

Contribution of Agricultural Sector of Bhutanese Economy

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ABSTRACT

Bhutanese economy is predominantly known as an agrarian economy. The agriculture sector, incorporates arable agriculture, horticulture, livestock and forestry, employed 63 percent of the population (NSB-2013) and accounted for 19.1 percent of GDP in 2012 which was almost 56.7 in 1961. Bhutan was almost totally agrarian with a self-sufficient subsistence economy before launching the economic development Programme under five year plans. Monetization was very low with taxes being imposed in the form of labour, farm products and other products like textiles. The output of renewable natural resource increased from Nu 6037 million in 1980 to Nu 13459 million in 2011. Although the agriculture sector remains the single largest contributor to GDP, its share of GDP has decreased from 26.4 percent in 2001 to 15.7 percent in 2011. However, it must be kept in mind that large sections of the rural economy still remain outside the formal economy, undervaluing the actual contribution of agriculture to total GDP. . Agriculture crops production has an important role to play in meeting this objective since more than 90% of the population under poverty lives in the rural areas.

INTRODUCTION

Bhutanese economy is predominantly known as an agrarian economy. The agriculture sector, incorporates arable agriculture, horticulture, livestock and forestry, employed 63 percent of the population (NSB-2013) and accounted for 19.1 percent of GDP in 2012 which was almost 56.7 in 1961.¹ Bhutan was almost totally agrarian with a self-sufficient subsistence economy before launching the economic development Programme under five year plans. Monetization was very low with taxes being imposed in the form of labour, farm products and other products like textiles.² Since the beginning of the first five year plan (FYP) in 1961, significant socio-economic progress and perceptible structural changes have taken place in the economy. The statistical information of macroeconomic observations are abysmally unauthentic before 1980, however reliable data is only available from 1980 onwards. The output of renewable natural resource increased from Nu 6037 million in 1980 to Nu 13459 million in 2011. (Bhutan RNR Statistics 2012). Although the agriculture sector remains the single largest contributor to GDP, its share of GDP has decreased from 26.4 percent in 2001 to 15.7 percent in 2011. However, it must be kept in mind that large sections of the rural economy still remain outside the formal economy, undervaluing the actual contribution of agriculture to total GDP. The goal of the RNR sector has been to increase self-sufficiency in food commodities through domestic production. One of the objectives of the RNR sector's 10th Plan (2008 to 2013) was to help reduce poverty from 23% to 15 % of the population by the end of the plan. Agriculture crops production has an important role to play in meeting this objective since more than 90% of the population under poverty lives in the rural areas. To arrive at 65% self-sufficiency in rice has also been one of the targets set by the RNR sector for the 10th Plan. The food-grains self-sufficiency rate (SSR) for

¹Statistics for Bhutan vary. The figure quoted here is from the Statistical Yearbook of Bhutan 2004 (NSB 2005). The Poverty Analysis Report 2004 (NSB 2004b) estimates the rural population to be 80.8 percent whereas the National Labour Force Survey 2004 (DOE 2004) places the rural population at 73.1 percent.

²Macroeconomics Of Poverty Reduction :The Case Study Of Bhutan, S. R. Osmani ,B. B. Bajracharya ,Sonam Tenzing .Tashi Wangyal- August, 2007 2nd edition

2011 was recorded at 51% for paddy (rice) and 64% for total cereals. The projected figure for 2012 shows the self-sufficiency rate (SSR) of 53% and 69% with increase of 2% and 5% for paddy and total cereals respectively over 2011. Paddy and maize are prominent cereal crops while important cash crops include potatoes, vegetables, oranges, and apples. The agriculture subsector has been putting lots of efforts and resources to increase productivity of these crops by introduction of good agronomic practices and high yielding crop varieties along with development of necessary infrastructures such as farm roads, irrigation channel and post harvest facilities among others.

Importance of Agriculture for the Bhutanese Economy

Bhutan is predominantly an agrarian economy. The agriculture sector, consisting of arable agriculture, horticulture, livestock and forestry, employed 96 percent of the population and accounted for 56.7 percent of GDP in 1980. Prior to 1961, Bhutan was almost totally agrarian with a self-sufficient subsistence economy. Monetization was very low with taxes being imposed in the form of labour, farm products and other products like textiles. Since the launching of the First Five Year Plan (FYP) in 1961, significant socio-economic progress has taken place, accompanied by noticeable structural changes in the economy.

Tough the contribution of the agricultural sector is persistently decreasing as it has fallen from almost 57 percent in 1980 to 15.7 percent in 2012, its has yet providing employment opportunities and livelihood to 63 percent of the population (NSB).

Table 1

Renewable Natural Resources (RNR) GDP in current and constant prices

(ngultrum Million)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Current	6037	6884	7292	7864	8256	8859	9234	10078	11159	12178	13459
Constant	3849	6009	6138	6250	6274	6378	6278	6246	6291	6458	6478

Source: Bhutan RNR Statistics 2012

Table 2

RNR sector's contribution in percentage to national GDP in current and constant prices

percentage to national GDP in

current and

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Current	26.4	26.1	24.8	24.3	22.6	21.4	18.7	18.4	18.2	16.8	15.7
constant	27.2	25.2	24	22.9	21.5	20.1	17.2	16.5	15.9	14.3	13.4

Even after forty four years of planned development, the majority of the Bhutanese people are still dependent on agriculture. According to Bhutan RNR statistics 2012 out of the total population, 60.2 percent is engaged in agriculture farming, however it was almost 97.5 percent in 1980. Increasing rural-to-urban migration is the primary reason for the fall in employment in the agriculture sector. The study on rural-to-urban migration carried out by the Ministry of Agriculture found that lack of educational facilities was the stated reason for migrating for 46 percent of the migrants, 19 percent left their villages because of small landholdings, drudgery of farm work, unproductive agriculture, crop damages by wild animals and natural calamities. The stated objective of the Royal Government of Bhutan is to create employment opportunities in rural areas so as to sustain current levels of employment and halt rural-to-urban migration, and thereby alleviate economic and social problems from urbanization and unemployment (MOA 2002a). The objective is also to generate new employment opportunities in rural areas and establish agriculture as the basic sector for sustaining the country's economy.

Agriculture also makes significant contribution to Bhutan's foreign exchange earnings. Bhutan's landlocked position and poor access to world sea and air routes limits its trade to the geographically proximate region. Only high-value products that are able to overcome the disadvantage of high transport costs or those that enjoy seasonal comparative advantage are exported. These have been largely confined to tree crops, vegetables and spices. Bhutan's comparative

advantage in the agricultural sector derives from its wide range of microclimatic conditions that allows it to cultivate a large variety of produce. Coupled with the fact that its neighbours are mainly tropical agricultural producers and that Bhutan is able to produce temperate zone crops one month later than its neighbours, making it virtually the only source of fresh produce in the region for certain periods of the year. Although the large markets in India and Bangladesh can absorb all that Bhutan can produce, limited land and the huge variety of microclimates have constrained the establishment of large scale farming. Agricultural exports include oranges, apples, potatoes, cardamom, ginger, chillies, vegetables and processed fruit products and are exported to India, Bangladesh, Singapore and Japan.

Role of Agricultural Sector In Providing Employment

The agricultural sector has remained the major sector to provide employment opportunities and livelihood to large size of the population in Bhutan. The large engagement of the People in agricultural activities is ascribed to undeveloped industrial as well service sector during eighties. After the fifth five year plan, many developmental activities began to take in place whereby people of the nation are getting employment in non-agricultural activities. Therefore, the share of total population in agricultural activities persistently has been falling over the period of time. However, its contribution in generating employment opportunities is yet 63percent in 2012. It is shown below in table 7. Increasing rural-to-urban migration is the primary reason for the fall in employment in the agriculture sector. The study on rural-to-urban migration carried out by the Ministry of Agriculture found that 47 percent of all rural households had migrants (MOA 2005b). While lack of educational facilities was the stated reason for migrating for 46 percent of the migrants, 19 percent left their villages because of small landholdings, drudgery of farm work, unproductive agriculture, crop damages by wild animals and natural calamities. The stated objective of the Royal Government of Bhutan is to create employment opportunities in rural areas so as to sustain current levels of employment and halt rural-to-urban migration, and thereby alleviate economic and social problems from urbanization and unemployment (MOA 2002a). The objective is also to generate new employment opportunities in rural areas and establish agriculture as the basic sector for sustaining the country's economy.

Majority of Bhutanese farmers are small and marginal. A small farmer in Bhutan subsists on farming by growing crops ranging from rice, wheat, maize, buckwheat, potatoes and barley depending on the climatic conditions. A sub-sector of the farmers dwells on animal husbandry by rearing cattle. Farming in Bhutan is a challenge because of small land size holding and rugged topography with steep slopes of most agricultural land, making labor intensive and mechanization of it difficult. Further, majority of the farms are located at a distance of roughly five to six hours walk from the nearest road head. Given this set-up of the rural people depending wholly on the agriculture sector, it is important to enhance farm productivity in order to encourage people to pursue profitable farm related enterprises and diversify their source of livelihood. Farm productivity is determined largely by scale and technology. Technological backwardness persists, as much of the farming is non-commercial subsistence agriculture. With a total arable land area of 2.3%, the average farm size is estimated at 2.4 acres per household (NSB). Therefore, Bhutanese farmers cannot benefit from economies of scale. In addition, total arable land is declining steadily due to urbanization and natural disasters.

Table.2

Percentage share of the population engaged in agriculture sector (1980 to 2012)

year	1980	1985	1990	1995	2000	2005	2010	2012	
Employment	96.5	90.4	80	75	70.5	66.6	64.3	63	

Source: Statistical year book of Bhutan, National Statistics of Bureau.

Agriculture also makes significant contribution to Bhutan's foreign exchange earnings. Bhutan's landlocked position and poor access to world sea and air routes limits its trade to the geographically proximate region. Only high-value products that are able to overcome the disadvantage of high transport costs or those that enjoy seasonal comparative advantage are exported. These have been largely confined to tree crops, vegetables and spices. Bhutan's comparative advantage in the agricultural sector derives from its wide range of microclimatic conditions that allows it to cultivate a large variety of produce. Coupled with the fact that its neighbours are mainly tropical agricultural producers and that Bhutan is able to produce temperate zone crops one month later than its neighbours, making it virtually the only source of fresh produce in the region for certain periods of the year. Although the large markets in India and Bangladesh can absorb all that Bhutan can produce, limited land and the huge variety of microclimates have constrained the establishment of large scale farming. Agricultural exports include oranges, apples, potatoes, carda mom, ginger, chillies, vegetables and processed fruit products and are exported to India, Bangladesh, Singapore and Japan.

CONCLUSION AND RECOMMENDATIONS

While the developments in the agricultural sector have created diversification opportunities, there are constraints that can hamper the ability of farmers; especially that majority of Bhutanese farmers are poor and marginal farmers. Lack of adequate infrastructure, limited access to information, credit, and other assets (land, water, and technological know-how), can severely constrain the scope of diversification initiatives. These barriers, information gaps, and capacity limitations present not only an opportunity, but also a need for authorities' concerned (Ministries, agencies, donors) to provide support and assistance to build the capacity for pro-poor diversification activities. Diversification initiatives require a multi-component approach involving many specific investment areas. Policy and institutional environment, irrigation and drainage, science and technology, and rural infrastructure are just a few examples. All these investments will not come from the public sector. For long term planning, government has to create the enabling environments for the private sector to provide inputs and services to farmers necessary for diversification; (FDIs), however, the government needs to invest to widen the scope of research institutes to cover emerging issues of diversification, improve the analytical capabilities of farmers to synthesize the diversification opportunity, and develop the efficient knowledge and information systems. The upcoming national food security policies document need to address both the country-wide production and the local availability of foods in areas with low productivity and/or areas more suited for the production of tradable goods, for example. Health and sanitation must be promoted to fully exploit the welfare effects of commercialization and diversification, and policy should focus on training and labor mobility programs because "after all, the least diversifiable endowment is probably uneducated labor" (Quiroz and Valdés 1995, p. 254). And lastly, appropriate trade policy is critical, especially given that the country has initiated membership to joining the World Trade Organization (WTO), opportunities are increasingly tied to the exploitation of emerging markets in foreign countries.

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