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Assessing Impacts of Bangladesh Government's Covid-19 Stimulus Package on Economy using Keynesian Expenditure Multiplier

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Abstract: *COVID-19 pandemic is taking a toll on every space and sector of our global and national life. In addition to being life threatening in nature, it has been proved disastrous to the economy. It is being compared nowadays as much as, if not equal, with the Great Depression from the last century. To soothe the economy, everyone has turned to one proven macroeconomic solution, Keynesian Economics of Expenditure. So did the government of Bangladesh. To save the people and the highly RMG dependent economy from the grasp of recession, the government has already declared a stimulus package over Tk. 1.0 trillion, which accounts for 3.7% of our GDP. Even though Keynesian economics is not a perfect path to solve the economic problems, it is an effective way for such a highly uncertain period. Of course without a wisely devised economic plan, it might bounce back in long term. But as people don't eat in the long run, they eat everyday; the COVID-19 stimulus package by Bangladesh government might be the only ride for now, if managed effectively, to get out of this bearish economic situation.*

Keywords: *COVID 19, Keynesian Economics, Stimulus Package, Crowding out.*

1.0 Introduction

Originated in December 2019 in Wuhan, China, the COVID-19 disease has spread exponentially around the globe across 208 countries and territories infecting more than 30 million people which resulted in about 0.8 million deaths (as of August, 2020). This pandemic has had dire consequences beyond the spread of itself, not only on societies around but also on global and local economies.

Bangladesh is also affected by this world-wide pandemic with more than 300,000 confirmed cases and over 5000 deaths (as of August, 2020). At the same time, the pandemic is taking a high toll on the current rate of economic growth. With majority of the population being in lock-down or restricted

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movements and cancellation of orders for export, the economy is going to be on a path of recession. The severely injured sectors are- RMG, transportation and banking.

The World Bank and IMF have already predicted a sharp decline of GDP growth rate both at global and national arena. We are on the same boat with all other countries. Based on the experiences from past similar situations, Keynesian economics of government intervention shows the beacon of hope to a possible remedy from this downward slope of economy. Bangladesh government has already taken a prompt decision and declared multiple stimulus packages nationwide of more than Tk. 100,000 crore (~3.7% of GDP). People who are unemployed, who lost their jobs due to this pandemic, farmers and agriculture sector, SMEs, RMG sector etc. are the targeted beneficiary of this gigantic stimulus package. With some immediate positive outcomes, Keynesian economics of expenditure (or Keynesian Expenditure Multiplier based solution) has a lot of pitfalls if our policy makers and economists fail to predict the situation wisely. Current high government spending will generate inflation in the form of poor incentives, tax increases, national debts etc. (Michel, 2020). But it is also true that we have no other alternative better than becoming a Keynesian at this moment. So, it is necessary to understand the Keynesian economics as well as the expenditure function and its impact on GDP to stabilize or boost the economy. Efficient and effective implementation of our stimulus initiatives might save the economy and our people from a long, agonizing recession.

2.0 Literature Review

A large set of papers have been published there and are still expanding based on macroeconomic issues related to the core policy of Keynesian economics- the stimulus packages and government expenditure to come out of recessions. The impacts of such fiscal policies on overall economy have been studied extensively.

Since the Great Depression of 1929, the world has gone through 12-15 major recessionary periods so far- the Roosevelt recession, union recession (1945), post war recession (1948), the oil crisis recession (1973), the energy crisis recession (1981) etc. (Barufaldi & Chappelow, 2020). To come out of downward economic trends, increase in government expenditure is being practiced since the days of Great Depression (1929) and New Deal (1933-39) spending. Another example is the Asian flu pandemic of 1957, when the US GDP shrunk by 3.3%, raising unemployment to 6.2%. Eisenhower is credited to end that short recession by boosting government spending on highway construction and other infrastructure projects through 1956 Federal Aid Highway Act (Roos, 2020). Even though multiple anti depression economic policies have been highly discussed and experimented since then, Keynesian stimulus policy is still considered to be the last resort, which was reflected in two recent economic depressions of 1997 and 2008.

The Asian crisis of 1997, which put in motion a recessionary economy, was checked by government actions through stimulating the recovery. Governments in affected countries spent billions of dollars to come out of the downward journey (Clifford & Engardio, 1999) (Goldstein, 1998). As examples, in Korea, government declared a bailout plan worth of $50 billion and banks of Thailand raised $15 billion capital through government expansionary monetary policy. Apart from these endeavors, Asian economies (South Korea, Malaysia, Thailand Hong Kong, Singapore etc.) started diversifying their export basket, focused heavily on long neglected sectors of industry, invested on infrastructure development to attract FDI (D'souza, 2016).

Similar steps were taken during the last recession of global economy in 2008 and 2009 due to the US Mortgage crisis, oil price hike and decrease in food production worldwide. Governments around the world consorted to stimulus packages as correction measure. Within March 2019, total announced stimulus packages worldwide were of 2.18 trillion USD (~3.5% of global GDP). But the next years have shown us that such economic stabilization act must be coherent among economies; otherwise responses can be very slow. Coordination is the key factor to recover from these historic pitfalls of recessions (Ortiz, 2009).

The Economic Stimulus Act (2008) of the USA disbursed, among other packages, $100 billion of economic stimulus payments (ESP) to increase overall demand and consumption. Even though households did show a slightly increased propensity to spend; but there was no significant evidence of rising general consumption as a whole (Broda & Parker, 2013). Also the fiscal policy based on tax rebate program gave birth to a lot of questions later. Even though, previous estimation was a fiscal multiplier of about 2.0 with per job cost under $100,000; it was later found out that Keynesian multiplier was between the range 0.5~1.0, significantly smaller than advocated. Cross state analysis found out expense of $170,000 behind per job creation, while a state level time series analysis proved a smaller response of the stimulus package against expense of $400,000 behind per job (Feyrer, 2011).

For China scenario, study (Ouyang & Peng, 2015) showed that the stimulus package of 2008 had raised China’s GDP growth by 3.2%. Even though critics had blamed the $586 billion stimulus package for China’s debt surge among local governments and state owned enterprises, it helped China to recover from a dipped economy to a 10% growth within the third quarter of 2009.

Vietnam was no different from the world wide shock of 2008. To be at par with the situation, Vietnamese government declared a stimulus package of $8 billion which gained both praise and criticism. With an initial decrease of FDI inflow, export reduction and decline in consumption, Vietnam's average GDP growth for first half of 2009 was ~3.7% against annual average of 7%. With the increased government expenditure in motion, GDP growth raised to 7.7% in the last quarter of 2009. But such expansionary policies later generated inflation and increased government's debt. It was later proven that the interest rate subsidy by government kept credit flowing to the economy and especially helped the industries to revive while banks found it too risky to act on its own (Ngoc, Duc, & Dinh, 2011).

India barely escaped 2008-09 global recession without any fatal blow to its economy. But the aftershocks were not insignificant. With fiscal and monetary policy packages of $8.1 billion, the downward GDP growth revived from 6.7% in 2009 to 8.6% and 8.9% in the following years of 2010 and 2011. But in parallel, budget deficit rocketed to 8% of GDP against the assumption of 2.5% of GDP, which subsequently rolled back on projected growth (Krishnan, 2017). The main reason behind this roll back was the wrong assumption about Indian economy being less integrated with the global economy which was proved wrong and followed by a crash in stock market, withdrawal of funds by foreign investors and increased interest rate (Kannan, n.d).

During the 2008 economic crisis, Pakistan, another neighboring economy, had a little room to expand its government expenditure given the state of fragile economy it already was suffering from. With an inflation rate over 12%, fiscal deficit of 9% of GDP and tremendous external debt, it was kind of an impossible call for Pakistan to introduce a Keynesian stimulus package (except some allocation for social safety net to augment the income of the poorest) (Khawaja, Mahmood, & Qadir, 2010).

Apart from the learning of economic depressions of 1997 and 2008, past similar situations and evidences show that the types of spending control the output of stimulus packages. Some economists suggested that lower interest rates will raise the probability of stimulus packages' effectiveness (Woodford, 2011). Also direct government spending has proved to be more impactful than cash transfers (Feyrer, 2011).

3.0 Methodology

This article is an independent desk study. The data gathered to shed light on stimulus packages in Bangladesh and other countries included collecting and reviewing secondary sources, such as academic works, analytical reports and publicly available data. In order to find out a suitable explanation of the impacts of Keynesian stimulus packages on the economy, both qualitative and quantitative approaches have been used for validity and reliability. The article is based on sources that we consider to be reliable and the findings are referenced throughout the report.

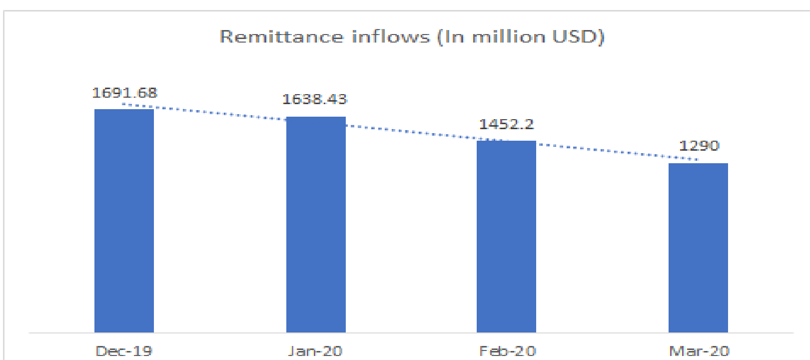
However, the study is subjected to several limitations. Due to the pandemic situation, primary data collection was not possible. In addition to that, some estimates are backdated by few years due to the lack of availability of most recent data or time constraint to generate it.

COVID 19 Impacts on Bangladesh Economy

The pandemic is not a mere health crisis; rather it is hitting the societies and economies around the world to their core. Bangladesh is facing no less than any other struggling economies, in some cases, even more. With a population over 160 million and highly dense urban areas, the South Asian country is not only facing a hard time in controlling the spread out but also its economy is bleeding.

Alongside the global economy, Bangladesh is equally affected by disruptions in trade, loss of remittance inflow (Figure 1), business and fiscal policies etc. due to the interruption in global supply chain as well as transportation shutdown.

The readymade garments industry is taking the largest blow from this negative 'pandemic economic storm.' Till now, RMG sector has received work order cancellations amounting over 3 billion USD (Bhuiyan, 2020). A survey conducted by CGWR on 316 Bangladeshi suppliers, from March 21-25, shows that 58% of the suppliers are forced to partial or complete shutdown of their operations because of corona outspread (Frayer, 2020).

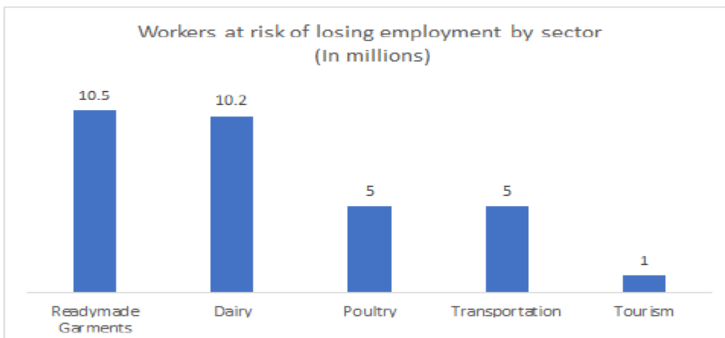


Source: Bangladesh Bank (Holy, 2020)

Figure 1: The remittance inflows (in million USD)

Among the 4 million apparel industry workers, who contribute to almost 84% of the export revenue, at least one quarter of them have already been fired because of this crisis. The president of BGMEA said in a March 23 YouTube plea addressed to global buyers: "We will have 4.1 million workers literally going hungry if we don't all step up to our commitment to the welfare of the workers" (Frayer, 2020).

A vast majority of the people depends on a hand to mouth income source such as- garment workers, day laborers, rickshaw pullers, workers related to the transportation sector etc. who, sadly, are more concerned about their income source rather than COVID-19. The lockdown has made life insufferable for them. Fall of demands in poultry, dairy and fisheries have led to a drastic price drop in the respective sectors too. Also, a mentionable percentage of jobless people have moved to village areas which is pounding the rural economy (Holy, 2020). Figure 2 shows the number of workers (in millions) at risk of losing employment by sector.



Source: The Business Standard (Holy, 2020)

Figure 2: Number of workers at risk of losing employment by sector (in millions)

Also other private sectors, aviation industry, tourism and hospitality industry etc. are showing decelerating credit growth. If this lock down continues for a longer period, Bangladesh will fall into a social as well as economic turmoil, which will be tough to recover from.

To avail the economy from such an abysmal situation, economists and governments around the world are suggesting the implementation of Keynesian Model, which is breeding the stimulus packages of the governments resulting in economic ramification through increased government expenditures.

Keynesian Economic Theory

John Maynard Keynes is one of the greatest and most influential economists of 20th century. His book, *The General Theory of Employment, Interest and Money*, laid the foundation of fiscal policies worldwide.

Before Keynes, the Classical economists (Adam Smith, Jean Baptiste Say etc.) believed that economy is of self-correcting nature and thus no intervention from the government is required. That means no fiscal policy or no monetary policy. But this theory proved wrong during the stock market crush and Great Recession of 1929. Keynes rejected Classical theory and declared that waiting long for the economy to recover is fruitless. The economy is not self-correcting; under certain circumstances, economy would not rebound naturally. It would either stagnate or fall into death spiral. According to Keynes, the only way to get the economy moving again from such pitfalls is to pump with increased government expenditure.

Supporting explanation behind Keynesian theory is that when aggregate demand is not sufficient enough to achieve full employment, government injection of money can help to fulfill the desired purpose. Keynesian theory generally describes that aggregate demand and market economy is a volatile concept which sometimes hampers from unpredicted, unwanted and inefficient macroeconomic factors like recession, inflation and other exogenous shocks (like wars, natural disasters, new technology, baby boom, pandemic etc.). But these impacts can be mitigated by the economic policy actions of the government which can take the business cycle to its track. Keynesian economists advocate active government interventions in the economy.

Back in the last century, economists believed that it is not possible for unemployment and inflation to take place simultaneously. But during 1970s, that ‘impossible’ thing took place and gave birth to “Keynesian Dilemma”, which was only effective to solve half of the problem.

With all of its shortcomings, still Keynes’s multiplier theory is widely appreciated and practiced among the governments, especially in times of deficit budget and recessions to fight unemployment or inflation.

The need for a Government Funded Package

With more than one-third of the global population being in lock down, the world is going through the worst recession ever. Bangladesh, with her immense population and struggling export sector is under heavy burden of rapid response to counter balance the disastrous economic situation. The best available option for Bangladesh as well as other countries is government intervention through effectively engineered both fiscal and monetary policies. Special stimulus packages are what Keynesian economics suggests here.

COVID Stimulus Packages of Bangladesh Government

To minimize the suffering of the people nationwide, the government has so far announced 19 stimulus packages worth around 12.5 billion USD or past Tk. 1.0 trillion to cushion the blow of this exogenous shock of COVID-19.

The amount is nearly 3.7% of our GDP. Table 1 **(Appendices)** and Figure 3 shows the major packages under this stimulus incentive (Imam, 2020).

Adding to the PM's bailout plan, there exists a plan to increase money supply lowering the Repo Rate and the Cash Reserve Ratio (CRR) that goes in parallel with the stimulus program.

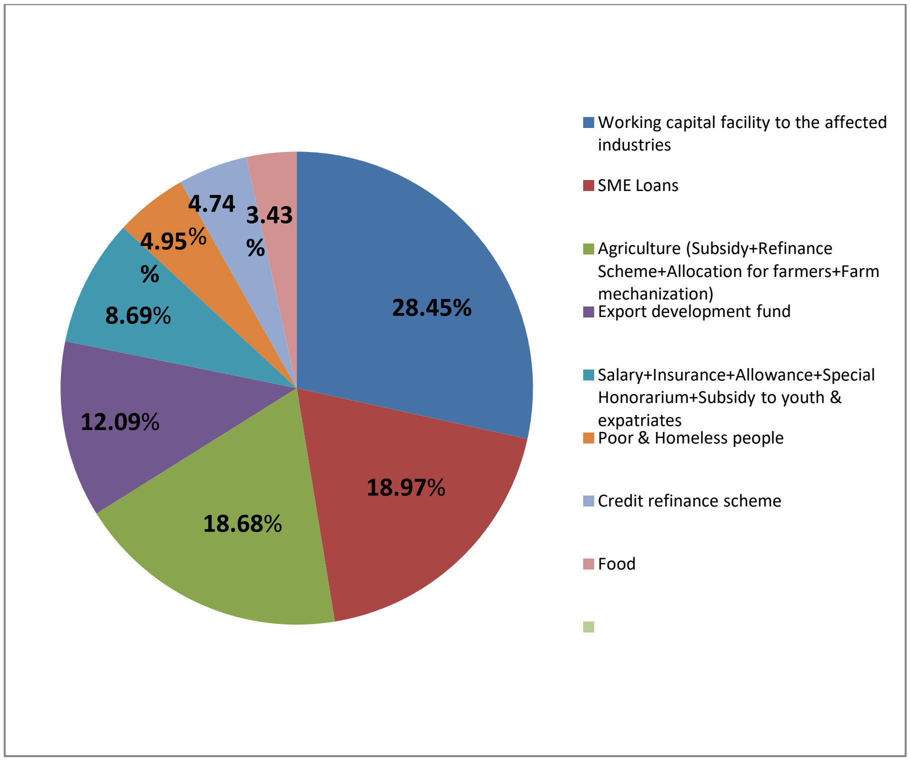


Figure 3: Covid-19 stimulus packages' allocation among various sectors

Bangladesh's Stimulus Packages Compared to others Countries

A comparison with G20 countries and also SAARC countries shows our stimulus package (in term of % of GDP) to be at par with most of the economies, except a few ones. This indicates an allocation of sufficient resources to fight the pandemic. We can see from the comparisons mentioned in Table 2 **(Appendices)** and Table 3 **(Appendices)** that the stimulus packages taken by Bangladesh seems to be reasonable in terms of percentage of GDP, at least for now.

Keynesian Multiplier

Keynesian Multiplier denotes the number by which a change in aggregate government expenditure must be multiplied to determine the resulting change in total output. Simply, it means that normally X amount of government stimulus will result in more than X×M (M=Keynesian Multiplier) amount of private sector activity. M can be greater, equal or less than 1.

M=1, *government expenditure creates no extra private sector activities and the resources are simply reallocated from private to public sector.*

M<1, *additional government spending will shrink the private sector with negative impact on overall GDP.*

M>1, *traditional Keynesian model is supported by increased positive economic activity with increased government expenditure* (Shinji, 2009).

Keynesian Multiplier can be summarized as: If a person spends Tk.100 on something, whoever receives that amount also spends it on something. And this is supposed to go on indefinitely, which eventually results in the expansion of economic activities.

But what if, the receiver doesn’t spend the entire amount he did receive at first place? If he/she decides to spend only Tk.60 and save the other Tk.40, he is circulating 60% of the money. The next receiver, suppose, also decided to spend 60% of the received amount (60×0.60=Tk.36). Here arises another concept based on consumption rate, Marginal Propensity to Consume.

Marginal Propensity to Consume (MPC) is the extra amount people consume when they receive an additional amount of disposable income.

MPC= $\frac{Chnage\ in\ Consumption}{Change\ in\ Income}$

Expenditure Multiplier can be found based on MPC.

From definition, the simplest form of Keynesian Multiplier, M=$\frac{1}{1-MPC}$.

Impact on Bangladesh Government’s Stimulus Packages

Basic Keynesian economics takes out “net export, [X-M]” from GDP formula (=C+I+G+X-M), considering a closed economy as a whole. But at advanced level, Keynesian Multipliers can be calculated in three different methods based on whether the economy is closed or open, including or excluding tax collection by government etc.

We have our stimulus package of approximately= **12.5 billion USD.**

Marginal Propensity to Consume, MPC (for Bangladesh) = 0.53 (Hussain, 2013).

Case 1:

Considering a closed economy and excluding the government sector (both imports and tax revenue):

M= $\frac{1}{1-MPC}$ =$\frac{1}{1-0.53}$ = 2.13 (>1)

So, the output in expenditure = 12.5×2.13= **26.625 billion USD.**

Case 2:

Considering a closed economy including government sector (tax only):

M= $\frac{1}{1-(1-t)MPC}$

Here, t = Marginal Tax Rate

Considering 30% marginal tax rate, t= 0.30 (Bangladesh, 2019)

Now, M= $\frac{1}{1-(1-0.30)\times 0.53}$ =1.59(>1)

So, the output in expenditure = 12.5×1.59= **19.875 billion USD**.

Case 3:

Now, if we consider an open economy including government sector (tax+import):

M= $\frac{1}{1-(1-t)MPC+m}$

Here, t= Marginal Tax Rate

m=Marginal Propensity to Import

For Bangladesh, t=0.30 and m= 0.69 (Hussain, 2013)

Now, M= $\frac{1}{1-(1-0.30)\times 0.53+0.69}$ =0.76(<1)

So, the output in expenditure = 12.5×0.76**= 9.5 billion USD.**

4.0 Findings

We have found three different outcomes using three separate economic scenarios of Keynesian Multiplier (Table 4 & Figure 4). For Case 1, when the economy was considered closed and tax excluded, we got the largest M (=2.13), which is satisfactory so far. But from Case 2, we can see a decrease in the multiplier, M (=1.59), which shows a lesser output from our stimulus package in the economy. The leakage of fiscal output is caused from tax effects considered through this process.

When an open and government included economy is considered in Case 3, the resulting multiplier is less than 1 (M=0.76). The stimulus package is beat by both taxes and import effects. This means private consumption or private investment gets crowded out.

Table 4: Keynesian Multiplier impact on stimulus package

Case	Conditions	Keynesian Multiplier(M)	Output of stimulus package (in billion USD)
Case 1	Closed economy +Tax excluded	2.13	26.625
Case 2	Closed economy +Tax included	1.59	19.875
Case 3	Open economy +Tax included	0.76	9.5

So, we can see that Keynesian Multiplier varies extensively depending on whether government tax and import effects are included in the model or not. For the COVID stimulus package declared by Bangladesh government to be effective positively, long term policies on tax and imports should be considered.

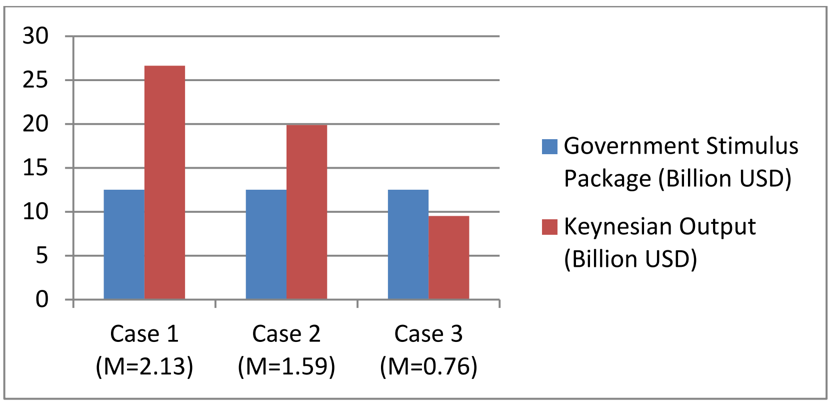


Figure 4: Keynesian Multiplier impact on stimulus package

Sectoral Impacts of Stimulus Packages

Industries and SMEs

Credit growth and money supply is increasing owing to government interest rate subsidy in loan disbursements for SMEs and affected industries. With time, the industry sector is slowly going back to its pre-Covid operational level. The most important factor here is assisting the sectors to lessen the burden of high interest bearing loans, which eventually reduces the cost of borrowing during an economic situation like this and enables the industries to carry on with the production and employment.

If a firm's production function is given by q= f [l, k, m] … (1)

Where q = output, l = labor, k = capital, m= managerial input (Bhaumik, Estrin, & Meyer, 2004).

This cost minimization yields the labor demand function**,** L= g [w, r, p, q (m)] … (2)

Here, w = wage rate, r = rental rate of capital, p = price of final product.

Economic theory suggests that $\partial l/\partial p$ and $\partial l/\partial q$ are both positive while $\partial l/\partial r$ is negative. That means if there is a sales growth, resulting whether due to an increase in p (product price) or because of an increase in q (output) or reduction in cost of doing business , r (cost of capital) and the demand for labor is likely to increase, solving production and unemployment problem simultaneously (Ngoc, Duc, & Dinh, 2011).

In our case of stimulus packages, government capital flow with subsidy is expected to reduce cost of doing business. Macro economically, this swift, politically driven stimulus package is highly effective to avoid the recessionary environment of deep economic pessimism in the business sectors. Temporarily this stimulus package will be more successful at shifting resources to the industries which need subsidies most (Michel, 2020).

Export Sector (RMG)

Around 84-85% of our export basket is dependent on RMG industry which has taken a huge blow from order cancellation from the regular buyers due to fall in demand. Government has allotted a grand percentage of the stimulus package to support RMG industry and its workers.

If we see the pre-COVID scenario of the total export and RMG export, both were simultaneously hiking in a promising manner (Table 5-**Appendices**). The COVID period experienced a negative surge in growth.

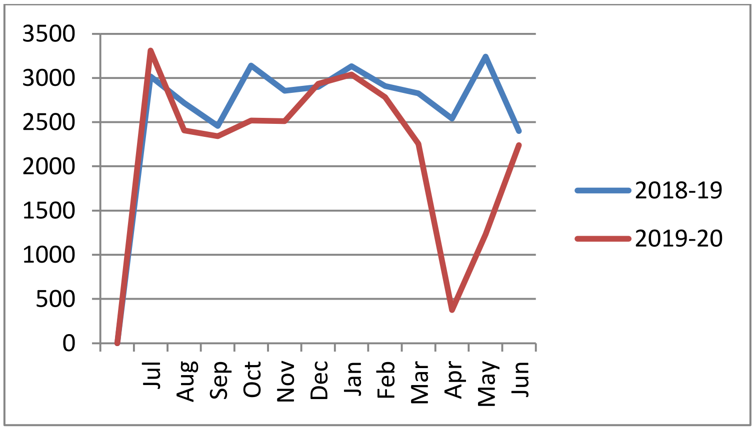


Figure 5: RMG export (in million USD)

Since last Dec'19 to Apr'20, it was a continuous downward slope for RMG export (Figure 5), which was in a record time lowest during March-April.

Government subsidy, loan allocation in low interest rate etc. have been keeping the RMG sector and its workers breathing so far. Since May, there has been a sign of continuous increase in orders. Subsidized working capital, special salary fund for workers and export development fund declared by the government are working as the stimulus factors here to boost the export sector (mainly garments industry) and to survive in the global competition.

Agriculture

The stimulus packages reflected a pro-agriculture policy response instantly. Continuity in food production, transportation and distribution was of highest priority. The most humane step of agriculture subsidy is the BDT 50 billion package for the affected farmers at 4% discounted rate. All of these initiatives are not only keeping our food production running, but also helping the agriculture sector workers who are suffering from this lockdown.

Banking Sector and Economy

The main distribution channel of government stimulus packages is the banking sector under the guidance of Bangladesh Bank. To facilitate the process, Cash Reserve Ratio (CRR) and the Repo Rate have been reduced, while Advance Deposit Ratio (ADR) threshold has been increased by the regulatory authority. But there is a possibility of increasing NPL (Non Performing Loan) after the disbursements of packages. Most of the banks are not comfortable with lending in a situation when there exists a high risk of loan defaulting. In addition to that, some of the banks also lack the deposit necessary to disburse (Arif & Ohee, 2020). The government has ordered the banks to ensure faster implementation of stimulus packages as small industries are suffering from huge financial crisis.

As government is relying on commercial banks to finance the stimulus scheme, there might be a possibility that the private sector will suffer from crowding out effect (Michel, 2020). Apart from this, increased government expenditure through debt financing will raise fiscal deficit and national debt, which might take a negative bite in the long run. So far, our moderate debt to GDP ratio (27.9%) is a positive factor for Keynesian Expenditure model. Also government expenses may generate higher future tax rate, which may create a strong negative wealth effect (Davig & Leeper, 2011).

Aggregate Demand

Keynesian economics assumes that government expenditures will increase aggregate demand and thus resulting in full employment. Stimulus packages based on Keynesian theory mainly focus on the expenditure multiplier, that people will spend the extra income (or at least a mentionable % of it). But if people do not spend that much and save more generating a low MPC, which means producers will not produce as predicted and they will have to lay off workers. Then the prediction of uprising aggregate demand is not effective in that scenario. The same thing happened to our export industry during the first quarter of pandemic. Uncertainty of consumer behavior is a weakness to stimulus packages based on Keynesian economics.

5.0 Suggestions

The corona pandemic has disclosed the real scenarios of lack of attention to our public sectors especially the health sector. This is a common scenario in most of the countries (except a few developed ones). To be able in getting out of this situation, the stimulus packages will help us undoubtedly. But proper functioning of a more effective public sector is a precondition. Because the effectiveness of fiscal stimulus depends on institutional quality a lot.

Also, proper disbursements of the stimulus package to the suffering sectors and people should be monitored strongly. A priority list based on poverty (both location and gender wise) is required to be formulated. Direct disbursements will help the cash to reach the neediest. The government has provided direct cash assistance to 5 million families via mobile banking.

The government also needs to take a few effective and careful measures regarding the business sector. Barriers to economic activities must be removed if we want our local business cycle to adjust with the recession. Any form of new impediments to growth will be suicidal to the stimulus activities. The authority and policy makers must emphasize on our non-export sectors like construction and transportation to keep the economy and working force running and to create more employment opportunities. At the same time, our economy is taking a blow from cancellation of orders in RMG sector, which is the single most dominating factor in our foreign export. It's not too early to start thinking about a diversified export basket.

Effectively infused fiscal and monetary policies are important for the success of our COVID stimulus package. Case 2 and 3 of Keynesian Expenditure Multiplier made that clear to us about the leakage or negative impact. When we invest more or get more orders for RMG, we have to increase our import of capital goods, raw materials, intermediate goods which may create trade deficit. Measures should be taken to check this scenario. In parallel with the yearly fiscal policy for next couple of years, special attention ranging from immediate 1 year to 2-3 years is a necessity here to observe the path of our economy. Our 8th Five Year Plan should be focused on recovering from the crisis as well as further growth. Luckily, our government has already begun to prepare a 3 year plan to overcome COVID-19 situation (Shawon, 2020).

Mega projects might be life saving factors in the long run, if managed effectively. With the help of these projects and heavy development works those are supposed to go on in Bangladesh, we can check the long term negative effect of Keynesian Expenditure economics.

6.0 Conclusion

Experience shows us that the current recession should be fought with debt or government expenditure, rather than change in taxation. In this stage, while the Classical economists suggest to "do nothing", Keynesians pave the way to "fiscal intervention." We resort to Keynesian economics with caution because it is only half a useful theory, for such situations. The main weakness is: it exaggerates the possibility of aggregate demand raise, neglecting the other budgetary, monetary and long term macroeconomic effects. From the mathematical findings (Table 4) it is evident that there is a possibility of negative impact on the economy in the long run. But still Keynesian is the only available option for the policy makers to promise a shorter and less painful recession in such threatened global economic situation. Bangladesh government wisely took a swift decision of stimulus package to counterbalance the recessionary impacts. But considering its pitfalls and weaknesses inherited from the original Keynesian theory and highly volatile as well as unpredictable macroeconomic factors of national level, a sharp eye on the economy and correcting cognitive economic policy will ensure the fruit of this COVID-19 stimulus package.

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APPENDICES

Table 1: Declared government stimulus packages

Package number	Name of the Package	Amount (in BDT crore)
1	Special Fund to support salary of the export oriented manufacturing industry workers	5,000
2	Working capital facility to the affected industries and service sectors	30,000
3	Working capital loans to the SMEs	20,000
4	Expansion of facilities of Export Development Fund	12,750
5	Pre-shipment credit refinance scheme	5,000
6	Special honorarium for doctors, nurses, medical professionals	100
7	Health insurance and life insurance	750
8	Free Food Distribution	2503
9	OMS at Tk.10/kg	251
10	Cash Transfer to targeted poor people	1,250
11	Expansion of coverage of Allowance Programs	815
12	Building houses for homeless people	2,130
13	Additional purchase of Boro paddy/rice (200,000 ton)	860
14	Support for farm mechanization	200
15	Subsidy for agriculture	9,500
16	Agriculture Refinance Scheme	5,000
17	Subsidy to youth and expatriates who lost jobs	2,500
18	Allocation for the farmers to offset the agriculture fallout	5,000
19	For the people affected badly by nationwide shut down	1,840
	Total (in crore TK)	**105,449**
	In billion USD	**12.5**
	% of GDP	**3.7**

Source: (Imam, 2020)

Table 2: BD stimulus package compared to some G20 countries

Country	Stimulus package (% of GDP)	Country	Stimulus package (% of GDP)
Japan	21.1%	South Korea	2.2%
USA	13.0%	Argentina	4.0%
Australia	9.9%	Mexico	0.7%
Canada	9.8%	Saudi Arabia	2.8%
Germany	4.9%	India	3.5%
France	5.0%	Russia	2.9%
Italy	4.6%	Turkey	5.0%
UK	5.0%	Indonesia	3.9%
European Union	4.0%	**Bangladesh**	**3.7%**
China	2.5%	--	--

Source: Statista

Table 3: BD stimulus package compared to some SAARC countries

Country	Stimulus package (% of GDP)
Bangladesh	3.7%
India	3.5%
Pakistan	3.34%
Srilanka	2%
Maldives	3.04%

Table 5: Export Data for last five fiscal years

Year	Export of RMG (Million USD)	Total export (Million USD)	% of RMG in Total Export
2015-16	28094.16	34257.18	82.01
2016-17	28149.84	34655.90	81.23
2017-18	30614.76	36668.17	83.49
2018-19	34133.27	40535.04	84.21
2019-20	27949.19	33674.09	83.00

Source: (Export Promotion Bureau)