**Topic: Impact of Trade on GDP growth in Bangladesh**

**Introduction:**

Over the last couple of centuries, the world economy has experienced sustained positive economic growth, and over the same period, this process of economic growth has been accompanied by even faster growth in global trade. GDP is a broad measure of a country’s overall economic activity. It is used to estimate the size of an economy and its growth rate. GDP specifically is the monetary value of all the finished products and services within a country measured within a specific time period, generally measured annually. GDP is a key tool used by policymakers, investors, and businesses in strategic decision-making. GDP includes all private and public consumption, government outlays, investments and exports. Imports are subtracted from the GDP. The balance of trade is one of the key components of a country's gross domestic product (GDP) formula. GDP increases when there is a trade surplus: that is, the total value of goods and services that domestic producers sell abroad exceeds the total value of foreign goods and services that domestic consumers buy. If domestic consumers spend more on foreign products than domestic producers sell to foreign consumers—a trade deficit—then GDP decreases.

For this project, We want to see how the volume of Trade in Bangladesh affects the GDP growth of the country. We will use the data of Bangladesh for 40 years (1960-2020) to see the relationship among the variables. We have used data from World Development Indicator Dataset, Worldbank.

**Background and presentation of the problem:**

At the cross-country level, there is a correlation between economic growth and rising international trade. Some of the most cited papers in this field (e.g., Frankel & Romer 1999 and Alcalá & Ciccone 2004) rely on long-run macroeconomic data and find evidence of a causal relationship: trade is one of the factors driving economic growth. Other important papers in this field such as Pavcnik, N. (2002) and Draca & Reenan (2016) have focused on microeconomic evidence, exploring the causal impact of specific trade liberalization policies on firm-level productivity within countries. These studies also find that trade liberalization has led to growth in the productivity of firms.

In a similar way, if we look at country-level data from the last half-century we find that there is also a correlation between economic growth and trade: countries with higher rates of GDP growth also tend to have higher rates of growth in trade as a share of output (Ventura, J. (2005)).

Among the potential growth-enhancing factors that may come from greater global economic integration are Competition (firms that fail to adopt new technologies and cut costs are more likely to fail and to be replaced by more dynamic firms); Economies of scale (firms that can export to the world face larger demand, and under the right conditions, they can operate at larger scales where the price per unit of product is lower); Learning and innovation (firms that trade gain more experience and exposure to develop and adopt technologies and industry standards from foreign competitors) (Stirati (2018), (Soyres and Gaillard (2020).

Taking a look at the available empirical evidence, we can see these mechanisms are supported by the data as well. When it comes to academic studies estimating the impact of trade on GDP growth, the most cited paper is Frankel and Romer (1999). In this study, Frankel and Romer used geography as a proxy for trade, in order to estimate the impact of trade on growth. This is a classic example of the instrumental variable approach. The idea is that a country’s geography is fixed, and mainly affects national income through trade. So, if we observe that a country’s distance from other countries is a powerful predictor of economic growth (after accounting for other characteristics), then the conclusion is drawn that it must be because trade has an effect on economic growth. Following this logic, Frankel and Romer find evidence of a strong impact of trade on economic growth. Other papers have applied the same approach to richer cross-country data, and they have found similar results. A key example is Alcalá and Ciccone (2004). here are many papers that try to answer this specific question with macro data (Durlauf et. al (2004) (Zestos and Tao (2002)). This body of evidence suggests trade is indeed one of the factors driving national average incomes (GDP per capita) and macroeconomic productivity (GDP per worker) over the long run.

If trade is causally linked to economic growth, we would expect that trade liberalization episode also led to firms becoming more productive in the medium and even short run. There is evidence suggesting this is often the case. Pavcnik (2002) examined the effects of liberalized trade on plant productivity in the case of Chile, during the late 1970s and early 1980s. She found a positive impact on firm productivity in the import-competing sector. And she also found evidence of aggregate productivity improvements from the reshuffling of resources and output from less to more efficient producers.

Bloom, Draca, and Van Reenen (2016) examined the impact of rising Chinese import competition on European firms over the period 1996-2007 and obtained similar results. They found that innovation increased more in those firms most affected by Chinese imports. And they found evidence of efficiency gains through two related channels: innovation increased, and new existing technologies were adopted within firms, and aggregate productivity also increased because employment was reallocated towards more technologically advanced firms.

Overall, the available evidence suggests trade liberalization does improve economic efficiency. This evidence comes from different political and economic contexts and includes both micro and macro measures of efficiency.

Data

Variables Description:

1. Trade variable: Exports of goods and services (current US$). Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments. Data are in current U.S. dollars.
2. GDP per capita (current US$): GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars.
3. Population: Total population is based on the de facto definition of population, which counts all residents regardless of legal status or citizenship. The values shown are midyear estimates. We have used population as a control variable.

Motivation: My graduate thesis is related to International Trade and Technological Innovation. According to Grossman & Helpman (1990), Technological Innovation affects Economic Growth. On the other hand, International Trade also affects Economic growth ( (Hsu, Riezman, & Wang, 2019). This motivated me to see whether there is also a relationship between International Trade and Economic Growth.

Data Source: I will use the country data from World Development Indicator by the World Bank. Link of the data source is the following: World Development Indicators | DataBank (worldbank.org)

Model  
To see the relationship, I will use a Multiple Linear Regression Model. I will use a scatter plot with a regression line to see the relationship between Trade and GDP.

Results  
Conclusion

Reference:

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