# BHUTAN'S BUSINESS INFRASTRUCTURE POLICY

# AND INDUSTRIAL PARKS

**June 27, 2019**

## EXECUTIVE SUMMARY

● **Between 2010 and 2018, Bhutan's economic performance in the real growth of gross domestic product (GDP) was respectable, averaging more than 5 percent a year.** This was driven by hydropower, services, and agriculture. However, there is growing pressure to diversify production. Hydropower development will peak by 2023 and is associated with widening current account deficits and the accumulation of public debt. There is a greater need to foster a dynamic private sector and create employment.

● **In this context, Bhutan has recently embarked on a strategy to develop a business infrastructure policy.** This is mainly focused on establishing four industrial parks to jump-start investment and developing the management arrangements. These industrial parks would include access to land, infrastructure, and energy sources and be located in the south, near the border with India. Drawing on the experiences of other countries, the industrial park policy in Bhutan is based on an overall umbrella of rules on purpose, coverage, policy considerations, existing infrastructure, regulatory and legal framework, and enactment and implementation of legislation. The industries in the parks are envisaged to include wood-based, agriculture-based, and metal-based industries.

● **In order for the parks to be successful, it will be paramount for the Government of Bhutan to focus on four key areas.** First, it will be important to develop the proper industrial infrastructure and governance arrangements and clear management structure of the parks, working with a dedicated Government team. Second, liberalization of the FDI policy regime to make it more investor-friendly is very important objective for the industrial parks as foreign firms can bring in talent, capital, and management. Third, it is paramount to attract the private sector to the industrial parks and to help facilitate the transition from a government model to one where private developer have a greater role. Finally, the Government will need to have an overall business environment to support competitive value chains.

● **There are several lessons that can be learned from both international and Bhutanese experience about industrial parks.** First, a Government team will need to be the single window for all investors and have expertise in communicating with potential investors, investment promotion, legal arrangements, and aftercare services. Second, the "plug and play" approach to industrial parks, used by China, Vietnam, and Bangladesh suggests the fundamental role of Government is to provide infrastructure and support cluster development. Third, it is important to have a phased approach to ensure that the work is done based on investor interest and appetite. It is important that costs be contained to ensure a congruence between supply of zone facilities and market demand. In light of these experience, Bhutan will need to go forward with developing the government team, ensuring the zones are professionally managed, and bringing in the private sector investors as early as possible.

**MAP OF BHUTAN**


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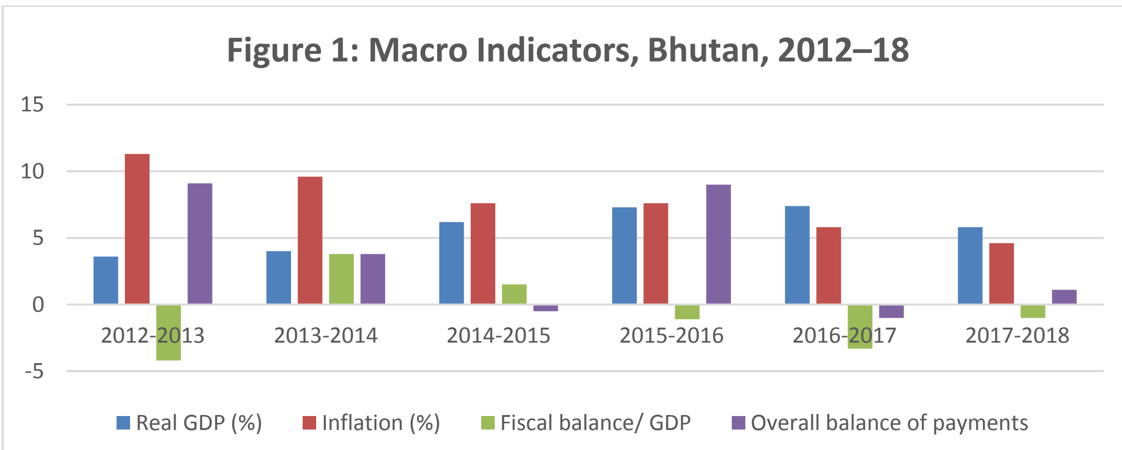
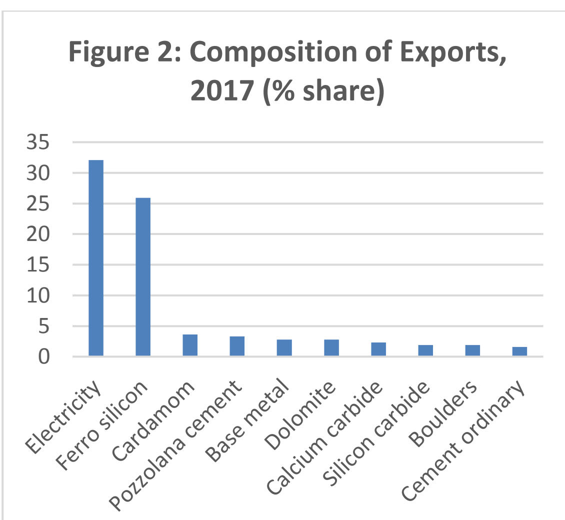
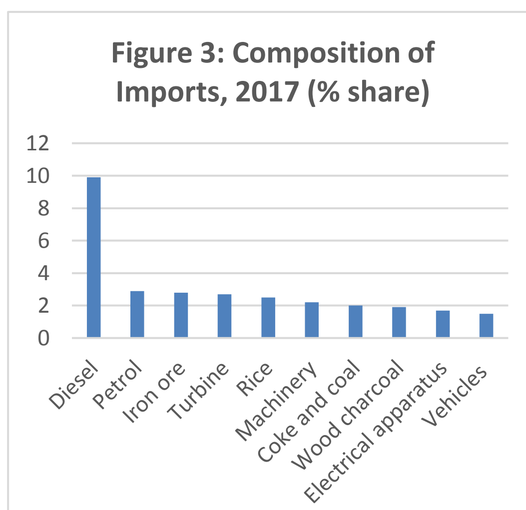
# I. Introduction: The Context of Bhutan's Special Economic Zones

1. **Bhutan has enjoyed a stable macroeconomic environment in recent years,but faces challenges in structural transformation.** The country continues to follow a robust growth path, averaging more than 5 percent growth gross domestic product (GDP) annually, and inflation continues to be contained (figure 1). The country's reserves represent more than 10 months of imports, and it has achieved a good degree of macroeconomic stability. The economy is mostly based on agriculture and hydropower, but there has been renewed emphasis in recent years on services and manufacturing. Between 2002 and 2015, while agriculture declined from 26 percent of GDP to 17 percent, industry only increased from 38 to 42 percent, and services increased from 35 to 40 percent. The pace of change has been limited. Much of traditional production focuses on cottage industries and forestry, with a high dependence on consumer goods and key essentials. An export market has been developed that includes minerals, cement, and calcium carbides (figure 2). The country is highly dependent on the Indian economy, which accounts for more than 75 percent of Bhutan's imports and exports (figures 2 and 3).




*Source:* Data of the International Monetary Fund; Royal Monetary Authority of Bhutan.




*Source:* RMA 2018.

2. **There are challenges in the medium term.** Hydropower development will peak by 2023 and is associated with widening current account deficits and the accumulation of public debt. The country is now at moderate levels of debt distress. Hydropower rents are financing a growing public sector, while youth unemployment is growing. Major sectors of the economy are stagnant, and the growth of the private sector is stunted by the small domestic market, high trade costs, and investment climate imperfections. While reforms have recently been undertaken to improve Bhutan's investment climate, much remains to be done to improve the overall investment climate and the doing business indicators.[1] The country continues to be affected by limited access to key factors of production, particularly land, financing, and skilled labor. Smaller firms are finding the scaling-up of production challenging. The access of firms to domestic and international markets is limited by deficiencies in transport, logistics, customs, marketing, and competition policy. Deficiencies in the distribution of power stations will have to be resolved to help serve the country's development (Santini, Tran, and Beath 2017).

# II. Bhutan Industrial Infrastructure Strategy

3. **In light of these challenges, the Government of Bhutan has been seeking ways to develop industrial infrastructure and enhance export competitiveness.** Over the last decade, the government has adopted a multi-pronged strategy to accomplish this.

- First, the Ministry of Economic Affairs has drafted a Business Infrastructure Policy in 2018 that defines the governance arrangements, the institutional structure, and the policy for the four selected industrial parks. These four parks are located in the south of the country to minimize logistics costs and cater to foreign industries and businesses via inland waterways and local roads to ports in Bangladesh and India. The four new industrial parks—Bondeyma Industrial Park in Mongar, Dhamdum Industrial Park in Samtse, Jigmeling Industrial Park in Sarpang, and Motanga Industrial Park in Samdrupjongkhar—are expected to be completed within the 12th Five-Year Plan (2018–23), during which the plots are to be allocated to investors (table 1).

- Second, the new industrial parks will complement the two existing industrial estates, Pasakha Industrial Estate near Phuentsholing in the south and Bjemina on the outskirts of Thimphu. The government's plan is to use the new industrial parks to create employment opportunities among youth.

- Third, the government will try to bring foreign direct investment (FDI) into the industrial zones. Bhutan is currently one of the lowest recipients of FDI in South Asia, with FDI concentrated in hospitality and conspicuously absent in agribusiness and manufacturing. The government hopes that through a revised FDI policy and a stronger industrial infrastructure, FDI could come into the four industrial parks in the south. Fourth, the government has done several feasibility studies of all four of the parks as well as master planning. These studies demonstrate that all four parks have economic viability due to the combination of good location and potentially strong value chains,

[1] See Doing Business (database), International Finance Corporation and World Bank, Washington, DC, http://www.doingbusiness.org/data.

especially in agriculture, wood, and minerals and chemicals with an envisaged size of two, four, and seven acres, respectively.

4. **The zones have potential given their location and assets, especially Jigmeling.** The most important industrial estate is the Jigmeling zone, which covers more than 700 acres, dwarfing Pasakha. Jigmeling is advantageous because it is mostly empty government-owned land and is near an existing railway connection. The land is flat and of good quality.[2] Jigmeling could create around 25,000 jobs, especially in administration, finance and accounting, technical skills, and manual work. Developers plan to use Bhutan's abundant electricity output—10,000 megawatts are available to the estate—in establishing local and FDI companies in the zone. The government is building the infrastructure, especially roads and water supply facilities. The goal is to establish heterogeneity across industries to spread the risk, but also to deepen the clustering. The government is not expected to subsidize the estate's electricity but will charge companies the commercial rate. The Bhutan Power Corporation has already been allotted land within the zone. DHI Infra, a state-owned enterprise, was envisaged to develop the land and issued various requests for proposals. The initial proposal involved the developer using the land commercially or leasing the 433 acres for a period of 30 years, developing it, and, at the end of the lease, handing back 300 acres to the government and at least 2 percent of the revenue. Up to 2019, there have been more than 60 industrial proposals, including 20 foreign investors. The government is hoping to open the park for business by 2022. DHI Infra handed the authority over the estate back to the Ministry of Economic Affairs after several years, delaying the momentum of development of the industrial estates.

**Table 1: Industrial Parks, Bhutan**

| *Park* | *Size, location* | *Features* |
|---|---|---|
| Jigmeling Industrial Park | 756 acres in Gelephu | One of the promising new developments in Bhutan and the largest industrial estate. Good option: flat land favorable for future expansion. An abundance of water, but also prone to flooding. Abundant power supply. Proximity to border with India and greater proximity to Bangladeshi and Indian markets. A recent flurry of construction activity includes internal roads, a three-story office building, several landfills for hazardous and nonhazardous waste. Boundary walls are almost completed. Work on fencing and the water supply is under way at a cost of Nu 800 million. |
| Motanga Industrial Park | 156 acres in Samdrupjongkhar | Another promising park that is close to Bangladesh and India. The only park that is fully funded by the government. During the 11th Five-Year Plan, a total budget of Nu 100 million was allotted for the park. More than 25 plots have been designated for industries, such as the ferrosilicon industry. Environmental work has been ongoing. |
| Bondeyma Industrial Park | 110 acres in Mongar | A second-tier park; one of the smaller parks. Basic infrastructure includes road access, construction of a bridge, a three-story office building with several units, water supply, and water distribution network. The park is expected to host multiple industries. |
| Dhamdum Industrial Park | 349 acres in Samtse | A promising project that has been discussed and planned for more than a decade. Nu 300 million is being provided under project tied assistance by the government of India. Work on river training and |

[2] About 40 acres of private land belonging to 28 households were acquired for the project; the rest was owned by the government.

| | | |
|---|---|---|
| | | road connectivity projects have been undertaken due to flooding. |
| Pasakha | 267 acres, 17 kilometers north of Phuentsholing | First big industrial estate in Bhutan. The park has registered successes and failures. Some 25 companies have relocated here. Steep terrain and environmental challenges. The largest private sector employer and the biggest local market for electricity generate government revenue. |
| Bjemina | Less than 100 acres near Thimphu | Established in early 2000, Bjemina Industrial Estate has small medium industries like automobiles, wood works, brick manufacturing industries and fabrication. Out of 32 industries registered, only 19 have been operational in 2018; not fully occupied; difficulty finding skilled workers |

*Source:* Government of Bhutan, Ministry of Economic Affairs, author interviews.

5. **Pasakha Industrial Estate, which has received more than Nu 2.5 billion in industrial investment since its establishment in the mid-1980s, was Bhutan's first industrial town.** It has a combination of small and large industries. Pasakha covers 267 acres, 105 of which have been allocated to industrial construction. Some of the key industries include Bhutan Carbide and Chemicals Limited, Bhutan Ferro Alloys Limited, Druk Cement, and Bhutan Beverages Company Limited, a soft drink bottling plant in the Tashi Group. In many ways, Pasakha was ideal for mineral-based industries because of its proximity to mineral resources as well as to the border with India, ensuring a good supply chain. It has enjoyed an ample supply of power and good connectivity to Phuentsholing. Indeed, all plots in the industrial estate have access to water and electricity. The estate has contributed to fiscal revenue through the electricity bills paid to Bhutan Power Corporation Limited. Pasakha has also been relatively successful in terms of creating jobs; there are close to 3,000 local and foreign employees. Pasakha was considered an ideal location for mineral-based industries because of the availability of raw materials like quartz, dolomite and limestone from nearby quarries in Pakchina, Kamji, Tintali and Gomtu, less than 100km away. Also, being located at the international border, the transportation of finished products and other imported raw materials are much painless. Most of the products are exported to the Indian and European markets. [3]

6. **The Government is playing an important role in park development for four reasons.** First, it has a dedicated team and the administrative capacity to address the challenges, as well as the historical experience and knowledge. Second, the private sector in Bhutan is nascent. Third, government support is needed to finance infrastructure and attract flagship countries. Fourth, the political economy in Bhutan is such as the access and knowledge to Government networks is important for success.

7. **To help develop the parks, the government has developed a specific policy regime.** First, the government has started financing some of the zones, but has faced fiscal challenges. It is thus planning to follow a public-private partnership (PPP) model that provides for resources and risks to be shared.[4] It has also been exploring the possible support of the Japan International

[3] A new WB study is evaluating Pasakha and the competitiveness of India-Bhutan value chains.

[4] There are different PPP modalities, including (a) a management contract with a private operator who provides services; (b) a government-to-government deal with another country to facilitate the entrance of a private developer (such as the Japan International Cooperation Agency, along with Sumitomo Corporation); and (c) the government leases land to a private sector operator or

Cooperation Agency and other sources of project financing.[5] Of the original Nu 7.4 billion requested for the establishment of the parks, only Nu 200 million was made available in the 10th Five-Year Plan. Because of budget constraints, the project is based on a design, build, finance, operate, own, and transfer model under a PPP. Second, for the regulatory framework, the government is planning to establish either a dedicated team or an independent business infrastructure development authority under the Ministry of Economic Affairs.[6] Third, the policy is to provide developers and industries exemptions from customs duties and sales taxes on imports of the capital goods and materials used in the construction of the business infrastructure as well as a tax holiday from the launch of commercial operations. Fourth, because the government owns all the land designated for the parks, the land acquired for business enterprise shall be leased to the developer for a period of 30 years initially.[7] The government will have to determine the terms and conditions of the land leases. Fifth, in deference to gross national happiness, the philosophy that guides the government, consideration is to be given to environmental norms, meaning that heavily polluting and harmful industries will not be allowed, especially toxic chemicals. Sixth, special consideration will be assigned to the large number of skilled and semiskilled workers required for the project.

# III. Four Key Areas

## A. Proper industrial infrastructure, planning and institutions

8. **It will be important for the Government of Bhutan to support the new parks with the right infrastructure and planning.** The plans have a basic master plan that will need to be developed and the right infrastructure in terms of road connectivity will also help support the zones. It will be important to ensure that industrial development in Bhutan in these parks does not happen in an ad hoc manner but instead one which happens in a coordinated way. A clustered approach to developing industries with well-planned linkages will help support zone development.

9. **Appropriate arrangements in Bhutan should be put in place.** The appropriate institutional arrangements for industrial parks are important as the existing international experience suggests that the coordination and governance framework around industrial park activity is an important element for their success. The clarification of roles and responsibilities and the mechanisms of power-sharing are important for optimizing park development. The best arrangement might therefore involve the identification of a separate development management

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developer; under a build-operate-transfer project, the public sector grantor grants to a private company the right to develop and operate a facility or system for a certain period. It is important to note that PPP project are successful when there is a robust feasibility study has been undertaken that proves it is viable (financially, environmentally and socially), bankable, value for money and affordable (for end users, for the contracting authorities and in terms of fiscal and contingent exposure to the MoF).

[5] One alternative involved the support of the Japan International Cooperation Agency for the development of the project, after which the government could directly lease it out. The Japan International Cooperation Agency could provide soft loans at 3 percent to 4 percent with a longer repayment period.

[6] However, the creation of such an authority is a long process and requires legislation that may require years of parliamentary deliberation.

[7] The Land Lease Rules and Regulations 2018 is the revised version of Land Lease Rules and Regulations 2009 and provides detailed terms and conditions about FDI and local investment leasing rules. The new regulations also address socioeconomic considerations during the leasing process.

team at the Ministry of Economic Affairs. A successful industrial park requires a certain degree of autonomy in local and zone management, coupled with clear objectives and a sound benchmarking system. For instance, in Bangladesh, legislation in 2010 established the Bangladesh Economic Zones Authority under the guidance of the Prime Minister's Office. Current government business policy in Bhutan provides for the establishment of an independent and autonomous business infrastructure development authority under the Ministry of Economic Affairs (GNHC 2014). However, the gross national happiness perspective embodied in the institutional arrangement proposed in the business policy document (GNHC 2014), namely, the business infrastructure development authority, may not be an appropriate parks authority because of capacity constraints and timing issues. Meanwhile, the creation of a special agency to monitor and manage industrial parks would require legislation to set the rules of behavior and of autonomy. The setting up of legislation will involve many years and lead to a delay of activity, perhaps even more than five years. The best arrangement might therefore involve the identification of a separate development management team at the Ministry of Economic Affairs.

## B. Liberalization of the FDI policy regime

10. **For the government to be successful with industrial park development, it is important to attract FDI.** The government is currently revising the FDI policy to encourage the movement of more capital into the country. This is important as it will support the park development. The FDI law was amended in 2014. Further revisions will be necessary to ensure that the simplification of the regulatory regime supports the inflows of foreign capital. The revisions will be important for the success of the industrial parks in Bhutan. The critical FDI policy areas under revision are (a) a reduction in the investment minimum allowed; (b) streamlining approval processes, (c) the liberalization of foreign currency restrictions, and; (d) facilitating provision of business visas for investors, including the rules on hiring foreign managers and workers.[8]

## C. Attracting the private sector to the industrial parks

11. **The current policy will need to consider a transition process regarding a future private developer for the industrial parks.** The current policy states that "the Royal Government shall facilitate provision of basic infrastructure facilities, i.e., roads, power, water, and telecommunication facilities up to the boundary of the business area . . . the developer shall be responsible for providing the required infrastructure facilities inside the facility and to the enterprises therein" (GNHC 2014, 3–4). In order to attract a long-term developer, there are five possible models: (a) a PPP according to the private participation in infrastructure framework policy, (b) fully privately owned, (c) fully government owned, (d) a joint venture between the government and the private sector, and (e) an FDI entity according to the FDI policy.

12. **The most likely solution in Bhutan would be a government-owned zone in which the government would act as regulator and operator in the early stages and then transition toward a more private model.** Many emerging markets have had difficulty with PPPs and it will take Bhutan to develop the expertise to handle PPP arrangements. The experience with PPP approaches reveals that misunderstandings between public and private actors, especially

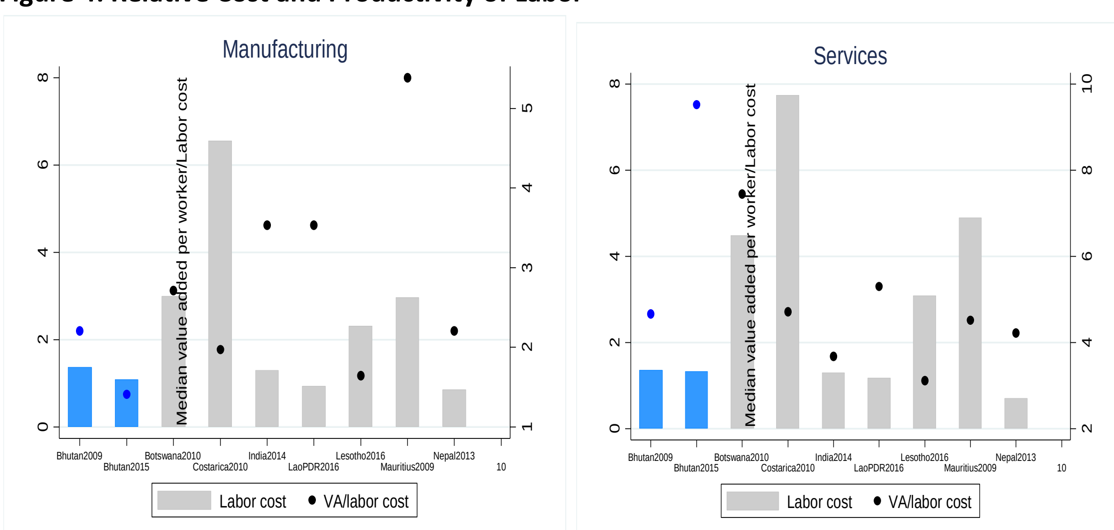
[8] Under the current policy, a foreign company investing in Bhutan faces currency restrictions in investment and the repatriation of profits. The government is considering the relaxation of the foreign exchange provisions, which would allow investment and profit repatriation in local currency.

around fiscal risk, coupled with poor communication and long procurement delays, have tended to hamper PPP projects.[9] The Government's recently articulated PPP policy is a good beginning in that it states explicitly that PPP is a contract between an institution and a private party where the private party renovates, constructs, operates, maintains or manages an asset to provide a service in whole or in part, in accordance with specified output specifications. Supportive business environment

## D. Business Environment and Competitive Value Chains

13. **The government will need to maintain the country's competitiveness in the value chains, which will be an important parameter to define the success of industrial parks.** The success of value chains translates into park success. The current lack of export diversity means that local entrepreneurs encounter difficulties in expanding into new product categories unless agricultural or industrial value chains are associated with supply chains that make exports to regional markets profitable. Given the inability of local entrepreneurs to compete with bigger economies because of the higher local per unit costs, businesses need to focus on niche markets and develop specialized products for export. One advantage of the Bhutanese economy is the cost of labor in the industrial estates, which is significantly lower relative to the costs of labor among competitors, although productivity is also lower (figure 4). Skills training among workers will be required to reach competitive wage and quality standards. Agribusiness is one possibility, although there are challenges: outside distinct niche activities, most agribusinesses in Bhutan are microenterprises that operate as sole proprietorships and do not produce for export.

**Figure 4: Relative Cost and Productivity of Labor**

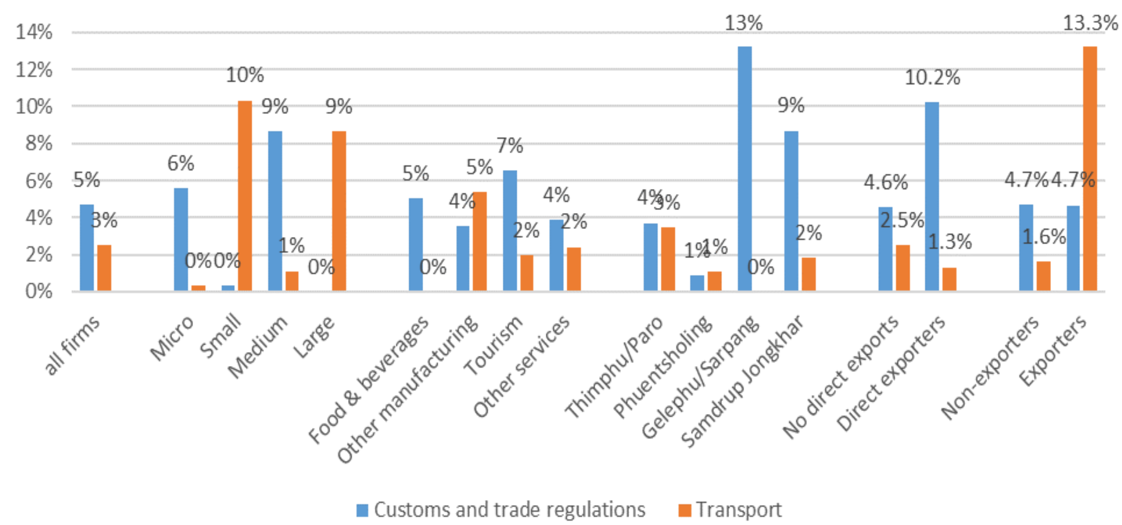



*Source:* Santini, Tran, and Beath 2017. For data availability reasons, the table measures cost efficiency not worker value added.

[9] Although landlocked, Bhutan could follow the model of the Aqaba Special Economic Zone in Jordan. In that case, the infrastructure (the port) was owned by the government, but a private agent was responsible for providing services. In Jordan, rather than immediately entering into a long-term PPP, the government relied on a management contract, whereby the private sector actors would be responsible for providing management services, but not any port infrastructure. The two-year contract gave the government the possibility of evaluating the performance of the private partners and testing the commercial and operational viability of the PPP model.

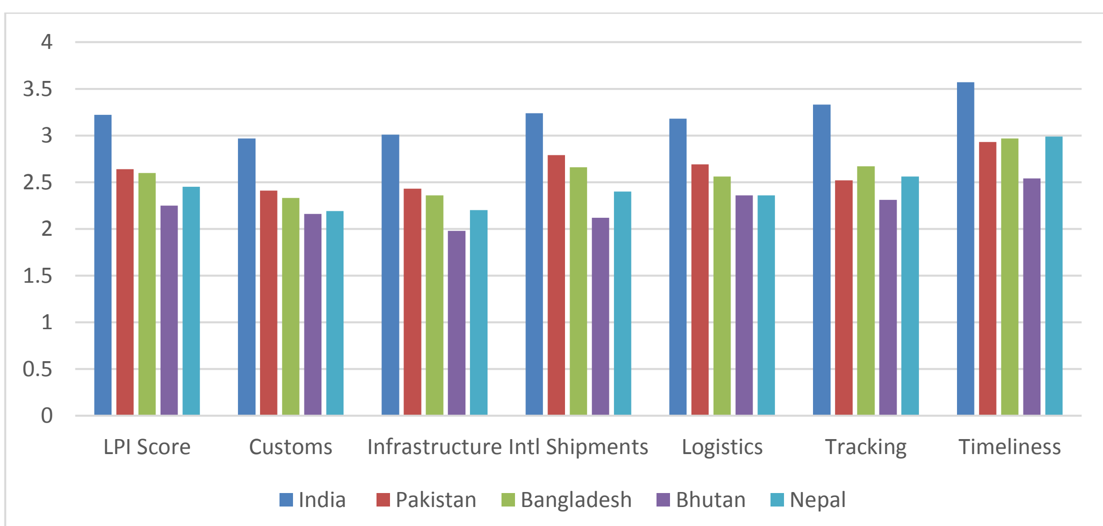
14. **Effective and affordable logistics is important for export industries.** Evidence worldwide indicates that poor trade logistics—slow and inefficient transport, border delays, and inadequate communication—tends to penalize firms that rely on imported inputs or that export. Figures 5 and 6 document the logistics challenges faced by Bhutan. The Ministry of Economic Affairs should encourage the development of industrial and logistics clusters along existing and planned corridors. Companies in Bhutan used to export mainly agricultural and forestry products, but, more recently, there has been a surge in energy-intensive light manufacturing products, including ferroalloys, nonferrous metals, and miscellaneous manufactured goods. The success of the policy will depend on the competitiveness of these selected value chains.

**Figure 5: Firms Reporting Customs and Trade Regulations or Transport as the Biggest Obstacles**




*Source:* Santini, Tran, and Beath 2017.

**Figure 6: Aggregated Logistics Performance Index, 2012–18**



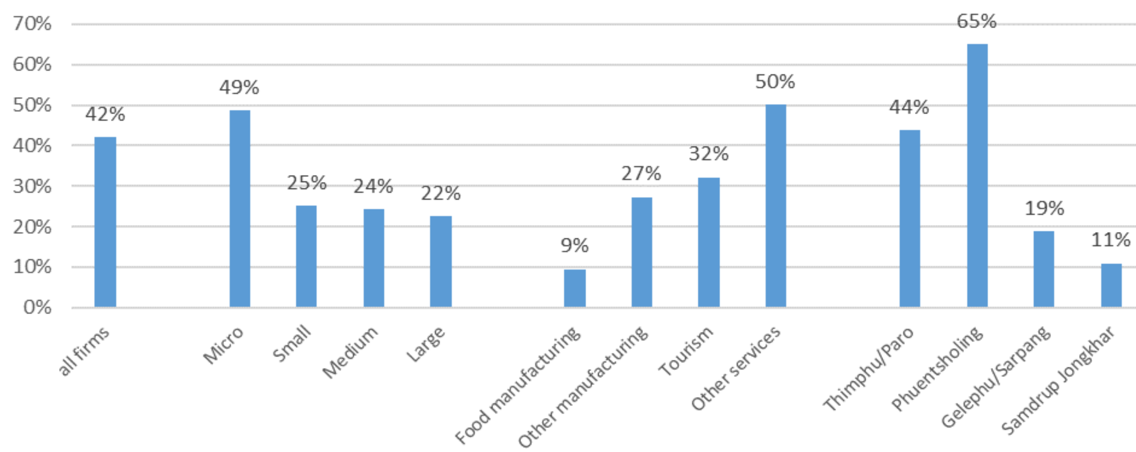

*Source:* Santini, Tran, and Beath 2017.

15. **Infrastructure assessment will be required in the new industrial parks.** Most goods are currently transported from Bhutan to or through India via the roads, railways, airports, and ports (principally the Port of Kolkata) of the Indian transport system. A recent memorandum of understanding between the governments of Bhutan and Bangladesh provides that goods may be transported over Bangladeshi waterways, thereby reducing transport costs. The roads between the industrial parks and Phuentsholing will also support the export corridors.

16. **The lower energy costs relative to its neighbors is an advantage of Bhutan.** The success of the four new industrial parks will depend on power supply. Many of the manufacturing industries in the industrial parks, such as ferro-silicon, iron, steel, and chemicals production, are highly energy intensive and require adequate energy supplies to expand.

17. **Capital constraints may influence the location of firms in the industrial parks.** The cost of capital in Bhutan has been high. Average interest rates are close to 11 percent to 14 percent. Access to finance is thus one of most important investment barriers among most domestic firms. In Asia, all growing firms, especially small and medium enterprises, typically need additional resources to purchase new equipment, upgrade technology, improve buildings, and buy land. Small firms often do not have access to sufficient formal financing. Even if financing is available, the lack of adequate collateral and poor credit ratings may hinder loans.

**Figure 7: Firms Indicating Access to Finance Is the Biggest Obstacle**




*Source:* Santini, Tran, and Beath 2017.

## IV. Lessons from Bhutanese and International Experience

18. **A review of the experience of industrial parks in Bhutan provides us several lessons.**

**First, the idea has potential, but it is important to have a phased approach to ensure that the work is done based on investor interest and appetite.** It is important that costs be contained to ensure a congruence between supply of zone facilities and market demand. When Pasakha became the first and biggest industrial estate in the country, in 1988, there was some skepticism that it would be successful. However, over time, more than more than 20 large and medium scale industries are now housed in the vicinity. The two biggest plants, Bhutan Ferro Alloys and Bhutan Carbide and Chemicals Limited, were established in the early 1990s, and many others have followed. Pasakha was ideal for mineral-based industries due to proximity to raw materials and proximity to international borders.

**Second, there has been an issue of scale.** Pasakha is not big enough, the terrain is steep, and there is insufficient usable land. Also, several of the firms have not been viable due to economies of scale affecting occupancy rates, which were usually high at more than 75 percent. Some firms were forced to leave and others to merge. For example, Lhaki Steel, Pelden Thermex TMT and Druk Iron and Steel, the three major steel manufacturing companies now operate as one entity.

**Third, designing the power tariff was a challenge.** Many of the industries in Pasakha claimed that there was a significant increase in the power tariff to levels which were not profitable for the companies. For example, in October 2013, Bhutan Electricity Authority (BEA) approved an increase of energy charge that was not favorable to industry. Many of the ferrosilicon industries pay millions in electricity to Bhutan Power Corporation Limited.

**Fourth, the area has environmental challenges and significant flooding.** An earlier flood in 1996 had washed away tons of raw materials and damaged factory premises. In 2000, a flash flood occurred, damaging infrastructure and one of the important bridges bringing raw materials to the zone. This also affected the transport of workers to Pasakha. The riverbed at Pasakha must be dredged every year to keep the level of the water lower than the retaining walls.

**Fifth, in industrial parks and tech parks, it is important to market early on and get anchor investors. Thimpu** Tech Park did not start favorably as there were many vacancies, and the Singaporean investors lost interest in the project. However, when US online photo company Scan Café scaled up its 20-strong pilot project in 201415, more than 10 international companies followed, specializing in telecoms, business process outsourcing and online data.

**In sum, there are several lessons from the existing experience.** First, it is important to get private investment but to target FDI as well to get a certain industry quality and scale. The existing zones were insufficiently marketed to foreign investors. In the case of Thimpu Tech Park, good wages and cheap electricity and rent were not enough until they were complemented with a flagship anchor investor – Scan Cafe. Second, it is key to pick good sites with abundant land and have in place mitigation measures to deal with environmental concerns. Third, it is key to have a "plug and play" model with subsidized utilities in the beginning to give firms incentive to relocate.

**Box 1. Zone Success: International Experience**

**The review of industrial estates should consider the various factors that have helped some zones succeed, while others have failed.** The review should draw on the extensive experience of Bangladesh, China, Mauritius, and other economies. First, the institutional strength of the zone management and supervisory authority has been paramount. The success of the Bangladesh Export Processing Zone Authority in developing garment exports in Bangladesh and of the Economic Development Board in Singapore are prominent examples. Second, a World Bank survey finds that, among the characteristics driving the economic dynamism of specific zones, two stand out: zone size and the technological components (Farole 2011). According to the analysis, larger zones have performed better than smaller zones, and lower-technology, labor-intensive zones have been more economically dynamic than high-technology counterparts. Third, success is based on the proper planning of facilities, such as zoning and the provision of roads, water, electricity, and administrative support. Fourth, zones near big cities and large markets do better because of the advantages of agglomeration economies, while zones far from markets and transit corridors are less likely to succeed. Fifth, success is strongly correlated with investment promotion activities. Sixth, macroeconomic stability and a transparent regulatory framework matter more than special packages of fiscal and nonfiscal incentives. Seventh, microeconomic costs, especially transport, energy, finance, and logistics are important to the success of supply chains. Eighth, lack of political interference in day-to-day operations is critical.

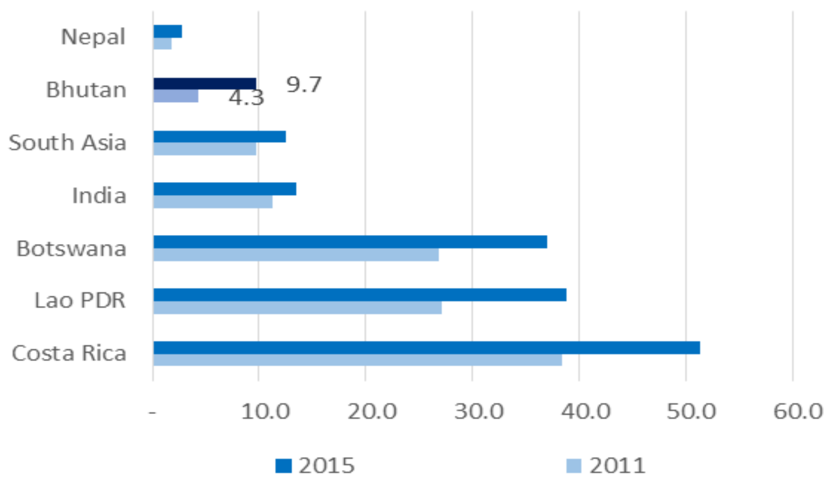
Dinh et al. (2013) find that the experience of China with industrial parks can be replicated. A combination of strong entrepreneurship, creative solutions to binding constraints, and supportive public policy can foster successful, scalable industries. Government support for promising clusters can work, provided the public sector helps firms address some of the constraints they face, including the availability, cost, and quality of inputs, access to industrial land, access to finance, trade logistics, technical and management entrepreneurial capabilities, and worker skills. Government policy in Bhutan should avoid repeating some of the mistakes in India, where the land allotted for parks is underused and often misused. According to a report on the performance of the industrial parks in India (CAG 2014), only 152 of the 392 notified parks are operational because developers have not undertaken any investment in the park land allotted to them for two to seven years. Empirical evidence shows that, in West Bengal for example, around 96 percent of park land is lying vacant. Developers in many parts of the world are using land for speculation or commercial purposes.

## VI. Conclusion

**The road map for Bhutan will need to be based on the revised business infrastructure policy, as well as the revised FDI policy.** The industrial parks can be successful if there are good incentives for private sector and foreign investors to participate and if they can overcome the financial, logistics, and infrastructural challenges. The government and Bhutanese businesses should seek to develop export value chains for niche products along critical corridors and improve the integration of Bhutan in the world economy.

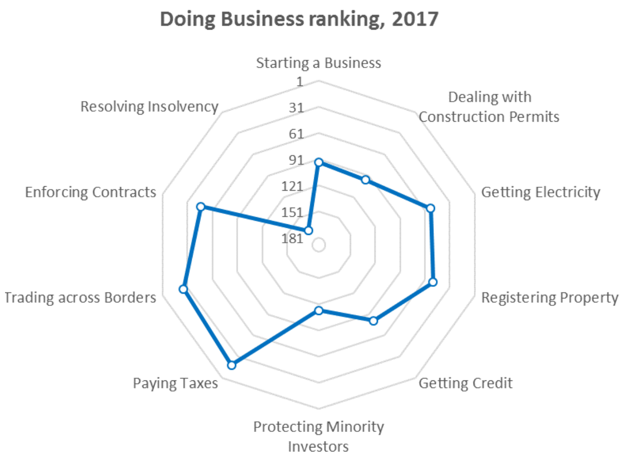
**Annex A**

**Table A.1: FDI Stock Comparison**
*% of GDP*




*Source:* Santini, Tran, and Beath 2017.

**Table A.2: Doing Business, 2017**




*Source:* World Bank 2017.

**Annex B: Government of Bhutan Definitions**

*Agricultural free zone*: land designated for agricultural purposes to foster the preservation and development of farming activities and farm enterprises, including holding and fattening facilities for cattle

*Application*: the application submitted by a developer for a developer license

*Authority*: the Business Infrastructure Development Authority

*Business entity*: any entity satisfying the requisite incorporation and legal status requirements for designation as a developer or enterprise

*Customs*: the Customs and Excise Division of Bhutan of the Department of Revenue and Customs

*Customs director*: the director, Department of Revenue and Customs, or any official to whom the customs director may delegate functions granted to him

*Development Lease*: a lease granted by the authority to an approved developer

*Domestic tariff area*: any area in Bhutan that does not have duty-free status

*Developer*: any business entity entitled, by virtue of holding a valid developer license issued by the authority, to promote, develop, and operate a business area

*Developer license*: a license issued by the authority to a promoter to promote, develop, and operate a business area

*Dry port*: an inland intermodal terminal connected by road or rail to a seaport and operating as a center for the transshipment of sea cargo to inland destinations. In addition to their role in cargo transshipment, dry ports may also include facilities for storage and the consolidation of goods, maintenance for road or rail cargo carriers, and customs clearance services

*Education park*: infrastructure facilities for the establishment and development of an education center as a key development focus

*Enterprise*: any business entity operating a business within a business area

*Export processing zone*: a designated area located physically or administratively outside a customs territory with incentives predominantly oriented toward export production

*Industrial estate*: a tract of land subdivided and developed according to a comprehensive plan with provisions for basic infrastructure and utilities with or without prebuilt factory buildings

*Information technology parks*: areas to which information technology–related knowledge and service industries are attracted and supported through the provision of buildings, general and industry-specific infrastructure, and business support services

*Management committee*: the committee constituted for the administration and management of a business area

*Ministry*: the Ministry of Economic Affairs

*Project lease*: a lease or sublease granted by a developer under the powers set out in the development lease

*Royal Government*: the Royal Government of Bhutan

*Special economic zone* (SEZ): a part of the territory of the state where any goods introduced are generally regarded, insofar as import duty and taxes are concerned, as located outside the customs territory and not subject to the usual customs control

*Technology park*: an area with high-quality infrastructure dedicated to scientific and technological research on a commercial basis; other terms that are used synonymously include research parks and technopolis

*Tourism development zone*: designated land with defined boundaries that is suitable for development as an integrated resort complex—such as, but not limited to, sports and recreation centers, accommodations, convention and cultural facilities, food and beverage outlets, commercial establishments, and other special interest and special attraction activities or establishments—and that is provided with roads, water supply facilities, power distribution facilities, drainage and sewerage systems, and other necessary infrastructure and public utilities

*Source:* GNHC 2014.

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