top-25 categories of export.
- Many of the top categories take advantage of Bhutan's comparative advantage in **electricity**. These include **aluminium production** and a variety of **metalworking activities**.
- The presence of **fruit juices, beverages** and other **sugared-water products** reflect value-adding growth in **manufacturing**, extending from agriculture. This may be an indicator of future expansion of value-added in the economy.

Table 2: Top 25 Bhutan exports of goods (USD million)

Rank	ISIC code	Description	Exports
1	7202	Ferro-alloys	111.8
2	2716	Electrical energy. (optional heading)	42.3
3	2849	Carbides, whether or not chemically defined.	26.2
4	0908	Nutmeg, mace and cardamoms	12.4
5	0805	Citrus fruit, fresh or dried	12.0
6	3920	Plastic plate, sheet, film not cellular, reinforced	8.7
7	2505	Natural sand except sand for mineral extraction	7.7
8	2804	Hydrogen, rare gases, non-metallic elements	7.0
9	2521	Limestone flux; limestone	6.8
10	7214	Iron/steel bar, only forged hot-rolled drawn, extruded	4.9
11	7408	Copper wire	3.8
12	2518	Dolomite, whether or not calcined or sintered	3.6
13	4410	Particle board, similar board, wood, ligneous material	3.5
14	2520	Gypsum, anhydride, gypsum plaster	3.5
15	2510	Natural calcium phosphates	2.7
16	2207	Beverages, spirits and vinegar	2.6
17	6802	Worked monumental, building stone, articles thereof	2.4
18	2811	Inorganic acids, non-metal inorganics	2.4
19	7207	Semi-finished products of iron or non-alloy steel	1.8
20	2517	Pebbles, gravels, aggregates and macadam	1.7
21	2701	Coal; briquettes, ovoid and similar solid fuels manufactured from coal.	1.6
22	2009	Fruit juices (including grape must) and vegetable juices	1.3
23	7206	Iron and non-alloy steel in primary forms, ingots	1.2
24	0808	Apples, pears and quinces, fresh.	1.1
25	2202	Waters with added sugar	1.1

Source: UN Comtrade, Oxford Analytica

* Maximum value reported in 2013-2015 period. Data are assembled from the world's import data from Bhutan.