

REVIEW ARTICLE

CONTRIBUTION OF AGRICULTURE SECTOR IN THE GDP GROWTH OF BANGLADESH

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ABSTRACT

There are many sectors and subsectors in a country which runs the wheel of the economy. Gross domestic product or GDP is one of the important most indicator of the economic activity of a country which specially reflects about the size and performance of an economy. Since Bangladesh is an agrarian country it's economic activities are largely agro based. But, with the pace of industrial revolution share of agriculture in GDP has been changed. Thus, to evaluate the overall changes in GDP from agro sectors and sub sectors and their possible reasons solutions were briefly stated in this review. Notably contribution of GDP from agriculture in current and constant prices over the last 12 years (2010 to 2021) has been following a declining trend. Contrary, the industry sector followed an upward trend but services sector showed a more or less stable trend. Previous five fiscal years (2016-17 to 2020-21) illustrated the reduction of about 1.5% GDP in the agriculture sector at current and constant prices but the growth rate remained in a steady state in both prices. Some key steps for preventing the drop of GDP share from agriculture was noted as- preventing environmental pollution, more emphasis on rural and remote area's agriculture development, motivation and scope for cultivation of cash/profitable crops and sustainable market linkage development. To boost up the agro economic sector of the country adoption of new improved technology is imperative for the greater agricultural and economic development of the country.

KEYWORDS

Agriculture, Economic Development, GDP Growth, Sectorial Share

HIGHLIGHTS

- Share of agriculture sector on the GDP growth was found to be declining gradually which might be due to the growth of industrial sectors particularly ready-made garments (RMG) and service sectors.
- To improve the contribution of agricultural sector and subsectors strengthening agricultural research, extension and sustainable market linkage development was annotated.

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1. INTRODUCTION

Today share of agriculture in global GDP is around 4%; which is almost stable since 2000 (FAO, 2022). Among the economic sectors in Bangladesh, agriculture is the most important economic sector and it is the lifeblood of Bangladesh (Hossain and Chen, 2022). However, the economic exertion of a country is largely determined by Gross domestic product (GDP) which is a financial measure of the market value of all the final goods and services produced in a specific period (Finance and Development, 2023; BEA, 2019). Though GDP (nominal) per capita does not reflect differences in the cost of living and the inflation rates of a country; thus, using a base of GDP per capita at purchasing power parity (PPP) is arguably more useful when comparing living standards between

nations, while nominal GDP is more useful comparing national economies on the international market (Anonymous, 2023). The economy of Bangladesh is distributed in three essential sectors namely- service, agriculture, and industry. Among them, the agriculture sector influences the development of the national economy (Chen *et al.* 2021). Nevertheless, the contribution of the agriculture sector is following a declining trend toward GDP as the other sectors are progressing. During 2021 GDP contribution to agriculture was below 12% (Data Co., 2019). Interestingly, Bangladesh's economy pulls its main force from the agriculture portion. This sector employs 40.6% of the labor force (BBS, 2022). Farming is the ancient and most familiar profession in Bangladesh. Most of the people of Bangladesh reside in the village (76.75% of the total population) and most of the villagers (51.7% of manpower) are involved in agriculture (BBS 2022). One of the main reasons for holding a common

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interest in farming is- the land is veritably rich in nutrients and most of the part of Bangladesh is plain another intriguing reality is that Bangladeshi people are intrinsically good at farming (Masud and Bhowmik, 2018; Chowhan, 2021). The agricultural sector is the single largest contributor to GDP where the crop sub-sector dominates about 47.23% of the entire production. Fisheries, livestock, and forestry sub-sectors are 21.87%, 16.41%, and 14.50% respectively (BBS, 2022).

Though the authority has numerous positive phases for individual sector progression but still agriculture has some current and unborn challenges as well. Farming in Bangladesh is constrained every year by countless challenges, such as reduction of arable land, increased population, natural calamity, improper management practices, unstable product price, and inadequate investment in exploration and development. In Bangladesh, every year about 80,000 ha of arable land is becoming non-arable, this loss is intimidating and needs to be negotiated immediately (Hossain et al., 2015; Chowhan et al., 2022). To prevent further mistreatment of arable land, the government's land use policy should be updated and strictly enforced. Another challenge with agriculture is the rapidly increasing population. The binary challenge of arable land loss and population growth needs to be addressed contemporaneously to ensure sustainable crop production. The country's crop production is also affected constantly by floods, drought, and salinity. Varieties/technologies tolerant to these natural hazards have to be developed in place of time as weather and climate is changing every time. Another point is eco-friendly power generation strategies e.g., renewable energy, lessening the use of fossil energies, and afforestation are urged to mitigate the unfavorable effects of climate change. Chemical fertilizers must be integrated with organic manure to sustain crop production, and expensive non-urea fertilizers must continue to be subsidized. The prevalence of pests and diseases has recently become severe due to climate change impacts. Consequently, it is important to create more pest and disease-resistant varieties. Bangladesh's marginal and small farmers have limited access to institutional credit. Also, they are ineligible for NGOs' microcredit programs. To match their requirements, it is advised that a new institution or foundation be established in coordination with PKSF. These farmers lack cooperatives or farmers' associations to negotiate a fair price for their produce. To guarantee profitable prices for their goods, the government may encourage the formation and operation of more agricultural cooperatives. To ensure the success of related cooperatives, top-down influential approach should be eluded. Investment in agricultural research should be lifted to at least 2% of GDP in order to induce new technologies to cope with climate change situations and rapid dissemination of such technologies at the grassroots level (Global Economy, 2021). Therefore, the present review aimed to depict the role of agriculture sector on the GDP growth of Bangladesh over time and some points that are to be considered for rising the GDP% from agricultural share.

2. MATERIAL AND METHODS

Mostly secondary data have been used for analysis and interpretation in this review article. Data have been collected from Bangladesh economic

survey, Bangladesh bureau of statistics, Bangladesh bank, World bank, and Internet web sites, Books, Newspapers, Magazines and Journals.

3. RESULTS AND DISCUSSION

The share of the agriculture sector in GDP was found to be declining (Figure. 1). The main reason was the development of other sectors like industries, service, education, health, etc. Contrary, labor was reduced in this area as profit is less accompanying more time in work. Thus, laborers were shifted to other areas. As seen in Figure. 1; in 2021 the contribution was below 13%.

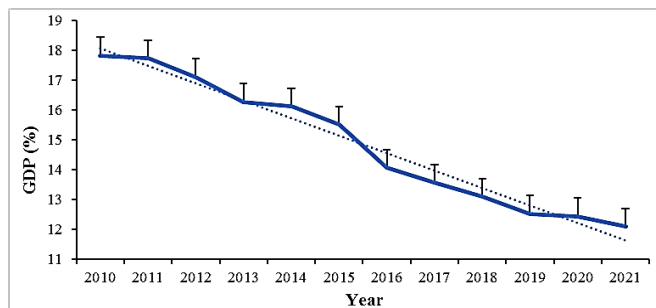


Figure 1: Trends on the contribution of GDP in Bangladesh agriculture in current prices (Source: BBS, 2020; Statista, 2021)

In the year, 2009-2010 contributions of agriculture, industry, and service were 18.38%, 26.78%, and 54.84% respectively. Whereas in 2020-2021, it was 12.07%; 36.01% and 51.92% respectively (Figure 2).

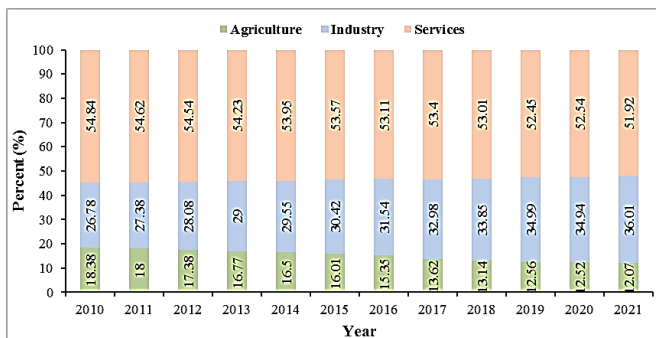


Figure 2: Share of economic sectors in GDP from 2010 to 2021 in constant prices (BBS, 2022; BBS, 2020; Statista, 2021)

On the other hand, GDP of Bangladesh at current prices in 2016-17 was 3,011,670 million takas (MT) in agriculture including fisheries and it remarkably increased to 4,106,614 MT in 2020-21 (Table 1).

Table 1: Gross Domestic Product of Bangladesh at current prices during 2016-17 to 2020-2021					
Industrial origin sector	2016-17	2017-18	2018-19	2019-2020	2020-2021
Agriculture	3,011,670	3,293,802	3,534,431	3,804,464	4,106,614
a) Crops & horticulture	1,486,692	1,623,332	1,733,782	1,861,159	1,996,305
b) Animal Farming's	495,159	531,856	562,897	597,153	632,931
c) Forest and related services	398,637	435,632	466,390	503,992	559,163
d) Fishing	631,181	702,982	771,362	842,160	918,215

price in million BDT; Source: BBS, 2022

Whereas, the sectorial share of GDP at current prices was 13.56% in 2016-17 and gradually declined to 12.09% in the year 2020-21. The fishing sector also had the alike downward trend (Table 2).

Table 2: Sectorial share percent of GDP at current prices, 2016-17 to 2020-21					
Industrial origin sector	2016-17	2017-18	2018-19	2019-2020	2020-2021
Agriculture	13.56	13.09	12.52	12.44	12.09
a) Crops & horticulture	6.69	6.45	6.14	6.09	5.88
b) Animal Farming's	2.23	2.11	1.99	1.95	1.86
c) Forest and related services	1.79	1.73	1.65	1.65	1.65
d) Fishing	2.84	2.79	2.73	2.75	2.70

Source: BBS, 2022

The sectorial growth rate (GR) of GDP at current prices for agriculture in 2016-17 was 7.75 which was reduced to 7.64 in 2019-20 but increased to 7.94 in 2020-21 conversely, fishing produced a GR of 9.03 in 2020-2021

which was lower compared to 2016-17 (10.00) (Table 3). GDP at constant prices in 2016-17 for agriculture was 2,884,380 MT and in 2020-21 it was 3,290,754 (Table 4).

Table 3: Sectorial growth rate of GDP at current prices, 2016-17 to 2020-21

Industrial origin sector	2016-17	2017-18	2018-19	2019-20	2020-21
Agriculture	7.75	9.37	7.31	7.64	7.94
a) Crops & horticulture	7.51	9.19	6.80	7.35	7.26
b) Animal Farming's	6.13	7.41	5.84	6.09	5.99
c) Forest and related services	7.19	9.28	7.06	8.06	10.95
d) Fishing	10.00	11.38	9.73	9.18	9.03

Source: BBS, 2022

Table 4: Gross Domestic Product of Bangladesh at constant prices between 2016-17 to 2020-21

Industrial origin sector	2016-17	2017-18	2018-19	2019-2020	2020-2021
Agriculture	2,884,380	2,986,618	3,083,999	3,189,501	3,290,754
a) Crops & horticulture	1,413,445	1,452,281	1,482,299	1,519,388	1,554,174
b) Animal Farming's	479,482	493,403	508,246	524,455	539,891
c) Forest and related services	390,487	410,329	431,359	454,402	477,043
d) Fishing	600,966	630,605	662,095	691,256	719,645

price in million BDT, Source: BBS, 2022

Tables 5 and 6 represents the sectorial share and growth rate of GDP at constant prices in the agriculture sector. Sectorial share was the decline in the preceding year whereas, the sectorial growth rate increased in

agriculture in 2019-20 (3.42) than in 2016-17 (3.20) but in case of the year 2020-21 it was lower (3.17).

Table 5: Sectorial share of GDP at constant prices, 2016-17 to 2020-21

Industrial origin sector	2016-17	2017-18	2018-19	2019-2020	2020-2021
Agriculture	13.62	13.14	12.56	12.52	12.07
a) Crops & horticulture	6.68	6.39	6.04	5.96	5.70
b) Animal Farming's	2.26	2.17	2.07	2.06	1.98
c) Forest and related services	1.84	1.81	1.76	1.78	1.75
d) Fishing	2.84	2.77	2.70	2.71	2.64

Source: BBS, 2022

Table 6: Sectorial growth rate of GDP at constant prices, 2016-17 to 2020-21

Industrial origin sector	2016-17	2017-18	2018-19	2019-2020	2020-2021
Agriculture	3.20	3.54	3.26	3.42	3.17
a) Crops & horticulture	2.22	2.75	2.07	2.50	2.29
b) Animal Farming's	2.77	2.90	3.01	3.19	2.94
c) Forest and related services	5.00	5.08	5.13	5.34	4.98
d) Fishing	4.73	4.93	4.99	4.40	4.11

Source: BBS, 2022

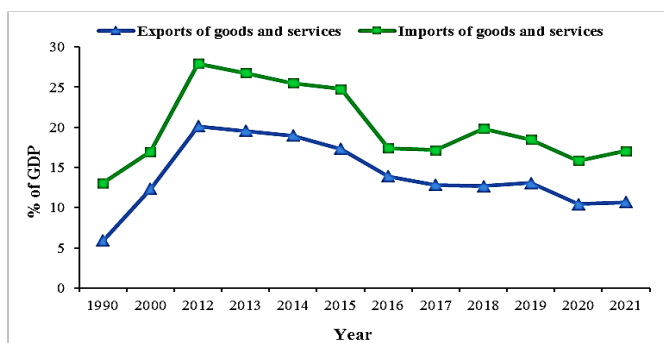


Figure 3: Export and import of goods and services (% of GDP) in Bangladesh over last 12 years (Source: World Development Indicators, 2023)

Figure. 3 presents percentage of GDP for the imports and exports of goods and services in Bangladesh in the last 12 years considering 1990 as base year. It shows that percentage of GDP share in case of imports of goods and services was always greater than exports of goods and services. The

highest percentage was observed in the year 2012 and the lowest was for 2020. It was evident that, import was always higher than export; which may be due to imbalanced demand and supply of goods and services. Thus, import of goods and services always hold a higher percent of GDP.

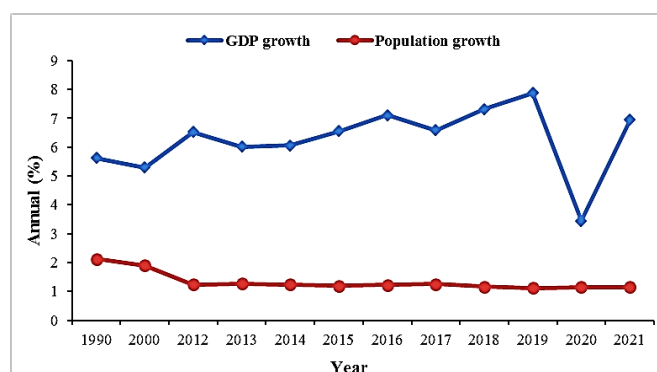


Figure 4: Annual population and GDP growth (%) of Bangladesh (Source: World Development Indicators, 2023)

Figure 4 presents the 12 years' annual population and GDP growth rates for Bangladesh, which have been slowly decreasing during 1990 to 2000 but later GDP growth was faster and population growth became lower up to 2012. In 2019 GDP growth (%) was the most but later it declined due to Covid-19 in 2020; however, annual population growth (%) seemed to be more stable than annual GDP growth of Bangladesh.

After reviewing the aforementioned factors following recommendation should be under taken for the development of agriculture sector of Bangladesh—

- Government can take more initiatives to prevent environmental degradation.
- Coordination of government and non-governmental organizations (NGOs) or other voluntary organizations for rural agricultural development.
- The government should promote the cultivation of cash crops like sugarcane, jute, and others so that we can earn foreign currency.
- Development of a sustainable supply-demand chain for fair prices to growers and consumers.
- Arrangement of short or long term loans for farmers to undertake risk.
- Farmers should be informed by the weather department regarding the forecast, which should ensure accuracy and accessibility of the weather info to farmers.
- To reduce Monga crisis in north-west, government can motivate to adopt new varieties/technologies such as short duration varieties cultivation and also encourage small and cottage industry during that unemployment period or can take other economic project.
- Motivate farmers to use natural/organic fertilizers.
- Government should rationalize public expenditure allocation, increasing public investment in infrastructure and public good services and promoting private investment in agriculture.
- The ministry's capacity building efforts should concentrate on strengthening its capacity to deliver good governance on the basis of precise knowledge and understanding of the effects of policies on the beneficiaries.
- Inter-ministry coordination and collaboration is needed.
- Because the private sector benefits from the fisheries and livestock industries, the relevant authorities must devote more attention to these fields.
- Instead of expanding input use, agricultural growth should result from efficient input use.
- It is necessary to devote more attention to agricultural research and quality seed production in order to develop climate-resilient technology.

4. CONCLUSION

Among the economic sectors in Bangladesh, the agriculture sector is the most important economic sector. Though the contribution of the agriculture sector to the GDP is decreasing steadily. But agriculture sectors influence the development of the national economy. It is to be noted that the total amount of income from agricultural sectors is increasing gradually; which is a positive indication of agricultural development. This paper will provide strategies for the development of agriculture sectors and scope for future study of identifying the inhibitions factors responsible for the economic development of the agriculture sector of Bangladesh.

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