

Causality Study of Trade and Economic Growth of Nepal



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Abstract: This paper investigates the impact of foreign trade on economic growth in Nepal. The objective of this study is to identify the causal relationship between the foreign trade and economic growth of Nepal. For this achieving the purpose, secondary data of 1975 to 2017 have been used, which are referenced from the Nepal Rastra Bank. The analysis methods has been used the Auto Regression Model and Granger-Causality Tests for achieved the results. The result of the study reveals that there is a significant relationship between the export and economic growth of Nepal. The result showed when export increases by 1 unit then GDP increases by 0.58 units in short run. It indicates that current GDP growth is also affected by past year's export. Similarly, Granger causality test also shows that export trade caused to economic growth ($p=0.0071$) and foreign loan also caused to economic growth ($p=0.0410$). It shows that there is a unidirectional causality with economic growth in Nepal. Hence, this study suggests that the policy makers should focus on exportable products which have potential for larger scale productions within the country, and comparative advantage for export trade as well as economic growth in Nepal. Moreover, national economic policy should be focused on investment friendly environment and creating a trust for foreign loan in Nepal.

Keywords: Causality, Economic Growth, Foreign Trade & Nepal

I. INTRODUCTION

Economic growth is the most powerful and importance tools for poverty reduction and enhance the quality of people's life in developing countries (Phillips & Cutler, 1998). For instance, Islam (2010) also demonstrated that if a country achieved a sufficiently higher growth rate, poverty will be reduced automatically. As a many developing and emerging economic countries, like Nepal is suffering from high inflation rate and low economic growth. They are given the high priority in economic growth, however, growth rate is not successes to increase what they expect. It is still suffering from lower growth and enables to develop other sectors of the countries. Nepal is under development country and its economic situations are almost poor. It is the newly federal democratic republic country has been passing through a protracted political transition for more than a decade. The per capita income of Nepal is only US \$ 1191 in 2019 (MOF, 2019/20).

The remittance is the one of the major sources of Nepal, which was 26.3% of GDP in 2016 (MoF, 2018). Agriculture is the main sources of the economy, and it is providing a livelihood of almost two third of the population. Moreover, it is contributing 27.60% of GDP (MOF, 2019). The most of the Industrial activity mainly based on the processing of agricultural products. Hydropower is the one of the major sources of economy of Nepal and its capacity to generate 83,000 MW but we have acute energy shortfall per capita 132 KWH/Year (ADB, 2020). Thus indicators show that economic condition of Nepal is not satisfactory level due to difference reasons. Nepal hits the natural hazard and political gridlock in the past years. It was hit by massive earthquakes in early 2015 A.D which destroyed physical infrastructure as well as human lives and set back economic development. Political situation of Nepal is worst in the past many years. It has hindered post-earthquake recovery and improvement should have needed for people's livelihood and economic reform. Additional challenges of Nepal for economic growth includes its landlocked ness, power shortages but now it is gradually decreasing, poor infrastructure of transportation, people strife and labour unrest, and its sensitivity to natural disaster. The lack of political consensus of Nepal in the past several years has prevented much-needed economic reform. In 2016, Gross Domestic Product (GDP) of the country has increased by 7.5% as compared to growth rate of 0.4% in the previous year (MOF, 2015). The annual growth rate of GDP is not steady. In the 17 years of time, it was the lowest 0.2% in 2001 whereas the highest 7.5% in 2016. For the 2015 the growth rate was only 0.4% which is among the lowest growth of the study time span. The destructive earthquake of 2015 and nearly a year long blockade of Nepal India boarder could be the low growth rate. The growth rate for 2017 was s 5.0% (MOF, 2017). Foreign trade is one the back bound of the economy of Nepal. It has 49.3% contribution in GDP of Nepal at the same time GDP growth rate was 6.39% respectively (MOF, 2018). Nepal, developing and poor countries in the world arena is getting some benefits of globalization. After globalisation, import trade is creating the additional competition in the domestic markets. In this context, foreign trade is providing the benefits to business, for different ways such as access to improved capital inputs and technology, tools, boosting productivity as well. It is pushing the redistribution of labour and capital to relatively more productive sectors than others. Specially, it has contributed to some productivity and service activities from developing countries providing many opportunities for growth of business.

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However, foreign trade of Nepal had huge trade unbalance since two decades. There are different reasons for trade unbalance in Nepal. The difference may be the reason for trade between the two countries. If the price of an item is same in two countries, then trade between them is very difficult. The higher price of exports and lower price of imports promote business enterprises to trade in other countries. This leads countries to specialize in economics activities they are best endowed with. The division of labour helps in more production and lower cost thus bringing the benefits to all the trading nations (Bhat, 2014).

Nepal is doing trade with India and China. The trade transaction volume is dominated by India. The export volume is smaller compared to import trade of Nepal. The main export commodities are woollen carpet, steel products, yams and pashmina, coffee, readymade garments, handicrafts, cardamom, tea, fruit and vegetable juices, iron, and medicinal, herbs. Nepal imports outside products such as petroleum products, iron, and steel products, chemical pharmaceutical products, electronics goods vehicles and their parts, electrical equipment, gold, cement, and fertilizers. Nepal is trading with its immediate neighbours as major trading partners, which jointly occupied 58.8 percent (NRB, 2017).

This study is basically divided into introduction, reviews of previous literature, objectives methodology, results, conclusion and recommendations which is describing as coming chapters.

II. LITERATURE REVIEW

The foreign trade is an exchange of goods and services between and among the countries. It is believed that in the absence of foreign trade, the world community would not live a happier and prosperous life with a higher standard of living at this stage. Foreign trade has been proven to be an important tool for developing the path of economic prosperity. It has been popularly called the “engine of growth” which has pushed the development of today’s economically modern and sound nations during the nineteenth century’s (Todaro & Smith, 2003). This principle is still valid in the arena of foreign trade.

David Ricardo’s comparative advantage theory states that a country can produce those goods and services comparatively better than the other country in terms of opportunity cost than the financial cost. He has focused that a comparative advantage is the best way for a country to specialize in the efficient production of goods and services. Mostly, specialization in accordance with the comparative advantage leads to increased global production than better living standards of people. Foundation of his theory carries from Adam Smith and has been identified that countries should produce those products which have comparatively better production opportunity than other countries have. His principle of comparative advantage provided ideas to the then trend of the world trade. Nepal Rastra Bank had attempted a quantitative analysis of foreign trade entitled “Import and Export Function in Nepal” in 1987 A.D. This study has used mathematical technique to analyze the behaviour of imports and exports trade, and to examine the factors affecting trade. On import side, the study exhibits

macro causality with gross domestic product, availability of foreign exchange and exchange rate vis-a-vis US dollar. In terms of import, the result of econometric analysis found that GDP and exchange rate vis-a-vis US dollar play a significant role to determine the Nepalese export trade. The study showed the elasticity of per capita exports 9.6%, and then increased to 10% per capita of GDP (NRB 1987).

Similarly, Sharma & Bhandari, (2005) conducted a study on foreign trade and its effects on economic development of Nepal. They concluded that exports growth leads to economic growth in Nepal. They also found that private spending is crucial factor to increase import than government spending. Policy must have consideration in the substitution between the Indian goods and Nepalese goods through price effect. Similarly, Nepal’s foreign trade has been suffering from trade deficit and it has impacted negatively on foreign currency balance causing more economic instability. The lack of efficient management of the growing population also invites disaster to the economic growth of country in long terms. The researchers concluded additionally that extension of labor and capital, and export are the major determining factors for increasing per capita income of Nepal.

Ghimire; (2009) conducted a study on trade openness and GDP growth in Nepal. The main objectives of the research were to find causal relations between trade openness and GDP growth in Nepal. The researcher has used 37 years annual data from 1970 to 2006, collected from the secondary sources. The researcher found that, openness of trade is a positive force to increase real GDP in Nepal and opening of trade has a positive effect on real GDP. Integrating the domestic economy with rest of the world offers the static gains such as an increase in income/output over the short run because of cheaper import of raw materials and consumption goods, expansion of the market, predicted by the classical and neo classical theories and the dynamic gains are sources of a high GDP growth. In addition, a high GDP growth over the long run expands economic opportunities and improves allocate efficiency reduces distortion in relative prices, exchange rate and correct market failure. Kafle, (2017) conducted a study on foreign trade and its present trends of Nepal. The main objective of the study was to analyze the trends and patterns of foreign trade of Nepal and to analyze the cause for trade deficit, particularly with India. He compared data of fiscal year 2011/12 to 2015/16 to analyze Nepal’s foreign trade composition and trade of commodity based on standard foreign trade classification. The finding concluded that there is a big trade deficit due to increase of imports and decreased exports, which has been the foremost problem of trade of Nepal. However, for the last few years, imports have been increased exponentially compared to the exports. Nepal started the policy of economic liberalization in mid-1990. Despite of the policy address, exports could not be increased as expected. It also lacked diversification for trade deficit.

The reason, inter alia as pointed by the researcher is political instability and unstable government. The trade policy has also been unstable; that led to increase of trade deficit in Nepal. Based on these studies and literature reviews, it is understood that there are some research studies done on the causality between the trade and economic development.

III. RESEARCH GAP

The studied literature reviews showed contradictory findings and now, it is to identify a multivariate relationship between foreign trade and economic growth in different countries including Nepal. There are no further studies to test the created existing gap of trade and economic growth. Thus, this study attempts to apply the causality analysis framework using the ARDL testing approach to identify the causality between foreign trade and economic growth. The size of Nepalese economy has remained one of the smallest in the South Asia. Nepal, as trying to be a developing country, is chosen for the study. It might well represent the relationship between foreign trade and economic growth. Hence, this study will focus on the causes and effects of export trade and economic growth of Nepal.

IV. OBJECTIVES

Based on the previous research, there is a dearth of literature on understanding a relationship between export and economic growth in Nepal. Thus, the overall objective of this study is fragmented into two different objects as stated below.

- To identify the causal relationship between the foreign trade and economic growth of Nepal.
- To find the appropriate suggestion for trade promotion and economic growth of Nepal.

V. METHODOLOGY AND MODEL SPECIFICATION

To achieve the above objectives, secondary data from 1975 to 2017 of Nepal Rastra Bank retrieved through the E-views software are analyzed. The quantitative analysis is based on the regression analysis. Within the regression analysis, the ARDL model is selected for analysis. Similarly, Granger causality model has been used for identifying the causal relationship between the real GDP and explanatory variables. The variables of interest in this study are: gross domestic product (GDP)- a dependent variable; and independent variables are total expenditure (TEX), economically active population (EAP), foreign grants (GRA), and foreign loan (LOA) total export trade (EXP) and total import trade (IMP).

The model is:

$$LNGDP_t = \beta_0 + \beta_1LEXP_t + \beta_2LIMP_t + \beta_3LTEXT_t + \beta_4LEAP_t + \beta_5LGRANT_t + \beta_6LLOANT_t \dots \dots \dots (1)$$

Where, β_0 is the constant of the model $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the coefficients of the explanatory variables, and is the stochastic error term that captures the effect of other variables not included in the model.

This method in solving the relationship examines the predictive content of the time series data. It involves economic indicators with lagged economic indicator and lagged growth indicator and then apply F test in hypothesis testing. This method can test for cause of economic growth; i-directional causality or no causality (Boon, 2005). This study employs the following equation for testing causal relationship:

$$r_t = \alpha + \sum_{j=1}^k \beta_j r_{t-1} + \sum_{j=1}^k \gamma_j s_{t-1} + \mu_t \dots \dots \dots (2)$$

$$s_t = \delta + \sum_{j=1}^k \phi_j s_{t-j} + \sum_{j=1}^k \gamma_j r_{t-j} + \mu_2 t \dots \dots \dots (3)$$

From the above equation, $H1: \gamma_j = 0, j=1, \dots, p$, means that exports trade does not cause GDP and $H1 : \beta_j = 0, j=1, \dots, p$ means that GDP does not cause exports. If null hypothesis and applied mathematics special issue is rejected, then it implies that exports do Granger cause Gross Domestic Product growth rate in the economy and Gross Domestic Product growth rate also does Granger cause exports and indicates that the two variables are independent of each other. The simplicity, Y_t is said to cause Z_t in Granger causality means if knowledge of Y_t aids the prediction of z_{t+j} , for some $j > 0$. Ganger causality doesn't actually require a direct causal mechanism lining y_t and z_t to exist. They could be connected by nothing except a common causal factor that (say) operates on y_t with a lag of one period, and on z_t with a lag of two periods.

VI. RESULTS AND DISCUSSION

A. Unit Root Test and Results

The test of unit root for the foreign trade on economic growth, and the results of ADF test for each of the variables in levels and first differences are reported in Table 1. The results found that the p-values for some of the variables in the research are greater than 0.5. Thus, the null hypothesis cannot be rejected, and we must therefore conclude that those variables are non-stationary. Moreover, the absolute value of test statistics is less than the critical values at the 5% so that the variables have unit root meaning they are not stationary at level. This implies that the first difference of those variables should be taken before they can be tested for co-integration. The results at level, found that not significant then it is to take the first difference of all the variables before using them for co-integration test.



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The test at first difference shows that the p-values of all variables are less than 0.5. In other words, the absolute values of test statistics are greater than the critical value at 5%. It means that the null hypothesis is rejected and that the variables are stationary at first difference. Then, it used the

Akaike Information Criterion (AIC) for estimator of out-of-sample prediction error and thereby relative quality of statistical models for a given set of data. Once the study has found co-integrating equations then next steps is to estimate model of error correction test.

Table: 1 ADF Unit Root Test

Level	ADF	GDP	EXP	IMP	TEXP	EAP	LON	GRA
with constant	t value	0.61	-1.507	-0.416	-0.191	0.919	-1.932	-1.58
	P value	0.988	0.521	0.897	0.932	0.995	0.315	0.484
with constant and Trend	t value	-3.296	-0.528	-2.14	-1.809	-1.59	-2.24	-3.225
	P value	0.081	0.978	0.509	0.683	0.78	0.456	0.093
without constant and trend	t value	12.026	2.106	9.681	10.239	14.93	3.486	2.755
	P value	1	0.99	1	1	1	1	1
Remarks		No Sig.	No Sig.	No Sig.	No Sig.	No Sig.	No Sig.	No Sig.
First Difference								
with constant	t value	-8.054	-5.291	-5.5	-6.618	-5.492	-5.817	-9.584
	P value	0.00	0.00	0.00	0.00	0.00	0.00	0.00
with constant and Trend	t value	-8.071	-4.976	-5.5	-6.542	-5.496	-5.806	-9.781
	P value	0.00	0.0012	0.0003	0.00	0.0003	0.0001	0
without constant and trend	t value	0.05	-4.478	-0.75	-0.952	-1.538	-4.53	-8.204
	P value	0.693	0.00	0.385	0.299	0.115	0.00	0.00
Remarks		Sign.	Sign.	Sign.	Sign.	Sign.	Sign.	Sign.

@ Significant at: 5 % level

B. Co-Integration Test

Here, we apply the autoregressive distributed lag (ARDL) co-integration technique as a general vector autoregressive (VAR) model of order p, in Z_t , where Z_t is a column vector composed of the five variables: RGDP= f (Import, Export, Expenditure, Active population, Loan & Grant). The ARDL estimate shows that less than fifty percent of explanatory variables are significant at 5 percent level of significance ($p=0.05$). It may be because of the non-relevant explanatory variables. For finding those kinds of variable, the Wald test is applied in this study. The coefficient diagnostic result shows that out of total independent six variables can be

dropped to find parsimonious model. After removing the first lag of RGDP, first and second lag of LGRA, second lag of LEAP, and level and first lag of LLON, it gets parsimonious ARDL model. The re-estimated output of Parsimonious ARDL model is run for further analysis.

The parsimonious ARDL Model Test is shown in Table 2. The test of results shows relationship with Real GDP (LRGDP) of past year to the current growth. Second and third lag of real GDP is significant at 0.05. Moreover, the positive coefficient of GDP lag indicates that there is positive relationship between past years GDP to current GDP.

Table: 2 Parsimonious ARDL Model Test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LRGDP(-2)	-0.493885	0.173141	-2.852498	0.0102**
LRGDP(-3)	0.600909	0.130294	4.611944	0.0002**
LEXPORT	0.058542	0.015621	3.747743	0.0014**
LEXP(-1)	-0.080586	0.019514	-4.129701	0.0006**
LEXP(-2)	0.108839	0.026129	4.165489	0.0005**
LEXP(-4)	0.042513	0.01388	3.062957	0.0064**
LGRA(-4)	0.032471	0.010776	3.013224	0.0071**
LTEXP	0.143601	0.031	4.632286	0.0002**
LTEX(-3)	0.167564	0.046033	3.640082	0.0017**
C	8.401551	1.669378	5.032743	0.0001**
R-squared	0.999799	Mean dependent var		12.8309
Adjusted R-squared	0.999588	S.D. dependent var		0.517673
S.E. of regression	0.010513	Akaike info criterion		-5.966803
Sum squared resid	0.0021	Schwarz criterion		-5.080141
Log likelihood	140.3361	Hannan-Quinn criter.		-5.646214
F-statistic	4726.995	Durbin-Watson stat		2.644318
Prob(F-statistic)	0			

Dependent Variable: LRGDP



Similarly, the coefficient of foreign export (LEXP) trade is significant at 0.05 ($p = 0.004$) and positive coefficient (0.58) shows that there exists positive relationship between GDP growth rate and Export growth rate. It showed when export increases by 1 unit then GDP increase by 0.58 units. Moreover, the lag first, second, third and fourth of export (LEXP) is also significant at 0.05. It indicates that current GDP growth is also affected by past year's export.

The analysis shows that the import trade is not significant at 0.05 levels, even first lag also, so we cannot conclude that there is no significant relationship between real GDP and import trade.

However, the import trade is significantly important for gross domestic products (GDP). The foreign grant is not significant at 0.05 ($p = 0.11$) in this test. Hence, there is not significant relationship between grant and GDP growth rate. But the fourth lag of grant is significant, so it can be concluded that past year's grant have effects on current GDP growth.

The Economically active population (LEAP) is one of the variables for this study. Based on the test, current year's active population is not significant ($p = 0.14$) but past year's EAP is significant at 5% level. Similarly, third lag of EAP is significant ($p = 0.02$), hence, we can conclude that EAP taken three years back have significant contribution to the current fiscal year's GDP. It is telling that the EAP is important in current year as well as past fiscal year for real Gross Domestic Products in Nepal.

Similarly, all total Government expenditures either current or past are significant at 0.05 levels. It is telling that there is vital role of current and past expenditure in GDP growth rate of Nepal. Normally, Government expenditure is the one of the importance tools for economic development in every country. This study also showed that the Government expenditure is one of the importance and playing the vital role for Gross domestic products.

The co-integration test showed that both real GDP and independent variables are co-integrated so there is a long run relationship between dependent and independent variables. The variable which has short run relationship between the variables is conducted using error correction model under the framework of co-integrating relationship. The value of error correction term (ECT) is both negative ($ECT = -1.59$) and significant ($p = 0.0023$) indicate that there is long run relationship originated from short run relationship between real gross domestic product and independent variables, such as export trade, import trade, foreign loan, expenditure, economically active population and grant.

C. Granger Causality Test

The test results showed that only 07 peers are unidirectional causes within the variables and rest of the pair variables are not significantly causes each other's which is shown in Table 3. The export trade does not granger cause real GDP is rejected ($p = 0.0017$). Hence the alternative hypothesis that exports granger cause to real GDP accepted. On the other hand, the null hypothesis that real GDP does not Granger cause to real export is accepted ($p = 0.72$) because it is more than 0.05. Hence, it concludes that export cause to real GDP and real GDP does not cause to export. The fundamental theory also suggests that exports lead economic growth,

especially in the case of poor under developing countries which need foreign exchange to import capital inputs for their domestic production as well. This means that there is a unilateral relationship between GDP and exports trade of Nepal.

The pair wise causality test of foreign loan and real GDP, we found the null hypothesis: foreign loan does not Granger cause to real GDP is rejected ($p = 0.04$). Hence there is causality from foreign loan to real GDP. On the other hand, the hypothesis that real GDP does not Granger cause to foreign loan is accepted ($p = 0.37$). Hence, we can conclude that foreign loan has cause to real GDP, however, the GDP does not cause to foreign loan. Therefore, there exist unidirectional causality between loan and real GDP. We can conclude that the size of foreign loan matters for real GDP. The foreign loan is playing the vital role for production and other economic activities.

The test of causality of economically active population and import trade, the result found the null hypothesis: active population does not Granger cause to import trade is rejected ($p = 0.0164$) because it is less than 0.05. Hence there is causality from active population to import trade. On the other hand, the hypothesis that import does not Granger cause to active population is accepted ($p = 0.56$). Hence, we can conclude that economically active population does cause to import trade, however, the import does not cause to economically active population. Granger causality test of export and import, then result found that null hypothesis: export does not Granger cause to import is rejected ($p = 0.0093$) because it is less than 0.05. Hence there is causality from export to import. On the other hand, the hypothesis that import does not Granger cause to export is accepted ($p = 0.53$). Hence, we can conclude that export has cause to import; however, the import does not cause to export trade because importable goods are not related to equipment and raw materials for products. It shows that only high volumes of import trade are related to consumption goods.

The Granger causality test of foreign loan and export, the result found that loan does not Granger cause to export; it means that the null hypothesis is rejected ($p = 0.0183$) and alternative hypothesis is accepted. On the other hand, the Null hypothesis of export trade does not Granger cause to foreign loan. Hence, Null hypothesis is also accepted ($p = 0.245$) because it is more than 0.05. It is telling that the foreign loan causes to the export trade adversely export does not cause to foreign loan. Hence, the result indicates that there is unidirectional causality between foreign loan and export trades of Nepal. The causality between Government expenditure to total foreign loan is significant, whereas probability value less than 0.05 ($p = 0.035$) and alternative hypothesis are accepted. On the other hand, foreign loan does not Granger cause to expenditure whereas ($p = 0.56$), Null hypothesis is accepted. Hence, expenditure is influenced from foreign loan. If there is increase in the government loan then foreign loan also increases in the country. The null hypothesis of expenditure does not Granger cause to economically active people. It means that Null hypothesis is accepted ($p = 0.32$).

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Hence, the alternative hypothesis is that expenditure cause to economically active people and which is rejected. On the other hand, economically active people do not Granger cause to expenditure whereas ($p=0.0328$). It is telling that the economically active people do cause to the expenditure

however, expenditure does not cause to the economically active people. In summary, the analysis shows that loan and export trade are found to significantly cause to real GDP and rest of peers do not directly cause to economic growth of Nepal.

Table: 3 Pair wise Granger Causality Test

Null Hypothesis	Obs	F-Statistic	Prob.
LIMP does not Granger Cause LR GDP	42	2.60160	0.0877
LR GDP does not Granger Cause LIMP		0.34000	0.714
LEXP does not Granger Cause LR GDP	42	7.57773	0.0017*
LR GDP does not Granger Cause LEXP		0.05132	0.95
LLON does not Granger Cause LR GDP	42	3.48588	0.0410*
LR GDP does not Granger Cause LEAP		1.01449	0.3725
LEAP does not Granger Cause LIMP	42	4.60028	0.0164*
LIMP does not Granger Cause LEAP		0.57832	0.5658
LEXP does not Granger Cause LIMP	42	5.32137	0.0093*
LIMP does not Granger Cause LEXP		0.62998	0.5382
LLON does not Granger Cause LEXP	42	4.46390	0.0183*
LEXP does not Granger Cause LLON		1.45906	0.2455
LTEX does not Granger Cause LLON	42	3.67640	0.0350*
LLON does not Granger Cause LTEX		0.58230	0.5636
LTEX does not Granger Cause LEAP	42	1.10093	0.3432
LEAP does not Granger Cause LTEX		3.75324	0.0328*

VII. CONCLUSION AND RECOMENDATION

The empirical model in the framework based on neoclassical growth theory, and based on the ARDL model test, total export trade, and government expenditures are the most significant determinant of real Gross Domestic Product, that is economic growth, in Nepal in terms of short and long run. According to ARDL model test shows that export trade plays the significant role for economic growth of Nepal. If there is increase of export trade by 1 unit then increase by 0.58 units in gross domestic products occurs. Moreover, the lag first, second, third and fourth of export is also significant at 0.05 in short run. It indicates that current GDP growth is also affected by past year's export. So, it is importance for making trade balance as well as economic growth in Nepal. The export trade and foreign loan are significant for real GDP which is proven by Granger causality test. It means that there are other variables also significant but not directly to economic growth. It implied that foreign loan itself importance to enhance the export as well as economic development of Nepal. The export enhancing strategy is to produce goods the country can make competitively advantageous. Consequently, consumers could get those products at a competitive price, and they will benefit from an extended domestic market. However, adoption of export lead economic development is a means for achieving quick economic growth which is still valid for Nepal. The Ganger Causality shows that among the different sectors export trade is most significant for economic growth or export lead economic growth. From the pair wise causality test of foreign loan and real GDP, the null hypothesis found is: foreign loan does not Granger cause to real GDP is rejected ($p= 0.04$) because it is less than 0.05. Hence there is causality from foreign loan to real GDP. On the other hand,

the hypothesis that real GDP does not Granger cause to foreign loan is accepted ($p= 0.37$). Hence, we can conclude that foreign loan has cause to real GDP, however, the GDP does not cause to foreign loan. Therefore, there exist unidirectional causality between loan and real GDP. We can conclude that the size of foreign loan matters for real GDP. The foreign loan is not playing the vital role for production and other economic activities. The test of causality of economically active population and import trade, the result found for the null hypothesis is: active population does not Granger cause to import trade is rejected ($p= 0.0164$) because it is less than 0.05. Hence there is causality from active population to import. On the other hand, the hypothesis that import does not Granger cause to active population is accepted ($p=0.56$). Hence, it can be concluded that economically active population has cause to import, however, the import does not cause to economically active population. Hence, policy should be focused to export lead growth rather than import lead growth. Reform on foreign trade policy should have focus on competitiveness and quality of goods, which has higher demand in international markets. Moreover, foreign loan and economically active population those are significant for economic growth as well as export trade in this analysis. Hence, the policy makers should focus on exportable products which have potential for larger scale productions within the country, and comparative advantage for export trade as well as economic growth in Nepal. Moreover, national economic policy should be focused on investment friendly environment and creating a trust for foreign loan in Nepal.

The policy should be focused on engaging with and encouraging various development partners for maximizing the resource allocations under aid for trade initiatives. Finally, those initiatives will increase the export trade, and then economic growth will also be increased in Nepal.

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REFERENCE

1. ADB, (2019). Potential Exports and Nontariff Barriers to Trade of Nepal National Study; website: <https://www.adb.org/sites/default/files/publication/507016/nepal-exports-nontariff-barriers-trade-study.pdf>
2. Customs Tariff (2020/2021). Published by Department of Customs, Kathmandu of Nepal.
3. Ghimire, R.(2009).Trade openness and GDP growth in Nepal: A granger causality test. The Economic Journal of Nepal, 32(126), 87-109.
4. Hollis Chenery (1961). "Comparative Advantage and Development Policy", American Economic Review LI, No. 1
5. Kafle, A. (2017). Nepal's Foreign Trade: Present Trends. International Journal of Latest Engineering and Management Research 2-(11).1-7.
6. Kehar, S. and Inder, S.(2003).Prospects of Agricultural Exports of India: A Composite Index Approach, Indian J. Agric Econ., Oct-Dec, 5&4: 781-799.
7. Nepal Trade Policy Review (2018) , published by Government of Nepal Ministry of Industry, Commerce and Supplies Singha Durbar, Kathmandu, Nepal
8. NRB, (2019). The status of Remittance in Nepal, Nepal Rastra Bank, Baluwatar Kathmandu
9. Nepal Trade policy Review (2018). Published by Government of Nepal Ministry of Industry, Commerce and Supplies Singha Durbar, Kathmandu, Nepal
10. Nepal Foreign Trade trend Study (2020). Published by Nepal Rastra Bank, Kathmandu
11. Poudel, Sri R. (1988). Foreign Trade, Aid and Development in Nepal. New Delhi: Common Wealth Publishers
12. Ricardo David (1817). The principles of Political Economy and Taxation Shameek, M. and Sahana M., 2012, Overview of India' Export Performance: Trends and Drivers, Indian Institute of Management, Working Paper No. 363.
13. Singh, D. A. and Khanal, R. K. (2010). Pattern of Indo-Nepal Trade After 1990. Socioeconomic Voice. Downloaded from <http://www.indiastat.com/article/18/arjun/fulltext.pdf>.
14. Sharma, O. & Bhandari, R. (2005). Foreign trade and its effects on Nepalese Economic development. The Journal of Nepalese Business Studies, 2(1), 13-32. [[CrossRef](#)]
15. Thirlwall, A. P. (1999). Reflections on the concept of Balance of Payments Constrained Growth, Journal of post Keynesian Economics, 19(3), 337-385. [[CrossRef](#)]
16. Todaro, M. P. & Smith, S.C. (2009). Economic development. New Delhi: Pearson Education

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