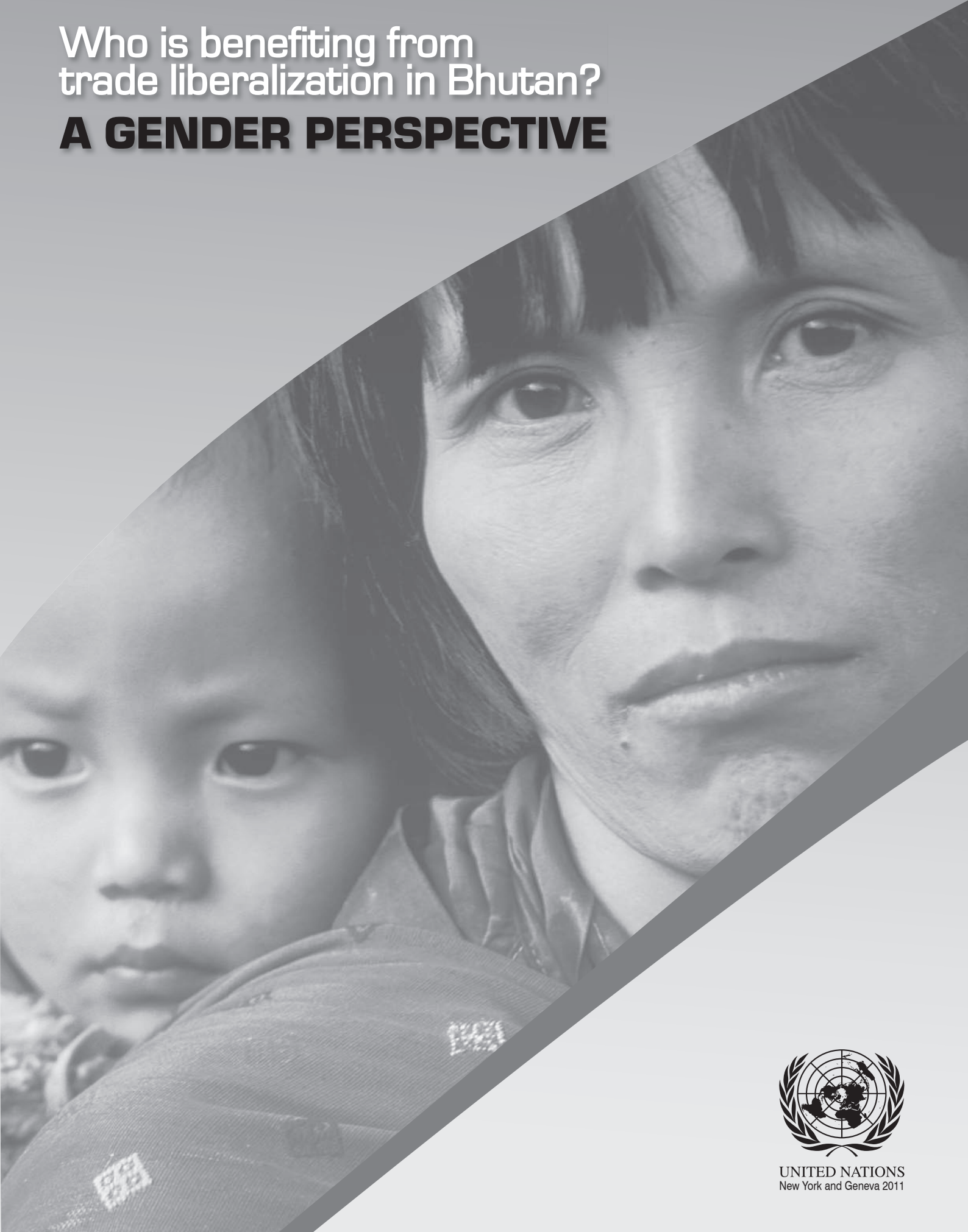


Who is benefiting from
trade liberalization in Bhutan?
A GENDER PERSPECTIVE



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This study was prepared by Irene Musselli, Simonetta Zarrilli, Mona Froystad and Sarah Houghton from UNCTAD's Trade, Gender and Development Unit, in collaboration with Professor Guido Porto from the Department of Economics of the University of La Plata, Argentina. The overall work was coordinated by Simonetta Zarrilli. Invaluable support was provided by the Royal Government of Bhutan, in particular the Ministry of Economic Affairs, which generously shared data, official documents and reports with UNCTAD. Precious support was provided by the United Nations Resident Coordinator Office and the Office of the United Nations Development Programme (UNDP) in Thimphu, which ensured the coordination between UNCTAD and the Royal Government of Bhutan. The study benefitted from insightful comments and suggestions provided by Lisa Borgatti, Murray Gibbs, Alessandro Nicita and Yumiko Yamamoto.

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EXECUTIVE SUMMARY

Trade policies tend to have strong redistributive impacts, which favour some groups or individuals, while penalizing others. The aim of this report is to determine who would benefit from further trade liberalization or facilitation in Bhutan and, in particular, to analyse whether there is a gender bias in the gains from trade. The Bhutanese economy is characterized by a fair degree of openness in terms of import tariffs or quantitative restrictions, since the bulk of Bhutan's imports is sourced from countries with which Bhutan enjoys free or preferential trade. Similarly, major destinations of Bhutan's exports are countries where goods originating from Bhutan enter duty free or under preferential arrangements. Accordingly, in this study, trade liberalization is intended to broadly cover aspects of trade facilitation – in the areas of customs procedures, transport and standards compliance, for example. In these areas, Bhutan suffers from high transaction costs associated with customs clearance, transport bottlenecks and other non-tariff barriers (see chapter 2). Policies aimed at reducing these constraints would boost Bhutan's export competitiveness and have a significant trade-enhancing effect. The analysis is also relevant to assess the gendered impact of a reduction in most-favoured nation (MFN), or non-preferential, tariff rates, which are relatively high in Bhutan. The report also sheds some light on tariff liberalization in sectors of potential export interest to Bhutan, such as handicraft textiles.

A review of the documents of the Royal Government of Bhutan reveals a long-standing commitment to gender equality. Yet, there are still questions about how effectively these commitments have been translated into practice, particularly in the economic and trade domains. For example, it appears that gender considerations were not taken into account prior or during the negotiations of the trade agreements to which Bhutan is a party. The inclusion of a gender perspective in the design and implementation of trade policies is a way to give substance and meaning to commitments.

The conceptual framework underlying this study is that trade policies affect economies through their effect on prices of goods and factors of production and by their effect on government revenues. Three main effects on household can be discerned: (a) the consumption effect, which refers to the manner in which trade policies affect the price of the goods consumed by the house-

holds; (b) the income effect, which refers to changes in household income, including earnings, sales of agricultural products or any other goods, farm profits (if the household produces the goods) and other forms of income including government transfers; (c) the revenue effect, which refers to how trade policies affect government revenues and how those revenues are redistributed to households. The quantitative analysis was conducted in three steps. First, the analysis sought to measure the extent to which trade policies affect domestic prices of goods and factors of production. This included making estimations of or assumptions on the extent to which international prices affected the domestic prices of goods and factors of production. Estimations and assumptions were also made in an effort to determine to what extent trade policy affects government revenues. The second step was to identify and quantify the sources of income and the consumption basket for each household. This provided a measure of the dependence between household real income and changes in the price of a particular good or factor of production attributable to trade policy. Third, the price changes in goods and factors of production prompted by trade policies were mapped into each household's budget and income shares. This allowed for the calculation of any positive or negative effect of trade policy on the real income of the household. Results were then aggregated by the relevant dimension – region, gender, poor or non-poor – so as to better identify any subgroup that would gain or lose from the trade policy.

The main findings of the analysis are summarized below. Given that data was available and that most households, including female-headed households, work in the agricultural sector, a particular focus was given to this sector.

Hydropower resources and the mineral sector

Data from the *Labour Force Survey Report 2009* (Royal Government of Bhutan 2009a) show that only 1.1 per cent of the total population work in this sector, and only 0.4 per cent is represented by women. As a result, plans and policies related to this sector contribute to achieving economic self-reliance and overall socio-economic development, but have little direct effect on women's employment. There are nonetheless some important gender-specific aspects to consider. In particular, modern energy services would help women

meet their practical and educational needs. Women would also indirectly benefit from the expansion of this sector, via government spending and spillovers. Well-managed public spending can be translated into high-quality public services that can benefit the whole population, and women, in particular.

Similarly, the mineral sector offers few direct employment opportunities, especially for women. Only 0.2 per cent of the workforce is in mining and, within manufacturing, employment in cement-related industries is also negligible (Royal Government of Bhutan 2009a). As in the case of hydropower resources, there will not be sizeable quantifiable impacts on female employment. However, women would indirectly benefit from the expansion of this sector, via government spending and spillovers.

Manufactures and tourism

As in the cases of electricity and cement, available data do not allow to generate a meaningful quantification of the likely gender impacts of trade liberalization or facilitation in manufactures and tourism. Nevertheless, the inclusion of these sectors is important because of their potential source of growth for the country.

On aggregate, only 4.7 per cent of total Bhutanese employment is in the manufacturing sector (Royal Government of Bhutan 2009a). At first glance, this may indicate that trade liberalization or facilitation will have only small impacts at the national level. However, this aggregate picture conceals the dynamic potential of specific subsectors, such as textiles and handicrafts and agro-processing.

The *Bhutan Living Standard Survey Report 2007* (Royal Government of Bhutan 2007) indicates that almost half of the employment in manufacturing is in textiles. The textile sector has important gender-specific aspects, accounting for 85.7 per cent of all women employed in the manufacturing sector. The domestic market for traditional garments is sizeable, as all Bhutanese citizens must wear the appropriate national dress in all public areas. Bhutan's textile handicraft could expand significantly if certain conditions were met. It would first be necessary to establish trademark protection for the traditional textile designs. This will help reposition Bhutanese textile handicrafts as differentiated products of superior quality. A second key issue is to establish linkages with key tourist outlets, as well as with strategic off-takers in global supply chains: branded retailers, specialized wholesalers and traders.

Processing of fruit products in Bhutan also has significant potential, particularly if linkages with the tourism sector are operationalized, for example, food supplies to hotels and catering for meetings or workshops. This will be contingent on the ability of local suppliers to meet stringent food safety and quality standards, in addition to requirements for timely deliveries, as well as quantity and consistency of delivery.

Like textiles, tourism is a source of potential gains from trade. The promotion of community-based tourism and forms of ecotourism is viewed as an effective catalyst for poverty reduction, promotion of cultural heritage and environmental protection in rural areas (Royal Government of Bhutan 2009b). A survey on tourism in Bhutan presents evidence of a large proportion of women in employment (UNCTAD 2007), supporting the view that women may benefit from the expansion of this sector.

Agriculture

From an employment perspective, agriculture is the most important sector of the economy, absorbing 65.4 per cent of the total workforce and 72.1 per cent of the female workforce (Royal Government of Bhutan 2009a). The sector is particularly important from a poverty perspective, owing to a higher incidence of poverty in rural areas and low education levels among those engaged in subsistence farming.

The study identifies key agricultural products where the impacts of trade are first, potentially sizeable – and thus meaningful for analytical purposes – and, second, quantifiable in the following areas:

- Exports of potatoes, oranges, and apples, the major export crops in which Bhutan shows a revealed comparative advantage;
- Imports of paddy rice, the Bhutanese staple food, and the major imported crop, in which Bhutan has a comparative disadvantage.

The analytical framework used in this report implies that net producers of export goods, such as potatoes, oranges, and apples, and net consumers of imports, such as rice, will gain from trade. By combining trade and microsurvey data, the analysis attempts to identify and compare these net producers and net consumers: women versus male, rural versus urban, poor versus non-poor. By doing so, the report sheds some light on the potential beneficiaries of agricultural trade liberalization or facilitation in Bhutan and, in particular, whether there is a gender bias in the gains from trade. With specific reference to the major agri-

cultural exports and imports, the principal conclusions that emerge from the analysis are as follows:

- The Bhutanese population would stand to gain potential benefits from trade liberalization or facilitation in these commodity sectors;
- There appears to be little or no gender bias in the gains from trade;
- Trade liberalization or facilitation would have a pro-poor impact where potatoes and oranges are concerned, while it appears that non-poor households would benefit relatively more than poor households from an expansion of exports of apples. Import liberalization or facilitation in rice will benefit net consumers. Since the share spent on rice sharply declines with the level of household well-being, lower rice prices will have a pro-poor bias for net consumers. The impacts on net producers of rice were not documented. It is important to note that 75 per cent of farming households are engaged in rice production, and thus may be affected by a change in the price of rice due to trade liberalization.

Hence, the analysis highlights that Bhutan would benefit from further diversifying into higher-value commodities that have the most dynamic export potential: oranges, apples and potatoes. There are, however, some important concerns that should be taken into consideration.

First, the ability to expand export trade in high-value products will be contingent on overcoming supply-side obstacles at home, such as increasing productivity, boosting trade infrastructure and building human and institutional capacities, and meeting stringent entry and quality requirements in export markets. From a policymaking perspective, this calls for (a) the mobilization of internal resources (transfer of resources within the economy, across sectors) and (b) the pooling and alignment of external funds. A number of Aid for Trade initiatives, including the Enhanced Integrated Framework – can catalyse development assistance in support of Bhutan's efforts to develop the basic economic infrastructure and tools the country needs to expand its exports of apples, oranges and other high-value products. Where specific gender issues arise, it will be important to incorporate them in the design and implementation of support schemes, not to have mute supply-side responses to policy incentives. Policy options and models may also play a crucial role in integrating Bhutanese small agricultural producers, including women, in supply chains in

a sustainable manner. Examples of such policy options are outgrower schemes, supermarket and off-taker-driven supply chains, as well as supply chains facilitated by non-profit organizations. The feasibility of these options should be explored.

Enhancing women's participation in the production and export of agricultural and food products, including through the integration in international supply chains, would be contingent upon enhanced education and skill accumulation. This is of special importance, considering that 87 per cent of women who head households in rural areas have no schooling.

Second, questions arise as to how to reconcile a focus on dynamic export crops with considerations of food security, equitable development, biodiversity conservation and cultural heritage, which play a key role in the distinct development strategy of Bhutan. The integration of these aspects calls for a holistic approach that attempts to strike a balance and eventually unleash synergies between dynamic export sectors and traditional ones. A key component of this strategy is the creation of linkages between dynamic export sectors and traditional ones. High-value niches within the traditional sector should be identified – for example, the collection and sale of mushrooms, medicinal plants and plants for the extraction of essential oils. These niche sectors in agriculture can provide employment for women, and build upon their traditional knowledge. Synergies and complementarities should be established with other dynamic activities, for example, low-impact, high-value ecotourism.

The scope and reach of this report is limited by some methodological constraints.

First, the core analysis focuses on specific trade sectors (the major exported and imported agricultural commodities) for which the available microsurvey data allow to generate a meaningful quantification of the likely gender impacts of trade liberalization or facilitation. Due to lack of microsurvey data, the report does not provide an in-depth quantitative assessment of other sectors in which Bhutan is either currently competitive or where there is a potential to become competitive in the future, including high-value organic niche products, particularly forest-based products; handicraft textile manufactures; mineral waters; and community-based tourism and ecotourism. These are promising areas into which Bhutan may wish to diversify and broaden its economic and export base so as to generate quality employment, including for women.

Promoted and managed in a sustainable manner, these sectors and industries are also viewed as an effective catalyst for the conservation of the environment and the promotion of cultural heritage.

Second, the gender analysis in this report is limited in that it essentially discusses employment and income effects on female- versus male-headed households, while disregarding intra-household dynamics rooted in social patterns. For example, decision-making

processes and command over resources within the household and intra-household transfers are not discussed. This level of analysis – female- versus male-headed households – may overlook important features of the Bhutanese society such as forms of matrilineal society and polygamy, including both polygyny and polyandry. Yet, drawing on a quantitative model, the analysis provides important insights into the impacts of trade expansion on household welfare, with a focus on gender issues.

INTRODUCTION

Based on a quantitative approach, this report seeks to assess who would benefit from trade liberalization or facilitation in Bhutan and, in particular, analyse whether there is a gender bias in the gains from trade.

The report is structured as follows.

Chapters 1 to 3 provide a stocktaking and analytical background: Chapter 1 offers both an overview of Bhutan and a more detailed characterization of the Bhutanese economy; chapter 2 briefly discusses Bhutan's patterns of trade and presents a summary overview of relevant trade agreements at the bilateral, regional and multilateral levels; chapter 3 provides a comprehensive overview of gender mainstreaming commitments by the Royal Government of Bhutan and looks at how existing commitments have been translated into practice.

The core of the analysis is chapter 4, which seeks to shed light on the gendered impact of trade liberalization or facilitation in Bhutan. The chapter looks into the income and expenditure distribution for men and women in rural and urban areas, as well as in different economic sectors. It explores how trade expansion would affect men and women, mainly through changes in income and consumption patterns. It then critically assesses the findings from the analysis against the background of important non-trade concerns such as food-security, equitable development, biodiversity conservation and cultural heritage.

Chapter 5 concludes with some policy recommendations.

I



Country profile

1.1. OVERVIEW

Bhutan is a small landlocked country of 38,394 square kilometres in the Himalayas. Bordered by India and the Tibetan region of China, it has a mere population of 695,822 people, according to a 2010 projection.¹ The capital is Thimphu and there are 20 districts in the territory. The terrain is rugged, with alpine peaks to the north and subtropical plains in the south. Almost 85 per cent of the country is inhabitable and covered with forests and year-round snow and glacier, and nearly 10 per cent is permanently cultivated or used for human habitation; while the rest of the land is either barren, rocky or scrubland. For these reasons, people have settled across this territory wherever they could find useable land, which has resulted in a scattered population. About 70 per cent of the population live in rural areas (Royal Government of Bhutan 2005c), but permanent migration has been taking place for some time. The proportion of Bhutanese living in urban areas has thus increased from 15 per cent in 1995 to 30 per cent in 2005.

The country was ruled as a Buddhist theocracy from 1751 to 1907, and an absolute monarchy from 1907 to 2008. In 2006, the King abdicated power to his

son and called for democratic elections in 2008, which transformed the country into a constitutional monarchy. In the 1960s, Bhutan ended its self-imposed isolation and began a process of progressive modernization and opening to the external world.

Bhutan has enjoyed significant progress in promoting human development.² With a human development index (HDI) value of 0.583, Bhutan ranks 129th among 177 countries and is one of the few so-called least developed countries (LDCs) that fall in the category of medium human development countries (Royal Government of Bhutan 2005b). The human poverty index (HPI-1) was assessed at 33.34, placing the country at 61 from among 103 developing countries (Royal Government of Bhutan 2005b). The distribution of income in Bhutan is relatively unequal, with a Gini index of 46.8.³

Since 2000, the average annual growth rate of Bhutan's GDP has been around 8.8 per cent; poverty declined by 10 percentage points since 2000, reaching 23.2 per cent in 2007 (Royal Government of Bhutan 2007). In 2008 Bhutan's GDP was \$1,341 million dollars and per capita income was \$1,952. The country ranks 162nd on the global GDP list. Nevertheless, the economy is still characterized by

Box 1. Bhutan's discriminatory approach to the forces of globalization

[...] "We must recognize that modernization is a powerful force. It is both a destroyer and creator of values. The values destroyed are typically those that are traditional and indigenous, while the new values are more universal, modelled in the mould of the technologies that fuel the modernization process and which seek to create a world in their own image. Against this background, we cannot allow ourselves to assume that everything that is new and alien to us should be unconditionally accepted. We must accept that some forces that promise change and progress may erode the assets we have built up over centuries and which continue to serve us well. However, this does not mean that we should regard our values, assets and customs as inherently superior to all those of others and that everything we have inherited from the past should be accepted dogmatically and without question. We must recognize that assets and values are never static but are always subject to a continuous process of redefinition as they adapt to the needs and aspirations of a society in development. Assets that are defined in static terms will eventually have no other home than in a museum. The key to the redefinition of assets and values is the exercise of a cultural imperative that makes it possible for us to distinguish between positive and negative forces of change. In exercising this imperative we must continue to be 'social synthesizers' and assimilate the positive forces for change, making them our own and accommodating them within our own distinctive model of development."

Source: Royal Government of Bhutan; 2020: *A Vision for Peace, Prosperity and Happiness, Part I*, p. 25, Royal Government of Bhutan, 1999a.

a narrow economic base; low employment elasticity of the hydropower sector, which is the engine of the economy; limited involvement of the private sector in economic development; administrative limitations on the expansion of the private sector and a rapidly growing number of educated but unemployed young people (Asian Development Bank 2005).

From a development viewpoint, Bhutan has embarked on a unique development strategy aimed at maximizing gross national happiness – a distinctively Bhutanese concept that holistically combines material well-being with more intangible cultural, spiritual and emotional needs. Propounded in the late 1980s by His Majesty King Jigme Singye Wangchuck, this multidimensional approach to development was articulated in five central tenets in the Bhutan 2020 Vision Statement (Royal Government of Bhutan 1999 a):⁴ human development, the conservation and promotion of culture and heritage, balanced and equitable socio-economic development, good governance and environmentally sustainable development. Although consistent with the human development paradigm, the concept of gross national happiness moves beyond the human development perspective in at least one important respect – the internalization of intangible values associated with social and cultural heritage and the environment in the measurement of a nation's welfare.

The distinctive path of development in Bhutan, with its strong roots in its Buddhist traditions, compels Bhutan to adopt a discriminatory approach to the forces of modernization (box 1). In the trade policy area, this approach is contingent on the articulation of a trade policy stance based on two central elements: the retention – at all levels (bilateral, regional and multilateral) and across sectors (goods, services and intellectual property) – of a margin of manoeuvre, or policy space, that is necessary to pursue the gross national happiness paradigm; and the proactive, instrumental use of trade as a catalyst to protect and enhance traditional and indigenous values and assets.

The remainder of this chapter presents key social and economic data. The objective is to uncover the main features of the Bhutanese labour market, so as to prepare the ground for the analytical work on trade, employment and gender carried out in the following chapters.

1.2. ANALYSIS OF SELECTED ECONOMIC AND SOCIAL INDICATORS

1.2.1. Composition of GDP

Since the early 2000s, sustained growth in Bhutan has been fuelled by the rapid expansion of the secondary sector, particularly hydropower development. In 2007, the electricity sector (20.4 per cent) for the first time overtook agriculture (18.8 per cent) as the main contributor to GDP. The hydropower and construction subsectors together comprised more than 30 per cent of GDP in 2008. Via cheap electricity inputs, the growth in the electricity sector has sustained other sectors such as manufacturing (8.5 per cent of GDP in 2008), transport and communications.

The share of agriculture's contribution to GDP has declined steadily over time, down to 18.9 per cent in 2008. However, the agricultural sector remains the main source of livelihood and income for the majority of the population. In Bhutan, much of the farming is still non-commercial subsistence agriculture. With a total arable land area of approximately 7 per cent, the average farm size is estimated at 1.2 hectares per household (Dukpa and Minten 2010). Smallholdings and rugged topography with steep slopes of most agricultural land make farm labour intensive and mechanization difficult. This limits the opportunities to benefit from economies of scale. Yet, there is significant potential for agricultural diversification and commercialization in Bhutan. First, Bhutan has seasonal advantage over India; second, it can produce a wide range of products due to variations in altitudinal zones; third, its geographical situation, with little or no pollution, is valued by modern customers; finally, huge markets across the border, especially in India, absorb whatever Bhutan can produce. The emergence of cash crop marketing of commodities, such as apples, oranges, cardamom and areca nuts, is a recent development underpinned by improved transport infrastructure, enhanced access to markets in India and Bangladesh and domestic demand from the food-processing industries (Tobgay 2005). Bhutan is also seeking to strategically position itself in high-value niche products, including mushrooms and lemon grass oil that are currently being exported, and organic crops.

The contribution of the tertiary sector remained roughly constant throughout the 2000s, in spite of an expanding tourist sector, attributed to hotels and restaurants.

Table 1. Evolution and composition of GDP

GDP	1980	1990	2000	2004	2005	2006	2007	2008
Current prices (million dollars)	138	304	439	689	796	884	1,117	1,341
Constant prices (2,000 million dollars)	109	276	439	591	632	672	805	845
GDP annual growth (percentage at constant prices)		9.7	4.8	7.7	7.0	6.4	19.7	5.0
Per capita (dollars)	327	554	783	1,087	1,224	1,332	1,653	1,952
Per capita (2,000 dollars)	258	502	783	932	973	1,013	1,191	1,230
Composition (percentage at current prices)								
Primary	57.0	44.0	29.2	25.5	24.0	24.4	20.6	21.2
Agriculture, livestock and forestry				24.1	22.4	22.2	18.8	18.9
Mining and quarrying				1.4	1.5	2.2	1.8	2.3
Secondary	32.0	32.0	32.8	34.1	33.7	33.7	42.3	39.1
Manufacturing				7.3	7.2	7.8	8.2	8.5
Electricity and water				8.4	8.9	10.7	20.4	19.1
Construction				18.4	17.5	15.2	13.7	11.5
Tertiary	11.0	24.0	38.0	36.6	38.6	38.5	34.2	36.7
Wholesale and retail trade				5.5	5.9	5.9	5.1	5.0
Hotel and restaurants				0.5	0.6	0.8	0.7	1.1
Transport, storage and communication				10.5	11.0	10.3	9.1	9.9
Financing, insurance and real estate				7.3	8.1	8.6	8.1	9.3
Community, social and personal services				12.2	12.6	12.4	10.8	11.0
Private, social and recreational services				0.5	0.5	0.5	0.5	0.5
Plus: Indirect taxes less subsidies				3.9	3.7	3.4	2.9	2.9
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Royal Government of Bhutan 2005a, International Monetary Fund 2010b, and Wissink 2004.

1.2.2. Key socio-demographic figures

The *Bhutan Living Standard Survey Report 2007* (Royal Government of Bhutan 2007) estimates the nation's population at about 630,000 – projected to reach 695,822 in 2010, based on the Population and Housing Census of Bhutan 2005. Of the total estimated population, 73.6 per cent still reside in the rural areas and 26.4 per cent, in the urban areas. The urban share has increased significantly – by 20 per cent – from the figures reported in the 2003 survey, owing to rural–urban migration. The gender ratio is estimated at 96 males for every 100 females, for both rural and urban areas. The average household size is estimated at 5, with about 1 in 3 households headed by women. The share of female-headed households was found to be significantly higher in rural areas, at 34.7 per cent, than in urban areas, at 21.4 per cent.

Income poverty, measured by the percentage of the population living below the poverty line, is a major challenge. According to the Survey's 2007 figures, about 16.9 per cent of Bhutanese households are poor. Poverty continues to be a predominantly rural phenomenon, exacerbated by human poverty conditions and relatively poorer access to social and economic services in rural parts of the country: while only 1.1 per cent of households in urban areas are poor, the poverty rate for households in rural areas stands at 23.7 per cent. Since poor households tend to be larger than non-poor households, the proportion of the population under poverty is higher than the share of poor households: the poverty count in the country was 23.1 per cent at the national level, 30.8 per cent in rural areas and 1.7 per cent in urban areas. Data from the *Bhutan Living Standard Survey 2007* reveal an absence of the feminization of poverty in Bhutan, even if women are engaged in less remunerative

occupations and many work as unpaid family members. In terms of consumption expenditure, in both rural and urban areas, female-headed households are found to be relatively better off than male-headed households. Notably, there is also no discernible distinction with regard to the distribution of owned assets between male- and female-headed households. In particular, over 60 per cent of land title registration deeds are held by women, following a traditional pattern of matrilineal inheritance in most communities.

The Survey also reveals a significant gender gap and urban or rural divide in literacy. The overall literacy rate of the population aged 6 and above is estimated at 55.5 per cent. About 74 per cent, or nearly 3 of every four persons in urban areas are literate, while slightly less than half of the rural population (49 per cent) is literate. The literacy rate among males (65.7 per cent) is significantly higher than that of women (45.9 per cent). In rural areas, only 39.2 per cent of women are reported to be literate.

Table 2. Literacy rate of the population 6 years and above by area and sex, 2007 (percentage)

	Male	Female	Both sexes
Urban	84.0	64.9	74.2
Rural	59.3	39.2	49.0
Bhutan	65.7	45.9	55.5

Source: *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007.

in line with the literacy rate, the level of formal education attainment is low for women, particularly in rural areas. About 87 per cent of female heads of households in rural areas have not attended formal schooling (Royal Government of Bhutan 2007).

1.2.3. Employment

This section reports data from the *Labour Force Survey 2009* (Royal Government of Bhutan 2009a). This information reveals the sectors in which females are

Table 3. Employment sectors (percentage)

Economic activity	Female	Male	Total
Primary	72.3	59.2	65.5
Agriculture and forestry	72.1	59.1	65.4
Mining and quarrying	0.2	0.1	0.2
Secondary	8.9	3.9	6.3
Manufacturing	8.4	1.3	4.7
Electricity, gas and water supply	0.4	1.8	1.1
Construction	0.1	0.8	0.5
Tertiary	18.8	36.9	28.2
Wholesale and retail trade, repair of vehicles and goods	0.0	0.1	0.1
Hotels and restaurants	0.9	0.9	0.9
Transport, storage and communication goods	0.3	0.3	0.3
Financial intermediation	0.2	0.4	0.3
Real estate, renting and business activities	0.1	0.4	0.3
Public administration and defense	2.9	14.7	9.0
Education	2.6	3.3	3.0
Health and social work	0.6	1.1	0.8
Other community, social and personal service activities	7.3	9.7	8.6
Private households with employed persons	4.0	6.0	5.0
Extraterritorial organizations and bodies	0.0	0.0	0.0
Total	100.0	100.0	100.0

Source: *Labour Force Survey Report 2009*, Royal Government of Bhutan, 2009a.

Table 4. Status in main occupations (percentage)

Employment status	Female	Male	Total
Regular paid employee	10.2	29.8	20.4
Casual paid employee	4.1	6.2	5.2
Unpaid family worker	62.2	42.1	51.8
Own-account worker or self-employed	23.3	21.7	22.5
Employer	0.2	0.3	0.2
Total	100.0	100.0	100.0

Source: *Labour Force Survey Report 2009, Royal Government of Bhutan, 2009a.*

mostly employed, and thus the sectors via which imports and exports are more likely to impact women.

The Bhutanese economy still relies on the agricultural sector as the main source of livelihood and income to the majority of the population (see table 3). The sector, including forestry, absorbs 65.4 per cent of the total workforce, 72.1 per cent of women and 59.1 per cent of men. Within the secondary sector, the manufacturing subsector absorbs only 4.7 per cent of total employment. The participation of women in manufacturing, however, is higher than that of men (8.4 per cent, as opposed to 1.3 per cent). In contrast, male employment is prominent in the tertiary sector, especially in the civil and military service (public administration and defence). The main drivers of the economy – the hydropower and construction sectors – only employ a small fraction of the population (1.1 per cent in electricity and water, and

0.5 per cent in construction), the majority of which are male.

Some 51.8 per cent of all employed persons are unpaid family workers (see table 4). This pattern of employment is observed particularly for women, as more female workers (62.2 per cent) are engaged as unpaid family workers, compared with male workers (42.1 per cent), probably because of female prevalence in agricultural employment, which is largely subsistence oriented. About 23.3 per cent of female workers are reportedly self-employed (these are women likely to be employed in agriculture as well), while only 10.2 per cent are regular paid employees. These figures suggest that trade will affect women to a much larger extent through agriculture (subsistence, unpaid family work) than via formal labour markets and wages.

Statistics from the *Labour Force Survey Report 2009* reveal an increase in the unemployment rate from 1.9 per cent in 2001 to 4 per cent in 2009 (see table 5). This has occurred in parallel with an increase in the rate of female employment, a key element driving employment trends. The labour force participation rate for women has increased significantly, from 38.4 per cent in 2001 to 64.6 per cent in 2009. There are more unemployed females (5.3 per cent) than males (2.6 per cent). The statistics also reveal that more people are unemployed in urban areas (7.5 per cent) than in rural areas (3 per cent). In urban locations, higher incomes allow for the support of dependents, and greater educational opportunities encourage people to study longer.

Table 5. Labour force participation and unemployment (percentage)

Employment data	2001	2003	2005	2006	2009
Labour force participation					
Total	56.5	62.9	54.4	61.8	68.5
Female	38.4	53.6	42.7	53.9	64.6
Male	75.2	72.6	67.5	69.8	72.8
Rural	51.7	66.5	56.0	63.5	71.9
Urban	66.4	52.3	49.7	57.2	63.2
Unemployment					
Total	1.9	1.8	2.5	3.2	4.0
Female	3.2	2.0	3.3	3.8	5.3
Male	1.3	1.6	2.1	2.6	2.6
Rural	0.6	1.5	2.6	2.5	3.0
Urban	4.1	2.9	2.0	4.9	7.5

Source: *Labour Force Survey Report 2009, Royal Government of Bhutan, 2009a.*

NOTES

- 1 Projection based on the *Population and Housing Census of Bhutan, 2005*, Royal Government of Bhutan, 2005c.
 - 2 Human development is a process of “enlarging people’s choices” (UNDP 1990). The human development index is based on three indicators: longevity, as measured by life expectancy at birth; educational attainment, as measured by a combination of adult literacy (two thirds weight) and combined primary, secondary and tertiary level enrolment ratios (one third weight); and access to resources needed for a decent living, as measured by gross domestic product (GDP) per capita in dollars adjusted for purchasing power parity.
 - 3 The Gini index lies between 0 and 100. A value of 0 represents absolute equality and 100, absolute inequality.
 - 4 This strategy document identifies a hierarchy of goals, objectives and principles that should guide Bhutan’s development over the 2000–2020 period.
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III



Trade analysis

Table 6. Trends of trade (millions of dollars)

	2001	2003	2005	2007	2008	2008/2001
Exports	107.67	74.83	255.24	630.44	559.59	5.20
Imports	193.80	241.33	381.87	492.09	581.99	3.00
Balance of trade	-86.13	-166.50	-126.63	138.35	-22.40	0.26
Exports/GDP	0.22	0.12	0.32	0.56	0.42	1.92
Imports/GDP	0.39	0.40	0.48	0.44	0.43	1.11
Openness	0.61	0.52	0.80	1.00	0.85	1.40

Source: *Statistical Yearbook of Bhutan 2005 and 2009 (Royal Government of Bhutan 2005a and 2009d)*.

This section provides a stocktaking and analytical background. It first analyses basic trade statistics for Bhutan in 2.1. It then presents a summary listing and review of the trade agreements involved, while also briefly assessing their commercial significance in the light of Bhutan's trade specialization and direction of trade flows in 2.2. It concludes with an assessment of major obstacles to export diversification and competitiveness in 2.3.

2.1. TRADE FLOWS

Bhutan has moved from a virtually closed economy in 1960 to an economy characterized by a fair degree of openness, compounded by a concentration of exports and imports on a single market, India.

The trade share of GDP (exports plus imports as a percentage of GDP) has remained at about 101 per cent between 2004 and 2008, reflecting a significant degree of openness (Royal Government of Bhutan

Table 7. Top export commodities (in dollars, percentage and rank)

Item	2009			1999			2009/1999
	Value (\$)	%	Rank	Value (\$)	%	Rank	
Electrical energy	208,539,924	42.1	1	46,918,881	40.5	1	4.4
Ferro-silicon, >per cent silicon	87,311,687	17.6	2	12,421,531	10.7	4	7.0
Portland cement, other than white cement	28,931,800	5.8	3	12,432,202	10.7	3	2.3
Wire of refined copper < 6mm wide	20,085,226	4.1	4				
Bar/rod, i/nas, of free cutting steel, nes	18,037,774	3.6	5				
Calcium carbide	17,324,063	3.5	6	12,493,205	10.8	2	1.4
Unrecorded sound recording media except photo/magnetic	12,798,480	2.6	7				
Dolomite not calcined	11,757,430	2.4	8	1,192,775	1.0	17	9.9
Gypsum, anhydride	8,862,413	1.8	9	1,481,067	1.3	12	6.0
Potatoes, fresh or chilled except seed	8,240,280	1.7	10	1,949,544	1.7	8	4.2
Oranges, fresh or dried	7,994,029	1.6	11	2,989,639	2.6	6	2.7
Mixtures of juices not fermented or spirited	2,790,755	0.6	18	2,573,257	2.2	7	1.1
Beverage waters, sweetened or flavoured	2,512,050	0.5	19	427,678	0.4	18	5.9
Apples, fresh	1,939,590	0.4	23	1,526,021	1.3	11	1.3
Total export	495,846,187	100.0		115,950,052	100.0		4.3

Source: *United Nations Commodity Trade Statistics Database*.

Table 8. Top 20 import commodities (in dollars, percentage and rank)

Item	2009			1999			2009/1999
	Value (\$)	%	Rank	Value (\$)	%	Rank	
Petroleum oils and oils obta	62,398,276	11.8	1	10,982,443	6.0	3	5.7
Ferrous products from direct reduction of iron ore	20,584,071	3.9	2				
Rice, semi-milled or wholly milled	14,898,669	2.8	3	8,459,039	4.6	2	1.8
Wire of refined copper > 6mm wide	12,213,633	2.3	4	9,996	0.0	550	1,221.9
Shovels and excavators with revolving superstructure	11,988,360	2.3	5				
Wood charcoal (including shell or nut charcoal)	11,883,627	2.2	6	1,883,815	1.0	18	6.3
Automobiles, spark ignition engine of 1000-1500 cc	10,781,374	2.0	7	1,449,821	0.8	31	7.4
Coke, semi-coke of coal, lignite, peat and retort carbon	8,959,135	1.7	8	2,170,507	1.2	15	4.1
Coal except anthracite or bituminous, not agglomerated	7,805,521	1.5	9	1,132,057	0.6	39	6.9
Dump trucks designed for off-highway use	7,433,724	1.4	10	15,428	0.0	483	481.8
Towers and lattice masts, iron or steel	6,754,893	1.3	11	14,529	0.0	493	464.9
Automobiles, spark ignition engine of <1000 cc	6,411,292	1.2	12	241,869	0.1	125	26.5
Flat rolled i/nas, coat/zinc, corrugated, w >600m	6,348,585	1.2	13	1,686,228	0.9	23	3.8
Electrical apparatus for line	6,094,636	1.2	14	41,810	0.0	329	145.8
Petroleum bitumen	5,771,803	1.1	15	810,489	0.4	47	7.1
Waste or scrap, of cast iron	5,529,532	1.0	16	20,220	0.0	437	273.5
Milk powder < 1.5% fat	5,219,743	1.0	17	1,521,677	0.8	28	3.4
Refined soya-bean oil, not chemically modified	4,951,413	0.9	18	240,356	0.1	126	20.6
Beer made from malt	4,912,374	0.9	19	2,527,901	1.4	10	1.9
Coal or rock cutters, self-propelled	4,618,983	0.9	20				
Total Imports	529,407,521	100.0		182,077,408	100.0		

Source: United Nations Commodity Trade Statistics Database.

2009a). Trade has increased significantly since 2001 (table 6). The ratio of exports to GDP grew from 0.22 in 2001 to 0.42 in 2008, primarily on account of the sustained increase in the value of hydropower and mineral-based industrial exports to India. The ratio of imports to GDP ranges from 0.39 in 2001 to 0.43 in 2008, affected by import requirements for capital-intensive activities such as the mega-hydropower projects. Except for 2007, the balance of trade (exports minus imports) has been always negative.

By far, the main export item from Bhutan (table 7) is electrical energy, which in 2009 accounted for 42 per cent of total exports. Agricultural products represented 4.7 per cent, and manufactures, only 3.4 per cent. Other relevant exports are related to mineral industries (e.g. cement). Within the top selected commodities exported, potatoes, oranges and apples are identified as the main cash crop exports. In 2009 they ranked tenth, eleventh, and twenty-third, and they

accounted for 1.7 per cent, 1.6 per cent and 0.4 per cent of total exports, respectively. The main destinations of Bhutan's exports in 2009 were India (93.5 per cent); Bangladesh (3.16 per cent); Hong Kong, China (2.82 per cent) and Nepal (0.35 per cent).

As shown in table 8, petroleum oil was the major imported item in 2009, accounting for 11.8 per cent of the total. Manufactures represented 32.6 per cent of imports and agricultural products, 12.8 per cent. For the purpose of this study, it should be noted that rice is among the major imported items. For example, in 2009, rice ranked third among imports and in value accounted for 2.8 per cent of total imports. Bhutan's main supplier is India, accounting in 2009 for 77.8 per cent of total imports. Other important suppliers in 2009 were Singapore (2.9 per cent), Japan (2.2 per cent), China (1.9 per cent), the Republic of Korea (1.5 per cent) and Malaysia (1.5 per cent).

Table 9. Export destination of major cash crops and tariff treatment, 2009

Crop	Destination	Export share (percentage)	Tariff treatment
Potatoes, fresh or chilled (not including sweet potatoes)	India	100	Duty free
Oranges, fresh or dried	Bangladesh	91	Preferential rate (15 per cent)
	India	9	Duty free
Apples, fresh	Bangladesh	35	Preferential rate (15 per cent)
	India	65	Duty free

Source: UNCTAD calculations, based on data from the United Nations Commodity Trade Statistics Database and information provided by the Royal Government of Bhutan.

India has always been Bhutan's largest trading partner, accounting on average for over 90 per cent of the total value of Bhutan's exports and over 80 per cent of imports from 2000 to 2009. This trade pattern can be attributed to India's geographical proximity and the extensive bilateral cooperation in hydropower development. This has boosted energy exports from Bhutan to India and also sustained the high import levels of energy-related equipment from India to Bhutan (Royal Government of Bhutan 2009b). It has been facilitated by a bilateral free trade agreement, as well as the use of the Indian rupee in trade and the fixed exchange rate between the two national currencies.

2.2. TRADE AGREEMENTS

The Royal Government of Bhutan has actively promoted trade through various bilateral, regional and multilateral trading frameworks.

2.2.1. Bilateral trade agreements

At the bilateral level, Bhutan enjoys a free trade agreement with India and preferential trade with Bangladesh. Initiatives are under way to establish bilateral trade agreements with Nepal and Thailand, with whom Bhutan has direct air links.

Trade with India is duty free and transacted in Bhutanese ngultrum and Indian rupees.⁵ While there has been free trade between the territories of the Governments of India and Bhutan since the Indo-Bhutan Friendship Treaty of 1949, a formal agreement known as the Agreement on Trade, Commerce and Transit between Bhutan and India was signed in 1972 and most recently renegotiated in 2006. Under the Agreement, Bhutan also enjoys transit rights through India for trade with third countries. In December 2009, Bhutan and India signed 12 memorandums of understanding, 4 covering hydropower and the remaining

8 covering information technology, health and medicine, narcotics, civil aviation, agriculture and the environment.

Trade with Bangladesh – conducted within the framework of a preferential trade agreement originally signed in 1980 – started only from 1988 after transit rights had been negotiated with India. Bangladesh and Bhutan renewed the bilateral trade agreement in 2003, granting each other MFN status. The protocol attached to this bilateral trade agreement defines Burimari (Bangladesh)—Changrabandha (India)—Jaigaon (India)—Phuentsholing (Bhutan) as the transit route for bilateral trade between Bangladesh and Bhutan. The trade agreement was renewed in 2009. Key provisions in the most recent agreement will result in the opening of a new trade route in eastern Bhutan and an increase in the number of commodities, which will receive duty-free treatment in both countries.

Trade with Bhutan's largest partners – India and, to a lesser extent, Bangladesh – is thus conducted within the framework of preferential arrangements; for India, they take the form of free trade agreements. This is important as context because multilaterally agreed tariffs would only apply to trade with non-preferential countries. In 2009, countries other than India and Bangladesh accounted for only 3.3 per cent of Bhutan's exports and 21.7 per cent of imports. This non-preferential share is even lower if preferential trade with other South Asian countries within the framework of the South Asian Free Trade Area (SAFTA) is taken into account.

Hence, despite relatively high non-preferential (MFN) tariff rates, in practice there is very little or no protection of the domestic economy in the form of import tariffs, since virtually all of Bhutan's trade is either with India, with which Bhutan has a free trade agreement, or with preferential countries. The quest for an appropriate policy space at the multilateral level (see 2.2.3) will thus pose the challenge of policy coherence:

Table 10. SAFTA Trade Liberalization Programme

SAARC members	Phase 1	Phase 2	
	Two years (1/1/2006–1/1/2008)	Five years (1/1/2008–1/1/2013)	Eight years (1/1/2008–1/1/2016)
Least developed members (Bangladesh, Bhutan, Maldives, Nepal)	Tariffs cut to a maximum rate of 30 per cent (if actual tariff rates already below 30 per cent, reduced by 5 per cent yearly)		Subsequent tariff reduction from 30 per cent or below to 0–5 per cent
Non-least developed members (India, Pakistan, Sri Lanka)	Tariffs cut to a maximum rate of 20 per cent (if already below 20 per cent, reduced by 10 per cent yearly)	Subsequent tariff reduction from 20 per cent or below to 0–5 per cent	

Source: Agreement on South Asian Free Trade Area, article 7.

coherence in terms of policy commitments taken at different levels – bilateral, regional and multilateral.⁶ These remarks concern imports into Bhutan.

Similar considerations apply when Bhutan's exports are at stake. Major destinations of Bhutan's exports are countries where goods originating from Bhutan enter duty free (like India, alone accounting for more than three quarters of Bhutan's exports) or under preferential arrangements. Table 9 provides some details on the tariffs faced by Bhutan's main export cash crops (potatoes, oranges and apples) in major export markets.

2.2.2. Regional trade agreements

At the regional level, Bhutan is a member of two sub-regional groupings: the South Asian Association for Regional Cooperation (SAARC), with Afghanistan, Bangladesh, India, the Maldives, Nepal, Pakistan and Sri Lanka, and the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC), with Bangladesh, India, Myanmar, Nepal, Sri Lanka and Thailand.

Bhutan is a founding member of SAARC and has negotiated three trade agreements under its umbrella: the Agreement on SAARC Preferential Trading Arrangement (SAPTA); the Agreement on South Asian Free Trade Area (SAFTA); and the SAARC Agreement on Trade in Services (SATIS).

The Agreement on SAARC Preferential Trading Arrangement was signed on 1 April 1993 and became operational on 7 December 1995. Its focus was on preferential tariff reduction. Four rounds of trade negotiations concluded under the Agreement covered over 5,000 commodities, with an incremental trend in the product coverage and the deepening of tariff concessions. However, the impact of the concessions ex-

changed was limited, as the tariff concessions were modest and the major export products did not benefit from large tariff cuts. There was consensus that the SAARC countries should move to a free trade agreement.

The Agreement on South Asian Free Trade Area was signed by India, Pakistan, Nepal, Bangladesh, Sri Lanka, the Maldives and Bhutan on 6 January 2004 and entered into effect on 1 January 2006. Members of SAFTA have committed to phased tariff cuts for intra-SAFTA trade over a ten-year period beginning in January 2006 (table 10). Tariff reductions will proceed in two stages, at a different pace for least developed members and non-least developed members. This tariff liberalization programme would cover all tariff lines except those kept in the sensitive list (negative list) negotiated by the member States and subject to periodic reviews. Bhutan has about 150 goods listed as sensitive, exempted from reduction commitments. The South Asian Free Trade Area was primarily envisaged as the first step towards the transition towards a customs union, common market and economic union.

Many important areas, including services, were left out to be further negotiated. The Fourteenth SAARC Summit in New Delhi in April 2007 stressed that to realize its full potential, SAFTA should include trade in services. Signed on 29 April 2010, the SAARC Agreement on Trade in Services has established a framework for promoting and liberalizing trade in services within the region. It is patterned after the General Agreement on Trade in Services: the sectoral classification established by the World Trade Organization is used as the basis for negotiation; liberalization commitments are scheduled on the basis of a positive list approach, followed with a request-and-offer modality to achieve progressive liberalization.

Table 11. Most-favoured-nation-applied tariffs in selected South-Asian economies

Country	Year	Simple average of import duties		
		All goods	Agricultural goods	Non-agricultural goods
Bangladesh	2008	14.7	17.6	14.3
Bhutan	2007	21.9	41.4	18.9
India	2009	12.9	31.8	10.1
The Maldives	2009	20.4	18.3	20.7
Nepal	2009	12.4	14.3	12.1
Pakistan	2009	13.9	17.1	13.4
Sri Lanka	2009	11.2	24.8	9.2

Source: UNCTAD, based on WTO statistics, *Trade Profiles*.

Note: For MFN-applied tariffs, the simple average of import duties refers to the simple average of ad valorem and calculable ad valorem equivalent of MFN applied HS 6-digit duties.

Bhutan belongs to BIMSTEC, a regional economic grouping under which members will progressively reduce and ultimately eliminate tariffs and non-tariff barriers for virtually all goods. The grouping further promotes progressive liberalization of trade in services and an open and competitive investment regime to promote foreign direct investment. Liberalization of trade in goods is based on the negative list, while service is on the positive list.

2.2.3. Multilateral trade agreements

At the multilateral level, Bhutan is negotiating on its accession to WTO. The Royal Government of Bhutan submitted its application on 6 October 1999, which was accepted by the WTO General Council. The Memorandum of Foreign Trade Regime was formally submitted to WTO in February 2003. Bilateral market access negotiations are ongoing on the basis of revised offers in goods and services. The multilateral examination of the foreign trade regime is proceeding on the basis of a draft working party report circulated in December 2007. Because of Bhutan's inherent limitations due to location and small domestic market size, WTO members will likely have greater interest in services than in the market access to goods. Tourism is a sector in which WTO members might show interest. Energy is another area that could interest WTO members, in view of Bhutan's vast hydropower potential and the market for electricity in India and Bangladesh (Dorji 2004).

The remainder of this section briefly describes some of the likely implications of Bhutan's membership of WTO and discusses some policy options.

Domestic protection and policy space for development

At present, Bhutan's customs duties on merchandise imports tend to be relatively high, compared with those prevailing in the region (see table 11). The simple average of import duties (applied MFN rates) was 21.9 per cent in 2007. Of this, the average for agricultural goods was 41.4 per cent, while rates applied to non-agricultural products were significantly lower (an average 18.9 per cent). From a more detailed assessment of MFN applied rates (Royal Government of Bhutan 2004b), it appears that the majority of items are subject to a duty of 10, 20 or 30 per cent. Tariffs on beer and non-alcoholic beverages are levied at 50 per cent, while tobacco and alcoholic beverages are subject to a levy of 100 per cent. Cereals such as rice, wheat and maize that are imported from non-preferential countries are hit by a 50 per cent MFN-applied rate.

Although the simple average of MFN-applied import tariffs is high in comparison with many countries, suggesting a high degree of trade restrictiveness, this does not substantially affect trade. In practice there is very little protection of the domestic economy in the form of import tariffs, since virtually all of Bhutan's imports are sourced from India, with which Bhutan has a free trade agreement, or from other countries, such as Bangladesh and SAFTA members, that enjoy significant preferential margins. The tariffs are largely in place not as a protectionist measure but to conserve hard currency reserves (Royal Government of Bhutan 2009b). However, MFN tariff negotiations and the erosion of preference margins may lead to some form of trade diversion whereby imports from preferential partners such as India would be replaced by imports

from MFN partners, including neighbouring China. Nevertheless, logistics may remain a major obstacle to trade diversification.

Less visible constraints on the implementation of pro-poor policies and policies specifically targeted at women may arise from other areas of discipline in WTO, including the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), the Agreement on Sanitary and Phytosanitary Measures (SPS Agreement) and the Agreement on Trade-Related Investment Measures (TRIMs).⁷ These disciplines may possibly interfere with a holistic strategy that combines gender, food security and agriculture. They point to a more subtle source of complexity: the difficulty to integrate intangible values and assets in a system of law – WTO law and practice – that appreciates these values and assets only by way of exception or to the extent that they translate into market values.

Despite the costs in terms of reduced policy space, Bhutan seems willing to engage in the multilateral trading system to enhance its negotiating leverage and protect its rights, particularly compared with its large neighbours. Within the WTO context, Bhutan can increase its limited leverage by consensus-based decision-making and the use of strategic alliances. Also, the country could have recourse to the WTO dispute-settlement mechanism to vindicate rights, so as to be less exposed to the power disparity that would operate in a bilateral situation.

Bhutan must actively engage in negotiations to retain the flexibility needed to pursue its development objectives. Should the need arise, it may wish to create a policy space to protect its agricultural sector by bidding agricultural tariffs at a relatively high rate. Drawing lessons from Nepal's accession, Bhutan may wish to resist the imposition of WTO-plus conditions that are often imposed by existing members on an acceding country, particularly in the field of intellectual property protection.

External market access

WTO accession is expected, by some, to add momentum to Bhutan's export trade to third (non-preferential) countries, leading to trade diversification and a higher inflow of hard currency (trade with third countries is denominated in dollars). However, WTO accession would not add much in terms of enhanced market access to developed market economies.⁸ Bhutan, as an LDC and irrespective of its WTO status, currently enjoys duty-free access to large export markets. These include:

- The European Union (EU), under the "Everything But Arms" initiative, which gives LDCs duty-free access to the EU for all products, except arms and ammunition;⁹
- The United States of America, through 31 December 2010 – the extension of the scheme is pending – within the framework of the U.S. Generalized System of Preferences (GSP).¹⁰ Some textiles produced with cotton, wool, manmade fibre, other vegetable fibre, which is of potential export interest to Bhutan, were excluded from the list of GSP-eligible articles. However, several certified textile handicrafts, such as wall hangings, pillow covers and fabrics certified by the beneficiary country as handmade and folkloric, could be imported duty free in the United States under bilaterally negotiated GSP-certified textile handicraft arrangements;
- Canada, under the General Preferential Tariff and Least Developed Country Tariff schemes.¹¹

For Bhutan, market access barriers to these export markets are essentially framed in terms of non-tariff barriers, as discussed below.

2.3. MAJOR OBSTACLES TO EXPORT COMPETITIVENESS AND DIVERSIFICATION

Given the vulnerabilities that arise from a non-diversified export base and market, a major challenge for Bhutan is to expand its non-hydro exports and diversify its export markets. The Royal Government of Bhutan is currently promoting agricultural diversification into oranges, apples and other temperate commodities in which Bhutan has, within South Asia, some comparative advantage. Bhutan is also strategically positioning itself in a number of high-value niche exports, such as mushrooms and lemon grass oil. Beyond agriculture, the Royal Government of Bhutan is particularly keen to promote trade in knowledge-based and cultural industry goods and services as a long-term strategy to diversify and broaden its economic and export base and to generate quality employment (Royal Government of Bhutan 2009b). Within the framework of the European Commission-sponsored Trade Development Project, the Department of Commerce has identified export priority sectors, such as handicrafts and wood-based products (European Commission 2003).

The ability to diversify strategically into these sectors will be contingent on overcoming supply-side bottlenecks and fulfilling increasingly stringent requirements in export markets.

Indicator	Bhutan	South Asia	OECD
Documents to export (number)	8	8.5	4.4
Time to export (days)	38	32.3	10.9
Cost to export (dollars per container)	1,352	1,511.6	1,058.7
Documents to import (number)	11	9	4.9
Time to import (days)	38	32.5	11.4
Cost of import (dollars per container)	2,665	1,744.5	1,106.3

Source: World Bank, *Doing Business 2011 data*.

In Bhutan, some key supply-side constraints to export diversification and competitiveness in agriculture are inherently related to climatic and soil differences, including limited availability of arable land, rough terrain and poor soil quality. Others are related to infrastructural or institutional deficiencies, particularly with respect to inadequate rural facilities, low-yielding seedlings, the low adoption level of modern technologies, insufficient support services, limited access to finance and poor farmer linkages. More generally, the weak transport and communication infrastructure is a critical constraint to export diversification. Bhutan also suffers from high transaction costs associated with customs clearance. For example, the number of days to process an export and import shipment is significantly higher in Bhutan than in other countries in South Asia (see table 12). This is reflected in Bhutan's relatively low ranking (161st out of 183 economies) under the trading across borders indicator – a measure of the costs and procedures involved in importing and exporting a standardized shipment of goods.

A final major constraint and challenge is the low level of technological base and weak education or schooling record, particularly among women.

These supply-side constraints are to be assessed in interplay with, and against the background of increasingly stringent requirements in target export markets. These include both technical barriers to trade and sanitary and phytosanitary measures, as well as private-sector standards.

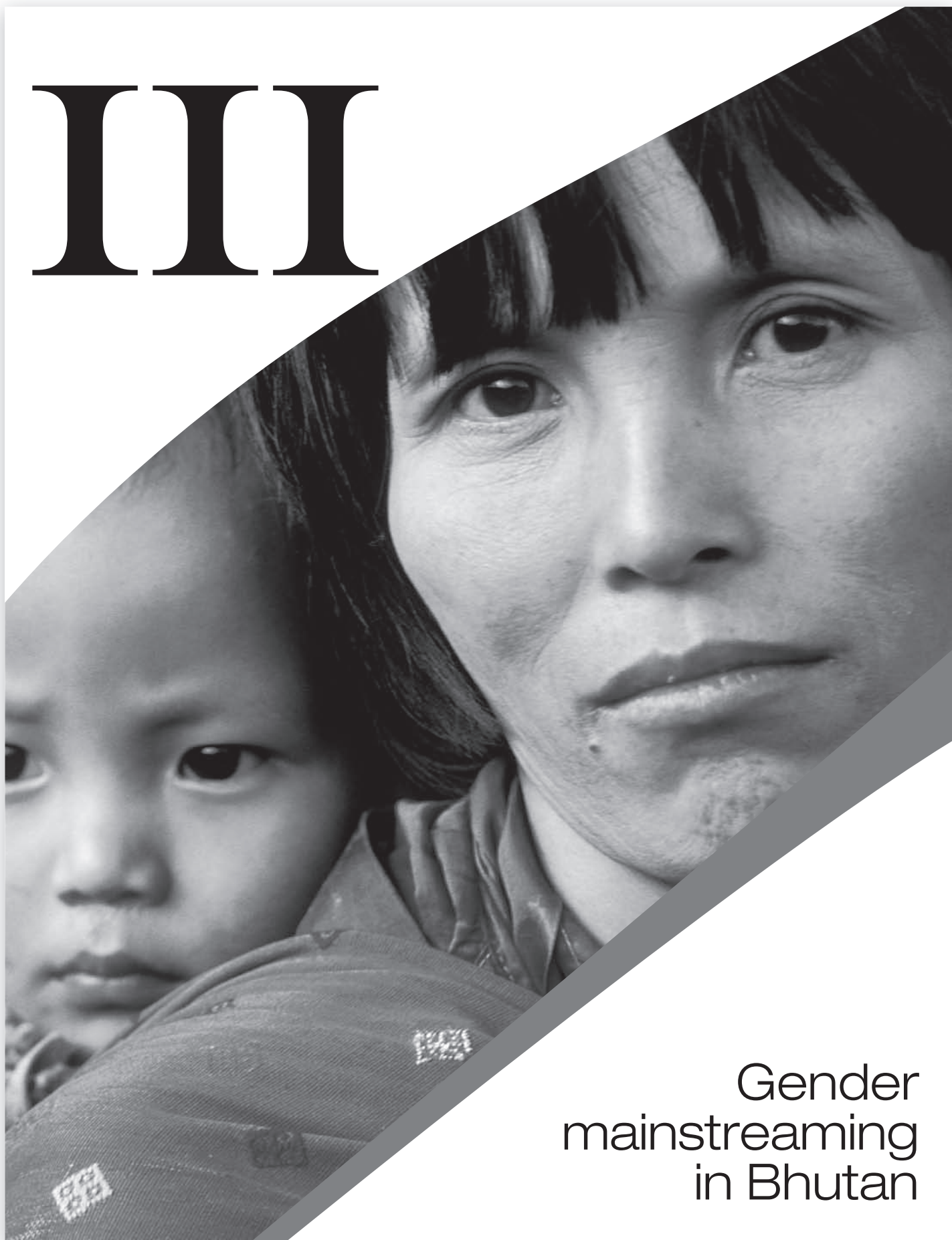
Specifically, the application of sanitary and phytosanitary measures is an important dimension in the expansion of trade in edible products, including a number of niche exports of potential interest to Bhutan. There is a pressing need for Bhutanese exporters to adapt and respond to changing requirements in export markets. This is particularly challenging because these requirements are continuously evolving, for example, pesticide regulations.

Other market entry barriers would stem from the structural characteristics of supply chains and markets. In the area of fresh fruits and vegetables, for example, and to access to niche markets for edible products, compliance with private food standards has become de facto mandatory, because of the market power of global retailers and importers. This has important exclusionary effects for those who are not able to invest heavily to meet the requirements, which involve sunk costs and economies of scale. Private actors – whether supermarkets, traders and other off-takers – have assumed a pivotal role in the agriculture sector and mediate access to markets. Hence, the ability of Bhutanese producers and exporters to reach lucrative markets in high-income countries will be contingent on their ability to integrate into these off-taker driven supply chains.

NOTES

- 5 The former being pegged to the Indian rupee at parity, and the latter, circulating freely in Bhutan as legal tender.
 - 6 Important exceptions and safeguard mechanisms have been incorporated in the bilateral trade agreements. In the free trade agreement with India, for example, either contracting party may maintain or introduce such measures or restrictions as necessary for the purpose of (a) protecting public morals; (b) protecting human, animal and plant life; (c) implementing laws relating to imports and exports of gold and silver bullion; (d) safeguarding national treasures; and (e) safeguarding such other interests as may be mutually agreed upon. Furthermore, the Government of Bhutan may impose such non-tariff restrictions – not stricter than those applied to goods of third-country origin – on the entry into Bhutan of certain goods of Indian origin, as may be necessary for the protection of industries in Bhutan.
 - 7 Both the TRIPS Agreement and the SPS Agreement have important implications for agricultural development, food security and biodiversity conservation in Bhutan. In particular, the TRIPS Agreement requires members to provide intellectual property protection to plant variety, whether in the form of patent protection or an effective sui generis system (article 27.3(b)). As part of their obligation under the TRIPS Agreement, a number of acceding LDC members, including Nepal and Cambodia, were asked to join the International Union for the Protection of New Varieties of Plants, and to enact a plant variety law as per the model prescribed by the Union. The Union is seen as granting a high level of protection to commercial plant breeders but as weakening the position of farmers, restricting their rights to save, reuse, exchange and sell seeds. Bhutan may wish to carefully draft its plant-variety protection regime, so as to reconcile breeders' and farmers' rights, and preserve benefit-sharing mechanisms for traditional knowledge (UNDP 2004). The SPS Agreement and relevant disciplines relating to the General Agreement on Tariffs and Trade would likely impinge on Bhutan's ability to discriminate against genetically modified organisms and genetically modified products. Another area of concern is represented by the TRIMs Agreement, which would forbid domestic content, trade-balancing requirements – limits on the purchase or use of an imported product up to a maximum value or volume in relation to local products – and foreign-exchange-balancing requirements.
 - 8 Although it may expose Bhutan to the risk of increased imports from third countries, with significant pressure on the convertible currency reserves.
 - 9 <http://ec.europa.eu/trade/wider-agenda/development/generalized-system-of-preferences/everything-but-arms/>
 - 10 Bhutan qualifies as a least developed beneficiary developing country under the U.S. Generalized System of Preferences, which was instituted on January 1, 1976, by the Trade Act of 1974. Congress had authorized the GSP through 31 December 2010 (its extension is pending). The programme has promoted economic growth in the developing world by providing preferential duty-free entry for about 4,800 products from 131 designated beneficiary countries and territories. The combined lists of developing and least developed beneficiary countries included most dutiable manufactures and semi-manufactures and also certain agricultural, fishery, and primary industrial products not otherwise duty free. Some goods were excluded from the list of GSP-eligible articles, including textiles produced with cotton, wool, manmade fibre and other vegetable fibre.
 - 11 Under the least developed country tariff schemes, Canada unilaterally provides duty-free and quota-free access for all products from LDCs, with the exception of over-quota access for supply-managed products in the dairy, poultry and eggs sectors. See http://www.international.gc.ca/trade-agreements-accords-commerciaux/ds/other-trade.aspx?lang=eng&menu_id=59&menu=R.
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III



Gender
mainstreaming
in Bhutan

A review of the Royal Government of Bhutan's documents reveals a long-standing commitment to gender equality. The Government ratified the Convention on the Elimination of All Forms of Discrimination against Women in 1981 and has included goals of achieving gender equality in the four consecutive five-year policy plans beginning in 1992. The stated commitments to address gender gaps have become increasingly detailed, the most recent of which were unveiled in 2008. The National Assembly established the National Women's Association of Bhutan as a non-governmental organization in 1981, and the National Commission for Women and Children was founded in 2004. Her Majesty the Queen Mother, Ashi Sangay Choden Wangchuck, also heads a new organization meant to target marginalized women that is called RENEW, which stands for Respect, Educate, Nurture and Empower Women. The Government has also expressed its commitment to the achievement of the Millennium Development Goals (MDGs) and the SAARC Development Goals, both of which have gender components. Furthermore, in 2008 a National Plan of Action on Gender was formulated, which outlines seven key areas,¹² including economic development with a focus on employment.

3.1. GENDER ASSESSMENT IN BHUTAN

3.1.1. Gender under Bhutanese law

According to the 2008 Gender Assessment of the Ministry of Economic Affairs (Royal Government of Bhutan 2008b), "Laws in Bhutan treat women and men equally, and women's rights and interests are safeguarded by the provisions of different legal acts, including the Draft Constitution of Bhutan". Bhutan's Inheritance Act of 1980, for example, guarantees equal inheritance rights to men and women. Traditional inheritance practices – which in Bhutan favour daughters – are even more progressive than modern law. As a result, 60 per cent of rural women hold land registration titles – a higher figure than anywhere else in South Asia.

The draft constitution has since been formally adopted – on 18 July 2008 – and constitutional article 9, clause 17, states, "The State shall endeavour to take appropriate measures to eliminate all forms of discrimination and exploitation against women, including trafficking, prostitution, abuse, violence, harassment and intimidation at work in both public and private spheres". The inclusion of such an anti-discrimination

clause does demonstrate a strong State commitment to gender equality, though it does not specifically include the economic, political and social participation of both genders.

3.1.2. Bhutanese women's current socio-political and economic status

While women in Bhutan enjoy full gender equality under the law, there are several areas in which women are at a disadvantage compared with men.

As mentioned earlier, the literacy rate for women, which stands at 45.9 per cent, is lower than that for men, which is 65.7 per cent. This translates into lower levels of female participation in formal employment and high public office. The gap is particularly acute in rural areas, where only 39.2 per cent of women are reported to be literate.

Although labour force participation rates for women have increased significantly, from 38.4 per cent in 2001 to 64.6 per cent in 2009, women tend to be engaged in less remunerative occupations or remain as unpaid family members, particularly in the agriculture sector, which absorbs 72.1 per cent of female employment. However, even if women are engaged in less remunerative work, data (Royal Government of Bhutan 2007) reveal an absence of the feminization of poverty in Bhutan, as poverty is slightly higher among male-headed households.

Another area requiring attention is the low representation of women in parliament and high public office, as well as civil service (Royal Government of Bhutan 2009b). Women are only marginally represented in public decision-making forums: in 2009, only 13.9 per cent of parliamentarians were women, with no female government ministers (UNDP 2010). About 29.7 per cent of civil servants were women; in the judiciary, they accounted for 2 per cent of the judges, 6 per cent of the assistant judges and 40 per cent of the officials at the lower registrar levels (Royal Government of Bhutan 2009b).

Both the 2004 CEDAW periodic reports of Bhutan (Royal Government of Bhutan 2004a) and the 2001 Gender Pilot Study (Royal Government of Bhutan et al., 2001) highlight the sociocultural stereotypes about women within the Bhutanese society. The Pilot Study noted that men and women perceive women as less capable and confident than men, and the CEDAW Report mentions the extent to which these perceptions and notions of a gender role assigned by society are

not compatible with higher education and employment. Bhutan's ranking on UNDP gender indices is low. Under the gender development index – the UNDP human development index adjusted downwards for gender inequality – Bhutan ranked 133rd out of 155 in 2007. This low ranking – mainly due to the relatively low adult literacy rate and earning capacity of women – is not caused by explicit legislative barriers, but by a lack of gendered policy implementation to overcome the sociocultural obstacles to women's greater and more equitable participation in society.

The current prime minister, H.E. Lyonchhen Jigmi Y. Thinley, speaking to government officials at a workshop on high-level sensitization held by the National Commission for Women and Children in July 2010, reiterated the sociocultural barriers to women's full participation in economy. He urged the officials to “be mindful that even as we pride over our traditions of gender parity, ours has been and, in many ways continues to be, a society where the women have modestly played the subordinate role” (Pelden 2010). At the same gathering, the Commission's Director, Dr. Rinchen Chopel, emphasized the difficulties in mainstreaming gender and gathering reliable gender data because many senior officials considered the topic to be sensitive. The lack of gender disaggregated statistics and studies is significant obstacle to conducting gender analysis in Bhutan and consequently, to gender mainstreaming in Bhutan.

3.2. GENDER STRATEGIC PLAN OF THE ROYAL GOVERNMENT OF BHUTAN

Several government documents that encompass trade policy serve to guide the course of public policy. Figure 1 shows a diagram from the Tenth Five-Year Plan, which depicts how these plans work together. The overarching and long-term goals are to maximize gross national happiness, Vision 2020 Goals, MDGs and other international development targets. These long-term goals are then achieved through the Tenth Five-Year Plan, which is divided into five categories detailing specific strategies. Viewed from a gendered perspective and particularly from one of mainstreaming gender in trade policy, a key constraint of this structure is that it does not include goals and indicators promoting gender equality. Although MDG 3 does promote gender equality, there are no indicators that are directly linked to promoting economic equality, such as promoting women's access to credit or entrepreneurship. Despite many shortcomings to

better mainstream gender in trade policy to be further illustrated below, the Tenth Five-Year Plan has a much more progressive gender equality agenda. This does reflect the progress being made by those advocating for women's rights, particularly the right to develop.

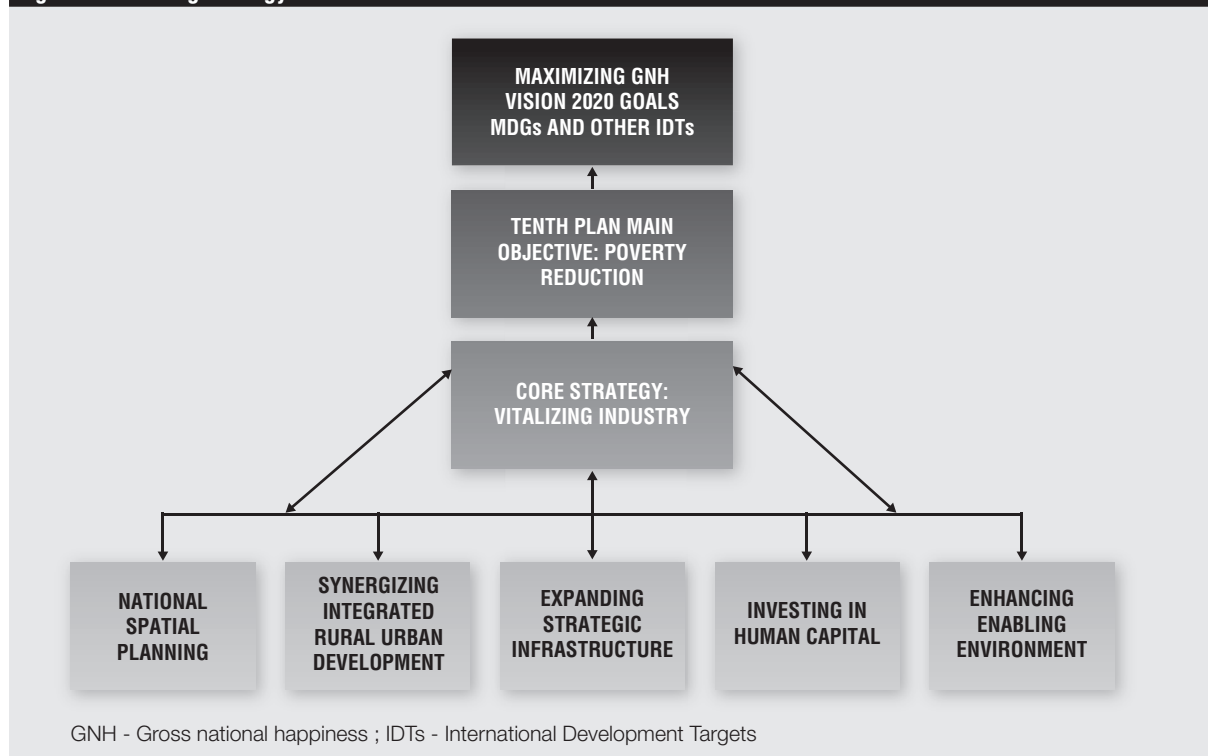
High-level support for the promotion of gender equality has changed dramatically in recent years. Gender and women's rights was previously a topic that was subject to political divisions and therefore, little discussed. This policy seems to have been changing since 2008 with the Tenth Five-Year Plan and the United Nations Development Assistance Framework. The statement made by Foreign Secretary Dasho Daw Penjo on the concluding day of the General Debate of the United Nations General Assembly in September 2010 was especially telling. Expressing interest in a non-permanent seat on the Security Council, he welcomed the establishment of the United Nations Entity for Gender Equality and the Empowerment of Women, also known as UN Women, and expressed support of the Organization to further advance issues of gender equality and women's empowerment.

3.2.1. Tenth Five-Year Plan (2008–2013)

The United Nations Development Programme recently applauded the efforts of the Tenth Five-Year Plan to mainstream gender: “The Royal Government of Bhutan has considered the theme of women in development as an integral part of the country's Tenth Five-Year Plan by ensuring equal opportunities for men and women, reflecting the high priority it places on maintaining gender balance and equality”. It was the first five-year plan in which Bhutan did not separate gender into a separate focal point, stating, “...each sector is required to effectively mainstream gender issues into their policies and programmes. Sectors are also required to maintain gender disaggregated data to help identify and monitor potential gender gaps” (Royal Government of Bhutan 2009e).

Despite the Tenth Five-Year Plan's commitment to gender mainstreaming, volume 1, section 1, there is no mention of gender in the targets, objectives and strategies outlined for the trade sector or any of the other key sectors listed – industry, tourism, geology and mines. According to the Plan, the trade sector aims to achieve the following objectives:

- To alleviate poverty through trade;
- To improve contributions from trade to the national economy;

Figure 1. Planning strategy

Source: Royal Government of Bhutan, Tenth Five-Year Plan (2008–2013).

- To create a liberal and enabling environment for the growth of the private sector;
- To pursue trade liberalization and support private-sector development;
- To enhance employment and revenue generation;
- To ensure stable market access for Bhutanese products;
- To promote competition and fair trade practices;
- To promote efficient distribution of goods and services;
- To strengthen the sector's institutional and professional capacity with a view to fulfilling its mandate;
- To expand growth of exports, particularly convertible currency exports.

Without specific targets, objectives and strategies, particularly with regard to capacity-building to encourage the full participation of both genders in the 10 objectives outlined above, not only has gender not been mainstreamed, but the achievement of the objectives

may be limited as well. The goal to alleviate poverty through trade may be especially difficult to achieve without gender mainstreaming, as women tend to represent a high percentage of the population living below the poverty line.

Volume 2 of the Plan is organized by ministries, each of which is responsible for specific objectives. The Ministry of Economic Affairs is responsible for 18 different categories,¹³ each coupled with a results-based strategy, budget and managerial design. The only mention of gender within the Ministry's plan was in the section, Development of Micro, Small and Medium Enterprises Programme. This is an important thematic area to include women, as they tend to be involved in this sector. However, this sector is traditionally characterized by low skills and wages. Other categories in the Plan cover sectors that have much larger budgetary allocations, however, they are gender blind. Enabling more Bhutanese women to work in the more highly skilled and well-paid sectors would help narrow Bhutan's gender wage gap. Moreover, the reduction in brain waste could result in a more competitive sector.

The Royal Government of Bhutan has been criticized by UNDP for its “gender-neutral position” to planning, policymaking, programme formulation and implementation. According to the Organization, the continued gender gaps in key areas of education, the national economy and political participation are the “result of subtle and indirect forms of gender bias that exist in the society” (Gender Mainstreaming – UNDP Bhutan). Although UNDP did not specifically refer to this as institutionalized discrimination, the prevailing gender gaps and gender-neutral policies represent a systemic lack of political will to institutionalize policies promoting gender equality.

3.2.2. National Plan of Action for Gender (2008–2013)

The Royal Government of Bhutan’s National Plan of Action for Gender (2008–2013) outlining its gender strategy represents a strong commitment to gender mainstreaming. The section entitled Economic Development (Focus on Employment) provides a detailed description of the current economic situation of women in Bhutan, as well as a results-based action plan for achieving gendered economic development. An essential component of this strategy is that the 24 planned activities are to be implemented by various governmental agencies, not solely a gender focal point or agency. The Ministry of Economic Affairs is committed to seven of the activities, which demonstrates a deeper commitment to gender mainstreaming than exemplified in other Ministry documentation.

3.3. MAINSTREAMING GENDER IN TRADE STRATEGIES

3.3.1. Department of Trade

Bhutan’s Department of Trade has an extensive website providing information about its trade agreements, objectives, mission, vision, events and other trade-related information. The Government also has a website that gives information about its government, citizens, business and overseas services. Gender issues are not addressed. The lack of mainstreaming gender into the main vehicle through which the Government communicates development and trade objectives and its philosophy appears to be inconsistent with the apparently strong commitment to gender mainstreaming underscored in the National Plan of Action for Gender (2008–2013) (Royal Government of Bhutan 2008c).

3.3.2. Development agencies’ gender and trade strategic plans

Other institutions that can significantly affect a country’s commitment to gender mainstreaming in trade policy are international lending agencies. The International Monetary Fund supported the development of the Poverty Reduction Strategy Paper (International Monetary Fund 2010a), which does not refer to gender issues. Another example can be found in the Asian Development Bank’s Country Strategy and Programme 2006–2010 (Asian Development Bank 2005). Though gender-related issues are addressed in some detail in the document, its analysis and related recommendations are not linked to those concerning the trade sector.

The United Nations Development Assistance Framework for the Royal Government of Bhutan is a strategic partnership plan involving United Nations agencies, the Royal Government of Bhutan and various other stakeholders and agencies (United Nations and Royal Government of Bhutan 2007).¹⁴ The most recent plan, from 2008–2012, states that MDGs are the overarching development goals, with the Common Country Assessment 2006 as a point of reference. While gender is mainstreamed throughout the United Nations Development Assistance Framework, it relates directly to five key outcomes¹⁵ and helps to foster trade and economic development. At the time when discussions started regarding the formulation of the 2008–2012 United Nations Development Assistance Framework, Bhutan, in spite of its international commitments, was still debating the relevance of gender in the local context. Little sex-disaggregated data was available at the national level and gender mainstreaming was a relatively new concept within the country. Nevertheless, gender equality goals linked to the achievement of MDGs 1, 2, 3 and 8 were listed as national priorities. Such goals in the United Nations Development Assistance Framework led to the following positive results: (a) Bhutan started to meet more of its commitments as a signatory to the Convention on the Elimination of All Forms of Discrimination against Women through periodic reporting on the status of women in the country; (b) the momentum was created for gender mainstreaming in Bhutan, as reflected in the Tenth Five-Year Plan 2008–2013 and the formulation of the National Plan of Action for Gender 2008–2013; and (c) Bhutan took action on women’s issues on the basis of the Concluding Comments made by the Committee on the Elimination of Discrimination

Against Women. For example, women's political participation increased, the bill against domestic violence was approved, and sex-disaggregated data began to be more widely collected (*Gender Evaluation Report 2010*).

Although the United Nations Development Assistance Framework has provided momentum for gender mainstreaming in Bhutan, more remains to be done to translate commitments into practice. The Mid-Term Review Process 2010 for the Bhutan United Nations Development Assistance Framework provides a number of recommendations to give impetus to gender mainstreaming in the Framework. The recommendations are grouped under the following headings:

- Gender perspective in planning, implementation, monitoring and evaluation;
- Systematic collection and reporting of sex-disaggregated data and dissemination of data, studies and reports across sectors;
- Strengthened coordination and leadership on gender mainstreaming by the Royal Government of Bhutan in partnership with the United Nations;
- Strengthened role of the Gender Task Force and Gender Focal Points;
- Consultation and institutionalization of gender-responsive budgeting;
- Continuing gender sensitization and capacity-building;
- Policy and legal reform and advocacy;
- Strengthened multilateral and bilateral partnerships;
- Formulation of gender strategy plan for the United Nations as part of the United Nations Development Assistance Framework;
- Sound gender analysis for the United Nations Development Assistance Framework 2013–2017 and additional partnerships.

3.3.3. Gender considerations in trade agreements

Bhutan's two bilateral agreements with India and Bangladesh (see 2.2.1), make no mention of gender. They contain no evidence of an ex ante gender assessment of the agreements or gendered capacity-building efforts directly linkable to the agreements.

Practically since its inception in 1985, SAARC has made serious institutional commitments to gender.

In 1986, under the Integrated Programme of Action, it established the Technical Committee on Women in Development. The Committee, meeting at regular intervals, has experienced some institutional changes, evolving into the SAARC Integrated Programme of Action in 2000 and the Regional Integrated Programme of Action in 2004 (Nag 2008). In 2001, SAARC signed a memorandum of understanding with the United Nations Development Fund for Women (UNIFEM) to develop a SAARC gender database called Mapping Progress of Women in the South Asia Region.

Despite extensive efforts to promote gender mainstreaming in trade policy, the trade agreements negotiated by SAARC do not have provisions for mainstreaming gender, nor there is evidence of an ex ante gender assessment prior to the enactment of these agreements.

Regarding BIMSTEC, upon textual analysis of the organizational documents, including Economic/Ministerial meeting minutes, project proposals, documents relating to the working structure and the BIMSTEC website, it appears that the Organization has made no efforts towards gender mainstreaming. Gender has not even been integrated into the 13 priority sectors of cooperation.¹⁶ They do mention poverty alleviation. The two trade agreements negotiated by BIMSTEC, the Framework Agreement on the BIMSTEC Free Trade Area and the Protocol to the Framework Agreement on BIMSTEC Free Trade Area make no mention of gender either. Furthermore, there appears to have been no efforts to undergo an ex ante gender assessment and no gender sensitive capacity-building efforts linkable to the agreements.

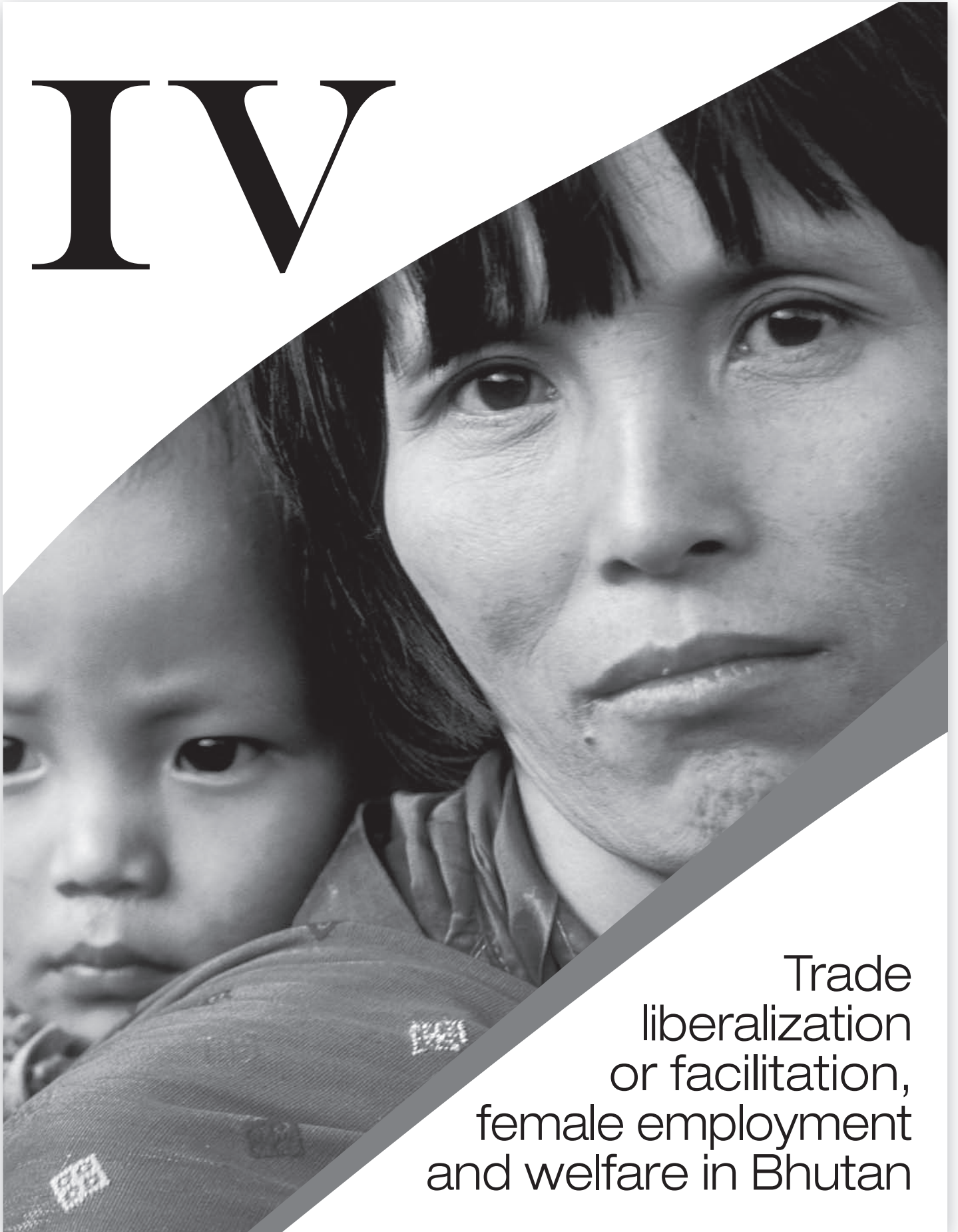
3.3.4. Trade facilitation and supply-side services

There is some scattered evidence of gender biases in access to extension layouts and other supply services. It appears, for example, that women farmers have not benefited equally from agricultural extension services, especially training programmes (Royal Government of Bhutan et al. 2001). Access to credit also remains an obstacle for women, particularly rural women. For example, as of June 2006, 5,965 women (37.7 per cent of beneficiaries) were benefiting from rural credit from the Bhutan Development Finance Corporation, compared with 9,843 men (62.3 per cent); as of September 2008, the proportion of females had lowered slightly to 36.8 per cent (National Plan of Action for Gender 2008–2013) (Royal Government of Bhutan, 2008c).

NOTES

- 12 Good governance; education and training; economic development with a focus on employment; health; violence against women; prejudices and stereotypes; and ageing, mental health and disabilities.
 - 13 Promotion of domestic and foreign trade, development and management of petroleum oil and lubricant services programme, development of micro, small and medium enterprises programme, development and management of industrial estates, strengthening institutional framework for industrial development, sustainable environmental management and institutionalization of cleaner technology, development and strengthening of intellectual property and copyrights, power transmission programme, rural electrification programme, accelerated hydropower development programme, institutional strengthening of the energy sector, development of renewable energy, strengthening of national hydrological and meteorological services, electricity regulation and private-sector participation in major hydropower projects, capacity enhancement in geo-scientific investigations and mineral development, and assessment and monitoring of climate-change-induced and geological hazards.
 - 14 “The United Nations Development Assistance Framework for Bhutan (2008–2012) provides a collective, coherent and integrated UN response to national needs and priorities and is consistent with Bhutan’s overall development vision articulated by Gross National Happiness. The United Nations Development Assistance Framework, formulated through a highly consultative and participatory process with the Royal Government of Bhutan and other stakeholders, embodies a rights-based and results-driven development approach aimed at poverty reduction and pursuit of the MDGs.” (United Nations Development Assistance Framework for the Kingdom of Bhutan 2008–2012, Thimphu, May 2007:3)
 - 15 By 2012, opportunities for generation of income and employment increased in targeted poor areas (MDG 1 and 8), by 2012, increased access and utilization of quality health services with emphasis on reproductive health, maternal and child health and nutrition, HIV/AIDS, TB, malaria and non-communicable diseases, (MDG 4, 5, 6), by 2012, access to quality education for all with gender equality and special focus on the hard-to-reach population improved (MDG 2, 3), by 2012, institutional capacity and people’s participation strengthened to ensure good governance (MDG 1, 3, 8), by 2012, national capacity for environmental sustainability and disaster management strengthened (MDG 7).
 - 16 BIMSTEC priority sectors: trade and investment, transport and communication, energy, tourism, technology, fisheries, agriculture, public health, poverty alleviation, counter-terrorism and transnational crime, protection of biodiversity/environment and natural disaster management, culture and people-to-people contact (www.bimstec.org/sector.html).
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IV



Trade
liberalization
or facilitation,
female employment
and welfare in Bhutan

This chapter explores some of the impacts of trade liberalization or facilitation on household welfare, with a focus on gender issues. Trade policies tend to have strong redistributive impacts, which will favour some groups or individuals, while penalizing others. The aim is to shed some light on the question as to who would benefit from further trade expansion in Bhutan. In particular, it aims to analyse whether there is a gender bias in the gains from trade. As discussed elsewhere (see chapter 2), the Bhutanese economy is already characterized by a fair degree of openness in terms of import tariffs or quantitative restrictions, since the bulk of Bhutan's imports are sourced from countries, namely, India and Bangladesh, with which Bhutan enjoys free or preferential trade. Similarly, major destina-

tions of Bhutan's exports are countries where goods originating from Bhutan enter duty free or under preferential tariffs. Accordingly, trade liberalization is here intended broadly to essentially cover aspects of trade facilitation, for example, in the areas of customs procedures, transport and standards compliance. Trade facilitation in these areas would contribute towards Bhutan's export competitiveness and have a significant trade-enhancing effect. The analysis is also relevant to assess the gendered impact of a reduction in MFN, or non-preferential, tariff rates, which are relatively high in Bhutan. In Bhutan, an MFN tariff-reduction strategy would be essentially aimed at eroding preferential margins and diversifying import sources with a view to reducing exposure to a single market

Box 2. The basic framework Who is benefitting from trade liberalization or facilitation? A quantitative model approach¹⁷

Trade policies have diverse impacts on individuals: some will benefit from trade liberalization or facilitation, others may suffer, yet others may not be affected. The impacts that trade policies have on individuals depend mainly on two factors. First, they depend on the influence that trade policies have on domestic prices (of goods and factors of production, such as wages, earnings, returns to capital and land) where individuals operate. Owing to regulatory frameworks, some domestic markets and/or economic sectors may be sheltered from the effect of trade policies, while others may be fully dependent on international markets, and thus on trade policies. Second, the impact of trade policies depends on the degree of exposure that individuals have to the various goods and factors of production. Individuals employed in export sector, for example, textiles, may not be affected in the same manner as those in import- competing sectors, such as rice. The degree of exposure also depends on the extent of self-subsistence activities that the individual is engaged in. In LCDs such as Bhutan, many households engage in self-sufficient activities, that is, production for own use. Those activities, largely independent of price shocks, are therefore isolated from trade policies.

Trade policies affect economies through their impact on prices (goods and factors of production) and by their effect on government revenues. There are three main effects on households: (a) the consumption effect, which refers to the effect of trade policies on the price of the goods consumed by the households; (b) the income effect, which refers to the effect on households' income, including earnings, sales of agricultural products or any other goods and other forms of income such as government transfers; (c) the revenue effect, which refers to the effect on the generation and distribution of government revenues. Revenues may indirectly affect households through transfers and the provision of public goods.

The quantitative analysis of the effect of trade policies on individuals is generally conducted in three steps (see appendix 1 for technical details): First, the measurement of the extent to which trade policies affect domestic prices of goods and factors of production, including estimating or making assumptions on the degree of which international prices pass through to domestic prices of goods and factors of production, as well as how much trade policy contributes to government revenues; second, the identification and quantification of the sources of income and the consumption basket for each household, which provides a measure of the dependence between the real income of the households and the change in price of a particular good or factor of production due to trade policy; and third, the consideration of how the changes in the prices (of goods and factors of production) due to trade policies are mapped into each household's budget and income shares. This allows calculating the positive or negative effects of trade policy on a household's real income. Results can be aggregated by the relevant dimension, for example, region, gender, or poor/non-poor, so as to better identify any subgroup that may gain or lose from the trade policy.

such as India. The report also discusses tariff liberalization in sectors of potential export interest to Bhutan, such as textiles, which in the United States is largely excluded from the list of GSP-eligible articles.

Given that most women work in the agriculture sector, a particular focus has been given to how this sector would be affected by trade liberalization or facilitation. An agriculture model has been used to analyse the effects of trade. The main outline of the model appears in box 2, while the details are provided in appendix 1.

A caveat should be made here: the bulk of this chapter focuses on specific trade sectors – the main exported and imported agricultural commodities – for which the available microsurvey data allow to generate a meaningful quantification of the likely gender impacts of trade liberalization or facilitation. The report, however, does not provide an in-depth assessment of other sectors in which Bhutan is either currently competitive or where there is a potential to become competitive in the future, owing to the unavailability of microsurvey data.

The gender analysis is limited, in that this chapter essentially discusses employment and income effects on female- versus male-headed households, while disregarding intra-household dynamics rooted in social patterns, for example, decision-making processes and command over resources within the household and intra-household transfers. Yet, drawing on a quantitative model, the analysis provides important insights of the impacts of trade expansion on household welfare, with a focus on gender issues.

4.1. AGRICULTURE

As discussed earlier, agriculture is the main source of livelihood and income in Bhutan, especially for women.

By combining trade and microsurvey data, the analysis in this section attempts to quantify the redistributive effects of trade liberalization or facilitation in major agricultural export crops (potatoes, oranges and apples) and import crops (rice). This section presents both an overview of the major findings from the overall analysis (see 4.1.1) and the detailed analysis (see 4.1.2). It then turns to consider ways to reconcile a focus on export cash crops with broader trade-related concerns relating to food security, biodiversity conservation and traditional knowledge (see 4.1.3).

4.1.1. Main findings from the quantitative model

The analysis in chapter 2 has identified key agricultural products for which the impacts of trade are potentially sizeable and quantifiable: on the export side, potatoes, oranges, and apples, which are the main export crops, in which Bhutan shows a revealed comparative advantage; on the import side, paddy rice, the Bhutanese staple food, which is the principal imported crop, in which Bhutan has a comparative disadvantage. The analytical framework used in this report implies that the net producers of export goods, such as potatoes, oranges and apples, and net consumers of imports, such as rice, will gain from trade.

The principal conclusions that emerge from the analysis are as follows:

- The Bhutanese population would face potential benefits from trade expansion in these commodity sectors;
- There appears to be little or no gender bias in the gains from trade;
- Trade liberalization or facilitation would have a pro-poor impact in the case of potatoes and oranges, while it appears that non-poor households would benefit more than poor households from expanding apple exports. Import liberalization or facilitation in rice will benefit net consumers. Since the share spent on rice sharply declines with the level of household well-being, lower rice prices will have a pro-poor bias for net consumers. The impacts on net producers of rice were not documented. However, 75 per cent of farming households are engaged in rice production, and thus may be affected by a change in the price of rice due to trade liberalization.

A closer examination of the findings leads to the following observations:

- Since potato and orange producers tend to be significantly poorer than non-producers, an expansion of exports of these crops has a pro-poor bias benefiting the poorer segment of the population. There is no association between the probability of being a grower of potatoes or oranges and the number of females in a household or the proportion of the number of females in total household size.
- Since apple producers tend to be better off than non-producers, an expansion of apple exports is likely to benefit both poor and non-poor households, but non-poor households are likely to benefit rela-

tively more than poor households. There seems to be a positive association between apple production, and thus being a likely recipient of the gains from exports, and the number of females in the household.

- Rice, the main staple of Bhutanese households, is largely imported. Import liberalization or facilitation would most likely bring about a decline in rice prices. While this can hurt net producers, it benefits net consumers. Furthermore, lower rice prices will have a pro-poor bias for net consumers, since the share spent on rice sharply declines with the level of household well-being. There appears to be little gender bias in the gains from trade liberalization or facilitation in this area: households with more women tend to allocate a lower share of their expenditure to purchase rice, especially in urban areas. Therefore, these households will enjoy lower gains from trade liberalization or facilitation in rice.

The following table summarizes these findings in tabular form.

Table 13. Summary of the effects of trade liberalization or facilitation

	Male-headed		Female-headed	
	Poor	Non-poor	Poor	Non-poor
Exports (price increases)				
Potatoes	++	+	++	+
Oranges	++	+	++	+
Apples	+	++	+	++
Imports (price declines)				
Rice	++	+	++	+

Source: UNCTAD.

Note: + indicates positive impacts; ++ indicates positive and larger impacts.

4.1.2. Detailed analysis

For analytical purposes, it is important to identify the main agricultural goods produced, exported and imported by Bhutan. The prominent role of its exports (potatoes, oranges and apples) – and its imports (rice) has already been discussed. Here, the study attempts to determine whether these crops are indeed produced by smallholders. If so, this means that the crops to be explored in the trade and gender analytical work have been successfully identified.

Table 14 describes the structure of production and trade of vegetables and fruits in 2009. The data used are from the Annual Agricultural Sample Survey and

from the United Nations Commodity Trade Statistics Database. Maize and paddy rice account for 58.6 per cent of the total land allocated to vegetable production. While imports of maize are rare – the country is self-sufficient in maize – rice accounts for 22 per cent of agricultural imports. Similarly, around 5.5 per cent of the land is allocated to potatoes, ranked in third place. In turn, potatoes account for 35 per cent of agricultural exports. Other important exports are cardamom and ginger, with shares of 8 and 2 per cent, respectively. These crops, however, are not relevant in the household survey data (cardamom production is not recorded and ginger is merged with coriander and garlic). These data thus confirm that it makes sense to focus on the impacts of rice imports and potato exports.

Mandarins/oranges, areca and apples are the fruits representing the highest number of bearing trees in 2009. These are thus the main fruits produced in Bhutan. However, only oranges/mandarins and apples are significant export products, accounting for 34 and 8.2 per cent of agricultural exports, respectively. These data thus confirm that it makes sense to focus on the impacts of exports of oranges and apples.

Using the analytical framework of appendix 1, the study now explores the impacts of trade liberalization and trade facilitation in potatoes, oranges, apples and rice on the economy, and especially on women. Trade liberalization and facilitation tend to cause an increase in the price of export goods and a decrease in the price of imports. To study the impacts of these price changes on employment, income and welfare, it is important to determine the net producers and the net consumers. For this, it is imperative to know, for each product, the amount produced, the amount auto-consumed, the amount sold, and the amount purchased in the market. Unfortunately, this information is not available in Bhutan. The Bhutan Living Standard Survey does not include detailed employment information. It reveals whether someone is employed in agriculture, but does not provide any information on relevant disaggregated activities within the sector. In addition, the Survey includes a detailed expenditure module, but not an income module. This prevents the quantification of income sources and income shares, key pieces for identifying net producers or net consumers and measuring exposure to trade.

The study outlines a procedure that uses the available information in the best possible way so as to shed some light on the likely consequences of trade expansion in agricultural products. Different procedures are adopted for export crops and import crops.

Table 14. Vegetable and fruit production

Commodity	Area (acres/trees)	Percentage of total (acres/trees)	Production (metric tons)	Yield (kg per acre/kg per tree)	Percentage of agricultural export	Percentage of agricultural import
Vegetables, crops and others						
Maize	70,603	32.0	61,161	866	0.0	1.3
Paddy	58,609	26.6	65,763	1,122	0.7	22.0
Potato	12,156	5.5	46,161	3,798	35.0	0.7
Finger millet	8,587	3.9	3,535	412	0.0	0.2
Wheat	7,709	3.5	3,679	477	2.0	1.9
Chili	5,686	2.6	8,887	1,563	0.0	0.0
Sweet buckwheat	5,603	2.5	2,240	400	0.0	0.0
Mustard	5,570	2.5	1,741	313	0.1	0.1
Cardamom	5,133	2.3	433	84	7.9	0.0
Barley	4,956	2.2	2,398	484	0.0	0.0
Bitter buckwheat	3,923	1.8	1,619	413	0.0	0.0
Radish	3,167	1.4	5,672	1,791	0.1	0.0
Ginger	2,546	1.2	3,766	1,479	2.0	0.0
Bean	2,272	1.0	1,823	802	0.1	0.0
Turnip	2,140	1.0	9,368	4,377	0.0	0.0
Green leaves	2,034	0.9	2,224	1,093	0.0	0.0
Soya	1,667	0.8	546	328	0.3	7.3
Others	18,135	8.2	10,316	850	-	-
Total	220,496	100.0	231,332	1,147.3	48.1	33.5
Fruits						
Mandarin	1,570,380	56.4	44,177	28	34.0	0.0
Areca	585,649	21.0	6,375	11	-	-
Apple	315,875	11.4	15,086	48	8.2	0.0
Banana	165,756	6.0	2,183	13	0.0	0.1
Guava	40,656	1.5	955	23	0.0	0.3
Peach	33,754	1.2	1,234	36	0.0	0.0
Pear	17,334	0.6	1,109	64	0.0	0.0
Walnut	14,711	0.5	236	16	0.0	0.0
Mango	13,279	0.5	315	24	0.0	0.0
Plum	12,236	0.4	434	36	0.0	0.0
Passion fruit	8,094	0.3	174	21	0.0	0.0
Persimmon	4,610	0.2	166	36	0.0	0.0
Total	2,782,334	100.0	72,444	30	42.2	0.4
Total vegetables and fruits					90.3	33.9

Source: Estimation based on Annual Agriculture Sample Survey 2009 and the United Nations Commodity Trade Statistics Database.

The analysis first looks at exports of potatoes. The problem is to identify net producers of potatoes – and also oranges and apples – without any production information. The expenditure modules are used to construct an estimate for production of different goods. In the consumption questionnaire in the *Bhutan Living Standard Survey*, households report expenditures on various products and identify whether these expenditures refer to home-produced goods or market purchases. In principle, for the export crops considered (potatoes, oranges, and apples), it is clear if a household consumes the product and if the same household also produces it. As a result, the information on consumption of home-produced potatoes can be used as a proxy for being a potato producer (this also applies to oranges and apples). Since these are export crops, farmers are likely to be net producers of the crop and the producers can be identified indirectly using data on auto-consumption. Under this assumption, it is useful to build a dummy variable equal to one if a household reports any home consumption of the target export crop and use this dummy as a measure of exposure to exports in place of the net income shares derived in the analytical framework described in appendix 1.

There is a simple test to assess how accurate this procedure is. The procedure will work if a household that owns and consumes the crop does not purchase the good on the market. That is, if the household is consuming a fraction of its own production, then a net producer should not report market purchases of the crop. This can be tested in the data collected.

The results are reported in table 15, which shows the total number of producers of each crop: potatoes, oranges, apples and rice. The fraction of producers who also report market purchases of these products can be calculated by using the expenditure module.

Table 15. Producers and buyers of commodities, 2007

Product	Total producers	Producers and buyers		
		Total	Percentage of producers	Percentage of total households
Potatoes	41,424	1,319	3.2	1.0
Oranges	36,320	796	2.2	0.6
Apples	11,276	638	5.7	0.5
Rice	48,829	30,007	61.5	23.8

Source: Estimation based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007.

For potatoes, only 3.2 per cent of the producers also buy the product; for oranges, this share is only 2.2 per cent; and for apples, it is 5.7 per cent. These low shares are reassuring. The situation, however, is diametrically different for rice because 61.5 per cent of rice producers also purchase rice on the market. This means that the same procedure will not work well for rice. But this is reassuring because rice is a net import and thus a high degree of purchases in the market should be expected, even for producers.

The procedure, however, has some shortcomings. First, producers and non-producers can only be tentatively identified, although with some error. Second, the procedure works only if a producer consumes something of its own production. If a producer sells all its production, it will not be possible to identify him or her in the data. While this might pose a problem for large producers, it is reasonable to assume that all net producers will consume at least a small amount of their own production. Finally, the procedure imperfectly determines who the producers are, but it does not provide any indication of the extent of production, and thus of the potential benefits derived from trade. In other words, this procedure treats a large seller and a small seller in the same fashion.

Table 16 provides a characterization of household producers and non-producers for each crop. Almost 30 per cent of households produce potatoes and oranges each; only 9 per cent produce apples. There are great disparities between rural and urban areas. With regard to potatoes, 45.5 per cent of rural households are producers and 54.5 are non-producers; in urban areas, only 3.2 per cent of the households produce potatoes. For oranges, the share of rural households that produce the crop is roughly 40 per cent; only 1 per cent of households report the production of oranges in urban areas. Finally, for apples, around 10 per cent of rural households are producers. There are also some differences between female- and male-headed households, especially in the case of potato producers, where female heads represent 37.2 per cent of all potato producers.

Potatoes

Potatoes are the main export horticulture crop by volume and India is the major export destination. In contrast to other export crops, potatoes are very adaptable and can be produced at almost all land elevations, a major characteristic of Bhutan. For instance, it is the only agriculture option available to those households

Table 16. Characteristics of producers and non-producers

	Potatoes		Oranges		Apples		Rice		Total per product
	Producer	Non-producer	Producer	Non-producer	Producer	Non-producer	Producer	Non-producer	
Number of households									
Total	41,424	84,502	36,320	89,606	11,276	114,650	48,829	77,097	125,926
Female-headed	15,426	23,306	10,956	27,776	5,796	32,936	18,541	20,191	38,732
Male-headed	25,998	61,196	25,364	61,830	5,480	81,714	30,288	56,906	87,194
Rural	40,091	47,976	35,958	52,109	9,216	78,851	43,324	44,743	88,067
Urban	1,333	36,526	362	37,497	2,060	35,799	5,505	32,354	37,859
Percentage of households									
Total	32.9	67.1	28.8	71.2	9.0	91.0	38.8	61.2	100.0
Female-headed	39.8	60.2	28.3	71.7	15.0	85.0	47.9	52.1	100.0
Male-headed	29.8	70.2	29.1	70.9	6.3	93.7	34.7	65.3	100.0
Rural	45.5	54.5	40.8	59.2	10.5	89.5	49.2	50.8	100.0
Urban	3.5	96.5	1.0	99.0	5.4	94.6	14.5	85.5	100.0
Mean per capita expenditure									
Total	2,148	3,847	2,021	3,802	3,703	3,247	2,806	3,594	3,288
Female-headed	2,348	4,003	2,215	3,789	3,753	3,272	2,968	3,689	3,344
Male-headed	2,030	3,788	1,938	3,807	3,650	3,238	2,707	3,560	3,263
Rural	2,071	2,652	1,989	2,662	3,313	2,279	2,460	2,317	2,387
Urban	4,472	5,417	5,242	5,385	5,447	5,380	5,532	5,358	5,383
Proportion of female-headed	0.4	0.3	0.3	0.3	0.5	0.3	0.4	0.3	0.3
Mean share of females	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Mean number of females	2.7	2.5	2.7	2.5	2.7	2.5	2.7	2.5	2.6
Total females	113,657	209,108	98,964	223,801	30,929	291,836	133,588	189,177	322,765
Percentage of total females	35.2	64.8	30.7	69.3	9.6	90.4	41.4	58.6	100.0

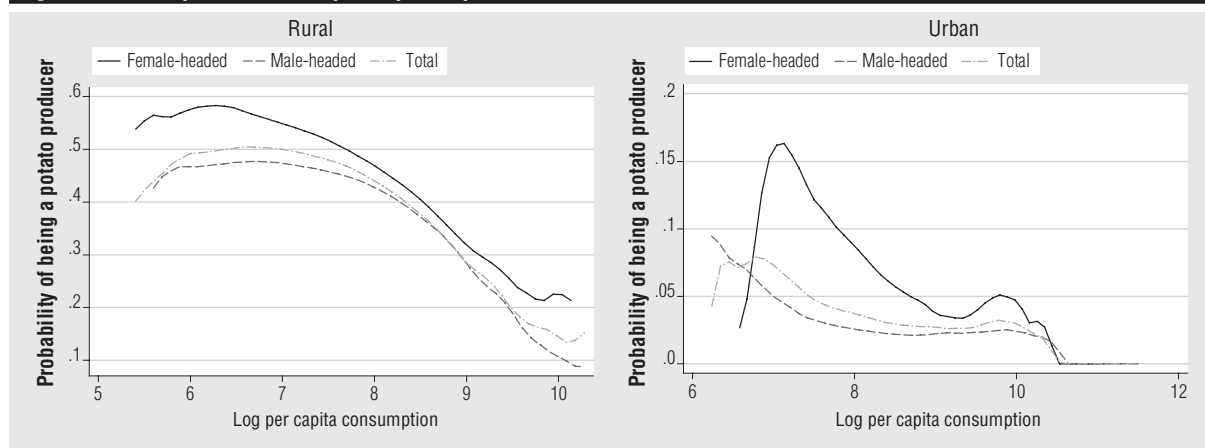
Source: Estimation based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

in regions above 2,500 meters. According to Roder et al. (2007), "considering its contribution to the individual household income, the adoption of this cash crop had no doubt the most important impact on the socio-economic conditions of rural households in the higher regions of the country".

To examine the welfare impacts of enhanced opportunities for potato exports, the study now provides a detailed description of the dummy variable that identifies potato producers, hence the households most likely to benefit from potato exports. The analysis starts with non-parametric regressions of this dummy on household log per capita expenditure and illustrates the potential distributional impact of potato exports across

different levels of living. The main results are reported in figure 2.¹⁸

The probability of being a potato producer in rural areas is over 55 per cent at the left tail of the distribution (households with the lowest per capita consumption) for female-headed households and around 45 per cent for male-headed households. This probability declines sharply with per capita consumption for both types of households. Given the theoretical framework, an expansion of potatoes exports, mostly to India, would in principle benefit the left tail of the distribution, the poorest households. It would also benefit female-headed households relatively more than male-headed households. Results for urban areas are comparable

Figure 2. Potato producers and per capita expenditure

Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

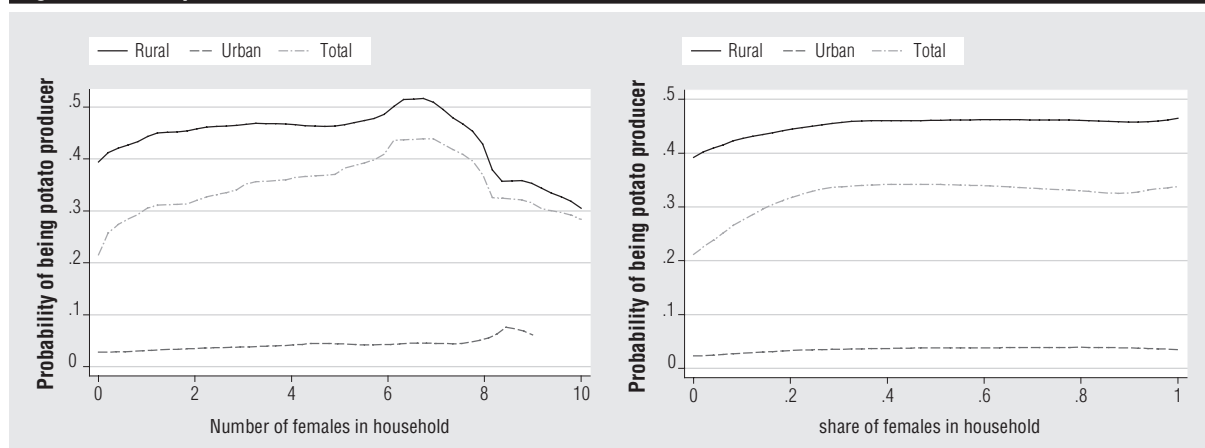
to results for rural areas. Given that there are only a few urban potato producers, the following section focuses mostly on rural households.

Another look at gender issues

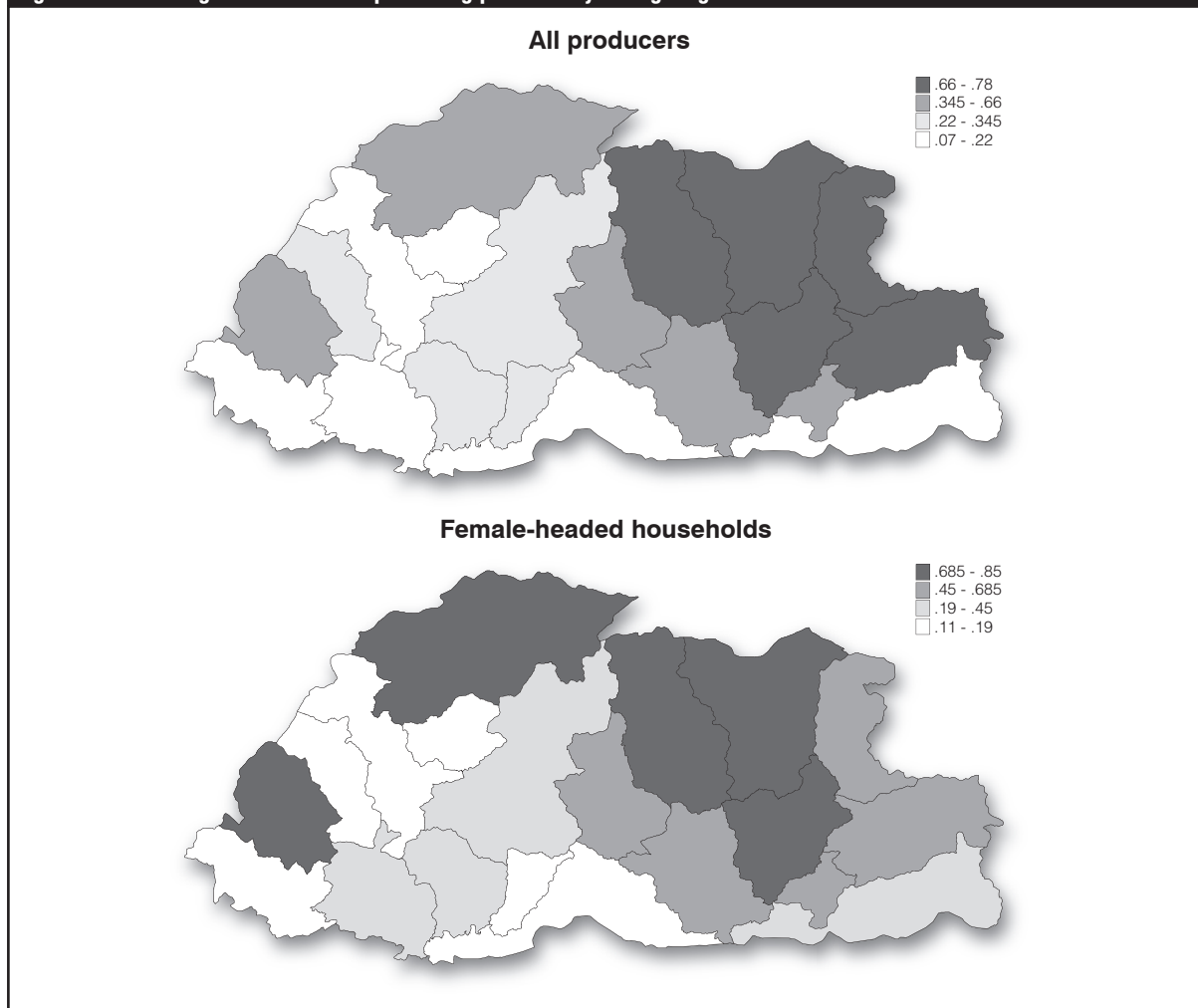
A look at the differences between female- and male-headed households does not necessarily capture all the impacts on women. So far, it has been assumed that female-headed households are affected directly by an expansion in potato exports if they are involved in its production. However, women living in male-headed households can also benefit from exports if these benefits are distributed among all members within the household. Without delving into intra-household allocation issues, which are hard to tackle, additional light can be shed on how women are affected by trade by examining the following two indicators.

First, it is important to explore the association between the probability of being a potato producer – consider the dummy indicators, as before – and the number of females in the household. The results are in the left panel of figure 3. The data show no apparent link between the probability of being a potato producer and the number of females in the household. This suggests potentially uniform benefits across households, independently of the number of females. In other words, a household with no females is more or less equally likely to be a potato producer, and thus to enjoy gains from potato exports, than a household with 8 to 10 females.

One problem with this measure is that, for a given gain or loss, the higher the number of females, the lower the per capita gain. Therefore, while in principle households with different numbers of females are

Figure 3. Potato producers and women

Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

Figure 4. Percentage of households producing potatoes by Dzongkhag

Source: Based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007.

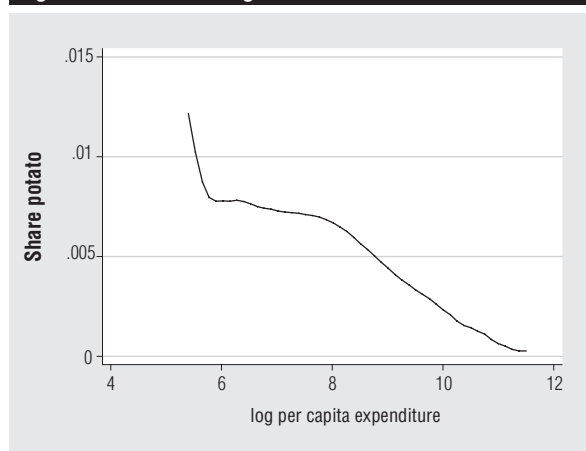
equally likely to be benefitted by trade, the per capita gain may differ. To explore this further, the analysis considers the relationship between the probability of being a potato producer and the share of females in total household size. The non-parametric regression is plotted in the right panel of figure 3. As before, it appears that trade liberalization or facilitation by an expansion of potato prices and its effects on potato producers would have similar effects for households with different compositions of females. For example, a household without any females – a share of 0 – is more or less equally likely to be a potato producer, and thus to enjoy gains from potato exports, than an only female household with a share of 1.

Another aspect of this analysis is the regional dimensions of trade and gender in Bhutan. Geographical

differences arise from climate, land type, road access, electricity provision and other factors. Below are the regional disparities that arise from the distribution across the country of households that produce potatoes, and of female-headed households that produce potatoes. Figure 4 reports the percentage of households that produce potatoes by district. Potato production is concentrated in the north-east of the country, not only for total households but also for female-headed households; as a result it is more likely to benefit from potato exports than the rest of Bhutan.

Net consumers

The analysis so far has shown that Bhutan is a net exporter of potatoes and that most households are net producers of the product. Hence, trade liberalization or facilitation in potato markets would bring

Figure 5. Potatoes budget shares

Source: Based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007.

net gains not only for women, but for the country as a whole. This result, however, is valid mostly for rural areas, where the vast majority of the net producers resides. In urban areas, 96.5 per cent of households are non-producers. These households may be hurt by trade liberalization or facilitation if they consume potatoes. To measure non-producers' exposure to higher prices of potatoes as a result of trade liberalization or facilitation, one can look at budget shares spent on potatoes. However, the reported budget shares are too small to be relevant. Figure 5 shows the relationship between the share spent on potatoes and the log of per capita household expenditure in urban areas. The poorest households in Bhutan report spending only about 1 per cent on potatoes. The average share declines sharply, and plummets to almost zero for households at the top of the distribution. This means

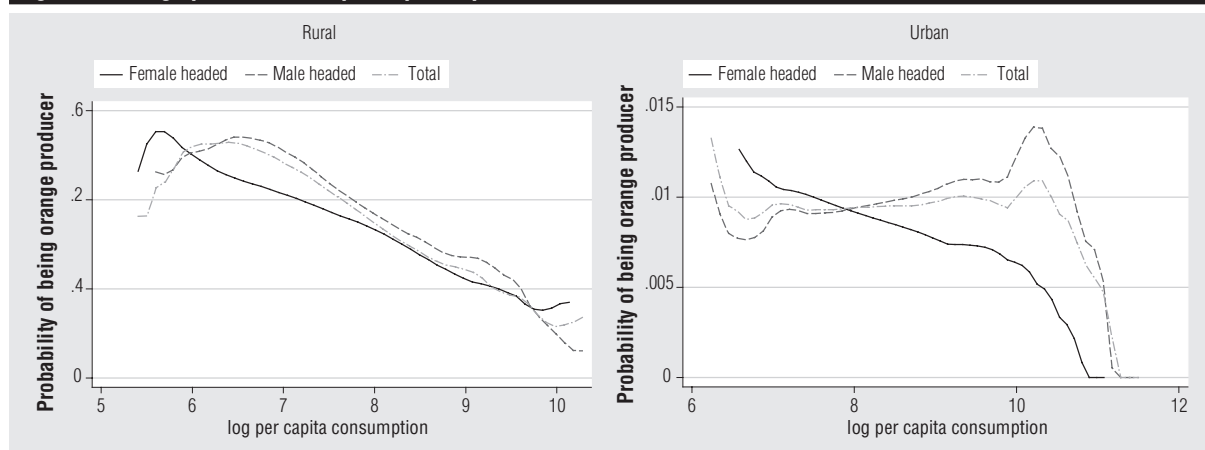
that a 10 per cent increase in the price of potatoes would cause the real income of poor households to decline by only 0.1 per cent, while richer households would be virtually unaffected. These magnitudes are, for all practical purposes, negligible.

Oranges

Citrus production is the highest value export crop for Bhutan. More than 90 per cent of the production is exported to Bangladesh. Oranges grow mostly in the subtropical southern regions of the country. Farm size is measured in terms of number of trees. Based on data collected by the Australian Centre for International Agricultural Research in 2008, (Australian Centre for International Agricultural Research, 2005), 34 per cent of citrus producers were of medium size, owing between 101 and 300 trees. These data also revealed that 32 per cent of citrus trees in Bhutan were more than 20 years of age, which is when their productivity may begin to decline. This should be kept in mind for policy purposes.

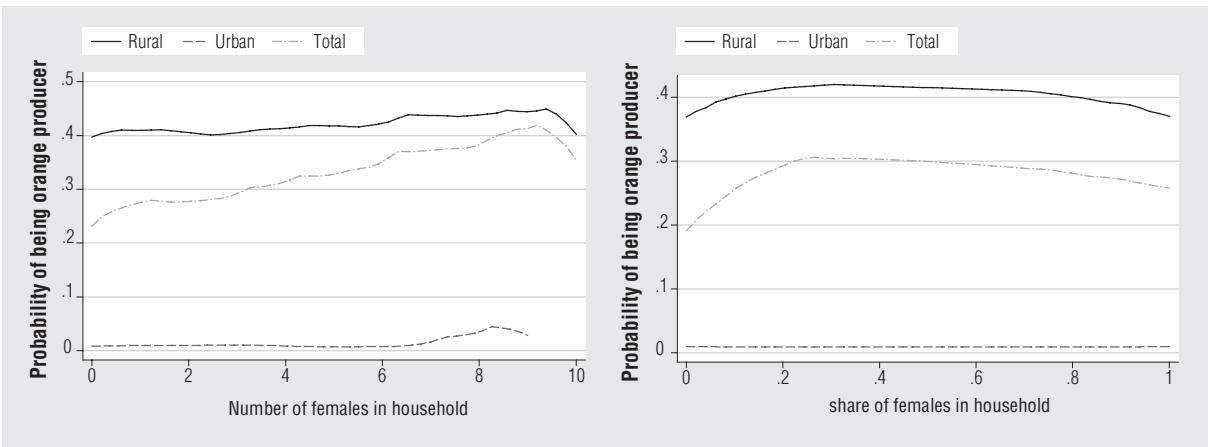
In the analysis of the potential impact of orange exports, the approach explores the correlations of the likelihood of orange production with key household characteristics, such as gender of the head of households, demographic structure and location (rural or urban households, analysis by district). The likely impacts of trade expansion are very similar to those of potatoes.

Figure 6 shows that the probability of being a rural orange producer ranges from 45 per cent for households at the bottom of the income distribution to around 10 per cent for households at the top of the distribution. This means that the probability of being

Figure 6. Orange producers and per capita expenditure

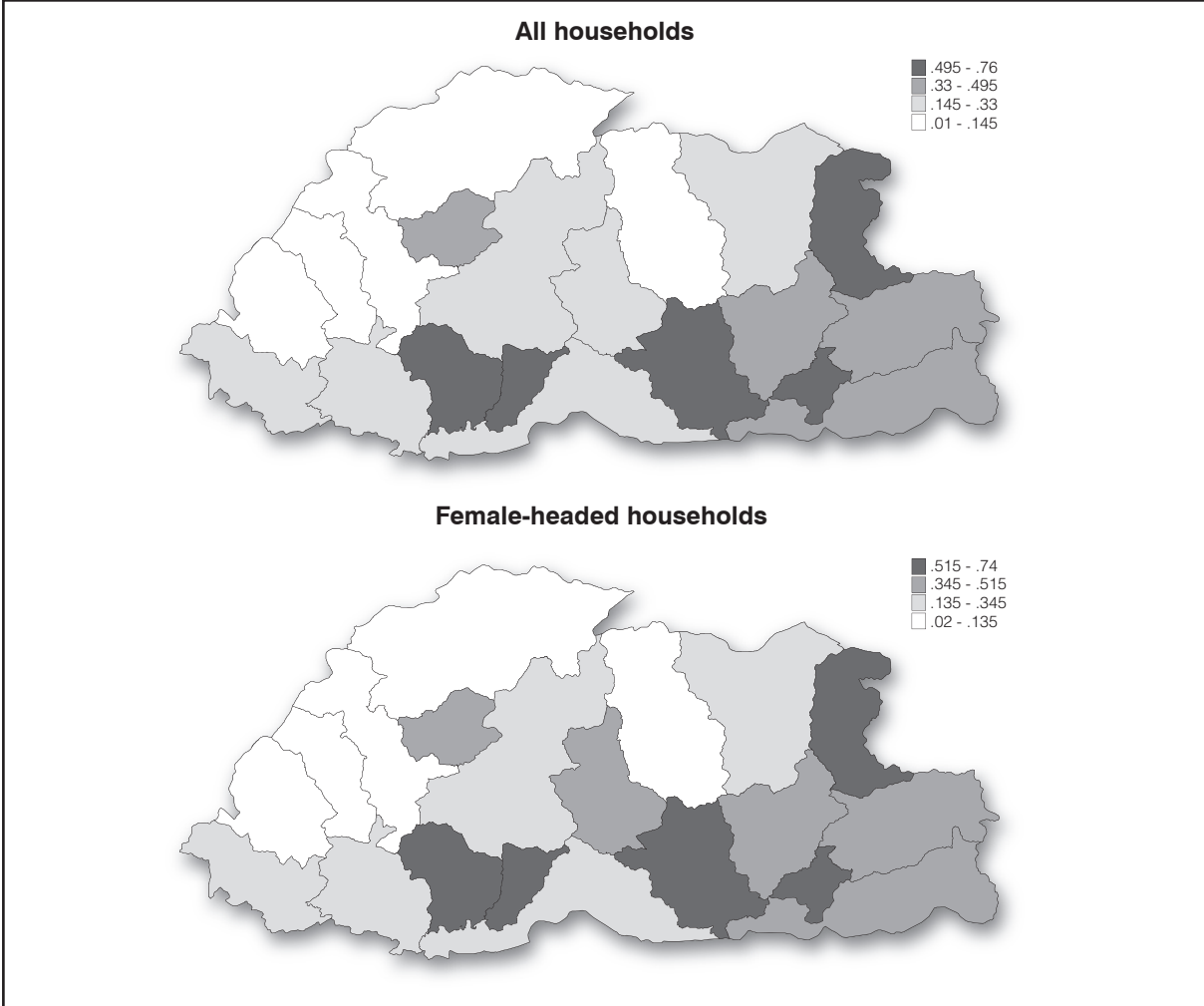
Source: Based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007.

Figure 7. Orange producers and women

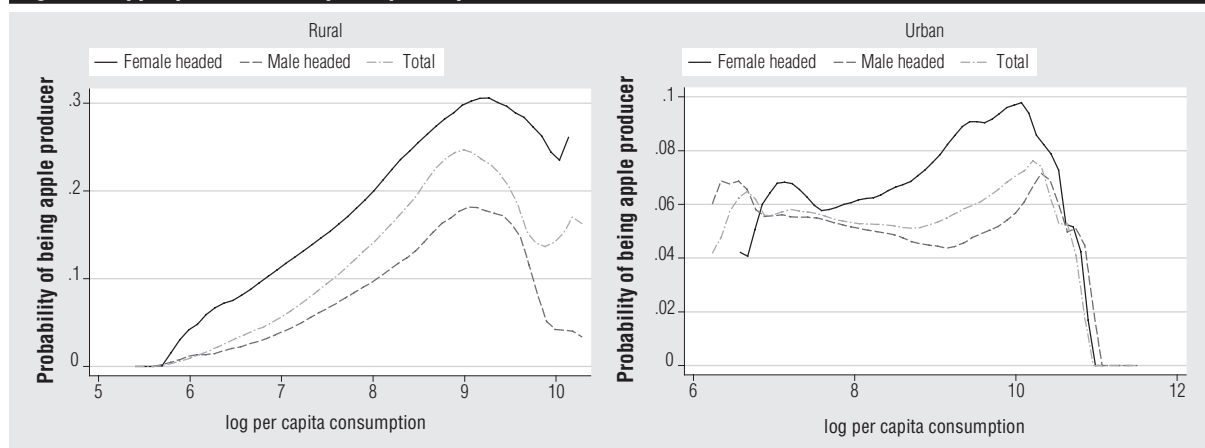


Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

Figure 8. Percentage of households producing oranges by Dzongkhag



Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

Figure 9. Apple producers and per capita expenditures

Source: Based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007

an orange producer is higher for the poorest households, and thus the poorest farmers are more likely to benefit from trade liberalization or facilitation. Further, there are only minor differences between female- and male-headed households, which points to the fact that in principle there is no apparent gender bias in the gains from trade.

Figure 7 shows that the probability of being an orange producer is roughly similar for households with both different numbers of females and different shares of females. As with potatoes, trade liberalization or facilitation would bring similar benefits to households, regardless of the number of females in the household.

Figure 8 shows that orange production is concentrated in the south-east of the country. Note that orange production is regionally more scattered than potato production. The bottom panel of figure 8 illustrates the regional distribution of female-headed orange producers, which is similar to the pattern observed at the national level.

Apples

Apples were initially introduced in Bhutan in 1960 and the country started exporting small quantities to India in 1970. In 1980, the apple boom began and in the 1990s, new varieties of apples with good harvest potential were researched (Royal Government of Bhutan 1999b).

There are distinctive features in the correlation of the probability of being an apple producer and various gender characteristics of the household. Figure 9 shows that, unlike with potatoes and oranges, the

probability of being an apple producer increases with per capita expenditure. In fact, the probability tends to be zero at the left tail and reaches around 30 per cent for female-headed households and to almost 20 per cent for male-headed households at the right tail. This indicates that an expansion of apple export is likely to benefit both poor and non-poor households, but non-poor households are likely to benefit relatively more than poor households.

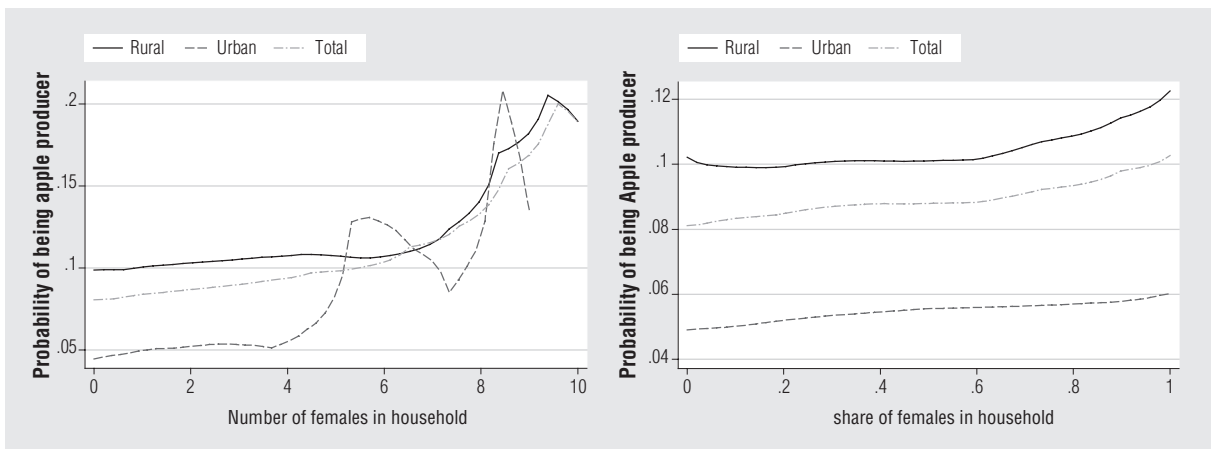
The left panel of figure 10 reveals another interesting feature of apple production: the probability of being an apple producer increases with the number of females in the household. For instance, while a rural household with no females has a 10 per cent probability of being an apple producer, a household with 8–10 females is twice as likely to be an apple producer. In principle, apple exports are a potential source of gains for females. The right panel of figure 10 shows that the correlation with the share of females also increases, but less markedly.

Figure 11 shows the percentage of households producing apples and the percentage of female-headed households producing apples across districts. Production is relatively scattered across the territory and no obvious regional pattern can be discerned, except perhaps that little apple production takes place in the southernmost part of the country.

Paddy rice

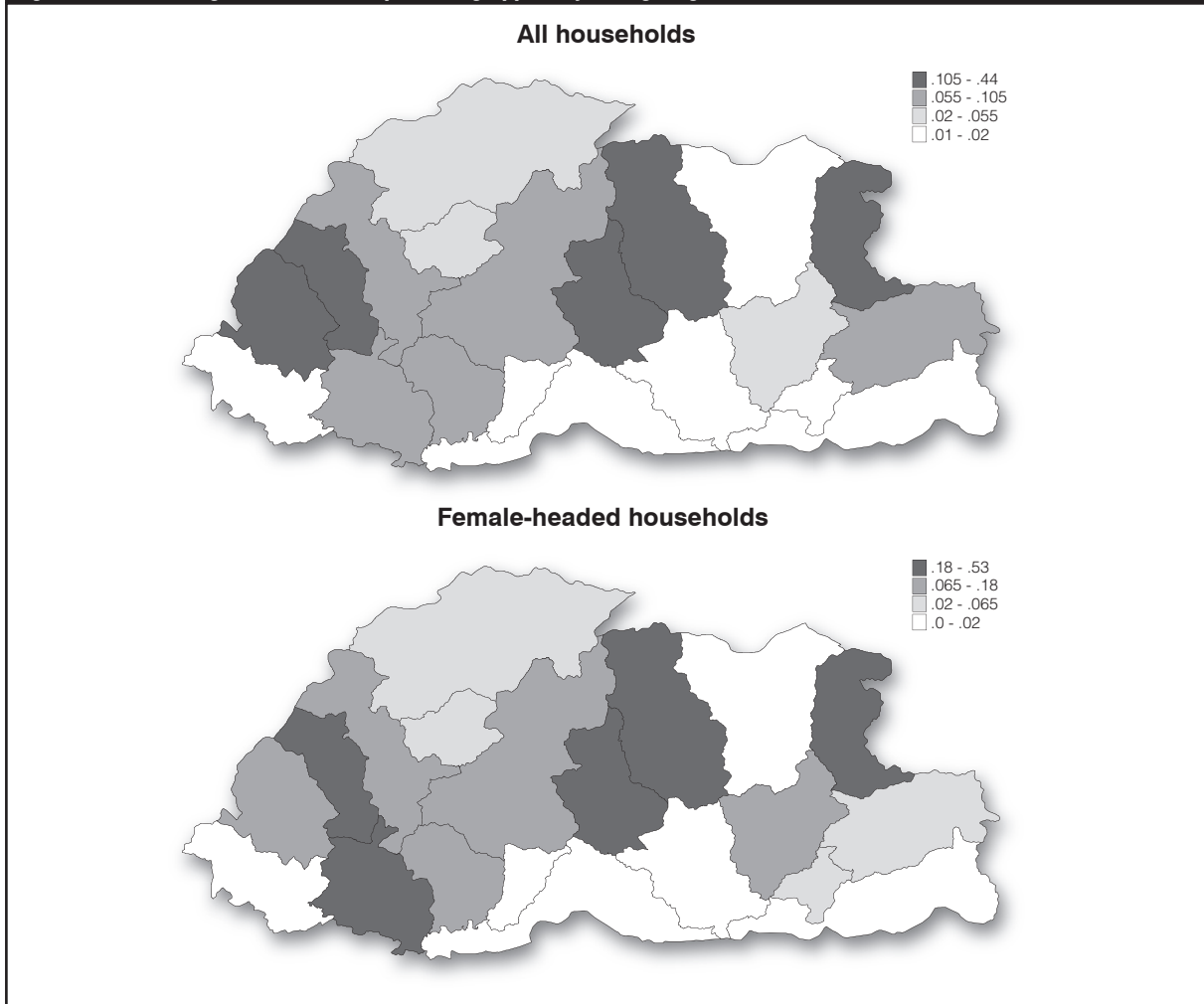
The analysis will now switch to imports. Although almost 75 per cent of farming households are engaged in rice production, 74 per cent of the consumption

Figure 10. Apple producers and women



Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

Figure 11. Percentage of households producing apples by Dzongkhag



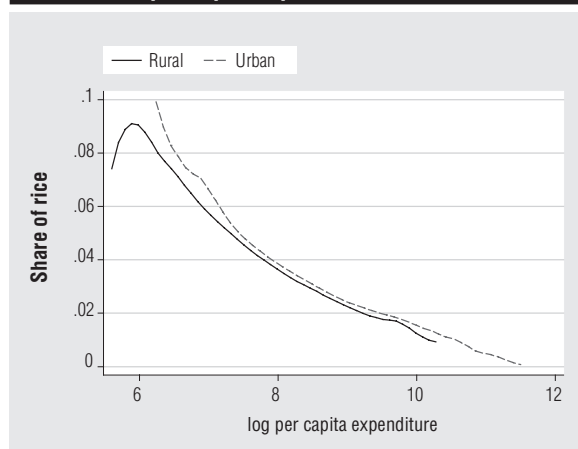
Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

of rice in Bhutan's urban areas is made of imported Indian white rice.¹⁹ The fact that domestic supply of rice does not satisfy the rising demand, thus leading to increasing rice imports, can be explained by different factors. First, the shortage of arable land and the low productivity of farm labour contribute to low supply, relative to demand. Second, pest damage from boars, monkeys and other animals is large, with losses ranging from 18–71 per cent of the value of the crop (Tobgay and McCullough 2008). This also increases labour requirements to look after the crop, especially at night. A comparison of per unit costs of production of different agricultural crops in Bhutan with India and Bangladesh (Deb 2004) revealed that yields as well as per unit variable costs of production of irrigated rice in some localities such as Paro and Tongsa were comparable to India and Bangladesh. However, in most of the locations, rice production in Bhutan was not internationally competitive. Therefore, rice continues to be a major Bhutanese import.

Under the assumption that trade liberalization or facilitation should likely cause a decline in the price of rice, net producers would be hurt while net consumers would be better off. As before, there is not enough information to identify net producers. Identifying net buyers is instead feasible when assuming that they need to purchase some rice in the market (they are thus allowed to produce something at home but not to sell in the market if they are buying at the same time; in other words, identification is possible when assuming that a net buyer who buys in the market is not selling). Net buyers enjoy a gain from lower prices only on the amount purchased on the market, not on the amount which is home produced, assuming that home production is valued at market prices. Consequently, budget shares of purchased rice can be used as a measure of exposure to import liberalization. This study, therefore, describes the impacts on consumers but not on producers.

In both urban and rural households, rice expenditures represent a large share of Bhutanese household total expenditure, especially among the poor. Figure 12 shows that the rice budget share at the left tail of the income distribution is approximately 10 per cent in both urban and rural areas. As expected, the share spent on rice sharply declines with the level of household well-being. As far as net consumers are concerned, it follows that lower rice prices will have a

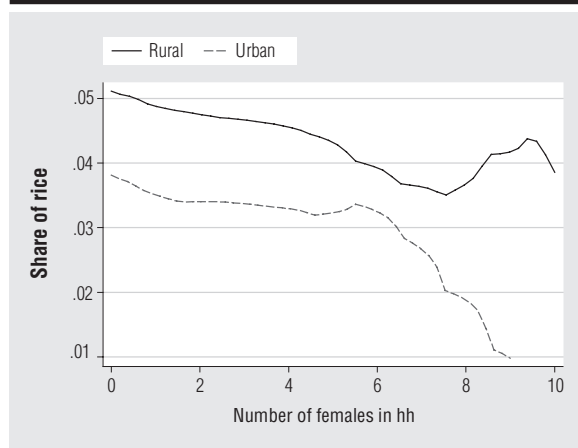
Figure 12. Rice share in total consumption and log of per capita expenditure



Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

pro-poor bias. Figure 13 depicts the relationship between the share of purchased rice and the number of females in the households. In principle, households with more women tend to allocate a lower share of their expenditure to purchased rice, especially in urban areas; therefore, these households will enjoy lower gains from trade liberalization or facilitation in rice. This association is not too strong, however.

Figure 13. Rice share in total consumption and log of females



Source: Based on the Bhutan Living Standard Survey Report 2007, Royal Government of Bhutan, 2007.

4.1.3. Broadening the scope of the analysis to non-trade concerns

Up to now, the analysis has been premised on considerations of income. Intangible values and assets associated with natural, social and cultural capitals were somewhat discounted in the analysis. Questions now arise as to how to reconcile a focus on dynamic export crops with considerations of food security, equitable development, biodiversity conservation and cultural heritage. This section briefly assesses these trade-related concerns in the context of Bhutan's agricultural diversification strategy and sketches some elements of a holistic approach that attempts to strike a balance between dynamic and traditional sectors.

Food security

As discussed previously, Bhutan currently depends on rice for its consumption needs. Although almost 75 per cent of farming households are engaged in rice production, 74 per cent of the rice consumed in Bhutan's urban areas is white rice imported from India. Wheat imports are relatively small and the country is self-sufficient in maize.

As discussed earlier, net consumers would benefit from welfare gains deriving from a further liberalization of rice imports, for example, the reduction of MFN tariffs. Yet, the potential benefits of lower rice prices through imports interact with a concern about food self-sufficiency. While food policy objectives in Bhutan have shifted over time, with a progressive move from food self-sufficiency to food security (Peljor and Minot 2010), the 2007–08 global food crisis has highlighted some of the risks of relying on food imports, leading to renewed interest in staple grain self-sufficiency in Bhutan.

In Bhutan, diversification from low-value staple crops, such as maize and rice, into higher-value export commodities, such as orange, potato, and apples, seemingly involves some form of land diversion. While the share of cereals accounted for 75 per cent of the cropped area in 2000, it dropped to 59 per cent of the cropped area in 2008. The share of cereals in the value of production fell from 59 per cent to 42 per cent between 2000 and 2008. The livestock population is reported to be on the decline as well, and its importance compared with crop agriculture has seemingly decreased over the 2000–2008 period (Pradhan, Dewina and Minten 2010).²⁰ This trend raises some concerns not only about food security, but also about equitable development, biodiversity conservation and cultural heritage.

Equitable and inclusive socio-economic development

Agriculture diversification into high-value export crops, while inducing a new dynamism to the economy, is likely to accentuate inequalities of income and wealth. Research by Pradhan, Dewina and Minten (2010) finds that richer farmers are better able to diversify their sales in a larger number of crops than poorer ones. Indeed, given the labour requirements, costs and risks associated with horticultural production, very few farmers are able to specialize fully in horticulture, although many can produce some fruits and vegetables in addition to their cereal crops. Data from the Renewable Natural Resource Census 2009 show that the larger farmers are mainly involved in fruit cultivation, as 80 per cent of the land devoted to orchards is held by farmers in the highest land quintile (Dukpa and Minten 2010). This finding was confirmed earlier with regard to apples, whereas it yields opposite conclusions for potatoes and oranges. However, the analysis offers a static picture: as trade becomes more sophisticated, only the more dynamic elements would likely be able to compete.

The strong emphasis on equity and social harmony in the gross national happiness paradigm points to the need for reconciling economic dynamism and social inclusiveness. This can be readily achieved by means of redistributive policies and processes that lead to equitable outcomes, as spelled out in the policy recommendations.

Traditional knowledge and biological conservation

In a number of countries, land diversion into export crop production has eroded the ongoing cultivation of domestic/extant/farmers' varieties, reduced biodiversity and has had an effect on the traditional knowledge associated with local staple food production. Overall, agricultural diversification into high-value export crops and the shift from subsistence to commercial agriculture typically occur in parallel with the erosion of the distinctiveness of traditional agrarian systems. Given the unique biodiversity and ecosystems that are found in Bhutan, as well as the invaluable cultural heritage associated with its traditional agrarian society, this issue deserves special consideration.

A strategy geared to agriculture diversification and commercialization in Bhutan should thus be cautiously designed so as not to encroach with the attainment of sustainable and equitable socio-economic devel-

opment, the conservation of the environment, and the preservation and promotion of cultural heritage. The integration of these non-trade concerns calls for a holistic approach that attempts to strike a balance and eventually unleash synergies between dynamic export sectors and traditional ones. The aim is to dynamize the traditional sector, that is, to preserve it, but in a more sophisticated way that conjugates elements of tradition and innovation. Beyond tariff protection²¹ and productive investment in staple food production, a key component of this dynamization strategy is to identify high-value niches within the traditional sector, and to establish synergies and complementarities with other dynamic activities. A number of high-value niche products can be targeted as source of livelihood for disadvantaged rural people and as export commodities, for example, the collection and sale of mushrooms, medicinal plants and plants for the extraction of essential oils. The production of traditional paper and natural dyes, as well as many cottage and handicrafts industries, also rely on the traditional agriculture and forestry sectors for their raw materials. Low-impact, high-value ecotourism, particularly if community based, can also be a strategic component of a holistic strategy aimed at dynamizing the traditional agriculture sector.

The challenge is to operationalize linkages and build entrepreneurial and even export capacity. This may be possibly done by implementing a strategy based on geographical indication or even trademark protection, in the context of strategic alliances between producer associations (built around appellation areas) and large off-takers (traders, specialized wholesalers and retailers) (UNCTAD 2008). In this respect, in high-income countries, customers (consumers and tourists) are increasingly willing to pay for symbolic product attributes (Daviron and Ponte 2005) based on intangible assets and values that are typically associated with cultural heritage and the conservation of biodiversity. By capitalizing on its traditional production systems, Bhutan could strategically position itself in this area, which would also allow the country to translate some sources of competitive disadvantage, for example, the low adoption level of modern technologies such as chemical fertilizers and plant protection chemicals, into a comparative advantage (organic farming).

A related critical issue, in terms of cultural heritage and biodiversity conservation, is to favour agro-ecological research and local breeding tailored to local conditions, and geared to conserving and improving

plant genetic resources. Any yield-improvement strategy should also be premised on the use of technologies with minimal environmental impact. As discussed above, Bhutan should continue to operate within the broad principles of organic agriculture – an important source of potential comparative advantage.

4.2. HYDROPOWER RESOURCES AND THE MINERAL SECTOR

4.2.1. Hydropower resources

The hydropower sector itself can neither generate significant employment for women nor backward linkage effects within the economy. Indeed, only 1.1 per cent of the total population works in this sector, 0.4 per cent of which are women (Royal Government of Bhutan 2009a). All capital goods related to the construction of hydropower plants must be imported. There are nonetheless some important gender-specific aspects to consider.

First, women would indirectly benefit from the expansion of this sector, via government spending and spillovers. In 2009, electricity accounted for 42.1 per cent of total export earnings, or \$208 million. In the fiscal year 2008-09, the sector contributed 40.4 per cent of total governmental revenue through corporate income tax and profit transfers (Royal Government of Bhutan 2009c). Also, the availability of cheap electricity inputs has led to the development of certain power-intensive industries such as cement-based operations (Shi 2009) – a further source of government revenues. Well-managed public spending can be translated into high quality public services that can benefit the whole population and in particular women.

Second, improved access to electricity would lessen the burdens on women who rely on biomass fuels, such as wood, charcoal and agricultural residues. Collecting traditional fuels is indeed a physically draining and time-consuming task, disproportionately incumbent on women. As poor rural women spend much of each day indoors at the cooking fire, the use of these traditional fuels also raises public health concerns (UNDP 2005). More generally, modern energy services would help women meet their practical needs (using electric pumps to get underground water, for example), their productive needs (women's microenterprises are often heat intensive as in food processing and/or light intensive as in home-based cottage industries in which work is carried out often

in the evenings), and their strategic needs (using the radio or the Internet for distance learning, information-sharing, marketing, advocacy and coalition-building). All of this would have crucial, though indirect effects on women's employment. According to findings from the *Bhutan Living Standard Survey 2007* (Royal Government of Bhutan, 2007), almost 73 per cent of all households have access to electricity. However, there is unsatisfied demand among 39.7 per cent of the rural population. There are plans to remediate this by 2020 with the Rural Electrification Master Plan, which will provide "electricity for all".

4.2.2. The mineral sector

The endowment of mineral-related resources has facilitated the growth of a mineral-based industry that generates significant export proceeds (Shi 2009). However, mining and quarrying contributed to only 2.3 per cent of GDP in 2008 (see table 1). More importantly, for the purposes of this study, the sector offers little direct employment opportunities, especially for women. Only 0.2 per cent of the workforce is in mining; in manufacturing, employment in cement-related industries is also negligible. As in the case of hydropower resources, there will not be sizeable quantifiable impacts on female employment. However, indirect effects through increased governmental revenues and expanded public services may be important. Their assessment goes beyond the scope of the present report.

4.3. MANUFACTURES AND TOURISM

For the sake of completeness, this section investigates two promising sectors for the Bhutanese economy: manufactures and tourism. As with electricity and cement, the available data do not present a meaningful quantification of the likely impacts of trade liberalization or facilitation. Nevertheless, the description of these sectors is important because they are a potential source of growth.

4.3.1. Manufactures

The Bhutanese manufacturing sector has undergone significant changes in the past few decades. Before the 1960s, manufacturing was mostly a household activity based on products such as handicrafts, wood and bamboo products, where production was carried out on a small scale. Since then, the number of industries has expanded steadily and nowadays, the sector

is dominated by a small number of major operators, some of which are involved in processing Bhutan's agricultural production.

On aggregate, only 4.7 per cent of total Bhutanese employment was in the manufacturing sector in 2009 (see table 3). At first glance, this may indicate that trade liberalization or facilitation will have only small impacts at the national level. The *Bhutan Living Standard Survey 2007* (Royal Government of Bhutan, 2007) contains information on the distribution of employment by main occupation and by gender in manufactures (see table 17). Almost half – 47 per cent – of manufacturing employment is in textiles. This sector is especially important for women: 85.7 per cent of all women employed in the manufacturing sector are in the textile sector. However, textiles comprise only a negligible share (0.95 per cent) of Bhutanese exports. In comparison, males are more evenly employed and are concentrated in the glass, furniture, and wood-products sectors. These are not, however, trade-focused sectors.

The analysis in this section has offered an aggregate and static picture that does not fully capture the strong dynamic potential of discrete segments and industries within the sector.

In particular, the textile handicraft industry could expand significantly in Bhutan if certain conditions were met. It would first be necessary to establish intellectual property protection for the traditional textile designs. The challenge will also be to establish linkages with strategic off-takers in global supply-chains (branded retailers, specialized wholesalers and traders). Finally, while handicraft textile would enter the EU duty free under the Everything But Arms Initiative, Bhutan would need to seek tariff reductions to access other markets, including the United States. The textile handicraft sector has important gender-specific aspects, as weaving is closely associated with women and is the only one of Bhutan's traditional arts and crafts that is dominated by women.

Beyond textile handicrafts, agro-processing industries also have significant potential in Bhutan, particularly if linkages with the tourism sector are operationalized, for example, food supplies to hotels or catering for meetings and workshops. This will be contingent on the ability of local suppliers to meet stringent food safety and quality standards, in addition to requirements for timely deliveries, as well as quantity and consistency of delivery.

Table 17. Main sectors in manufacturing and related trade

Sectors	Female		Male		Total		Exports		Imports	
	Persons	%	Persons	%	Persons	%	Value (dollars)	%	Value (dollars)	%
Spinning, weaving and finishing of textiles	4,711	85.64	89	1.90	4,800	47.08	1,263,220	0.95	3,227,790	2.86
Glass and glass products	152	2.76	1,045	22.26	1,197	11.74	1,449,637	1.09	4,708,425	4.17
Furniture	38	0.69	890	18.96	928	9.10	811,377	0.61	500,485	4.43
Products of wood, cork, straw and plaiting materials	68	1.24	495	10.54	563	5.52			19,146	0.02
Basic chemicals	79	1.44	359	7.65	438	4.30	539	0.00	88,019	0.08
Beverages	79	1.44	183	3.90	262	2.57	3,644,535	2.73	7,909,184	7.01
Sawmilling and planing of wood	10	0.18	212	4.52	222	2.18				
Basic iron and steel	40	0.73	150	3.19	190	1.86	123,252,735	92.33	49,387,370	43.76
Office, accounting and computing machines	52	0.95	116	2.47	168	1.65			239,222	0.21
Casting of metals	0	0.00	119	2.53	119	1.17	3,803	0.00	854,751	0.76
Medical appliances and instruments	26	0.47	91	1.94	117	1.15			4,818,924	4.27
Printing and service activities related to printing	13	0.24	91	1.94	104	1.02				
Rubber products	52	0.95	52	1.11	104	1.02	3,049,273	2.28	21,295,728	18.87
Television and radio transmitters	26	0.47	73	1.55	99	0.97			13,560,487	12.02
Other textiles	13	0.24	67	1.43	80	0.78	5,280	0.00	500,610	0.44
Not elsewhere classified	12	0.22	53	1.13	65	0.64	13,937	0.01	1,248,618	1.11
Other manufacture	130	2.36	610	12.99	740	7.26				
Total	5,501	100.00	4,695	100.00	10,196	100.00	133,494,336	100.00	112,858,759	100.00

Source: Estimation based on the *Bhutan Living Standard Survey Report 2007*, Royal Government of Bhutan, 2007, and the United Nations Commodity Trade Statistics Database.

4.3.2. Tourism

Tourism is a rapidly growing services sector for Bhutan, and has significant potential in terms of generating foreign exchange and employment, particularly for women.

In terms of earnings, tourism has always been an important source of hard currency for Bhutan. By 1996 it was the sixth largest producer of revenue for the country, and the third largest foreign exchange earner. Earnings from tourism were \$1.67 million in 1985, almost \$6.0 million in 1996, and \$38.8 million in 2008, representing 2.9 per cent of Bhutan's GDP in 2008. Tourism earnings are also transferred to local communities for repairing and maintaining trekking trails and supporting trekking-relat-

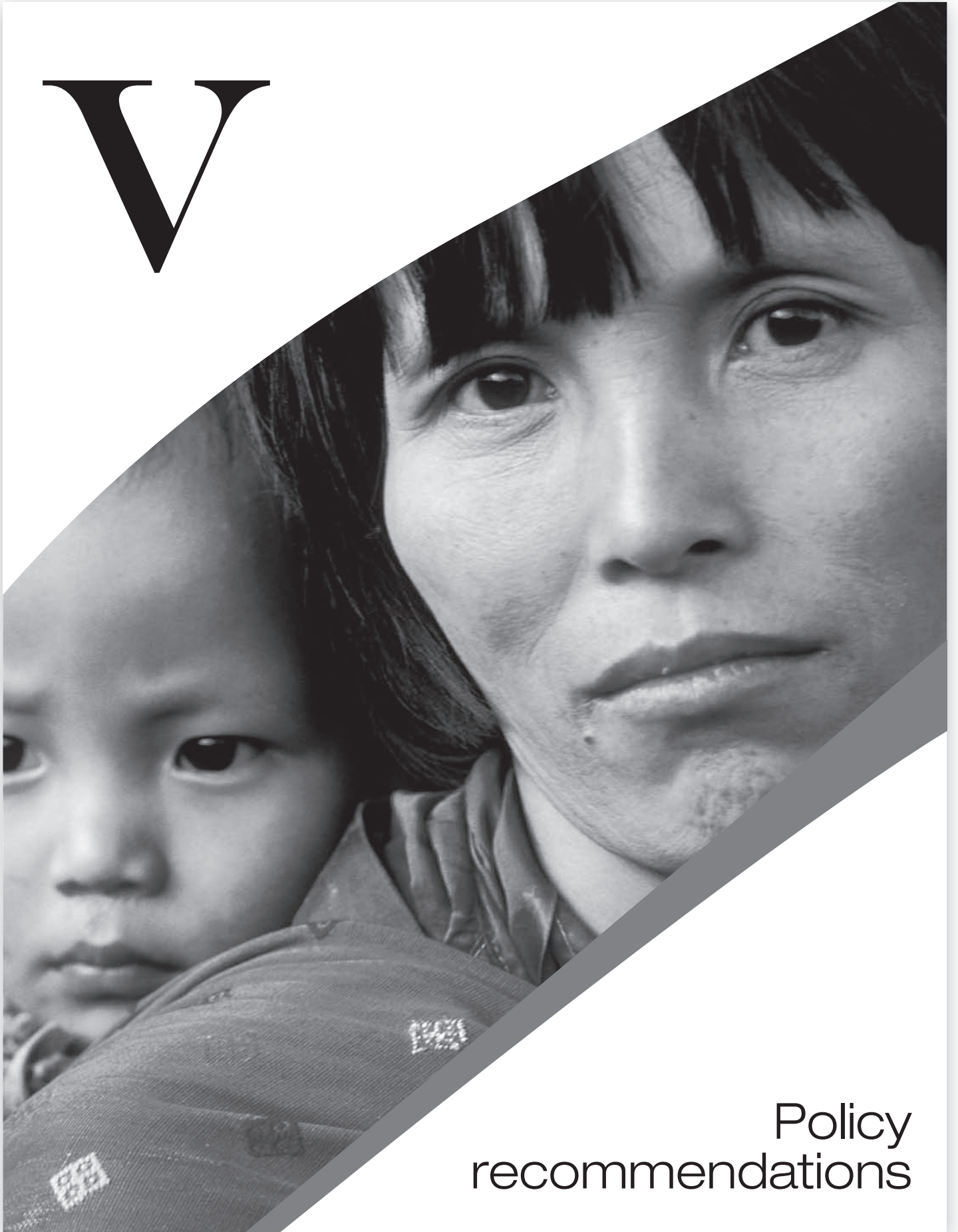
ed activities. Tourism also has a positive effect on rural employment, since guides, drivers, office staff, hotel and catering employees are often recruited among the rural population.

A survey on tourism in Bhutan presents evidence of a large proportion of women in employment (UNCTAD 2007), supporting the view that women may benefit from the expansion of tourism. The promotion of community-based tourism and forms of ecotourism is also viewed as an effective catalyst for poverty reduction, promotion of cultural heritage and environmental protection in rural areas (Royal Government of Bhutan, 2009b). Like textiles, tourism remains as a source of potential gains from trade.

NOTES

- 17 This box is based on the framework developed by Nicita 2009.
- 18 These graphs were derived using the local polynomial regressions of Fan (1992, 1993). See also Pagan and Ullah (1999).
- 19 There are some differences in price and quality between red rice, which is a nutritious and traditional component of the Bhutanese diet, and white rice, which is cheaper and readily available.
- 20 The Fifth and the Sixth Five-Year Plans (1981–86 and 1987–92) called for self-sufficiency in staple foods, the Seventh Five-Year Plan (1992–97) still advocated self-sufficiency, but also recognized that it might not be a realistic goal, the Eighth Five-Year Plan (1997–2002) shifted its focus on food security, though it called for the value of agricultural exports to exceed the value of agricultural imports. In 2007, the Bhutan National Food Security Strategy Paper adopted the definition of food security from the 1996 World Food Summit. Food self-sufficiency refers to the ability to meet consumption needs, particularly for staple food crops, from own production rather than by buying or importing. According to a widely accepted definition, food security is achieved when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (Food and Agriculture Organization of the United Nations, 1996).
- 21 Tariff protection could be conveniently used in a focused way, for example to transitionally protect sectors where Bhutan is building its comparative advantage. In the mid-term, this strategy should strive to establish conditions for self-sustaining growth.
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V



Policy
recommendations

Drawing on the previous analysis, this chapter makes some policy recommendations. As discussed, there appears to be little or no gender bias in the gains from trade. Available data reveal an absence of the feminization of poverty in Bhutan. Accordingly, policy recommendations tend to be gender-neutral, except when specific gender issues need to be mentioned.

5.1. OVERCOMING SUPPLY-SIDE OBSTACLES AND ENHANCING EXPORT COMPETITIVENESS

Critical supply-side constraints hinder Bhutan's export competitiveness. The ability to benefit for market access will be contingent on overcoming these key supply-side obstacles. From a policymaking perspective, this calls for the mobilization of internal resources (transfer of resources within the economy, across sectors) and the pooling and alignment of external funds.

In terms of domestic resource mobilization, a key issue is sustained growth in other sectors of the economy (hydropower) and transfer of resources within the economy, across sectors. Special credit lines to agriculture through public programmes or state banks would also contribute to channel funds to the sector. Public investment would need to be targeted carefully, favouring productive investment in strategic physical infrastructures, quality assurance and traceability systems (including organic labels), and suited innovation (research and development) and extension systems supportive of ecological agriculture.

Turning to international development cooperation, a number of Aid for Trade initiatives, including the Enhanced Integrated Framework, can catalyse development assistance in support of Bhutan's efforts to develop the basic economic infrastructure and tools the country needs to promote export trade and diversification. Enhanced South–South cooperation could also play a useful role in strengthening research and development, particularly in agriculture. The key challenge is to align aid flows to the priorities expressed in Bhutan's sectoral strategies.

...with due attention to gender-specific issues

There is some scattered evidence of gender biases in access to extension layouts and other supply services. It will be important to integrate gender considerations in the design and implementation of support schemes, not to have mute supply-side response to policy incentives. In practice, this gender focus will require the inclusion of gender when planning extension

layouts and other support services. This will involve the use of more inclusive, participatory approaches when assessing needs: for example, women can work with the extension workers to evolve appropriate technologies that will ease their workload.

...and to Bhutan's unique biodiversity and special ecosystems

Bhutan has a strategic commercial interest in preserving its still dominant organic farming systems. Accordingly, any yield-improvement strategy will have to take into account all possible negative externalities associated with the erosion of Bhutan's natural capital, and take preventive and corrective action. A major concern should be to strengthen ecologically based agricultural practices supportive of Bhutan's unique biodiversity and special ecosystems.

At the domestic level, this calls for public support (by means of structured incentives and disincentives) for alternative technologies that minimize damaging effects on the environment, such as biological pest management and composting. It would also be imperative to establish the legal and technical infrastructure needed for the implementation of a credible national organic standards and certification scheme. The enactment of an effective *sui generis* law for the protection of plant varieties should also figure prominently on the agenda of policy-makers. While according specific privileges to commercial breeders, an effective *sui generis* legal system relating to the protection of plant varieties should also provide for customary farmers' rights (to save, reuse and exchange farm-saved seeds and propagating material from protected varieties). In addition to farmers' welfare, this will contribute to the maintenance of biodiversity, which has traditionally occurred through the process of on-farm experimentation.

At the international level, more aid should be made available to strengthen ecological farming methods and infrastructure, and support the implementation of national organic schemes. At the same time, there needs to be a full operationalization of the flexibilities enshrined in relevant multilateral disciplines, so as to allow some policy space to differentiate between conventional versus organic products. Finally, the flexibility provided for in the TRIPS Agreement (requiring an effective *sui generis* system for plant variety protection) should not be diluted by forcing acceding countries to adopt systems similar to those devised by the International Union for the Protection of New Varieties of Plants or allowing patentability of plant varieties.

5.2. MEETING MARKET ACCESS AND MARKET ENTRY REQUIREMENTS

A number of high-value niche products can be targeted as source of livelihood for rural people, and as export commodities: for example, handmade textile and other handicraft manufactures, as well as forest-based products, such as mushrooms, medicinal plants, and plants for the extraction of essential oils. These niche sectors could provide employment for women and build upon their traditional knowledge. However, a number of market access or entry issues arise on the demand side. On the supply side, the ability to benefit from market access or entry will then be contingent on overcoming supply-side obstacles and build entrepreneurial and export capacity.

Tariff barriers – Tariffs are not a major issue, as Bhutan enjoys free trade with India and preferential trade with Bangladesh and other SAFTA countries, as well as duty-free access (all goods except arms) to the EU and, to a more limited extent, to the United States and Canada. However, the impact of certain preferential schemes was limited by exclusion from their product coverage of items of export interest to Bhutan. Under the preference scheme of the United States, in particular, some textile manufactures could not qualify as GSP-eligible articles. Bhutan may wish to follow closely the extension of the U.S. Generalized System of Preferences programme, and seek duty-free treatment for its certified textile handicraft products (eventually under GSP-certified textile handicraft arrangements).

Non-tariff barriers – In spite of low or preferential tariffs, Bhutan's exporters would still face, in many sectors and industries, obstacles in the markets of destination, due to burdensome legal and administrative conditions imposed by the importing countries. In particular, compliance with technical barriers to trade and sanitary and phytosanitary measures has become a major challenge for exporters from developing countries, particularly in relation to dynamic, non-traditional commodity sectors (e.g. horticulture and fisheries). To some extent, the recent surge in this type of non-tariff barriers has offset the commercial significance of negotiated tariff reductions. Compliance with these requirements can be particularly challenging for women, due to gender gaps (e.g. in education) and gender biases (seemingly, in the delivery of support services). There is a pressing need, particularly for the LDCs, to enhance their ability to adapt and respond to changing requirements in export markets. This is

challenging, especially since these requirements are continuously evolving (e.g. pesticide regulations). Mobilizing Aid for Trade is critically important to boost ability to adapt on the supply side. There is also a pressing need to achieve a greater degree of clarity, predictability and information about non-tariff barriers through the full and meaningful operationalization of the transparency provisions enshrined in the relevant WTO Agreements.

Market entry barriers – Besides market access barriers – tariffs and non-tariff barriers – Bhutan will most likely face a number of actual market entry barriers that stem from the structural characteristics of supply chains and markets. These impediments include important structural (for example, sunk costs and economies of scale) and behavioural barriers, such as access to distribution channels and the abuse of market power by incumbent firms, which severely hinder a new competitor's ability to enter new export markets. Critical to overcome these barriers are policy options and models for integrating Bhutanese small agricultural producers in supply chains in a sustainable manner. A number of models of organized supply chains have been relatively successful in integrating small producers into new supply chains. These include out-grower schemes, supermarket and off-taker-driven supply chains, as well as supply chains facilitated by non-profit organizations (UNCTAD 2006). By linking small producers to a guaranteed buyer who will also supply inputs, know-how, equipment and finance, these schemes can help Bhutanese farmers integrate into global supply chains and reach global markets. Given its distinctive development strategy (gross national happiness paradigm), Bhutan may particularly wish to link with fair-trade schemes and organic labels (non-profit-organization-facilitated supply chains, but also, and increasingly, retailers' brands).

5.3. TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY: A PRODUCT DIFFERENTIATION STRATEGY BASED ON INTELLECTUAL PROPERTY

In high-income countries, customers (consumers and tourists) are increasingly willing to pay for symbolic product attributes based on intangible assets and values (Daviron and Ponte 2005). These are typically associated with cultural heritage and the conservation of biodiversity. By capitalizing on its image, Bhutan could gain brand identification and strategically position itself

in high-value markets. This may be done by implementing a strategy based on geographical indication or even trademark protection through strategic alliances between producer associations built around appellation areas and large off-takers, for example, traders, specialized wholesalers and retailers (UNCTAD 2008). To the extent that gender contributes to gaining market recognition, gender should be an integral component of this strategy.

Both geographical indication and trademarks can be used as a source of niche marketing to identify products of Bhutanese origin. Geographical indications consist of place names, or words associated with a place. Trademarks may consist of names, figurative elements, colours and different signs that combine the characteristic attributes of the product with crafts, music or other expressions of folklore from the country of origin. In practice, the effectiveness of this strategy is largely a matter of consumer perception (UNCTAD 2008). Geographical indications are essentially marketing tools: they function if they are understood by consumers to denote the origin and the quality of products, and if this distinctiveness translates into a price premium. Similarly, whether a sign functions as a trademark is a matter of consumer perception and high advertising budgets are necessary for promoting brand recognition in consumer markets. Involvement of external actors, such as industrial processors and branded consumer goods companies domiciled in the consuming countries, can help to penetrate consumer consciousness, as well as to meet the costs associated with legal protection. In this respect, trademark protection is particularly complex and costly because of the requirement to register separately with each national or regional office where protection is sought. In addition, geographical indications would need to be legally protected to avoid misuse, for example, the false use of geographical indications by unauthorized parties. These requirements can be more easily met within the framework of strategic alliances between producer associations organized around appellation areas and the off-takers domiciled in the consumer countries.

Geographical indications and trademarks are inherently different. Whereas the former may be used by all producers who make their products in the place designated by a geographical indication and whose products share typical qualities, the latter gives its owner the right to exclude all others from using it and to license its use in return for royalty payments. Further-

more, geographical indications, unlike trademarks, do not trigger royalty payments.

5.4. PROMOTING EQUITABLE AND INCLUSIVE OUTCOMES IN EXPORT-LED STRATEGIES

The analysis points to the welfare gains that would accrue from trade expansion in major crop exports – potatoes, oranges and apples. In some instances – oranges and potatoes – export trade seems to have pro-poor and equalizing impacts. Expansion strategies of cash crops, however, may also accentuate inequalities of income and wealth. Some evidence of this can be found in the apple trade. Given the labour requirements, costs and risks associated with horticultural production, especially if conducted on a large scale for export purposes, only the richest farmers may be able to specialize in it. Moreover, there will most likely be a tendency for buyers to source from large-scale growers that are easier to coordinate and monitor. The strong emphasis on equity and social harmony in the gross national happiness paradigm points to the need to reconcile economic dynamism and social inclusiveness. Diversification strategies in agricultural production must, therefore, include instruments for redistributive policies and address the specific difficulties that the poorer farmers face in reaping commercial opportunities. Strengthening producers' organizations or clusters should appear prominently on the agenda as a means to overcome supply-side obstacles faced by small farmers.

Price transmission along the domestic chain is also an issue. For example, if a geographical-indication strategy is implemented (see above), producers would need to control the extra value unlocked by geographical-indication recognition, that is, the premium price. Given that producers tend to be illiterate and vulnerable – more than 87 per cent of women heading households in rural areas have no formal schooling – it is likely that this extra value would be appropriated by downstream actors, from intermediaries to exporters to international traders, with no significant transmission back to producers. The extent to which export benefits are reaped by producers, rather than taken by middlemen or other categories, ultimately depends on the relative bargaining power of small producers in their relation with downstream agents, from middlemen to exporters. Promoting producers' organizations and ensuring effective extension services, particularly market information services, would help empower producers. In a

broader sense, however, there is a pressing need for improvements in education and skill accumulation, especially for rural women.

5.5. PRESERVING LOCAL CAPACITY FOR STAPLE FOOD PRODUCTION: TRADE-RELATED POLICIES

Drawing on a theoretical model, the analysis finds that further liberalization of rice imports, that is, a reduction in MFN tariffs, would benefit net consumers. Since the share spent on rice sharply declines with the level of household well-being, lower rice prices would have a pro-poor bias, as far as net consumers are concerned. The erosion of preferential margins and diversification of import sources would also reduce exposure to a single market, such as India.

The major drawback of this analysis is that it does not quantify welfare impacts on net producers. Also, the analysis tends to discount considerations of food security and other non-trade concerns. The 2007–08 global food crisis highlighted some of the risks of reliance on international trade to meet food needs at the expense of stock holding. According to the Food Price Index of the Food and Agriculture Organization of the United Nations, global food prices shot up to a nominal record in January 2011, surpassing the levels of the 2007–08 food crisis. In a context of tight supplies, changing weather patterns and rising demand in emerging economies, Bhutan may wish to preserve some capacity for domestic production. Tariff regimes, agricultural investments and market exploration represent policy tools that may be used by Bhutan to reconcile food security and agricultural modernization and diversification strategies.

Tariffs – In negotiating tariff bindings, Bhutan may wish to keep the bound tariff rates appreciably higher than the currently applied rate, particularly with respect to very sensitive products in terms of gender and food security. This tariff headroom will leave the country with a considerable amount of flexibility when designing domestic protection schemes aimed at empowering rural women and promoting livelihood security and rural development (Tobgay 2006). In this respect, it should be noted that WTO member States agreed to observe restraint in seeking concessions and commitments on goods and services from LDCs that were negotiating membership (WTO General Council Decision, 10 December 2002). Once its accession has been completed, as an LDC, Bhutan will be exempted from tariff-reduction commitments under the WTO Agreement

on Agriculture. In practice, however, Bhutan may be obliged to actively engage in negotiations to receive the privileges enjoyed by the existing LDC members.

Domestic support – An alternative or complementary approach to tariff protection would be to increase yields in staple food production through productive investment in agriculture. Key support elements would include rural infrastructural services, adaptive research in the areas of food crops and livestock, and extension layouts in the areas of training, advisory services, pest and disease control, variety and breed improvement, fodder grassland and pasture development (Tobgay 2006). Relevant multilateral disciplines, such as the Agreement on Agriculture, would allow considerable leeway for implementing domestic support schemes in favour of farmers, including rural women. The Agreement would not put any restrictions on the use of measures that do not or only marginally distort trade, such as research and development, extension outlays, rural infrastructural services and regional assistance programmes. Such measures fall under the green box in WTO jargon, and are exempted from reduction commitments. Other relevant trade policy measures, including subsidization of inputs and price-support schemes, would qualify as trade-distortive measures, or amber-box measures, normally subject to reduction commitments. However, as an LDC, Bhutan would be exempted from taking reduction commitments. In the event of graduation from LDC status, some of these measures, for example, non-product specific agricultural input and rural investment subsidies, would continue to be permissible under the development-box exemption granted to developing countries (Agreement on Agriculture, article 6.2). Budget allocations for other trade-distortive measures, both product- and non-product-specific, would meet WTO requirements only within a de minimis threshold: for developing countries, 10 per cent of the value of production of individual products (product-specific support) or total agricultural production (non-product-specific support). The problem is not legal, but financial. This yield-improvement approach is costly, especially if coupled with subsidization schemes, which may play a role here, given the strong pro-poor bias of a strategy geared to subsistence agriculture. Key issues are thus sustained growth in other sectors of the economy, in particular hydro-power sector and large-scale energy-intensive industry, and the transfer of resources within the economy, across sectors.

Clustering or linkages – Beyond tariff protection and productive investment in food production, an essential component of a strategy aimed at empowering subsistence farmers is to identify high-value niches within the traditional sector (forest-based products) and to establish synergies and complementarities with other dynamic activities, for example, community-based ecotourism. Gender should be an integral component of this strategy. Rural women, who form the backbone of the agricultural labour force, are routinely concerned with food security and biodiversity. As food providers and custodians of biodiversity, they can play a catalytic and pivotal role in modernizing the agriculture sector in a way that contributes towards the attainment of equitable socio-economic development and environmental sustainability – two fundamental tenets of the gross national happiness paradigm.

5.6. RETAINING POLICY SPACE TO ESTABLISH LINKAGES IN TRADE POLICY

The study highlights the importance of clustering and linkages between sectors and industries within the

economy. For example, it is worth exploring how to link local agro-processing industries with tourist outlets. Bhutan may wish to retain the policy space needed to operationalize these linkages, including by means of local content requirements. This would include, for example, the provision of structured incentives to hotels and other tourist outlets to source certain goods and services locally. This type of measures would be commercially sound under certain conditions. Most notably, local suppliers may need to upgrade, in order to meet the stringent food safety and quality requirements imposed by hotels and other tourist outlets. Turning to legal constraints, the General Agreement on Trade in Services would allow significant flexibility to source service inputs locally. However, relevant disciplines under the Agreement on Trade-Related Investment Measures would likely inhibit local content and local value added with regard to goods, on the grounds that it entails discriminatory treatment of imported products in favour of domestic products. Bhutan should carefully assess the policy implications of these disciplines, and seek clarification when needed.

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APPENDIX 1: ANALYTICAL FRAMEWORK

This appendix lays out the analytical framework used to assess the impacts of trade liberalization on welfare and, in particular, on women. This framework builds on the standard agricultural household models of Singh, Squire and Strauss (1986), Porto (2007), and Brambilla and Porto (2010).

The unit of analysis is the household, denoted by h . To measure welfare changes, the analysis adopts the approach in Dixit and Norman (1980) and works with the budget constraint of the household. In equilibrium, household expenditures, including savings, have to be financed with household income, including transfers. That is,

$$e^h(\mathbf{p}, \mathbf{u}^h, \mathbf{x}^h) = \sum_j \mathbf{w}^j + \sum_i \Pi_i^h(\mathbf{p}, \Phi) + T^h + \mathbf{x}_o^h \quad (1)$$

The expenditure function $e(\cdot)$ of household h , on the left-hand side, is defined as the minimum expenditure needed to achieve a given level of household utility \mathbf{u}^h . It depends on a vector of prices of consumption goods, \mathbf{p} , on the level of utility \mathbf{u}^h and on other household characteristics, \mathbf{x}^h , such as household composition.

Income comprises the sum of the wages of all working members j (\mathbf{w}^j) and the sum of the profits Π_i made in different economic activities i . Profits include, for instance, the net income from agricultural production (potatoes, oranges, apples, rice) or farm enterprises. They depend on prices, technical change and key household characteristics such as gender (summarized by Φ). Note that profits are defined as sales net of purchases of inputs so that some of the effects caused by protection on inputs or intermediate goods can be captured by Π_i . In (1), T^h measures transfers (public or private), saving and other unmeasured factor returns. Finally, exogenous income \mathbf{x}_o^h is added for technical reasons.

It is evident from equation (1) that household welfare depends on equilibrium variables such as prices and wages that affect household choices and on household endowments. For instance, household consumption depends on the prices of consumer goods and household income depends on the labour endowment (skilled, unskilled), the wage rate, and the prices of key outputs. Therefore, changes in commodity prices affect welfare directly via consumption and production decisions, and these impacts are heterogeneous insofar as they depend on household choices and endowments. In addition, there are short-run impacts, when households do not adjust; medium-run impacts, when households make partial adjustments; and long-run impacts, when growth, investments, and long-run choices have taken place.

A crucial assumption that consents to work with equation (1) for welfare analysis is that the principle of separability holds. Under this assumption, production decisions are independent of consumption decisions (utility maximization). This means that the income level of the household can be considered as exogenous (once optimal production decisions have been made) when utility maximization takes place. The separability assumption is not innocuous: it requires perfect and complete markets (for goods, credit, insurance and so forth). Further, just to simplify the algebra, separability is also assumed between consumption and leisure in utility.

First-order impacts

The analysis will now consider the impacts of changes in the price of commodity i . The short-run impacts on the household can be derived by differentiating equation (1) (while keeping utility constant and adjusting T^h). Therefore

$$cv^h = (b_i^h - s_i^h) d \ln p_i^h + \sum_j \theta^j \epsilon w_i^j d \ln p_i^h \quad (2)$$

where $cv = -dx_o/e$ is a measure of the compensating variation (as a share of initial expenditures) associated with a change in the i th price. The compensating variation is defined as in Hicks (1939). The revenue of a planner needs to compensate households for the price change. If a household loses from a price increase, the compensating transfer of income from the planner is dx_o/e and the compensating variation cv is negative, that is, a deficit for the planner. Instead, if the household benefits from a price increase, the compensating variation is positive because it actually represents a transfer from the household to the planner, so that $\frac{x_o}{e}$ is negative.

In (2), s_i is the budget share spent in good i , b_i is the share of household income from the production of good i , θ^j is the share of the wage income of member j in total household income, and ϵw_i^j is the elasticity of the wage earned by household member j with respect to the price p_i .

Equation (2) summarizes the first-order impacts of a price change. Note that $d \ln p_i^h$ has been purposely indexed by h in order to introduce heterogeneity of price changes at the household level. The right-hand side of (2) reveals impacts on both household consumption and income. On the consumption side, consumers are worse off if prices go up, but are better off if prices go down. In a first-order approximation, these impacts can be measured with budget shares, s_i . On the income side, there is also a direct impact on profits if the household produces goods i , which depends on the share of income attributed to these goods, b_i . In rural economies, this source of income can account for a large fraction of total income. In more urbanized economies with more developed labour markets, the role of the direct production of agricultural goods will be much less important.

Overall, the first term on the right-hand side of (2) establishes a key result in the literature: after a price increase, net consumers, as defined by the difference between budget shares and income shares, are worse off and net producers are better off. The opposite is true for price decreases: net consumers become better off and net producers, worse off. Further, this shows that the welfare impacts will be heterogeneous across countries. An exporter of agricultural goods will, on average, benefit from price increases associated with the international liberalization of agriculture; but an importer will probably be hurt by those changes. In the context of the Bhutanese trade liberalization, this general proposition implies that net producers of export goods, such as potatoes, oranges, and apples, and net consumers of imports, such as rice, will gain from trade.

The result was introduced by Deaton (1989a), who launched a whole new literature by advocating the use non-parametric density estimation and non-parametric regressions in economic development to study the distributional effects of price changes. Deaton (1989a) used data from the *Thailand Socioeconomic Survey of 1981–82* to explore the distributional consequences of the export tax on rice across all Thai households. The ideas introduced in Deaton's work have been, and still are, extensively utilized in the literature. Early examples include Deaton (1989b), who reviews applications for Cote d'Ivoire, Indonesia and Morocco; Budd (1993), who investigates food prices and rural welfare in Cote d'Ivoire; Benjamin and Deaton (1993), who study cocoa and coffee in Cote d'Ivoire, too; Barret and Dorosh (1996), who look at rice prices in Madagascar; and Sahn and Sarris (1991), who examine structural adjustments in several sub-Saharan African countries. Deaton (1997) provides an account of the early use of these techniques in the distributional analysis of pricing policies.

Price changes also affect wages. This channel is described by the second term on the right-hand side of (2). The mechanisms are in principle simple. When there is a price change, labour demand for different types of labour

and labour supply can change, thus affecting equilibrium wages. In (2), these responses are captured by the elasticities ϵw_i^j , which will vary from one household member to another, provided that different members are endowed with different skills – unskilled, semi-skilled or skilled labour – or if they work in different sectors (industry premia). These impacts on labour income depend on the share of income contributed by the wages of different members, θ^j . Clearly, if countries differ in technologies, endowments, or labour regulations, the responses of equilibrium wages to prices can be heterogeneous across different economies.

As shown in equation (2), the response of wages can generate first-order effects on household welfare. To account for these responses, the standard net consumer/net producer proposition needs to be modified. To see this, consider the extreme case where a farm-household consumes a product but does not produce it at all. Instead, the farm earns income from selling labour in neighbouring farms. Omitting wages, this household is a net consumer and could thus be hurt by a price increase. But if wages respond positively to prices, the final welfare effect may not necessarily entail a loss. For details, see Ravallion (1990), Boyce and Ravallion (1991), Porto (2005), and Porto (2006).

A few practical considerations

For the purpose of measuring the impacts of trade liberalization on welfare and gender, data are needed to compute equation (2) for different types of households, that is, male-headed versus female-headed households. This requires information on expenditure shares and on income shares, including wages and household production. Bhutanese data do not include detailed income information and thus do not allow measuring (2) to clearly identify the net consumers and net producers. As a preview of the solution proposed below, it is useful to assume to have instead proxies that indicate whether a household is a net producer or a net consumer. In principle, it would be possible to use these proxies to describe the potential impacts of trade liberalization. Clearly, the fact that it is not possible to observe the net shares, $s_i - b_i$, comprises a loss of information that prevents the measuring of the intensity of the impacts of trade. At the very least, however, studying those proxies should provide some useful lessons about them.

