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Effects of Sectoral Transformation of Employment on GDP in Bangladesh

By Muhammad Rabiul Islam Liton

Mawlana Bhashani Science and Technology University, Bangladesh

Abstract- Macroeconomic variables indicate the overall situation of the country, which we expect to be more consistent, stable and grow over time. The unemployment rate in Bangladesh is 5% at 2012 which is lower than world unemployment (around 6%). Labor Force participation rate is also higher in Bangladesh (73.8% in 2000). On the other hand GDP growth rate even in 2008 was 6.6% where most of the countries had a negative growth rate in their GDP. In Bangladesh, more than 2% of GDP increase due to employment growth. The labor force was 49.5 million in 2006 which becomes 53.7 million in 2009 and now 54.1 million. The growth rate has been 2.7 percentage points a year. At the same time, GDP also increase at around 6% in last decade. In GDP, the share of agriculture sector is decreasing where other two major sectors industry and services are increasing and the same thing occurs in the case of employment. This study focuses on the parallel transformation of employment and GDP and its impact on our economy.

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I. INTRODUCTION

Bangladesh, small state of South-East Asia with the total area of 147,570 sq km, can't still shake off the ill-reputation of being one of the least developed countries, shadowed by miserable poverty, high illiteracy rate and a huge population of 154 million (2012 est.). In Bangladesh, Monitoring of Employment (Labor Force) Survey (MES) 2009 finds that the labor force increased from 49.5 million to 53.7 million from 2006 to 2009 and now 54.1 million. The growth rate has been 2.7 percentage points a year. The working age (ages 15-64) population about 62.7 percentage points and out of them 59.3 percentage points are economically active, and 40.7 are inactive. The volume of female labor force (13.5m) is much smaller than that of male (40.2m). At the same time labor force transfers from agriculture sector to industry sector and service sector. In 1974 agriculture, industry and service sector contains 78 percentage points, eight percentage points and 14 percentage points of labor force where in 2010 it becomes 42.5, 11.3 and 46.2 percentage points respectively. On the other hand, from 1994 until 2012, Bangladesh GDP growth rate averaged 5.58 percentage points reaching an all-time high of 6.70 percentage points in June of 2011 and a record low of 4.08% in

June 1994, and current growth rate is 6.32 percentage points. At the same time the, average rate of yearly decrease of GDP in agriculture is 40 percentage points whereas the average yearly increase in GDP in the industry is 37 percentage points during the FY1997-1998 to FY 2011-2012. The position of the service sector is quite stable. In the decade 1940-1950 the share of agriculture, industry and service sector was 70 percentage points, four percentage points and 26 percentage points where last decade 2001-2010 it becomes 18 percentage points, 30 percentage points, and 52 percentage points respectively. Thus, there becomes a huge change in sectoral share of GDP as well as the sectoral composition of employment.

II. OBJECTIVES

The objectives of this article are as follows-

1. Analyzing the growth trend of GDP in Bangladesh
2. Identifying the structural changes of GDP in Bangladesh.
3. Analyzing the structural changes of Employment in Bangladesh.
4. To give some recommendations for the improvement of GDP by using sectoral transformation of employment.

III. METHODOLOGY

Secondary sources are used to prepare this research-article. Mainly, web-sites, national dailies, books and statistical reports collected from various sources are used.

a) *The Economy of Bangladesh*

A brief discussion of Bangladesh economy may help us to understand its GDP. Economy of Bangladesh composes three main sectors-----Agriculture, Industry, and Service.

i. *Agriculture*

Agriculture sector includes crops, forestry, livestock and fisheries. Main agricultural food products are cereals, pulses, gur/sugar, milk, meat, fish, fruits, vegetables, oil, etc. Major Industrial crops are jute, tea, tobacco, etc. The total cultivable area was 2.26 crore acres in the survey of 1983-84, which decreased to 1.64 crore acres in 1995-96. Long before and after independence war, agriculture was the dominating sector in Bangladesh economy. In the years after

Author: Assistant Professor, Department of Economics, Mawlana Bhashani Science and Technology University, Santosh, Tangail-1902, Bangladesh. e-mail: rabiul388@gmail.com

independence, agricultural products increased steadily; yet it couldn't keep pace with the rapid growth of population. Rice is the main food crop in Bangladesh. Bangladesh acquired the fourth place in the world for the production of rice in the middle of the 1980s, which became possible for the use of high yielding seeds, fertilizer and irrigation. Domestic production of other agricultural products, such as, pulses, sugar, milk, meat, fish, vegetables, and oil never fulfilled requirements of the country, rather remained short.

ii. Industry

There are three categories of industries in Bangladesh — Large Scale Industries, Medium Scale Industries, and Small & Cottage Industries. In British and Pakistani colonial rule in Bangladesh, industries couldn't develop much. After independence, though this sector increased, it was not satisfactory. The highest growth rate of Industrial GDP was first counted as 8.1 percent in annual average in 1991-1995 at the constant prices of 1984-85. And the contribution of industry sector increase to 30 percentage points where it was only four percentage points in 1941-1950 and 11 percentage points in 1971-1980. In these years, industrial

establishments and foreign investments increased significantly by the help of the government. 'According to Planning Commission Estimates, there were about 32,000 small industries and 383,000 cottage industries in 1990. The number of manufacture industries was 3,356 in 1981-82, which increased in 23,752 in 1988-89.

iii. Service

Recently, this is the largest sector in the percentage contribution to GDP. The contribution of the service sector in GDP is 52 percentage points in the 2001-2011 where it was only 26 percentage points in 1941-1950 and 45 percentage points in 1971-1980. Its major sub-sectors are construction, utility (power, gas, water), transport & storage, trade service, housing, public administration and defense, banking insurance and other professionals.

b) Growth Trend of GDP in Bangladesh

Growth trend of GDP shows that there is the sign of economic development in Bangladesh. Whether this trend is slow or fast, can be realized by analyzing the growth rates of Real GDP and Nominal GDP assorted in different years in the following table:

Table 1 : Growth Trend of Gross Domestic Product (GDP) in Bangladesh during 1975-2000 (at 1984/85 prices)

Year	Growth rate of Real GDP (%)	Growth rate of Nominal GDP (%)
1979-80	0.8	0.4
1980-81	3.8	3.1
1981-82	1.2	3.2
1982-83	4.9	4.6
1983-84	5.4	4.2
1984-85	3.0	3.7
1985-86	4.3	4.0
1986-87	4.2	2.9
1987-88	2.9	2.4
1988-89	2.5	4.3
1989-90	6.6	4.6
1990-91	3.4	4.2
1991-92	4.2	4.8
1992-93	4.5	4.3
1993-94	4.2	4.5
1994-95	4.4	4.8
1995-96	5.3	5.0
1996-97	5.9	5.3
1997-98	5.7	5.0
1998-99	5.2	5.4
1999-00	5.2	5.6
2000-01	5.3	4.8
2001-02	5.6	4.8
2002-03	4.4	5.8
2003-04	5.3	6.1
2004-05	5.3	6.3
2005-06	6.3	6.5
2006-07	6.0	6.3
2007-08	6.6	6.0
2008-09	6.4	5.9
2009-10	6.2	6.4

Source: Government of Bangladesh, Ministry of Finance, Economic Survey of Bangladesh 2000, (Bengali), pp. 184-185

Analysis of Table 1: The table shows that Real and Nominal GDP change at the same direction. During 1975-76, Real GDP was recorded as 293820 million takas, which from the next fiscal year increased slowly and it continued until 1993-94 in Bangladesh. The size of Real GDP grew twice after 20 years in 1994-95. Real GDP increased into \$ 116.4 billion in 2012. From 1975 to 2010, the growth rate of Real GDP fluctuates from 1 to 6 percent. The highest growth rate was counted as 6.63 percent in 2007-08, and the lowest rate found as 0.8 percent in 1979-80. Most of the years, the growth rate was limited between 4 and 5 percent. During the 1990s, the growth rates of Real GDP increased more visibly than those estimated during the 1980s. This economic development was helped by the fall in the population growth rate. The population grew at 2.2 percent annually during the 1980s, while the growth rate of Real GDP was

low. But population growth rate reduced to 1.7 percent during the 1990s. In last decade (2000-2010) GDP increase more consistently around 6 percent compared to 5 percent of the previous decade.

i. Sectoral Composition of GDP in Bangladesh

The rate at which industry is increasing is lower than that of the rate at which the contribution of agriculture sector is decreasing due to the demand and supply side reasons and lack of industrial policy implementation. The average yearly rate of decrease in agriculture is 40 percent points whereas the yearly average rate of increase in the industry is 37 percent points during the FY 1997-98 to FY 2011-2012 (Safiqul - 2013). The position of service sector is quite stable.

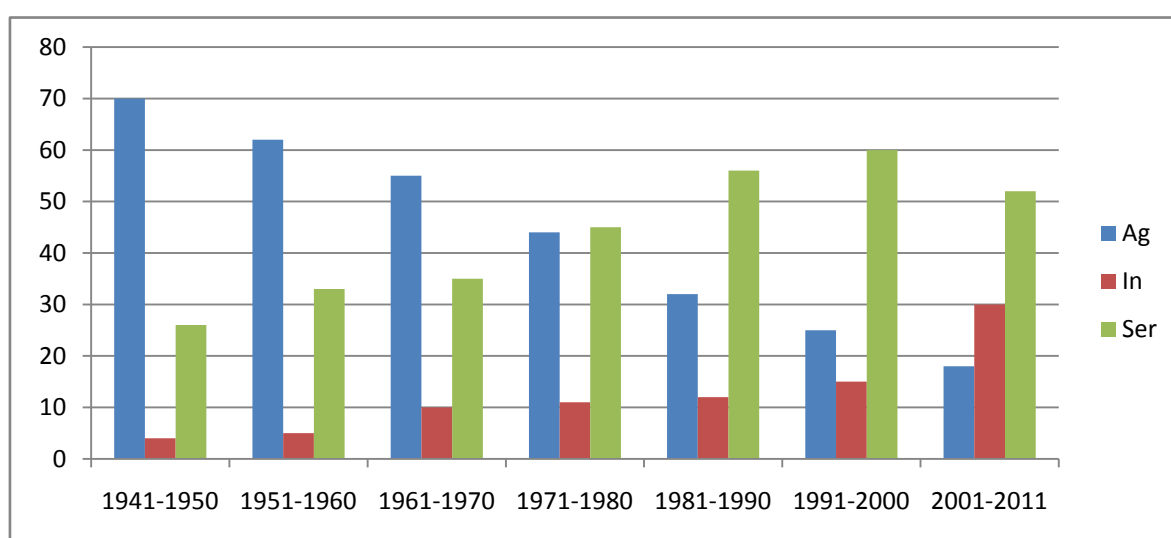


Figure 1 : Share of different sectors in GDP in Bangladesh

Source: Statistical Pocket Book of East Pakistan, different years & BBS, Statistical Year Books, different years, GOB, Economic Survey of Bangladesh, different years.

In British and Pakistani colonial rule Bangladesh economy was an agriculture-based economy. The share of industry sector, as well as service sector, was very small, and the only dominating sector was agriculture sector. In the decade 1941-1950 the share of agriculture, industry and service sector was 70 percentage points, four percentage points, and 26 percentage points respectively and in the time of the independence of Bangladesh the share of agriculture, industry and service sector was 55 percentage points, ten percentage points and 35 percentage points respectively. After obtaining the independence, government takes various steps to convert the agriculture-based economy into an industry-based economy. In the decade 2001-2011 the share of agriculture, industry and service sector has converted into 18 percentage points, 30 percentage points, and 52 percentage points respectively.

c) Employment

i. Employment Trends in Bangladesh

Bangladesh is number eight in the world according to the size of the labor force (CIA Fact Book, 2010). It becomes three times more after 40 years of the independence of Bangladesh. Employment also increases almost at the same rate. During 1974-2010 the population growth rate was around two percentage points (before the 1990s more than 2% and after 1990s less than 2%) and it was decreasing during last four decades. On the other hand, labor force increases from 21.9(m) in 1974 to 54.6 (m) in 2010.

Table 2 : Labor Force and Employment (in million and percentage)

YEAR	Labor Force	Employment	LF gr. Rate (%)	Employment gr. Rate (%)
1974	21.9	19.4		
1981	25.9	23.0	2.4	2.5
1984	28.5	25.2	3.3	3.1
1985	29.5	26.1	3.5	3.6
1986	30.9	27.4	4.5	5.0
1989	33.3	29.5	2.6	2.5
1991	35.5	31.7	3.8	3.7
1996	36.1	34.8	2.2	1.9
2000	40.7	39.0	3.0	2.9
2003	46.3	44.3	4.3	4.3
2006	49.5	47.4	2.3	2.3
2009	54.4	51.9	3.2	3.1
2010	54.6	52.6	3.6	3.5

Source: Labor Force Survey 2005 and Monitoring of Employment Survey (MES) 2009 and Economic Review, Various years.

In 1981 the population growth rate of Bangladesh was 2.35 percentage points where labor force increase at 2.4 percentage points and employment increase at 2.5 percentage points.

In 1991, this rate became 2.17 percentage points, 3.8 percentage points, and 3.7 percentage points respectively. In recent years, the labor force, as well as employment, increases more rapidly than population. In the last decade labor force growth rate and employment growth rate were more than three percentage points although the population growth rate remains between 1-1.5 percentage points. Thus, Bangladesh is benefiting by following two points. Firstly- the share of working population (ages 15-64) has been

steadily rising from 40 percent in 1970 to 62 percent in 2009. Secondly- there is also a growing labor force participation rate, especially owing to increased participation rate by female working population (Planning commission of Bangladesh, Sixth Five Years Plan).

ii. Sectoral Transformation of Employment

Transforming Bangladesh's agrarian economy into a modern manufacturing and service based economy is a long-term challenge because most of the labors are engaged in agriculture sector. Although service sector develops rapidly, industry sector in Bangladesh remains in the primary stage.

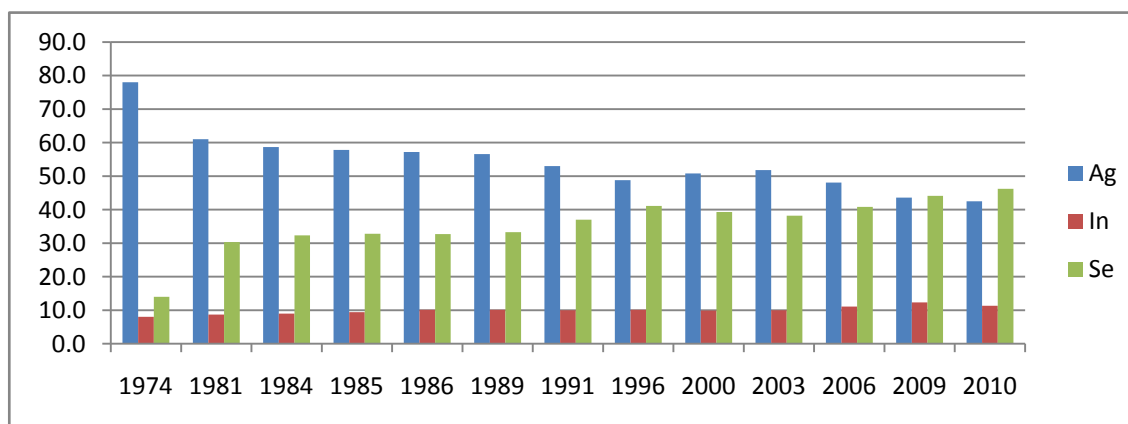


Figure 2 : Sectoral distribution of employment in percentage (1974-2010)

Source: Planning Commission of Bangladesh, Sixth Five Years Plan

In the 1970s and 1980s the performance of manufacturing sector was lack luster, growing below the average growth of the economy. Up to 2000 the share of employment in the manufacturing sector was below ten percentage points where in 1974 it was eight percentage points. But last decade it becomes 17 percentage points which is almost two times more than the previous decade. At the same time share of

employment opportunity in agriculture sector decrease day by day. In 1974, it was 78 percentage points where in 2010 it becomes only 42.5 percentage points. Service sector takes this opportunity. The share of employment in the service sector in the 1970s only 14 percentage points where now it is 46 percentage points and becomes dominated sector of employment in the economy. The growth rate of employment in agriculture

sector is negative, but others two sector positive. The growth rate of employment in the service sector and industry sector are positive and in industry sector it is more consistent than service sector especially in last decade. In the 1980s, the overall employment growth rate was on average 6 percent where it more than 10 percent in the industry sector. In 2006 growth rate of employment in agriculture sector is -0.73 percent, in the service sector, is 14.18 percent and in the Industry sector it was 18.67 percent.

d) *Empirical relationship between GDP and Employment in different sectors*

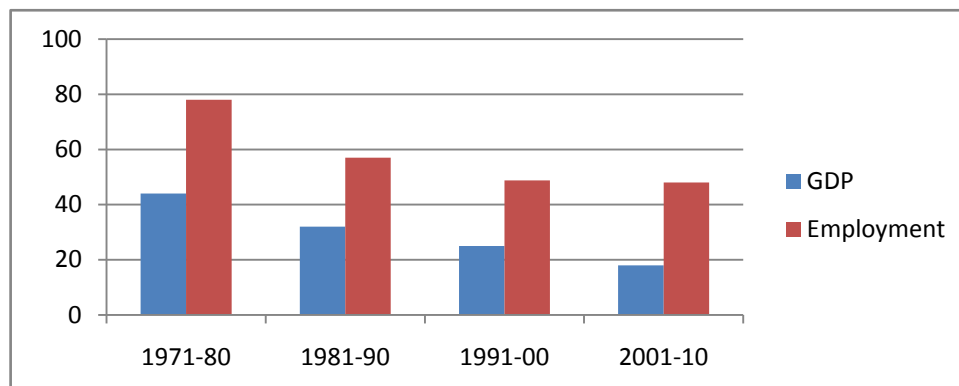
Sectoral transformation of employment clearly indicates the transformation of Bangladesh's agrarian economy into a modern manufacturing and service

based economy. Because during the 1970s the share of agriculture sector in total GDP is more than 75% where in 2010 it becomes only 42.5%. On the contrast after same time the GDP share of industry sector increase from 8% to 11.3% and service from 14% to 46.2%.

i. *Agriculture sector*

From the early stage Bangladesh economy was agrarian. Before the independence in 1971, she was a colony of UK and Pakistan. The rulers did not give any attention to developing the economy. Rather their full concentration was on increasing economic facilities from this country. Thus, our economy remains undeveloped.

Comparison between GDP and Employment in Agriculture sector (%)

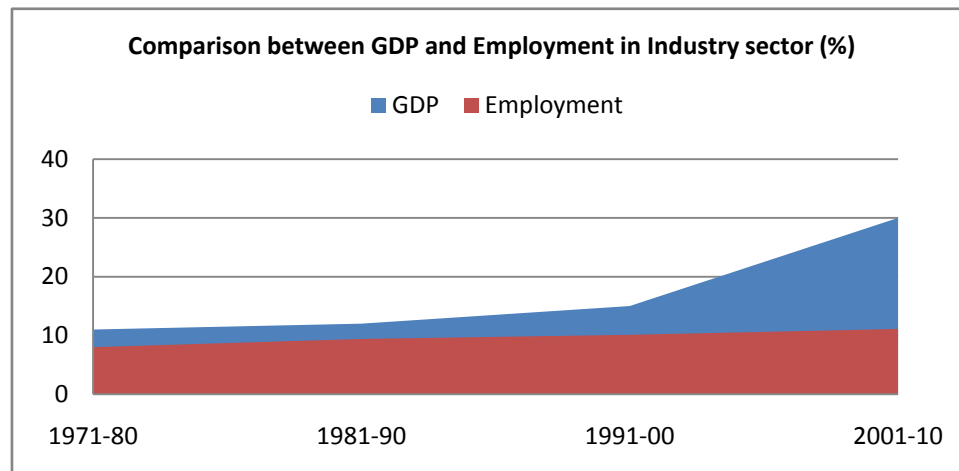


Source: Author's calculations by using data available from Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Finance in different years.

During the liberation war infrastructure and economic system destroyed. It takes many years to overcome the war cost. On the other hand, our labor force was mostly unskilled. As a result, our economy remains agri-based. But with the times, other sectors become stronger, and it results in the decrease in the share of agriculture sector in GDP as well as share in total employment.

ii. *Industry sector*

Under the British and Pakistani rule industry sector of our country was neglected. Instead of developing our industry sector they collect raw materials for their industries from here. During 1980s industry sector becomes relatively stronger.



Source: Author's calculations by using data available from Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Finance in different years.

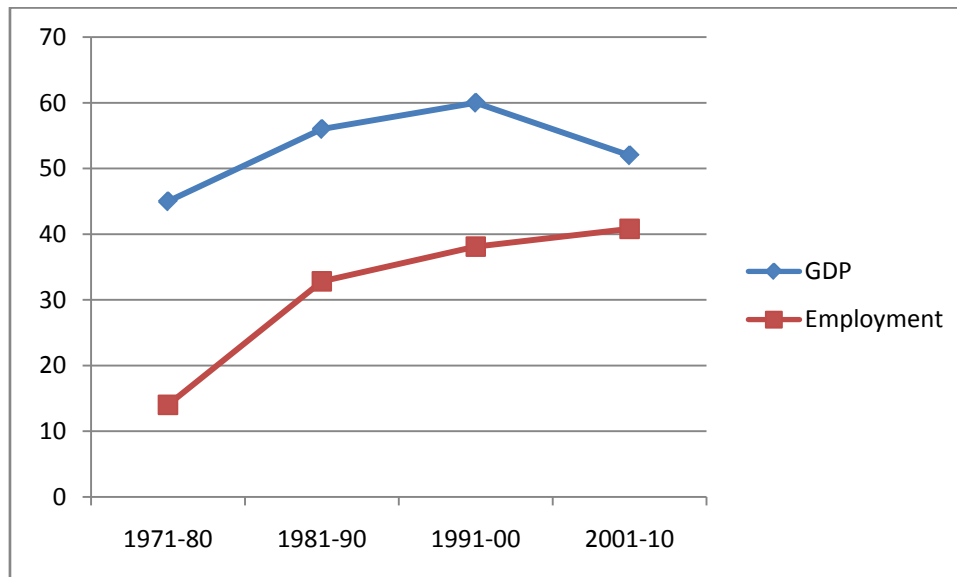
After 1980s due to taking some necessary steps and political stability under the democratic government the GDP share increases but employment share remains more or less stable.

iii. Service sector

Service sector takes benefits from both agriculture and industry. With the time share of

agriculture sector decrease but industry sector could not increase at proportional rate. Service sector has taken this chance.

Trends of GDP and Employment in Service sector (%)



Source: Author's calculations by using data available from Bangladesh Bureau of Statistics, Bangladesh Bank, Ministry of Finance in different years.

Now it becomes the key sector of our economy. Although in the last decade both GDP and employment share decrease, the total volume of service sector increase.

IV. RECOMMENDATIONS

In Bangladesh, the labor force increased from 21.9 million to 54.6 million from 1974 to 2010. The working age (ages 15-64) population about 62.7 percentage points and out of them 59.3 percentage points are economically active, and 40.7 are inactive. Thus, if we can activate these labors economically, they must contribute to GDP.

About 50% of population in Bangladesh is female. But the volume of female labor force (13.5m) is much smaller than that of male (40.2m). That means that a lot of female worker are not interested in works. For developing our economy we have to employ this part of population.

Although the unemployment rate in Bangladesh is 5% at 2012 which is lower than world unemployment (around 6%). The lower unemployment refers to a large contribution of the labor force in GDP and an indicator of a developing economy. But this unemployment and disguised unemployment must be reduced because 40.7% labor force has no contribution to GDP.

The sectoral composition of growth has to change in favor for a much higher share of modern manufacturing and organized services to create a more rapid expansion of good jobs and GDP. In Bangladesh, during 1991 to 2003 industry is the most employment intensive sector with an employment elasticity of 0.78, followed by agriculture (0.35) and services (0.03). Thus, the employment responsiveness of growth in manufacturing needs to increase to absorb more labor. Thus, by developing industry sector we can employ our unemployed people and it results in increasing GDP.

V. CONCLUSION

Dr. Debapriya Bhattacharya, Executive Director of Centre for Policy Dialogue (CPD), recommends that if the GDP growth rate of Bangladesh rises to 8 percent and sustains this position constantly, Bangladesh may develop in 2020. By raising the growth rate of exports to 20.83 percent and reducing the growth rate of imports to 17.58 percent, we can achieve this desirable growth rate of GDP. With his valuable comment, the following issues can also be considered to improve GDP growth rate. Agricultural and Industrial GDP are small in recent years, but Service Sector's GDP is swelling. This kind of imbalanced swell of one sector except other two causes inflation. The contribution of all sectors to GDP needs to

increase equally. The government should take necessary steps to use labor force, an important factor of production, efficiently. In this way, the burden of the nation (population) converts into the assets and can contribute to the GDP. Finally, proper management and efficient use of employment results in growth in GDP.

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