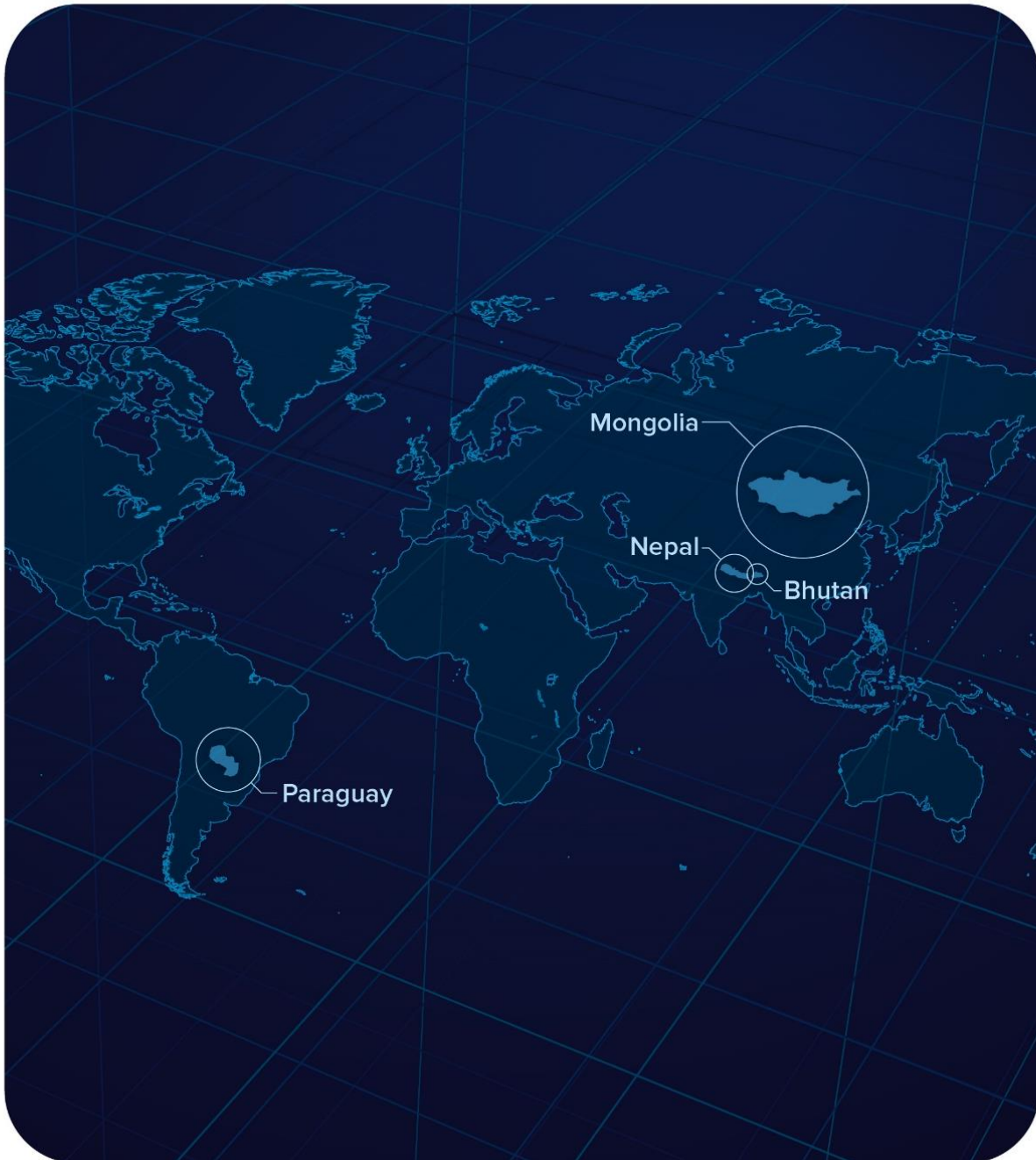


Economic diversification of landlocked developing countries



Prepared for International Think Tank for LLDCs
and United Nations Development Programme



Oxford
Analytica



Oxford Analytica is a global analysis and advisory firm which draws on a worldwide network of experts to advise its clients on their strategy and performance. Our insights and judgements on global issues enable our clients to succeed in complex markets where the nexus of politics and economics, state and business is critical.

HEAD OFFICE

5 Alfred Street, Oxford OX1 4EH
T +44 1865 261 600

Any reproduction or distribution of this study in whole or in part without the written consent of Oxford Analytica Ltd is strictly forbidden.

www.oxan.com

Table of Contents

Overview: Developing resilient economies	7
Developing resilient economies, the role of diversification and setting of appropriate “yardsticks”	7
Assessing the rate of diversification in small developing economies	8
The world’s list of most successful economies – which examples to follow?	12
South-South trade	17
HHI and COUNT	20
Intra-sector diversification (ISDIV)	21
Export-product diversification	22
Export-market diversification	24
FDI-source diversification	25
Production diversification	26
Intra-sector diversification	27
Mongolia	30
Country analysis and economic overview	31
Nature and trends of economic diversification	36
The demand side of the economy	37
Employment and productivity	37
Exploring policy measures (national policy documents)	40
Investment	44
FDI as an indicator of diversification and connectivity	45
Private sector	47
Integrating the principles of the Vienna Programme of Action	48
Improving the transport infrastructure	50
International trade and trade facilitation	51
Regional integration and cooperation	52
Value added in agriculture	52
Structural Economic Transformation	52
Gender impacts and equality	53
Challenges, opportunities and policy recommendations	56
Developing sustainable mining industry	57
Avoiding equity ownership in mineral projects in the near term	57
Fostering economic diversification	58
Privatising certain sectors, combating corruption and enhancing accountability	58
Further investing in road infrastructure	59
Streamlining and modernising business procedures	59
Increasing support to SMEs	59
Capitalising on ‘organic’ agriculture practices to win international markets	60
Successfully integrating registration and electronic information system for food safety	60
Re-branding to increase the market share	60
Encouraging and developing nascent industries	60
Pursuing proactive policy making	61

Bhutan	62
Country analysis and economic overview	63
Exports	64
Export destinations	65
Value-added contributions and concentration	67
Labour force	68
Productivity	70
Nature and trends of economic diversification	72
Gender equality and participation in the labour force	73
Exploring policy measures (national policy documents)	74
Macro-economic management	76
Industry and services	77
Public sector preference	78
Financial constraints	79
Transport and infrastructure	79
Strengthening governance structures and institutions	80
Investment	81
Foreign Direct Investment	81
Investment levels	82
Private sector	83
Integrating the principles of the Vienna Programme of Action	84
Transit	84
Infrastructure	85
International trade	86
Regional integration	86
Structural economic transformation	86
Means of Implementation	87
New measure of diversification	88
Challenges and opportunities	90
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.	90
Developing the SME sector and extending the financial system to rural areas	90
Agro-processing and improved farming	91
Harnessing highly skilled technology specialists	91
Encouraging trade and investment with third parties	91
Gradually replacing foreign labour with local talent	91
Intra-sector diversification	91
Nepal	93
Country analysis and economic overview	94
Economic growth	95
Structural transformation of the economy	95
Labour productivity	98
External trade	99
Intra-sectoral diversification and transformation	101

Remittance economy and structural transformation	102
Gender and structural transformation	103
Infrastructure, structural change and diversification	106
Exploring policy measures (national policy documents)	108
Macroeconomic policy	108
Nepal's Trade Integration Strategy (NTIS)	108
Shortcomings and challenges of the NTIS	109
Insufficient attention to the productivity-trade integration nexus	109
Prioritising low quality products in the NTIS	110
More focus needed on infrastructure	110
Investment	110
Foreign direct investment	112
Private sector	112
Integrating the principles of the Vienna Programme of Action	113
Nepal policy on structural change	113
Challenges, opportunities and policy recommendations	114
Policies for increasing investment	115
Policies for export diversification and increasing productivity	115
Policies to deal with migrant remittances	116
Paraguay	118
Country analysis and economic overview	118
Competitiveness	123
Technological innovations	125
Sectoral labour force concentration and intra-sectoral concentration	125
Productivity levels and growth rates across sectors and within sectors	127
Gender equality and economic diversification	128
Nature and trends of economic diversification	129
Exploring policy measures (national policy documents)	134
Investment	135
Private sector	136
Private sector investment	136
Integrating the principles of the Vienna Programme of Action	137
Fundamental transit policy issues	137
Infrastructure development and maintenance	138
International trade and trade facilitation	139
Regional integration and cooperation	140
Structural economic transformation	141
Challenges, opportunities and policy recommendations	143
Boosting competitiveness	146
Enabling more conducive business practices, combating red tape and corruption	146
Using rich water resources and hydroelectric potential	146
Increasing tax revenues and productivity gains	146
Improving the distributional effect of the agricultural sector	146
Strengthening resilience to climate shocks	147
Promoting R&D and research capabilities – boosting innovation capacity	147

Table of Figures	148
Overview: Developing resilient economies	148
Mongolia	148
Bhutan	149
Nepal	149
Paraguay	150

Overview

Developing resilient economies, the role of diversification and setting of appropriate “yardsticks”

It is generally accepted that economies based on a broad range of activities and trading relationships are more resilient to both shifting trends and idiosyncratic shocks. This is easier to achieve in a large, advanced or partially developed economy but even a small, less developed (or otherwise restricted) economy will have some potential to diversify and thus reduce economic risk. Moreover, efforts to diversify are also believed to help expand and advance skill sets, improve macroeconomic productivity and boost connectivity. The development of external operations to manage export sales can also serve a broader purpose of fostering a better understanding of how to do business in other countries and the sectors in which opportunities exist.

Certainly, reducing dependence on just a few products and markets through the development of additional businesses, transport routes and trade relationships can make a country more resilient to potential changes in conditions at home and abroad. Evidence of robustness and resilience can be seen across many of the largest and most developed economies around the world, although most countries have at some time suffered from severe recessions due to either their internal or external vulnerabilities.

The global crisis of 2008-2009 offers an important example of countries' varying reactions to major shocks, which may hold lessons for the developing countries under examination in this study. During the steep collapse in economic activity from late 2008 into 2009, most economies suffered from the systemic shock, but some saw exceptional losses due to their very high exposure to both global markets and the hardest hit industries, such as finance, investment goods, vehicles, shipping, and commodities (e.g., oil and minerals). Among the world's largest economies, Germany, Italy, Japan, Russia and the UK suffered substantial losses in 2009 (4-8% of GDP), while, interestingly, the US itself was less badly affected (GDP down by less than 3%) even though it was at the centre of the crisis. To some extent, this US resilience was due to its relatively low dependency on exports and the safe-haven position of the dollar (which also brought in financial resources). In contrast, exacerbated by their excessive external indebtedness, some of the worst affected countries (GDP losses as high as 10-20%) were the Baltic states and Eastern European members of the EU. Other post-Soviet states (Armenia, Moldova and Ukraine) also suffered massively.

Notably, economies that were less open to trade (e.g., India) and small developing states that were far from the epicentre of the crisis (e.g., many African and Asia-Pacific countries, including Bhutan and Nepal) were more or less untouched by the global turmoil and, in some cases, even achieved high growth rates -- in part due to China's rapid fiscal policy boost and subsequently strong growth rate. However, China's neighbour Mongolia was hampered by falling commodity prices and did suffer a shallow and short-lived recession in 2009. Latin America also saw negative GDP growth of about 1.7% (in-line with the world average) but some countries such as Argentina crashed (GDP down by over 6%) and Paraguay also fared quite badly (GDP dropping by 4%), probably provoked by the recessions in neighbouring Argentina and Brazil as well as weakened commodity prices.

Notably, within the EU, Belgium and Switzerland were relatively resilient during the 2008-2009 crash while some of the other small, wealthy member states saw GDP drop sharply (e.g., Finland, Iceland and Sweden). These varying outcomes can be linked to differing business models, such as the greater exposure to commodities trade in the Nordic countries versus the preponderance of headquarter activity and international business operations in Belgium and Switzerland. Such contrasting outcomes may be interesting in the context of the development planning and policy dilemmas faced by small developing countries.

Assessing the rate of diversification in small developing economies

Key examples of well diversified, robust and resilient economies are the major advanced countries (e.g., the US, Japan, Germany, France the UK) and also China, all of which have built up a rich sectoral representation and widespread trade relations over many years.

These countries tend to have a significant impact on economic thinking and opinion regarding development models. Their data also set a benchmark in global assessments and comparisons of rates of diversification (or concentration): such statistics and related studies unsurprisingly conclude that most developing countries, especially very small states, are very poorly diversified. This encourages the view that such countries are performing badly and should adopt more aggressive policies aimed at boosting diversification. Yet their progress may be in line with their stage of development and capabilities – commensurate with, and perhaps better than, their peer group.

Oxford Analytica has developed an innovative methodology for measuring diversification in small developing countries, which employs a fairer system of assessing diversification rates across a suitably selected peer group (of comparator countries) rather than across all countries. In Figure 1, we summarise the findings of this study based on the four countries under review and a select group of 77 developing countries.

We explore 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.

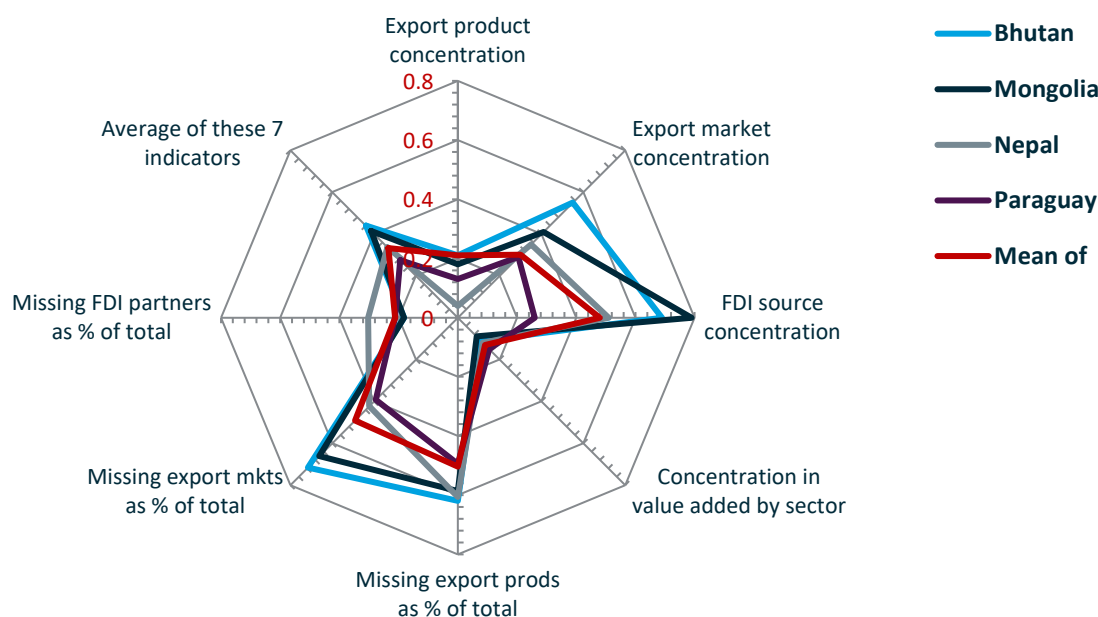
Figure 1 shows these various aspects of diversification based on products exported, export markets, the sectoral spread of value-added and FDI partners (for ease of comparison, all normalised to the range 0 to 1). In addition, it includes the average of these seven measures as a form of overall performance score for each country. The average scores for the comparator group are also shown. (See *Appendix. Alternative measure of diversification* for a detailed discussion of Oxford Analytica’s methodology).

While the performance of the group of four countries varies across indicators, they all appear to be fairly close to the median score: that is, they are not grossly out of line with their peers.

Paraguay is clearly the best performer, followed by Nepal – although Nepal’s actual economic performance is poor. Nepal’s neighbour, Bhutan, is the worst performer, held back chiefly by poor export market concentration (dominated by India). Average scores along with the worst features for each country are listed in the table below.

Such peer group reviews offer a more reasonable, less onerous yardstick by which to measure status and progress – and there is less risk of a small developing country with a relatively good diversification record *compared with its peers* being branded as a poor performer.

Figure 1: The OA alternative diversification indicators converted into similar format (range 0 to 1, where higher scores indicate higher concentration, less diversification)



Source: Oxford Analytica

Table 1: Country rankings and worst areas of performance

Country	Average Scores	Worst scores are in
Bhutan	0.44	Missing export markets
Mongolia	0.41	FDI source concentration
Nepal	0.34	Missing export products
Paraguay	0.28	Missing export products
Mean of comparator countries (peer group)	0.33	Missing export and markets and FDI concentration

Source: Oxford Analytica

However, even a shift in methodology is not enough to answer some concerns over the measurement of diversification rates and their use in policy recommendations. Certainly, great care must be taken over the interpretation of such measures and there is a risk of these yardsticks putting undue pressure on small, lesser developed economies to set a high priority on increasing diversification. Attention must be paid not only to the position of the country and its degree of diversification compared with appropriate peer groups but also to the potential distortions caused by a country being in the process of development, perhaps part way through a particular phase of development that might even cause measures of diversification to deteriorate rather than improve over a period of time.

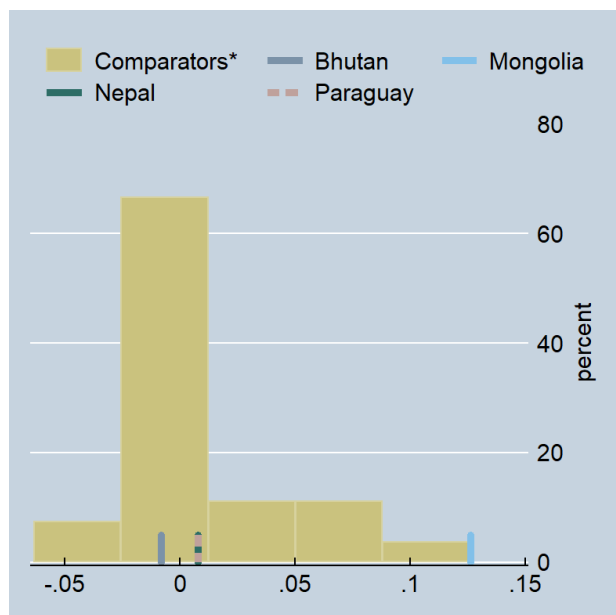
These problems can be illustrated using examples from the four countries selected for this study – in this case, Bhutan and Nepal. When assessing a country's diversification performance, it is necessary to look at this over time and in the context of any other economic development programmes. Furthermore, it is also important to examine carefully what exactly it is that certain statistics are measuring in order to understand whether the figures calculated are pointing towards a decrease or increase in diversification. For example, we may question if Bhutan really has become less diversified due to the recent disproportionate development of hydropower and exports of this power to India, as indicated by the usual measures of diversification, or whether this new economic development should be understood as an important step towards diversification (plus the achievement of greater export revenues and GDP) and away from dependence on the type of "traditional export basket" previously produced. Conventional diversification analysis is also dominated by goods markets and trade, whereas Bhutan actually earns around a quarter of its export revenues from services, which have more diverse sources.

In contrast to Bhutan, Nepal's goods exports are still dominated by the "traditional export basket", which has a slightly wider range of external markets than hydropower even though India is still the dominant partner. Thus, Nepal is estimated to be the more diversified of the two economies due to the definitions of sectors and diversification applied. Yet, in truth, Nepal is very dependent on subsistence agriculture and generates both very low GDP per capita and weak export revenues (only around 10% of GDP). Its GDP and export figures are heavily dependent on both services trade (over half of export revenues) and the meagre level of external earnings from the "traditional export basket".

Diversification analysis for Mongolia is also being impacted by its inevitable tilt towards China and the boom in fuels and minerals trade: on the conventional measure, concentration is increasing. However, as seen with hydropower in Bhutan, this development has offered an available route to rapid economic progress and improving living standards. Moreover, at the same time as the boom in fuels and minerals, Mongolia has been increasing productivity in goat herding and thus exports of cashmere to a wider market, including Europe.

It is also interesting to note that the countries that top the list of the world's most successful economies, as measured in terms of GDP per capita (and wealth), are all small economies -- and some of them, including Switzerland, are land-locked. These countries often have relatively concentrated sectoral interests, which most obviously shows that being small and geographically challenged is not necessarily a barrier to success. However, it also appears to confirm the idea that any targets for diversification across other small economies should be set differently to the levels seen in large, "all singing, all dancing" economies – one size does not fit all.

Figure 2: Intra-sectoral diversification over five years



The graph reports a histogram of MEAN_ISDIV: the average – across all reported sectors – of the growth in value added minus the growth in output (specific to each sector), over five years. Higher numbers (x axis) indicate higher intra-sectoral diversification.

The y-axis reports the percentage of observations found in the given interval of the x-axis. Data are for 2011-2016 or latest available.

* 77 economies with 2018 per-capita GDP between 500 and 5000 US dollars (see Appendix 2 for the list of countries).

Source: Oxford Analytica

Index results for the four landlocked economies and comparator-group summaries are reported in Table 1. The four landlocked countries under review exhibit more export diversification than the average of their comparators according to the HH index for export products (HHI_X). However, only Paraguay exports as many *types* of export categories as the average of the comparators (COUNT_X).

This roughly agrees with the IMF Theil index of export-product diversification (EDI), where both Nepal and Paraguay are in the same league as or better than the comparator-country average. (Recall that lower numbers for the EDI, like the HH indices, indicate *more* diversity.) Again, only Paraguay matches the comparator group in terms of export market diversification, as measured by the HH Index for export markets (HHI_MAR). Both Nepal and Paraguay have at least as *many* export markets as does the average of the comparator group (COUNT_MAR).

Table 2: Summary results

(all HHI_* and EDI are rising in concentration, so lower numbers indicate more diversification)

	HHI_X	COUNT_X	HHI_MAR	COUNT_MAR	HHI_FDI	COUNT_FDI	HHI_VA	MEAN_ISDIV	EDI
Bhutan	0.21	461	0.55	63	0.69	27	0.11	-0.008	N/A
Mongolia	0.18	501	0.41	75	0.79	27	0.09	0.126	4.5
Nepal	0.04	477	0.35	128	0.51	23	0.12	0.008	2.4
Paraguay	0.13	612	0.29	135	0.26	26	0.15	0.008	3.9
Comparator group (excluding Landlocked-4), N~77									
min	0.02	4	0.26	6	0.12	22	0.07	-0.087	1.9
mean	0.21	601	0.30	113	0.48	26	0.13	0.003	3.8
max	0.94	1210	1.02	222	1.00	33	0.53	0.054	6.3
sd	0.21	320	0.06	50	0.25	2	0.06	0.030	1.1

Source: Oxford Analytica

In terms of FDI, again only Paraguay bests the comparator group – indeed with an HH Index coming in well below the comparator-group average. The count variable for FDI is less instructive, as nearly all reporting jurisdictions report some outward FDI positions in the landlocked-4 and in the average comparator. (The inward FDI data are constructed from the outward reported positions of OECD economies.)

The HH Index for value added of reported production sectors (HHI_VA) for all landlocked-4 countries is within a standard deviation of the average for the comparator group. Note that the production sectors do not lend themselves to a count variable because of the heterogeneity of reported output aggregations, which is offset by the averaging entailed in the HHI. Hence there is no "COUNT_VA" variable.

Only Mongolia exhibits substantially better intra-sectoral diversification (MEAN_ISDIV) than the comparator group. The comparator-group average is essentially zero, and – apart from Mongolia – all landlocked-four economies exhibit a MEAN_ISDIV well within a standard deviation in this outcome. Mongolia is actually a standout in this respect, with a mean ISDIV more than twice as big as the comparator-group maximum. As shown in the Mongolia section of this report, this result does not rely on any one sector's performance but is broadly spread across economic sectors.

The world's list of most successful economies – which examples to follow?

The overall ranking for the world's most successful economies displayed in Table 3 -- based on the level of GDP per capita, measured in US dollars at current prices and market exchange rates -- is headed by Monaco, Liechtenstein, Luxembourg and Switzerland. The first major OECD economy in this global "rich list" is the United States (ranked 8th, according to the IMF's data for 2017). The first of the big European economies is Germany (18th) although a number of smaller

European economies come higher or just below Germany on the list, including Norway, Iceland, Ireland, Denmark, Sweden, Finland, Austria, Belgium and the Netherlands. Other top performers include Bermuda, Macau, Hong Kong, Singapore, the Cayman Islands, Qatar, the UAE, Australia and Canada.

Table 3: World's leading economies ranked in terms of GDP per capita

(measured at current market prices and exchange rates, US\$)

IMF	WORLD BANK	UN
Luxembourg	Luxembourg	Monaco
Switzerland	Switzerland	Liechtenstein
Macau (China)	Macau (China)	Luxembourg
Norway	Norway	Bermuda
Ireland	Ireland	Switzerland
Iceland	Iceland	Macau (China)
Qatar	Qatar	Norway
United States	United States	Ireland
Singapore	Denmark	Cayman Islands
Denmark	Singapore	Iceland
Australia	Sweden	Qatar
Sweden	Australia	United States
Netherlands	San Marino	Australia
San Marino	Netherlands	Denmark
Austria	Austria	Singapore
Hong Kong	Hong Kong	Sweden
Finland	Finland	San Marino
Canada	Canada	Netherlands
Germany	Germany	Austria
Belgium	Belgium	Hong Kong
New Zealand	United Kingdom	Finland
Israel	New Zealand	Germany
France	Japan	Canada
United Kingdom	UAE	Belgium
Japan	Israel	Greenland

* The Channel Islands is not identified here as it is considered part of the United Kingdom.

Source: Oxford Analytica

Notably, at the very top of the rankings, Liechtenstein, Luxembourg and Switzerland are all small landlocked countries -- and Austria follows not far behind. Arguably, Iceland faces an even tougher geographic and logistics challenge and to some extent Ireland is also hampered by additional cost and accessibility factors, yet they both achieve high rankings. True, most of these countries have had to make considerable efforts to overcome initial hurdles – including widespread poverty (as recently as a century ago) – in order to generate jobs and wealth creation. Now, they have overtaken their larger neighbours.

The most successful countries listed in Table 3 clearly offer some interesting lessons regarding the potential for GDP growth and wealth development in less developed small states. To summarise:

- Small poor states can become highly successful, wealthy small states.

- Being more specialised and less diversified than large states may be a key feature of successful small states – with services such as HQ functions, medicine, finance, law, specialist high-end tourism and gaming often being very important industries, more so than goods production.
- Promoting education and high skill levels can help a small population to become very effective in targeting successful business developments and opening up to trade in areas of competence: many small jurisdictions offer highly specialised services/products aimed at particular groups of (mostly high net worth) clients and trade partners.

Of course, landlocked states cannot operate as key ports on important sea routes (like Hong Kong and Singapore) but they can consider building up high-level business hubs to serve their much larger neighbouring states and high net worth groups at home and abroad. For business hubs to be effective, stability of regime, a strong legal system and skill sets are more important factors for such businesses than location, transport or manufacturing costs. In some cases, there may also be potential to act as air, rail or road transport hubs and storage/regional distribution centres: arguably, this could be feasible in Mongolia or Paraguay but would be practically impossible for Nepal and Bhutan given their exceptionally restricted geopolitical position. Obviously, various aspects of a country's geographic position beyond being landlocked (e.g., extreme mountainous locations and politically difficult borders) can restrict potential for infrastructure development, business and trade.

Any restrictions on accessibility, the length of time taken on routes in/out and high costs of transportation tend to block many development opportunities, especially regarding goods trade or mass market services. This puts even more focus on highly specialised services and light manufacturing.

Given the geographic positions of the four countries studied and their stages of economic development, it is highly unlikely that they could quickly succeed in providing high value-added export products and services for far distant and/or highly developed economies. But they can build businesses based on products that are either readily saleable into world markets (such as Paraguay's soy or Mongolia's minerals and cashmere) or relatively easy to sell to potential customers at home, in neighbouring developing countries and among annual visitors. While the impacts on traditional measures of diversification may be weak or even perverse at the early stages, it would offer them the chance to develop new niches from which to expand over time into new markets and/or products, increasing long-term diversification substantially.

For example, we can consider the options for Bhutan, which has a very small population with a relatively stable and conservative government. While extension of the range of exports across more products may be a target for Bhutan, it is hard to see how attempts to increase goods production might be cost-effective in such a landlocked, mountainous country. Higher levels of production would exacerbate its infrastructural problems: high transport costs, the slow passage of any goods exported (largely through India), and the country's general lack of experience in both manufacturing and international markets. Specialist services could offer more opportunities for diversification of activity and revenues. For example, there may be potential for Bhutan to become a local centre for specialised financial and legal services – such as

management of charitable funds and operations related to environmental and wildlife protection in the Himalayas. This would follow more of a small-scale “Channel Islands” route rather than a full-service “Switzerland” model of banking and finance. Such services might be a good fit with Bhutan’s focus on high-end travel and tourism. However, these new businesses would require high-level skills and expertise, for which foreign workers would be needed in the short term while extensive training programmes got underway for locals.

On a more readily achievable scale for both Bhutan and Nepal, tourists also require various ICT, financial and personal services. Similar business opportunities exist in Mongolia and Paraguay, although the focus in these countries is probably more strongly on business visitors and foreign workers.

Difficulties in estimating the appropriate rate of diversification for each country

What is clear from the preceding discussions is that the optimum method of diversification is country specific and very hard to estimate. Accordingly, the best way of achieving this must be tailored to each country’s specific circumstances. These circumstances include its size, stage of development and education standards, skill sets, geographic position, and the feasibility and cost of doing business in individual markets.

The new products and markets targeted as part of any drive towards increased diversification must also be backed by economic and business logic to avoid a persistent need for subsidies, although there may be grounds for long-term assistance if other worthwhile benefits, such as improved skill sets and entrepreneurship, accrue and have positive effects on the economy.

There may also be an over-emphasis (for all four countries) on goods products and markets, downplaying the role of services exports. Transport, travel and tourism are important segments in trade for both Nepal and Bhutan – yet commentaries often seem to neglect these revenues compared with the focus on goods trade. Another advantage of these service sectors is the diversity of trade geographically – compared to goods trade, which mostly passes through India.

All four economies reviewed here have made marked economic progress over the last decade in terms of GDP growth and improved GDP per capita. However, Bhutan has made very substantial gains while Nepal has not, both in the short and longer term. Notably, these two economies point to the potential for sharply differing outcomes to be seen between countries otherwise in very similar circumstances. Nepal has a considerably larger population than Bhutan (nearly 30 million to less than 800,000) but the key income generator in Bhutan is not the scale of the population but the development of export revenues from hydropower and related industries. In Bhutan, tourism receipts are an extra revenue source whereas Nepal has to rely on them more heavily to earn foreign currency. Without these two key exports – hydropower and tourism -- both countries would be heavily dependent on subsistence farming, along with a variety of low-value craft and specialised food products (so-called traditional exports) to generate very meagre export revenues.

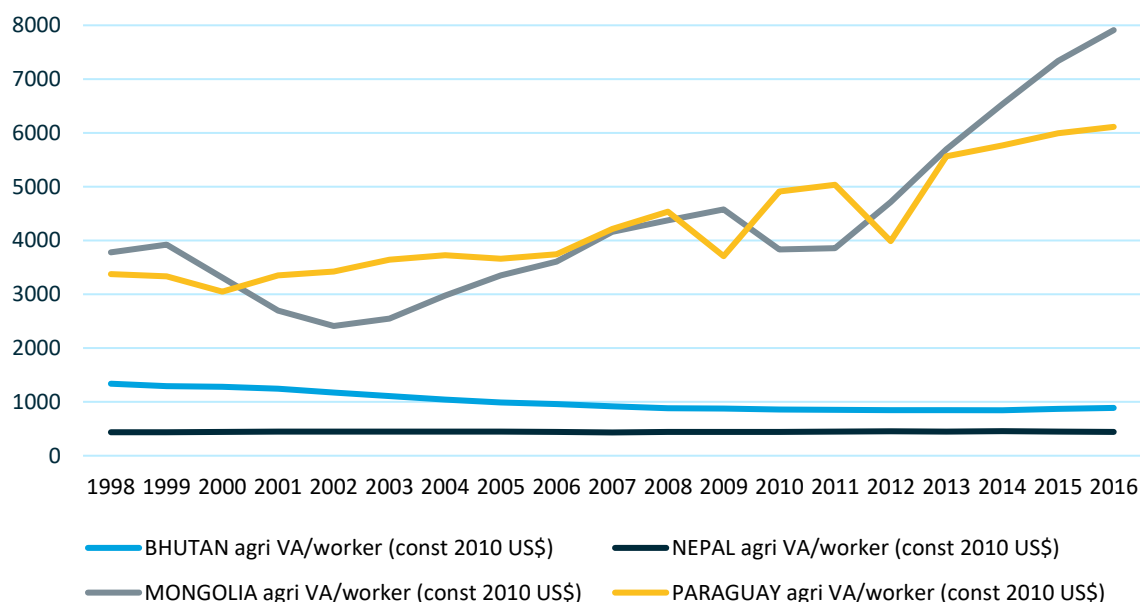
Table 4: Real GDP growth has been strong in both Bhutan and Mongolia, more mediocre in Paraguay and Nepal

Country	Average real GDP growth over 2008 to 2017 (% per annum)
Bhutan	6.7
Mongolia	7.2
Nepal	4.5
Paraguay	4.8
India	7.0
China	8.3

Source: World Bank and Oxford Analytica estimates

Paraguay and Mongolia also show certain similarities. Both have GDP per capita in the range of 3,500-4,000 dollars, and both have similar sized populations (roughly 7 million and 3 million people respectively). Total GDP is just over 27 billion dollars for Paraguay and 11 billion dollars for Mongolia. Both economies have limited routes for trade, through a couple of much larger neighbours (Brazil and Argentina, China and Russia respectively). However, in contrast to Bhutan and Nepal, Paraguay and Mongolia have both seen sharp gains in agricultural productivity, and agricultural exports have risen accordingly.

Figure 3: Output per worker in agriculture (constant 2010 US\$)

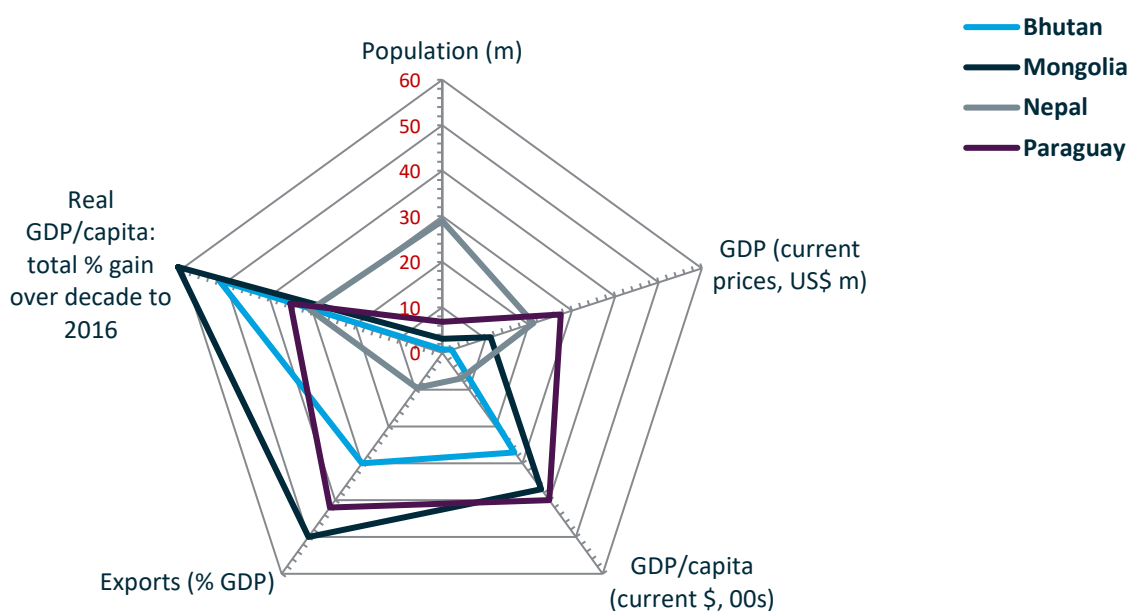


Source: World Bank WDI database

Like Bhutan, Paraguay is a large exporter of hydropower to its direct neighbours. However, through its expansion in agribusiness (especially internationally traded soy products), it has recently been able to diversify its trade and increase exports to a much wider range of countries.

In contrast, Mongolia's surge in fuels, minerals and metals exports has been mostly aimed at the huge and booming China market, although, in principle, it could sell these products elsewhere. Nevertheless, Mongolia has also expanded its specialist agricultural exports (chiefly cashmere from expanding goat herds) and these can be more readily sold across a wider range of markets than other commodities, which are difficult to transport. As part of China's 'One Belt, One Road' (OBOR) infrastructure plan, a new road link connecting China and Russia will pass through Mongolia: it is due for completion in 2018 and may open up additional potential for Mongolia's exports.

Figure 4: Key economic attributes of the four landlocked countries under investigation



Source: WDI (World Bank) and Oxford Analytica calculations

South-South trade

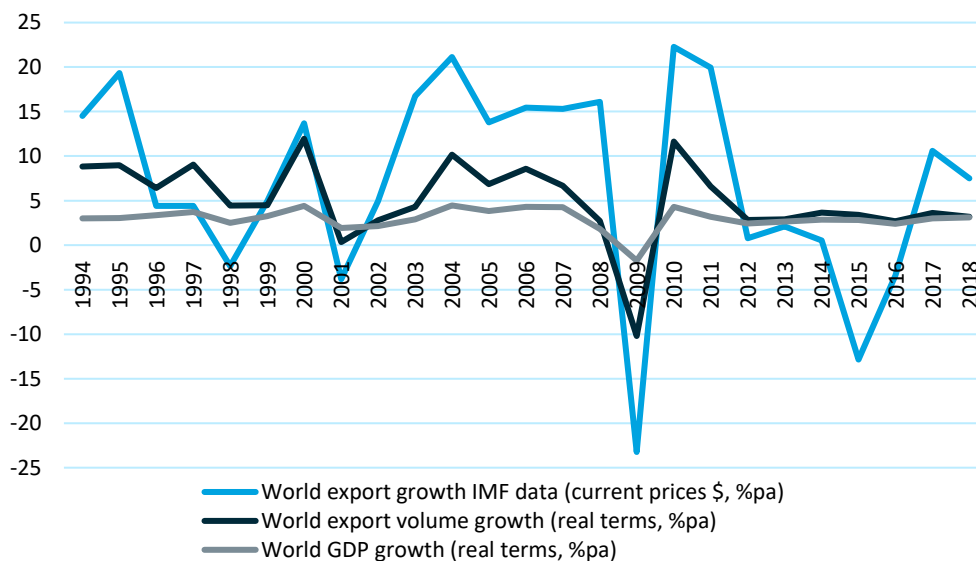
A gradualist approach to the build-up of new export businesses and trade networks, starting with improving connectivity across neighbouring developing countries, would also lead to greater development of South-South trade, even if growth in overall world trade is subdued.

Global trade performance has been turbulent since 2009, with weaker growth over the last few years in particular. According to analysis carried out by the WTO, world trade growth used to be about 50% higher than world GDP growth, at around 4.5-6% annually. Now, it seems to be moving more or less in line with GDP. This implies that the developing world is more likely to be galvanised into generating its own trade momentum. Furthermore, current tendencies towards protectionism among some of the advanced economies, particularly the United States, may

serve to further weaken overall world trade growth. This could lead to faster development of new trade hubs in the developing world. China-led OBOR projects are already expected to encourage this trend, both directly and indirectly through inspiring other regions into similar infrastructure projects.

For those small developing countries that find it particularly hard to achieve export growth across a wide range of advanced economies, more rapid growth in South-South connectivity and trade should allow them to improve their export performance. However, while this might increase their range of trade partners, diversification in the range of products offered might remain difficult to achieve, especially for landlocked countries with physical accessibility problems. Arguably, instead of promoting efforts to greatly diversify goods products, an alternative policy goal might be to expand into services, especially those that might clearly appeal to a well-identified target group of potential clients. There are opportunities in services as well as goods trade – tourism and business services are resilient industries that have performed well throughout most of the last decade, in spite of a turbulent global trade environment. Trade in services is expected to continue to outperform trade in goods, mimicking the growing role of services in global GDP.

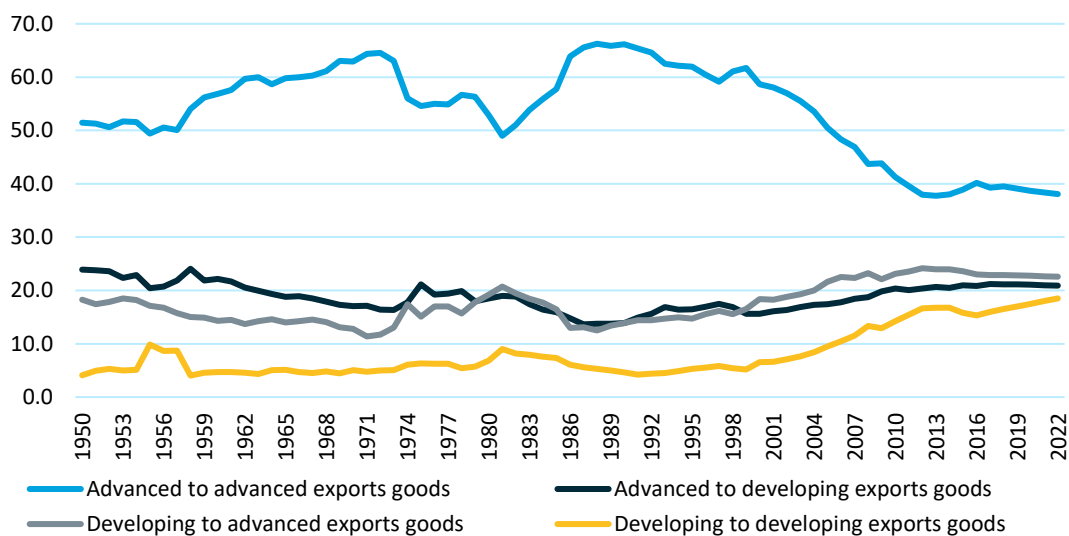
Figure 5: World trade growth, 1994-2018



Source: WDI, WTO and IMF

The trends in trade across the advanced and developing countries depicted in Figure 6 (including projections for 2018-2022) clearly show the marked uptrend in South-South trade, which is forecast to continue increasing its share in world trade.

Figure 6: Export trade shares for advanced and developing countries (as % share of total world exports; 2018-2022 are OA forecasts)



Source: WDI, WTO and IMF and further OA forecasts

The current rise in global GDP and trade growth is likely to taper off, due to several prominent trends across advanced economies: productivity growth remains low, consumer demand for goods is becoming satiated, and populations are ageing. In contrast, most developing countries still have plenty of scope for catch-up. They also have rising numbers of workers, all eager to raise their living standards. Over the long run, even the developing world will see its population stabilise, but in the short-to-medium term, it is likely to achieve high levels of GDP growth.

This growth in the developing world will likely generate strong growth in South-South trade, and improvements in business connectivity and cross-border investments will further raise its potential. Successful new export businesses would also build strong launch pads for pursuing trade growth with the advanced economies.

Appendix 1. Oxford Analytica’s alternative methodology of measuring diversification

In an ideal world, researchers would measure the types of activities comprising GDP at a fine level of detail to assess the extent of economic diversification. As such data are generally unavailable, however, researchers typically utilise trade data – which is highly disaggregated -- as a proxy for economic diversification. A defence for doing so is that production diversity must at least be as high as export diversity (else there would be no way to export a given array of products). In other words, the set of domestic products contains the set of export products; the converse is not necessarily true.

We report both kinds of diversification – in export products (net of re-exports) and in domestic output (measured in valued-added per sector). We also present a measure of notional *within-sector* diversification, based on the growth of value-added in the sector relative to the growth in sector output (see below). We also report on the diversification of export product markets, as an indication of dependence upon, and vulnerability to, limited export markets. Finally, we report on the diversification of sources of FDI inward stocks, again as an indication of dependence and vulnerability.

Table 1: Economic diversification indices used in this report.

Index	Description	Comp (N)	Global (N)	Notes	Data source
HHI_VA	HHI for value-added sectors	77	201		UN
COUNT_VA	Count of value-added sectors				
HHI_MAR	HHI for export markets	67	67	1/	COMTRADE HS-4
COUNT_MAR	Count of export markets				
HHI_FDI	HHI for FDI stock by origin	79	202	Based on outward positions of reporting economies	OECD
COUNT_FDI	Count of FDI origins				
HHI_X	HHI for export products	74	188	1/	COMTRADE HS-4
COUNT_X	Count of export products				
MEAN_ISDIV	Intra-sectoral diversification index	20	77	See text for description	UN, national authorities
EDI 2/	IMF Export Diversification Index	72	185	Theil index; excludes Bhutan	COMTRADE HS-4

* Data for Bhutan assembled from imports of COMTRADE reporters

** This index not compiled by Oxford Analytica

Source: Oxford Analytica

HHI and COUNT

Our two measures of diversification are generally a Hirschman Herfindahl index (HHI) and a count variable. The appeal of the HHI is that it reflects magnitudes as well as dispersion. Limitations of the HHI include its potential to be wrong-footed by the use of nominal trade values. For example, commodity price swings can affect the reported diversification of the economy by inflating or deflating a particular category without any structural change in the

economy. This shortcoming is not big enough to cancel the HHI's attributes, and the index remains one of the most widely reported and utilised measures of diversification (Hidalgo 2009).¹ The HHI sums over the squared shares of categories, as in Equation 1:

$$1 \quad HHI = \sum_{i=1}^N \left(\frac{x_i}{X} \right)^2$$

where N is the total number of categories, x_i is the nominal value of the category and X is the total across categories. The category in our context depends upon the index. It is either an export category (at the 4-digit HS level), an export market or a source of inward FDI.

To interpret the HHI, we recommend the "Horizontal Merger Guidelines" established by the US Federal Trade Commission and the US Department of Justice (August 2010).²

Diversified exports, markets, FDI or production	HHI < 0.15
Moderately concentrated exports, markets, FDI or production	0.15 ≤ HHI < 0.25
Highly concentrated exports, markets, FDI or production	HHI ≥ 0.25

COUNT is also employed in this report. This is a simple count of the number of categories and is also widely used in the economic-diversification literature (Persson 2013). Its benefits include invulnerability to price changes. A weakness is that all categories have equal importance, which will usually not be the case.

We report all these measures for the four landlocked economies plus a group of roughly 77 comparator economies.³

Intra-sector diversification (ISDIV)

Economic diversification research has typically focused on broadening economic activity across disparate sectors (UNIDO 2018). This is gradually changing to reflect 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* in. 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. As a measure of such intensification, or 'intra-sector diversification' (ISDIV), we report a new measurement called *MEAN_ISDIV*.⁴

¹ Strictly speaking the HHI is a concentration index: it is rising in economic concentration; higher values connote *less* diversification.

² With acknowledgement to Statistics Canada for this reference (Statistics Canada 2017).

³ See Appendix 2 of this report for details.

⁴ This measure arises indirectly from, and responds to, an interview we held in January 2018 with Manuel Albaladejo of UNIDO.

MEAN_ISDIV is the average -- across all reported sectors -- of the percentage-point difference between value-added growth and output growth (both over five years). Specifically, it is the difference in the five-year log-change in these variable (Equation 2). Higher values indicate notional intra-sectoral diversification, measured in percentage points:

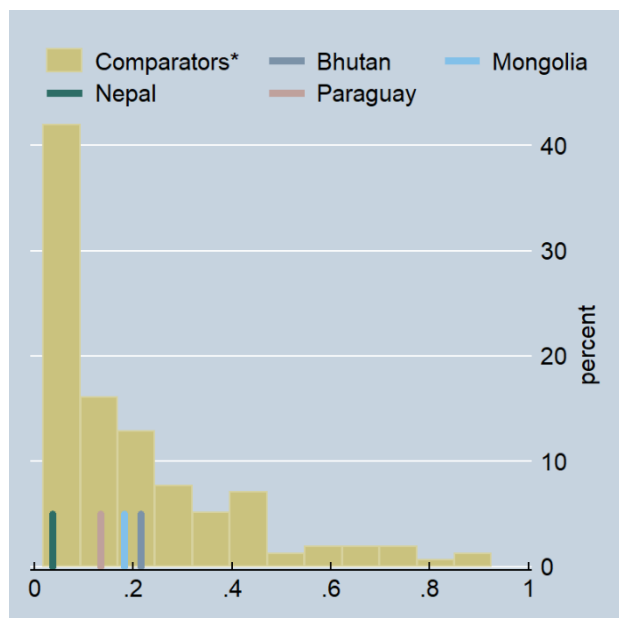
$$2 \quad MEAN_{ISDIV} = \frac{\sum_{i=1}^N \{\Delta va_i - \Delta y_i\}}{N}$$

where N is the total number of sectors, Δva_i is five-year change in log of value added in sector i and Δy_i is five-year change in log of output in sector i .

Export-product diversification

Figure 1: Export-product HH index (HHI_x)

This is a histogram of or export-product HH index. It is a concentration index, meaning that higher values on the X axis indicate less diversification.

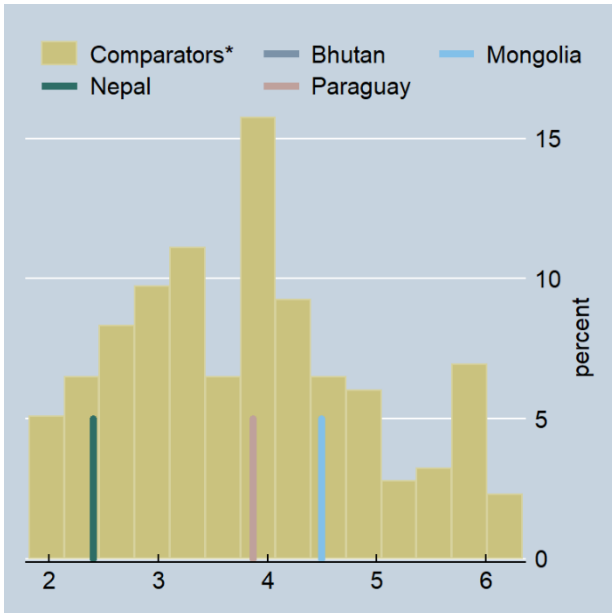


* 77 economies with 2018 per-capita GDP between 500 and 5000 US dollars

Source: Oxford Analytica

Figure 2: Export Diversification Index (EDI), 2010

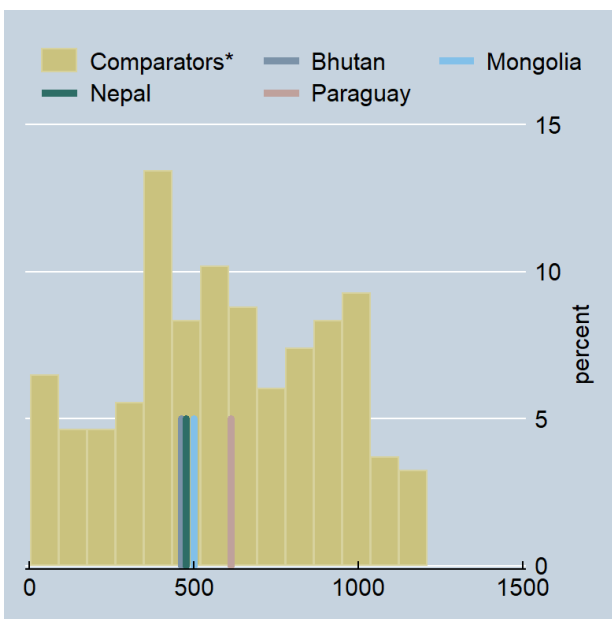
This is a histogram of the IMF's export diversification index (EDI), based on the Theil measure. Although not an HH index, it is a concentration index, meaning that higher values on the X axis indicate less diversification.



Source: Oxford Analytica

Figure 3: Count of export categories

This histogram reports the dispersion of total count of export categories (COUNT_X).

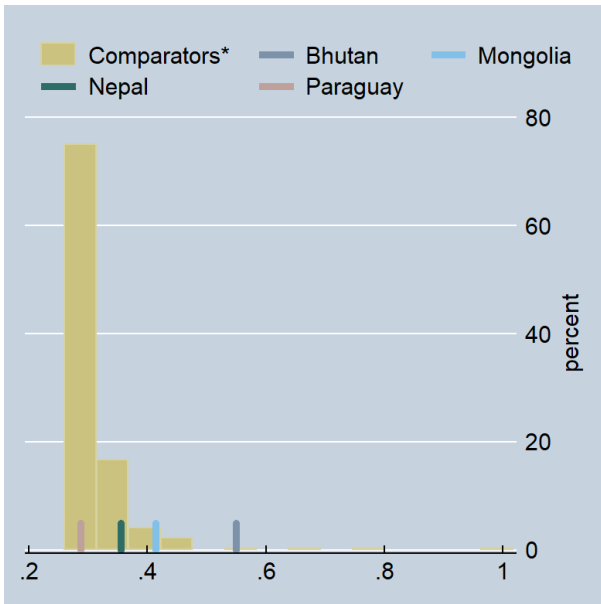


Source: Oxford Analytica

Export-market diversification

Figure 4: HH index for export-market diversification (HH_MAR)

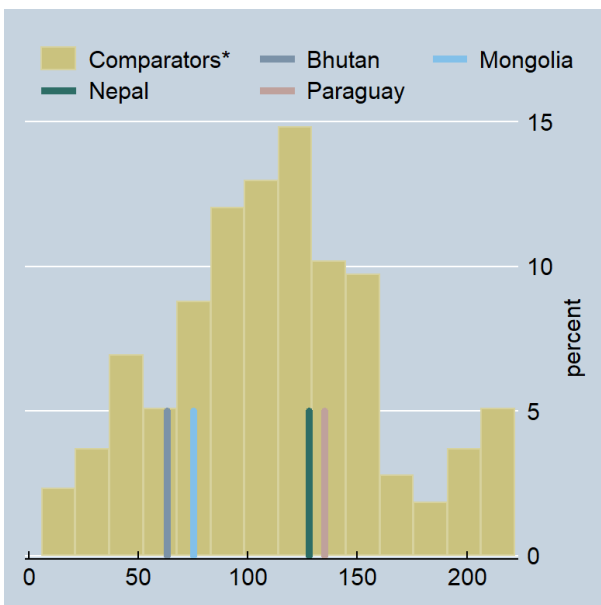
The histogram reports the dispersion of observations of the HH index for market concentration (higher values connote higher concentration, less diversification).



Source: Oxford Analytica

Figure 5: Count of export markets

The histogram reports the percent of observations falling within each interval on the x axis.

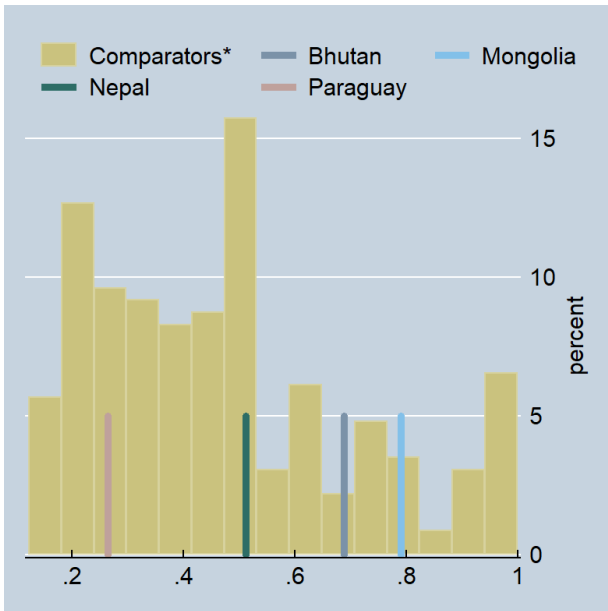


Source: Oxford Analytica

FDI-source diversification

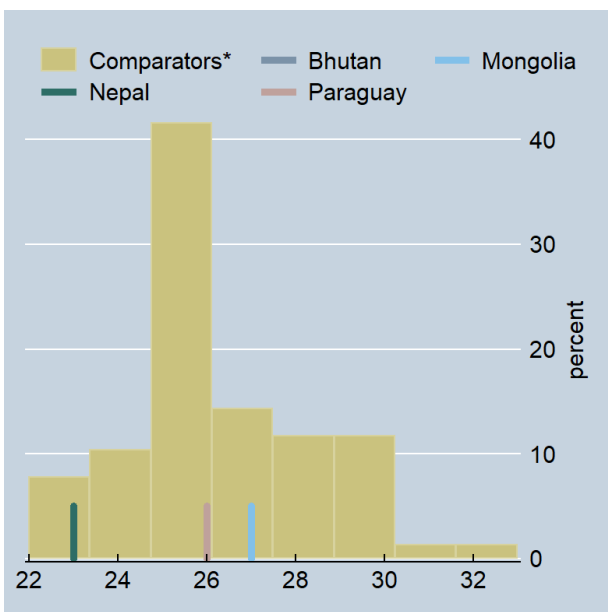
Figure 6: HH index for FDI origin (HHI_FDI)

The graph is a histogram of observations for the HH index for origin-of-FDI (inward stock). Higher values indicate less diversification.



Source: Oxford Analytica

Figure 7: Count of FDI sources of origin (COUNT_FDI)



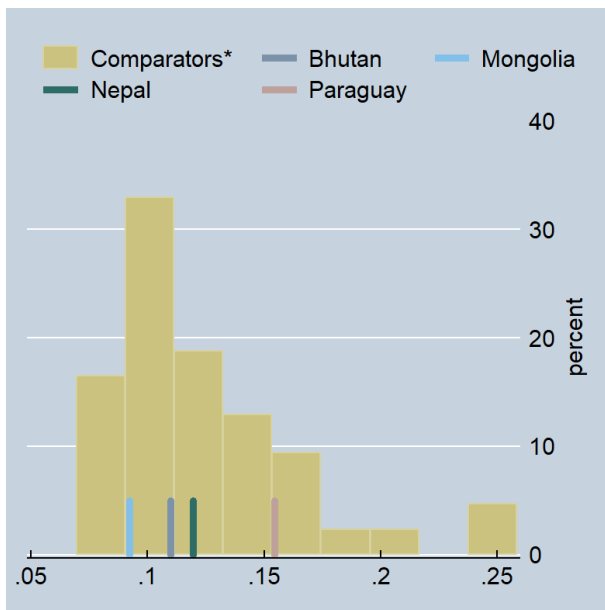
Source: Oxford Analytica

Production diversification

We have one type of index for production diversification: HHI_VA. The reason there is no "COUNT" variable is that countries report heterogenous sectors, so it would not be a fair comparison – as noted and discussed in "Data Summary.docx".

Figure 8: Production diversification (HHI_va)

This histogram reports the dispersion of values for our HH index for sectors of the economy, measured in value-added.



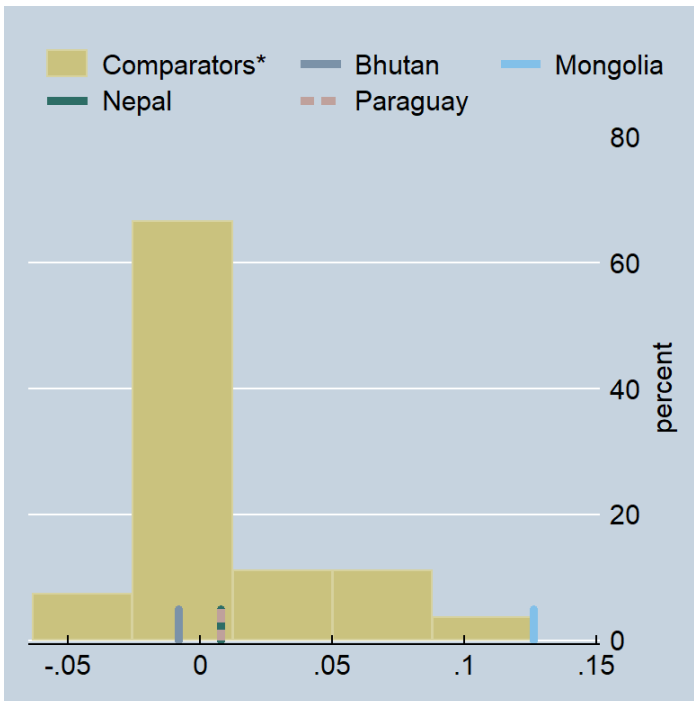
Source: Oxford Analytica

Intra-sector diversification

We report a novel measurement of the within-sector diversification of the economy – see "Data Summary.docx" for details and interpretation. In addition to the summary number "MEAN_ISDIV" we have a number of sector-specific indices, also reported below.

Figure 9: Overall intra-sector diversification (MEAN_ISDIV)

The histogram reports frequencies of ISDIV, a measure of the within-sector diversification of the economy. Specifically, ISDIV is the growth of value-added in the sector relative to the growth in output; positive numbers indicate, in percentage points, faster value-added growth than output growth (and thus within-sector diversification), and vice-versa.



Source: Oxford Analytica

Appendix 2. Landlocked 4 and comparators

Per-capita income and latest index observation

	GDP pc 1/	hhi_va count_va	hhi_mar count_mar	hhi_fdi count_fdi	hhi_x count_x	mean_ isdiv	edi
Iran	4683	2014		2013	2011		2010
Belize	4636	2015	2016	2013	2016		2010
Guyana	4475	2016	2016	2013	2016		2010
El Salvador	4343	2016	2016	2013	2016		2010
Bosnia Herz	4308	2016	2016	2013	2016	2016	2010
Albania	4203	2015	2016	2013	2016	2015	2010
Guatemala	4089	2016	2016	2013	2016		2010
Samoa	4035	2016	2016	2013	2016		2010
Paraguay	4003	2016	2016	2013	2016	2015	2010
Azerbaijan	3956	2016	2016	2013	2016	2016	2010
Algeria	3944	2015	2016	2013	2016		2010
Sri Lanka	3887	2016	2016	2013	2016	2016	2010
Tonga	3856	2015	2014	2013	2014		2010
Georgia	3842	2016	2016	2013	2016		2010
Tunisia	3730	2015	2016	2013	2016		2010
Mongolia	3660	2016	2016	2013	2016	2016	2010
Indonesia	3604	2015	2016	2013	2016		2010
Armenia	3511	2016	2016	2013	2016	2016	2010
Angola	3502	2015	2015	2013	2015		2010
Marshall Islands	3338	2015		2013			
Swaziland	3330	2015		2013	2007	2015	
Bolivia	3197	2016	2016	2013	2016		2010
Micronesia	3150	2015	2013	2013	2013		
Cape Verde	3078	2014	2016	2013	2016	2014	2010
Morocco	3063	2016	2016	2013	2016		2010
Philippines	2924	2012	2016	2013	2016	2012	2010
Vanuatu	2815	2009		2013	2011		
Bhutan	2674	2015	2015	2013	2015	2015	
Honduras	2609	2016	2016	2013	2016		2010
Papua NG	2528	2006	2012	2013	2012		2010
Sudan	2384	2013	2015	2013	2015		2010
Nigeria	2211	2015	2016	2013	2016	2015	2010
Ukraine	2194	2016	2015	2013	2015	2015	2010
Vietnam	2173	2012	2015	2013	2015		2010
Uzbekistan	2122	2003		2013			2010
Nicaragua	2120	2016	2015	2013	2015		2010
East Timor	2102	2010	2013	2013	2013		
Solomon Is	1971	2012	2016	2013	2016		2010
Laos	1925	2014	2016	2013	2016		2010
Djibouti	1908	2013		2013	2009		2010
Moldova	1901	2014	2016	2013	2016		2010
Congo	1784	2014	2014	2013	2014		2010
India	1723	2014	2016	2013	2016		2010
Principe	1687	2016	2016	2013	2016		2010
Ghana	1569	2016	2016	2013	2016		2010
Kenya	1516	2016	2013	2013	2013	2016	2010
Cote D'Ivoire	1459	2014	2015	2013	2015		2010
Kiribati	1437	2015	2016	2013	2016		2010
Bangladesh	1411	2016	2015	2013	2015		2010
Zambia	1275	2014	2015	2013	2015	2015	2010

Myanmar	1269	2016	2016	2013	2016		2010
Mauritania	1243	2012	2016	2013	2016		2010
Cameroon	1238	2016	2016	2013	2016		2010
Cambodia	1230	2016	2016	2013	2016		2010
Lesotho	1170	2013	2012	2013	2012	2015	
Kyrgyzstan	1073	2016	2016	2013	2016	2016	2010
Zimbabwe	977	2015	2016	2013	2016		2010
Tanzania	970	2016	2016	2013	2016	2016	2010
Senegal	960	2014	2016	2013	2016		2010
Yemen	938	2015	2015	2013	2015		2010
Chad	852	2015		2013			2010
Mali	830	2016	2016	2013	2016		2010
Eritrea	823			2013	2003		2010
Tajikistan	800	2016		2013	2000		2010
Ethiopia	795	2016	2016	2013	2016		2010
Benin	771	2014	2016	2013	2016		2010
Haiti	761			2013			2010
Comoros	753	2016	2013	2012	2013		2010
Nepal	733	2016	2015	2013	2015	2016	2010
Rwanda	729	2015	2016	2013	2016		2010
Guinea-Bissau	694	2014		2013	2005		2010
Burkina Faso	646	2015	2016	2013	2016		2010
Uganda	638	2015	2016	2013	2016	2015	2010
Sierra Leone	618	2014	2016	2013	2016		2010
Togo	590	2016	2016	2013	2016		2010
Afghanistan	565	2015	2016	2013	2016		2010
Guinea	515	2015	2015	2013	2015		2010
Liberia	480	2012		2013			2010
Gambia	469	2016	2016	2013	2016		2010

* 2018 GDP per capita in USD at market exchange rates

Mongolia

Country analysis and economic overview



Country analysis and economic overview

Sandwiched as it is between Russia and China, it is not surprising that these two countries have played important roles in the development of Mongolia's economy, trade and investment. Over the last twenty years, it is China that has been the dominant influence, representing as much as 80-90% of Mongolia's exports and about a third of its imports. Mongolia also relies primarily on China for access to the sea and markets beyond. However, Russia still supplies almost a quarter of Mongolia's imports.

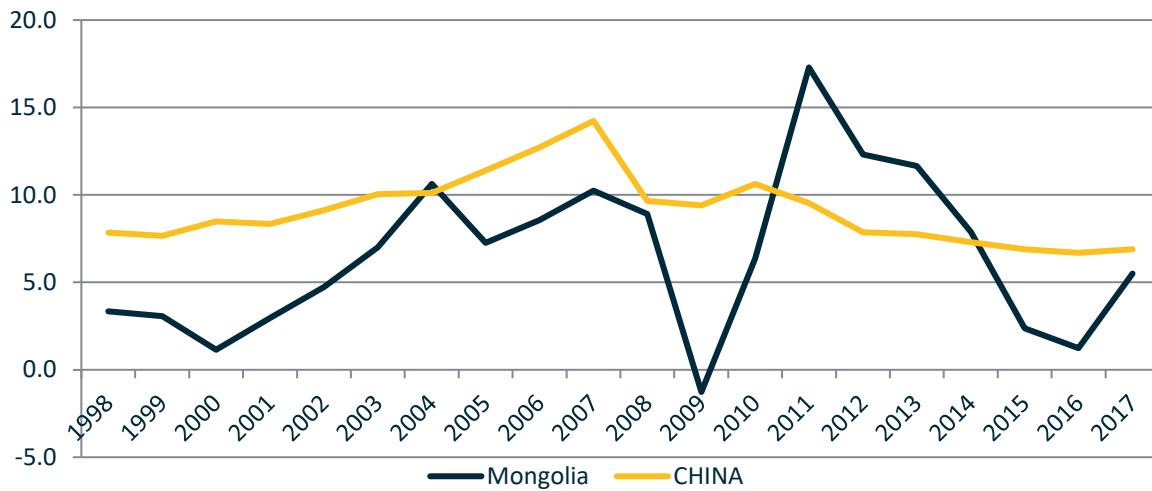
The country's large landmass contains significant mineral wealth that includes large deposits of copper, gold, uranium, and coking and thermal coal. The government's adoption of highly favourable mineral and investment legislation in the late 1990s generated significant interest from international mineral exploration and development companies, which brought with them the ability to deploy new technologies and rapidly raise output in the mining and quarrying sector.

Starting in the early 2000s, Mongolia entered a period of accelerating growth as FDI poured into mining and quarrying and produced a corresponding multiplier effect across the economy. Trade boomed, especially with China, pushing exports up to as much as 50-60% of GDP, and mining and quarrying products accounted for as much as 80-90% of exports.

However, this reliance on commodities amplified the impact of the global financial crisis of 2008-09, which saw the country slip into recession and require an IMF bailout. A quick recovery in commodity prices meant the country was able to make early repayments to the IMF, however, and the downturn was too short and recovery too fast for policymakers to learn a meaningful lesson from the crisis.

As a result, the country entered another boom cycle complete with a property bubble. In 2011, Mongolia received 4.6 billion dollars in FDI, more than the sum total for the previous decade. Another 4.3 billion dollars in FDI was injected in 2012. These sums represented 44% and 35%, respectively, of the country's annual GDP. Increased resource rents resulted in a classic case of Dutch disease as growth stalled in sectors other than speculative real estate.

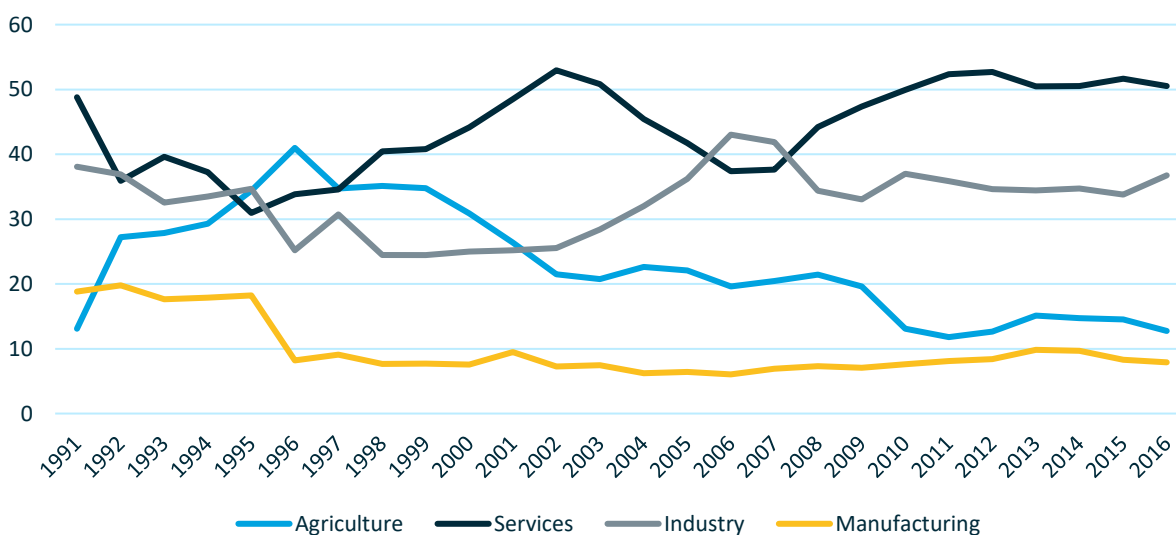
Figure 1: GDP growth rates for Mongolia and China (% per annum)



Source: World Bank, WDI

Mongolia achieved 6.2 billion dollars in exports and 4.3 billion dollars in imports in 2017. However, the country’s market concentration of exports is very high. At the height of the commodities boom in 2011 and 2012, more than 90% of the country’s exports were going to China. Although this reliance on the Chinese market has declined somewhat as the pace of growth in the Chinese economy has moderated, China still bought 79% of Mongolia’s goods exports in 2016. Moreover, as of 2016, mining and quarrying accounted for 71% of its export earnings. Compared to 2015, total exports grew by 1.3 billion dollars, driven mostly by the similar scale of increase in coal exports.⁵ The concentration in both export products and markets implies that Mongolia is seen as poorly diversified.

Figure 2: Value added (% of GDP)



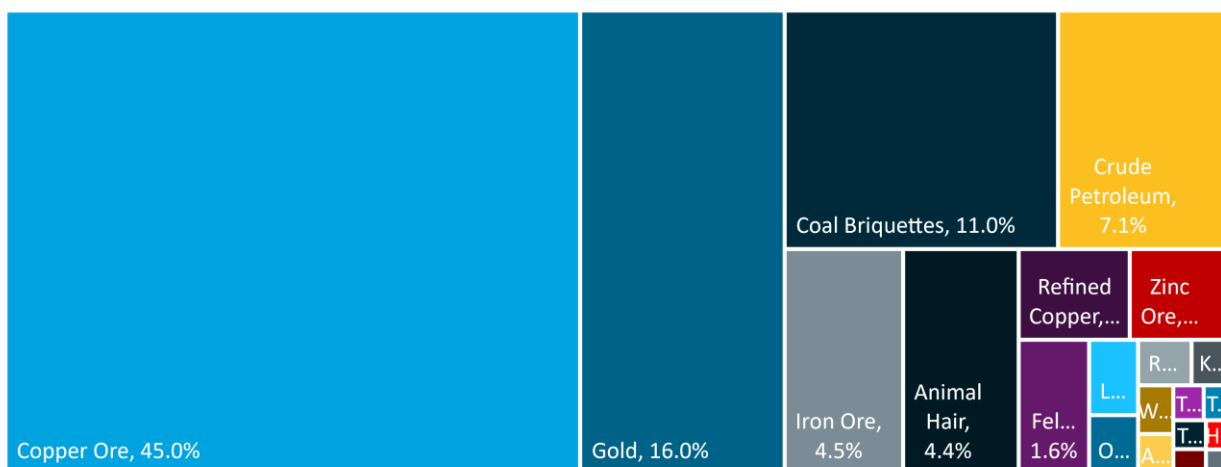
Source: World Bank, World Development Indicators

⁵ Mongolian Statistical Information Service

Mining and quarrying continued to account for 20% of Mongolia’s GDP in recent years⁶, in spite of the downturn in the global commodities cycle (and prices), and the latest pick up in this cycle is likely to raise its share in the economy. However, the largest macro sector is services, which has seen its share of GDP vary from 40% to 60% over the cycles of the last twenty years. As much as a quarter of services are accounted for by wholesale and retail trade, making this the second largest individual sector after mining and quarrying (at the detailed level). Wholesale and retail trade was the second largest contributor with 11% of GDP in 2016. Processing industries and real estate generated 7% each in the same year.⁷

Manufacturing value added has remained low, averaging less than 10% of GDP for the past decade. Agricultural value added has seen a steep decline in its share since 1996 but it remains about on a par with wholesale and retail trade.

Figure 3: Export structure

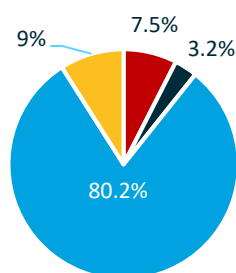


Source: The Observatory of Economic Complexity (2015 data)

Figure 4: Total exports by main commodity group and partner

2015

- Agricultural products
- Manufactures
- Fuels and mining products
- Other



Top 5 export destinations 2016 (US\$ million)	Top 5 import origins 2016 (US\$ million)
China 3,883	China 1,040
UK 787	Russia 862
Russia 56	Japan 331
Germany 43	Korea, Rep. 198
Italy 34	US 139

Source: World Trade Organization Country Profiles

6 Mineral Resources Authority, Annual Bulletin of Mining and Geology of Mongolia 2016 (https://www.bgr.bund.de/EN/Themen/Zusammenarbeit/TechnZusammenarb/Downloads/mongolei_RAM_AnnualBulletin2016.pdf?__blob=publicationFile&v=2)

7 Mongolian Statistical Information Service

Agriculture remains the largest employment sector, employing almost a third of the workforce: this is in stark contrast to the extremely weak level of investment in the sector. The second largest sector for employment (creating around 15% of jobs) is wholesale and retail trade. Education services are also a significant source of employment, currently employing 8.2% of the working age population.

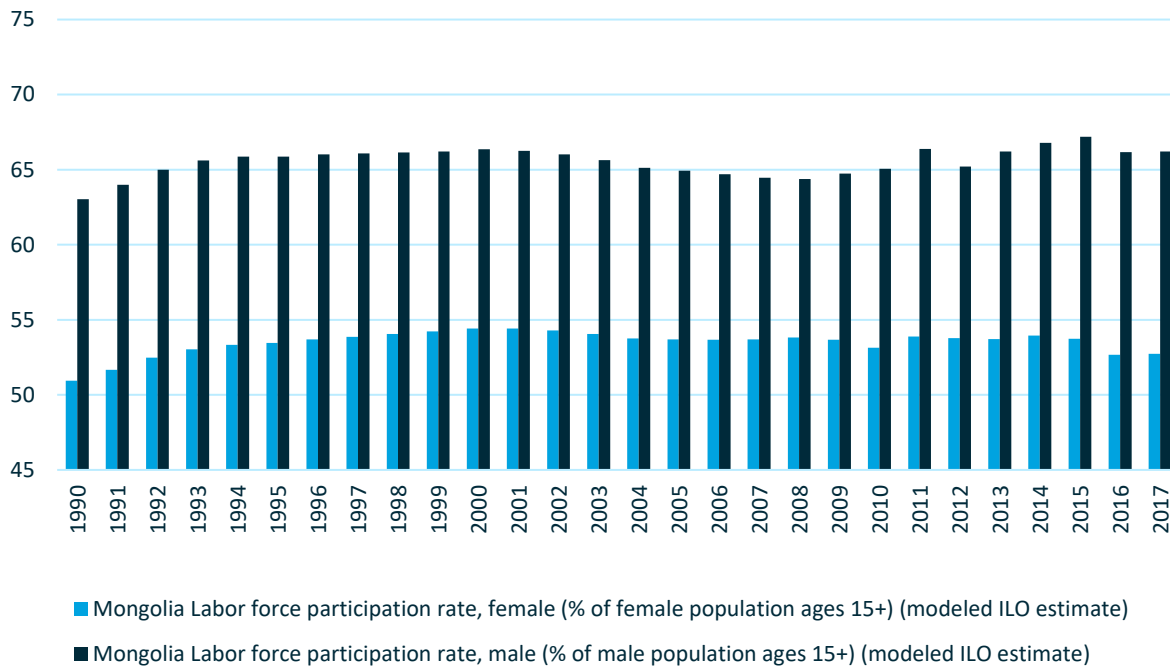
Mining and quarrying employs only 3.7%, reflecting the limited scope of artisanal mining activities and the predominance of large mechanised mines for production of the country's main export commodities. For example, the Oyu Tolgoi copper and gold mine, which will have cost about 20 billion dollars to develop and is expected to contribute as much as 30% of GDP once in full production, will only employ around 3,000 people.

Table 1: Labour force by sectors (%)

Divisions	2006 Q4	2007 Q4	2008 Q4	2009 Q4	2010 Q4	2011 Q4	2012 Q4	2013 Q4	2014 Q4	2015 Q4	2016 Q4
Education services	7.35%	8.90%	7.09%	7.69%	8.94%	8.92%	9.04%	8.19%	7.97%	7.48%	8.23%
Public administration and defence	3.32%	6.14%	6.05%	5.38%	5.82%	5.43%	6.10%	6.54%	5.52%	5.42%	6.85%
Agriculture, forestry, fishing	37.50%	35.70%	37.17%	34.46%	31.77%	34.04%	31.22%	29.37%	28.59%	31.37%	31.07%
Construction	3.85%	3.23%	4.48%	4.48%	4.51%	4.77%	6.05%	6.11%	7.39%	7.22%	5.22%
Mining and quarrying	1.86%	3.43%	3.05%	3.24%	3.67%	4.09%	4.04%	4.00%	3.46%	3.88%	3.69%
Wholesale and retail trade	14.66%	10.72%	12.77%	16.69%	13.97%	12.69%	13.48%	14.62%	14.65%	14.47%	15.25%

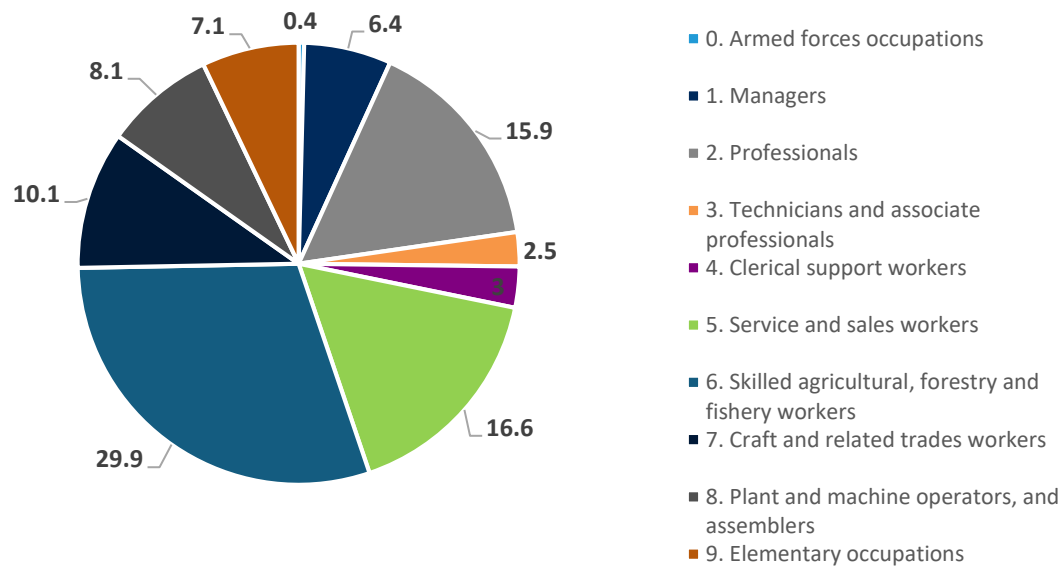
Source: Mongolian Statistical Information Service

Figure 5: Labour force participation (male vs female)



Source: World Bank, World Development Indicators

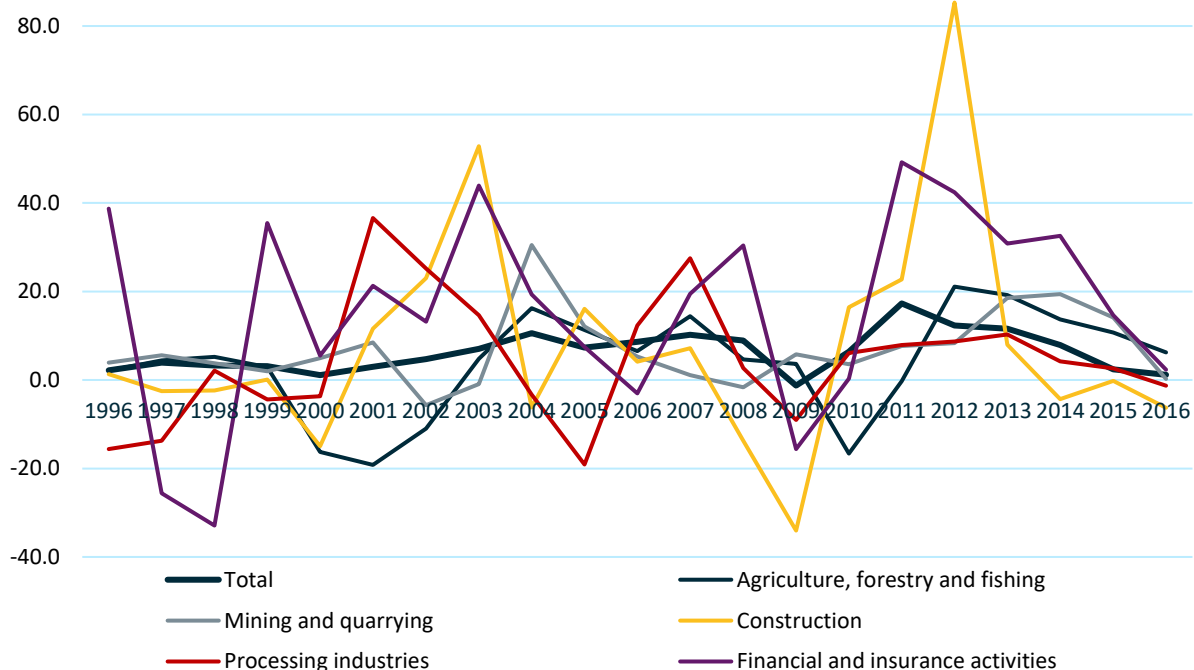
Figure 6: Employment distribution by occupation



Source: World Bank, World Development Indicators

The last commodity boom created a real estate bubble concentrated in Ulaanbaatar, the country’s capital. With an estimated 500,000 people in the city living in ‘gers’ (traditional dwellings), there is a clear need for modern housing. Government mortgage subsidy programmes significantly contributed to the construction boom that peaked in 2012.

Figure 7: Growth in selected industries



Source: Mongolian Statistical Information Service

Nature and trends of economic diversification

Mongolia’s location between Russia and China has been both a blessing and a curse. The country owes its sovereignty to the delicate political balance maintained between the two neighbours after the establishment of Soviet Russia and collapse of the Qing dynasty in China. While its natural resources have always attracted interest, Mongolia’s relationship with its two neighbours was defined for most of the twentieth century by geopolitical considerations rather than economic ones. Ulaanbaatar aligned with Moscow when relations between the USSR and Mao’s China soured in the 1960s. As result of this, Mongolia entered the 1990s with almost no trade with its southern neighbour and completely reliant on trade with and subsidies from the Soviet Union.

As these links disappeared with the collapse of the USSR, Mongolia was forced to make a quick transition into a China-facing market economy. By 2005, nearly half of Mongolia’s exports were going to China, but by 2012 mineral products constituted 89% of exports, and 93% of all exports were going to China as both the production volumes and prices of the country’s main export commodities hit unprecedented highs.

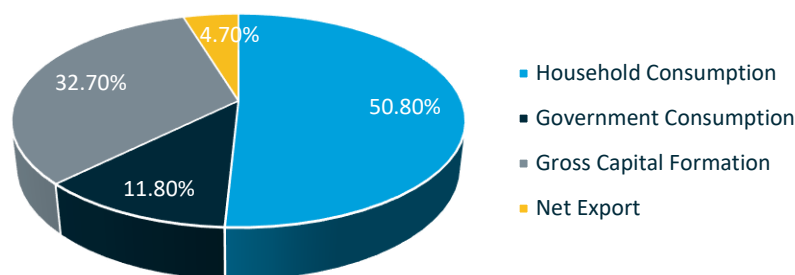
The HHI for the market concentration of exports went from 0.29 in 2005 to a peak of 0.86 in 2012, indicating a very tightly concentrated export market. A long period of high growth in China, driven by surging investment in fixed assets, fuelled its thirst for commodities from across the globe. Mongolia’s geographic proximity to China and its status as a low-cost supplier of key

raw materials such as copper and coal created a demand pull that crowded out the country's other sectors.

The demand side of the economy

The macro economy looks relatively well balanced from the perspective of the demand components of GDP (in global comparisons), although the export and investment shares are somewhat large.

Figure 8: 2016 GDP Composition – Expenditure Approach (Composition of GDP by expenditure approach, share total)



Source: Mongolian Statistical Information Service

The composition of GDP by expenditure approach shows household consumption at 50.8%, which is on par with the average for middle-income countries. Reflecting the high level of reinvestment into fixed assets required for the early stages of economic growth and development, gross capital formation is also high at 32.7%, equivalent to the level of upper middle-income countries. Government consumption is slightly lower than that for low income countries.

Within value added sectors, Mining and quarrying does not dominate GDP, but it does dominate trade and investment. It represented 20% of Mongolia's GDP in 2016, while 63% of exports went to China and mineral products constituted 71% of exports. Mongolia ran a trade surplus equivalent to 4.7% of GDP in 2016. However, the trade balance is highly dependent on commodity prices and it has been known to reach a deficit as high as 22.5% as recently as 2013.⁸

Employment and productivity

As of Q3 2017, unemployment in Mongolia was 9%. The participation of women in the labour force is significant, at 47% of total employment. Agriculture remained the largest sector of employment with around 30% of the workforce. Almost all those working in agriculture are involved in animal husbandry.⁹

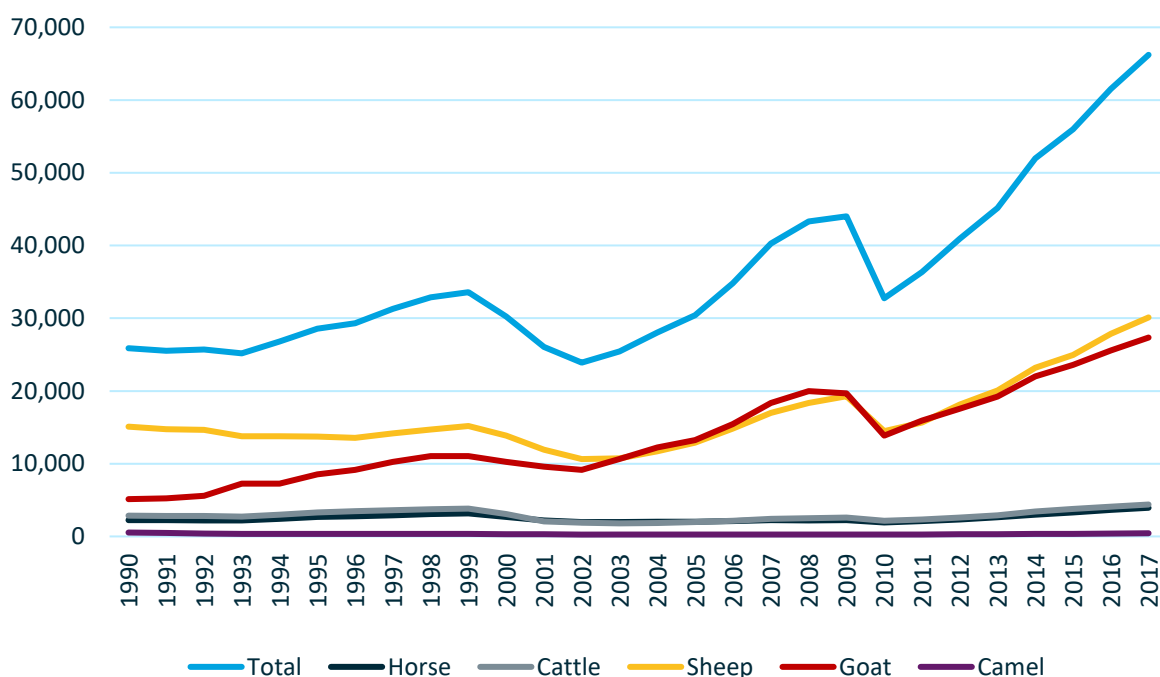
⁸ World Bank, World Development Indicators

⁹ Mongolian Statistical Information Service

Labour productivity (measured as output per worker) increased significantly in the mining sector thanks to the substantial expansion of output in the sector generated by large capital investments. Such investments can turn very basic (labour intensive) industries into capital intensive processes.

In contrast, official data point to poor productivity growth in agriculture. Nevertheless, this may be misleading. An alternative estimate can be obtained by looking at livestock figures. The total livestock count has grown 2.5 times since Mongolia’s transition into a market economy and the development of mining and quarrying. The headcount for goats increased fivefold, responding to the high prices offered for cashmere produced by Mongolian goats. Meanwhile, the share of employment in the sector declined from around 50% to 31%. At 66.2 million heads of livestock, Mongolia has a significant resource per capita. The virtues of transforming Mongolia’s traditional animal husbandry into modern large-scale farms is a subject that is fiercely debated from economic, cultural and societal points of view. But the current evidence certainly points to a sharp increase in the volume of livestock managed per person employed in the sector, with most of the gains being achieved over the last decade.

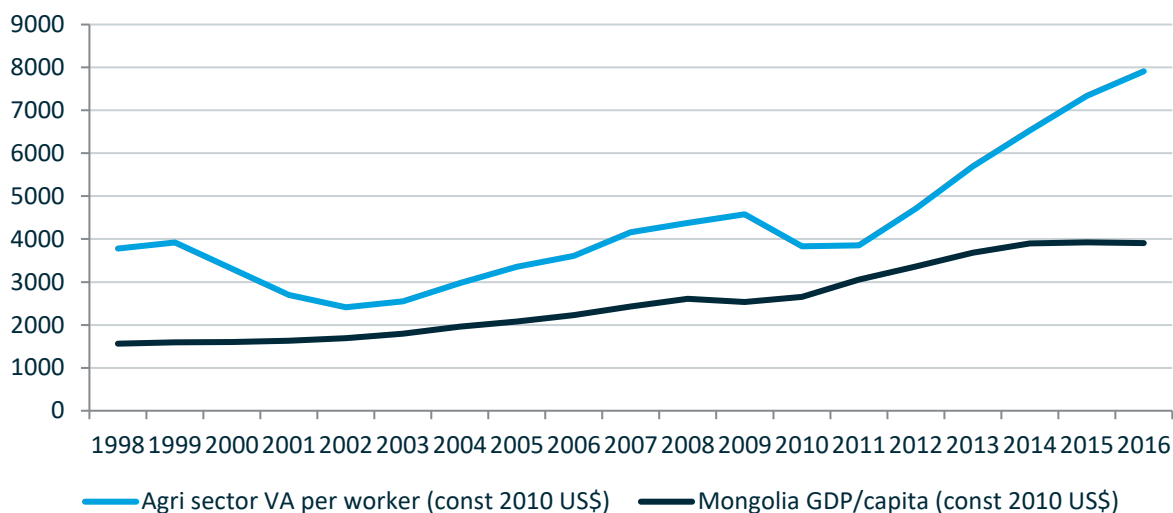
Figure 9: Livestock



Source: Mongolian Statistical Information Service

This calculation is substantiated by the evidence on output per worker for the agriculture sector, which has outperformed the economy as a whole (Figure 10).

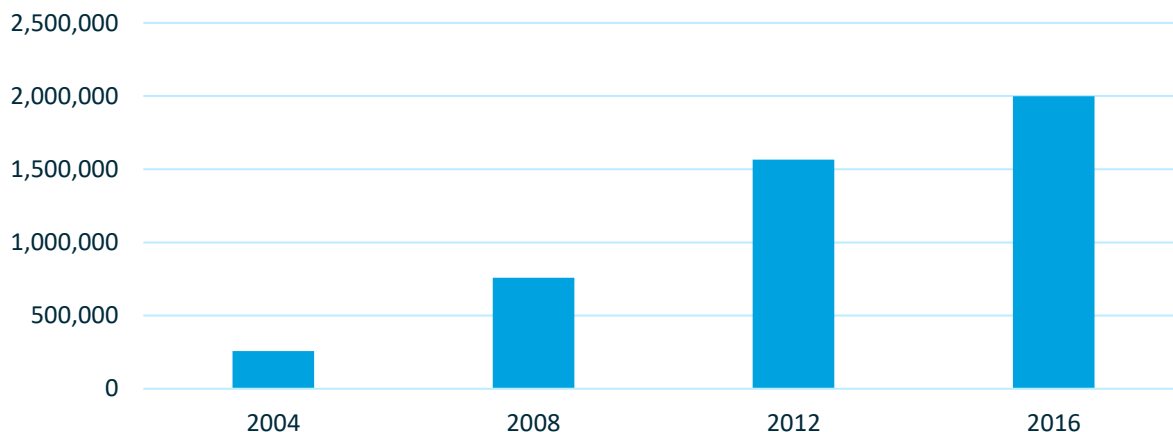
Figure 10: Output per worker in the agriculture sector versus GDP/capita for economy as a whole (both measured in constant 2010 US dollars)



Source: World Bank WDI

Processing industries also more than doubled in value between 2008 and 2016. This growth was mainly focused on import substitution of foods and basic household products rather than being export-oriented. But this too points to productivity gains in the sector.

Figure 11: Processing industries (value in MNT)



Source: Mongolian Statistical Information Services

Mongolia continues to be a fast-growing developing economy. It averaged an annual GDP growth rate of 7.7% over the decade from 2007 to 2016 (not far short of China’s 9% rate), and the economy is reported to have grown by 5.8% in the first three quarters of 2017.¹⁰ Growth continues to be supercharged by large investments in the extractive industries. From 2009 to 2016, almost 40% of total investment went into the mining and quarrying sector. From 2015 to 2016, exports grew by 1.3 billion dollars, almost all of which is attributed to increased sales of

¹⁰ Mongolian Statistical Information Service

coal. As commodity markets continue to recover from their poor performance in 2014-15, Mongolia looks likely to pick up steam.

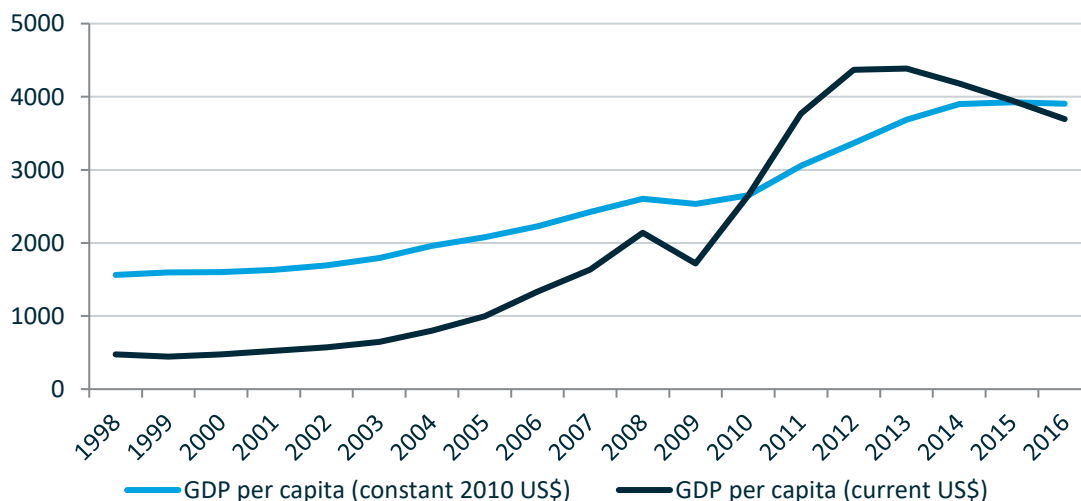
Exploring policy measures (national policy documents)

Mongolia’s National Development Strategy (NDS), ratified by parliament in 2007, is the main policy document outlining the country’s development and economic strategy leading to 2021. As outlined in the NDS, the government targeted extremely high growth rates of an average of 14% in annual GDP in the period of 2007-2015 and 12% in the period of 2016-2021. Growth was to be achieved on the back of the rapid development of its extractive sector, which was expected to provide significant resource rents. Excess revenues were to be collected into sovereign wealth funds and used for investments in infrastructure, broadening of the processing industry, and development of a knowledge-based economy.

The first shortcoming of the economic development policy was to underestimate the potential volatility of Mongolia’s main export products, copper and coal. As prices for such commodities halved in the years after 2007, export earnings and government revenues fell substantially below targets even when productive capacity was increased. The commodities market assumptions that went into forming economic development policy were themselves not conducive to maintaining macroeconomic stability and did not allow for the range of adverse price movements in the country’s main export earners.

Despite missing its very ambitious targets, Mongolia has been one of the fastest growing economies in the world as a result of massive inflows of FDI into its extractive sector. For a decade, starting in 2004 until the retrenchment in commodity prices in 2013, the average GDP growth rate was 9.2%: it remained high at 7.7% between 2007 and 2016, a much more turbulent decade globally. Furthermore, GDP per capita (in current US dollars) has more than quintupled.¹¹

Figure 12: GDP per capita, in constant 2010 US dollars and in current US dollars

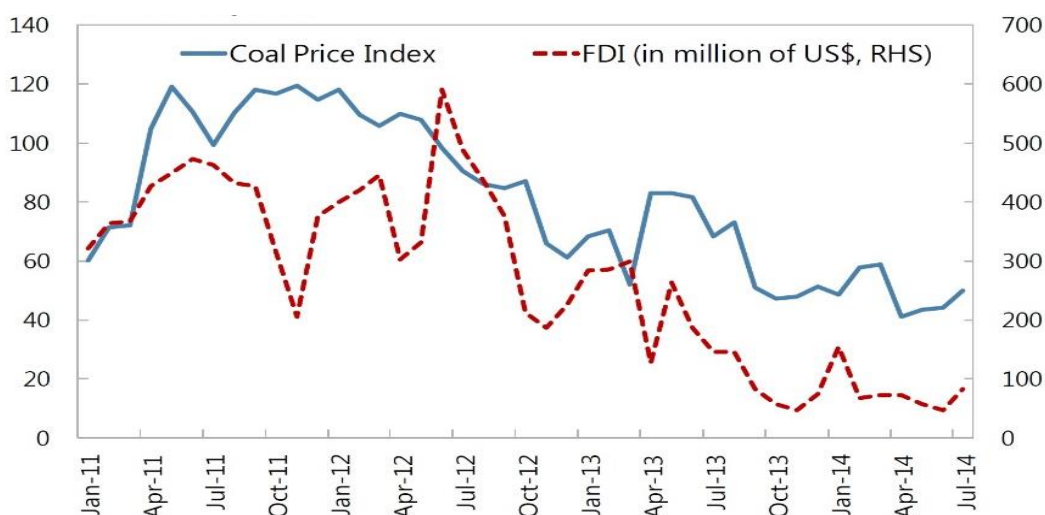


Source: World Bank WDI database

11 Mongolian Statistical Information Service

However, the extremely uneven distribution of gains in the period of fast economic growth, together with government policies that involved cash distributions to the population, created an environment that was encouraging of populist politics. The Democratic Party (DP) won the 2012 parliamentary elections on the platform of renegotiating the contracts for both Oyu Tolgoi and Tavan Tolgoi, the two huge mining projects that served as main engines of growth. When it took office, the development of the second phase of Oyu Tolgoi, with expected capital investment of five billion dollars, stalled. Attempts to renegotiate high prices for coal from the Tavan Tolgoi deposit meant that sales fell off sharply just as global prices were decreasing.

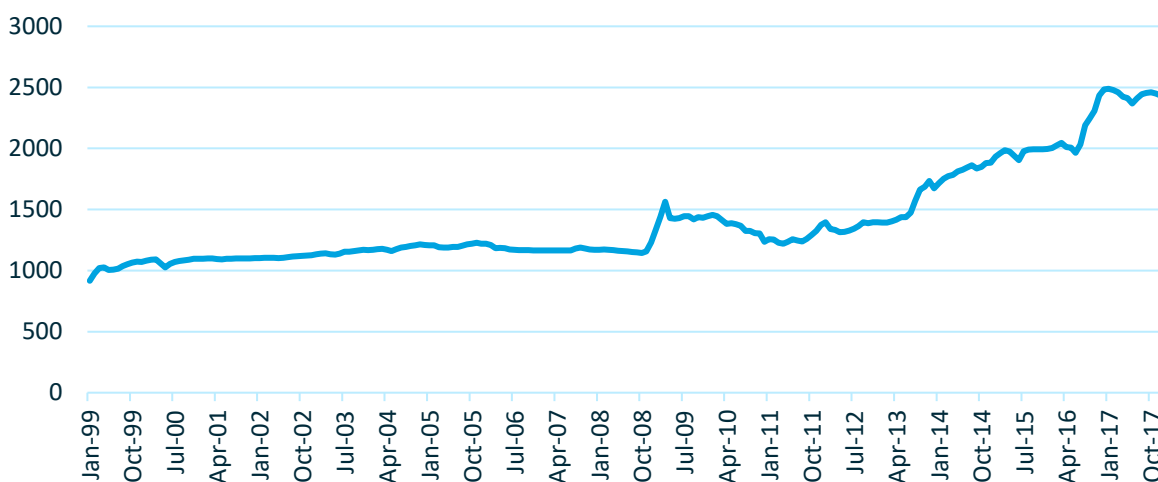
Figure 13: Coal export price and FDI



Source: IMF WEO

Shocks to FDI and self-inflicted damage in coal exports, coming against a backdrop of continued loose fiscal policies, led to reserve losses and a sharp depreciation of the domestic currency starting in 2013. The latter implies a sharp hike in import prices, hitting the population, but it may also have encouraged import substitution.

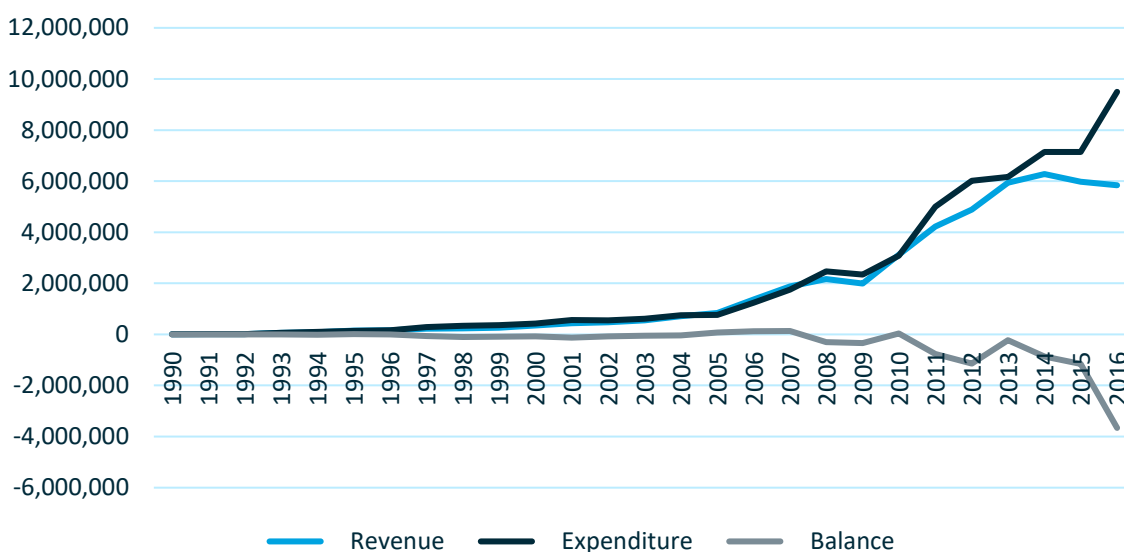
Figure 14: Exchange Rate (MNT/USD)



Source: Bank of Mongolia

Mongolia has a stated policy of economic diversification and reinvestment of resource rents. However, the mechanisms of implementation are weak, and the government continues to take an excessively pro-cyclical approach to fiscal management. The Fiscal Stability Law, which went into effect in 2013, set a ceiling of 2% of GDP for the fiscal deficit. However, the Development Bank of Mongolia (“DBM”), established in 2011, continued to make what amounted to off-budget fiscal expenditures equivalent to as much as 8% of GDP.¹²

Figure 15: Government revenue, expenditure and balance (MNT)



Source: Mongolian Statistical Information Service

The DBM was set up to make loans to commercial projects that would diversify the country’s economic base. However, in effect, it became a vehicle for fiscal spending on mostly infrastructure projects, with a small portfolio of commercial loans whose merits are difficult to evaluate. The Future Heritage Fund (“FHF”) and Stabilization Fund are two other mechanisms for accumulating resource rents. The FHF came into effect in 2016 and is intended to accumulate capital for outbound investments. The Stabilization Fund was established in 2010 to absorb external shocks. To date, the downturn in the commodities markets has meant that no meaningful funds have been accumulated in the FHF, while Stabilization Fund reserves have been run down.

In 2008, Mongolia launched an agricultural subsidy programme -- “Atariin Ayan 3” -- which aimed to eliminate the country’s dependence on imports of grain and vegetables. Within three years, the country was able to meet 100% of the domestic demand for wheat and potatoes and 53.7% of other produce. The programme was abruptly terminated by the subsequent government, however. As businesses shut down, the country reverted to dependence on Russian imports of grain.

¹² IMF Country Report No. 15/109

The overall effectiveness of policy measures over the last five years has been poor, even given the limited ability to implement policies due to the economic downturn and fiscal constraints. Some aspects, such as roads and highways infrastructure programmes, have been relatively successful, however. The share of economic activity in non-extractive industries has increased, although it is not likely to prove sustainable in the medium term as commodity prices recover. Mechanisms for accumulating resource rents are institutionally weak and prone to political interference. While efforts to improve trade conditions and ease of doing business have been positive, the country still faces constraints in terms of transaction costs and the bureaucratic burden at customs.

In June 2016, the Mongolian People’s Party (MPP) gained an absolute majority in parliament. Assistance from the IMF combined with a recovery in commodity prices helped to restore the economy growth and curtail further depreciation of the national currency. In March 2018, the MPP government formally adopted the Action Programme of the Government of Mongolia 2016-2020, which aims to further stabilise the economy and create macroeconomic resilience. The document outlines specific measures to accomplish the following main objectives:

- eliminate remaining obstacles and boost Mongolia’s economic growth engines;
- diversify the economy and provide special assistance to industries outside of mining and quarrying; and
- improve the livelihood of citizens by improving access to healthcare, education and employment and enhancing social security.

The programme aims to diversify the industrial base through efforts to organise and coordinate industrial development, support non-extractive sectors with favourable tax policies, and improve access to financing. To boost foreign trade, Mongolia will seek to increase its participation in international and regional trade agreements and will make further efforts to join economic integration initiatives and infrastructure networks. The plan calls for rationalisation of customs and inspection bureaucracy and improve infrastructure at and near border points. The “Mongol Export” programme will provide state support for coordinating research and marketing of export products, for example through state-sponsored international fairs and exhibitions. It will also provide support for outbound investments and assist in accessing international financial and property markets.

Specifically, the government will develop industrial mapping of Mongolia and implement a coordinated plan for developing heavy industry. Companies that are working on large industrial projects may receive government assistance in securing long-term lower interest loans. The plan also envisages a push for development of Free Economic Zones (FEZ) and will seek to attract domestic and foreign investors. Businesses in rural areas will receive support through the “Regional Discount” subsidy program. Non-tariff barriers will be reduced by a push to harmonise national standardisation and assessment of products in compliance with international and regional standards. Particular attention will be paid to the agricultural sector where the government pledges to create an integrated system of production, transportation, processing and supply of products from animal husbandry.

Companies outside of the extractive sector that export more than 50% of their product will receive tax breaks and customs processes will be streamlined and moved online or to one-stop service centres. Pricing for industrial production inputs such as steam, water and electricity will be stabilised with the goal of gradual decreases in tariffs.

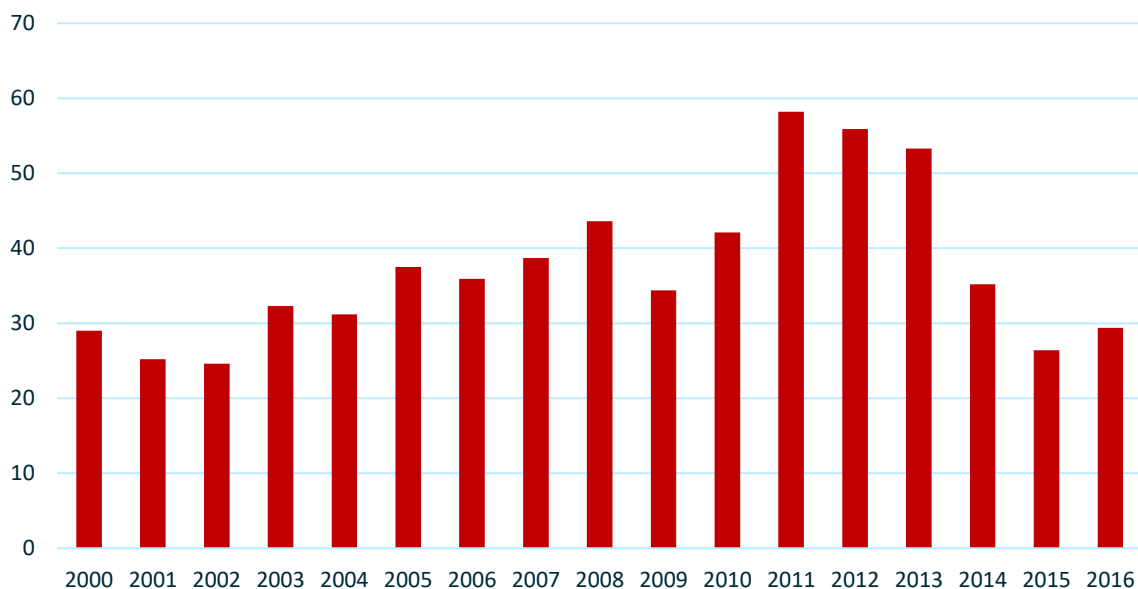
The Action Programme will also seek to encourage more competition in the banking and financial sectors with the aim of reducing cost of capital for businesses. The government will seek to set up subsidised unsecured financing for SMEs through a “Loan of Trust” programme.

Investment

Mining and quarrying received by far the largest share of investment until 2014, when adverse global trends as well as a contentious Foreign Investment Law and disputes over the country’s largest mineral projects, Oyu Tologoi and Tavan Tolgoi, caused investors to pull back sharply. Nevertheless, the sector has seen some recovery since 2014 and it remains the heavyweight sector for investment, along with construction. This contrasts markedly with the paucity of investment in both agriculture and processing industries, which completely reverses the sector rankings for employment.

Arguably, this could be seen as a form of diversification: people (human capital) are invested in agriculture and services (where they can better “own” their businesses) while the weight of financial capital is ploughed into “large scale” industries such as international minerals, quarrying and big construction projects.

Figure 16: Gross capital formation (% of GDP)



Source: World Bank

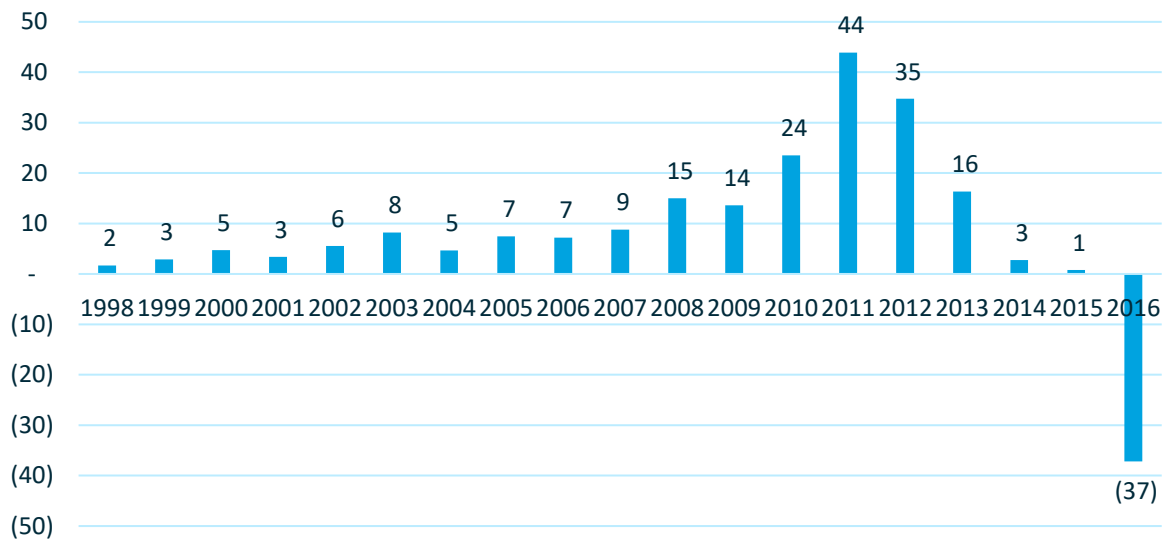
Table 2: Investment by sector (million USD)

	2009	2010	2011	2012	2013	2014	2015	2016
Agriculture, forestry and fishing	21.0	23.3	38.0	64.6	50.0	88.2	139.7	147.5
Mining and quarrying	487.0	1,761.7	5,195.5	4,694.5	3,031.5	917.2	1,374.8	1,457.3
Processing industries	60.9	71.5	92.1	139.2	228.7	418.9	351.1	81.7
Utilities	120.8	103.8	207.0	171.6	199.4	310.9	331.3	348.1
Construction	148.4	262.8	990.7	913.8	802.8	1,098.8	788.3	1,331.9
Wholesale and retail	304.7	497.7	326.9	1,466.5	480.7	835.0	424.6	502.2
Transportation and storage	126.4	136.7	280.1	510.5	212.7	356.8	83.0	406.6
Information and communication	34.9	60.4	91.6	156.2	388.5	273.4	225.8	157.2
Financial and insurance	71.4	103.3	227.2	168.3	216.0	410.3	151.2	130.0
Real estate activities	26.9	89.7	64.0	39.3	150.2	118.9	39.1	161.8
Public administration and defence	374.1	370.3	373.6	429.1	401.8	427.2	380.3	500.4
Educational services	158.1	79.2	140.3	122.3	126.7	359.1	232.8	302.8

Source: Mongolian Statistical Information Service

FDI as an indicator of diversification and connectivity

Over 2010-2012, Mongolia was the beneficiary of some of the largest rates of FDI inflows as measured as a share of the recipient's economy. Net FDI inflows surged to the equivalent of 44% of GDP in 2011 and 35% of GDP in 2012. However, retrenchment in the commodities market combined with policy blunders resulted in FDI declining to just 1% of GDP by 2015. Russia's sale of its stake in Erdenet, the second largest copper producer, tipped FDI into a net outflow in 2016. Nevertheless, the recent pick up in commodity markets and investment should boost a new round of FDI inflows into Mongolia.

Figure 17: FDI, net inflows (% of GDP)

Source: World Bank, World Development Indicators

As noted above, most of the FDI into Mongolia is concentrated on the development of large mineral projects. Thus, the key sources of FDI are likely to be those countries in which there are large concentrations of the types of big international companies that manage such projects, notably Australia and China.

Aside from mining and construction, all sectors of the country's economy need substantially increased investment inflows. The government of Mongolia recognises findings made by UNDP which assessed that value-added manufacturing was only 20.3% of total industrial production. The government adopted the "Industrialization Program 21:100" in January 2018. The programme seeks to create one hundred projects in non-mining value added manufacturing sectors financed by both public and private capital. Table 3 illustrates the objectives of the newly adopted Industrialization Program.

The build-out of these industrial units has a capital requirement estimated at 1.4 trillion tugriks (about 580 million dollars). The plan envisages financing from multiple sources including central and regional government, loans from donor countries and aid, domestic and foreign investors, government bonds and concession agreements.

Table 3: Objectives of the newly adopted *Industrialization Program 21:100*

Metric	Unit	Base Measure	Goal	Source Document
Share of value-added manufacturing in total exports	%	9	15	National Statistical Office 2016, National Sustainable Development Policy 2030
Share of processed leather and hide	%	20	60	National Sustainable Development Policy 2030
Share of processed wool and cashmere	%	36	60	National Sustainable Development Policy 2030
Industrially processed meat and meat products for human consumption	%	6	30	National Sustainable Development Policy 2030
Industrially processed dairy products for human consumption	%	9	40	National Sustainable Development Policy 2030
New industrial units	#	-	100	Action Program of the Government of Mongolia for 2016-2020
New jobs created	#	-	6,000	Action Program of the Government of Mongolia for 2016-2020
Share of domestic manufacturing standards compliant with international standards	%	42	50	National Standardization Strategy and Plan 2017

Source: Mongolian government documents

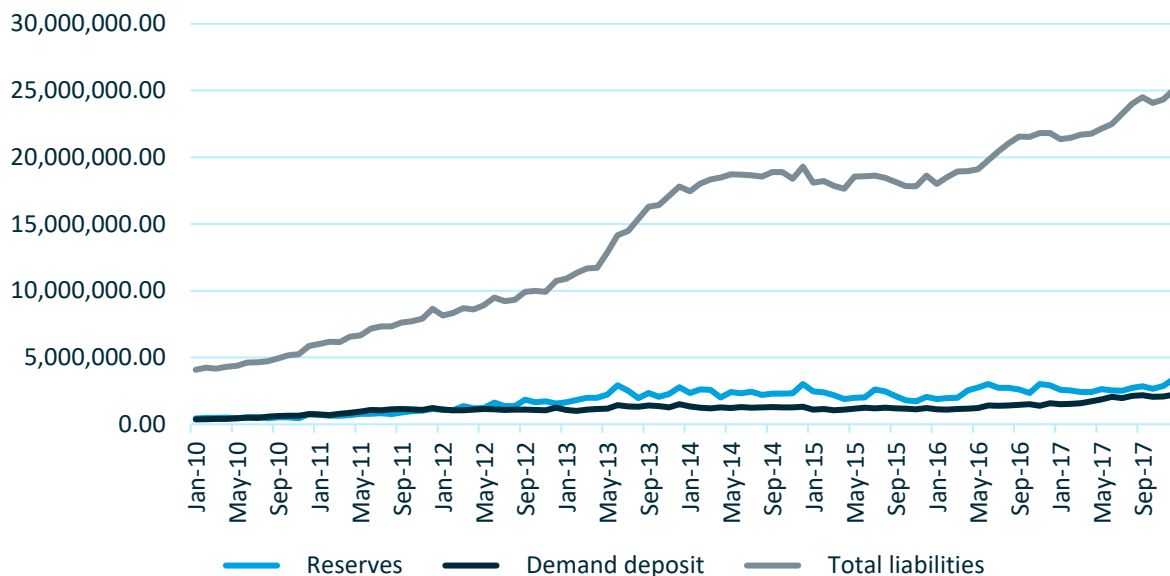
Private sector

The Mongolia Export Development Project was launched in 2016 with the help of a modest loan of 20 million dollars from the World Bank. Its aim is to support development of Small and Medium Enterprises (SMEs), which currently provide almost half of the jobs in the country. Mongolia has good potential to develop niche industries such as organic products including cosmetics, foods and artisanal products. However, aside from subsidised loan programmes, access to funds for SMEs is limited as bank loans are difficult to obtain and have very high interest rates. Loans from non-banking financial institutions can have monthly interest rates of as high as 5% and require heavy collateralization. Mongolia's banking and finance sector requires significant reform if it is to become part of the structure needed to accelerate indigenous business development and growth.

Overall, Mongolia is heavily privatised, and only a few sectors are government owned. There are some SOEs such as Erdenes MGL in the mining sector and the national airline, but most businesses are private.

Since 2012, there has been significant growth in the banking sector, but interest rates remain stubbornly high and are generally 20% or more even for well qualified borrowers. Efforts to advance internal reform and introduce foreign competition have been stifled by the banking lobby. This is significant as over 90% of financing in the country is through bank loans. The stock market is highly illiquid and does not function well as a means of raising equity capital.

Figure 18: Bank balance sheets



Source: Mongolian Statistical Information Service

Mongolia also needs a rapid development of its energy infrastructure and should seek to become a net energy exporter on the back of its abundant fossil and renewable energy resources. There are several proposed private power plant development projects, but none have secured financing. During the Mongolia-China Business Forum held in April 2018, 36 agreements with a nominal value of 4.6 billion dollars were signed. It is difficult to say how many of these will ultimately come to fruition, but reality, but amongst the signed deals was a project to build a 300-megawatt station in Tuv Province.

Integrating the principles of the Vienna Programme of Action

Mongolia has taken a proactive role in promoting the interests of LLDCs. The International Ministerial Conference of Landlocked and Transit Developing Countries and Donor Countries and International Financial and Development Institutions on Transit Transport Cooperation was held in Almaty, Kazakhstan in 2003. The meeting resulted in the Almaty Programme of Action for LLDCs. Subsequently, at the heads of state meeting in Havana in 2006, Mongolia’s President Enkhbayar Nambar called for the creation of an international think tank to increase the analytic capacity available to LLDCs. In July 2009, the International Think Tank for LLDCs was officially launched in Ulaanbaatar by H.E. Ban Ki-moon, United Nations Secretary-General, and H.E. S. Batbold, Mongolia’s Minister of Foreign Affairs. In 2009 the UN-General Assembly adopted a resolution welcoming its establishment. The organisation is mandated to conduct research and advocacy activities to benefit LLDCs.

Mongolia’s National Development Strategy (NDS), the main policy document outlining the country’s development and economic strategy for the period of 2007-2021, is based on the Millennium Development Goals that were endorsed at the United Nations Summit in 2005. The main principles of NDS include a commitment to democracy, justice, and human rights, the pursuit of sustainable development based on a market economy, and the primacy of

transparency and respect for law. Mongolia's firm commitment to democracy and human rights is notable, particularly in contrast to the political structures of its two neighbours.

The stated objectives of the NDS are largely in line with the Vienna Programme of Action. However, it places primacy on sovereignty and national security. In terms of development goals, it lists the following priorities:

- achieve the Millennium Development Goals and provide for all-round development of Mongolia;
- actively develop export-oriented, private sector-led, high-technology driven manufacturing and services, and the creation of a knowledge-based economy;
- exploit strategically important mineral deposits, build savings, ensure high rates of economic growth and develop modern processing industries; and
- actively develop regions and infrastructure to reduce urban-rural disparities.

To understand the government's development vision and policy priorities, it is useful to evaluate strengths and weaknesses that are specific to Mongolia as a LLDC:

Advantages

- Proximity to China and Russia;
- the transit neighbour countries, particularly China, have rapidly developing economies with strong infrastructure programmes;
- the world's largest consumer of Mongolia's main commodity products is just across the border;
- free of internal civil conflicts and international disputes;
- relatively high Human Development Index score of 0.735, with the government aiming to reach 0.8 by 2021; and
- high mobile phone penetration rates and good telecommunications coverage, with almost a quarter of households having internet access at home in 2016.

Disadvantages

- Small and dispersed population;
- labour force shortages, particularly of qualified engineers, technical staff and expertise in market economy;
- extreme climate;

- reliance on very few mineral products for export earnings;
- reliance on low-value agricultural products;
- widespread poverty;
- high transport and trade transaction costs;
- limited infrastructure;
- vulnerability to climate change, continued desertification and land degradation; and
- weak governance.

While legislation and policies have been broadly in line with development goals outlined in the NDS, implementation has faced challenges due to political interference and institutional weaknesses.

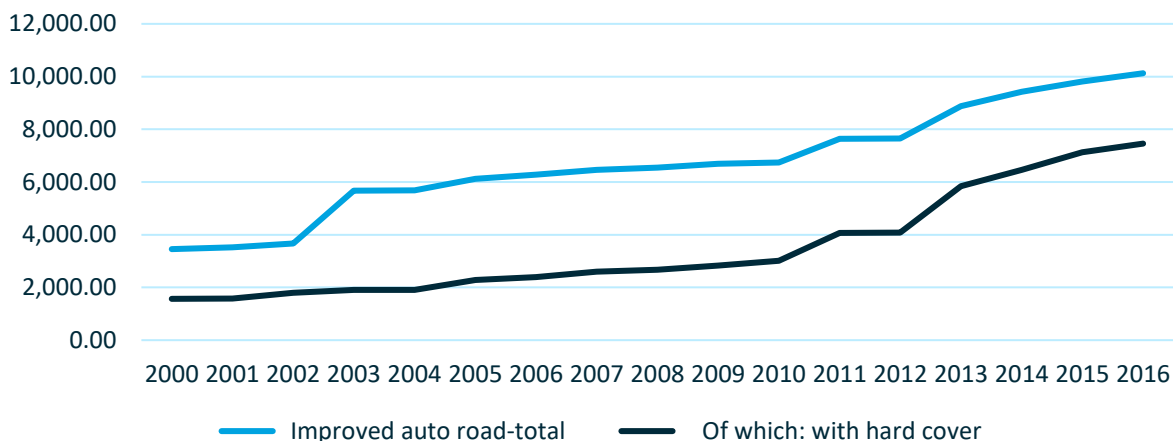
Improving the transport infrastructure

Mongolia overwhelmingly relies on China for transit of its goods. The Chinese port of Tianjin handles most of its imports and exports from overseas. In 2014, Mongolia and China entered into a bilateral agreement which guaranteed transit rail transport and access to seaports. It also increased the number of border crossings between the two countries. Mongolia's current rail network, co-owned by Russian Railways, has a wide gauge rail system while China uses narrow gauge. Although Mongolian law allows for the building of narrow gauge railways on its territory, there has been significant political opposition on national security grounds.

In 2010, the government set out a phased approach to developing the country's railway network. Subsequently, creating rail transport from major mines in the south to Chinese rail ports became a priority. However, further development has stalled due to lack of financing and political disagreements over the gauge to be used.

Mongolia has had an agreement with Russia dating back to 1992 on access to the sea across Russian territory, and in 2014 the two countries entered into a bilateral transit and transport agreement. Although the ability to transport via ports in far-eastern Russia now exists in theory, the reality in terms of costs and delays means that this is not currently a viable option.

There is also an agreement with Kazakhstan on the international transport of goods via road. Mongolia's western province of Bayan Ulgii has a significant ethnic Kazakh population and has meaningful trade with Kazakhstan. The NDS outlined an ambitious goal of building 10,000 kilometres of paved roads to connect the major regions of Mongolia. The programme enjoyed sufficient financing and was well managed, resulting in a rapid build-out of the country's road infrastructure:

Figure 19: Road length over time (km)

Source: Mongolian Statistical Information Service

In 2004, the Mongolian parliament ratified membership of the Asian Highway Development programme and committed the government to build 4,286 km of paved roads. Although the build out of roads proceeded at a rapid pace, Mongolia did not provide sufficient budgeting for road maintenance. According to a study by the Asian Development Bank, the current budget covers only about 20% of the funds required to maintain paved roads without losing substantial road assets.¹³

International trade and trade facilitation

Mongolia became a member of the WTO in 1997, and it now has bilateral investment treaties with 44 nations.¹⁴ Notable trade agreements include:

- Agreement reached with the EU in 1997 for tariff-free import of textiles from Mongolia;
- Mongolia signed TIFA agreement with United States in 2005;
- EU GSP+ status for tariff free export of Mongolian goods in 2006;
- Mongolia's first comprehensive free trade agreement (FTA), with Japan, reached in 2015;
- the U.S.-Mongolia Agreement on Transparency in Matters Related to International Trade and Investment, or Transparency Agreement, went into effect in 2017; and
- an agreement with Canada for the promotion and protection of investments also went into force in 2017.

¹³ Asian Development Bank – Mongolia Road Sector Development to 2016

¹⁴ UNCTAD

A proposed FTA with China has been under intermittent discussion since 2010 and the two countries are currently conducting a joint feasibility study for establishing a Free Trade Zone.

Regional integration and cooperation

Mongolia currently has observer status with the Shanghai Cooperation Organization, a Eurasian political, economic and security organization. The country is also a member of the Chinese-led Asian Infrastructure Investment Bank and falls firmly within the scope of China's One Belt One Road initiative.

Value added in agriculture

Mongolia recognizes the enormous potential of its livestock businesses. Given proper processing, certification and transportation, the country has the potential to develop a substantial organic meat industry. There is high global demand for such products. Starting in 2000, Mongolia has entered into bilateral agreements and protocols covering veterinary and quarantine services (SPS) with a growing number of countries, including China, Russia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Belarus, Indonesia, Qatar, Laos, and Vietnam.

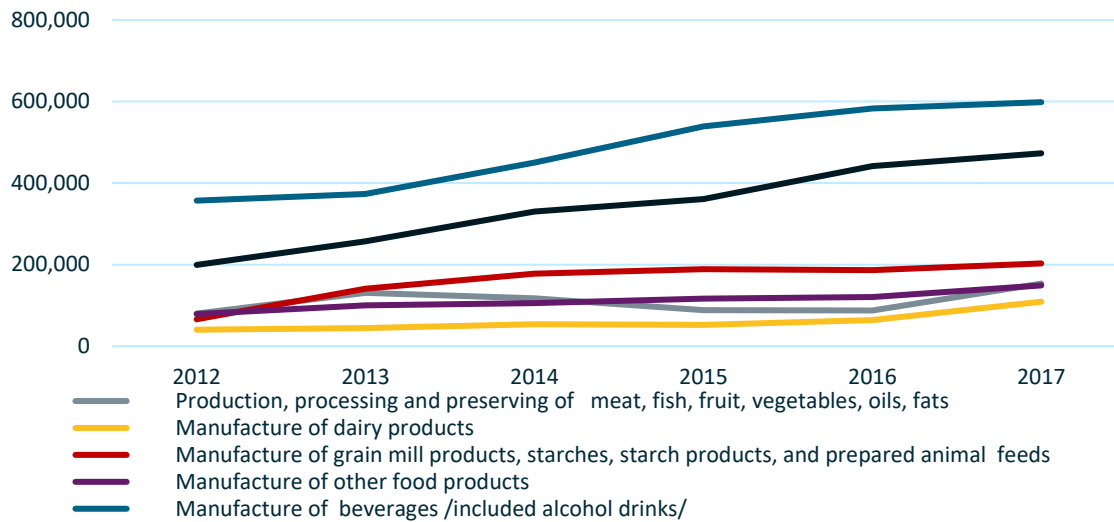
The cashmere industry in Mongolia combines agricultural and manufacturing value added. Mongolia is the second largest producer of raw cashmere in the world. The share of cashmere manufactured garments has been steadily increasing, but still represents less than 30% by weight of the total cashmere produced in the country.

Structural Economic Transformation

The NDS outlined a vision for economic diversification and envisaged a phased transformation of its economic structure. In the first phase, Mongolia aimed to leverage its mining and agricultural sectors to boost efficiency and production, including downstream processing of raw materials, in particular animal husbandry products. The second phase prioritised import substitution of food products, construction materials and small machinery. The downturn in the commodities market and resulting weakening of the domestic currency have already resulted in increased import substitution. Development of services and knowledge-intensive industries such as high-tech manufacturing, information technology and biotechnology were to be pursued in the third phase.

In recent years, beverage manufacturing and textiles have shown meaningful gains; the depreciation of the MNT may have encouraged consumption to shift to cheaper domestic alternatives. However, given the scarcity of capital and overall low growth environment over the past five years, very little sustainable structural change in Mongolia's economy has occurred. As of 2016 and 2017, the commodities sector has picked up and its share in the total industrial production mix has reverted to representing over 72% of total output.

Figure 20: Processing Industries 2012 - 2017 (MNT million)



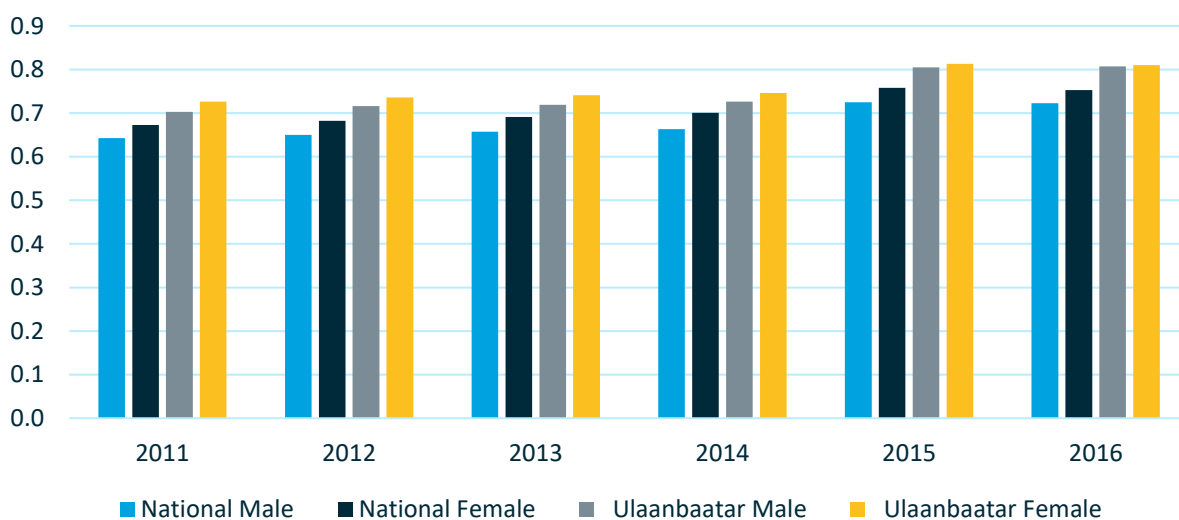
Source: Mongolian Statistical Information Service

Gender impacts and equality

Mongolia did not have any national laws addressing gender equality until 2011, when it passed the Law on Promotion of Gender Equality.

Gender equality in Mongolia is not a one-sided issue: the country shows high scores in some aspects, while it lags in others. The 2016 CPIA Gender Equality Index gives Mongolia a score of 4, with 6 being highest. Comparison of the Gender Development Index (GDI) for Mongolia with the Human Development Index (HDI) shows gender differences in relation to life expectancy, education and living standards.

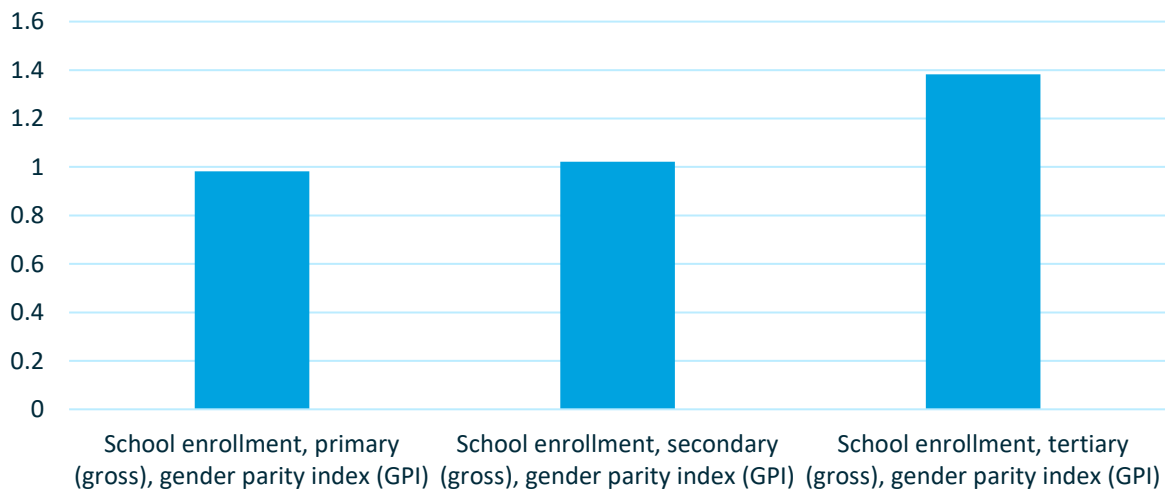
Figure 21: Gender development index



Source: Mongolian Statistical Information Service

The ratio of women’s GDI to HDI is above 100% nationally for 2015 and 2016, meaning that women fare better on those basic indicators. As of 2014, Mongolia’s GDI ranked 32nd among 161 countries. Women are also more educated as indicated by enrolment rates in primary, secondary and tertiary educational institutions.

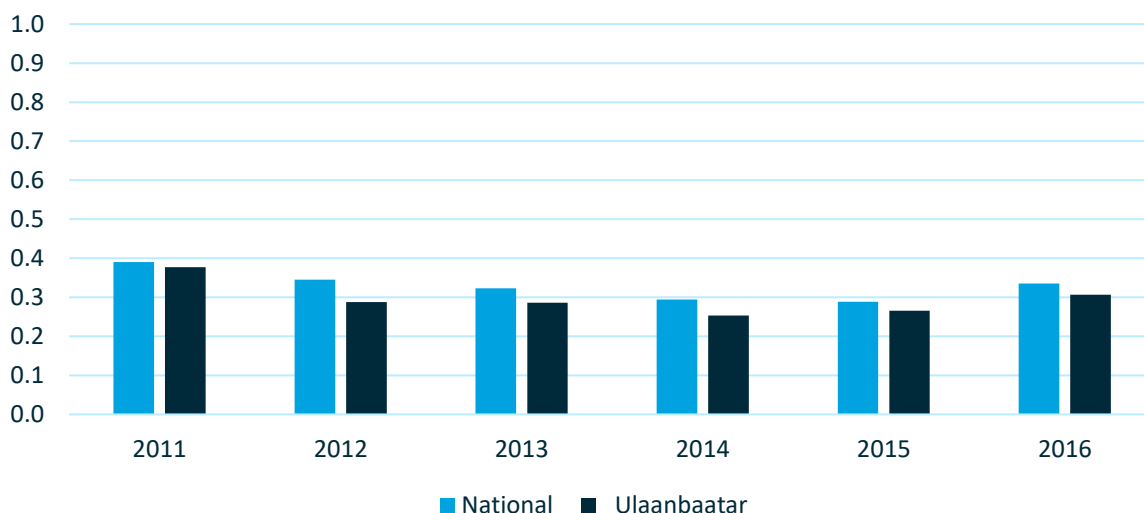
Figure 22: Female enrolment in educational institutions 2014



Source: World Development Indicators

However, the strong showing in education and GDI do not appear to translate into empowerment measures. The Gender Inequality Index (GII) measures inequality along three dimensions: reproductive health, empowerment and access to labour markets. As of 2014, Mongolia ranked 63rd among 155 countries.

Figure 23: Gender inequality index (0=perfect equality; 1=extreme inequality)

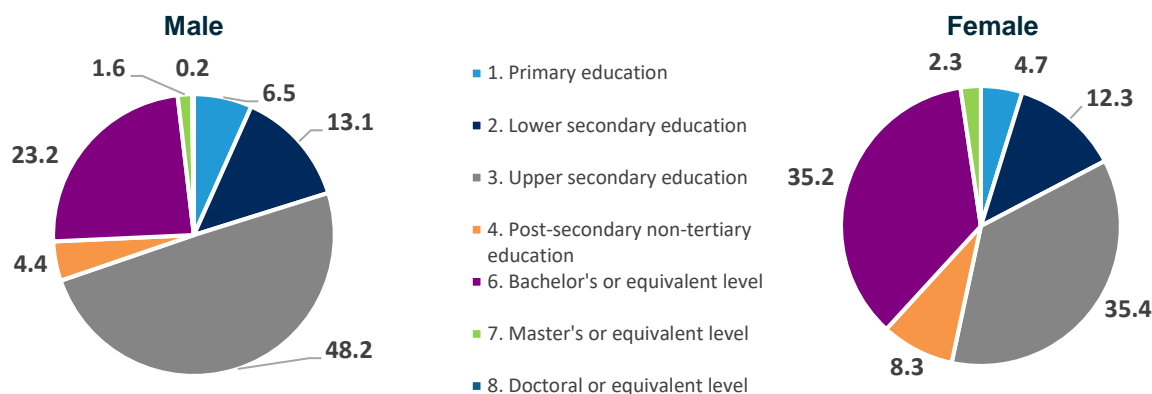


Source: World Development Indicators

According to the GII, Mongolia has a middling position in gender equality scores, held back slightly by the number of women parliamentarians in the legislative body of the country. There

are 13 women in Mongolia’s 76 seat legislature, representing about 17% of total. The average for the region in 2012 was 18.8% and 22.9% globally.

Figure 24: Education (Male vs Female), 2016



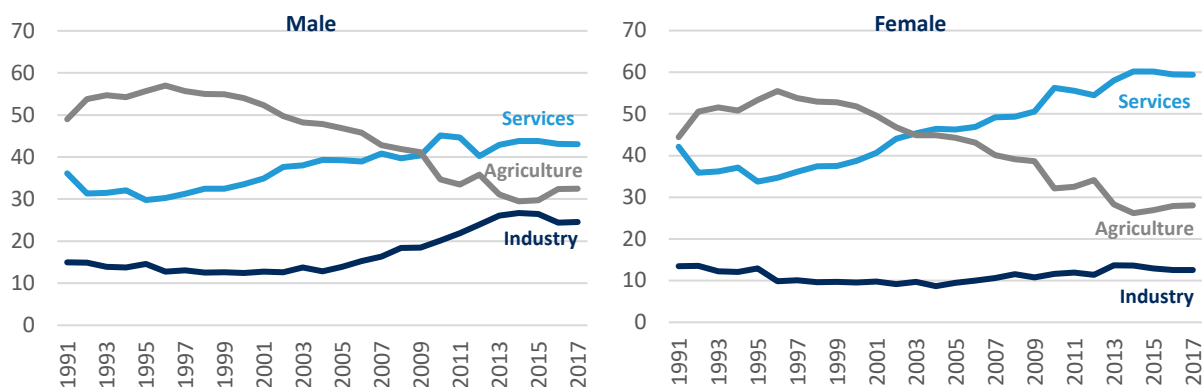
Source: ILO Labour Force Survey Mongolia 2016

An estimated third of women are also in nominally unpaid family work in rural areas. However, this is a more complex issue where it is difficult to estimate what share of economic revenues rural women ultimately receive from seasonal sales of agricultural products as well as increases in livestock capital. Traditionally and currently women participate in all major decision making pertaining to agricultural activities.

Mongolia’s Labour Law sets the voluntary retirement age for women at 55, five years earlier than for men, and ten years earlier, at 45, if a woman has four or more children. While the original intent was to assist women, there is evidence that some employers misuse the law to pressure women to retire early to replace them with younger staff. Until 2008, labour regulations prohibited female employment in what were categorised as dangerous occupations such as mining and trucking, and this resulted in women not participating in high growth sectors. Traditional values prevalent in the society also result in women self-selecting occupations in retail, catering and teaching.

SMEs are a very important segment of Mongolia’s economy, representing 98% of all registered enterprises. According to a 2014 IFC study on women-owned SMEs, the country’s commercial banks estimated that about 60% of micro-scale, family-owned and sole entrepreneur businesses are owned by women.¹⁵ This estimate came from a joint lending programme headed by the Development Bank of Mongolia and the Ministry of Economic Development and Ministry of Food and Agriculture. The Mongolia Enterprise Survey 2013 compiled by the World Bank indicates female ownership at 38.9%.

¹⁵ IFC - SMEs and Women-owned SMEs in Mongolia (2014)

Figure 25: Labour force participation rate in agriculture, industry and services (% of male or female employment)

Source: World Bank

However, it is possible that the survey answers were affected by cultural attitudes where Mongolians consider the oldest male in the family as “head of household,” nominally assigning ownership without real economic substance. The financial institutions in the study considered women to have better repayment rates while stating that often women don’t have the necessary collateral. The collateral issue isn’t specific to women and as most businesses are set up by families, the nominal ownership in the registry doesn’t truly reflect economic or managerial control.

Mongolia has an educated and economically active female population but policies that encourage increased women’s participation at the top levels of national government and corporate boardrooms are needed. Given the country’s young population and the educational advantage that young women enjoy, more effective implementation of gender equality policies will likely lead to the next generation of political and business leadership having a significantly increased female representation.

Challenges, opportunities and policy recommendations

Reliance on two neighbours for access to overseas markets, low population and harsh climatic conditions are some of the external challenges beyond the country’s control. However, Mongolia has been able to sustain a high economic growth rate on the back of its natural resource endowment.

Mongolia’s growth in the past decade and a half has been reliant on the mining and quarrying sector and will continue to be the case for the immediate future. Imbalances caused by such concentrated growth can be alleviated with proper policy and, equally importantly, efficient implementation. The objective should be to successfully accumulate capital from proceeds of mineral rents and to efficiently deploy it to diversify the economy, strengthen human capital and develop industries that reduce economic dependence on commodities exports. Non-extractive sector business growth should be fostered with proactive policies.

Diversification should not be sought at the expense of the extractive sector – the world will continue to need mined commodities and Mongolia’s mineral endowment and location next to its largest consumer is a competitive strength that should not be squandered. Instead, Mongolia should seek to develop a sustainable mining industry.

To mitigate the challenges and capitalise on the opportunities, Mongolia could consider policies and initiatives aimed at developing a sustainable mining industry, diversifying the economy not at the expense of the extractive sector but in addition to it, modernising business procedures, combating corruption and enhancing accountability, while improving road and energy infrastructure.

Developing sustainable mining industry

Sustainable development as defined by the United Nations World Commission on Environment and Development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” In this sense, economic, social and environmental impacts need to be carefully weighed. Reserves and resources also need to be continuously replenished through private and public investment in exploration. The following practices will help achieve sustainability and balance:

- consultation with international institutions and development organizations, such as UN Agencies and the World Bank, on overall policy and international coordination;
- cooperation with NGOs including Greenpeace, Transparency International and the World Wildlife Fund as measures of accountability;
- membership in international standards such as the Extractive Industries Transparency Initiative (where Mongolia is already a member);
- gradual and continued adoption of best practices and standards in environmental and social impact by domestic agencies and regulatory bodies;
- active participation of multilateral institutions such as the IFC, EBRD and ADB as stakeholders; and
- public investment in broad-scale geological mapping work.

Mongolia needs to create fair and stable conditions for further development of the key mining and quarrying sector. Involvement of international institutions in negotiating major investment agreements both in terms of enhancing the country’s expertise in negotiations as well as ensuring transparency may help. Agreements reached with a broad support base and through a transparent and well-discussed process will be less likely to fall victim to populist revisions that had previously stalled major projects.

Avoiding equity ownership in mineral projects in the near term

The model of SOEs has not worked well so far because of the lack of institutional strength, independence of relevant agencies as well as a lack of overall management and technical

expertise. For projects in the intermediate future, Mongolia should seek to negotiate a progressive royalty and tax regime, which are harder to subvert for political purposes, are more transparent and may prove to provide more predictable and reliable source of revenues. As the country's political system further matures and domestic technical and managerial capabilities are developed both in the private and public sectors, it may make sense to reconsider state equity involvement in the sector and development of "national champions."

Fostering economic diversification

While growing and strengthening its extractive industries, Mongolia should seek to implement policies to accumulate and deploy resources to create a more balanced economy. Key policy recommendation to foster economic diversification of Mongolia fall within the following main categories:

- create overall favourable macro-economic conditions;
- strengthen institutional capabilities;
- improve infrastructure;
- foster private sector growth;
- develop capital markets;
- identify and develop new niche industries; and
- create a comprehensive national branding strategy.

Existing mechanisms for accumulating resource rents should be reviewed and restructured with the following objectives:

- to minimise political interference;
- to professionalise management; and
- to operate as independent, for-profit agencies of the government.

Mongolia's stabilisation fund needs to be built up at times of higher commodity prices. This will require fiscal discipline as well as legislation requiring minimum contributions to the fund. Overall strengthening of institutional capabilities should be a priority. Foremost, agencies such as the Development Bank of Mongolia should operate free of political interference. Strict protocols need to be set for appointing professional management and determining how ministries and politicians interact with and influence these agencies.

Privatising certain sectors, combating corruption and enhancing accountability

Partial or total privatisation of certain sectors and SOEs can introduce additional measure of accountability. Erdenes MGL, Mongolia's state mining company, has been haunted by

accusations of corruption and overall inefficient operation. Its portfolio of undeveloped strategic deposits has seen no demonstrable progress towards development and exploitation. Mongolia has sought to gain a listing for Erdenes MGL in the past. It should do so while the commodity markets are still strong. Gaining international investors on its roster of shareholders will enhance management discipline and accountability.

Further investing in road infrastructure

Mongolia has been reasonably successful in developing its road infrastructure in the past decade. However, sufficient funds for maintenance need to be allocated for the investment to continue to pay dividends. Exports of bulk commodities such as coal and iron ore suffer from lack of rail transport capacity and bottlenecks at the border. Over the next decade, Mongolia should seek to develop its rail infrastructure at the same pace that it was able to develop its roads. As the main population centre and economic hub, the city of Ulaanbaatar requires significant investments. Improvements in energy, clean and waste water infrastructure and public transportation will help alleviate costs associated with pollution and lost productivity.

Streamlining and modernising business procedures

A comprehensive national review targeting elimination of outdated legal requirements and the system of multi-agency approvals should be implemented. The Mongolian National Chamber of Commerce Industry and other business associations such as the Business Council of Mongolia need to be consulted for recommendations on streamlining regulatory approval processes. The overall bureaucratic system should be modernised to reduce and, where appropriate, eliminate requirement of physical documents, excessive notarisational requirements and adoption of electronic filings and electronic signatures.

Businesses and particularly entrepreneurial ventures in Mongolia suffer from access to affordable capital. Although the country has sixteen banks, there is limited competition among lenders. Interest rates remain very high with even the most credit-worthy businesses paying 20% or more in annual interest. Banks can earn upwards of a 4% spread between its savings interest and loans. The banking lobby has been very successful in protecting itself from competition from abroad. The country's top banks no longer need protecting as they have become strong institutions with a domineering presence in the country's economy. For example, a group backed by the Trade and Development Bank of Mongolia, the country's largest bank, was behind the purchase of Russia's shares in the country's strategic Erdenet Mining Company in less than transparent circumstances. Mongolia should consider both issuing new banking licenses to credible counterparties as well as opening the sector to foreign competition.

Increasing support to SMEs

Some of the capital accumulated in Sovereign Wealth Funds should be allocated towards domestic venture capital investments. In particular entrepreneurship in technology, biotechnology, renewable energy and other knowledge-based sectors with potential for development of intellectual property should be supported as a matter of policy. Also, Mongolia may have potential for developing a domestic artisanal industry such as high-end fashion, decorative art and jewellery.

Capitalising on ‘organic’ agriculture practices to win international markets

After mining and quarrying, agriculture is the second largest sector in the economy and the largest source of employment. The country’s large livestock population can be developed towards an export-oriented organic meats and dairy industry. Its traditional animal husbandry practices are very much in line with modern trends for organic, free range and grass-fed meats and dairy products. If successfully branded and managed, these products can effectively compete in international markets. Internally, the government should focus policy towards implementing nationwide veterinary standards and a strict certification regime.

Successfully integrating registration and electronic information system for food safety

The Mongolian government’s Action Program for 2016-2020 calls for establishment of an integrated registration and electronic information system for food safety. Further investments in infrastructure for processing, storage and transportation are needed and the government should seek ways to incentivise private sector investment. Internationally, Mongolia should continue to gain bilateral trade agreements and adoption of mutually recognised certification regimes. The country’s Trademark and Geographic Indications Law has been in place since 2003. Currently it covers only four products: yak wool, yak cheese, camel milk cheese and sea buckthorn from Western regions. The list can be expanded to a much larger variety of meat, dairy and other organic products. Mongolia should not seek to compete on cost or volume given its geographic and population constraints. Mongolia’s national branding strategy should draw its strength from its pristine environment and authenticity of its nomadic tradition of animal husbandry, something that is effectively utilised in China for marketing products from Inner Mongolia.

Re-branding to increase the market share

As a low-population LLDC, Mongolia should seek to develop its manufacturing in sectors with potential for significant differentiation and strong competitive advantages. Organic products outside of meat and dairy can significantly benefit from a common branding strategy. These can range from alcoholic and non-alcoholic beverages to organic cosmetic products.

Mongolia’s main export market will continue to be its southern neighbour China. However, development of value-added exports such as organics should be with the aim of creating a more diversified market. Cooperation and investment from overseas markets will function as the economic pillar of Mongolia’s cornerstone “third neighbour” foreign policy. Maintaining friendly and strategic relationships with its two neighbours will help overcome some of the challenges of LLDCs.

Encouraging and developing nascent industries

The small size of Mongolia’s economy and its geographic remoteness often result in the country being overlooked by international brands. This tends to mean that larger companies do not enter the country’s market to facilitate technology transfers, but it also creates opportunities for local entrepreneurs to come up with innovative solutions and adopt new technologies without significant competitive pressures. This too requires quick action by policy makers to create a

favourable environment for the development of nascent industries. For example, the ride-hailing company Uber has not entered the domestic market so there is a local company that has created a similar solution. However, existing taxi and limousine regulations regarding left-hand-drive vehicles cut against the reality of the significant share of vehicles on the road being right-hand-drive imports from Japan. Regulators should exercise a degree of flexibility and pragmatism to encourage the emergence of domestic industries in view of existing realities.

Pursuing proactive policy making

Mongolia's key regional strength is its dynamic political and social system that has a demonstrated ability to change and adapt over the past two and a half decades. As such, Mongolia should seek to leverage its legislative and regulatory nimbleness and to foster a political culture of proactive rather than reactive policy making.

Assessing and working on creating a favourable environment for emerging technologies should be a priority that can be tasked to agencies as well as through formation of a parliamentary working group. Blockchain and cryptocurrencies are examples of transformative new technologies that many advanced economies are struggling to regulate and adopt given legacy considerations. Mongolia can afford to be in the forefront of adopting friendly regulations and should take a serious look on how the country can benefit from championing legal and regulatory silos for such new technologies.

Bhutan

Country analysis and economic overview



Prepared for International Think Tank for LLDCs
and United Nations Development Programme



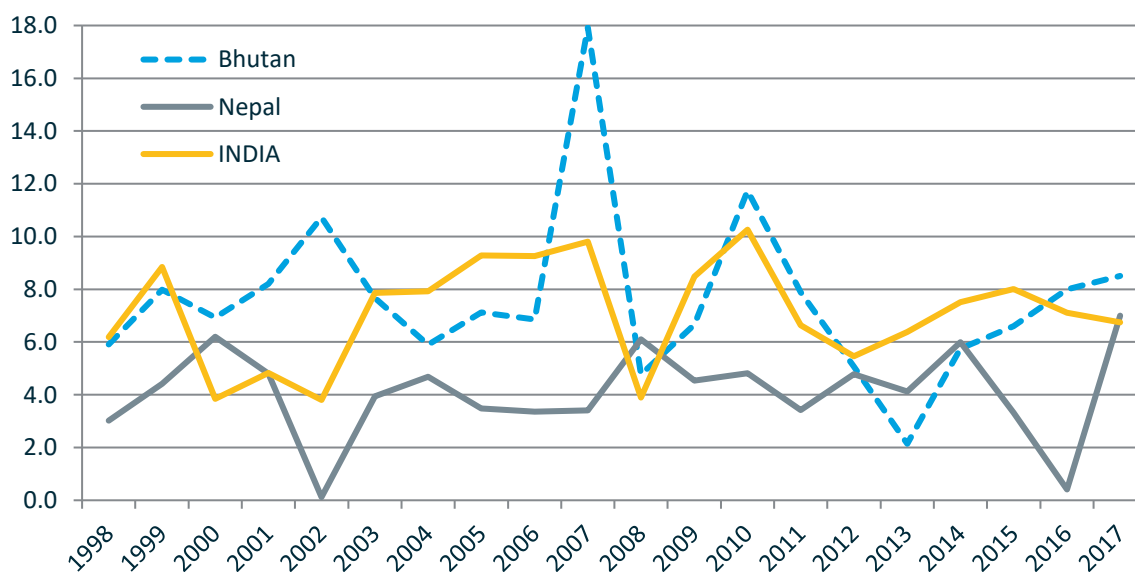
Oxford
Analytica

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+%¹⁶ 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 (%)

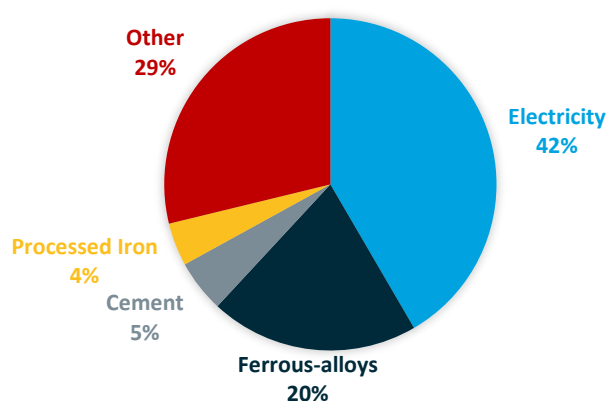
	2005	2010	2015
Manufacturing	7.0	8.7	7.9
Electricity and water	10.0	17.6	14.5
Construction	17.0	14.2	15.6

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)



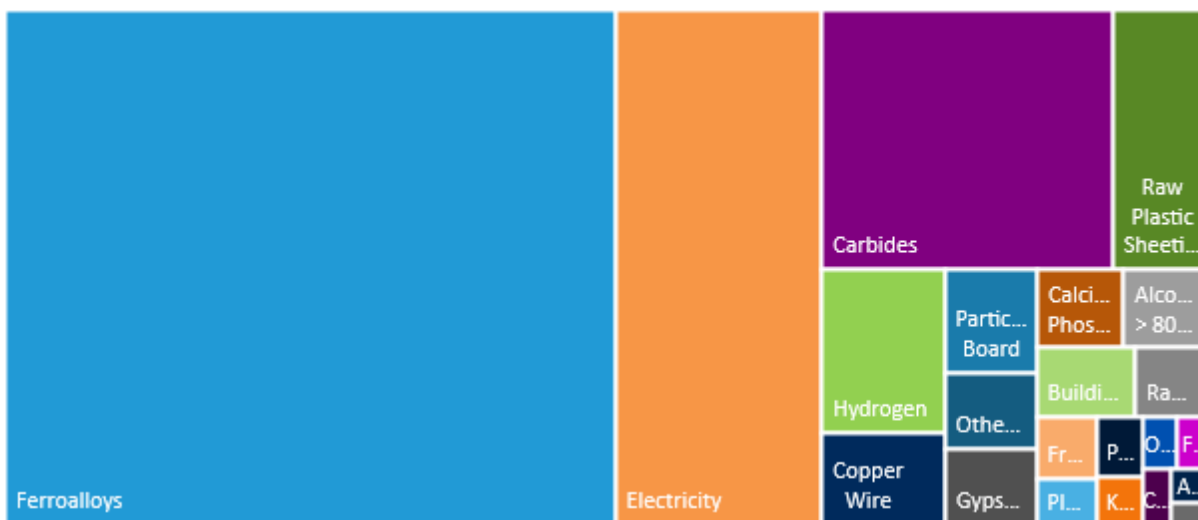
Source: Royal Government of Bhutan, Trade Statistics 2016

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

¹⁶ 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

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.¹⁷ 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



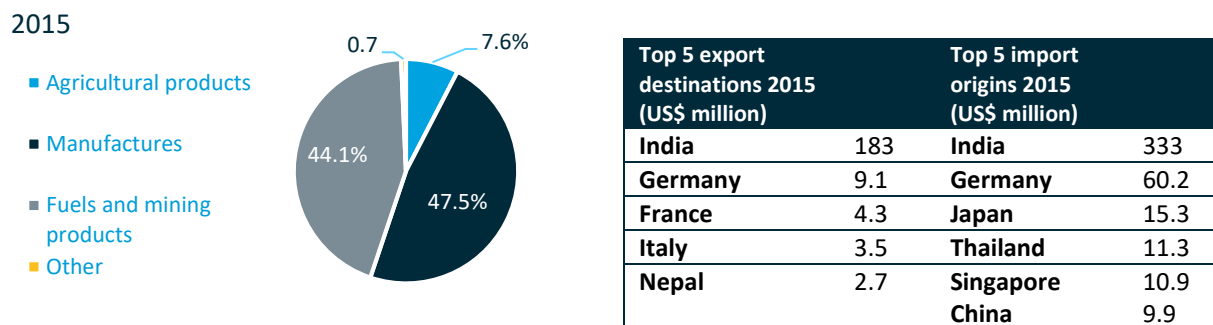
Source: The Observatory of Economic Complexity (2015 data)

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).

¹⁷ World Bank: WITS

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

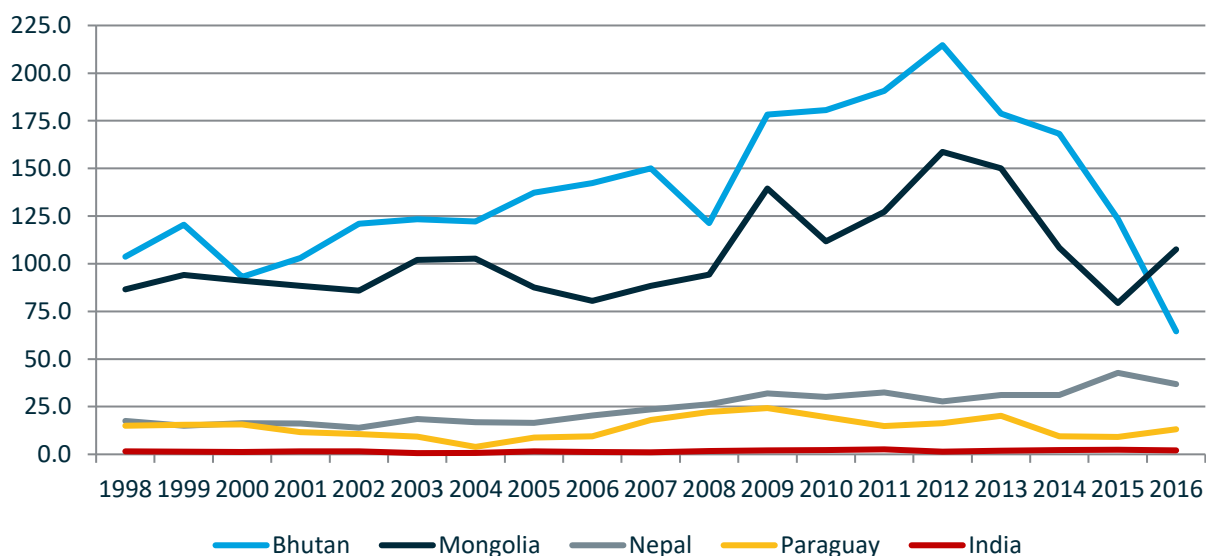


Source: World Trade Organization Country Profiles

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.¹⁸

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.

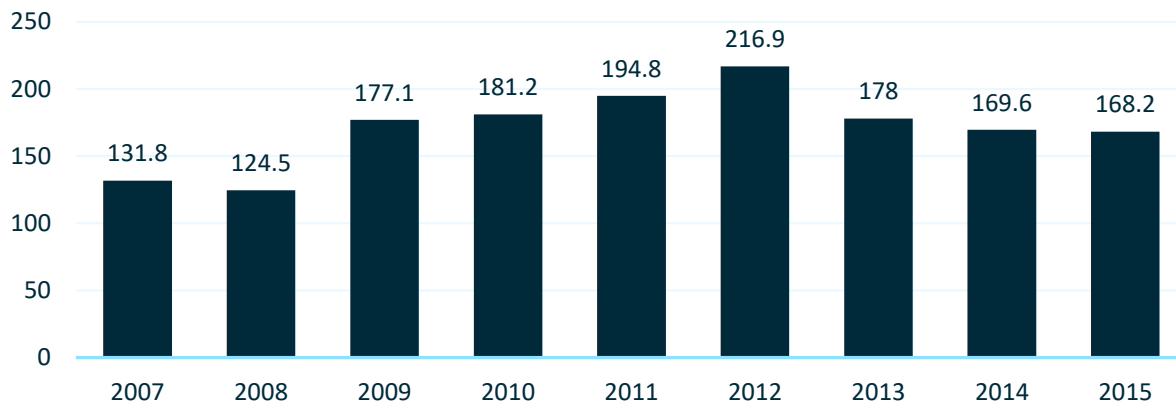
Figure 3: Net ODA received per capita (current US dollars)



Source: World Bank WDI database

¹⁸ “India’s CEA declines Bhutan’s request on CBTE”, *The Bhutanese*, 8 December 2017

Figure 4: Bhutan ODA per capita (US dollars)



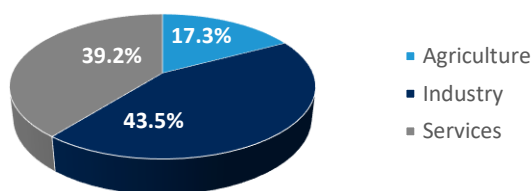
Source: World Bank

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.¹⁹ 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%.

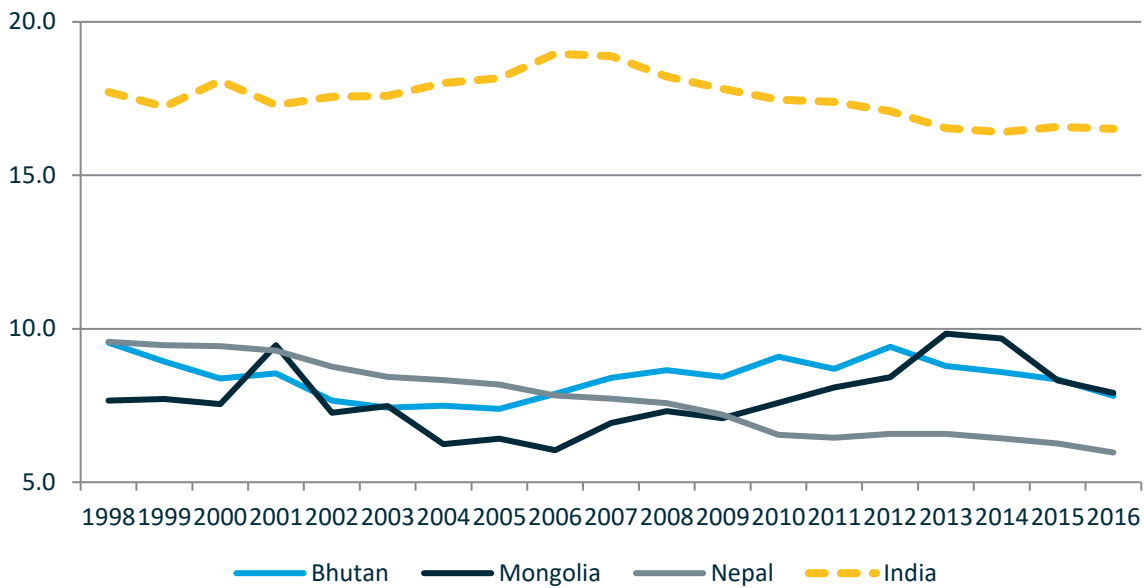
Figure 5: Value-added 2016



Source: World Bank: National Accounts Data, Bhutan 2017

¹⁹ 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 (%)

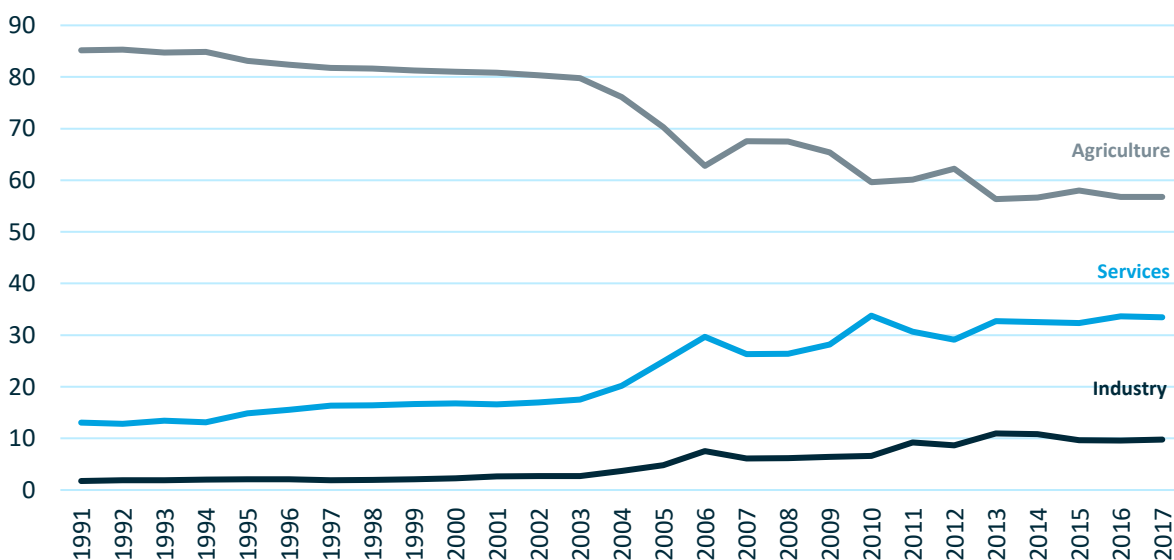


Source: World Bank WDI database

Labour force

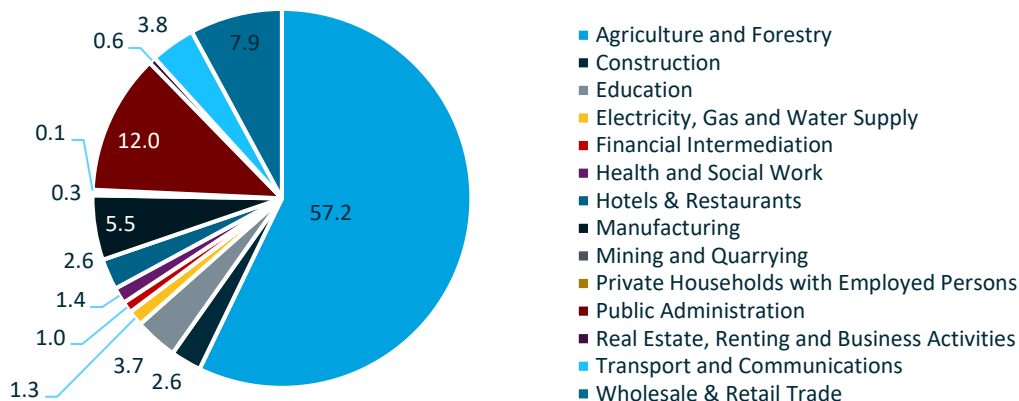
The implications of the low level of value-added in manufacturing are to be seen in the statistics on employment.

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



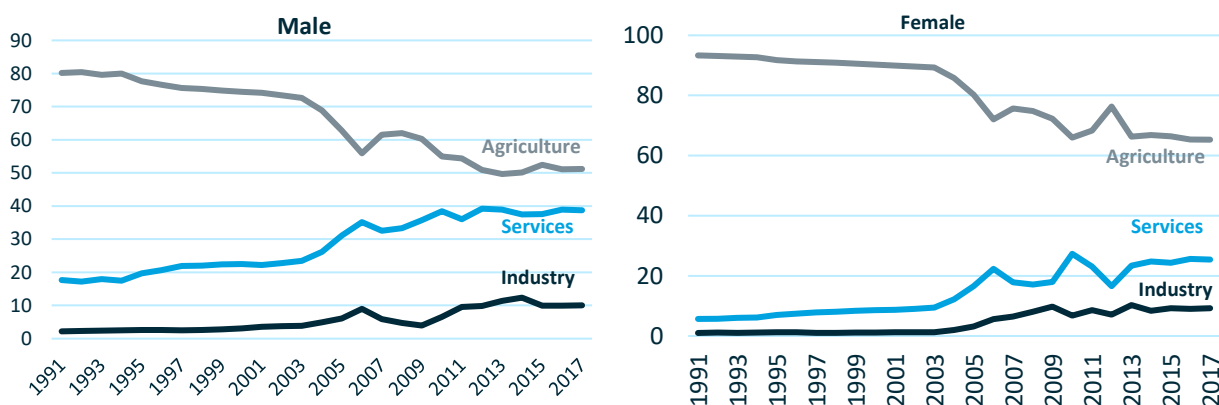
Source: World Bank WDI (modelled ILO estimate)

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)

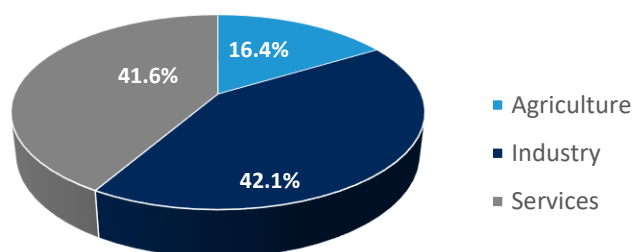
While there has been a significant shift away from agriculture in both its GDP contribution and value-added share since the first hydropower plant construction in 1987, this shift has been much less pronounced in the employment data. In 1986, when agriculture was responsible for 44% of GDP, the sector 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 2016.²⁰ 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 2012.²¹

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.²²

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 2015.²³ All the productivity increases were concentrated in services, where output per worker rose from 6,300 to 12,700 US dollars.²⁴

²⁰ RGoB, Labour Force Survey 2016, p34

²¹ UNDP: Problems of Youth Unemployment in Bhutan, 2013

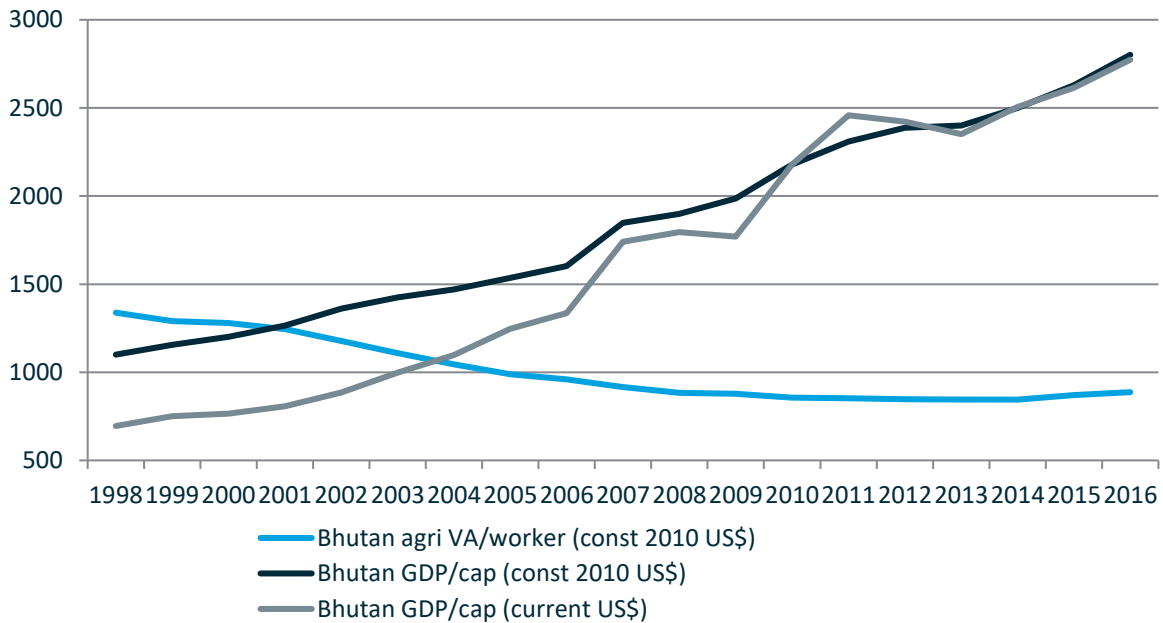
²² Asian Development Bank, *Unlocking Bhutan's Potential: Measuring Potential Output for the Small, Landlocked Himalayan Kingdom of Bhutan*. (South Asian Working Papers #32), November 2014

²³ 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)

²⁴ World Bank: *Investment Climate in Bhutan*, September 2017

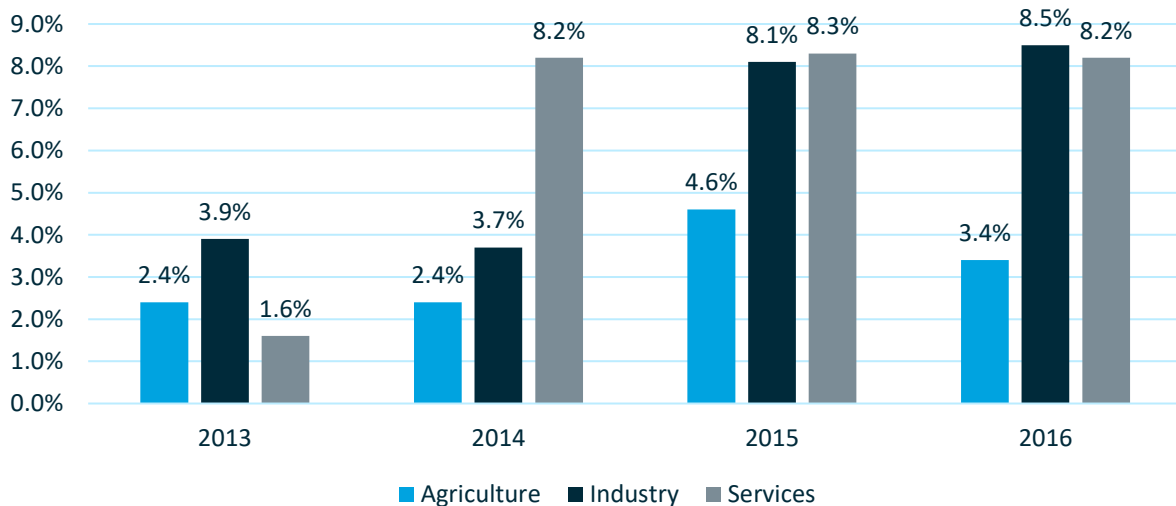
Productivity in agriculture has been characteristically weak, as shown by the decline in value-added per worker (measured in 2010 constant prices, US\$). This contrasts sharply with the gains in GDP/capita.

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 2017.²⁵
- High levels of expenditure have been devoted to public health (3.6% of GDP in 2014) and education (7.14% in 2015).²⁶
- 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.²⁷ Furthermore, while Bhutan has benefited

²⁵ Royal Government of Bhutan: National Statistical Office

²⁶ World Health Organisation, Bhutan; Royal Government of Bhutan: National Accounts Statistics

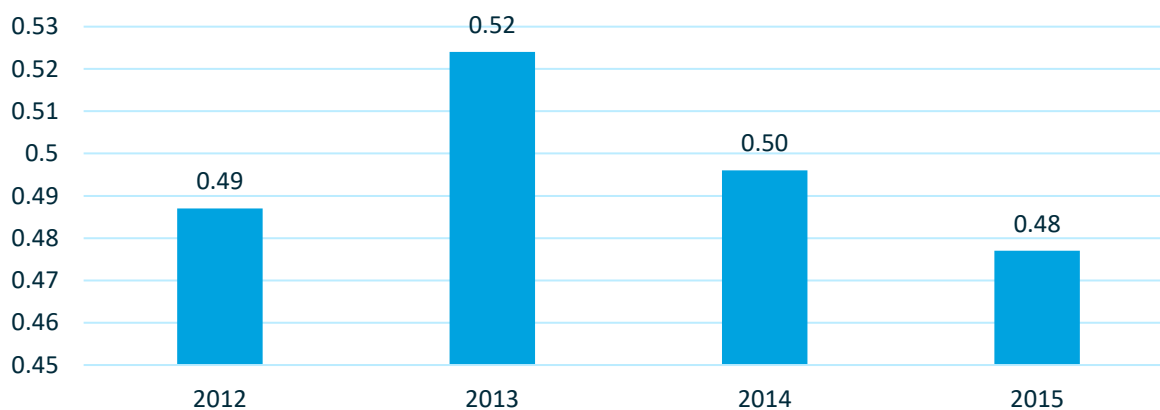
²⁷ RGoB, *Eleventh Five Year Plan 2013-18*. (Thimphu, 2013): "lack of economic diversification has resulted in a situation of high growth rates driven by the hydropower sector without a commensurate increase in gainful employment for a rapidly growing and educated labour force, which poses significant

from its relationship with India and appears keen to extend this friendship, it will need to further diversify its network of partners.²⁸

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%).²⁹

In health, Bhutan's fertility rate has fallen from 5.64 in 1990 to 1.98 in 2015.³⁰ The infant mortality rate has fallen from 110.99 in 2000 to 32.9 in 2017.³¹ Female life-expectancy has risen from 53.3 years in 1990 to 70.0 years in 2015.³²

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

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 World Bank: Bhutan National Education Update 2014

³⁰ Indexmundi

³¹ Ibid

³² Knoema World Atlas

2012, which is unrealistic and must discount much family farm labour at the earlier date.³³ 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.³⁴

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.³⁵

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.³⁶

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 Bhutanese 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.³⁷

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:

³³ Bhutan National Commission for Women and Children: Gender and Employment Challenge 2013 – hereafter NCWC

³⁴ Ibid

³⁵ Royal Government of Bhutan: 11th Five-Year Plan 2013-18

³⁶ 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

³⁷ 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.³⁸

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.³⁹

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.⁴⁰ 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.

³⁸ Thierry Mathou, *How to Reform a Traditional Buddhist Monarchy*. (Thimphu, 2008); Dhurba Rizal, *The Royal Semi-Authoritarian Democracy of Bhutan*. (Lexington, 2015)

³⁹ 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

⁴⁰ 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.⁴¹ 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.⁴²
- 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.⁴³

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.⁴⁴

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%.⁴⁵ 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).⁴⁶ Four Special Economic Zones (SEZ) were designated in 2013. However, they still lack basic

⁴¹ IMF: Bhutan Staff Report, Debt Sustainability Crisis, June 8 2016

⁴² "India's CEA declines Bhutan's request on CBTE", *The Bhutanese*, 8 December 2017

⁴³ Lakshmi Premkumar, *A Study of the India-Bhutan Energy Cooperation Agreements and the Implementation of Hydropower Projects in Bhutan*. (Vasudha Foundation, New Delhi, 2016)

⁴⁴ 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

⁴⁵ IMF: Bhutan Staff Report, Debt Sustainability Crisis, June 8 2016

⁴⁶ 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.⁴⁷ 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 controlled⁴⁸ 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.⁴⁹

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.⁵⁰

⁴⁷ 'Internet Penetration Rate in Bhutan 2005-16', *Statistica*

⁴⁸ RGoB, "Foreign Direct Investment Rules and Regulations", Schedule II, #3

⁴⁹ Royal Government of Bhutan: 2017 Budget.

⁵⁰ 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 failure⁵¹ 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-privatised⁵² 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.⁵³

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.

⁵¹ Tshewang Dorji, *Privatisation Gap in Bhutan. A Study of Small and Medium Enterprises in Bhutan*. (Grin Publishing, 2017).

⁵² R. Cole et al., *Banking in Bhutan: An Assessment of Financial Sector Development in Bhutan*. (Asian Development Bank, January 2017, p421)

⁵³ 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.⁵⁴ 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.⁵⁵

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.⁵⁶ 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).⁵⁷ 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.

⁵⁴ ODA (UK): Disentangling Transit Costs and Time in South Asia, 2015

⁵⁵ ODA (UK): Disentangling Transit Costs and Time in South Asia, 2015

⁵⁶ World Bank: Revenue-GDP Datasheet

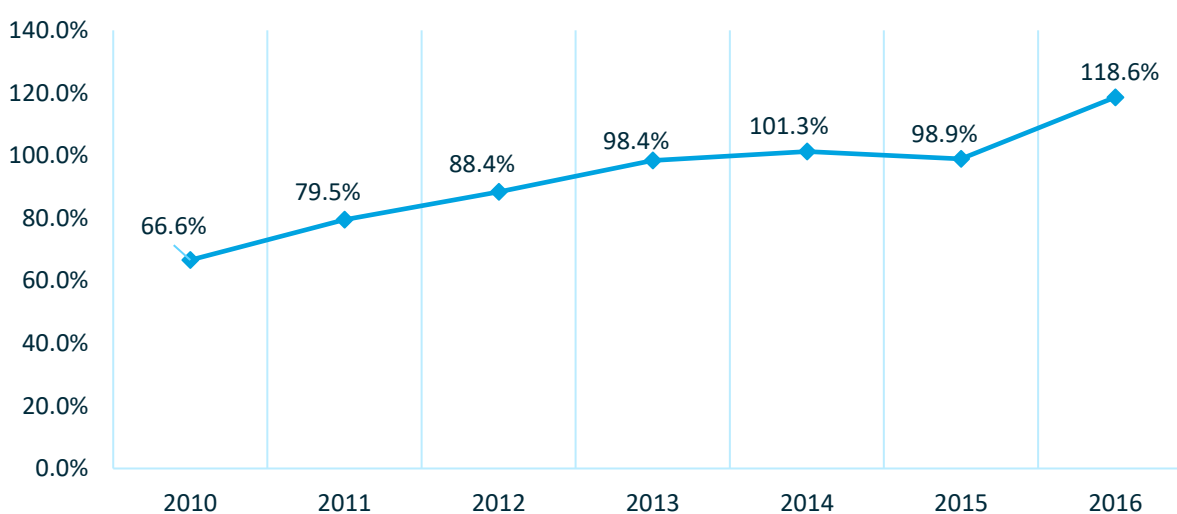
⁵⁷ World Bank: Doing Business – Bhutan, 2017

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.⁵⁸

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).⁵⁹ 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.⁶⁰ It is worth noting that Bhutan has to compete with other

⁵⁸ "Bhutan's hydro basket gets smaller as India becomes power surplus and tariff rates drop", The Bhutanese, 22 July 2017

⁵⁹ UNCTAD, World Investment Report 2017, Country Fact Sheets 'Bhutan'

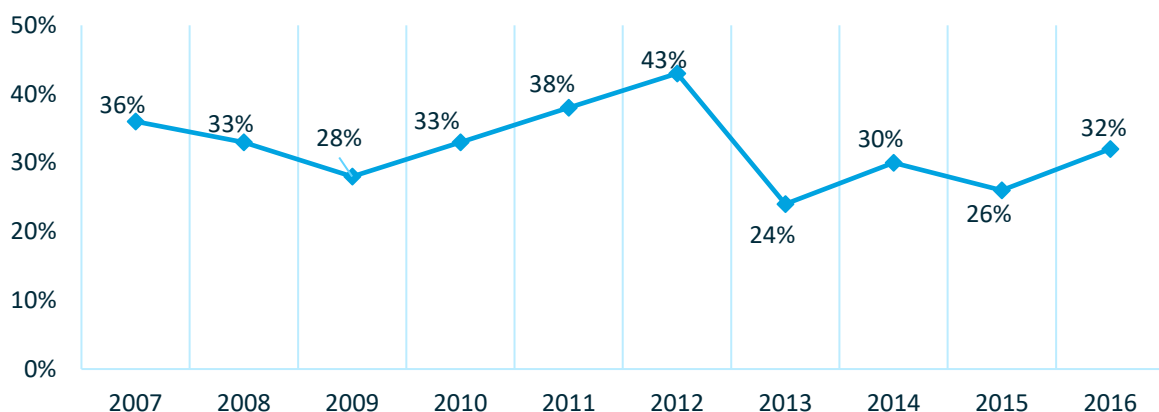
⁶⁰ IMF: Index Mundi, FDI

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:

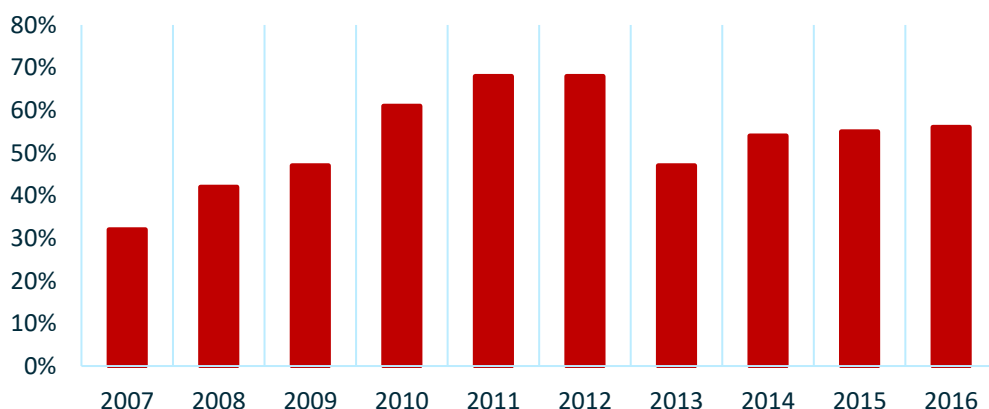
Figure 14: Domestic savings as % of GDP



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.

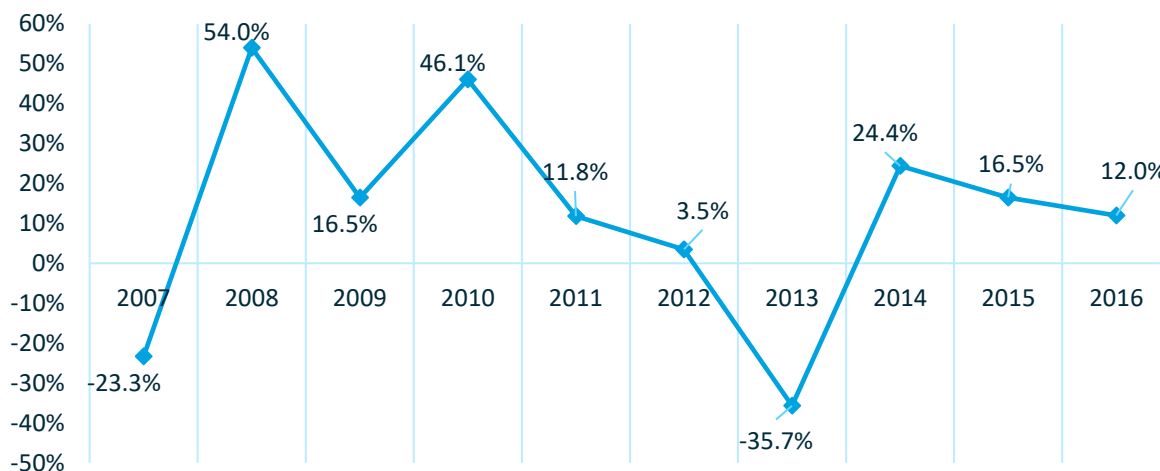
Figure 15: Gross capital formation as % GDP



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.⁶¹ 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.

⁶¹ "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.⁶²

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.⁶³ 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.

⁶² 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.

⁶³ "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",⁶⁴ 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

⁶⁴ 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 2016.⁶⁵

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.

⁶⁵ 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).

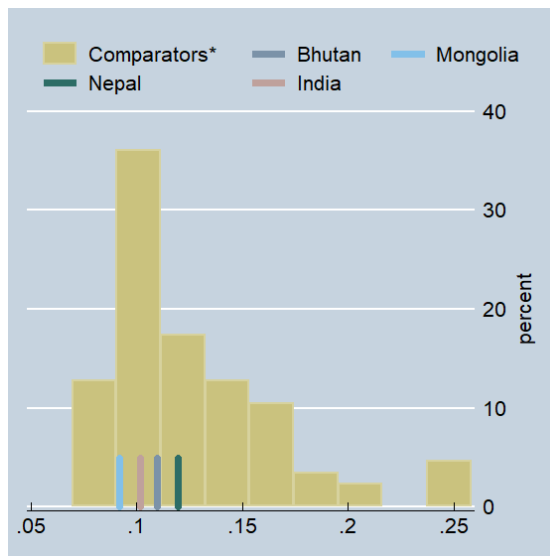
Finally, Bhutan has an undiversified portfolio of external investors. Its HH index for sources of inward FDI (0.6) is markedly higher (thus more concentrated) than the comparator group (0.48) though not dissimilar to Nepal (0.51).

Figure 17: Diversification indices



Herfindahl-Hirschman Index (up=concentrated)

Production (value added)

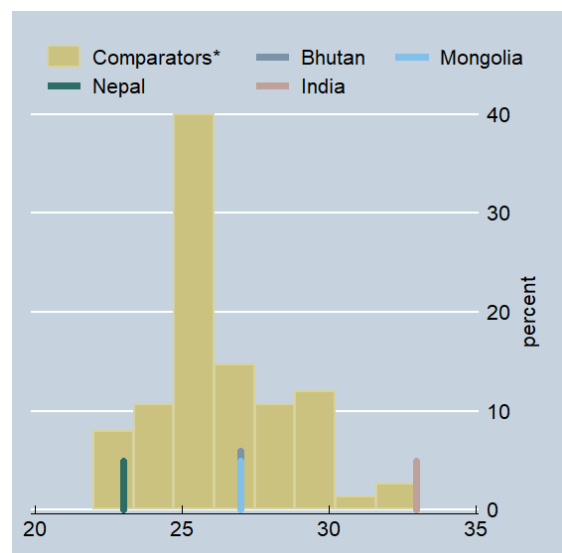
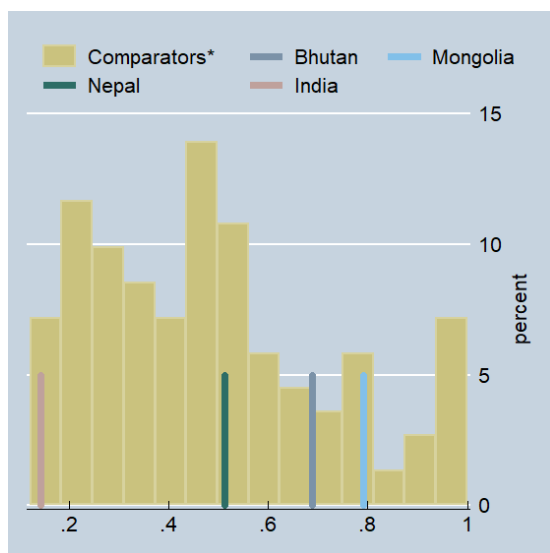


Count (number) (up=diversified)

(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.

Nepal

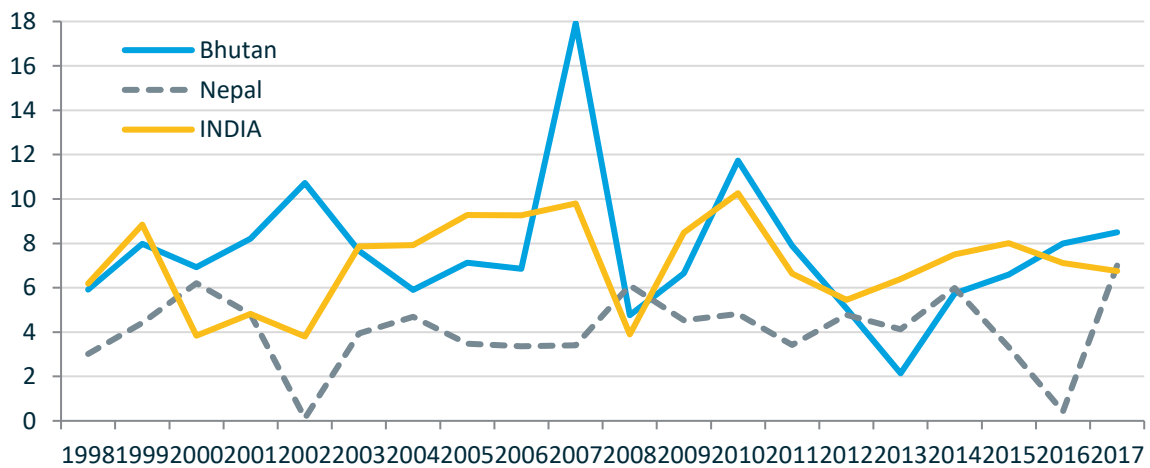
Country analysis and economic overview



Country analysis and economic overview

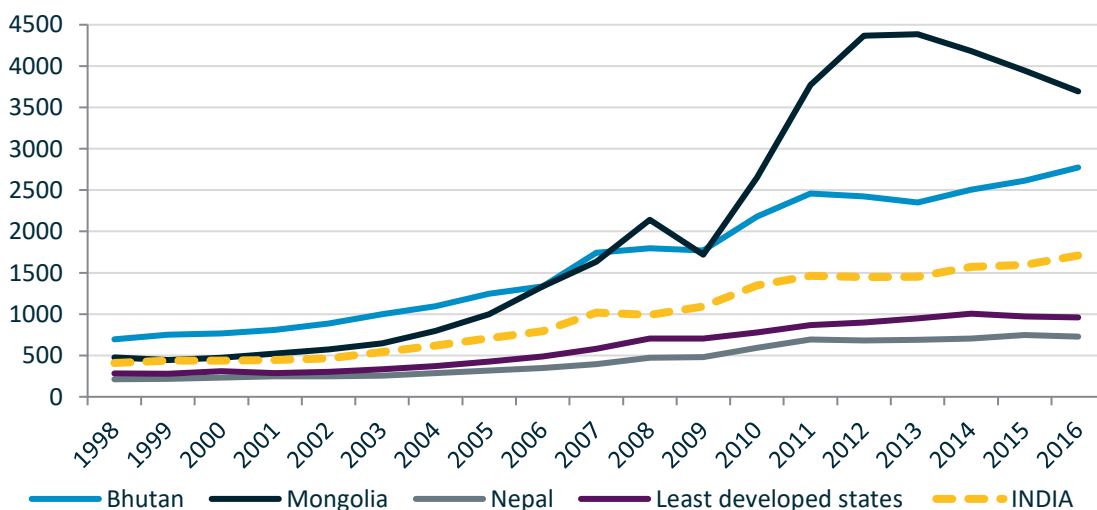
Nepal is a relatively low income ‘least developed country’ (LDC) that aims to graduate from this status by 2022 and transition to a middle-income country by 2030. It is a small landlocked economy of about 30 million people, strategically located between India and China. Nepal’s envisioned transition to prosperity is challenging and requires significant structural transformation and economic diversification. In particular, it requires a shift from a remittance-fuelled economy to one fuelled by new areas of investment and productivity gains.

Figure 1: GDP growth rates in Nepal versus neighbouring Asian states (%)



Source: World Bank WDI database

Figure 2: GDP per capita in current US\$ in Nepal and a selection of other Asian economies



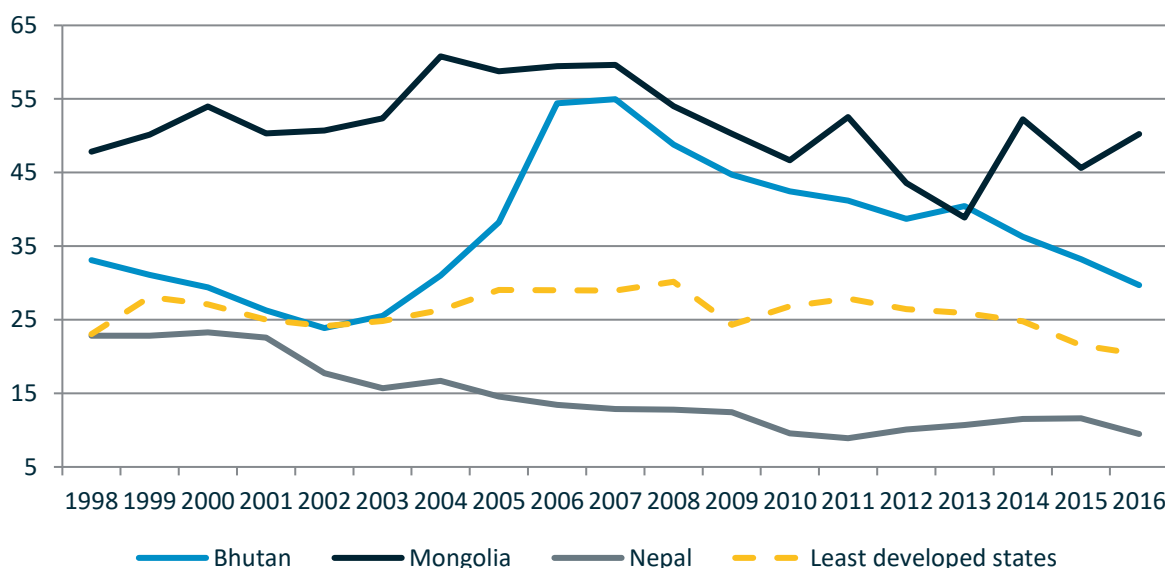
Source: World Bank WDI data base 2017

Nepal has made progress in poverty reduction and human development during the past two decades. While 46% of the population lived in absolute poverty in 1995, this figure fell to 25% by 2010 (World Bank 2018). However, its recent history has been marked by prolonged political instability, civil war and catastrophic natural disaster, the combined impact of which has resulted

in heavy humanitarian loss as well as negative effects on sustained economic growth and development.

The analysis in this report shows that Nepal remains an erratic growth economy, which has undergone very limited structural change and upgrading in the key areas of output, employment, trade, and domestic as well as foreign investment. The persistent decline in total exports (goods and services) as a share of GDP to just under 10% in 2016 is particularly alarming, especially as imports reached almost 40% of GDP (implying a trade deficit of more than 6 billion US dollars). Remittances from migrant workers overseas have softened the negative effects of Nepal's sluggish structural transformation, but greater emphasis on development and productivity in agriculture, services and manufacturing is essential if Nepal is to achieve the middle income country status it seeks.

Figure 3: The share of total exports in GDP in Nepal and across comparator countries (%)



Source: World Bank WDI database 2017

Economic growth

Historically, Nepal's economic growth has been slow by Asian standards. Growth rates have remained at an average of around 4% over the past ten years, with some exceptions such a growth spurt in 2017 when growth was spurred largely by post-earthquake reconstruction. The growth of both the agricultural and industrial sectors has been sluggish over this period, averaging 3.2% and 2.8%. The service sector has performed better, however, registering an average growth rate of 5.3%. The latter offers some scope for optimism regarding the potential motors for faster growth in Nepal.

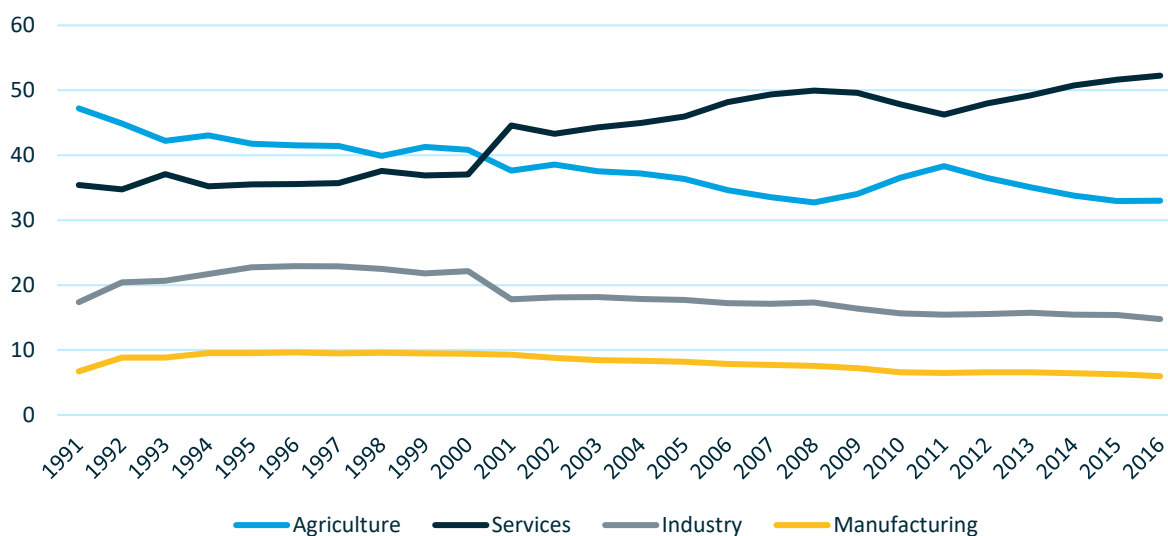
Structural transformation of the economy

In order to achieve sustained economic growth, developing countries need to undergo structural transformation that moves them towards high productivity sectors and the potential to achieve export revenue growth. This type of productivity enhancement has so far been very limited in

Nepal. Indeed, as the later discussion of productivity will show, productivity has made little progress over the last 30 years.

Although the share of GDP represented by agriculture has decreased from 46.5% in 1991 to 29.3% in 2016/2017, this has not been matched by an expansion in high productivity sectors. While the service sector has expanded significantly, much of this has been in low productivity areas such as community services (although service exports are a brighter spot). In addition, the significance of manufacturing in the economy has not increased. In fact, there are even some signs of ‘premature de-industrialisation’ in Nepal: for example, manufacturing value-added as a percentage of total GDP declined from over 9% in the mid-1990s to around 6% in 2016.

Figure 4: Value added by economic sectors (% of GDP)



Source: World Bank

Employment and productivity

Structural transformation of a subsistence agriculture-based economy obviously requires a movement of labour out of agriculture and into the manufacturing and service sectors. Again, this type of employment transformation in Nepal has been limited. A high share of the working population remains in agriculture. The share of the labour force in agriculture fell from 81% in 1991 to 66% in 2001, but increased slightly to 67% in 2011. (Data on employment is only available from the National Census, which was last conducted in 2011).

Table 1b shows that the growth rate of total employment was only 0.6% between 2001 and 2011. Agricultural employment growth was negligible, while employment growth rates in manufacturing were negative during this period.

While employment growth in agriculture can be expected to fall during a period of structural transformation, this should be compensated for by growth in manufacturing and service sector employment. This has not occurred in Nepal, with the employment elasticity of the

manufacturing sector being negative in the period 2001-2011 (ODI 2014). This indicates that not only did the manufacturing sector contract during this period, it laid off workers at a fast rate.

Table 1a: Employment share

	1991	2001	2011
Agriculture, Fisheries and Forestry	81.2	65.7	66.7
Mining and Quarrying	0.0	0.2	0.3
Manufacturing	2.0	8.8	5.5
Electricity, gas and water supply	0.2	1.5	0.2
Construction	0.5	2.9	3.2
Trade, Restaurant and Hotel	3.5	9.9	8.1
Transport, Communication and Storage	0.7	1.6	2.4
Financial and Real Estate	0.3	0.8	0.7
Community, Social and Other Services	11.6	8.6	12.8
Total	100	100	100

Source: Census Surveys 1991, 2001 and 2011, Central Bureau of Statistics

Table 1b: Employment growth (annual average, %)

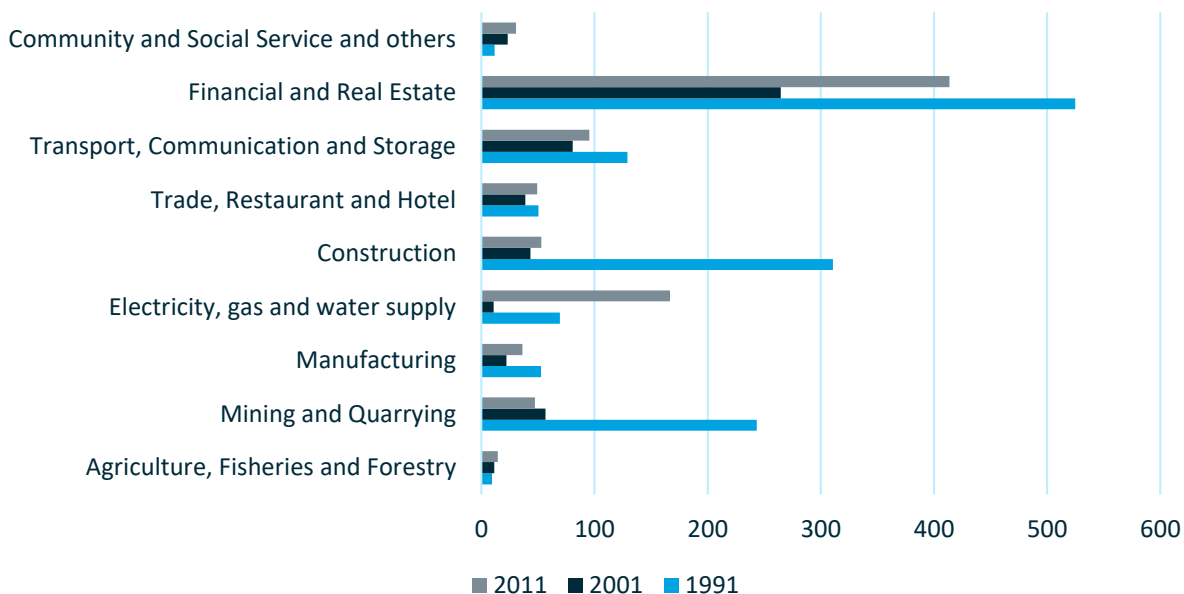
	1991-2001	2001-2011
Agriculture, Fisheries and Forestry	0.8	0.7
Mining and Quarrying	17.4	5.1
Manufacturing	16.0	-3.7
Electricity, gas and water supply	23.1	-16.0
Construction	18.9	1.6
Trade, Restaurant and Hotel	12.2	-1.3
Transport, Communication and Storage	10.5	4.3
Financial and Real Estate	11.8	0.2
Community, Social and Other Services	0.0	4.2
Total	2.7	0.6

Source: Census Surveys 1991, 2001 and 2011, Central Bureau of Statistics

Labour productivity

Labour productivity gaps between different sectors are typically very large in the Nepalese economy. The agricultural sector has very low (and stagnant) labour productivity. And, as the data below reveal, labour productivity in manufacturing actually declined during the period 1990-2011. While the financial and real estate sector has high levels of productivity, it employs only a small proportion of the labour force. Labour productivity in the community, social and other services sector is the lowest of all, but this is the major non-agricultural sector for employment.

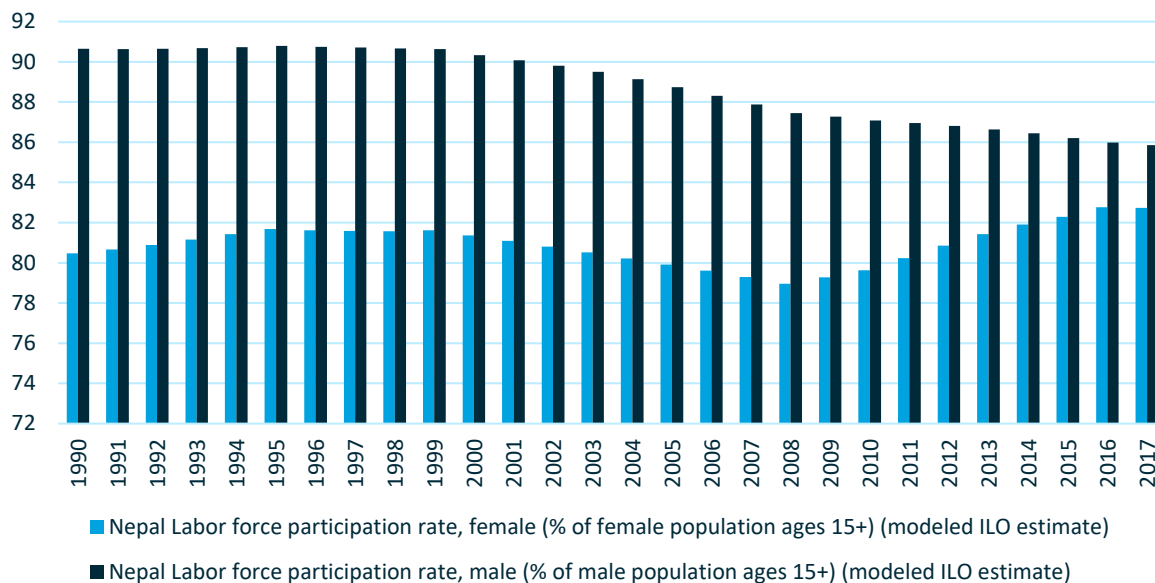
Figure 5: Sector wide labour productivity



Source: CBS, Nepal

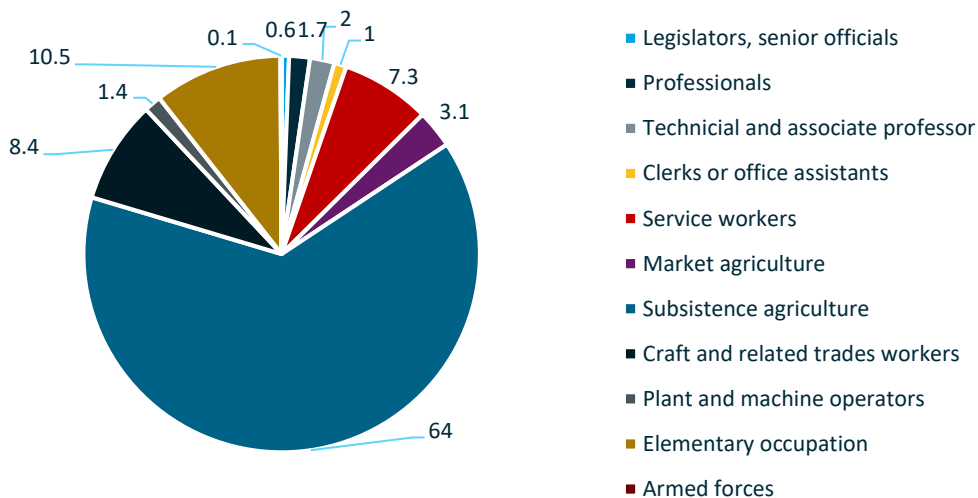
The above discussion highlights key shortcomings of the structural transformation that has occurred in Nepal. In terms of the structure of output, Nepal has shifted from an agriculture-based to a service oriented economy. However, productivity improvement in the service sector has been limited. In addition, the manufacturing sector has not expanded its share of national output and has experienced a decline in productivity in recent decades.

Figure 6a: Labour force participation rate



Source: World Bank, WDI

Figure 6b: Employment distribution by occupation



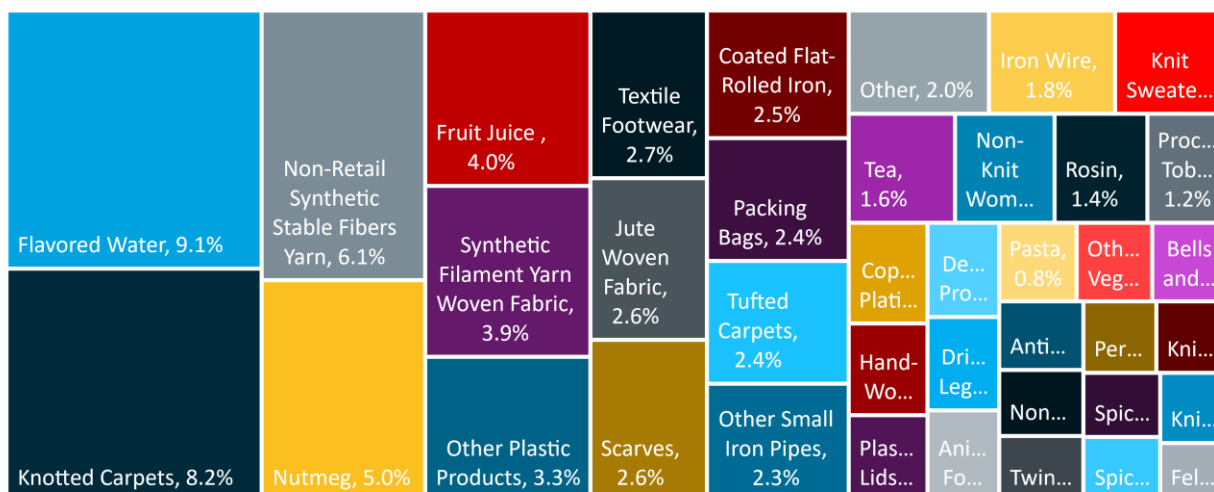
Source: World Bank, World Development Indicators

External trade

A dynamic, rapidly expanding export sector can be a key source of growth and structural transformation for a developing country economy. However, in Nepal, the merchandise exports sector is characterised by several shortcomings that prevent it from assuming this role. Services exports, especially travel and tourism, have grown and now account for about 1 billion US dollars worth of revenues per annum -- more than half of total export revenues (WTO data for 2016). But recent data suggest that even this engine of growth has currently stalled.

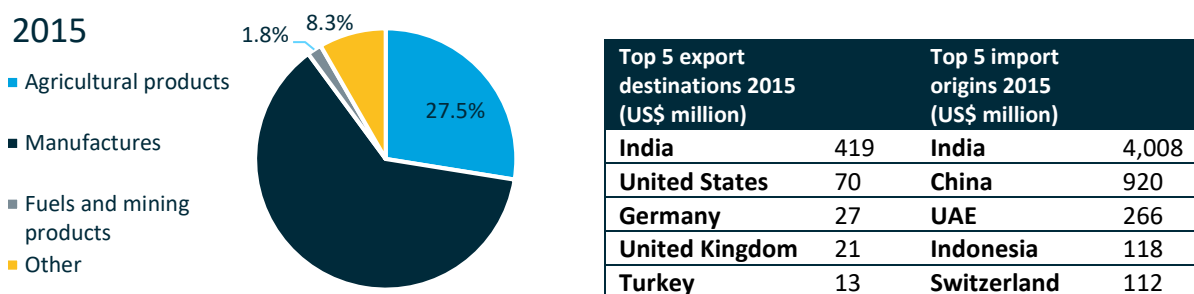
In goods trade, Nepal is primarily an exporter of manufactured consumer goods as shown below. However, it has failed to upgrade its export structure through moving away from labour-intensive, low-skill and low value-added exports towards higher value-added manufacturing exports. Flavoured water dominates Nepal's merchandise exports (9.1%), followed by knotted carpets (8.1%), yarn (6.1%), nutmeg (5%) and fruit juice (4%).

Figure 7: Export structure in 2015



Source: The Observatory of Economic Complexity

Figure 8: Total exports by main commodity group and partner



Source: World Trade Organization Country Profiles

A narrow concentration of exports in a few products or a few markets can result in volatility and vulnerability for a developing country. In Nepal, product concentration actually appears to be very low: it has a HH export product concentration index value of 0.034 for 2015. However, this may be misleading as the product mix involved (low value-added sectors with weak dynamics) looks unlikely to provide the substantial and dynamic growth that Nepal needs. Moreover, Nepal's export markets (destinations) are very concentrated, chiefly focused on India.

India is Nepal's largest trade partner, accounting for over 60% of the country's merchandise exports and imports in 2015. Nepal's reported exports to India are mainly concentrated in labour-intensive textiles, zinc sheet, thread and yarn.

Table 2: Product diversification and market diversification

Product diversification (based on HS02, 4-dig.)	2015
Number of exported products (max 1245)	260
Number of imported products (max. 1245)	998
HH export product concentration (0 to 1)	0.034
HH import product concentration (0 to 1)	0.017

Market diversification	2015
Number of export markets (max 237)	86
Number of import markets (max. 237)	113
HH export market concentration (0 to 1)	0.414
HH import market concentration (0 to 1)	0.387

Source: WTO Secretariat; UN Comtrade

Nepal's concentration in low value added, low quality exports is also revealed in its external terms of trade. These have worsened over the past 15 years, and the purchasing power of exports has gone down significantly.

Both the relatively high dependence on India and the worsening purchasing power of exports are linked to the dual quality distribution of both agricultural and non-agricultural exports in Nepal. In general, there seems to be a dual price structure for exports, with some firms exporting high-volume low-price products (mainly to India) and others exporting low-volume high-price exports to other destinations (EU, US, Japan).

These specific features of export composition and price trends severely constrain the capacity of the export sector to be a source of dynamism and structural change for the Nepalese economy.

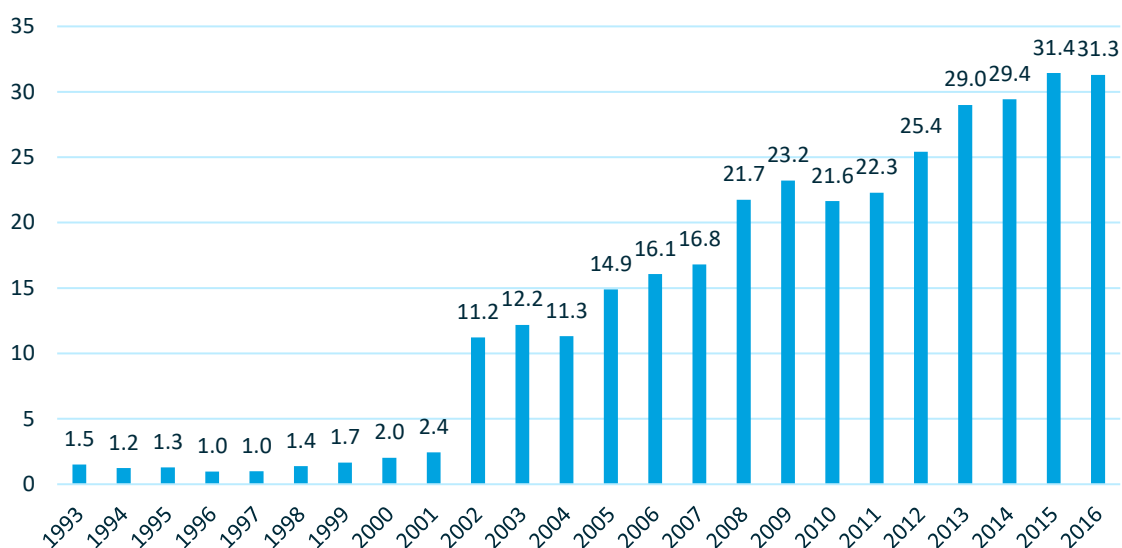
Intra-sectoral diversification and transformation

Structural transformation requires not only an inter-sectoral movement of resources but also an intra-sectoral shift from low productivity to high productivity activities *within* each sector. 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 level of intra-sectoral diversification during the period 2011-2016 in Nepal is broadly similar to the group of comparator developing countries used for this analysis. This relatively low level of intra-sectoral diversification is consistent with the slow productivity growth in each sector of the economy. A higher degree of intra-sectoral diversification could have resulted in sustained increases in productivity growth during this period.

Remittance economy and structural transformation

The agricultural sector in Nepal remains the main source of livelihoods for two-thirds of the population and productivity in this sector remains low. In addition, the manufacturing and service sectors have also had low levels of labour absorption coupled with low and negative rates of productivity growth. This sluggish growth in the non-agricultural sectors has resulted in an exodus of workers to foreign labour markets. This makes the Nepalese economy heavily dependent on remittances, both to provide family incomes and to boost the balance of payments (given the gaping trade deficit).

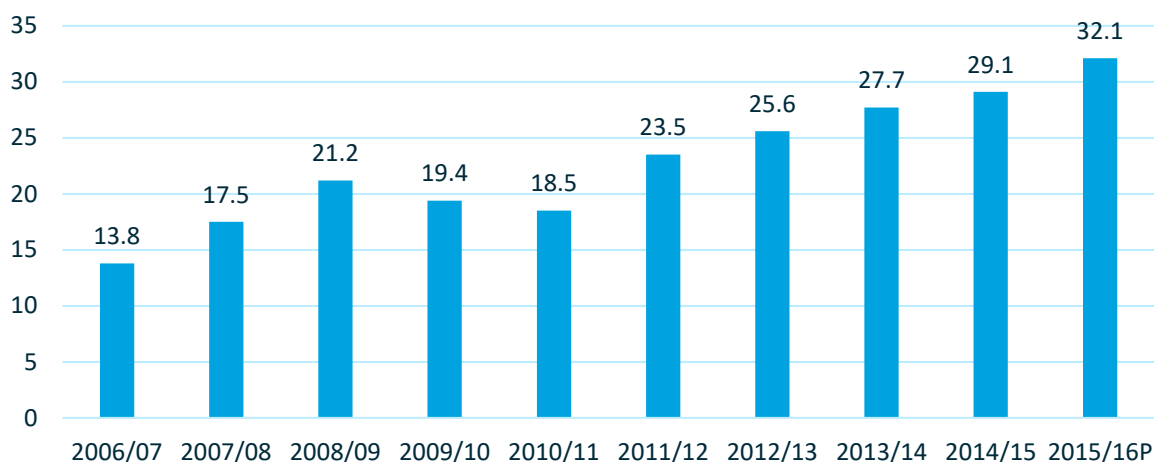
Figure 9a: Personal Remittances received (% of GDP)



Source: World Bank

Since 2008, Nepal has been consistently ranked as one of the top ten remittance recipient countries in the world when remittances are measured as a share of GDP. In 2016 remittances comprised approximately 29.6% of GDP.

The effects of remittances on economic performance in Nepal are complex. On the one hand, remittances are a key source of aggregate demand and have boosted household consumption. Microeconomic research has also shown remittances to have a significant positive effect on human capital development.

Figure 9b: Remittance income / GDP (%)

Source: Ministry of Finance, Nepal

On the other hand, remittances have led to currency appreciation, which has reduced export competitiveness. It is estimated that an increase in remittances by 10% could lead to a 0.5% appreciation of the real exchange rate over the longer term. Remittances put upward pressure on the prices of non-tradable goods and, with a nominal exchange rate regime that is pegged to the Indian rupee, the result is an appreciation of the real exchange rate. This appreciation favours imports, and biases against exports by making domestic goods uncompetitive. The impact is possibly largest on low-value, low-margin manufactured goods, which account for a large share of Nepal's export bundle.

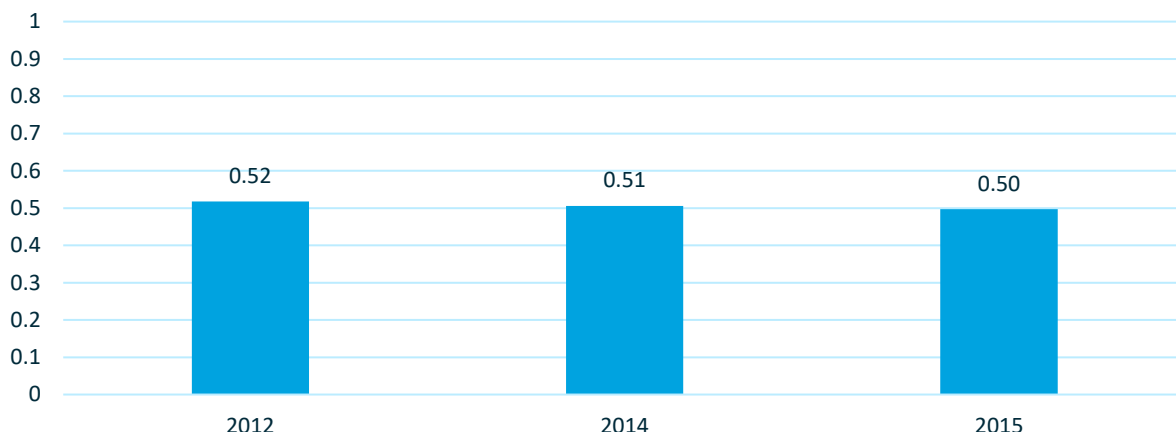
In this sense, remittances have had a type of 'Dutch Disease' impact on the economy. It could also be argued that the 'cushioning' provided by remittances has weakened the urgency for implementation of policies that would enhance productivity and opportunities within the country.

Gender and structural transformation

Growth and structural change can often have a differential effect on the livelihoods of men and women. In Nepal, the majority of women are employed in agriculture, a sector which has mostly stagnated in terms of growth and productivity in the past two decades. As illustrated by data, 73% of women are employed in subsistence agriculture, in contrast to 53% of men. The rural sector in Nepal is also the source of large migration, both to cities and overseas.

A high proportion of these migrants are male, and recent research has shown that the absence of men in farming has led to a feminisation of agriculture. This, however, has had an adverse effect on women's livelihoods and earnings. The exodus of men has meant a shortage of labour on farms and this has reduced efficiency and investment, leading to lower output and earnings from crop cultivation. In addition, wages earned by women in Nepal are markedly lower than those of men in both agriculture and non-agriculture, exacerbating the economic vulnerability of women. Slow and erratic growth in manufacturing and services has also worked to trap women in underperforming agriculture. The gender inequality index improved only marginally between 2012 and 2015.

Figure 10: Gender inequality index (0=perfect equality; 1=extreme inequality)



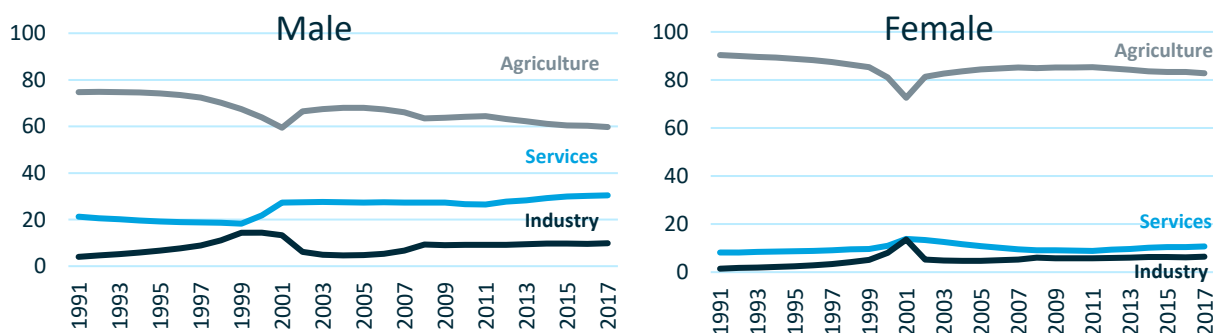
Source: United Nations Development Programme Human Development Data

Table 3: Average daily wage in cash/kind received by wage earners (in Nepalese Rupees)

	Agriculture sector		Non-agriculture sector	
	Cash	Kind	Cash	Kind
Male	145	68	234	92
Female	97	63	143	86

Source: CBS, 2011

Figure 11: Labour force participation rate in agriculture, industry and services (% of male or female employment)

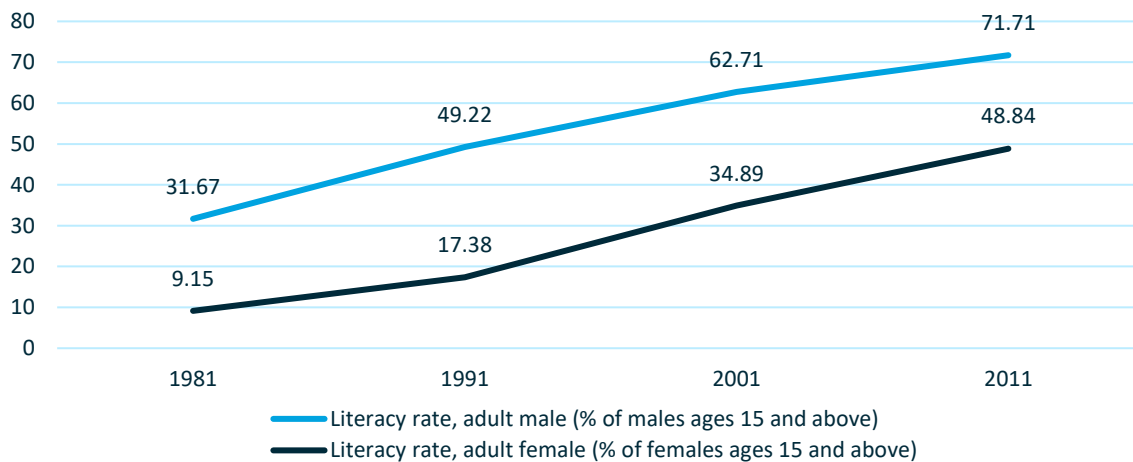


Source: World Bank

Human capital acquisition and improvements in education are strong enablers of structural transformation and economic diversification. Nepal has made progress in building human and educational capital in the past decades and educational expenditure as a proportion of total GDP has increased over time. Econometric research has shown that education investments have a significant and positive effect on productivity in Nepal, both in the agricultural and non-agricultural sectors (Bhattarai and Shrestha 2015). Overall, however, Nepal requires significantly

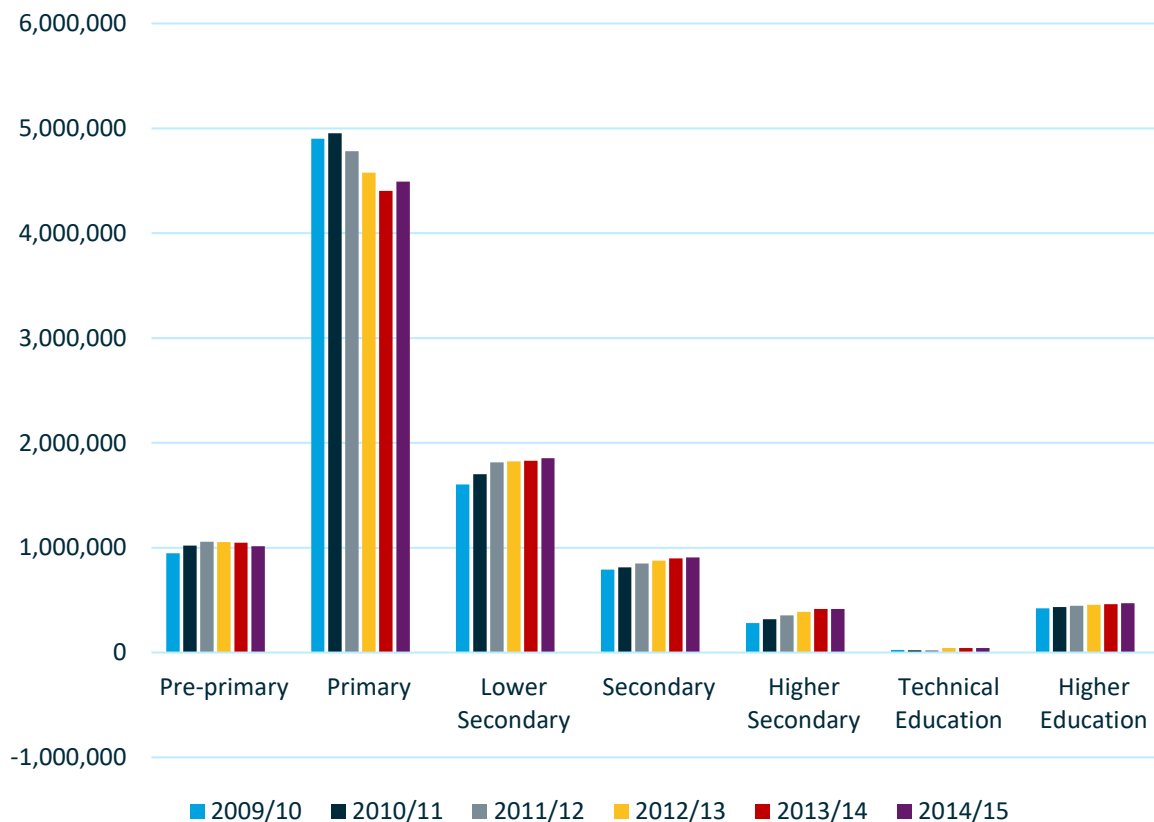
higher levels of investment in education to produce the quality necessary for the transition to a middle-income country.

Figure 12: Literacy rate among the population aged 15 years and older (in %)



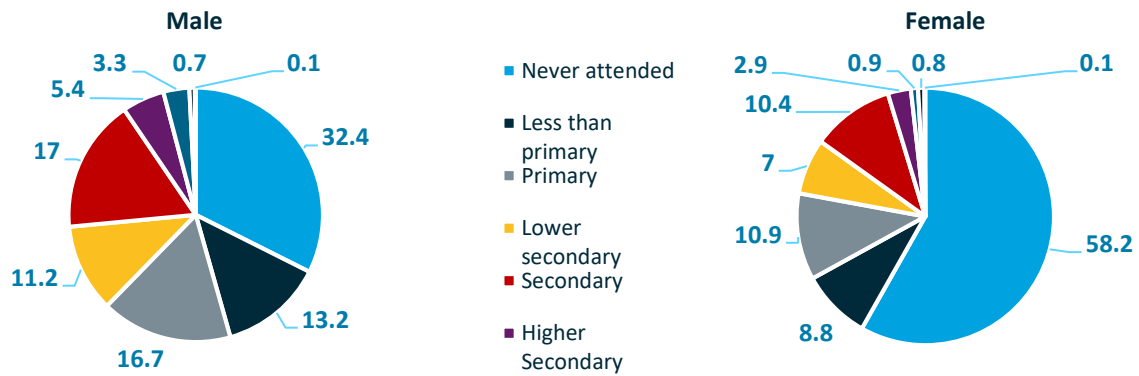
Source: World Bank, World Development Indicators (most current data available)

Figure 13: Enrolment at all levels of education



Source: UNESCO

Figure 14: Education (Male vs Female)

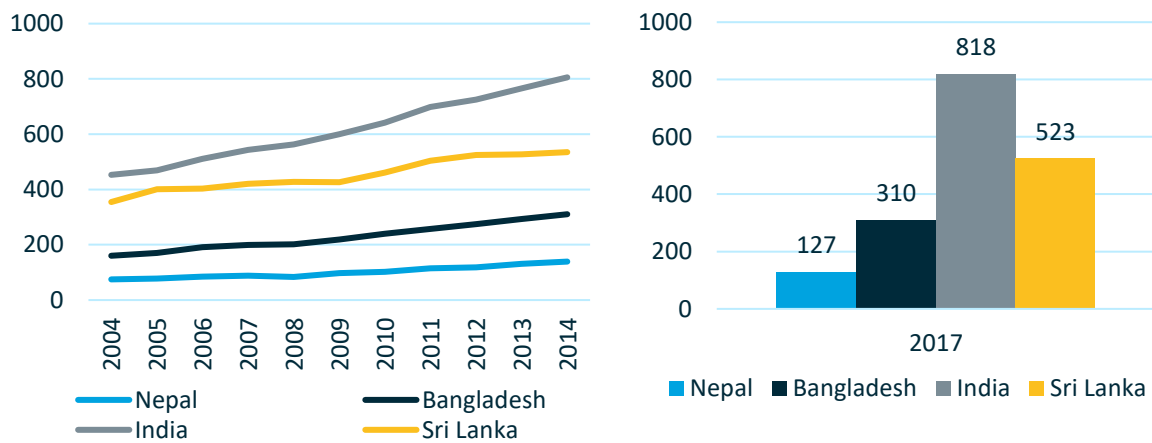


Source: ILO Labour Force Survey Nepal 2008

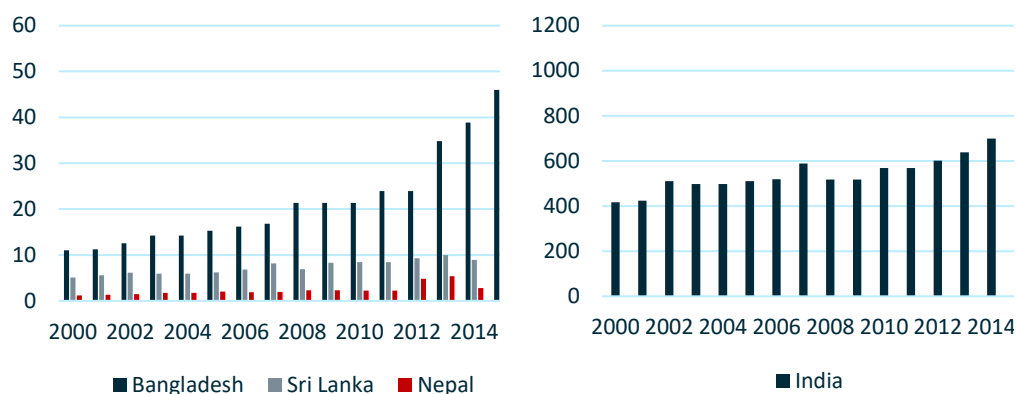
Infrastructure, structural change and diversification

Limited structural transformation and diversification of the Nepalese economy is linked to its historical infrastructure deficit, and partly linked to and exacerbated by its landlocked situation. Per capita electricity consumption is well below other South Asian countries. Estimates show that Nepal needs infrastructure investment worth least 8-12% of GDP until 2020 to adequately develop its infrastructure.

Figure 15a: Electric power consumption (kWh per capita)



Source: CIA World Factbook

Figure 15b: Overall electricity consumption to 2018 (billion kWh)

Source: CIA World Factbook

Apart from a lack of ‘hard’ infrastructure, Nepal also has an inadequate supply of ‘soft’ infrastructure such as transport service and IT services. Recent World Bank estimates (2017) show that transport inputs constitute 40% of all inputs for the processed food export sector and 30% of inputs for leather exporters. (World Bank TIS document).

World Bank data shows the average time taken for exporting in Nepal is significantly longer than that for comparator countries and that this is partly the result of an infrastructure and service input deficit. This deficit also makes it difficult for Nepal to diversify its export product mix.

Table 4: Yearly infrastructure investment needs (as % of GDP, 2010-2020)

World Bank Estimates	Transport	Electricity	ITC	Water & and Sanitation	Irrigation	Total
Nepal (percent of GDP)	2.3-3.5	3.3-4.5	0.3-0.4	1.1-1.6	1.0-1.5	8.2-11.8
USD billion by 2020	3.7-5.5	5.3-7.0	0.4-0.6	0.4-0.5	1.6-2.3	13-18
ADBI Estimates	Transport	Electricity	ITC	Water & and Sanitation	Irrigation	
Nepal (percent of GDP)	1.65	0.58	5.14	1.10	8.48	
South Asia (Including India)	5.55	3.03	2.02	0.39	11.00	

Source: Andres, et al., 2014, Bhattacharya, 2010, Ahmed, et al., 2012

Exploring policy measures (national policy documents)

Macroeconomic policy

Nepal is often cited as one of the best performing developing countries in terms of achieving macroeconomic stabilisation. Macroeconomic policy in Nepal has mainly consisted of tight fiscal policy, money supply control, and inflation targeting. It could be argued, however, that macroeconomic policy in Nepal has been stabilisation-centric, and that this has been at the expense of growth and structural change. In particular, the fiscal balance has been maintained at the cost of government-led investment that could have promoted productivity-enhancing growth and development.

In recent years, there has been more explicit recognition of the need for policy to move beyond stabilisation and deregulation, especially in the sphere of international trade. The Nepal Trade Integration Strategy was developed to deal specifically with the challenge of diversification and transformation.

Nepal's Trade Integration Strategy (NTIS)

Nepal's National Trade Integration Strategy 2015 (NTIS 2015) was developed with the objective of enhancing the contribution of the trade sector to growth and to overcome the constraints and challenges associated with trade development and export promotion. The assumption underlying this strategy is that trade integration can encourage diversification and structural transformation.

In a broad sense, the NTIS is consistent with the aim of structural transformation articulated by the Vienna Programme of Action. It covers four cross-cutting areas and three "priority export potential sectors." The cross-cutting areas are:

- transport and trade facilitation;
- standards and technical regulations;
- sanitary and phyto-sanitary measures; and
- intellectual property rights.

The priority export sectors are set out in the table below (Table 5).

Table 5: NTIS 2016 priority export potential sectors

Priority export potential sectors	
Agro-based products	Cardamom
	Ginger
	Tea
	Medical and aromatic plants

Craft and manufacturing products	All fabrics, textile, yarn and rope Leather Footwear Pashmina Carpets
Services	Skilled and semi-skilled professionals at various categories (remittance generating services) IT and BPO and IT engineering Tourism (leisure, business, education and medical)

Source: Government of Nepal. 2016. "Nepal Trade Integration Strategy".

The NTIS proposes that in order to benefit from trade integration, firms in Nepal need to make good use of available platforms for integration. These include:

- regional and global value chains both for goods and services;
- services trade in activities of marked comparative advantage; and
- e-commerce for high-quality, low-volume segments.

Regional and global value chains (R&GVCs) are seen as offering opportunities for firms in Nepal to access markets and benefit from productivity-enhancing technology as well as skills transfers and know-how.

Shortcomings and challenges of the NTIS

While the NTIS is an important step towards formulating explicit industrial and agricultural policy and linking this to trade integration, it has several shortcomings. The key ones are highlighted below. These limitations mean that the NTIS in some ways falls short of the policy regime articulated by the Vienna Programme of Action for enabling structural transformation in LLDCs.

Insufficient attention to the productivity-trade integration nexus

The key limitation of the NTIS is that it pays insufficient attention to productivity. Productivity improvement should be seen as integral to trade integration in a landlocked country such as Nepal. More specifically, the following issues relating to productivity need to be addressed with more focus in the NTIS.

- Productivity in the agricultural sector should be improved through mechanisation and commercialisation.
- Special attention should be given to promoting the manufacturing and service sectors, which can generate employment and exhibit high productivity.
- There should be a focus on developing human capital necessary for a knowledge-based, high-yielding economy.

- The construction of physical infrastructure and adequate supply of energy should be ensured for promoting economic activities in the economy.

Prioritising low quality products in the NTIS

The quality of most agricultural products prioritised by the NTIS 2015 is average or low. For products such as coffee and tea, Nepal's exports are positioned halfway through the quality distribution with an average unit price that is approximately 40% of that of the top exporting country.

However, focusing an export strategy that aims to participate in global value chains but at the lower quality spectrum of the market carries with it the significant risk of unfavourable price trends and demand conditions in the medium term, due to substitution effects and the tendency to cut costs and reduce prices at times of recession.

More focus needed on infrastructure

Given its tight fiscal policy, Nepal has some capacity to increase investment in infrastructure. Again, this could be linked more explicitly to integration and economic diversification in the NTIS.

The first stepping stone towards sound infrastructure governance is to improve project prioritisation in order to optimise the infrastructure portfolio. Reports have shown that eliminating poor performing contracts and the selection of improved alternatives could save up to 15-35% of new capital spending. In Nepal's case, even if the country saves just 10% of capital expenditure, which amounts to NRS 8 billion, this could provide sufficient cushioning to finance large scale infrastructure projects.

In Nepal, important infrastructure projects have been suffering from implementation delays caused by the lack of a sophisticated procurement system and a failure to streamline permit approvals and land acquisition in order to reduce bottlenecks.

It is also necessary to better utilise existing infrastructure assets. Adding more roads, constructing hydropower dams and fitting pipelines will not resolve problems if the existing infrastructure is not properly maintained. Nepal should move away from the build, neglect, and rebuild mentality and implement an adequate infrastructure management system. It has been argued that the deployment of information technology in establishing an intelligent transport system (ITS) for roads would enable the utilisation of the existing road capacity to double or even triple (World Bank 2017).

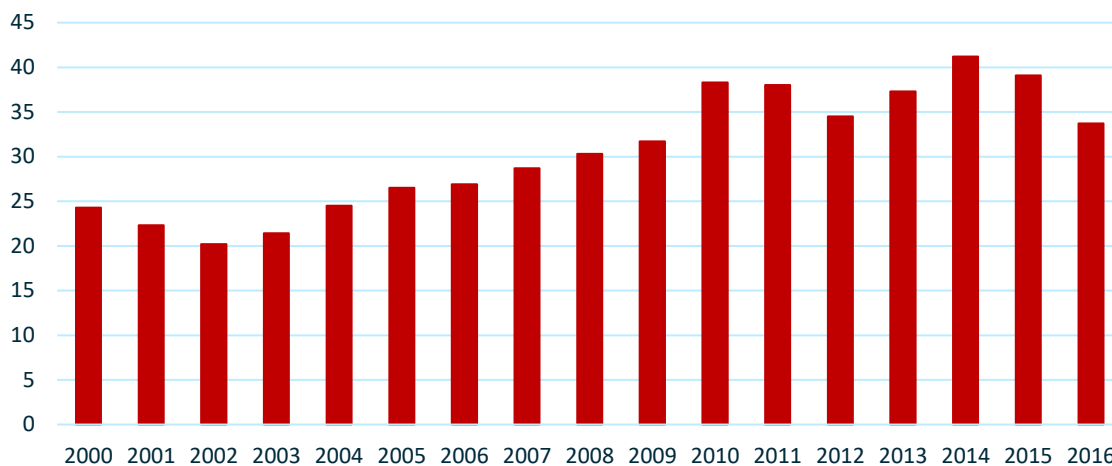
Clearly all these points go in the same direction – more clarity on objectives and a strong focus on achieving the key aims is essential if Nepal is to work through what has been a rather muddled and patchy approach towards improving growth and development.

Investment

Historically, investment rates in Nepal have been low as illustrated in Figure 18. Over the past 16 years, fixed capital formation as a percentage of GDP has averaged 22%, although there have

been some recent increases due to post-earthquake reconstruction. This underinvestment has resulted in lower growth rates and very limited structural transformation.

Figure 16: Gross capital formation (% of GDP)



Source: World Bank

Insufficient public investment in basic infrastructure in key areas such as energy and transport (around 4% of GDP in 2017, which is below average among both the South Asian and low-income countries) is a major cause of limited economic diversification in Nepal. The Asian Development Bank estimates that this needs to increase to a sustained rate of 7-8% for Nepal to reach the status of a middle-income country by 2030.⁶⁶

In addition, the efficiency of investment in Nepal is low. With a low (public) investment rate and capital stock, the return on marginal investment should be high, with many projects expected to have a high return. But this is not the case in Nepal, as shown by the incremental capital output ratio (ICOR), or the units of required capital needed to increase output by 1 additional unit. In other words, the higher the ICOR, the more inefficient is public investment. From 2001 to 2007, the ICOR for Nepal was 5.7, the highest among comparator countries. The ICOR has not improved in recent years, and the Fourteenth Plan of the National Planning Commission estimates the ICOR to be 5.2 between the fiscal years 2016 and 2019, with an unacceptable level of 29 for energy and 9 for transport.

This public investment deficit limits the ability of the private sector to perform well and to scale up investments. The country's inadequate and unreliable supply of electricity is repeatedly noted as having a crippling effect on private sector investment and activity.

Adequate levels and appropriate types of public investment in a low-income country like Nepal can have the effect of 'crowding in' by creating the conditions that enable private investment

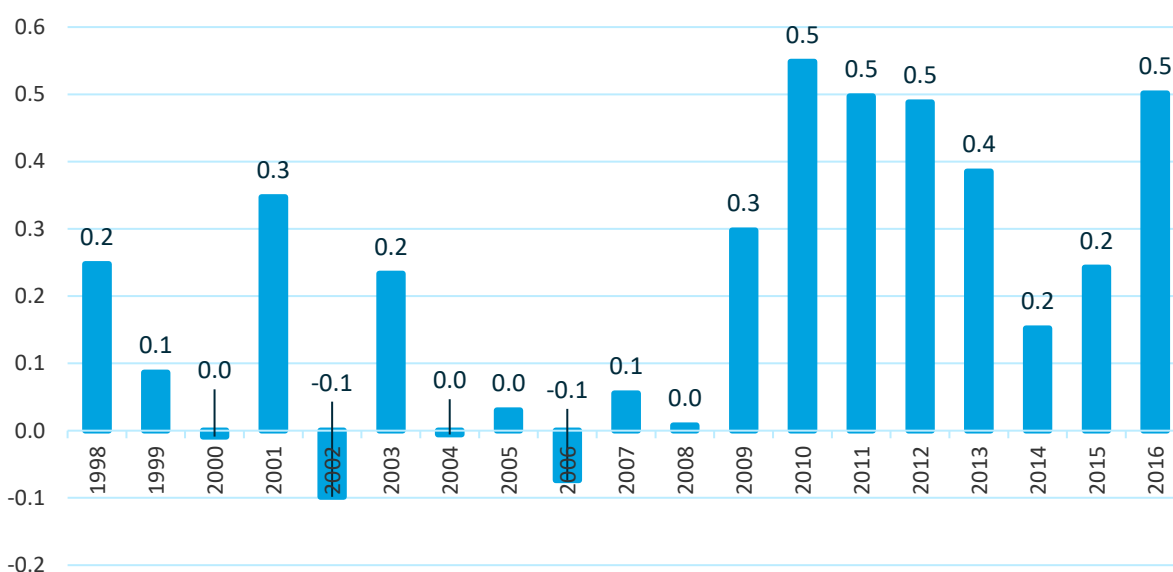
⁶⁶<https://www.adb.org/news/speeches/key-enablers-accelerating-infrastructure-investments-nepal-wencai-zhang>

and improving the potential profitability of this investment. This can be an important source of economic diversification and there is much scope for better policy emphasis on this in Nepal.

Foreign direct investment

FDI can enable a country to access new markets, upgrade the quality of its export basket and increase innovation and productivity, but FDI inflows to Nepal are very low compared with comparator countries. In 2016, FDI inflows constituted just 0.5% of GDP. Although the HH index for FDI concentration (for source country) in Nepal shows diversification of FDI sources over time, the very low volumes of FDI entering the country means that the overall impact of this diversification is not likely to be significant.

Figure 17: Foreign direct investment, net inflows (% of GDP)



Source: World Bank, World Development Indicators

The low volumes of FDI flowing into Nepal are the consequence of several factors, including the cumbersome process for repatriating funds, the time required to complete the hiring of foreign workers, and the entry barriers to foreign investment in certain industries (World Bank 2015).

Private sector

Nepal's private sector is dominated by small- and medium-scale enterprises, which comprised more than 90% of the total registered businesses. The World Bank's Nepal Enterprise Survey 2013 shows that about 60% of the formal non-agricultural private sector is in wholesale and retail business, followed by 15% in hotels and restaurants, and 12% in manufacturing.

The competitiveness of Nepal's private sector is also limited in the global economy. This is largely due to poor infrastructure (electricity and transport), political uncertainty, and limited bureaucratic capacity which constraint private sector performance in Nepal.

The government of Nepal now recognises the private sector as one of the key pillars of the economy and considers its role crucial to achieving higher growth. It is promoting private sector participation in infrastructure development of hydropower plants, irrigation, roads, and airports (through Public Private Partnerships).

As noted in this report, infrastructure development is key to economic diversification in Nepal, and therefore such policy could make the private sector a key player in the diversification process. In the fiscal year 2017, the private sector's investment in fixed capital assets, such as plants, machinery and infrastructure increased by 41.6%, partly reflecting the impact of these policy measures

Integrating the principles of the Vienna Programme of Action

The Vienna Programme of Action is specifically designed to mobilise national, regional and international action in support of the development efforts of the landlocked developing countries, focusing on six interrelated priority areas: (a) fundamental transit policy issues; (b) infrastructure development and maintenance; (c) international trade and trade facilitation; (d) regional integration and cooperation; (e) structural economic transformation; and (f) means of implementation.

Nepal is of course severely constrained in all five areas of VoP priorities. Infrastructure and international trade constraints have been discussed in detail above. In terms of transit issues, Nepal has persisting limitations: Kolkata is the nearest sea-port for Nepal. The transit arrangements between India and Nepal are governed by two main legal instruments: the India-Nepal Treaty of Trade and Transit, and the India-Nepal Rail Services Agreement.

The transit treaty has a number of inadequacies with issues related to documentation requirements, trans-shipment procedures, sensitive items, arbitrary bank guarantees, and poor infrastructure further increasing the transaction costs for transit cargo. Although the value of the total transit trade through India has been increasing, its share in Nepal's total trade with the world has seen a decline during 2009-13.

Nepal policy on structural change

The VPoA posits that structural transformation is central to promoting growth and development in landlocked LDCs. Nepal aims to become a middle-income country by 2030, and structural transformation is key to this. Policy emphasis on priorities of the VPoA in Nepal, however, have several limitations.

Policy initiatives and documents relating to structural transformation and diversification in Nepal fall into two categories:

- NTIS (discussed above); and
- Periodic Plans presented by the National Planning Commission which is the primary planning body in Nepal.

The Periodic Plans fail to address the sustained structural transformation of the economy as they are essentially short-term policy documents. Nepal has implemented nine five-year plans and five three-year plans since the process of planned economic development began in 1956. Although these plans provide a basis for the government to frame the annual budget and guide development work in the country, they are an ad hoc scheme and fail to provide a unified and well-coordinated strategy for promoting long-term growth and diversification.

There is limited coordination between the Nepal Trade Integration Strategy (which explicitly recognises the need for diversification) and the Periodic Plans. This means that there is significant scope for placing greater policy emphasis on Priority 5 of the Vienna Program by tightening the coordination between key development policy documents in Nepal.

Challenges, opportunities and policy recommendations

Nepal has opportunities to better utilise geological and cultural diversities to promote the tourism sector, which can enhance foreign currency earnings. There are opportunities to increase public capital expenditure through prioritisation of expenditures, maintaining financial discipline making public expenditure management result oriented, with the explicit objective of addressing Priority 5 of the VPoA.

In particular, there are opportunities to use the remittances to retrain or further train workers who have earned skills abroad. Nepal has opportunities to address the weaknesses of the NTIS by targeting export sectors which have greater potential for productivity increase, and export competitiveness and export diversification.

However, the country also faces the challenges of enabling higher economic growth rates and structural transformation through proper mobilisation of domestic and foreign investment. To achieve this, it will need to develop physical infrastructure and boost technology development aimed at increasing productivity in agriculture and industry.

Providing incentives for the private sector to engage in boosting economic growth, developing infrastructure and increasing productivity is also key. For example, constructing electricity projects with active participation of the private and government sectors will be critical to end the energy crisis in the county.

The effects of a 'Dutch Disease' created by the high level of inward remittances from migrant labour working overseas also add to the constraints facing Nepalese policy makers. A concerted policy effort is needed to bring about structural change and target alternative industries and sectors that can earn foreign exchange in a sustained manner.

To mitigate the challenges and capitalise on the opportunities, Nepal could consider policies and initiatives aimed at increasing investment, diversifying its export and dealing more efficiently with migrant remittances.

Policies for increasing investment

Investment rates (both public and private) have been low in Nepal, as has been its efficiency. Therefore, increased investment in infrastructure and in new technologies is essential for diversifying the economy. Investment specifically aimed at economic diversification should be integrated into economic planning. To achieve this, decision makers should consider making Periodic Plans of Nepal (PPN) for the medium term, and not on an ad hoc short-term basis, as is currently the practice.

In order for investment to be specifically directed at diversification, it is important to distinguish between two types of policy options which include:

- **Public sector and public-private infrastructure investment policies:** These are ‘general’ policies to extend and hasten investment in the transport and energy sectors in particular. While they do not directly target diversification, they create the necessary conditions that enable transformation towards higher productivity activities and sectors.
- **Public investment directed at ‘picking winners’,** which will include new activities and sectors in which Nepal has the potential to be internationally competitive. This type of investment policy should be directed at the acquisition and dissemination of new technology and providing incentives to the private sector to enter these specific sectors.

These policy initiatives can be formulated jointly by the National Planning Commission together with individual ministries such as the Ministry of Industry, Commerce and Supplies.

As discussed in this report, Nepal has some scope to increase public investment in the above directions through prioritisation of expenditures, maintaining financial discipline, and making public expenditure management result oriented.

Policies for export diversification and increasing productivity

This report evaluated the Nepal Trade Integration Strategy in terms of its potential to promote export diversification and structural transformation and argued that the NTIS has several shortcomings. Therefore, export and trade diversification policy in Nepal should target productivity improvement in agriculture, manufacturing and service and must move beyond prioritising low quality, low productivity sectors as the NTIS currently does.

While the NTIS is formulated by the Ministry of Commerce, expanding the productivity focus of the strategy may need more specific input from other Ministries – those dealing with agriculture and industry, as well as the broader institutions dealing with Period Plans.

This would enable trade policy to be closely coordinated with investment policies of the types discussed above, and also with policies to develop human capital and skills discussed below.

Policies to deal with migrant remittances

To a certain extent, the Nepal economy has been cushioned against the urgency for structural change, given the high level of inward remittances provided by migrant labour working overseas. To counter the possible impacts of ‘Dutch Disease’, policy efforts could involve the following initiatives:

- (i) **directing a proportion of the substantial earnings from remittances to improve and diversify human capital and training.** In particular, the policies should target the acquisition of industry-specific skills that will enable economic diversification, especially in high productivity sectors and in new export sectors.

- (ii) **coordinating between institutions such as the Council for Technical and Vocational Skills, the Nepal Business Forum and the National Planning Commission.** Such coordination can provide strategic direction for this type of policy aimed at educational and skill diversification in Nepal.

Paraguay

Country analysis and economic overview

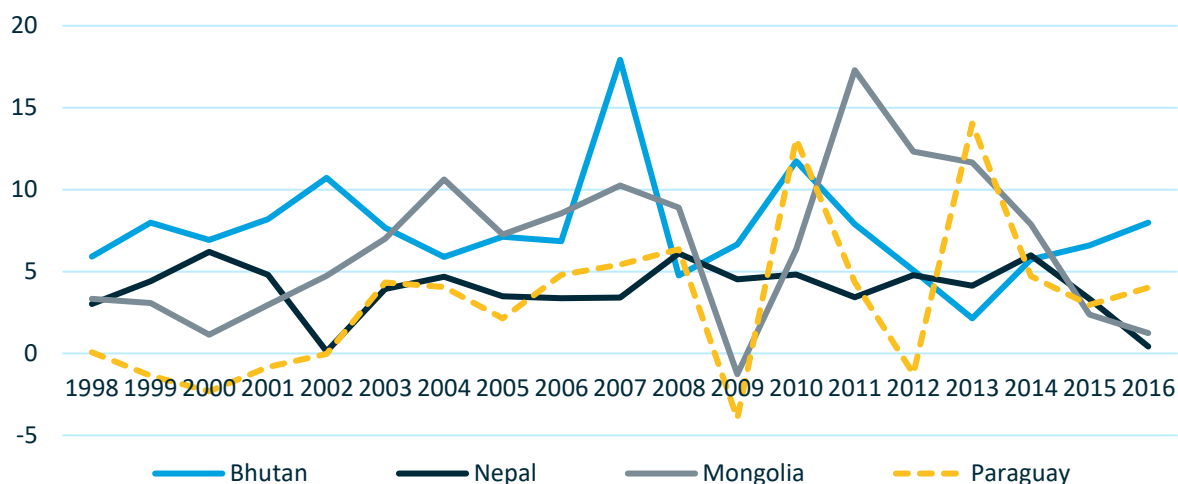


Paraguay

Country analysis and economic overview

The economy of Paraguay is small but open. Indeed, total trade (exports plus imports) was just over 80% of GDP in 2016. It is still heavily involved in agriculture, which accounts for around 20% of GDP and more than 60% of exports (WTO country profiles 2017). Over the past 15 years the economy has grown quickly. GDP growth has been above the world average since 2003, except for 2009 (global recession) and 2012 (unfavourable climatic conditions). As illustrated in Figure 1, over the last three five-year periods, the economy grew by 4.1%, 3.7% and 6.0%, respectively.

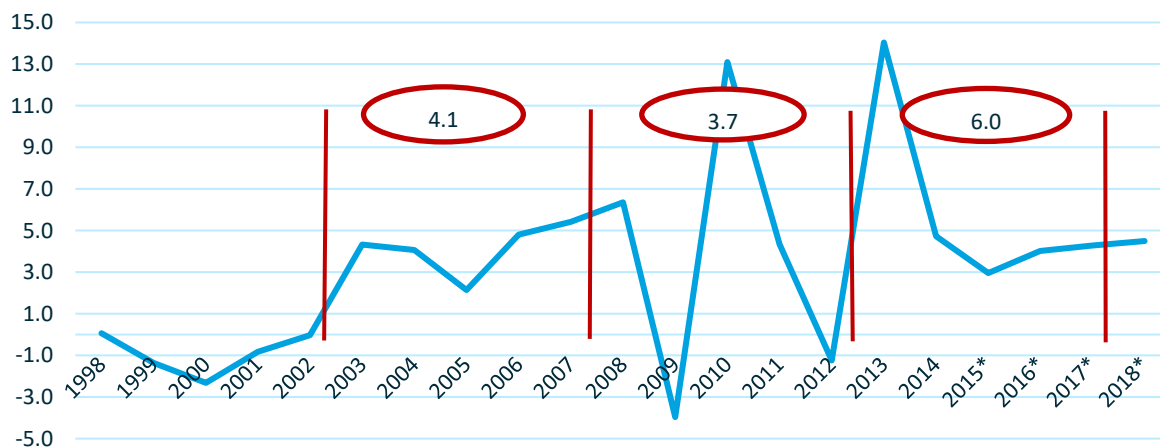
Figure 1: GDP growth rates in Paraguay versus other landlocked countries in this study (%)



Source: World Bank WDI database

By the end of 2017, the Paraguayan economy was almost twice the size it was in 2003 in real terms, and about four times as big at current prices in US dollars.

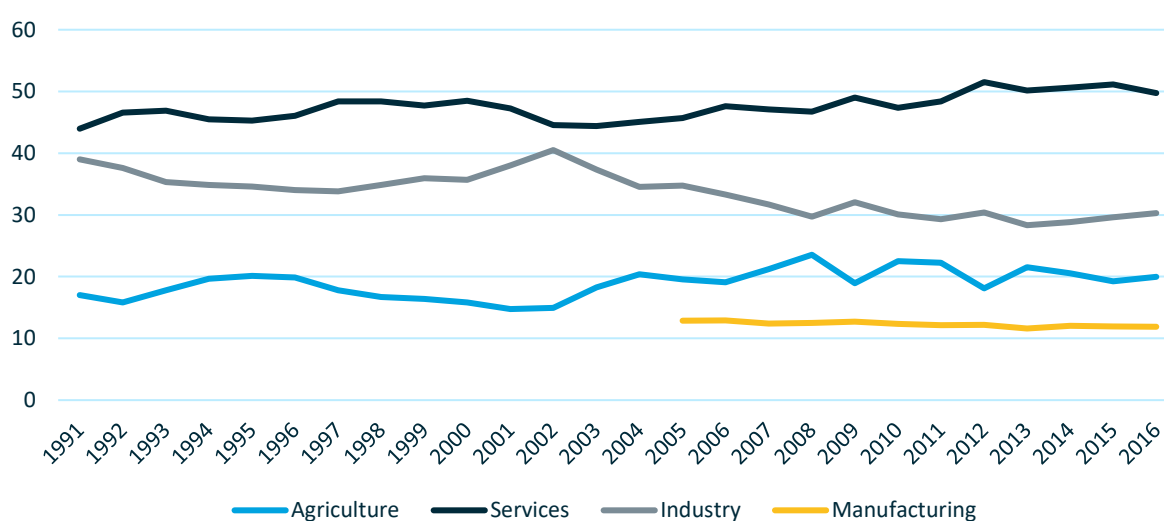
Figure 2: GDP growth rates in Paraguay (%)



Source: Central Bank of Paraguay (BCP), Statistical annex (2018/02)

Despite this expansion, however, the economy has remained largely static in two important respects. One is the continuing degree of volatility, which stems from its continuing dependence on the agricultural cycle, and the other is the minimal degree of change in its composition. While the tertiary sector is the largest in the economy, the primary sector (based on agriculture and livestock) continues to be the key driver of GDP growth and trade. The average share for the primary sector in total Value Added (VAB) was 28.3% between 2003-2007, rising slightly to 29.9% by 2013-2017. The secondary sector has varied from 19.6% to 17.3% in the same period, while tertiary sector has remained constant at 52%.

Figure 3: Value added by economic sectors (% of GDP)



Source: World Bank

In the primary sector, agriculture and livestock are the main activities in terms of both weight and dynamism. In the secondary sector, industry is more significant than mining or construction, while commerce stands out in the tertiary sector. Table 1 shows the shares and growth rates of sectors over the three periods analysed.

The periods between 2003-7 and 2008-12 were characterised by a high degree of volatility in growth rates. This was particularly true in 2008-12, when the adverse climatic conditions and global recession produced greater variability in annual growth rates. From 2013 onwards, in spite of less favourable regional conditions, the growth rates of the main sectors of the economy strengthened again and have shown more stability. However, agriculture continues to show considerable variability in growth rates, and this has repercussions on trade and finance in Paraguay.

Table 1: Shares in Value Added (VAB) and sectoral growth rates over the three periods

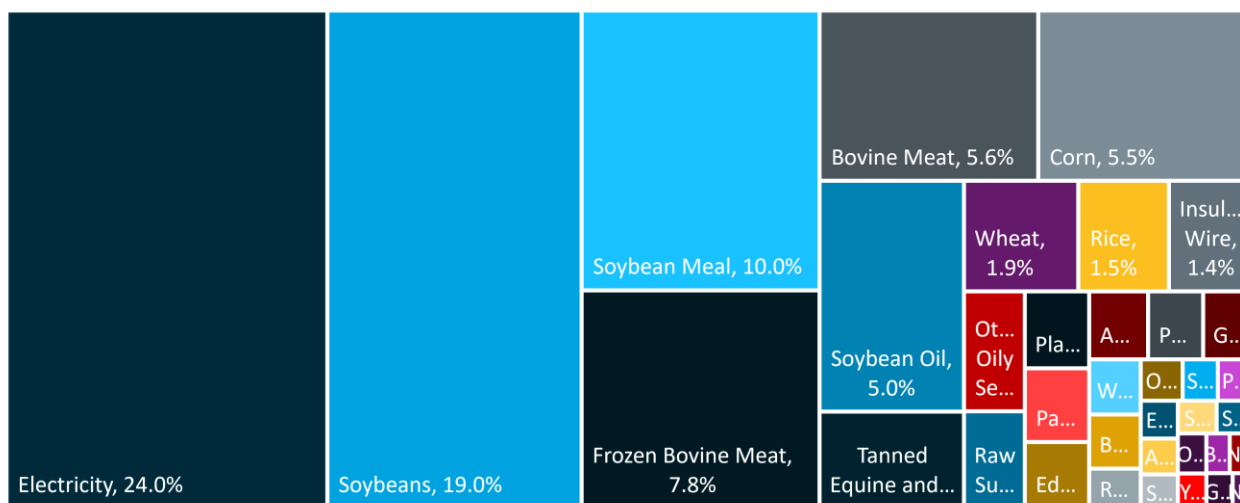
Sector	Activities	Share in total VAB			Growth average		
		2003-7	2008-12	2013-17	2003-7	2008-12	2013-17
Primary	Agriculture	19.64	20.14	22.21	6.92	2.81	14.87
	Livestock	6.49	6.44	6.24	5.12	3.99	5.88
	Forestry	2.05	1.70	1.36	3.28	-0.79	4.14
	Fishing	0.09	0.08	0.06	0.80	0.41	1.31

Secondary	Mining	0.12	0.11	0.11	5.48	3.60	7.36
	Industry	15.32	13.26	12.65	1.60	2.11	7.05
	Construction	4.13	4.29	4.55	4.94	5.70	9.90
Tertiary	Electricity and water	1.91	2.00	2.03	5.08	5.82	5.78
	Transport	4.38	4.14	4.14	7.35	1.12	7.96
	Communication	3.88	4.80	4.82	8.42	8.70	1.77
	Commerce	20.06	19.21	17.35	4.90	2.39	5.49
	Finance	2.27	2.94	3.49	1.72	13.56	5.80
	Real state	2.02	1.78	1.48	1.90	1.95	2.97
	Enterprise services	2.73	2.87	2.69	1.89	5.70	6.25
	Accommodation and gastronomy	1.26	1.21	1.20	1.91	4.92	5.66
	Household services	6.19	6.20	6.01	2.94	4.86	5.71
	Government	7.47	8.82	9.63	3.61	12.64	2.63

Source: BCP, Statistical annex (2018/02)

In spite of a less buoyant export performance in 2014-16, which cut the share of exports in GDP, one of the major enablers of growth in the Paraguayan economy over the last twenty years has been its openness and healthy export growth (especially for soy products). Between 2003-7 exports grew at an average of 7.9% before falling back to 2.2% in 2008-12 and then recovering to 5.8% over 2013-17.

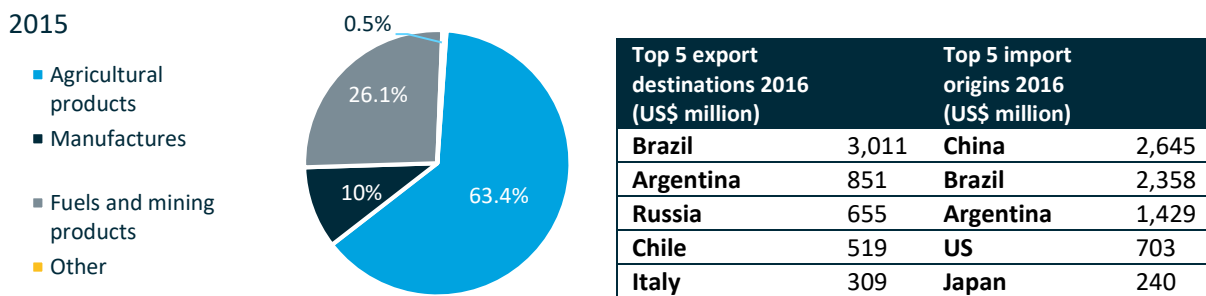
Figure 4: Export structure



Source: The Observatory of Economic Complexity (2015 data)

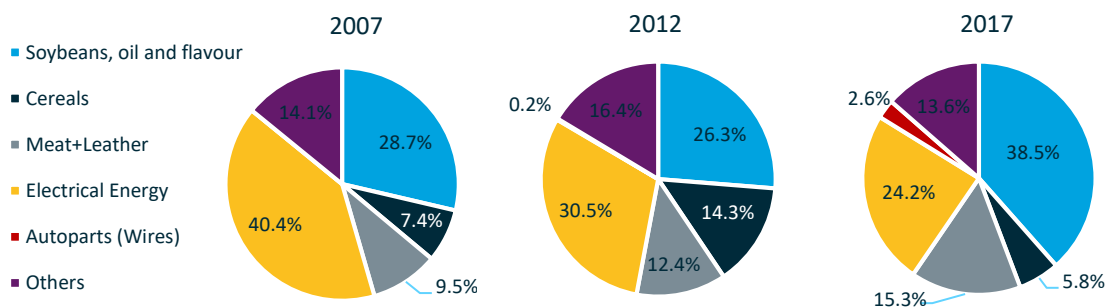
Exports are composed mainly of electricity (surplus hydropower) and a wide range of agricultural products such as soy, dairy and meat products. Auto parts also feature. Revenues from services exports (chiefly transport and tourism) represent about 10% of total exports and could offer opportunities for growth in the future.

Figure 5a: Total exports by main commodity group and partner



Source: World Trade Organization Country Profiles

Figure 5b: Merchandise exports’ composition by main products

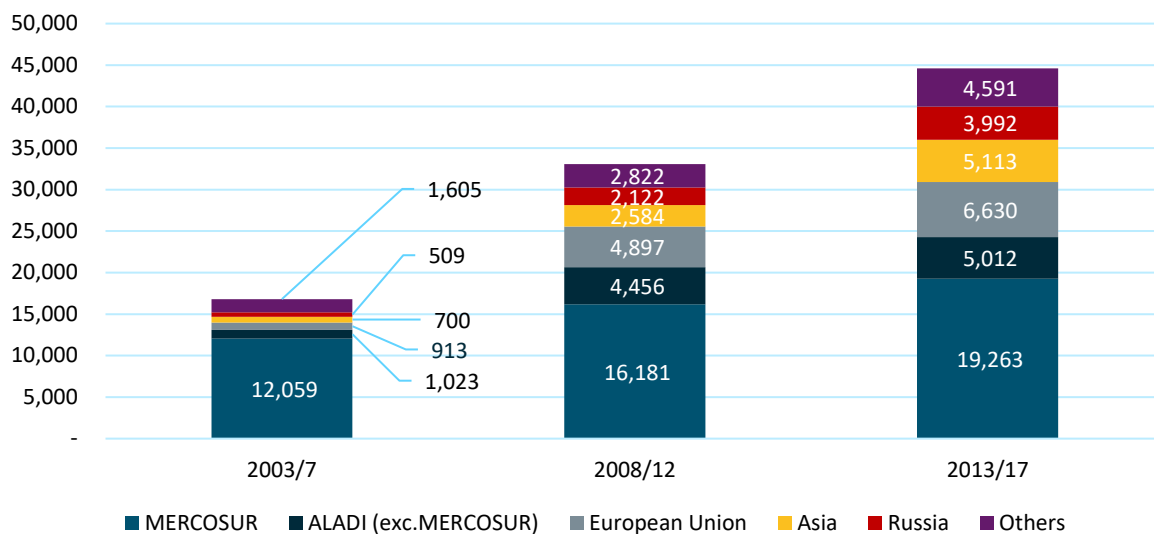


Source: BCP, Statistical annex (2018/02)

By 2017, Paraguay was exporting to 135 countries, compared to 100 in 2003. MERCOSUR countries have remained the largest export target, but they fell from taking 72% of exports in 2003-7 to only 43% in 2013-17 due to rapid gains for Paraguay in other markets. Between 2003 and 2017, exports to MERCOSUR grew at an annual average of 5.3% but exports to the EU and Asia rose more sharply, by 20.5% and 22.2%, respectively.

After Brazil (which accounts for about a third of exports), the EU is the largest export market for Paraguay, followed by Russia. However, Brazil only accounts for about 25% of Paraguay’s imports, with China almost at the same level and Argentina at about 15%. The EU and US both achieve about an 8% share.

Figure 6: Export totals over 5-year periods, detailed by market (US\$ million)

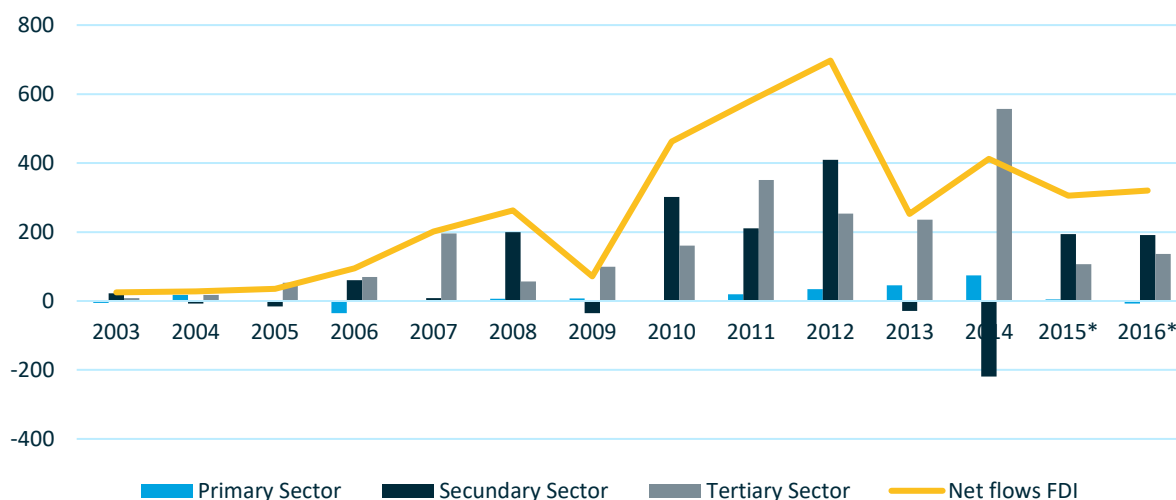


Source: BCP, Statistical annex (2018/02)

FDI also an indicator of diversification and connectivity

Net annual FDI flows into Paraguay did not exceed 200 million dollars until 2007 but from 2007 to 2012 annual FDI rose significantly, with the only exception being 2009 (in the aftermath of the global financial crisis). During 2013 to 2016, FDI volumes into Paraguay fell back again amid the wider trend of a slowdown of investment into Latin America and around the world in general. This weak period for global GDP growth, trade and investment seems to be over, with international activity rising again over the last year. Between 2008 to 2016, the US accounted for 25% of the net flows accumulated by Paraguay. This is followed by Brazil with 19%. In total, the EU probably accounts for almost as much FDI as the US. Other FDI positions are mostly accounted for by other regional economies.

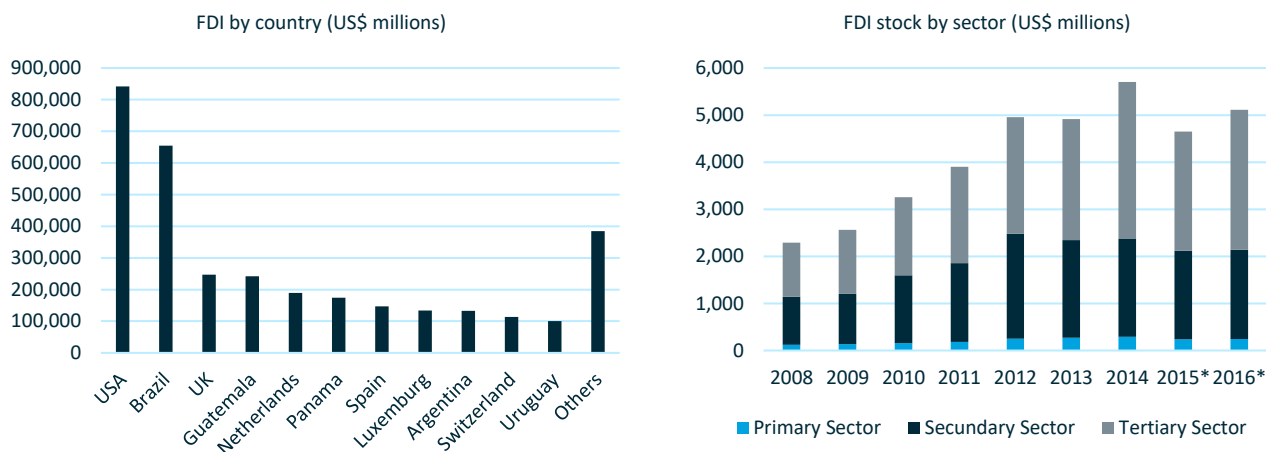
Figure 7: FDI net flows (US\$ million)



Source: BCP, Statistical annex (2018/02)

The accumulated stock of FDI increased during 2008-2012 before plateauing between 2013 and 2016. The composition of the stock has not shown significant changes between 2008 and 2016: the important primary sector continues to account for just 5% of the total while the secondary sector has fallen from 45% to 37%, and the tertiary sector has risen from 50% to 58%.

Figures 8 and 9: Accumulated FDI into Paraguay by partner country and FDI stock by sector



Source: BCP, Statistical annex (2018/02)

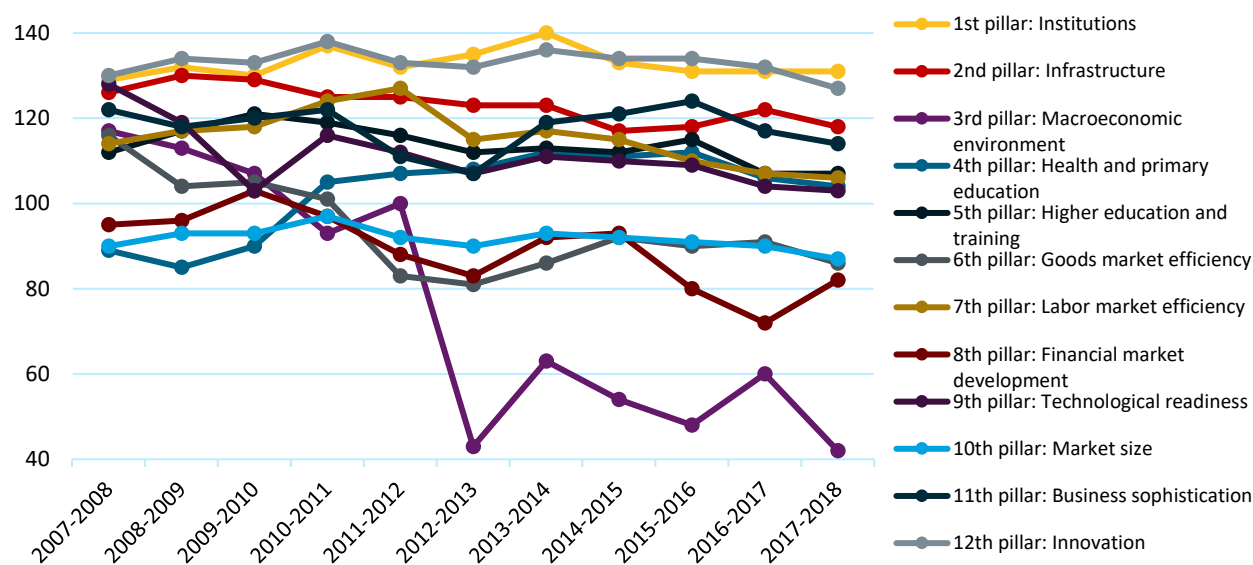
Competitiveness

The World Economic Forum’s Competitiveness Index summarises the institutions, policies and factors that determine the level of productivity of a country in terms of 12 pillars of competitiveness. The Index tracks between 137 and 140 countries each year, and Paraguay has struggled to reach a position in the top 100 countries for many of these pillars, as shown in Figure 10. In the most recent edition of the Index, for 2017-18, Paraguay ranks 112th overall out of 137 countries.

Although this is a slight improvement over the previous edition, Paraguay continues to be held back by low rankings for such fundamental drivers of growth as infrastructure, innovation and institutional framework. In terms of infrastructure, the most alarming weaknesses are associated with the quality of infrastructure, including routes, ports, air infrastructure and electric power supply, in which Paraguay ranks well below other Latin American and Caribbean countries. The latter may seem strange given Paraguay’s electricity export position but this is largely due to poor reliability of local supply.

Other areas in which Paraguay ranks poorly include development of technology, education and training, and business sophistication, although it should be noted that the macroeconomic environment has shown significant improvement in recent years.

Figure 10: Evolution of the pillars of the competitiveness index (period 2007-2008 to 2017-2018)



Source: WEF, Historical Global Competitiveness Index

According to data from the Ministry of Public Works and Communications (2014), Paraguay has 32,207 km of roads of which less than a quarter (22%) are classified as paved. For comparison, in 2011 the figure for Argentina was 30%, for Brazil 15% and for Uruguay, over 90%.

The state of the roads is particularly important as Paraguay does not have a functioning rail network. The main routes connecting the capital of Asunción with the most productive regions in the east of the country are no longer able to support the growing demand for transport. The Paraguay River waterway, which carries approximately 70% of the country's exports, is not navigable in times of drought due to poor maintenance and insufficient dredging capacity.

According to the ALADI (2016), Paraguay's reliance on river and road connections means that it has the highest transportation costs in the region. This is particularly significant as most of its exports are still bulk raw materials rather than higher value manufactured goods. Paraguay's combination of poor quality exports with high cost transportation options constitutes a barrier to trade that is estimated to be more important than tariffs.

Although almost all the population has access to electricity, much of which is low-cost hydropower, the 2017-2018 Global Competitiveness Index gives Paraguay the lowest regional ranking for electricity supply, with frequent power cuts due to overloads on the weak local distribution network.

According to the government's Permanent Household Survey for 2016, only 22.46% of households have direct access to the Internet. Around 90% of the population in both urban and rural areas use cellular devices, although only 13.4% have fixed lines. As the transmission capacity of communication networks is low, interference and dropped calls are common.

The 2018 edition of the World Bank's Doing Business index gives Paraguay an overall ranking of 108th out of 190 countries. This marginal improvement over the previous year is due to slightly improved scores for ease of business opening, management of construction permits, and resolution of insolvency.

Technological innovations

In terms of innovation and technological development, the 2017-18 Competitiveness Index notes Paraguay's weakness in the quality of its scientific institutions, the limited collaboration between universities and companies for R&D development, the low levels of private investment in R&D and the lack of availability of scientists and engineers. Data from the National Council of Science and Technology (CONACYT) shows that investment in R&D was 0.13% of GDP in 2015, when the regional average was 0.70%. According to CONACYT, countries with a level of per capita income comparable to that of Paraguay usually invest an average of 0.3% of GDP in R&D.

The country's universities and research and technology centres have limited ability to generate and transfer knowledge to the productive sectors that contribute to GDP, and so concentrate their resources on agriculture and human health. The government is the main source of research funding. As CONACYT points out, the most alarming regional difference in this area involves students graduating from STEM programmes, with Chile producing nine times as many engineers as Paraguay, and Uruguay 2.5 times as many.

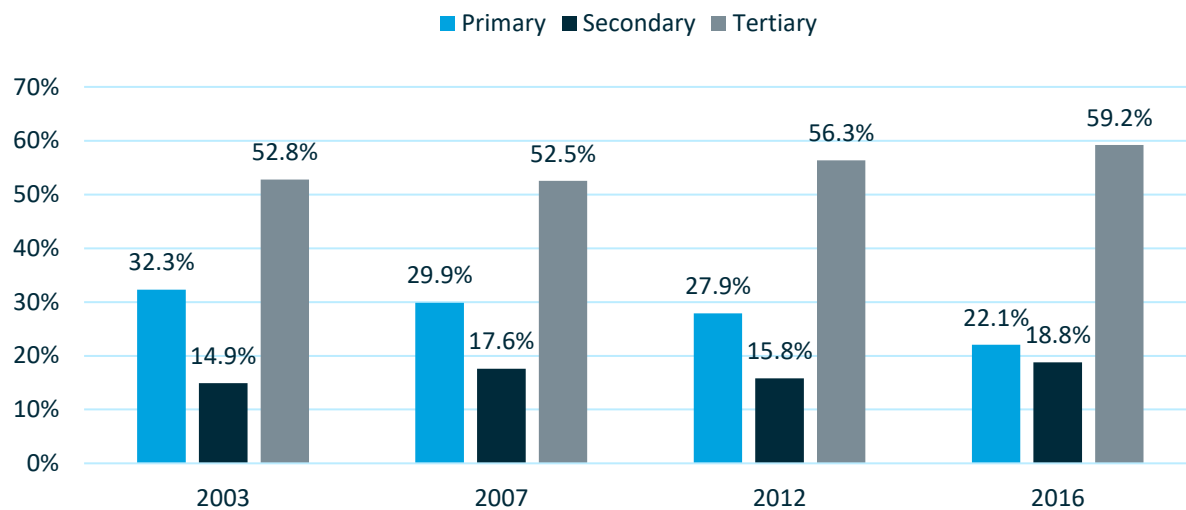
Sectoral labour force concentration and intra-sectoral concentration

In spite of the relatively static sectoral mix of the economy, some significant changes have been seen in sectoral employment and productivity. Paraguay's labour force has undergone a structural shift since 2003, passing from agriculture to the tertiary sector, which now employs more than half of the workforce. Between 2003 and 2016, employment in the primary sector fell from 32% to 22%.

Recent research by the World Bank on employment in Paraguay suggests that this structural change has been positive, with sustained growth leading to an improvement in the quality of work available and the creation of new jobs for the country's growing numbers of young, urban workers. The continuing number of low productivity jobs in the informal sector will remain a challenge in the coming years, however.⁶⁷

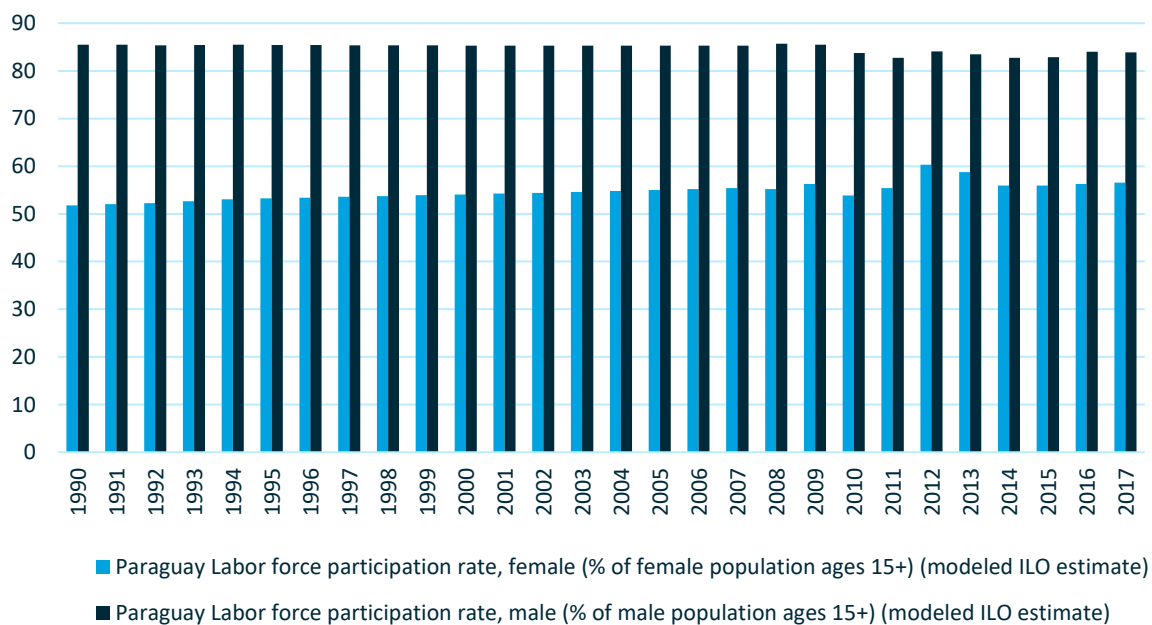
67 Banco Mundial (2017), Diagnóstico del empleo en Paraguay: La transformación dinámica del empleo en Paraguay, Banco Mundial, Washington DC.

Figure 11: Sectoral labour force concentration



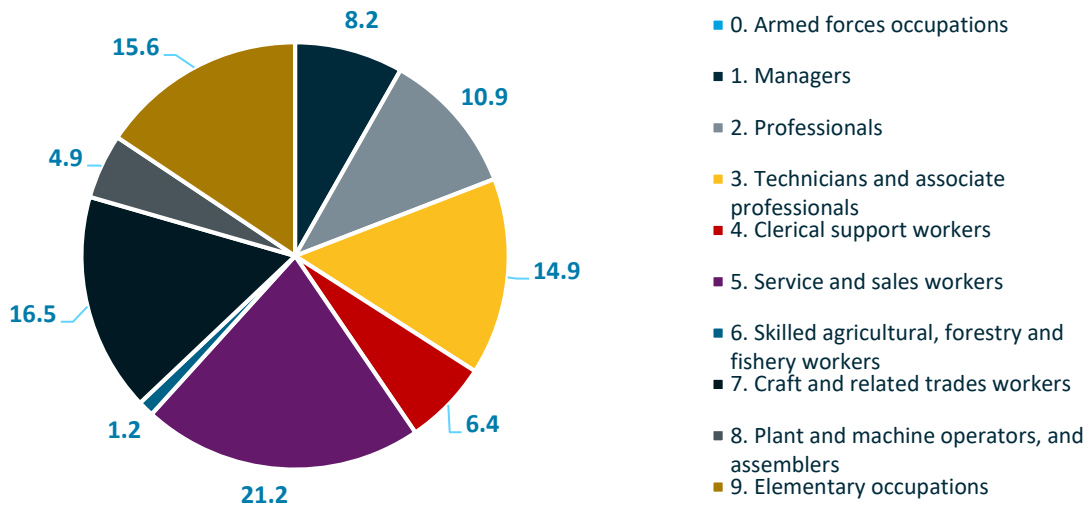
Source: Staff calculations with DGEEC data

Figure 12: Labour force participation rate female versus male



Source: World Bank, World Development Indicators

Figure 13: Paraguay Employment distribution by occupation

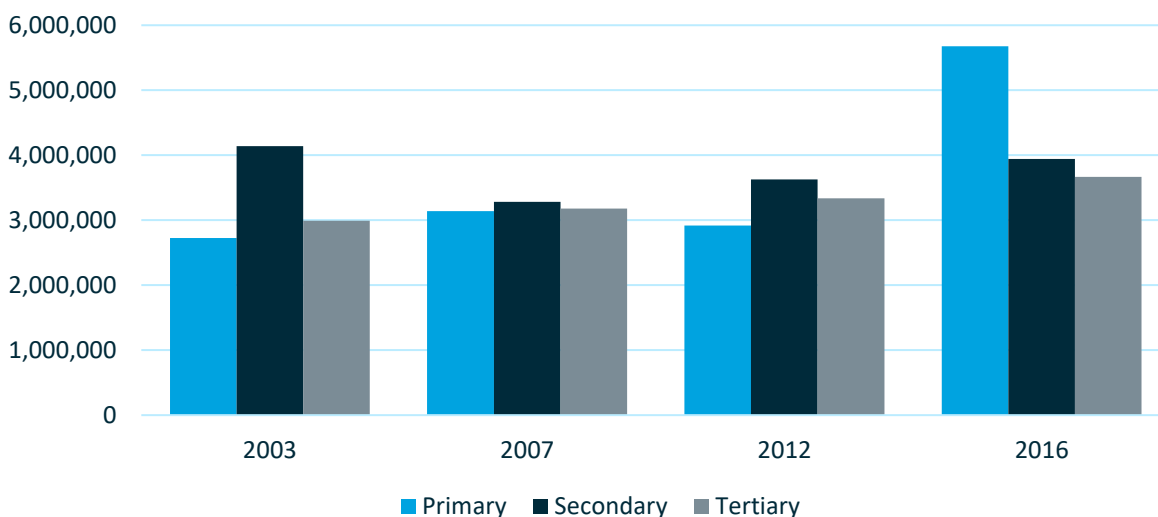


Source: ILO Labour Force Survey Paraguay 2016

Productivity levels and growth rates across sectors and within sectors

Value added per worker is highest in the primary sector, with the recent surge probably helped by growth in the soy market. In the secondary sector it has remained relatively static between 2003 and 2016, with a noticeable dip in 2007. Its recovery after 2012 is largely due to rising regional demand for Paraguayan products. Although the tertiary sector now employs the majority of the labour force, its value added per worker has seen only a slight improvement during 2003-16. Paraguay needs to build on these productivity improvements over the coming decade.

Figure 14: Value Added Per Worker (constant 1994 US\$)

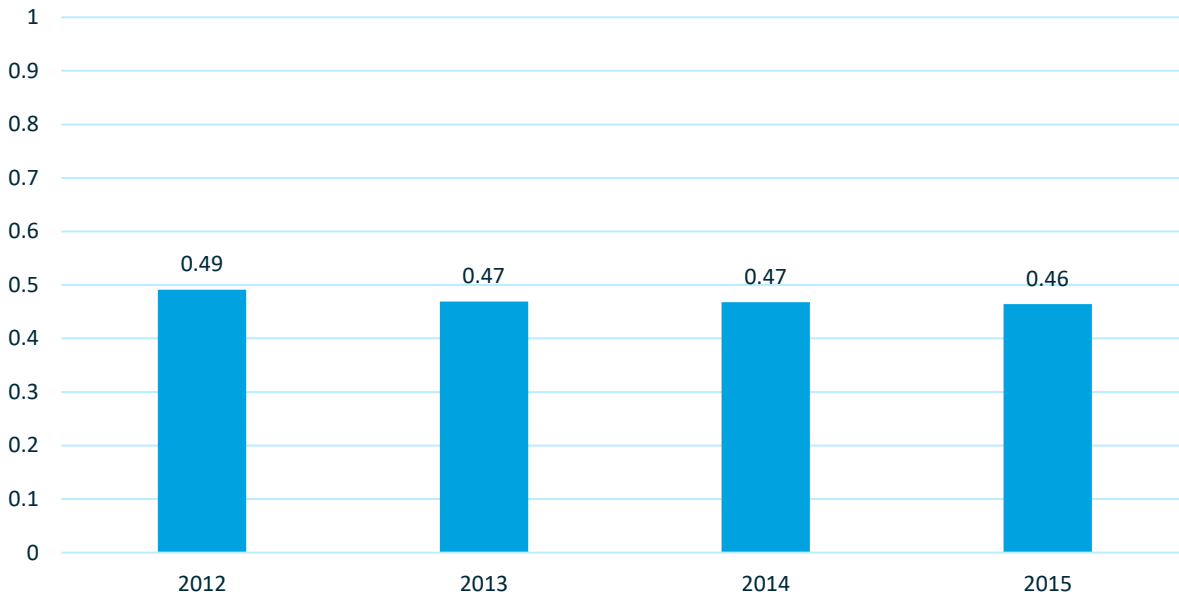


Source: BCP and DGEEC data

Gender equality and economic diversification

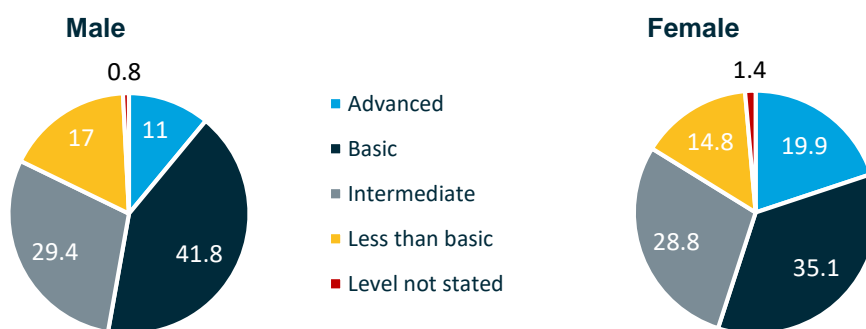
Gender inequality has shown little change since 2003. The only year in which females reached 40% of the labour force was 2012, although it was close in 2016. In terms of salary, the disparity has been around 30%, although a range of factors including place of residence, educational achievement, and number of children can affect the gap in individual cases.

Figure 15: Gender inequality index (0=perfect equality; 1=extreme inequality)



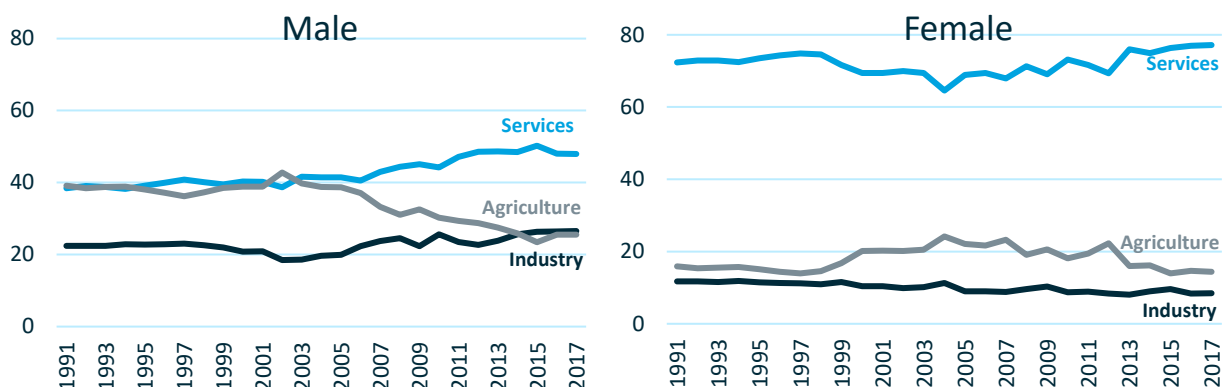
Source: United Nations Development Programme Human Development Reports

Figure 16: Education (Male vs Female), 2017



Source: ILO Labour Force 2017

Figure 17: Labour force participation rate in agriculture, industry and services (% of male or female employment)

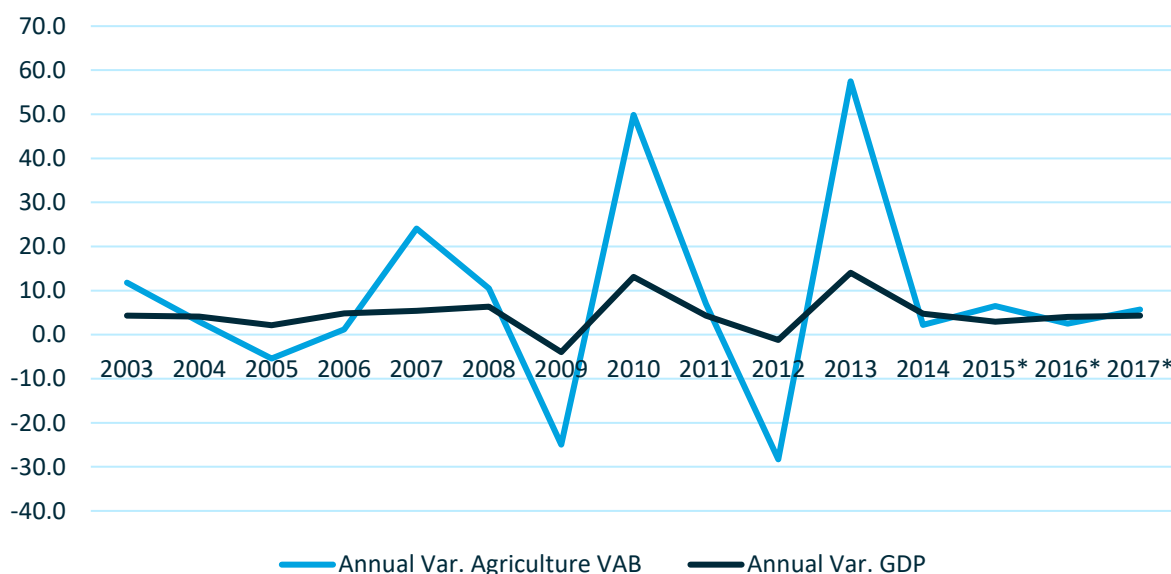


Source: World Bank

Nature and trends of economic diversification

Paraguay is competitive in areas such as producing and exporting soy products, but its continuing reliance on the volatile agricultural sector is reflected in the close correlation between swings in agricultural output and shifts in overall annual GDP growth, as shown in Figure 18.

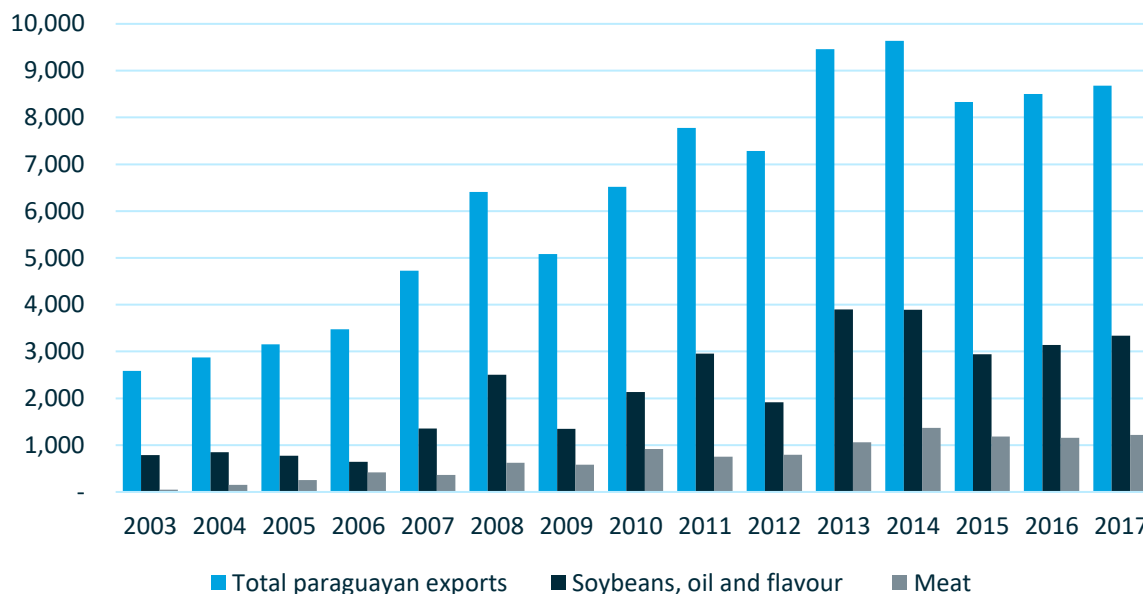
Figure 18: Annual variation of total GDP and agriculture GDP



Source: Central Bank of Paraguay, Statistical annex (2018/02)

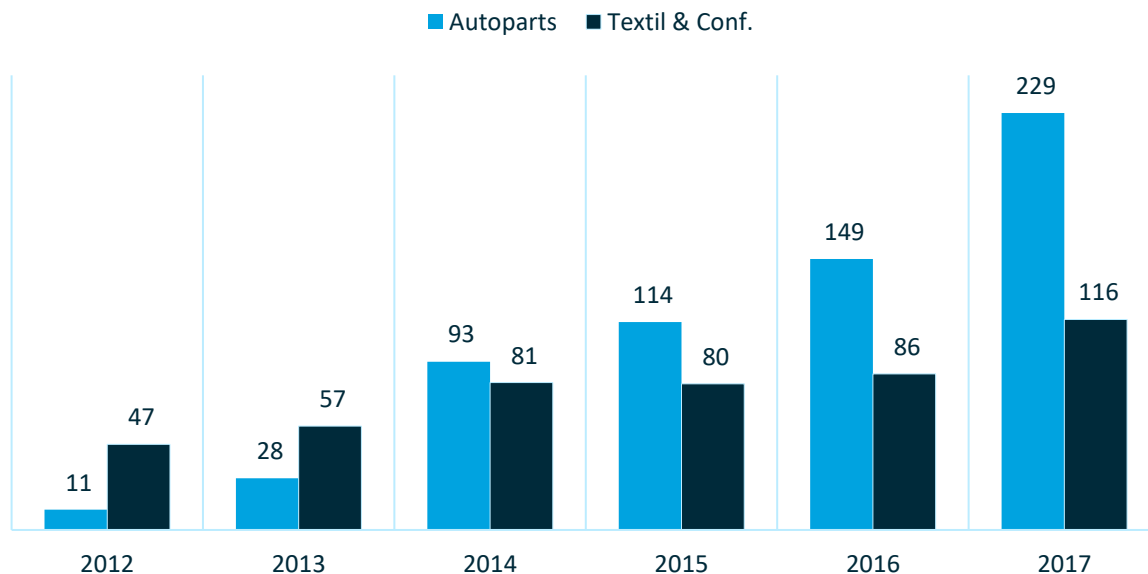
The concentration of exports in soy, dairy, and meat products has meant that the level of foreign currency coming into the country varies with the shipments of these products, as well as impacting overall GDP. Since 2013, however, the manufacturing sector has shown significant growth, some of which is connected to maquila-related investments, and this should increasingly contribute to the size and stability of the country’s exports. Services exports may also be related to this trade and have potential to grow.

Figure 19: Total merchandise and main products exported (US\$ million)



Source: BCP, Statistical annex (2018/02)

Figure 20: Exports of manufactured products (US\$ million)



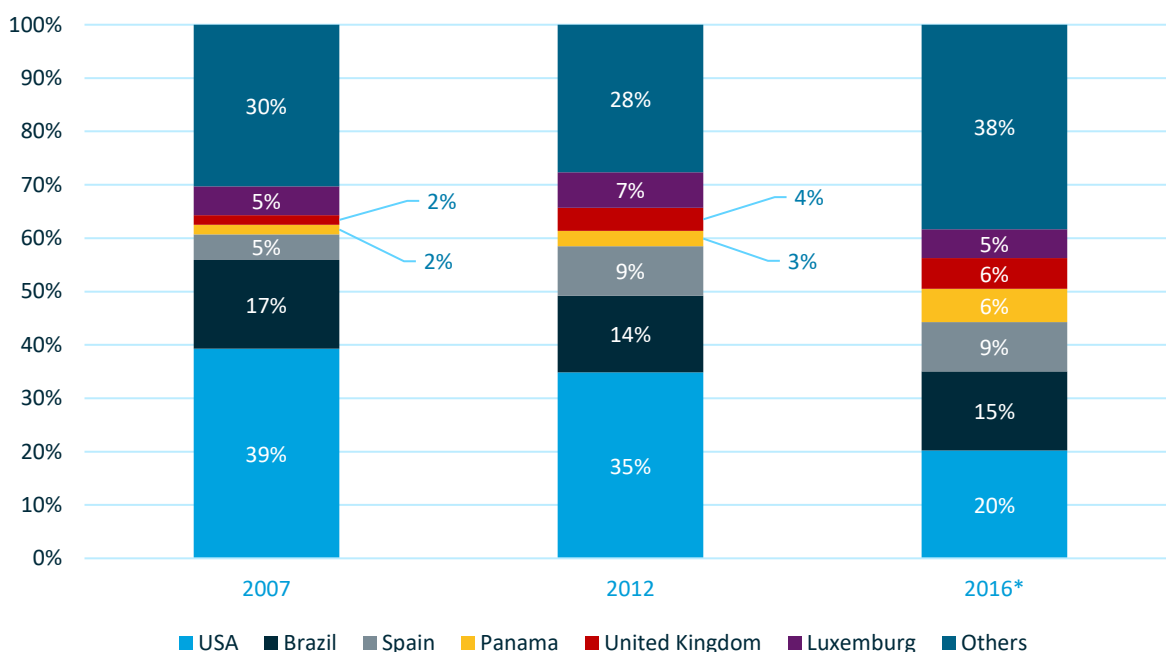
Source: BCP, Statistical annex (2018/02)

Paraguay faces a number of challenges in trying to diversify its export markets. Not only is it a landlocked country with a small economy, but it borders the two large economies of Argentina and Brazil. Between 2003-07 and 2008-12, its annual growth rates varied in line with growth in those two economies. However, between 2013-17, it is clear that the rates of change in the Paraguayan economy were less in tandem with its neighbours.

This recent decoupling of growth reflects the success of efforts to diversify export markets. This is also reflected in the HHI-mar indicator, where Paraguay’s position has improved relative to other economies.

Sources of FDI have also become more diverse. Although the United States and Brazil continue to provide the greatest proportion of FDI investment inflows, their shares have dropped from 39% and 20% respectively in 2007 to 20% and 15% in 2016, while 15 new countries have become investors.

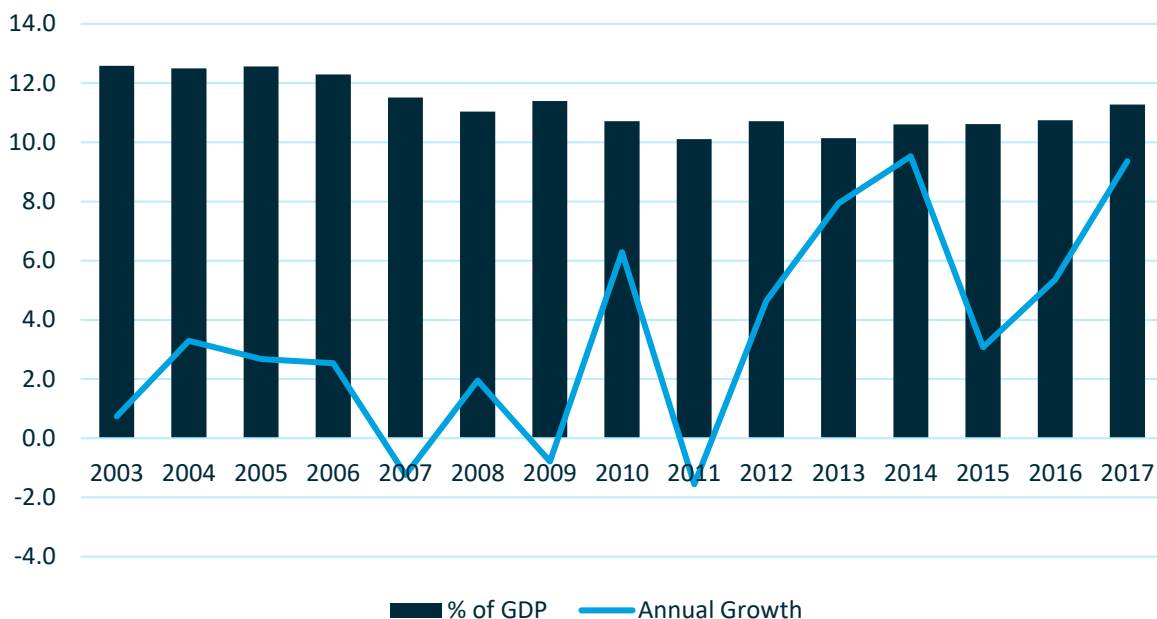
Figure 21: FDI stock composition by country



Source: World Bank, World Development Indicators

As a World Bank report noted in 2017, Paraguay has experienced a strong improvement in output per capita over the last 15 years, enjoying an average annual GDP growth rate of 3.6%. Growth has mainly been driven by strong growth in labour productivity, which contributed 2.3 percentage points, but the overall rate was also helped significantly by growth in the working-age population, which contributed 1.2 percentage points.

The growth of productivity in Paraguay was well above the average for the LAC region. Between 2001-08, this growth was largely driven by the agricultural sector, but in subsequent years productive growth has become more evenly distributed across a range of sectors, including transport services, communications, finance, and real estate.

Figure 22: Industry GDP: share in total GDP & annual growth

Source: World Bank, World Development Indicators

With the integration of supply lines and the globalization of trade, as well as the possibility that Paraguay may at some point have access to new international trade agreements, there is a clear need to improve the country's transport and logistics services to facilitate a greater volume of exports at a more competitive cost. In particular, this means upgrading the road network and increasing the reliability of waterborne routes. Improved infrastructure should also help Paraguay to improve the number of large enterprises. The most recent figures suggest that these account for only 6% of business overall, with the rest being classified as micro, small, or medium sized (DGEEC, 2011 Economic Census).

The financial sector also needs to develop policies that will help to promote the availability of long-term credit for investment projects in the productive sector. Paraguay is currently working on indicators related to access to credit, as well as other categories associated with improving the ease of doing business. It is also hoping to achieve an investment grade from the international ratings companies, which could trigger a new wave of FDI.

In 2003, after a period of economic recession that included a fiscal deficit crisis, sovereign default, and the stagnation of public finances, Paraguay reached a 'standby' agreement with the IMF under which it pledged to carry out five fundamental reforms. These were debt restructuring; fiscal fund reform (responsible for two-thirds of the fiscal deficit); tax reform called "Law of Fiscal Adjustment"; a new customs code coupled with operational transparency to accelerate trade; and reform of the public banking sector through the creation of a Financial Development Agency (AFD) and an overhaul of the National Development Bank (BNF).

With the exception of tackling the BNF, all these reforms were achieved. Efforts to tackle the deficit led to a period of eight consecutive years of fiscal surplus that provided a vital cushion during the crisis years of 2009 and 2012, when the government was able to finance investment expenditure while maintaining social spending. In addition, fiscal discipline was strengthened by

the Fiscal Responsibility Law, which sets legal parameters for government spending and gives credibility to its efforts to manage fiscal policy in the long term.

In terms of monetary policy, over the last 15 years the country's central bank has overseen a major improvement in the regulation and supervision of the banking sector after the 1995-1997 banking crisis, and successfully used open market operations to control inflation. It has also developed a careful approach to managing the exchange rate to enhance export competitiveness.

In the last decade, public policy has played an important role in driving public investment. This has included the income transfer programmes that began in 2003 with the aim of reducing poverty. Among these are the conditional monetary transfer (TMC - Tekoporã), pensions for older adults, and, more recently, money for the care of children and adolescents, which has had most impact in the fight against poverty. Although it was only introduced five years ago, the government's housing programme has also had a significant impact. However, there is still a deficit of management skills in the public sector, as well as a lack of experience in policy planning.

Another difficulty is the limited financial resources of the government. The tax burden in Paraguay is 13% compared to a regional average of around 25%. Based on Paraguay's current level of development, the tax burden should be substantially higher, with most experts suggesting it should now be close to 23%. To increase the current figure, the government needs to introduce progressive direct taxes on personal earned income and it needs to tax the agricultural sector at the same level as commercial activities and services. Paraguay's level of VAT is only 10% when the regional average is over 17%, and its personal income tax rate is still around 10% while the regional average is 23%. Corporate income tax is 10%, compared to 20% elsewhere in the region.

Although it could be argued that the low levels of tax have helped to make Paraguayan companies competitive, the lack of infrastructure investment is more than offsetting any benefit from low tax levels, and the private sector would do better if higher taxes produced a better business environment through improved transport options, for example.

Despite the existence of public policies designed to cover the short, medium, and long-term outlook, their contribution will continue to be limited by inadequate implementation and management. This is compounded by the weakness of the country's institutions, particularly the judicial sector, which continues to concern potential investors.

The policy effort to create the Maquila Regime, under which assembly plants close to the border with Brazil import materials and parts and assemble them into finished products, notably motorcycles, has not been viewed as a great success so far. It has little positive impact on the economic as a whole and is widely viewed as having merely created an extension of the Brazilian economy. Combined efforts by a number of ministries, including those covering foreign affairs, trade, and agriculture, have had more success in helping to find new markets for agricultural products. However, in the longer run maquila-related investments can increasingly contribute to the size and stability of the country's exports.

Within MERCOSUR, Paraguay has benefited from its status as a relatively less developed country (PMDR), which among other things has given it the ability to cheaply import raw materials and then export them at a preferential tax rate. In 2004, MERCOSUR created a Structural Convergence Fund (FOCEM) with contributions from more developed members that was intended to ensure that Paraguay, given its status as a landlocked and developing country, has access to better conditions of competitiveness and integration. Four programmes grew out of FOCEM: the Structural Convergence Program, the Competitiveness Development Program, the Social Cohesion Program and the Institutional Strengthening Program.

The result has been some very tangible benefits for Paraguay in the area of infrastructure. This is particularly true in the power sector, with the provision of new transmission lines, but also in transport with projects such as the route connecting the city of Concepción with Vallemí via a bridge over the Apa River. With a portfolio of 1 billion dollars, of which 65% is earmarked for Paraguay, FOCEM has become a vital source for improving the country's infrastructure. This is important because, despite its improving economic performance over the last 15 years and attempts to develop public-private partnerships, the quality and quantity of Paraguay's infrastructure has remained poor.

In order to encourage industrial development, the government has been preparing a soon-to-be-published plan with help and funding from the Inter-American Development Bank (IDB) that is meant to identify those areas that can be most effectively strengthened. The plan is expected to set out several pillars for a stronger industrial sector, and these are likely to include taking advantage of the country's landlocked status by increasing its integration into regional value chains, specifically those of Argentina and Brazil, as well as developing the country's role as a regional logistics sector.

Exploring policy measures (national policy documents)

The industrial plan presented by the Ministry of Industry and Trade in March 2017 identifies opportunities in the agricultural sector, taking soy as a starting point for its relevance to new linkages within the sector. It recommends that the country exports fewer soy beans and instead uses them to manufacture fishmeal and oil, which can then be exported at a greater profit. It also identifies the autoparts, apparel manufacturing and plastics sectors as potential drivers of diversification.

In particular, the development of soy industrialisation in the last decade is the result of substantial investments in milling plants for the production of oil and flour. The economy's greater generation of foreign currency is also a factor. The largest foreign investments in the period were recorded in the production of oils, which accounted for 11.2% of total FDI in the last decade. Transport is the sector with the second highest proportion of total FDI, at 9.1%.

A study presented by the Paraguayan Chamber of Processors of Oilseeds and Cereals (CAPPRO)⁶⁸ estimates that soybean meal exports could generate around 2 billion dollars in foreign currency by 2025, assuming that exports of soybean meal and flour remain at their current proportions.

⁶⁸ CAPPRO/IPIE. Paraguay: Potencia agroindustrial para alimentar al mundo (August 2016).

If more of the soybean meal is instead used to manufacture animal protein, the industry could generate as much as 3.3 billion dollars by 2025.

Investment

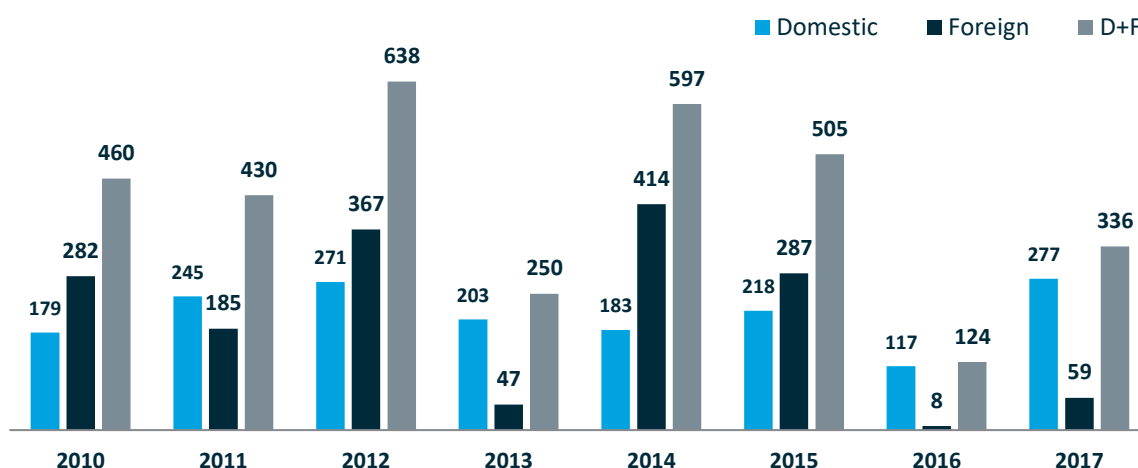
Paraguay is open to foreign direct investment. Law No. 60/90 guarantees equal treatment to foreign investors, with the sole exception of ownership of land near national borders. Paraguayan laws grant investors tax deductions and allow the total repatriation of capital and profits.

To encourage exports, Paraguay maintains special customs regimes, such as a free zone regime. Companies established in free zones dedicated to export pay a single tax on the gross income from these exports. These companies can also sell finished goods and services to the national customs territory for up to 10% of their gross sales revenue, without paying any additional taxes.

Paraguay maintains several types of incentives to investors to promote domestic production, such as those granted under Law No. 60/90 and its amendment.⁶⁹ The manufacturing sector is the main beneficiary of this law, which has several benefits to investors. It exempts VAT payment in the acquisition of imported and domestic capital goods, and also exempts any tariffs on imports of capital goods, raw materials and inputs for projects.

The graph below shows the level of investment under Law No. 60/90. Foreign investment has been volatile, dipping sharply in 2016-17 after peaking in 2014 at 414 million US dollars. Domestic investment has been more stable, but still fell dramatically in 2016 before recovering in 2017. Not shown in the graph are figures for the first three months of 2018, which show total investment (domestic and foreign) of just 13 million US dollars – considerably less than other years over the same period. Investment under the Maquila law rose sharply from 2016 to 2017, increasing approximately five-fold from 35 million to 166 million US dollars.

Figure 23: Investment under Law No. 60/90 (million US\$)



Source: Ministry of Industry and Trade. Monthly statistics <http://www.mic.gov.py/mic/site/inicio.php>

⁶⁹ <http://www.mic.gov.py/mic/site/industria/ddi/pdf/Lev60-90.pdf>

Private sector

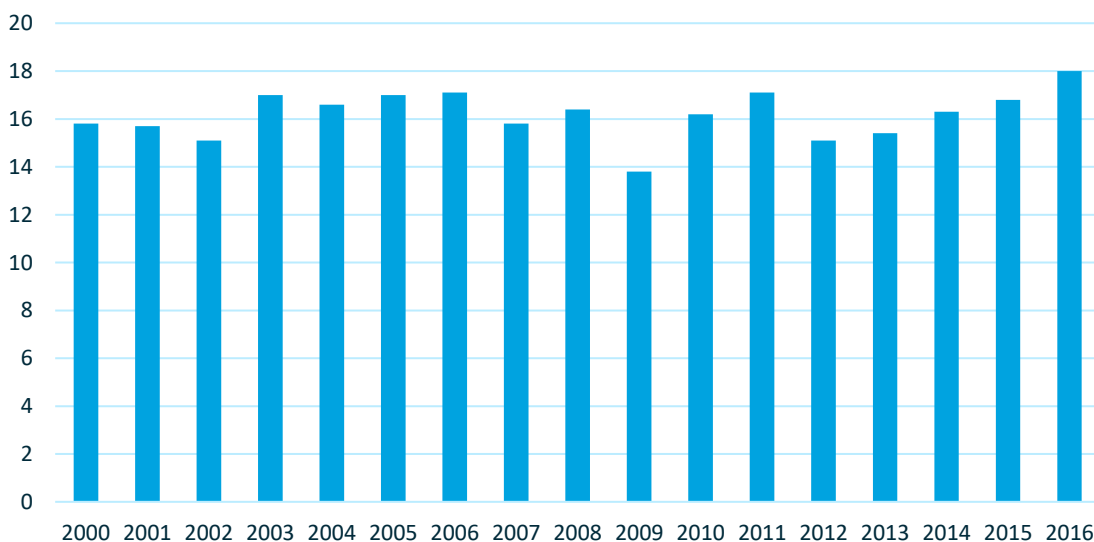
The private sector is involved in the development of trade policy in Paraguay through its participation in councils and forums in which public policies are discussed.⁷⁰ The most notable of these is the Advisory Business Council of Foreign Trade, coordinated by the Ministry of Foreign Affairs, in which the positions and concerns of the private sector are discussed in the context of Paraguay's foreign trade policy.⁷¹

Private sector investment

Public Private Partnerships (PPPs) have been gaining ground as an option for financing infrastructure development. PPPs allow the public sector to make use of private financial resources for sustainable projects, freeing up public resources for social programmes. Since legislation to encourage PPPs was passed in 2013 and came into force the following year, most of the projects considered have involved transport, although others have involved energy, prisons, and water and sanitation. However, little progress has been made so far, in part because of limited domestic financing capacity. The expansion of Silvio Pettirossi Airport is one of the projects that is furthest along the approval process.

Gross capital formation as a percentage of GDP has remained largely unchanged between 2003 and 2016 at between 15% and 17%, similar to figures for Argentina, Brazil and Uruguay, but low in the context of countries in other regions.

Figure 24: Gross capital formation (% of GDP)



Source: World Bank

⁷⁰ Among the mechanisms created are: the National Country Strategy Team, Municipal Development Council, Private Council for the Reduction of Extreme Poverty, Open Government, and the National Financial Inclusion Strategy.

⁷¹ WTO, Trade Policy Reviews. August 2017.

Table 2: PPP projects presented from 2014-04-01 to 2017-06-30

Public initiative	Number of projects	Preliminary amount (US\$ million)
Current contract	1	507
Bidding	1	132
Analysis phase	3	2206
Re-directed (2 sanitation, 2 prisons, 1 suburban railway - to be promoted by Law 5.074 / 14 modified by Law 5.396 / 15 and Law 117/91)	5	not available
SUB-TOTAL	10	2845

Private initiative	Number of projects	Preliminary amount (US\$ million)
Analysis phase, with Confidentiality clause	1	not available
Dismissed/discarded	15	not available
Withdrawn by private opponent	2	not available
SUB-TOTAL	19	not available

Source: Technical Secretary of Planning. PPP Management report 2017

Integrating the principles of the Vienna Programme of Action

Paraguay does not currently have a mechanism to promote and monitor the degree of compliance with the implementation of the Vienna Programme of Action. This generates difficulties when trying to evaluate the degree of specific contribution that the programme could make in generating concrete policies that provide integral solutions.

Nonetheless, the strategic document which sets out the long-term goals of Paraguay's economic policies is currently the 2030 National Development Plan (PND 2030). Its vision is designed to be met through coordination between the government, civil society and private sector. The plan is the result of a 2013 series of consultations and workshops with all of these stakeholders, resulting in an overall vision for Paraguay in 2030.

Fundamental transit policy issues

Paraguay is a member of bilateral and multilateral international agreements on air, land and river transport. The Agreement on International Terrestrial Transport (ATIT), which serves as a legal framework for the provision of terrestrial transport services in seven Latin American Integration Association (ALADI) member countries, covers all the countries through which Paraguay moves its products overseas. Last year, the ALADI countries began to study ways to

integrate their transport sectors. The waterways to Port Cáceres in Brazil and Port Nueva Palmira in Uruguay are also covered by a river transportation agreement.

For customs, with the implementation of Decree No. 998/1372, Paraguay has imposed the mandatory use of an electronic tracking system. This requirement applies to all cargo bound for Paraguay, by land or river.

The electronic monitoring of ships is regulated in Paraguay by Law 2367 of 2004, and adheres to the International Convention for the Safety of Life at Sea (SOLAS).⁷³ The National Directorate of Customs has also passed the Institutional Strategic Plan 2015-2018. The plan is in accordance with PND 2030 and adheres to the guidelines of the World Customs Organization.

The system allows the transport agent to submit the transit request and receive the corresponding authorization electronically. It also allows traceability of the cargo from the customs office of entry to the customs office of destination in a single consultation mechanism.

At the regional level, Paraguay participates in the International Transit System (SINTIA).⁷⁴ Improvements in processes and controls have made foreign trade operations considerably easier. They have also made collecting customs fees easier for the Paraguayan customs agency.

Finally, Paraguay has adopted Resolution MERCOSUR / GMC / RES.17 / 04, "Standard on the Computerization of the International Cargo Manifesto / Customs Transit Declaration and the Follow-up of Operation among the Parties of MERCOSUR".⁷⁵ Paraguay has incorporated the regulation through Executive Decree No. 6897 of 2005.

Infrastructure development and maintenance

The PND 2030 outlines an integrated transport infrastructure investment plan that includes pricing strategies and private-sector participation. The plan itself includes analysis of demand for transport services with special attention to cargo logistics, where supply and demand can vary seasonally in areas like agricultural produce. Other priorities are to enhance logistical capabilities and expand storage structures.

There are several other points to note in the PND 2030:

- The country's main international connection points with Bolivia and through to Chile will be developed as part of the vision to strengthen Paraguay's potential as a regional distribution centre;

⁷² Publication in Official Gazette N ° 248 of 12/27/2013. Available at: https://www.presidencia.gov.py/archivos/documentos/DECRETO998_f42pz517.pdf

⁷³ Available at: [http://www.prefectura naval.mil.py/documentos/PROYECTO%20DE%20CIRCULAR%2002%20%20\(2\).pdf](http://www.prefectura naval.mil.py/documentos/PROYECTO%20DE%20CIRCULAR%2002%20%20(2).pdf)

⁷⁴ Available on the website of the National Customs Directorate (DNA): http://www.aduana.gov.py/uploads/archivos/Resolucion_DNA_N_%20494_2017.pdf

⁷⁵ Details of the GMC Resolution No. 17/04 available at: <http://www.mercosur.int/innovaportal/v/598/2/innova.front/resoluciones-2004>

- cargo transport hubs will be moved away from potential areas of urban development;
- fibre-optic and wireless telecoms networks will be expanded to increase access to high-speed internet; and
- Paraguay's electricity grid will be strengthened, with plans to increase overall hydropower capacity to an overall goal of just over 12 GW.

The Master Transportation Plan (MTP), originally created in 1992 by the Ministry of Public Works and Transport with the support of the Government of Japan, has been updated with an approach emphasising investment in infrastructure. The National Logistics Plan (NLP),⁷⁶ created with the aim of improving Paraguay's logistical performance, is focused on the development of high value-add services and the streamlining of supply chains.

Law No. 5.102/13⁷⁷ -- on Promotion of Investment in Public Infrastructure and Expansion and Improvement of Goods and Services by the State -- was passed in 2013 with the objective of using PPPs to promote investment in public infrastructure and services. This includes investments in roads, railways, waterways, ports and airports; dredging and maintenance of rivers; social infrastructure; electrical infrastructure; urban development; and potable water supply and sanitation.

The National Telecommunications Commission (CONATEL) has published its National Telecommunications Plan (PNT) 2016-2020.⁷⁸ The plan promotes the expansion of network infrastructure, the management of terminal devices, and the development of virtual services offered to both the public and private sectors.

International trade and trade facilitation

The PND 2030 has two primary trade-related goals: to attract investment, foreign trade and enhance the country's image; and to diversify the economy, in terms of both products and regions. To attract investment, the document recommends that the public and private sectors work together to identify new exporting opportunities and develop a dependable trade route. It also stresses the need to create jobs and fight corruption. In terms of regional value chains, it suggests developing productive clusters to improve competitiveness, using technology parks and data centres to generate industrial innovation, and developing training plans to improve access to human resources.

⁷⁶ National Logistics Plan, available at: <http://embapar.de/wp-content/uploads/Plan-Nacional-de-Logistica.pdf>

⁷⁷ Law No. 5102/13, Regulatory Decree No. 150/14 and Modifications, available at: <http://www.csj.gov.py/legislacion>

⁷⁸ National Telecommunications Plan (PNT) 2016-2020, available at: https://www.conatel.gov.py/images/incipal/PNT%202016_2020/RD.244.2016%20-20PNT%202016_2020.pdf

Paraguay has signed the Trade Facilitation Agreement (CFA), which entered into force in February 2017 through Law 5564/17,⁷⁹ and contains provisions to expedite the movement, release and clearance of goods, including those in transit. Within the MERCOSUR framework, the Agreement for Business Facilitation and the Protocol for Cooperation and Investment Facilitation are also designed to foster a stable and prosperous trade environment.

The creation of the country's National Trade Facilitation Committee was established by Decree No. 7102/17.⁸⁰ According to the WTO Public Policy Examination 2017, among its reforms are the adoption of a computerized risk management system, the introduction of the express remittance regime and the digitization of customs documents. Paraguay has also introduced additional registration and pre-licensing requirements for imports of products such as footwear, salt, steel products, cement and cell phones, mostly for quality and safety reasons and, in some cases, for statistical monitoring purposes.

Regional integration and cooperation

The physical border and commercial integration plan is intended to do three things:

- frame the economic and commercial strategy in open regionalism with bilateral and bloc negotiations;
- connect and integrate the regions of the country to allow it to export more easily; and
- consolidate trade with existing partners while attracting new markets.

The strengthening of transnational coordination mechanisms to ensure navigability of the Paraná and Paraguay River is a critical element of the strategy. Provision of port centres efficiently distributed along the navigable rivers and multimodal logistic nodes to integrate various regions of the country with the exterior also form part of the national plan. Other key objectives include:

- strengthening land transportation and the Paraguayan waterways including border interconnections;
- developing integrated energy systems that allow the efficient sale of electricity to countries in the region;
- integrating the interests of the private sector into the country's international trade portfolio; and
- strengthening trade defence and competition.

⁷⁹ Law No. 5564/17. Available at: http://www.economia.gov.py/application/files/2014/6521/8856/Ley_5564_Facilitacion_Comercio_Come rcio_OMC.pdf

⁸⁰ Decree No. 7102/17. Available at: http://www.economia.gov.py/application/files/5615/0219/8909/Decreto_N_7102_-_Comite_Nacional_de_Facilitacion_del_Comercio_abril_2017_2.pdf

There are also plans to develop integrated energy systems that allow the efficient and profitable sale of electricity at a regional level, along with the corresponding legal and technical frameworks to look for agreements based on new production opportunities.

Paraguay is a founding member and active participant of MERCOSUR. Since the creation of the agreement, intra-MERCOSUR trade has been liberalized (with some exceptions in the automotive, sugar, capital goods, and computer and telecommunications goods sectors, which are subject to special regimes). This liberalization has occurred not only in trade barriers, but in those non-tariff barriers, import licences and quotas that have emerged in response to growing imbalances. As a result, MERCOSUR is now Paraguay's main trading partner, with an average annual participation in exports of approximately 50% and 35% of total imports.

Through its participation in MERCOSUR, Paraguay maintains Free Trade Agreements with Bolivia, Chile, Cuba, Colombia, Ecuador, Venezuela, India, Israel, Mexico, Peru and the Southern African Customs Union (SACU).⁸¹ Paraguay is also a member of the Latin American Integration Association (ALADI) and, under its umbrella, maintains several partial scope agreements (PPPs)⁸² with Argentina, Brazil, Chile, Colombia, Ecuador, Bolivia, Mexico, Venezuela and Uruguay, among other countries.⁸³

Paraguay, as a member of MERCOSUR, is granted duty-free access to most imports originating in Argentina, Brazil and Uruguay. Preferences are also granted through agreements signed within the framework of ALADI, Bolivia, Chile, Cuba, Peru, Colombia, Ecuador and Venezuela. Likewise, preferences are granted to Mexico, Israel, India and the SACU countries.

At the regional level, Paraguay is part of the MERCOSUR Public Procurement Protocol,⁸⁴ within which it has assumed commitments regarding transparency. In September 2014, Paraguay ratified MERCOSUR's Montevideo Protocol on Trade in Services. In 2017, the member states of MERCOSUR signed an Intra-MERCOSUR Investment Cooperation and Facilitation Protocol.

Structural economic transformation

According to the WTO Trade Policy Reviews (August 2017), Paraguay's economic model has historically had three essential characteristics: the export of livestock and agricultural products; the export of hydroelectric power to neighbouring countries; and commercial intermediation. Paraguay advocates special and differential treatment for landlocked developing countries and small and vulnerable economies, since it considers these characteristics to lead to higher costs in international trade, and vulnerability to external shocks. In addition, Paraguay considers that the informal economy is an obstacle to its economic development in some sectors, such as fuels

⁸¹ SACU: South Africa, Namibia, Lesotho, Swaziland and Botswana

⁸² List of Agreements. Available at: <http://www.aladi.org/nsfaladi/textacdos.nsf/vpaísesR/paraguay>

⁸³ Text of the Montevideo Protocol on Trade in Services of MERCOSUR available at: http://www.sice.oas.org/Trade/MRCSR/montevideo/pmontevideo_e.asp. Law No. 5.268 / 14 of September 24, 2014. Available at: <http://digesto.senado.gov.py/ups/leyes/8964.pdf>.

⁸⁴ CMC Decision No. 27/04, whose Annex was replaced by CMC Decision No. 23/06. Details available at: <http://www.mercosur.int/innovaportal/v/580/2/innova.front/decisiones-2004>

and food. In consequence, Paraguay's trade strategy fits within the guidelines of its 2014-2030 National Development Plan, and is influenced by its participation in MERCOSUR.

The National Development Plan 2030 is based on two axes for economic transformation: inclusive economic growth (including poverty reduction), and social development.

The first axis has several goals: to promote employment opportunities, particularly for the most vulnerable segment of the population; to increase sevenfold the number of people with university degrees; to universalise social security; to achieve an average annual economic growth rate of 6.8%; to promote multilevel transport infrastructure development (land, water and air); and to maintain low inflation rates.

The second axis aims to raise the quality of education (level 2 of PISA); increase overall life expectancy; cut non-communicable disease, obesity and suicide rates in half; and widen digital access to public information.

The NDP 2030 also proposes to promote training courses, increase innovation, and strengthen national telecoms and technology regulation.

The WTO also notes that Paraguay has issued several new laws to improve the investment climate over the last five years: the Public-Private Participation Law of 2013, the Public Works Law of 2013 and the Investment Protection Law of 2015. The latter protects the remission of capital and benefits, provides guarantees against administrative and judicial practices that can be considered discriminatory, and allows tax incentives for a period of up to 20 years.

The law that establishes the National Automotive Policy (2012) provides for tax incentives to stimulate the manufacturing and assembly of vehicles and parts. In addition, in 2012 incentives were established for the manufacturing and assembly of high-tech goods, allowing exemptions from tariffs and VAT on imports of raw materials and components. Likewise, in 2013 the Industrial Parks Law was approved, which establishes incentives for those parks in addition to those provided for in Law No. 60/90.

In 2012, Law 4457/12 was enacted, which aims to provide a regulatory framework for the creation, development and competitiveness of small and medium-sized enterprises (SMEs). In 2016, Law No. 5628 was enacted, creating a Guarantee Fund for small and medium-sized enterprises. Moreover, different agreements have been allowing such enterprises to receive training and logistical support to export.

Other crucial steps have included the enactment of the Law on the Defence of Competition (Law No. 4,956 / 13) in 2013, and the establishment of the National Commission for the Defence of Competition (CONACOM). The law governs restrictive practices, competition and monopoly prevention. Its scope includes the private sector, central government entities and decentralized entities. Paraguay has continued to modernise its regulatory framework to make procedures more streamlined and transparent, although it continues to use public procurement as an instrument to support national production and employment.

Paraguayan legislation has also undergone several modifications related to the decrees that regulate the laws of patents for inventions, copyright and related rights and trademarks. The National Directorate of Intellectual Property (DINAPI) has been created to improve the enforcement of IPR, identified as a problem in Paraguay. This directorate carries out preventive and investigative activity against piracy and forgery, for which it is authorised to carry out administrative interventions ex officio in customs and in shops and warehouses. Another change was the adoption, in 2013, of the Law on Geographical Indications and Designations of Origin, which provides a protection period of 10 years from its registration, and which may be extended indefinitely for periods of equal duration.

In the telecommunications sector, new rules have been approved regarding the procedure for obtaining licences and authorisations for the provision of internet access and data transmission services, satellite transmission of occasional signals and cable service. The requirements for obtaining licences and authorizations are the same for domestic and foreign companies. However, to lend or operate a telecommunications service, foreign companies must establish a domicile in Paraguay or appoint a legal representative in the country.

Challenges, opportunities and policy recommendations

The Industrial Plan presented by the Ministry of Industry and Trade presents three strategic sectors to shore up the country's productive transformation: food, manufacturing, and the cluster of the Paraná-Paraguay waterway.

Table 3: Paraguay's strategic value chains

Food	Manufacturing	Paraná – Paraguay waterway
Soy	Clothing	Services
Meat	Autoparts	Parts suppliers
Poultry	Pharmaceutical	Barge
Pork	Metalworking	Tappets
Dairy	Plastic	
Fruit juice	Leather	

Source: Industrial Plan, Ministry for Industry and Trade

The strategic guidelines of the industrial plan are further grouped into four pillars: strengthening of institutional capacity; financing and accumulation of gross capital; continuous improvement of the business climate and reducing bureaucracy; and continuous improvement of the competitiveness of clusters, value chains and strategic sectors.

Diversification of destination markets is difficult for Paraguay, as more than three-quarters of its manufacturing exports are directed within South America.

However, given the strength of its agricultural sector, development of the biotech sector will provide substantial value-add. The sustainable export of biotech goods is of strategic importance, and also presents an opportunity to combine growth, social development and environmental protection. In countries such as Paraguay, biotech exports are still very low, and the potential for expansion is great. An increase in biotech exports would contribute to product diversification and would be a significant value-add to the country's environment as a whole.

CEPAL (2017) lists some of the benefits that a focus on the biotech sector can have:

- opening new opportunities for agriculture, as an activity not only dedicated to producing food and ingredients, but also to the production of biomass for multiple uses;
- creating opportunities for the development of new value chains; and
- enabling the development of SMEs based on knowledge, inserted into new value chains and to provide employment opportunities and business development to young people and women.⁸⁵

Paraguay has the macroeconomic environment to develop the industrial plan successfully. The IMF (2017) has pointed out that at the heart of Paraguay's success story has been a strong track record of economic stability, supported by two main policy anchors: inflation targeting, which

⁸⁵ CEPAL (2017). Bioeconomía en América Latina y el Caribe Contexto global y regional y perspectivas.

has been successful in guiding monetary policy and containing inflation since it was introduced in 2011; and fiscal policy, underpinned by Paraguay's fiscal responsibility law. However, maintaining fiscal discipline under the fiscal law has seen its share of challenges. As is typical, disagreements in government often arise around public spending priorities and increases in public debt.

On the other hand, Paraguay should address challenges related to its competitiveness, particularly in agriculture. One of them is the increase in the productivity of agricultural sectors and sustainability. The CEPAL report notes that in South America, overuse of the land has affected land productivity to a much greater extent than in other regions. Extensive livestock and crop production has been particularly damaging, to the detriment of ecologically valuable primary dry forests. Paraguay shows the greatest loss of organic carbon in the soil between 2000-2010, affecting soil fertility in the country. Going forward, Paraguay must find a balance between strengthening its agricultural base to achieve greater economic transformation and implementing sustainable agricultural policies.

Value chain financing should also be taken into consideration. The growth and consolidation of value chains and export clusters will require resources that may be financed publicly or privately. FDI typically looks for local capital and loan financing that allows sustainable operations. Paraguay should encourage the development of new instruments and strengthen existing mechanisms (Industrial Plan, 2017).

Private funding providers are not bound by the same criteria of eligibility, and do not have access to sources of public funding. One advantage Paraguay has is the availability of young people of working age, which means that a larger percentage of its population will be available for work. However, this will only be a positive if educational standards rise, more jobs are generated, and productivity levels improve. In the event that there are not enough jobs, this trend could instead have a negative social impact.

Given the lack of people for mid-level management positions in Paraguay -- a consistent complaint from entrepreneurs and employers -- it may instead be time to orient policy towards promoting vocational education.

The IMF (2018) notes that infrastructural needs are still considerable in Paraguay, particularly in transportation, public education and health. Furthermore, the distribution of electricity within the country is still deficient. The quality of the infrastructure is also compared less favourably with other emerging markets.

CEPAL (2018) points out that one of the most serious deficiencies in Paraguay, along with other countries in the region, is the level of advanced telecommunications infrastructure to respond to the growing demand for digital services. In Paraguay, the average internet speed is less than 2 Mbps, compared to a regional average of approximately 5.6 Mbps, and an OECD average of 15.7 Mbps. As a consequence, given the high social and economic returns of infrastructure investment and Paraguay's early stage of development (its income per capita in 2015 stood at less than half of the average for South America), a big push on public investment will most likely require some financing through higher levels of public debt. Public-private partnerships can provide an alternative financing option, at least for some projects, but Paraguay has less

experience with this type of arrangement. More importantly, public concerns about higher government debt and how well funds will be spent may be restraining larger ambitions, according to the IMF (2018).

To mitigate the challenges and capitalise on the opportunities, Paraguay could consider policies and initiatives aimed at ensuring inclusive economic growth and sustainable development.

Boosting competitiveness

Paraguay need to address several cross-cutting drivers of competitiveness in order to achieve inclusive and sustainable growth prospects. For this, it needs to design and implement mechanisms to improve the effectiveness of public spending and road maintenance, revitalise the programme of public-private partnership for infrastructure projects, and improve connectivity and roads network.

Increased spending on education is another key policy priority which will need to aim for improved education attainment and a fairer, more equal distribution of resources to geographic areas. The policies will also need to account for professional career development of teachers.

Enabling more conducive business practices, combating red tape and corruption

The Executive Opinion Survey (WEF) indicates that the most problematic factors for doing business in Paraguay are corruption, poor education of the labour force, the inefficiency of the bureaucratic system and limited access to finances. In addition, the process of business creation is costly and long in comparison to the OECD countries, the procedures for the declaration of insolvency are obsolete, and only 30% of small and medium-sized enterprises have access to credit in Paraguay. The government should continue the current strategy of designing legal frameworks that are more favourable to doing business in the country.

Using rich water resources and hydroelectric potential

In the short and medium term, Paraguay should take steps to strengthen the regulation and governance of institutions in the electricity sector, ensure investment and improve the tariffs framework, and promote policies to increase energy efficiency and sustainability.

Increasing tax revenues and productivity gains

Current levels of tax revenues are low and largely depend on indirect taxes and transfers of bi-national enterprises. As such, Paraguay should aim at promoting tax reforms to expand the base and establish a more progressive system. It will need to ensure productivity gains while also strengthening the competitiveness of procurement systems.

Improving the distributional effect of the agricultural sector

While agriculture has become one of the main growth engines in recent years, it is largely based on an export-oriented model. As such, Paraguay should promote agricultural growth based on the rational use of natural resources, further improve its two main value chains (meat and soy

production), and enable coordination between various actors in the sector, including the small and rural producers. This can be achieved through policies that enable participation in high-value markets by implementing product differentiation and ambitious marketing strategies.

For example, the soy value chain must be further expanded to help generate more employment. Soybean oil is used in the production of vegetal cream, vegetable oils, margarine and hydrogenated vegetable fats while the main products made with soy flour are used to feed cattle, poultry and swine. As such, development of the soybean industry will result in higher value-added products including cattle, poultry, pork, fish, milk and derivatives, biodiesel, among others. To diversify its economy, Paraguay could also further leverage other value chains, such as garments, autoparts, pharmaceuticals, plastics, and leather. Furthermore, the Cluster of the Paraná Paraguay can help promote services and industrial value chains.

Strengthening resilience to climate shocks

Ensuring the effectiveness of the newly created Agricultural Commodity Exchange and health control measures are key for building resilience to climate shocks. The government, in collaboration with the private sector, will need to look into effective early warning systems and encourage robust agricultural risk management strategies.

Promoting R&D and research capabilities – boosting innovation capacity

Paraguay should also seriously address research programs, technical assistance and access to credit for small producers with a view to promoting small-scale agricultural businesses, cost-effective and sustainable solutions. To promote rural development, the government also needs to pay particular attention to instituting an effective rural cadastre for clarity of ownership and to establish tax responsibilities, regularising land titling, improving inter-agency coordination and carrying out land use plans compatible with economic, social and environmental objectives.

In all sectors, innovative marketing strategies will need to be employed in order to improve competitiveness and product differentiation. Entrepreneurs will need to play a key role in promoting innovation within the value chains, and so government subsidies would need to benefit and thus incentivise the innovators.

UNESCO has identified some mechanisms that favour competitiveness and innovation which, in line with Paraguay's National Development Plan, call for creation and adoption of quality standards through regulatory councils. Other proposals in the field of innovation include the need to facilitate access to equipment and facilities for small and medium-sized enterprises.

Together with the expert community, Paraguay's government and private sector will need to conduct studies to discuss the effective application of the rules outlined in the National Competition Law. They will need to help improve transparency and create an open and competitive market environment. Special working groups could be formed to stimulate such discussions and provide advice on future guidelines. It is also important to facilitate exchanges and research tours involving international experts.

Table of Figures

Overview: Developing resilient economies

Figure 1: The OA alternative diversification indicators converted into similar format	9
Table 1: Country rankings and worst areas of performance	9
Figure 2: Intra-sectoral diversification over five years	11
Table 2: Summary results	12
Table 3: World's leading economies ranked in terms of GDP per capita	13
Table 4: Real GDP growth has been strong in both Bhutan and Mongolia, more mediocre in Paraguay and Nepal	16
Figure 3: Output per worker in agriculture (constant 2010 US\$)	16
Figure 4: Key economic attributes of the four landlocked countries under investigation	17
Figure 5: World trade growth, 1994-2018	18
Figure 6: Export trade shares for advanced and developing countries (as % share of total world exports; 2018-2022 are OA forecasts)	19
Appendix 1. Oxford Analytica's alternative methodology of measuring diversification	20
Table 1: Economic diversification indices used in this report.	20
Figure 1: Export-product HH index (HHI_x)	22
Figure 2: Export Diversification Index (EDI), 2010	23
Figure 3: Count of export categories	23
Figure 4: HH index for export-market diversification (HH_MAR)	24
Figure 5: Count of export markets	24
Figure 6: HH index for FDI origin (HHI_FDI)	25
Figure 7: Count of FDI sources of origin (COUNT_FDI)	25
Figure 8: Production diversification (HHI_va)	26
Figure 9: Overall intra-sector diversification (MEAN_ISDIV)	27
Appendix 2. Landlocked 4 and comparators	28
Per-capita income and latest index observation	28

Mongolia

Figure 1: GDP growth rates for Mongolia and China (% per annum)	32
Figure 2: Value added (% of GDP)	32
Figure 3: Export structure	33
Figure 4: Total exports by main commodity group and partner	33
Table 1: Labour force by sectors (%)	34
Figure 5: Labour force participation (male vs female)	35
Figure 6: Employment distribution by occupation	35
Figure 7: Growth in selected industries	36
Figure 8: 2016 GDP Composition – Expenditure Approach (Composition of GDP by expenditure approach, share total)	37
Figure 9: Livestock	38
Figure 10: Output per worker in the agriculture sector versus GDP/capita for economy as a whole (both measured in constant 2010 US dollars)	39
Figure 11: Processing industries (value in MNT)	39

Figure 12: GDP per capita, in constant 2010 US dollars and in current US dollars	40
Figure 13: Coal export price and FDI	41
Figure 14: Exchange Rate (MNT/USD)	41
Figure 15: Government revenue, expenditure and balance (MNT)	42
Figure 16: Gross capital formation (% of GDP)	44
Table 2: Investment by sector (million USD)	45
Figure 17: FDI, net inflows (% of GDP)	46
Table 3: Objectives of the newly adopted <i>Industrialization Program 21:100</i>	47
Figure 18: Bank balance sheets	48
Figure 19: Road length over time (km)	51
Figure 20: Processing Industries 2012 - 2017 (MNT million)	53
Figure 21: Gender development index	53
Figure 22: Female enrolment in educational institutions 2014	54
Figure 23: Gender inequality index (0=perfect equality; 1=extreme inequality)	54
Figure 24: Education (Male vs Female), 2016	55
Figure 25: Labour force participation rate in agriculture, industry and services (% of male or female employment)	56

Bhutan

Figure 1: GDP growth across Bhutan, India and Nepal (% per annum)	63
Table 1: Industry shares in GDP (%)	64
Figure 2a: Exports of merchandise goods 2016 (by value)	64
Figure 2b: Export structure	65
Figure 2c: Total exports by main commodity group and partner	66
Figure 3: Net ODA received per capita (current US dollars)	66
Figure 4: Bhutan ODA per capita (US dollars)	67
Figure 5: Value-added 2016	67
Figure 6: Share of manufacturing value added in GDP (%)	68
Figure 7.1: Employment in key sectors (% of total employment)	68
Figure 8: Gender division of labour force participation (% of male or female employment)	69
Figure 9: Contribution to GDP by sector in 2015	70
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\$)	71
Figure 11: GDP growth by sector 2013-16 (%)	71
Figure 12: Gender inequality index (0=perfect equality; 1=extreme inequality)	73
Figure 13: Bhutan: Public debt as % of GDP	81
Figure 14: Domestic savings as % of GDP	82
Figure 15: Gross capital formation as % GDP	82
Figure 16: Gross capital formation as % GDP growth	83
Figure 17: Diversification indices	89

Nepal

Figure 1: GDP growth rates in Nepal versus neighbouring Asian states (%)	94
Figure 2: GDP per capita in current US\$ in Nepal and a selection of other Asian economies	94
Figure 3: The share of total exports in GDP in Nepal and across comparator countries (%)	95

Figure 4: Value added by economic sectors (% of GDP)	96
Table 1a: Employment share	97
Table 1b: Employment growth (annual average, %)	97
Figure 5: Sector wide labour productivity	98
Figure 6a: Labour force participation rate	99
Figure 6b: Employment distribution by occupation	99
Figure 7: Export structure in 2015	100
Figure 8: Total exports by main commodity group and partner	100
Table 2: Product diversification and market diversification	101
Figure 9a: Personal Remittances received (% of GDP)	102
Figure 9b: Remittance income / GDP (%)	103
Figure 10: Gender inequality index (0=perfect equality; 1=extreme inequality)	104
Table 3: Average daily wage in cash/kind received by wage earners (in Nepalese Rupees)	104
Figure 11: Labour force participation rate in agriculture, industry and services (% of male or female employment)	104
Figure 12: Literacy rate among the population aged 15 years and older (in %)	105
Figure 13: Enrolment at all levels of education	105
Figure 14: Education (Male vs Female)	106
Figure 15a: Electric power consumption (kWh per capita)	106
Figure 15b: Overall electricity consumption to 2018 (billion kWh)	107
Table 4: Yearly infrastructure investment needs (as % of GDP, 2010-2020)	107
Table 5: NTIS 2016 priority export potential sectors	108
Figure 16: Gross capital formation (% of GDP)	111
Figure 17: Foreign direct investment, net inflows (% of GDP)	112

Paraguay

Figure 1: GDP growth rates in Paraguay versus other landlocked countries	118
Figure 2: GDP growth rates in Paraguay (%)	118
Figure 3: Value added by economic sectors (% of GDP)	119
Figure 4: Export structure	120
Figure 5a: Total exports by main commodity group and partner	121
Figure 5b: Merchandise exports' composition by main products	121
Figure 6: Export totals over 5-year periods, detailed by market (US\$ million)	122
Figure 7: FDI net flows (US\$ million)	122
Figures 8 and 9: Accumulated FDI into Paraguay by partner country and FDI stock	123
Figure 10: Evolution of the pillars of the competitiveness index (period 2007-2008 to 2017-2018)	124
Figure 11: Sectoral labour force concentration	126
Figure 12: Labour force participation rate female versus male	126
Figure 13: Paraguay Employment distribution by occupation	127
Figure 14: Value Added Per Worker (constant 1994 US\$)	127
Figure 15: Gender inequality index (0=perfect equality; 1=extreme inequality)	128
Figure 16: Education (Male vs Female), 2017	128
Figure 17: Labour force participation rate in agriculture, industry and services (% of male or female employment)	129

Figure 18: Annual variation of total GDP and agriculture GDP	129
Figure 19: Total merchandise and main products exported (US\$ million)	130
Figure 20: Exports of manufactured products (US\$ million)	130
Figure 21: FDI stock composition by country	131
Figure 22: Industry GDP: share in total GDP & annual growth	132
Figure 23: Investment under Law No. 60/90 (million US\$)	135
Figure 24: Gross capital formation (% of GDP)	136
Table 2: PPP projects presented from 2014-04-01 to 2017-06-30	137
Table 3: Paraguay's strategic value chains	144
