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Comparative Study among Classical, Keynesian, Neo-Classical and Ricardian Equivalence Hypothesis (REH) Doctrines Regarding Budget Deficit and Economic Growth in Bangladesh Economy: A Study

Abdul Jalil Pathan[1*] and Shahed Ahmed[2]

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ABSTRACT

Purpose: To get comparative study among Classical, Neoclassical, Keynesian and Ricardian doctrine on budget deficit and economic growth and reveal the most relevant doctrines prevail in Bangladesh economy.

Methodology: Descriptive statistics had been utilized to reveal the relevancy of appropriate doctrine support the real status of Bangladesh economy covering period from 2000-01 to 2020-21 fiscal years.

Findings: The study found that resolving longer term structural challenges, diversification of exports beyond the RMG sector, graduating from LDCs to developing countries by 2026, upper middle income countries by 2041 and developed countries by 2050 Bangladesh invested huge amount by deficit budgeting in multiple sectors which creates crowd-out private investment specially resources crowd-out mentioned as neoclassical doctrine and expects crowd-in private investment and achieve satisfactory growth rate after successful completion of various mega projects which support Keynesian doctrine.

Practical Implication: Budget deficit can increase interest rate and lowering economic growth by crowding-out private investment according to neoclassical thought and Keynes discloses reverse opinion of deficit budget appreciates economic growth by crowding-in private investment. Bangladesh economy operates with both neo-classical and Keynesian doctrine practically and got results in short-run and will get more in long-run. Economy should run with deficit financing and govt. can reduce deficit only by earning more from improving Tax-GDP ratio and hindering money laundering by under in-voicing and over in-voicing.

Originality: Bangladesh Govt. should invest more in Social overhead Capital (SOC) by fiscal deficit which will induce Direct Productive Activities (DPA) and economic growth in the long-run.

Limitations: All the data are collected from secondary sources and used descriptive statistics since it is a comparative study.

1. Introduction

National budget is the pragmatic evidence of theoretical fiscal policy. Fiscal policy refers to public revenue and expenditure management mechanism by which government tries to enhance real output, employment and maintain price level stability. The target of achieving sustained growth and maintaining macroeconomic stability is the dream among many developed, developing and underdeveloped economies. The excessive and chronic fiscal deficits seem to be the major concern of academicians and policy makers in Bangladesh. The annual growth rate of GDP is 6.5 (approx.) percent for last ten years, 7.5 (approx.) percent for last four years and 2.38 percent in 2020-21 fiscal year for Covid-19 pandemic whereas gross fiscal deficit is 6.8 percent of GDP in same period in

* Corresponding Author
[1] Assistant Professor, Department of Economics, Islamic University, Kushtia, Bangladesh, E-mail: abduljalilraj@yahoo.com
[2] Assistant Professor, Department of Economics, Islamic University, Kushtia, Bangladesh, E-mail: shahedkgc@gmail.com

Bangladesh according to World Bank data. The government has to incur deficits to finance its expenditures on various mega investments. Capital from deficit financing used in productive sectors gives positive response to the economy. The ill-effects of deficits are linked to the way they are financed and how it is used. The fiscal deficits can be financed through domestic borrowing, foreign borrowing or by printing money. Excess application of any particular method of financing of the fiscal deficit has adverse macroeconomic phenomenon, viz, seigniorage financing of fiscal deficit induce inflationary situation in the economy, bond issuing/financing of fiscal deficit induce to rise in interest rates which lead to crowd-out private investment and the external borrowing/financing of fiscal deficit can destabilize balance of payment and appreciation of exchange rates and in turn debt spiraling. Sometimes large fiscal deficit can affect the country’s economic growth adversely. A higher fiscal deficit implies higher government borrowing and higher debt servicing which deepening deficit problem more and holds it on vicious cycle of deficit budget. Large public borrowing lead to crowd-out private investment and lowering economic growth by increasing interest rate which is prescribed by neoclassical economists. However, Keynes argued that if productive public investments increase by deficit financing at a given interest rate then the negative impact of high public borrowings on private investments and economic growth may be symmetries and adversely achieve crowd-in private investment by unbalancing the economy where investments on Social Overhead Capital (SOC) induces Direct Productive Activities (DPA). Government will invest more in social overhead capital like bridges, roads and highways, dams on vulnerable river side, flood controlling programme, power and energy, health, technical education etc. from deficit budget then private investment will be encouraged and they will invest in direct productive activities. Such a way, deficit budget crowd-in private investment and positively impacts on growth and development. Fiscal deficit used for creating infrastructure and human capital will have a different impact than if it is used for financing ill targeted subsidies and wasteful recurrent expenditure. Therefore the fear about high fiscal deficit is justified if the government incur deficit to finance its current expenditure rather than capital expenditure. Another peculiar thought of no impacts on macroeconomic variables of deficit budget from ‘tax now’ or ‘tax later’ ideas of Barro-Ricardo propositions. No crowd-out and no crowd-in private investment will be happened by the equality of today’s tax cut, borrowing, deficit and future adjusted tax. But Bangladesh facing many challenges like Myanmar forced rohingya crisis, climatic change, vulnerable coastal regions, drugs vulnerabilities and ongoing various mega projects like Padma multipurpose bridge, elevated expressway, Karnaphuli tunnel, Metrorail, Ruppur atomic electricity project etc. costs huge expenditures financed from deficit budgeting and expects tremendous change will be occurred in the economy by enhancing growth rate after attaching such projects in the mainstream economy. However, the COVID-19 epidemic impacted Bangladesh economy deeply which creates economic downturn. In this reality the study will try to reveal the most relevant thought working in Bangladesh economy.

The main limitation of the study is that, it is a review article in nature and justified its various objectives by descriptive statistics and empirical econometric tools are not used but will do its further research.

1.1 Significance of the Study

Bangladesh has achieved global attraction in rigorous economic development and persistent GDP growth except 2020-21 for covid-19 deterioration. It is graduating over LDCs, now in lower middle-income country and on the way to developing countries by 2026. Bangladesh emerged as a new Asian tiger with 42nd largest GDP and committed to place itself in developed within 2041.According to HSBC research Bangladesh will place itself in 26th largest GDP within 2030 and according to UK's Centre for Economics and Business Research (CEBR) Bangladesh will place itself 41st in 2022,34th in 2026, 29th in 2031and 24th largest economy within 2036 and it will cross over countries like Malaysia, Singapore, Denmark, Hongkong, UAE, Egypt, Norway, Argentina, Israel, Iceland, Austria, Belgium, Sweden and Taiwan in this duration. Bangladesh achieved MDGs (Millennium Development Goals in 2015) and on the way to achieve SDGs (Sustainable Development Goals by 2030) and targeted delta plan by 2100. Rather, Problems and challenges are unlimited for Bangladesh which are as Myanmar forced Rohingya crisis,Covid-19 deterioration, persistent unfavorable balance of payment, increased public debt; local and foreign, increased debt servicing payment, inflationary pressure, limited diversification in exportable goods and services, natural calamities and climatic change, inequality and corruption, lack of practical education, gender discrimination, and unemployment. To mitigate all the problems, challenges and prospects Bangladesh should undertake big volume fiscal budget but our capability is not satisfactory as per requirement. That is why, excessive expenditures creates fiscal deficit. We can utilize our maximum potentialities by managing limited resources with unlimited wants and challenges where macroeconomic stability is a large question. For macroeconomic stability, we want to ensure both internal and external balance simultaneously by proper budgetary system with effective monetary and fiscal policy so that continuous increasing economic growth, optimum inflation rate, effective interest rate, favorable exchange rate and BOP equilibrium can be achieved. But these are our dreams. Actualities are quite different and much more far from desires. Only Public investment is not sufficient for achieving such milestones and indicators positively and combat against such challenges. Both public and private investments are required. But satisfactory private investment is absent and declining day by day. Are increased interest rates from deficit financing (neoclassical financial crowding-out) or overuse of resources by public investments (neoclassical resource crowding-out) responsible for such declining? Is there any possibility to ensure crowding-in private investment as Keynes prescribed, or Ricardian propositions works in Bangladesh? Which doctrines get similarities with the prevailing status of Bangladesh economy? The study tries to reveal the similarities of real status of Bangladesh economy with the comparative study among various doctrines regarding fiscal deficit and economic growth and at the same time it will recommend policy for accelerating crowd-in private investment, employment and economic growth as a whole.

1.2 Objectives of the Study

Budget is an old but a continuous process. Now a days, most of the countries of the world faces many challenges which generates lots of public expenditures. They cannot match this expenditure with their own resources that is why deficit budget arises. Is deficit budget helpful for GDP growth and development or it is harmful for the economy? Or, if it is allowable, how much deficit we can accept? There are lots of controversies regarding this issue. Classical, Neo-classical, Keynesian and

Ricardian thoughts made those controversies. This study will reveal the reality of prevailing status of Bangladesh economy comparing with those schools of controversies. The main objective of this study is to explain the comparative study among those schools of thoughts and the reality of prevailing status of Bangladesh Economy by their comparisons.

The specific objectives of this study are:

i) To explain Classical, Keynesian, Neoclassical, and Ricardian thought regarding budget deficit and economic growth.
ii) To resolve Hirschman’s strategy of unbalanced growth theory with Keynesian crowd-in doctrine.
iii) To analyze the real status of Bangladesh economy and try to conclude with the most relevant doctrines.
iv) To identify resource and financial crowding-out in the context of Bangladesh.
v) To mitigate crowding-out Private Investment and crowding-in Private Investment situation by resolving Keynesian short-run and Neoclassical long-run puzzle with the context of Bangladesh economy.
vi) To draw conclusions and policy recommendations with the findings of the study.

1.3 Literature Review

The entitled study focuses Classical, Neoclassical, Keynesian and Ricardian Equivalence hypothesis of fiscal policy which highlight the relationship among budget deficits and macroeconomic variables such as growth rate of GDP, interest rates, inflation rate, trade deficit, exchange rate, balance of payment, status of current and capital account, tax rate, savings rate, investment rate, seigniorage rate, debt servicing costs in budget and internal and external financing of deficit financing. These literatures are reviewed basically from Rudiger Dornbusch and Stanley Fischer’s macroeconomics (1994) which generated original knowledge regarding entitled issue. Relationship among budget deficit, growth rate of GDP, inflation rate ,interest rate and exchange rate represents one of the most widely debated topics among economists and policy makers in both developed and developing countries (Saleh, 2003). This relationship can either be negative or positive.

Premchard (1984) showed budget deficit implies an increase in the supply of government bonds. In order to improve the attractiveness of these bonds the government offers them at a lower price, which leads to higher interest rates. The increase in interest rates discourages the issue of private bonds, private investment and private spending. In turn, this contributes to the financial crowding out of the private sector.

Miller (1983) argued that government deficit spending is a primary cause of inflation. These studies have supported the proposition that the Central Bank will be obliged to monetize the deficit either now or in later periods. Such monetization results in an increase in the money supply and the rate of inflation.

Aschauer (1989) argued that higher investment may raise the marginal productivity of private capital and thereby crowd-in private investment. He further noted that public capital, infrastructure capital such as highways, water systems and airports are likely to bear a complimentary relationship with private capital. It is also argued that an increase in the budget deficit would induce upward pressure on interest rate causing capital inflows and an appreciation of the exchange rate that will increase the current account deficit.

However, Barro (1989) is of the view that budget deficits have no positive or negative relationship with macroeconomic variables. In his model known as the “Ricardian Equivalence Hypothesis” (REH), he states that shifts between taxes and budget deficits do not matter for the real interest rate, the quantity of investment, or the current account balance. He argues that the value of the new debt (deficits) is simply perceived as the present value of the future tax liabilities. This means that the government deficits are not viewed as net wealth, and as a result money demand would not be affected. Consequently, interest rates and other macroeconomic variables remain unchanged as well.

Mohanty (2011) examined both the short run and long run relationship between fiscal deficit and economic growth in India by covering the time period from 1970-71 to 2011-12 and got negative and significant relationship between fiscal deficit and economic growth in the long run. One percent (1%) increase in fiscal deficit is likely to decrease gross domestic product by 0.216537 percent and this estimate is significant at 1% level. This is contrary to Keynesian theory, but in conformity with Neo-classical theory, which holds that fiscal deficits lead to a fall in the Gross Domestic Product.

Velnampy and Achchuthan (2013) used various statistical methods to find out the impact of fiscal deficit on economic growth in Sri Lankan perspective covering period 1970-2010. The results revealed that, there is no significant impact of fiscal deficit on the economic growth. It means that, economic growth is not contributed by the fiscal deficit significantly and economic growth is contributed by other factors significantly. And also, there is no significant relationship between fiscal deficit and economic growth in the Sri Lankan economic perspective in the support way, Vuyyuri and Seshaiah (2004) have found that, the economic growth is not contributed or influenced by the fiscal deficit in the Indian perspective and both are supported by Ricardian Equivalence hypothesis (REH).

Samirkas (2014) used various statistical tests to investigate the causes and effects of budget deficits on inflation, economic growth and interest rates during the years 1980-2013 in Turkey and got interest rates have a significant effect on budget deficits. Due to economic program implemented in Turkey in the recent years, interest rates are usually floating high. Accordingly, cost of borrowing with high interest rates increases, and consequently budget deficit of the state also increases. In this case, researcher suggested the Turkish government in order to reduce the budget deficit occurred due to implemented policies, interest rates should be reduced and obviously it is relevant with neoclassical doctrine.

Osuka and Chioma (2014) sought to find out the long-run relationship between budget deficits and other macroeconomic variables in Nigeria for the period 1981-2012. The results agree with the Keynesian theory (Keynesian school of thought argue that usually budget deficits result in an increase in domestic production, which makes private investors more optimistic about the future course of the economy resulting in them investing more and therefore crowding-in investment) that budget deficits crowd-in investment but rejects the claim that budget deficits increase interest rate which is a popular opinion held by both the Keynesian and the Neoclassical schools. They concluded that their study reveals there is a long run relationship between budget deficits and macroeconomic variables and budget deficits exert significant impact on the macro-economic performance of the Nigerian economy.

Khan, S. and Jahan, S. I. (2016) showed that public investment negatively affects private investment both in the long run and short run and suggested that public investment crowds-out privateinvestment. The findings of this paper have important policy implications in declining the role of the government in investment and policies related to liberalization.

Haider, ASM Shakil; Shaon, Sabrina Fatema and Kabir, M Rezaul (2016) found co-integrating relationships among budget deficit, inflation and exchange rate and there is a negative impact of budget deficit on GDP growth.

Rana, E. A., Wahid, A. N. M. (2016) found that the government budget deficit has statistically significant negative impact on economic growth in Bangladesh and suggested reestablishing the rule of law, political stability in the country, restructuring tax structure, closing tax loopholes, and harmonizing fiscal policy with monetary policy to attract additional domestic and foreign investment.

Biplob, M. N. K. (2019) found unidirectional causality running from budget deficit to economic growth while feedback causality has been found between governments total expenditures and economic growth and suggested for emerging economy like Bangladesh, government spending through deficit financing can drive positively in the level of economic growth. Bangladesh, however, should not have the luxury of forgetting about the bad consequences of consistent and gradually increasing budget deficit at all.

By studying such literatures this study tries to connect Classical, Neoclassical, Keynesian and Ricardian attitudes towards deficit budget and overall well-being of the economy with the existing status of Bangladesh economy considering collected data of specific variables to show comparative analysis.

1.4 Methodology of the Study

The study conducted on secondary data and the objectives of the study being examined by using time series data covering period from 2000 to 2021 fiscal year. Relevant data for the study collected from data base on Bangladesh economy from the central bank of Bangladesh- Bangladesh Bank (BB); Bangladesh economic review, World Development Indicators (WDI), World Bank (WB), Bangladesh Bureau of Statistics (BBS), various national and international daily, economic scrutiny, research organizations and various websites. Descriptive statistics utilized for data analysis. Trend line analysis used to show the trend line of our selected variables during data period. Descriptive statistics used to show the existing status of our selected variables such as growth rate, deficit as percent of GDP, public and private investment status, lending interest rate, government treasury bond rate and volume, savings scheme rate and volume, private bond rate and volume, resources (Labor and other raw materials) usage in public and private investment using MS-Excel and other software packages as per requirements and justifications.

2. Brief Summary of Various Doctrines Regarding Fiscal Deficit and Economic Growth

Various schools of economists expressed their views regarding the effects of budget deficit on macroeconomic variables where they had different opinions like a fiscal deficit is encouraging, discouraging or neutral in terms of its real effects, particularly on investment and growth. Among the mainstream analytical prospects, Classical view considers that govt. is good who earn less and minimum expenditures on internal and external security measures and financial balance between income and expense, the Neoclassical view considers fiscal deficit is deleterious to soul variables of macroeconomics like investment and growth by disturbing behavior of interest rate in the long-run where Keynesian school positively prescribed in the short-run and finally Ricardian Equivalence Hypothesis (REH) neutrally prescribed that fiscal deficits really do not matter of macroeconomic variables.

2.1 Classical Views on Budget Deficit and Economic Growth

Famous amalgamated statement of classical thought is, Economy should take laissez-faire and minimum government intervention in income and expenditure will lead automatic full-employment in the long-run via invisible hand, flexible behavior of interest rate, wage and price level in the closed economy. The only resource of government income is tax and toll and expenditure includes internal and external security measures, preserving public order, establishing justice and issues that private sector never prevail any interest and providing some general expenditure relates to cost of these duties. In this case budget deficit is meant the value of such government expenditure minus net taxes (Direct and indirect taxes-transfer payments including grants, subsidies, unemployment pension etc.). They believe that government should resort inflation policies in the case of budget deficit otherwise Government will bound to take loan if deficit budget policy is taken. Because of limited financial capability government will borrow and repay such debt by borrow again and by this way consecutive debts/loans/borrows will lead to financial bankruptcy of the government. They did not consider surplus budget because they believe that surplus revenue is in fact excess draw of taxes from people which has two negative effects, first it limits purchasing power of individual and second it encourages government for more expenses. According to classical proponents, to prevent irregular growth of public sector and expenditures government is required to observe the annual balanced budget by setting income and expenditures equality so that unwanted circumstances of the economy can be avoided.

2.2 Keynesian Views on Budget Deficit and Economic Growth

The Keynesian economists pleaded positive relationships between budget deficits and macroeconomic variables. They argue that budget deficits increases domestic production, aggregate demand, savings and private investment at any given level of interest rate. Classical prescriptions regarding ‘laissez-faire and minimum government intervention, invisible hand, automatic adjustment process by price, wage, and interest rate flexibility will achieve full-employment in the long-run’- causes as the background of great depression to all over the world. Then John Maynard Keynes provided his doctrine in 1936 as recovery mechanism (Called Keynesian Revolution).He advised to allow government intervention by two hands of monetary policy and fiscal policy. If government intervenes a cut in personal taxes and if households treat the debt issued by bonds with which the deficit is financed as net worth then accumulation of saved taxes and interest on bond will togetherly expand the aggregate demand and output of the economy through a multiplier process unless there is full employment level (i.e. under the full-employment level) under fiscal policy in the short-run during economic downturn thereby shortening the recovery period. Multiplier based expansion of output leads to increase demand for money and if money supply is fixed and deficit is debt (bond) financed then interest rate will rise partially. However, famous Keynesian economist Eisner (1989) suggests that increased aggregate demand enhances the profitability of private investment and leads to higher investment at any given rate of interest. The increased profitability of investment may higher than interest rate and thus the effect of a rise in interest rate is absorbed. There are lots of resources are unutilized and unemployed in Keynesian view. Keynesians argue that deficits may stimulate savings and investment even if interest rate rises by the engagement of unutilized resources. The Keynesian theory indicates that, an increase in government spending leads to an increase in aggregate demand, which leads to the employment of the redundant resources which subsequently leads to an increase in output (Bernheim, 1989). National budget is the pragmatic evidence of theoretical fiscal policy which consists aggregate income, aggregate expenditure and aggregate borrowing. Now a days, most of the countries of the world faces many challenges which generates lots of public expenditures. They cannot match this expenditure with their own resources that is why deficit budget arises. So investment in Social Overhead Capital through deficit financing will increase domestic production, aggregate demand, increases savings and private investment which makes private investors more optimistic about the future course of the economy resulting in them investing more at any given level of interest rate through Direct Productive Activities (DPA) resulting crowding-in in the economy.

2.3 Neo-classical Views on Budget Deficit and Economic Growth

Neoclassical model established on three assumptions, first consumption of each individual is determined as the solution to an inter-temporal optimization problem, where both borrowing and lending are permitted at the market rate of interest. Secondly, it assumes that each consumer belongs to a specific cohort or generation, and the life spans of successive generations overlap. Thirdly the market is assumed full employment in the long-run in a closed economy and clear in all periods (Bernheim, 1989). Fiscal deficit increases current consumption expenditure by tax reduction policies and shift the tax reduction and debt burden to the future generations. Since economy is in full employment under closed economy so increase of one variable must decrease another. Furthermore, Yellen (1989) argues that in standard Neoclassical Macroeconomic models, if resources are fully employed, so that output is fixed, higher current consumption implies an equal and offsetting reduction in other forms of spending. In this way, increase of current consumption expenditure will decline national savings rate. Reduction in government savings is not fully offset by a rise in private saving, thereby resulting in a fall in the overall saving rate which putting pressure on the interest rate, will adversely affect investment, employment and growth. Mechanism of such activities implemented by government’s expansionary fiscal policy through budget deficit, then government will offer lower price for bond which generates higher interest rate. As a result, business of private bonds goes down i.e. financial crowding-out will occur through higher interest rate, discourages the issue of private bonds, declines private investment. Even government will compete with private sector regarding borrowing money from banking channel which will create extra pressure on banking system. Demand of loan by government will increase as compare with the stock of money. Since banks are the source of loanable funds for both private and public sector then interest rate will go up and reduce loanable funds for private sector. And government will invest in Social Overhead Capital (SOC) tremendously which creates shortfall in resources like labor, and raw materials then private sector will face resource crowding-out. In an open economy interest rate and investment may unaffected in the world market but fallen national savings financed by higher foreign borrowing resulting appreciation of domestic currency which lead to fall in exports and rise in imports which deteriorate current account position. According to this theory therefore budget deficits have adverse effects on the economy and thus it advocates for a balanced budget at all times.

2.4 Barro-Ricardo Model of Ricardian Equivalence Hypothesis (REH)

My thicalthought advanced by new classical economist Robert Barro (1989) known as the Barro-Ricardo equivalence proposition or R4icardian Equivalence Hypothesis (REH) stated that debt financing of deficit budget by bond issue merely postpones taxation; therefore, in many instances it is strictly equivalent to current taxation. He developed the thought of no impact of macroeconomic variables with deficit budgeting through debt financing (Especially financing through bond issuing) instead of current taxation based on long-run. REH is a neutral proposition which suggests that government budget deficits do not affect the aggregate demand (AD) in an economy. The strict Barro-Ricardo proposition that government bonds are not net wealth turns on the argument that people realize their bonds will have to be paid off with future increase of taxes. If so, an increase in the budget deficit unaccompanied by cuts in government spending should lead to an increase in savings that precisely matches the deficit.

Since incrementing government expenditure and cutting tax are the effective instruments of expansionary fiscal policy during depression in an economy, so emphasizes tax later here. Government relief peoples from depression by cutting taxes in the short-run but not relief for ever and committed to impose taxes in the long-run. Government issues bonds as an instrument of debt financing under deficit budget. Peoples buy bonds and get return from government plus untaxed income make large income in hands. This accumulated income does not affect aggregate demand and it will not increase individual consumption spending because people do not consider bond investment as their wealth. But why? Answer according to REH is people will increase their savings due to consideration and worrying of imposing higher taxes in future. They will meet future taxes with their current savings. If government is capable of setting deficit (extra expenditure) equivalent to extra savings then all the indicators like GDP growth, interest rate, inflation rate, exchange rate and balance of payment will be remain unchanged.

In simple terms, the theory can be described as: Governments may either finance their spending by taxing current taxpayers, or they may borrow money. However, they must eventually repay this borrowing by raising taxes above what they would otherwise have been in future. The choice is therefore between "tax now" and "tax later". Suppose that the government finances some extra spending through deficits - i.e. tax later, Ricardo argued that although taxpayers would have more money now, they would realize that they would have to pay higher tax in future and therefore save the extra money in order to pay the future tax. The extra saving by consumers would exactly offset the extra spending by government, so overall demand would remain unchanged. Thus, a cut in today's taxes must be matched by an increase in future taxes, leaving real interest rates, and thus private investment, and the current account balance, exchange rate and domestic production unchanged. Therefore, budget deficits do not crowd-in nor crowd-out macroeconomic variables. In his view, no positive or negative relationships exist. Successions are as:

a) Expansionary fiscal policy of deficit budgeting
b) Deficit financing through tax now and no current borrowing versus tax later and current borrowing
c) Emphasizes on tax later and current borrowing by bond issue
d) Generating extra income adding interest income on bond plus untaxed income lead to extra saving for paying future taxes and no impact on AD
e) Equality of deficit = extra saving = Extra spending by govt. = current tax = future tax (adjusted)
f) No impacts on macroeconomic variables
g) No crowd-in or no crowd – out effects will be appeared.

3. Resolve Keynesian Crowd-in Doctrine by Hirschman's Strategy of Unbalanced Growth Theory

3.1 Hirschman's Strategy

Most of the countries have no available capabilities to solve all the backwardness of the economy simultaneously. So unbalancing the economy by emphasizing strategically important sectors first then using external economies of such sectors will encourage other sectors and by this way shifting the advantages of one sector to another sector, one project to another project and finally one industry to another industry will develop the economy by increasing productivity and profitability. 'Forward Linkages' and 'Backward Linkages' of an investment will play great role in this technique. Such unbalancing can be started by two ways like Social Overhead Capital (SOC) including education, public health, communication, transportation, and conventional public utilities like light, water, power, irrigation and drainage schemes by government and second is Direct Productive Activities (DPA) by public and private investors. The first one need government investment and no private investors will invest here because of its long gestation period. If government ensures these utilities then private investment will be encouraged and finally economy will get balanced growth path by equating SOC and DPA.

3.2 Absorbing Hirschman's Strategy in Crowd-In

Keynes admitted deficit fiscal policy by increasing government expenditure and tax reduction for increasing aggregate demand during economic downturn. Government will spend behind SOC in the short-run and the external economies and forward and backward linkages of such investment will encourage and optimistic private investor to invest more under DPA resulting positive effect on economic growth. The Keynesian analysis recommends anti cyclical methodologies in budget management which implies deficit budgeting to stimulate aggregate demand during recession and surplus budgeting to control inflation during economic boom which is assumed to be moderate balancing as Hirschman declared in his strategy.

4. Mitigating Crowding-out and Crowding-in Situation by Resolving Keynesian Short-run and Neoclassical Long-run Puzzle with the Context of Bangladesh Economy

4.1 Keynesian Case

Keynesian under the full employment situation analyzed on short-run only and denied any long-run effect of budget deficit on economic growth by famous Keynesian statement, "In the long-run we are all dead". But when government takes any initiative of public expenditure then its short-run effect started partially by increasing aggregate demand of countrymen by getting jobs. But full crowding-in effect starts after completion and usable of respective projects of SOC like roads and highways, bridges, power, water, drainage etc. in the long-run. That is, both short-run and long-run time periods are required for Keynesian analysis.

4.2 Neo-Classical Case

Neo-classical full employment situation analyzed on long-run only and denied any short-run effect of budget deficit on economic growth. By borrowing money from banking channel or issuing bonds or selling savings schemes, government have to start pay interest to the people from short-run and partial crowding-out effect started and created shortage of loanable funds from the very beginning of government steps of raising public expenditure. Rather interest rate rising, increasing home currency demand, home currency appreciation and reducing exports and increasing imports, or abolishing or decreasing private investments occurred in the long-run with full crowding-out. That is, both short-run and long-run time periods are required for neo-classical analysis.

5. Status of Bangladesh Economy

Bangladesh is a deficit budgeting country since its independence. Because of high expenditures in multiple sectors of a modern country like Bangladesh need to take deficit financing through borrowing from national and international sectors. Bangladesh needs an effective economic policy through a proper budgeting system to overcome all the challenges. Because of high expenditures in comparison to national income govt. has to manage the total economy by its budgeting system through fiscal policy.

Bangladesh collects tax and VAT by NBR and non-NBR income by nontax and borrows from national and international sources to mitigate the savings-investment gap. Bangladesh undertakes tax now and borrowing now simultaneously instead of REH's tax now and no current borrowing versus tax later and current borrowing. Impacts of such financing on growth rate, public and private investment rate and finally remarking about the discussed thoughts empirically prevailing in Bangladesh:

Table 1. Budget Deficit, Interest Rate and Growth Rate Comparison

Year	Deficit% of GDP	Lending Interest Rate	GDP Growth Rate
2000-01	2.92%	12.76%	5.29%
2001-02	4.08%	12.82%	5.08%
2002-03	2.74%	12.61%	3.83%
2003-04	2.34%	12.04%	4.74%
2004-05	2.62%	10.40%	5.24%
2005-06	2.85%	10.62%	6.54%
2006-07	2.57%	11.65%	6.67%

2007-08	2.23%	12.64%	7.06%
2008-09	4.03%	12.89%	6.01%
2009-10	3.21%	13.33%	5.05%
2010-11	2.68%	12.22%	5.57%
2011-12	3.59%	13.32%	6.46%
2012-13	2.98%	13.94%	6.52%
2013-14	3.38%	13.59%	6.01%
2014-15	3.08%	12.95%	6.06%
2015-16	3.98%	11.71%	6.55%
2016-17	3.36%	10.41%	7.11%
2017-18	3.34%	9.54%	7.28%
2018-19	4.64%	9.65%	7.86%
2019-20	5.43%	9.56%	8.15%
2020-21	6.00%	8.30%	2.38%

Source: The World Bank Data/data.worldbank.org

Table-1 shows that Bangladesh continued a significant deficit in every fiscal year from 2000-2001 to 2020-2021, growth rate also increasing except 2020 (Covid-19 downturn) but amazingly decreasing lending interest rate which is the violation of neoclassical adverse relationship between deficit and growth rate rather it supports Keynesian positive relationship. As for example govt. Increases investment in power sector by deficit budgeting increases private sector advantages to investment which stimulate growth rate.

Table 2. BGTB Rate Status of 5 and 10 Years

Year	BGTB Rate (5 Years)	BGTB Rate (10 Years)
2004	7.80%	9.90%
2005	8.90%	9.50%
2006	10.85%	12.50%
2007	10.62%	11.75%
2008	9.50%	11.85%
2009	7.63%	9.50%
2010	7.95%	8.85%
2011	8.30%	9.50%
2012	11.60%	11.50%
2013	11.74%	11.95%
2014	9.56%	11.50%
2015	8.20%	9.50%
2016	6.25%	6.95%
2017	5.85%	6.50%
2018	5.45%	7.10%
2019	7.25%	8.40%
2020	8.15%	8.85%
2021	3.85%	5.52%
Monthly Data Averaged at Yearly		

Source : WWW.CEICDATA.COM\BB

Table 2 shows Bangladesh Government Treasury Bond (BGTB) for both 5 and 10 years are decreasing; specially both are in single digit and decreasing mode from 2014. Neoclassical financial crowding-out private investment due to excessive bond issue with higher interest rate do not or a bit work in Bangladesh.

NEW INTEREST RATES OF SAVINGS TOOLS

5-YEAR BANGLADESH SAVINGS CERTIFICATE	Previous	New
Up to Tk 15 lakh	11.28	11.28
Tk 15 lakh plus to Tk 30 lakh		10.3
Tk 30 lakh plus		9.3

3-MONTH PROFIT BEARING SAVINGS CERTIFICATE	Previous	New
Up to Tk 15 lakh	11.04	11.04
Tk 15 lakh plus to Tk 30 lakh		10
Tk 30 lakh plus		9

PENSIONERS' SAVINGS CERTIFICATE	Previous	New
Up to Tk 15 lakh	11.76	11.76
Tk 15 lakh plus to Tk 30 lakh		10.75
Tk 30 lakh plus		9.75

FAMILY SAVINGS CERTIFICATE	Previous	New
Up to Tk 15 lakh	11.52	11.52
Tk 15 lakh plus to Tk 30 lakh		10.5
Tk 30 lakh plus		9.5

TERM DEPOSIT AT POST OFFICE SAVINGS BANK	Previous	New
Up to Tk 15 lakh	11.28	11.28
Tk 15 lakh plus to Tk 30 lakh		10.3
Tk 30 lakh plus		9.3

WAGE EARNERS' BOND	Previous	New
Up to Tk 15 lakh	12	12
Tk 15 lakh plus to Tk 30 lakh		11
Tk 30 lakh plus to Tk 50 lakh		10

Figure 1. Interest Rate Scenario of Savings Tools. Source: The Daily Star. Sep22, 2021

Figure 1 explains all the savings tools reshuffled with new decreasing rate than previous higher rate. Bangladesh budgetary authority does not depend on such tools blindly rather very conscious about debt servicing cost. Finally, savings interest rate also decreasing. All types of interest rate decreasing in Bangladesh where neoclassical prescription was deficit budget will induce to raise interest rate.

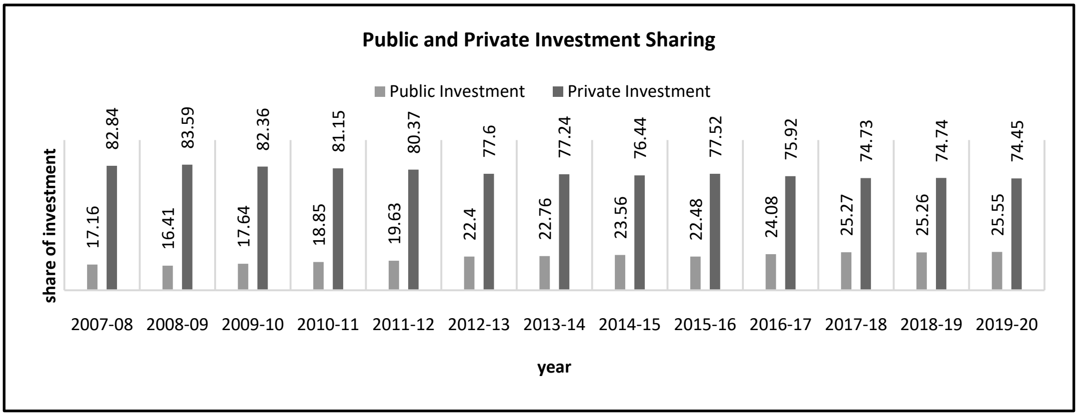

Figure 2. Shares of Public and Private Investment as % of Total Investment. Source : National Accounts Statistics, BBS

Figure 2 demonstrates that private investment is higher than public investment but public investment rate is gradually increasing than private investment which is the effect of various economic and non-economic causes. Shares of public and private investment percent of total investment shows public investment increases 17.16% to 25.55% and private investment decreases from 82.84% to 74.45% from 2007-08 to 2019-20 fiscal years. It seems to be puzzled that deficit financing increasing, interest rate decreasing, private investment decreasing but growth rate increasing in Bangladesh. Obviously public sector investment contributes to increase growth rate and it is not financial cause of declining private investment since all types of interest rates are decreasing.

Table 3. Resource Usage Data by Price

Rod (60-Grade)	Price per Ton
1st fortnight of Nov.2017	Tk.48000
2nd fortnight of Nov.2017	Tk.50000
1st fortnight of Dec.2017	Tk.51500
2nd fortnight of Dec.2017	Tk.53500
Jan.2018	Tk.55000
Feb.2018	Tk.57000
1st fortnight of Mar.2018	Tk.63000
2nd fortnight of Mar.2018	Tk.72000
Dec.2020	Tk.66000
Oct.2021	Tk.80700
Nov.2021	Tk.83000

Source: TCB

Table 3 shows constructions materials rod (60 grades) price increases from Tk.48000 to Tk.83000 from various quarters of 2017 to 2021.

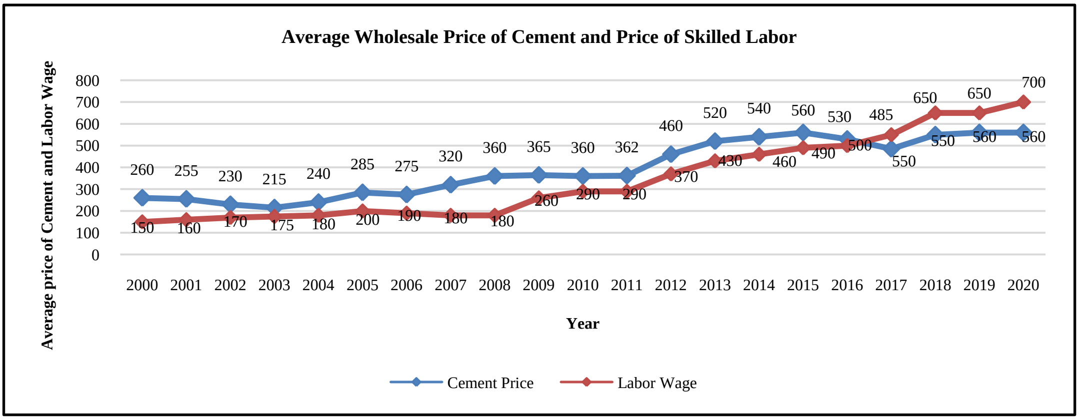

Figure 3. Average Wholesale Price of Cement and Price of Skilled Labor.

Source: www.ceicdata.com\BBS

Figure 3 shows cement and labor prices both are increasing tremendously. Overuse of various constructions resources by public various mega projects push out private investment. Bangladesh economy witnesses resources crowding-out private investment. Prices hike of various raw materials of production predicts that resource crowding-out occurs in the economy of Bangladesh and lowering interest rate from table-1,2 and 3 shows that it is not financial crowding-out. It is occurring short-run resource crowding-out and has no possibility of long-run resource crowding-out because raw materials of production will return to private sectors after completion of public mega projects in the long run. Rather full crowding-in situation will happen in the long run resulting in higher private investment, employment, and GDP growth. Even the average fiscal deficit that fulfills the World Bank declaration (2010) deficit should not be more than 3% of GDP during the data period.

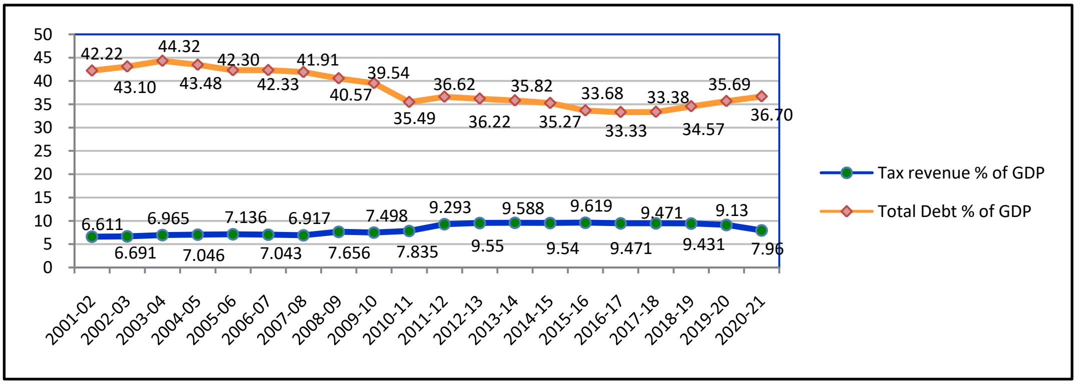

Figure 4. Tax and Debt Rates as % of GDP;
Source : The World Bank Data/data.worldbank.org

Figure 4 demonstrates tax revenue collection increasing with the rising capabilities of the country and total debt decreasing that is foreign dependency in budget making decreases every year. Bangladesh undertook taxation and borrowing simultaneously to mitigate its savings-investment gap or measures of deficit financing. Importantly tax revenue percent of GDP increasing and the total debt percent of GDP is decreasing year by year that is depending on its own capabilities increasing.Covid-19 changes the heads of both lines to the reverse trend in the graph.

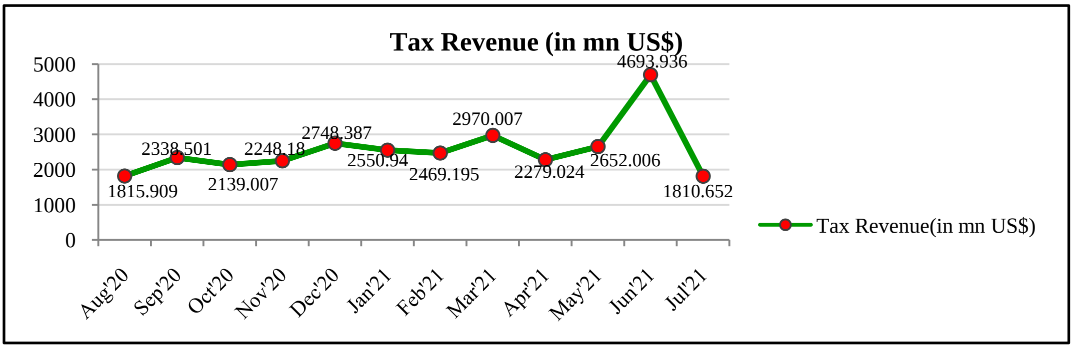

Figure 5. Tax Revenue Monthly Recent.
Source: The Financial Express: October 3, 2021.

Figure 5 shows monthly tax revenue collection shows satisfactory increasing tax revenue except Covid-19 pandemic.

Table 4. Internal and External Debt Scenario

Average Trend of Debt Statistics (As % of GDP)				
Year	Fiscal Deficit	Total Debt	Internal Debt	External Debt
1970s	7.6	33.65	12.96	20.69
1980s	6.96	56.95	13.38	43.57
1990s	4.7	51.05	12.33	38.72
2000/01-2005/06	4.53	51.98	19.24	32.74

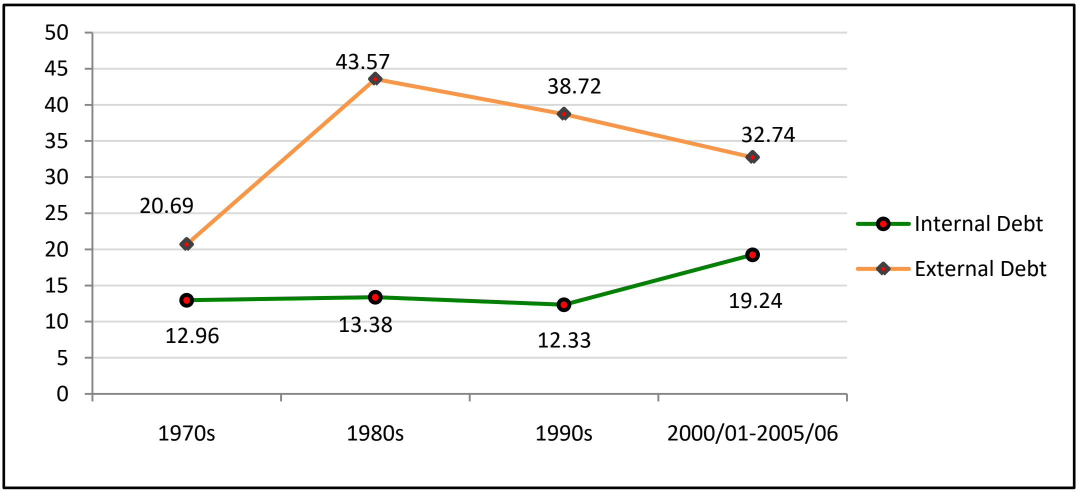

Figure 6. Internal and External Debt Scenario

Source: (1) Economic Trend, Bangladesh Bank, (2) External Resource Flow, Economic Relation Division (ERD), (3). National Savings Directorate (NSD), (4) BBS

Table 4 and figure 6 shows internal debt increasing and external debt decreasing gradually. Most of the investable loan used by public sectors in the country because govt. can finance it very quickly than foreign sectors rather high debt servicing is needed for this cause. Private investment declining may caused by such financing.

Table 5. Internal and External Borrowing/Debt Comparison

Internal and External Borrowing / Debt Comparison		
Year	Internal Debt	External Debt
1981	Tk.16.5bn	Tk.42.5bn
2021	Tk.1099.43bn	Tk.760.04bn

Source: The Financial Express: August 6, 2021.

Table 5 shows that internal debt increased 66 times from 1981 to 2021 whereas external debt increased 18 times from 1981 to 2021. These are a good sign of graduating from LDCs to developing countries under Economic and Environmental Vulnerabilities Index (EVI). But graduating from LDCs to a developing country will incur a high-interest rate on external debt such as WB, IMF, ADB, and Japan, China, USA, UK and other donor countries resulting in discourage external debt and much dependence on internal debt which may create financial crowd-out problem in the future.

6. Analysis of the Findings of Comparative Study among Various Doctrines Regarding Budget Deficit and Economic Growth in Bangladesh Economy

Bangladesh is continuing deficit budget since 1972 and deficit financing strategy classified into internal and external sources. Internally Bangladesh government earn from taxation by NBR and non-NBR collections, seignoraging; borrowing from banking and non-banking channels, issuing bonds and selling national savings certificates. Borrowing from external sources like WB, IMF, ADB, IDB and foreign donor countries are significant support to finance in deficit since independence. Relevancy of various doctrines with the reality of Bangladesh economy regarding budget deficit and economic growth are discussed below:

6.1 Classical Doctrine and Bangladesh Economy

The study denies old classical thought because of the differences of age and periphery of the activities of state. They advocated for balanced budget at the same time they expected full employment in the long-run but full employment even under the full employment is a very rare case in Bangladesh rather unemployment is a common scenario in every sectors of the economy. So deficit budget is the general requirement for the growth and development of the economy.

6.2 Keynesian Doctrine and Bangladesh Economy

The Keynesian economists pleaded positive relationships between budget deficits and macroeconomic variables. They argue that budget deficits increases domestic production, aggregate demand, savings and private investment at any given level of interest rate. Although Keynes prescribed his doctrine during great depression however it is very much relevant with Bangladesh economy. Table-1 shows that increasing deficit increases growth rate. Bangladesh government has undertaken some massive investment projects like Padma bridge megaproject, Metro rail, Karnaphuli tunnel, Elevated expressway, lane extension of various highways, Mirshorai Economic Zone, various projects of the fulfillment of SDGs and delta plan, etc. High volume expenditures behind these projects employed thousands of workers which induces aggregate demand and partially crowded-in private investment and growth in the short-run. After integration of such projects into the mainstream economy then the private investor will be encouraged and invest as direct productive activities which will divert the economy into full crowd-in private investment in the long run.

6.3 Neoclassical Doctrine and Bangladesh Economy

The neoclassical economists pleaded negative relationships between budget deficits and macroeconomic variables such as deficit budget will decline economic growth by increasing interest rate and inflation. In reality,Table-1,2 and 3 shows that interest rate of various instruments are decreasing and figure-1 shows private investment also decreasing as compare to public investment but a desired growth rate is achieved in Bangladesh except 2020-21 fiscal year for covid-19 epidemic. That is, public sector investment contributes to induce growth rate and financial crowding-out private investment is not relevant because of huge idle money in the banking channel (Tk.2, 04,700 cr. in Nov.2021) rather table-4 and figure-2 shows that resources crowd-out private investment in Bangladesh in short-run and these resources will be shifted to private sectors after completion of various mega projects and will motivate more private investment and growth in the long-run. So, neoclassical doctrine also partially relevant in Bangladesh economy.

6.4 Ricardian Equivalence Hypotheses (REH) and Bangladesh Economy

The study denies Ricardian Equivalence Hypothesis (REH) because of its statement as-tax now and no current borrowing versus tax later and current borrowing and emphasizing on tax later and current borrowing by bond issue which generated extra income adding interest income on bond plus untaxed income lead to extra saving which will be used for paying future taxes and no impact on AD and other macroeconomic variables. Equality of deficit=extra saving=Extra spending by govt. =current tax=future tax (adjusted) and no crowd-in or no crowd –out effects will be appeared which proven unrealistic in comparative study with the reality of Bangladesh economy because Bangladesh economy uses both taxation and borrowing simultaneously (Figure-3,4,5 and Table 5,6 shows it) to face deficit and mitigate savings-investment gap and the term 'future tax' is totally irrelevant in Bangladesh where non-economic and resource crowd-out private investment and expect to full crowd-in private investment very soon.

Finally we witnessed that Bangladesh economy operates with both neo-classical and Keynesian doctrine togetherly and got results in short-run and will get more in long-run. Bangladesh Economy should run with deficit financing and govt. can reduce deficit only by earning more from improving Tax-GDP ratio and hindering money laundering by under in-voicing and over in-voicing.

7. Policy Recommendations

The study witnessed neoclassical resources crowding-out private investment and it is declining as compare to public investment. The study introduces following recommendations for increasing (Crowd-in) private investment parallely with public investment because both have key role to enhance employment and growth:

1. The study observed that interest rate is not key responsible behind the declining of private investment rather other causes say, competition for resources are mainly responsible. So Govt. should take initiative to supply raw materials constantly for production of resources used in private investment.

2. The study observed that borrowing from external sources is decreasing and from internal sources is increasing day by day. As a result, demanding loans from both public and private sectors increases and crowd-out private investment. At the age of globalization govt. should borrow major portion of debt from foreign low cost sector rather graduating from LDCs to developing countries will incur the extra cost or excessive interest rate which will discourage borrowing from external sources. Bangladesh government should negotiate and address its foreign counterparts that achieving SDGs, reducing crowd-out effect, reducing debt servicing cost as the measures of lightening the burden of debt and combat against the climatic change-a rational cost of borrowing is needed.

3. Investment in massive SOC from deficit budgeting creates resource crowding-out in the short-run which hinders private investment. Government can encourage private investment

during this period by providing incentives to produce raw materials and reducing import tariffs of necessary raw materials.

4. One stop service must be ensured in investment registration against bureaucratic delays of getting gas, electricity, water and other necessary utilities.

5. Oil is the most important resource of economic activities. Bangladesh govt. should establish more oil reservoir for buying oil during low price and provide subsidy during price hike internationally.

6. Financing from capital market is more profitable for private investors. Govt. should ensure fair environment in capital market to enhance investment and growth.

7. Government should restore private investors confidence by providing various incentives like input import/output export subsidy or tax holiday after covid-19 deterioration.

8. Government should search new markets internationally by its foreign missions for exporting diversified products and take proper steps for bringing Bangladeshi citizens investment from overseas by establishment of specialized EPZ.

9. Government should create pressure upon ongoing mega projects to shorten their gestation period. Increasing project duration irrationally incurs an extra cost which lengthens crowd-out and delays crowd-in private investment.

10. Government will give attention to providing incentives to private entrepreneurs after opening mega projects to enhance investment and employment. Govt. will provide incentives to private investors and private investors will provide employment and the economy will get a satisfactory growth rate.

11. Bangladesh should focus on searching for other sources of income like expanding tax base or natural resources like maritime resources. Using a blue economy Bangladesh can enhance its income miraculously and reduce the burden of foreign debt and ensure the welfare of the nation.

12. Bangladesh should take proper steps to reduce corruption and bureaucratic delays in project operation and develop its management.

8. Conclusion

This study revealed the causes of declining private investment where interest rate is not prior concern rather supply of resources and other socio-economic causes highly concern behind declining private investment. This is relevant with neoclassical short-run resource crowding-out private investment and no long-run resource or financial crowding-out because all the resources will shift to the private sector in the long-run. Partially Keynesian crowd-in prevailing in the short-run by employing and increasing aggregate demand and will full crowd-in in the long-run after completion of all mega projects as social overhead capital which will make private investors confident to expand direct productive activities. That is Actions behind such neoclassical crowding-out private investment will impress Keynesian crowding-in private investment, employment and growth immediately. Government expenditures, taxation and borrowing are increasing as the instruments of expansionary fiscal policy under deficit budgeting since 1972 and today’s status of growth and development of Bangladesh has been achieved by using this strategy. Government incentives may increase for coordinating the supply of resources during taking-off private investment parallely with public investment and the study recommend continuing in manufacturing capital goods like bridges, roads and highways, power and energy, health, technical education, export promotion and import substitution simultaneously under social overhead capital to boost direct productive activities then crowding-out may appear in the short-run but economy will be self-reliant and crowd-in private investment and employment in the long-run.

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