

PUBLIC INVESTMENT IN PHYSICAL AND SOCIAL INFRASTRUCTURE: AN APPRAISAL

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The current issue of Bangladesh Economic Update aims at assessing the quality of public investment in physical and social infrastructure

1. INTRODUCTION

The current issue of Bangladesh Economic Update aims at assessing the quality of public investment in physical and social infrastructure. The Update finds that the low implementation status of public investment in physical and social infrastructure in the backdrop of continued sluggish private investment may hinder achievement of the targeted rate of growth in gross domestic product (GDP).

The allocations of development expenditure for social sectors as percentage of the total development expenditure have recently undergone decreasing trends signaling inadequate investments in social development and posing challenges to the formation of human capital in the country.

The Update puts particular emphasis on stimulating private investment and channeling adequate resources into health, education, and social security and welfare, thereby ensuring the provision of public services and facilitating the formation of human capital in Bangladesh.

Public investment in social sector is generally considered to play an important role in the economic development of a country by maintaining law and order, providing economic infrastructure, harmonising conflicts between private and social interests, increasing labor productivity through education and health and enhancing export industries (Khalifa 2001). It influences every sphere of citizens' lives – work, transportation, health care, recreation, and educational facilities.

2. THEORETICAL REMARKS

A number of theoretical frameworks have been developed in order to comprehend the effect of public expenditure on growth. A brief account of the major theoretical understandings is sketched in order to construct a framework for explaining the trend, and effect of the public expenditure especially social sector expenditure in Bangladesh.

Keynesian hypothesis (Keynes 1936), however, focused on the role of public expenditure in determining levels of income and distribution in the economy. In the Keynesian

paradigm, economic growth is considered to occur as a result of rising public expenditure which is assumed as an independent exogenous variable to influence the economic growth. While Wagner's approach (Wagner 1883) suggests that causality runs from output to public expenditure, the Keynesian approach assumes that causality runs from public expenditure to output. Both the Wagner's hypothesis and Keynesian hypothesis are short-run phenomenon in which the causality testing approach helps to identify the short-run interaction between public expenditure and economic growth. Wagner's law contains six versions which have been empirically tested by different economists over the years.

Bangladesh, as argued earlier, lags far behind other developing as well as its neighboring countries in raising public spending adequately.

Wagner's hypothesis further emphasises that in the process of economic development, government economic activity increases vis-à-vis private economic activity. Wagner offered three reasons why this case would happen. Firstly, with the economic growth, industrialisation and modernisation would take place which will diminish the role of public sector for private one. This continuous diminishing share of the public sector in economic activity leads to more government expenditure for regulating the private sector. Secondly, the increase in real income would lead to more demand for basic infrastructure particularly education and health facilities. Wagner asserts that it is the government who provides these facilities to the public more efficiently than private sector. Thirdly, to remove monopolistic tendencies and to enhance efficiency in economy, the government should come forward and invest in particular sectors that will increase public expenditure and ensure the provision of public services.

Todaro (2003) explicates two effects of the public expenditure on education and health – social and individual. For example, the private or individual benefit of public spending on education is that a more educated student is considered to earn considerably more income through future modern sector employment than a less educated student while social benefits of education are the payoffs of the education to the whole society.

Bangladesh, as argued earlier, lags far behind other developing as well as its neighboring countries in raising public spending adequately. The government's perspective plan to increase the size of the government spending in relation to GDP in order to provide the basic economic and social services and improve the quality of public service

delivery across the country has been remaining unachieved over the years. In 2013, the public spending stood at 32.21 percent of GDP in the developing and emerging economies, whereas Bangladesh accumulated only 16.79 percent of its GDP as public spending. The volume of public spending is far lower in Bangladesh than in its two neighboring countries – India and Myanmar.

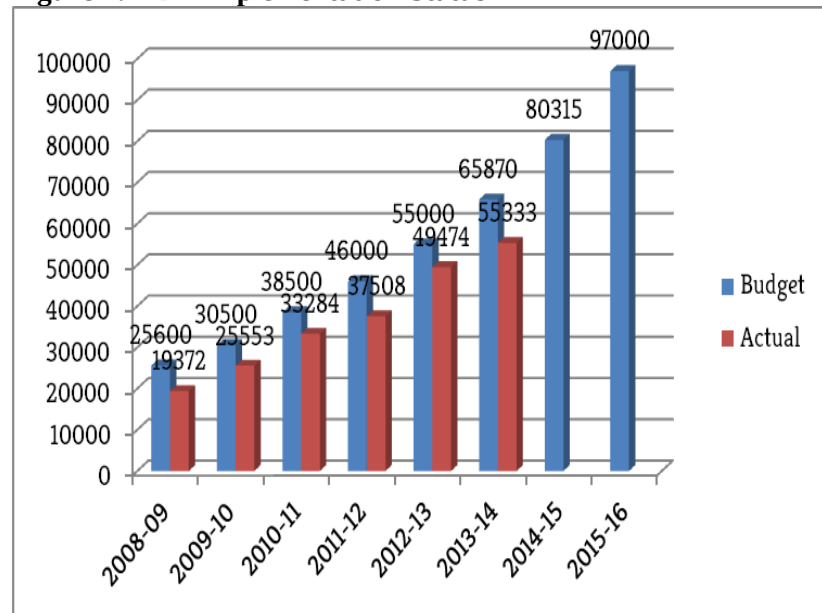
3. TOTAL PUBLIC INVESTMENT: TREND, SIZE AND IMPLEMENTATION STATUS

Since FY11, government expenditure has again started to pick up but grew at a slower pace compared to the targets due to slower growth in collection of government revenue.

In FY08, public expenditure was 16.6 per cent of GDP which was reduced to 14.5 per cent and 14.6 percent of GDP in FY09 and FY10 respectively as a consequence of global economic downturn but it was still higher than the target level set in the perspective plan. Since FY11, government expenditure has again started to pick up but grew at a slower pace compared to the targets due to slower growth in collection of government revenue. In FY13, the actual government spending was 1.6 percentage point lower than the target level. Despite the initiation of vigorous reforms in the revenue sector, revenue mobilisation target could not be achieved since FY12. As a result, government expenditure targets for the subsequent years are needed to be revised in line with revenue earnings. However, the government has revised the perspective targets and set the new targets of public spending at 18.6 percent, 19.2 percent, and 19.6 percent for FY15, FY16, and FY17 respectively, which also do not seem likely to be achieved amidst the current state of economy that is characterised by political standoff. In addition, the government intends to pursue a moderate consolidation path over the medium term to keep budget deficit within 5 per cent of GDP. In view of this, the government must therefore achieve its public expenditure targets set in the medium term macroeconomic policy statement.

However, According to Implementation Monitoring and Evaluation Division (IMED), the ministries and agencies of government spent only 55 percent of Tk. 75000 crore of revised Annual Development Programme (ADP) allocation up to April 2015 in FY 2014-15. As a consequence, implementation of the annual development projects has suffered a setback.

Figure 1: ADP Implementation Status



Source: Ministry of Finance, 2015

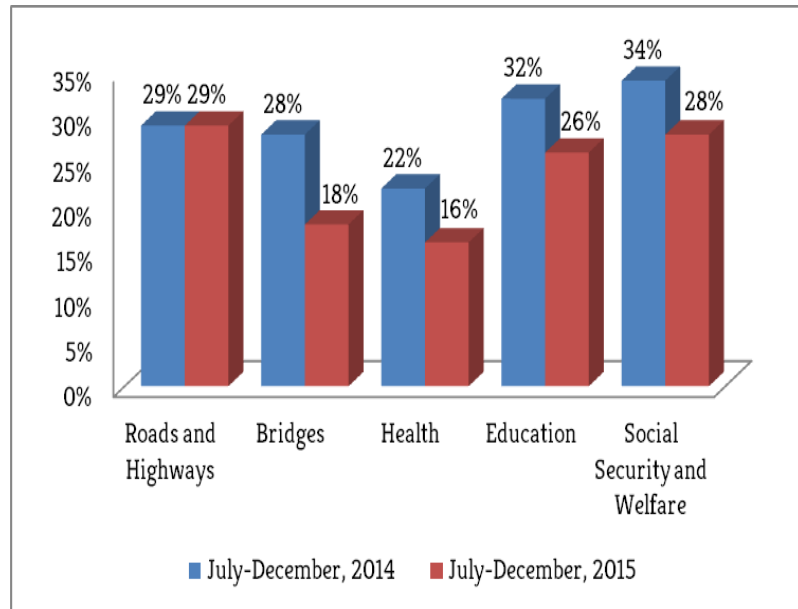
Furthermore, revised allocation as well as actual expenditure has been decreasing compared to proposed allocation of ADP for over the years.

Furthermore, revised allocation as well as actual expenditure has been decreasing compared to proposed allocation of ADP for over the years. In FY 2013-14, proposed allocation was Tk. 65872 crore and revised allocation was Tk. 60000 crore and in FY 2014-15, the proposed ADP allocation given Tk. 80315 crore and then revised at Tk. 75000 crore. Referring to the poor implementation of annual development programme (ADP) in the current fiscal year, it has, however, been warned that a notable portion of ADP allocation of Tk. 97000 crore in the FY2015-16 may remain underutilised, and taking the trend of ADP implementation status, the implementation of ADP at the end of FY2015-16 is projected at Tk. 91885 crore.

During the first half of the current fiscal year, 29 percent of total ADP allocation for roads and highways division has been implemented whereas the status was the same (29 percent) during the corresponding period of the previous fiscal year. However, only 18 percent of the total allocation of ADP for bridges division has been implemented during July-December'15 compared to 28 percent during July-December' 14.

Furthermore, ADP implementation status has stood at 16 percent in health, 26 percent in education, and 28 percent in social security and welfare during July-December'15 whereas 22 percent, 32 percent, and 34 percent of allocations for health, education, and social security and welfare respectively were implemented during July-December'14.

Figure 2: ADP Implementation Status in Five Major Public Investment Sectors



Source: Ministry of Finance, 2015

4. PUBLIC INVESTMENT IN PHYSICAL INFRASTRUCTURE: ACTIVITIES AND PROGRESS

4.1. Roads and Highways

Strategic Objectives	Activities	Implementing Departments/Agencies
Repair, rehabilitation, maintenance, development and expansion of the existing road networks	Repair, rehabilitation, maintenance of the damaged roads and development and expansion of economically important roads. Development and expansion of international, national and regional highways and construction of new roads, which are economically important from national perspective by undertaking new projects. Construction and repair of bridges and culverts on international, national, and regional highways and district roads.	Roads and Highways Department (RHD)
Introduction and expansion of a modern digital motor vehicle management and control system	Registration, issue and renewal of Fitness Certificates and route permits for road vehicles Issue and renewal of all types of Driving Licenses Collection of vehicle tax, fee etc. Control of all types of unlawful activities related to road transport Issue of Digital driving license (Smart card), retro- reflective number plates, radio frequency identification tag and vehicle ownership card.	Bangladesh Road Transport Authority (BRTA)
Ensuring road safety	Imparting training to professional drivers	Bangladesh Road Transports Corporation (BRTC)
	Establishment of training centers and creation of master trainers	Bangladesh Road Transports Corporation (BRTC)
	Taking appropriate measures to reduce road accidents.	Roads and Highways Department (RHD)
Introduction and expansion of an integrated modern public transport system	Procurement of new buses and trucks Introduction of e-ticketing at all levels	Bangladesh Road Transports Corporation (BRTC)
	Introduction and expansion of the Bus Rapid Transit (BRT)	Roads and Highways Department (RHD)
	Introduction and expansion of Bus Rapid Transit 3 (BRT)	Dhaka Transport Co-ordination Authority (DTCA)
Expansion of bus service to international routes	Expansion of bus services to new international routes.	Bangladesh Road Transports Corporation (BRTC)
Development and expansion of road network under Public Private Partnership (PPP)	Construction of new roads, flyovers and bridges under PPP Implement the Dhaka-Chittagong expressway construction project according to feasibility study	Roads and Highways Department (RHD)

4.1.1. Budget

Description	Budget 2015-16	Projection	
		2016-17	2017-18
Non-Development	2236,78,00	2385,00,00	2531,86,00
Development	5675,05,00	5218,00,00	5831,42,00
Total	7911,83,00	7603,00,00	8363,28,00
Revenue	2510,73,76	2608,59,80	2786,23,10
Capital	5401,09,24	4994,40,20	5577,04,90
Total	7911,83,00	7603,00,00	8363,28,00

4.1.2. Activities and Progress

Activities	Output Indicator	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
			2013-14		2014-15		2015-16	2016-17	2017-18
Repair, rehabilitation, maintenance of damaged roads and development and expansion of economically important roads.	Developed standard road network	Km (thousand)	3.30	3.30	3.60	3.60	4.00	4.25	4.5
Development and expansion of international, national and regional highways and district level and construction of new roads which are economically important from national perspective by undertaking new projects.	Constructed new roads	Km	300	220	275	250	250	200	200
	Rehabilitated roads	Km (thousand)	1.00	1.11	1.00	1.00	1.00	1.20	1.20
Construction of bridges and culverts on international, national, and regional highways	Constructed new bridges	Meter (thousand)	5.45	8.3999	5.19	5.19	6.59	7.25	7.25
	Constructed new culverts		3.36	1.16	3.95	3.95	4.39	4.83	4.38
Taking appropriate measures for reducing road accidents.	Reduced number of black spots	Number	30	0	82	35	50	40	40
Introduction and expansion of Bus Rapid Transit (BRT)	Prepared feasibility study and detailed design	(%)	30	30	65	65	-	-	-
Construction of new roads, flyovers and bridges under	Road	Km	-	-	30	-	75	100	100

PPP	Bridge	Meter	-	-	-	-	500	500	500
Implement the Dhaka-Chittagong expressway construction project according to feasibility study	Progress rate	%	-	-	-	20	50	100	-

4.2 Bridges

Strategic Objectives	Activities	Implementing Departments/Agencies
Development of integrated road systems	Land acquisition and rehabilitation of affected people and evaluation proposal for appointment of construction contractor of big bridges Construction of big bridge Construction of elevated expressway Construction of tunnel Construction of link road of big bridge and tunnel Construction of BRT lane (elevated part) Maintenance of big bridges	Bangladesh Bridge Authority

4.2.1. Budget

Description	Budget 2015-16	Projection	
		2016-17	2017-18
Non-Development	31,75,00	10,95,00	16,21,00
Development	8921,00,00	9523,00,00	10136,67,00
Total	8952,75,00	9533,95,00	10152,88,00
Revenue	1077,90,59	790,19,31	713,90,27
Capital	7874,84,41	8743,75,69	9438,97,73
Total	8952,75,00	9533,95,00	10152,88,00

4.2.2. Activities and Progress

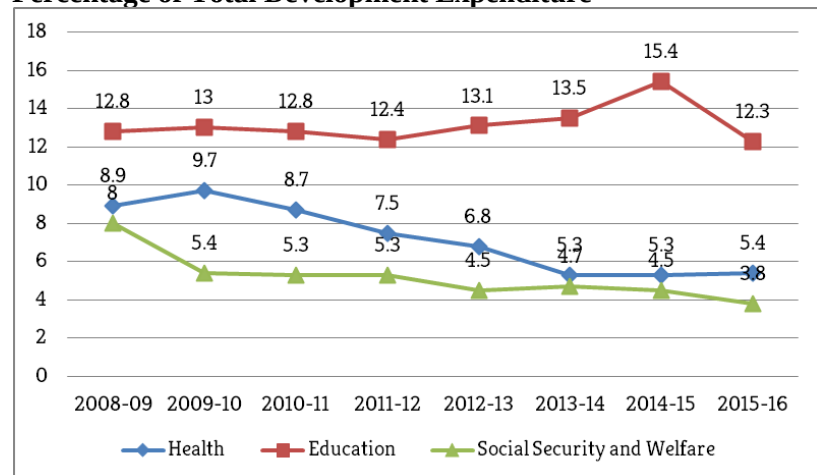
Indicator	Unit	Revised Target	Actual	Target	Revised Target	Medium Term Targets		
		2013-14		2014-15		2015-16	2016-17	2017-18
Construction of Padma Bridge	% Cumulative progress	12	10	35	20	45	70	90
Construction of BRT lane (elevated part)		-	-	40	-	20	60	100
Construction of Link Road of Muktarpur Bridge		-	-	30	-	30	70	100
Construction of Bekutia Bridge		6	-	30	-	30	60	90
Construction of Dhaka Elevated Expressway		5	-	40	12	40	75	100
Construction of tunnel at Karnafuli River		-	-	20	-	20	40	70

5. PUBLIC INVESTMENT IN SOCIAL INFRASTRUCTURE

Declining finance is likely to create skill shortages in addition to deteriorating quality of education.

Development expenditure in health stood at 9.7 percent of the total development expenditure in FY 2009-10 compared to 8.7 percent in FY 2010-11, 7.5 percent in FY 2011-12, 6.8 percent in FY 2012-13, 5.3 percent in FY 2013-14, 5.3 percent in FY 2014-15, and 5.4 percent in FY 2015-16. Development expenditure in education stood at 13 percent of the total development expenditure in FY 2009-10 compared to 12.8 percent in FY 2010-11, 12.4 percent in FY 2011-12, 13.1 percent in FY 2012-13, 13.5 percent in FY 2013-14, 15.4 percent in FY 2014-15, and 12.3 percent in FY 2015-16. Declining finance is likely to create skill shortages in addition to deteriorating quality of education. Development expenditure on social security and welfare stood at 5.4 percent of the total development expenditure in FY 2009-10, whereas the allocation was 5.3 percent in FY 2010-11, 5.3 percent in FY 2011-12, 4.5 percent in FY 2012-13, 4.7 percent in FY 2013-14, 4.5 percent in FY 2014-15, and 3.8 percent in FY 2015-16.

Figure 3: Development Expenditure on Social Sectors as Percentage of Total Development Expenditure



Source: Ministry of Finance, 2015

5.1. Public Investment in Health

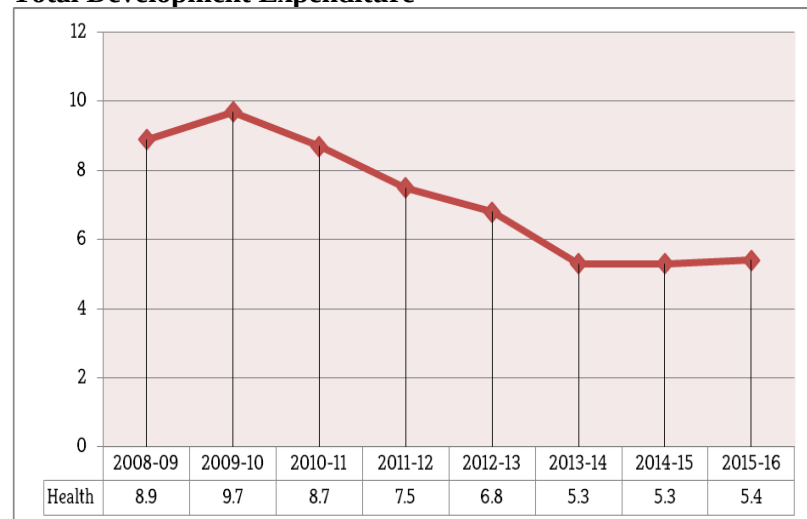
In FY 2014-15, total amount allocated to this sector is Tk. 111.46 billion. The proposed allocation in health sector for FY 2014-15 is 4.45 percent of the proposed budget while it was 4.26 percent of the proposed budget in FY 2013-14. The rate of increase in allocation to this sector amounts to be 0.19

Reduction in the subsidy in health sector will make the situation more difficult to provide minimum health services to the poor people.

percentage point. Although this amount is higher than that of the previous year, it is still not sufficient to provide adequate health facility to the population as the doctor-population, doctor-nurse, nurse-population ratios are still far away from acceptable levels. Moreover, it is apparent that, in most of the fiscal year, the proposed budgetary allocation is reduced in the revised budget. For example, in the budget of FY 2013-14, the proposed allocation for health sector was Tk. 94.70 billion (including development and non-development budget). However, the allocation has been reduced to Tk. 85.49 billion in the revised budget for this sector. Additionally, reduction in the subsidy in health sector will make the situation more difficult to provide minimum health services to the poor people. However, the allocations of public spending for health as percentage of the total program spending have been on the decline in recent years.

However, development expenditure in health stood at 9.7 percent of the total development expenditure in FY 2009-10 compared to 8.7 percent in FY 2010-11, 7.5 percent in FY 2011-12, 6.8 percent in FY 2012-13, 5.3 percent in FY 2013-14, 5.3 percent in FY 2014-15, and 5.4 percent in FY 2015-16.

Figure 4: Development Expenditure on Health as Percentage of Total Development Expenditure



Source: Ministry of Finance, 2015

As apart from other markets in part, health care services have some unique characteristics such as prevalence of uncertainty and risk, the problem of asymmetric information, restricted competition and widespread externalities (Cevik and Tasar 2013). Bangladesh spends 3.4 % of GDP on health and less than 1% of the population is covered by an insurance scheme. The health sector of Bangladesh has achieved significant progress in recent years. But still large numbers of households are being pushed into poverty, or those already impoverished are further burdened, both by ill-health and by excessive out-of-pocket payments for health care.

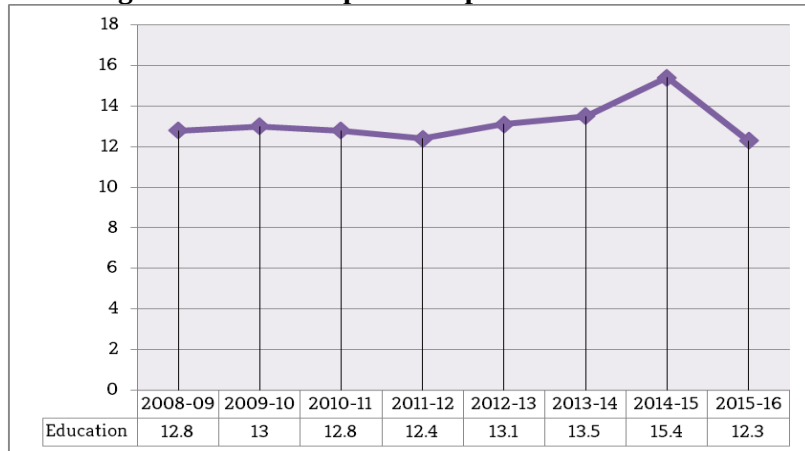
The health sector of Bangladesh has achieved significant progress in recent years. But still large numbers of households are being pushed into poverty

5.2. Public Investment in Education

It is needless to say that in order to improve the educational status of the population, large budgetary allocation is required. However, in the budget for FY 2014-15, the proposed allocation to this sector is Tk. 292.13 billion, which represents 16.42 percent increase compared to the previous fiscal year. Because of insufficient fund, the progress in education sector more or less has been limited to the increase of enrolment in primary education or to the increases of literacy rate. Moreover, the number of educated unemployed is on the rise as quality of education is not improving. It is to be noted here that the rate of increase in education budget was 27.73 percent between FY 2009-10 and FY 2010-11 and then it started to decline. Additionally, in most of the cases the proposed budgetary allocation has got negative revision during the period FY 2000-07 to FY 2012-13 (Mustafiz, 2014). The trend of allocations of public expenditure for education over the last few years has, however, been on the decline.

However, development expenditure in education stood at 13 percent of the total development expenditure in FY 2009-10 compared to 12.8 percent in FY 2010-11, 12.4 percent in FY 2011-12, 13.1 percent in FY 2012-13, 13.5 percent in FY 2013-14, 15.4 percent in FY 2014-15, and 12.3 percent in FY 2015-16.

Figure 5: Development Expenditure on Education as Percentage of Total Development Expenditure



Source: Ministry of Finance, 2015

The proposed allocation for the social security and welfare sector, which was Tk. 123.66 billion in FY 2013-14, was already considered to be inadequate for the population of the country as about three of every ten people are living under poverty line.

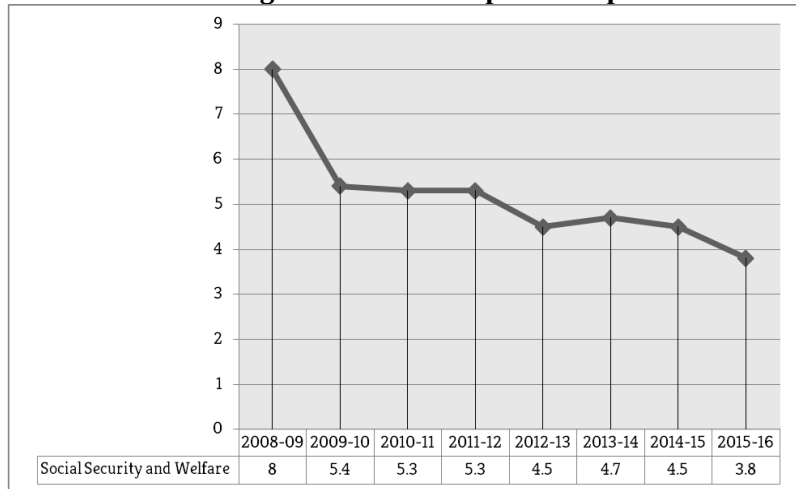
5.3. Public Investment in Social Security and Welfare

The proposed allocation for the social safety-net and welfare sector is estimated at Tk. 139.74 billion in FY2014-15, which represents only 13 percent increase over the amount in the previous budget. The proposed allocation for the social security and welfare sector, which was Tk. 123.66 billion in FY 2013-14, was already considered to be inadequate for the population of the country as about three of every ten people are living under poverty line. Such low allocation was attributed to the diversion of expenditure from social sector to meet the rising payment on account of principal and interest for the high public borrowing to finance the budget deficit in the recent years. Moreover, in Bangladesh, social safety net programmes have been developed and evolved on adhoc basis. The major shortcoming of these SSNPs is that they are short-term in nature and only designed to address post-disasters situations. However, the allocations of public spending for social security and welfare as percentage of the total program spending have also been on the decline in recent years.

However, development expenditure on social security and welfare stood at 5.4 percent of the total development expenditure in FY 2009-10, whereas the allocation was 5.3 percent in FY 2010-11, 5.3 percent in FY 2011-12, 4.5 percent in FY 2012-13, 4.7 percent in FY 2013-14, 4.5 percent in FY 2014-15, and 3.8 percent in FY 2015-16.

The allocations of development expenditure for social sectors – education, health, and social security and welfare – have been on the decline in recent years signaling the trend in social development to be unsustainable.

Figure 6: Development Expenditure on Social Security and Welfare as Percentage of Total Development Expenditure



Source: Ministry of Finance, 2015

6. CONCLUSIONS

As demonstrated above, the allocations of development expenditure for social sectors – education, health, and social security and welfare – have been on the decline in recent years signaling the trend in social development to be unsustainable. The projected allocations for social sectors in the medium term macroeconomic policy statement FY15 – FY17 are inadequate to keep the pace of social development, for which Bangladesh has been commended worldwide, in the coming years. The major barrier to the challenge of unsustainable social development is, therefore, considered to be the insufficient government expenditure on providing social services throughout the country. In addition, the absence of an effective social security system also hinders the path of social development exerting immense adverse impact on the low-income population particularly the poor and marginalized group in the society. It is, however, needless to say that the government must focus on raising public expenditure through increased collection of revenue and allocating sufficient resources for such sectors as education, health, and social security and welfare in pursuit of achieving a sustainable trend in social development in the country. The development of an efficacious social security system is also pressing in order to ensure the provision of social services especially the health services to the public. Monitoring of the social safety net programs also needs to be carried out regularly in order to evaluate the effectiveness of the programs in empowering the poor and marginalised population of the country.

Considering the unsatisfactory quality of public investment in physical and social infrastructure and current state of sluggish private investment due to infrastructure shortage and lack of business confidence, it is, however, emphasised that the government must focus on stimulating private investment and ensuring effective utilisation of public investment in addition to channeling adequate resources into social sectors that give particular impetus to the improvement in human development.

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