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RELATIONSHIP BETWEEN EXPORTS AND GROSS DOMESTIC PRODUCT (GDP)

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I. INTRODUCTION

Since economies have started exporting, it has become vital to evaluate the importance of exports in the economic growth of nations. In this paper the researcher is trying to evaluate the relationship between exports and GDP of five nations that are USA, Germany, India, Japan and Singapore taking into account the study period from 2000 to 2018. Mostly exports are seen as a tool for the economic growth specially for the top exporting nations in the world. After the removal of trade barriers in various economies, it has let to rise in the employment opportunities as well as reduced the costs of productions when the production is in bulk, this in turn has increased the GDP of the economies which let to the overall economic growth.

II. EXPORTS

Exports are basically the production of goods and services in one country and their supply and selling to buyers in some different country. Imports and exports together form the international trade. They are considered beneficial for the economy as they offer wide variety of customers and markets for supply. When there is more export than import it leads to trade surplus in the economy and it in turn leads to capturing significant market share which leads to better profit margins.

III. GROSS DOMESTIC PRODUCT (GDP)

It is the total market value of all the final goods as well as services that are being produced by a country in a given time frame. GDP of any nation is considered as a measure of its overall domestic production and due to this reason, it has a function of a nation's economic health. GDP is calculated on annual basis in 3 ways that are income, expenditure as well as production. It is generally used as a guide for the policy makers as well as investors.

IV. NEED FOR STUDY

The topic of exports with context to the economic growth has recently started receiving great importance. Due to this reason this particular study has been done in top exporting economies of the world so as to get knowledge about the relationship of exports and economic growth. For the purpose of measuring economic growth the researcher has taken GDP of that nation because that is the best indicator of growth. This study was particularly felt needed as it focuses on top five exporting nations. rest all studies generally focus on one economy.

V. REVIEW OF LITERATURE

(Ram, Jan 1985) studied in his article about the role of exports in the economic growth of nation. In this research he took the sample as 41 least developed countries and then related the mean annual growth per capita GNP. He conducted this study first from 1960 to 1970 and the from 1970 to 1977 in order to see that if there was increase in exports after 1970's. After the research he could conclude that the exports are important for the purpose of growth. After the research he even concluded that the overall impact of the performance of export on the growth in low income least developed countries is small and larger in middle income group.

(MEHTA, July, 2015) studied the relationship that exists between the GDP, exports and imports with context to specifically India. The time period taken into consideration for study is from 1976 to 2014. For the purpose of analysis, the researcher has used vector error correlation, ADF unit root test as well as Johnsen cointegration methods. The results of this particular study how that there actually exists a co integrating connection between exports, imports and the Gross domestic products.

(Munir & javed , 2018) conducted this research in order to analyse the impact of export on the economic growth with context to the South Asian nations in particular. In this paper the researcher has used the Cobb Douglas production function for the research. Under this the main aim was to analyse the vertical and horizontal export diversification. The period taken for study is from 1990 to 2013 at the annual frequency and this research mainly focuses on 4 nations that are Bangladesh, India, Pakistan and Sri- Lanka.

(Hye, 2012) studied with the aim to find export and import led growth with the help of autoregressive distributed lag method. In this the granger causality test is also used to find relation between long and short run. Overall, the study proved to be successful and the hypothesis used is proved valid. Thus, the empirical findings of this research can be useful for policy makers of china in the formulation of trade policies.

(Blumenthal, 1972) conducted this research to find the relationship of exports and imports in context to the Japanese economy. In this paper first the total contribution of exports in the GNP has been taken out and then their cyclical relation between the two variables. The tools of correlation and regression were used in this study. The results show that there is no negative rather only positive correlation between the two given variables.

VI. OBJECTIVES

- To establish a relationship between exports and economic growth due to it.
- To analyse what impact exports, have on economic growth from 2000 to 2018.
- To find out few solutions that can be done to improve exports in some countries.

VII. METHODOLOGY

This study was felt important to know about the impact of exports on economic growth. In order to find that five countries were taken into consideration that are Japan, United States of America, India, Singapore and Germany. The data will be collected from secondary sources like world bank website. The sources of journals are pro- quest, google scholar as well as j- store. Excel has been used for the purpose of correlation and regression to study the relationship of both the given variables in which GDP is the independent variable and exports is taken as the independent variable.

H_1- Alternative Hypothesis which means there is relationship between Exports and the GDP

H_0- Null Hypothesis which means there is no relationship between Exports and the GDP.

VIII. LIMITATIONS OF STUDY

- The data collection is done completely through secondary sources and not primary sources.
- The sample size of the study is limited to only 5 nations.
- The study is limited to only 19 years from 2000 to 2018.

IX. TOOLS FOR ANALYSIS

For the purpose of study, we have taken 2 variables that is exports as dependent and Gross domestic product as independent variable. Five countries are chosen for this study under a confined period from 2000 to 2018. Correlation is a statistical tool which measures the degree of relationship between to given variables and it just measures the association between the variables. Regression is another tool used in the study which defines the strength of relationship between the given variables. there are two types of regression that are linear and multiple linear regression. Here for the purpose of study he has chosen linear regression to find the strength of relationship.

X. ANALYSIS AND INTERPRETATION

1. INDIA

Table1. Correlation (India)

	GDP	EXPORTS
GDP	1	-0.168
EXPORTS	-0.168	1

Table 2. Showing Regression (India)

Regression Statistics	
Multiple R	0.168
R Square	0.028
Adjusted R Square	-0.029
Standard Error	9.647
Observations	19

Table 3. ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	45.816	45.816	0.492	0.492
Residual	17	1581.951	93.056		
Total	18	1627.766			

Interpretation-

The above table shows that the research is done from the time period of 2000 to 2018 for the variables Exports and GDP. It can be concluded that there exists a negative correlation of -0.168 between the two variables which means that they have low relation between them. According to the regression statistics, multiple R that is coefficient of determination represents simple correlation that is 0.168 which obviously shows low degree of correlation and the adjusted R square is -0.029. The R^2 shows that how much of the total variation is the dependent variable and, in this case, it is 0.028 which is very low. The significance level is 0.492 which signifies that alternative hypothesis should be rejected that mean that there is no relationship between exports and the economic growth.

2. UNITED STATES OF AMERICA

Table 4. Correlation (USA)

	GDP	EXPORTS
GDP	1	0.641
EXPORTS	0.641	1

Table 5. Showing regression (USA)

Regression Statistics	
Multiple R	0.641
R Square	0.411
Adjusted R Square	0.377
Standard Error	4.184
Observations	19

Table 6. ANOVA

	df	SS	MS	F	Significance F
Regression	1	208.062	208.062	11.887	0.003
Residual	17	297.565	17.504		
Total	18	505.626			

Interpretation-

The above table shows that the research is done from the time period of 2000 to 2018 for the variables Exports and GDP. It can be concluded that there exists a positive correlation of 0.641 between the two variables which means that they have a high relation between them. According to the regression statistics, multiple R that is coefficient of determination represents simple correlation that is 0.641 which obviously shows high degree of correlation and the adjusted R square is 0.377. The R^2 shows that how much of the total variation is the dependent variable and, in this case, it is 0.411 which is very pretty high. The significance level is 0.003 which signifies that null hypothesis should be rejected that mean that there is a relationship between exports and the economic growth.

3. GERMANY

Table7. Correlation (Germany)

	GDP	EXPORTS
GDP	1	0.872
EXPORTS	0.872	1

Table 8. Showing Regression (Germany)

Regression Statistics	
Multiple R	0.872
R Square	0.761
Adjusted R Square	0.747
Standard Error	3.176
Observations	19

Table 9. ANOVA

	df	SS	MS	F	Significance F
Regression	1	546.295	546.295	54.175	1.11E-06
Residual	17	171.425	10.084		
Total	18	717.721			

Interpretation-

The above table shows that the research is done from the time period of 2000 to 2018 for the variables Exports and GDP. It can be concluded that there exists a very strong positive correlation of 0.872 between the two variables which means that they have a high relation between them. According to the regression statistics, multiple R that is coefficient of determination represents simple correlation that is 0.872 which obviously shows high degree of correlation and the adjusted R square is 0.747. The R^2 shows that how much of the total variation is the dependent variable and, in this case, it is 0.761 which is very pretty high. The significance level is 1.11e-06 which signifies that null hypothesis should be rejected that mean that there is a relationship between exports and the economic growth.

4. JAPAN

Table 10. Correlation (Japan)

	GDP	EXPORTS
GDP	1	0.865
EXPORTS	0.865	1

Table 11. Showing regression (Japan)

Regression Statistics	
Multiple R	0.865
R Square	0.749
Adjusted R Square	0.734
Standard Error	4.986
Observations	19

Table 12. ANOVA

	df	SS	MS	F	Significance F
Regression	1	1261.099	1261.099	50.732	1.71E-06
Residual	17	422.583	24.858		
Total	18	1683.681			

Interpretation-

The above table shows that the research is done from the time period of 2000 to 2018 for the variables Exports and GDP. It can be concluded that there exists a very strong positive correlation of 0.865 between the two variables which means that they have a high relation between them. According to the regression statistics, multiple R that is coefficient of determination represents simple correlation that is 0.865 which obviously shows high degree of correlation and the adjusted R square is 0.734. The R^2 shows that how much of the total variation is the dependent variable and, in this case, it is 0.749 which is very pretty high. The significance level is 1.71e-06 which signifies that null hypothesis should be rejected that mean that there is a relationship between exports and the economic growth.

5. SINGAPORE

Table 13. Correlation (Singapore)

	GDP	EXPORTS
GDP	1	0.851
EXPORTS	0.851	1

Table 14. Showing regression (Singapore)

Regression Statistics	
Multiple R	0.851
R Square	0.724
Adjusted R Square	0.708
Standard Error	3.697
Observations	19

Table 15. ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	609.624	609.624	44.596	3.888E-06
Residual	17	232.386	13.670		
Total	18	842.010			

Interpretation-

The above table shows that the research is done from the time period of 2000 to 2018 for the variables Exports and GDP. It can be concluded that there exists a very strong positive correlation of 0.851 between the two variables which means that they have a high relation between them. According to the regression statistics, multiple R that is coefficient of determination represents simple correlation that is 0.851 which obviously shows high degree of correlation and the adjusted R square is 0.708. The R^2 shows that how much of the total variation is the dependent variable and, in this case, it is 0.724 which is very pretty high. The significance level is 3.888e-06 which signifies that null hypothesis should be rejected that mean that there is a relationship between exports and the economic growth.

XI. CONCLUSION

After conducting this research, it can be definitely said that in the top exporting nations there does exist a strong relationship between the exports and economic growth. Exports have both positive as well as negative affects on the economy. In this study we took a sample size of 5 countries and just for 19 years from 2000 to 2018. In this we only took 2 variables and hence due to these limitations very significant results cannot be produced obviously. Like in the above research the correlation between exports and economic growth in India is in negative and low so due to this reason it means that exports in a country like India do not impact much on the economic growth and hence in this we had to

reject the alternative hypothesis, but in rest all nations taken into consideration for study it can be concluded that it has improved the economic growth.

In the light of the above research it can be found that government will have to take some initiatives in countries like India which are still developing to make the unskilled more skilled by organising better training and development programmes and some essential components like innovation and creativity as well as education has to be paid attention to for development and growth.

XII. REFERENCES

Journals:

Blumenthal, t. (1972). Exports and economic growth: the case of post-war japan. Oxford university press journals, vol. 86, no. 4, pp. 617-631.
Hye, q. M. (2012). Exports, imports and economic growth in china: an ardl analysis. Journal of Chinese economic and foreign trade studies, vol. 5 no. 1, pp. 42-55.
Mehta, s. N. (July, 2015). The dynamics of relationship between exports, import and economic growth in India. Ret academy for international journals of multidisciplinary research (raijmr) , vol. 3, issue: 7, 39-47.
Munir, k., & javed , z. (2018). Export composition and economic growth: evidence from south Asian countries. South Asian journal of business studies, vol. 7 no. 2, 2018 pp. 225-240.
Ram, r. (Jan. 1985). Exports and economic growth: some additional evidence. The university of Chicago press journals, vol. 33, no. 2, pp. 415-425.

Websites: www.worldbank.org, www.investopedia.com,