

RESEARCH NOTES
INTERCONNECTED REALITIES: ANALYZING SOCIO-ECONOMIC TIES
BETWEEN INDIA AND BHUTAN

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Introduction

The interconnected socioeconomic relations between India and Bhutan are an important part of South Asian regional dynamics, as illustrated by historical, geographical, and cultural ties. Over the years, both countries have developed an expansive partnership that includes commerce, investment, infrastructure development, and technology collaboration. This alliance is built on a shared commitment to mutual prosperity, socioeconomic growth, and regional stability. In this context, examining the complex dynamics of their socioeconomic relationships yields useful insights into the potential and problems inherent in their collaboration. The Indo-Bhutanese connection is built on centuries of cultural and religious ties, as seen by the two nations' long tradition of spiritual exchange and pilgrimage. The Treaty of Friendship signed in 1949 by India and Bhutan established the official basis for diplomatic ties, consolidating a tight relationship based on non-interference, mutual assistance, and security cooperation (Sarkar, 2012). Since then, bilateral connections have grown in a variety of areas, including commerce, investment, infrastructure development, education, and cultural interaction. Rapid globalisation, technological improvements, and altering geopolitical dynamics have all contributed to substantial changes in India's and Bhutan's socioeconomic landscapes in recent decades (Sherpa, 2013). Against this backdrop, the intertwined reality of their socioeconomic connections has gained prominence, reflecting not only bilateral dynamics but also wider regional and global tendencies. Bhutan's strategic location in between India and China adds a geopolitical dimension to the relationship, impacting economic cooperation, security concerns, and regional stability (Singh, 1978).

The current research project aims to dive deeper into the complexities of India and Bhutan's socioeconomic connections, focusing on three main dimensions: infrastructural development, financial cooperation, and technology transfer. Bhutan's pursuit of technical improvement demonstrates its dedication to promoting innovation and progress in the face

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of changing global problems. At the centre of this journey is a strategic partnership with India based on mutual collaboration, shared values, and a common goal for socioeconomic progress. Over the years, India's support has played an important role in defining Bhutan's technology environment, catalysing revolutionary projects in a variety of areas. This article seeks to dive deeper into the intricacies of this collaboration, providing a comprehensive analysis of Bhutan's technical progression and the several ways in which India's help has contributed to its progress. This study aims to unravel the underlying mechanisms driving bilateral cooperation, identify emerging trends and challenges, and propose strategic interventions for fostering long-term socioeconomic development and regional integration by looking at these dimensions through a multidisciplinary lens. Understanding the complexity of the India-Bhutan relationship is critical given the changing regional dynamics in South Asia and beyond. This study aims to contribute to the current body of knowledge on bilateral relations by empirical analysis and theoretical investigation, providing insights that may shape future policy making, academic debate, and diplomatic interactions between India and Bhutan. As Bhutan navigates the intricacies of the digital era, the long-standing connection between India and Bhutan serves as a light of hope, revealing a route to a future in which technology is used for the greater good of mankind. Bhutan is positioned to harness the limitless potential of technology via collaborative efforts and creative leadership, ushering in an age of wealth, growth, and promise for future generations.

RESEARCH QUESTIONS

1. How does the strategic development of infrastructure between India and Bhutan influence bilateral trade patterns, market access, and economic integration within the region?
2. What are the key drivers and implications of financial cooperation initiatives between India and Bhutan in fostering economic resilience, sustainable development, and fiscal stability?
3. How do collaborative efforts in technology transfer and innovation ecosystems contribute to enhancing Bhutan's technological capabilities, fostering entrepreneurship, and promoting sustainable development?

OBJECTIVES

1. Assess the impact of infrastructure projects on trade and propose measures to enhance connectivity.
2. Evaluate financial cooperation's effectiveness and suggest strategies for sustainable development.
3. Analyse technology transfer's role and recommend ways to foster innovation for socio-economic growth.

HYPOTHESIS

1. There is no improved infrastructure development between India and Bhutan that leads to reduced bilateral trade volume and diversity.
2. There are no effective financial cooperation initiatives between India and Bhutan that result in limited economic resilience and sustainable development in Bhutan.
3. There is no enhanced technology transfer and innovation ecosystems that hinder long-term socio-economic growth in Bhutan.

RESEARCH METHODOLOGY

The study will use a qualitative research approach to investigate the entwined socioeconomic linkages between India and Bhutan. Qualitative methodologies will provide a better grasp of the complexity, perceptions, and experiences of key actors in the bilateral relationship. This study will be undertaken using document analysis, which will include a comprehensive assessment of official documents, policy reports, academic papers, and press coverage relating to India-Bhutan relations in order to supplement interview findings and provide context. Comparative analysis techniques will be used to analyse and contrast outcomes from various sources of data, including documents, case studies, and expert consultations. This will help us to identify parallels, variances, and trends in India-Bhutan relations throughout time and across industries.

RESULTS AND DISCUSSION

The geopolitical circumstances in the region impacted British policy towards the Himalayan kingdoms. Bhutan, a weak power area, has been a source of competition between the British (and since 1947, Indian), Tibetans, and Chinese. Its strategic location on the edge of the communist empire puts it in the centre of power politics. Parts of Bhutan's land in the Great Himalayan area are claimed by Communist China, and the border has been more tense in recent years (Karan, 1963). The primary goal of Britain's Himalayan strategy was to fortify India's traditional northern frontiers. This doctrine considered that Russia posed the most serious danger to India's northern frontiers. This was partially addressed by establishing a ring of protected and dependent states around the North-West Frontier. (Chester, 2002). Bhutan receives all of its foreign assistance from India. In recent years, India's economic aid has totalled around Rs. 310 crores yearly. Fearful of global power politics, India has prohibited direct economic aid agreements between Bhutan and foreign nations, which may entangle the little kingdom in links with outside powers and jeopardise its progress towards political and social stability (Karan 1963). Despite Chinese propaganda and provocation, India and Bhutan have the most amicable ties. (Poulose, 1971). On September 26, 1958, the two-day conversations between Nehru and King Wangchuk focused on Bhutan's economic growth. Nehru emphasised the necessity for further road construction

between India and Bhutan, as well as inside Bhutan itself. He reiterated India's willingness to provide technical and other types of help (Sarkar, 2007). Following Jigme Dorji, Bhutanese Prime Minister visit to New Delhi on September 1959, India offered to give financial and technical assistance for the construction of five all-weather highways.

Bhutan's first five-year plan (1961-1966) was completely funded by India. The entire Indian expenditure was approximately Rs 101.2 million (refer to table 1).

TABLE 1

Indian Expenditures Allocated to Bhutan During the 1961-1966 Five Year Plan

Project	Expenditure in Rs Crore
Roads	62.00
Education	10.00
Transport	7.50
Health	3.20
Forest Conservation	3.20
Agriculture	3.20
Power	2.00
Animal Husbandry	1.60
Industries	1.50
Industries	1.10
Miscellaneous	9.10
Total	Rs 101.20

Source: Adapted from information obtained from the Information Service of India, Political Office, Gangtok, Sikkim, July 5, 1968, p. 5.

In addition to the funding offered to Bhutan under this scheme, the Indian Border Roads Organisation invested Rs 300 million on road development in the Kingdom.

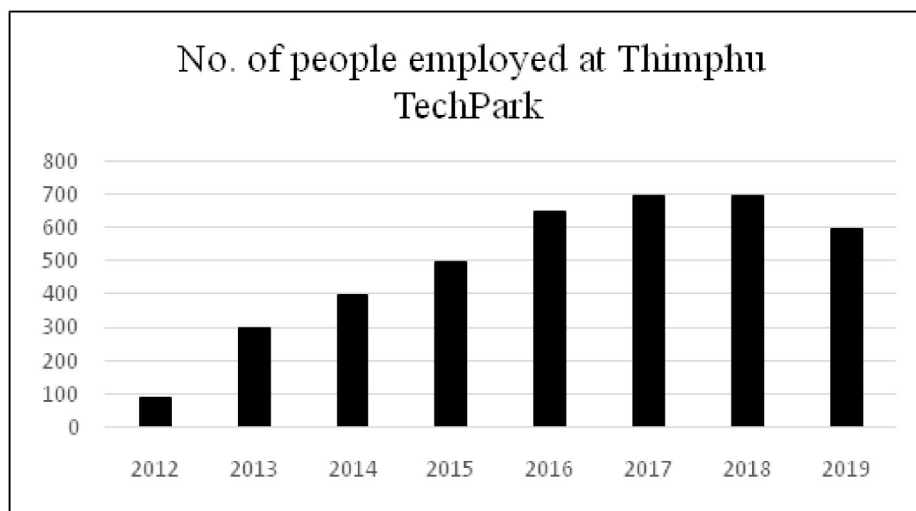
A second five-year plan (1966-1971) with a total expenditure of Rs 200 crore was also fully supported by India. The primary areas of investment under the proposed scheme were public works, agriculture, education and health. A third five-year plan (1971-1976) prioritises education, agriculture, and public health, with some funds allocated to small-scale cottage companies. India's first contribution to the third plan was Rs. 47.2 million. (Belfiglio, 1972)

From the first to the tenth Five Year Plans, the focus has been on attaining broad-based and sustainable growth, enhancing the quality of life, conserving the natural environment, maintaining the country's rich culture, and promoting good governance (Rajesh, 2000). These have been the themes and spirit of all of the country's Five-Year Plans since development efforts began. India aims to support Bhutanese educational development efforts. Prior to 1961, the nation had 36 lower elementary schools and 23 upper primary schools, with around 2,500 students enrolled. In 1970, there were over 200 schools serving about 16,000 pupils, including one teacher training school and one teacher training institution. In addition, 500 Bhutanese students were trained in India. Over 400 Bhutanese students received scholarships through Indian help provided by the Bhutanese government or directly from India. With the start of the first Five Year Plan, Bhutan's government formed its very own health department. Prior to the Plan's adoption in 1961, the country had just 11 dispensaries and 5 hospitals, with only two hospitals employing physicians. Since 1961, the facilities of these institutes have expanded, and all now employ trained physicians. Bhutan now runs three leprosy institutes, five hospitals, and 40 dispensaries. Malaria, TB, leprosy, goitre, and venereal disease are all being eradicated through major campaigns. Malaria is said to have been eliminated in the south. Water supply schemes for crucial Bhutanese towns have been established, and several nurses and chemists have gotten training in both India and Bhutan. With the first Five Year Plan, Bhutan's government established a Department of Agriculture. The Department has built a considerable number of model agricultural research stations. Bhutan's agricultural sector is mostly based on small farms, and the Agricultural Department is working to expand fruit and vegetable farming. In 1971, the Department of Animal Husbandry established eight livestock farms, a mithun breeding centre in the eastern part of Bhutan, two sheep breeding farms, and six veterinary clinics, one of which is a mobility pharmacy. Bhutan has extensive forest reserves, and geological assessments conducted by Indian scientists show that the Kingdom is endowed with a wealth of resources. Mineral resources abound, including coal, dolomite, graphite, gypsum, and limestone. Fertiliser and cement are made mostly from gypsum, coal, and limestone. The availability of petroleum and natural gas remains to be determined. Indian scientists believe the limestone has potential for use in cement production. The Chuka hydroelectric project is a shining example of Indo-Bhutan friendliness and cooperation. The project, an architectural wonder, was built nearly completely by Indian engineers and workers, while for Bhutan, it provided independence from power outages (Das, 2007). Bhutan, which is in the early stages of industrialization, utilises this electricity for household lights and a few mills. India receives more than 95 percent of its power. West Bengal has the biggest percentage (35%), while Sikkim has the lowest (1.5%). India's other hydropower

projects include the Kurichu Hydel Project (45 MW), the Santosh Hydel Project (1525 MW), and the Tala Hydroelectric Project (1020 MW). Indian help consists mostly of financial, project, and technical support. India's significant projects in Bhutan include the development of a large network of roads and airports, as well as the establishment of a broadcasting station. (Rajput, 2014).

" Bhutan Innovation and Technology Centre (BITC) in Thimphu TechPark is a Royal Government of Bhutan Ministry of Information and Communications project to foster national innovation and entrepreneurship. The establishment of BITC was supported by the Government of India, the aim and scope of this innovation was to provide workshops and training programme to Bhutanese citizens under the scope of cyber security, digital marketing and software development and it consists of three components: Business incubator, shared technology centre, and data centre. Infrastructure (Thimphu TechPark), Skills Development Programme (training 1,300 young people in ICT and ITES industry), and financial industry Strengthening via ICT Investments (created Inter-Bank Electronic Fund Transfer Clearing System, or EFTCS). The goal was to boost employment in Bhutan by promoting company growth in the ICT/ITES sector, improving ICT skills, and improving access to finance. In 2008, the Royal Government of Bhutan (RGoB) obtained a grant from the International Development Association (IDA) to fund the PSD Project. The Ministry of Information, Department of ICT & Telecom, and Communications, invited proposals to design, own, build, finance, transfer, and operate (DOBFTO) the ICT Park in Babesa, Thimphu, using the PPP approach. The ICT Park initiative aimed to attract international enterprises and create job opportunities for Bhutanese youth, while also boosting the country's emerging ICT industry. In 2010 and 2011, the Project Implementation Agency Team from the Ministry of Information and Communications, with financial aid from the World Bank, undertook promotional trips and road shows outside Bhutan. Thimphu TechPark provides optimism amid Bhutan's young unemployment crisis. Since 2010, the young unemployment rate has steadily increased, reaching 15.7% in 2018, up from 12.3% the previous year. The government has considered sending young people to work abroad, including Japan, Kuwait, and the UAE. However, this short-term approach is detrimental to both the youth and the country in the long run. Over the period of 2012-2019, more than 600 Bhutanese have found direct work at Thimphu TechPark (see Figure 1).

Figure 1: Number of Bhutanese employed at Thimphu TechPark.



Source: Dr Tshering C. Dorji, The Role of Thimphu TechPark in Bhutan's Technological and Socio-economic Advancement. The Druk Journal.

Digital Drukyl. Influenced by His Majesty's vision, the Royal Government of Bhutan (RGoB) initiated a coordinated, comprehensive, "Whole of Government" (WoG) programme to use ICT will be used to adequately provide end-to-end online services, and guarantee that residents, regardless of place of residence, have fair access to public services by the completion of the 12th Five-Year Plan. The government's flagship initiative, Digital Drukyl, was built with the problems learnt from previous projects in mind, with the aim that the services will meet, if not surpass, our residents' expectations (Tenzing, 2020). This platform is projected to significantly increase inhabitants' access to services, particularly in distant communities. It is also intended to improve business by enabling legally enforced identities that can be used to generate trust online, which is vital for buying and selling online. It is predicted that digital identity would become a central platform for many additional services in Bhutan that require identity authentication. One of the most important consumers of digital identity may be financial institutions, who may utilise this platform to provide e-KYC (electronic Know Your Customer) services, eliminating the need for clients to physically show themselves to create bank accounts. It is also planned that the WoG Biometric technology would be used to monitor border crossings. As a result, it will be built as a Whole of Government platform, accessible to all government entities that provide such services.

CONCLUSION

As Bhutan develops as a global technology actor, the convergence of strategic

relationships and regulatory frameworks, together with India's assistance, outlines a path of substantial socioeconomic transformation. The complicated interaction of capacity-building efforts, infrastructure development, information exchange, and policy reforms has driven Bhutan towards a bright future based on innovation, resilience, and sustainable development. The Bhutan Innovation and Technology Centre (BITC), which exemplifies this synergy, serves as a beacon of innovation, cultivating a generation of tech-savvy entrepreneurs who will catalyse Bhutan's digital revolution.

The approach of information sharing and collaboration deeply embedded in India-Bhutan cooperative research undertakings is critical to Bhutan's technological advancement. These relationships, which reflect shared ambitions and mutual respect, have fostered an innovative culture, resulting in advances in renewable energy, biotechnology, and climate resilience. Bhutan has used efforts such as cooperative research collaborations and technology transfer agreements to tap into the combined expertise of Indian and Bhutanese scholars, driving the country to the forefront of technical innovation. Furthermore, Bhutan's march towards technological modernization is supported by strong policy frameworks that were methodically created in partnership with India. Bhutan's National Technology Policy, a monument to this partnership, lays forth a vision for technology growth based on values of inclusion, sustainability, and ethical governance. This policy framework, strengthened by India's knowledge, sets the groundwork for a thriving ecosystem of innovation, entrepreneurship, and responsible technology use, guiding Bhutan towards a future based on technological sovereignty. Indeed, the economic benefits of Bhutan's technological rebirth are numerous, as seen by the transformative influence of technology parks and innovation centres. Thimphu Tech Park (TTP), an example of India-Bhutan partnership, acts as a breeding ground for technological innovation, nurturing a vibrant ecosystem of startups, SMEs, and multinational enterprises. TTP's synergistic alliances and investment incentives have catalysed economic diversification, job creation, and knowledge dissemination, establishing Bhutan as a regional powerhouse for technology-driven innovation. In conclusion, the tapestry of Bhutan's technological change, stitched with threads of collaboration, ingenuity, and vision, exemplifies the long-standing spirit of partnership between India and Bhutan. As Bhutan begins on this revolutionary journey led by the ideals of sustainability and inclusion, India's assistance legacy shines as a light of hope, revealing a route to a future in which technology is used for the greater good of mankind. Bhutan is set to harness the unlimited potential of technology through collaborative effort and creative leadership, ushering in a period of wealth, growth, and hope for future generations.

The approach of sharing knowledge and working together entrenched in India-Bhutan cooperative research efforts is vital to Bhutan's technical advancement. These relationships,

which represent shared ambitions and mutual respect, have fostered an innovative culture, resulting in advances in renewable energy, biotechnology, and climate resilience. Bhutan has used cooperative research projects and technology transfer agreements to use the pooled expertise of Indian and Bhutanese researchers, bringing the country to the forefront of technical innovation.

In conclusion, the growing significance of bilateral relations between India and Bhutan highlights the transforming interest of friendship and collaboration towards building a better world for future generations. Through an intersection of culture, history, education, and technology, India and Bhutan have established a relationship founded on mutual respect, trust, and understanding, defining the groundwork for a future marked by peace, prosperity, and shared wealth. As they begin on this journey hand in hand, India and Bhutan are set to meet the challenges of the twenty-first century, led by the everlasting values of friendship, fraternity, and goodwill.

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