

TRADE LIBERALIZATION IN NEPAL: ANALYSIS OF ITS IMPACT

Khom Raj Kharel, Ph.D.*; Yadav Mani Upadhyay, Ph.D.+; and Dipak Bahadur Adhikari[&]

**Associate Professor of Economics, T. U.; +Assistant Professor of Economics, T. U.;*

&Assistant Professor of Economics, T. U.

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ABSTRACT

The objective of this study is to examine the impact of trade liberalization on Nepalese economy over the period 1990-2018. As per studies, trade liberalization increases the areas and size of foreign trade. Nepal has introduced the economic and trade liberalization policy in mid-1980s and started to liberalize its trade and investment after 1990s. After the adoption of economic liberalization, the flow of foreign trade, economic growth of Nepal has been significantly increasing. The impact of trade liberalization on economy is measured in terms of economic growth, trade tax, industrial GDP and ratio of trade tax to total size of trade of Nepal by applying simple and multiple regression models. In Simple regression model, four equations show a positive correlation between INGDP and import, export, total trade, EOI inflation rate.

Keywords: economic growth - EOI - Nepalese economy - trade - trade liberalization.

INTRODUCTION

Nepal has started to liberalize its investment and trade system unilaterally in 1992. It became the first least developed country to join the World Trade Organization (WTO) through the full accession procedure in April 2004. Nepal has also become the member of SAFTA and BIMSTEC as well as Nepal has signed 17 bilateral trade agreements notably with China and India. By identifying the effective role of trade in

renovating a traditional agrarian economy into modern economy, the trade policy of 2009 has been adopted by Nepal.

After trade liberalization policy reforms started in 1990s, Nepal has experienced many ups and downs in its economic and political conditions. Nepal's trade openness in the agriculture and energy sector had found to be very low three and two percent respectively. The openness of the service sector was high because of Nepal's horizontal commitment to keep the first three modes of service supply generally unrestricted. The author highlighted that the trade openness has signify low whereas harmonization of trade openness shows a good performance (Chaudhary, 2011).

Economic performance of any country based on the impact of policy reform has been one of the relevant issues of development economics. There was considerable improvement in trade reform in many developing countries in the mid-seventies, turning from an import substitution strategy to an outward oriented approach. Furthermore, the economic landscape has been changed with the globalization of the world economy. Multinational companies have played important role in this change and these companies made networks of global production and distribution by dynamically cooperating with each other's.

The association between trade openness and economic evolution in developing nations has been contemporary issue of a large number of empirical studies. Those studies have examined the association between economic openness and trade flows and economic evolution. The main determinants of economic growth in developing nations has been economic openness. Most of the experimental studies have preserved exports as the main channel in the liberalization process that affects the output levels. Though maximum cross section studies have established a positive relationship between exports and growth, a large number of studies support the export-led growth hypothesis.

A substantial number of studies discover that the association between economic openness and economic growth is positive. The liberalization procedure was anticipated to rise not only trade but also foreign direct investment. Cuadros et al. (2001) tested the presence and nature of causal association between output level, inward GDP and trade in Mexico, Brazil and Argentina from the middle seventies to 1997. The study examined the scope and sources of informational relations between openness and economic performance in those nations and established that there was a major impact of GDP on

trade and economic growth. The literature on trade, foreign direct investment and economic growth generally points on a positive trade and GDP growth relationship. In theory, economic growth may induce trade and GDP may also stimulate economic growth.

EMPIRICAL LITERATURE

The trade openness plays a significant role in trade and GDP growth. Trade flows and GDP can be associated in a variety of ways (Goldberg & Klein, 1997). Adhikary (2011) examined the linkages between GDP and trade. The empirical findings trace a strong association between GDP growth rates. Numerous cross-country studies propose that trade does appear to create and even sustain higher growth (Bhagwati & Srinivasan, 1999).

There is a good deal of empirical backing for the argument that trade liberalization stimulates long-run economic growth by improving factor productivity (Winters & Others, 2004). Lee (1997), by using industry-level data for the Republic of Korea, found that trade protection reduced both labor and factor productivity. By applying time series and cross-sectional analysis on a sample 22 developing nations, Paulino and Thirlwall (2004) established that liberalization improves export trade as well increase imports trade leading the adverse trade balance and payments. Garibaldi, Mora and Zettlemeier (2001) revealed that trade openness and economic reforms are important determinants of GDP.

Lee (1996) made a remark that trade openness affects, through its direct and indirect spillover effect, on both factor and product markets. Rodriguez and Rodrik (2000) remarked that open trade policies stimulate trade growth. The growth in trade is, in turn, the result of both technological development and concentrated efforts to reduce trade barriers where some developing nations have opened their own financial prudence to take full benefit of the opportunities for economic improvement through trade (IMF Staffs, 2001). Trade may enhance growth by indorsing a more efficient use of means through specialization and allowing the realization of economies of scale (WTO, 2003).

Felicitas (2003) analyzed data on the Chilean economy and did not reveal a stable long-run relationship between growth and trade openness. There was good deal of empirical support for the argument that trade liberalization stimulates long-term economic

growth by enhancing factor productivity (Winters et al.2004). Babula and Andersen (2009) examined the channels through which international trade may affect the economic growth by providing access to foreign intermediates and technologies. Frank (2009) stated that the key role of trade in the development process is widely accepted. Sun and Heshmati (2010) examined the international trade and its effects on economic growth in China.

Katz and Istrate (January, 2011) stated that the exports supported 10.3 million to 11.8 million jobs in 2008. The wages were roughly 11 percent higher for exporting manufacturing companies. Growing exports was a recipe for a job-filled recovery because it takes advantages of new sources of global demand. Manni and Afzal (2012), using OLS technique of the liberalization policy, revealed that improved export of the country has led to higher economic growth after 1990s. In the study period, both real export and imports were increased with greater openness.

Asfaw (2015) examined the macroeconomic impact of trade policy on growth and development in 47 countries. The study observed a positive and significant relationship between the variables. Fitzova and Zidek (2015), using econometric model, indicated the important role of exports in the economic growth. Zahonogo's (2016) observed no linear relation between trade openness and economic growth in case of SSA.

Makhmutova and Mustafin (2017) examined the impact of international trade on economic growth. The authors analyzed economic trends for the periods 2015-2016, and found a significant impact on China, USA, Russia and Germany. WBG (2018) articulated that countries which are open to international trade tend to boost productivity and enhance more income and opportunities for their citizens. The open trade also benefits lower income people by offering consumers more affordable goods and services. Blavasciunaite, Garsviene and Matuzeviciute (2020) examined trade balance impact on economic growth. The study observed significant effects of export and import on the economic growth. Parikh and Stirbu (2004) highlighted that trade liberalization may lead to faster growth of imports than exports.

Das (2010) examined the relationship between trade and GDP flows in case of India and observed significant improvement when India reformed her policies governing international trade and GDP since 1991. Azhar (2012) indicated that the trade liberalization impacts positively on growth of economy. The trade impact was found

negative and significant on GDP due to the extensive privatization of state-owned enterprises. China has success to become the World's fastest-growing economies having real annual gross domestic product (GDP) growth averaging 9.5 percent through 2018. Similarly, China has also become the World's largest economy on a purchasing power parity basis, manufacturer, merchandise trader and holder of foreign exchange reserves. China has become success to help raise an estimated 800 million people out of poverty (Morrison, 2019).

Muhammad et al. (2020) attempted to assess the impact of lowering trade barriers in services on a country's economic development in terms of per capita income. According to a World Bank analysis from 2003, Nepal's trade policies were mainly sound, and the country could compete in a number of products. Nepal is fully committed to a multilateral trading system that is rule-based, transparent, and predictable (MOICS, 2018).

The Nepalese economy is based on trade and economic growth; however, no comprehensive study has been undertaken to analyze the influence of trade liberalization on the Nepalese economy's link with trade and economic growth, as well as GDP. According to the findings, no extensive research on the impact of trade liberalization in Nepal has been conducted. The current study looked at the effects of trade liberalization on the Nepalese economy in terms of foreign trade, trade tax income, foreign direct investment, and economic development.

RESEARCH METHODOLOGY

The descriptive and analytical research design has been applied in the present study. In case of descriptive research design, different tables, diagram and examples has been presented as required. Similarly, different econometric and statistical tools and models have been used to measure the impact of trade liberalization on Nepalese economy. After the collection of secondary data and experiences, this paper used analytical as well as descriptive research design. Standard statistical, mathematical tools have been used to measure the impact of trade liberalization on Nepalese economy.

Various publication and reports submitted to Government of Nepal by national and international experts and agencies, Central Bureau of Statistics (CBS), Nepal Rastra Bank, Ministry of Finance including journals articles, reports, magazines, websites and published and unpublished on the concerned subjects by offices and scholars. The

collected data through above sources were tabulated in different ways according to the requirement of the study.

The analysis presented in the study has covered two broad assessments, time series analysis for periodical comparison among the variables and parametric analysis to examine the implications of trade liberalization. For the parametric analysis part of the study, comparative set of data for the period 1990-2018 has been used. To examine the holistic view of the impact of trade liberalization on the economic growth, trade, EOI, the regression analysis has been employed by using natural log linear models. The macroeconomic variables used in this study have been regressed by the trade openness index (TOI) and dummy variables as independent variables to represent the trade/economic liberalization policy. The following equations are used to estimate the impact of international trade on economic growth, GDP of Nepal.

$$\text{INGDP}_t = \beta_0 + \beta_1 \text{IT}_t + \epsilon_1 \quad \dots(1)$$

$$\text{INGDP}_t = \beta_0 + \beta_1 \text{ET}_t + \epsilon_1 \quad \dots(2)$$

$$\text{INGDP}_t = \beta_0 + \beta_1 \text{TB}_t + \epsilon_1 \quad \dots(3)$$

$$\text{INGDP}_t = \beta_0 + \beta_1 \text{TOI}_t + \epsilon_1 \quad \dots(4)$$

$$\text{INGDP}_t = \beta_0 + \beta_1 \text{IT}_t + \beta_2 \text{ET}_t + \beta_3 \text{TB}_t + \beta_4 \text{TOI}_t + \beta_5 \text{InFL}_t + \epsilon \quad \dots(5)$$

In Equation (1) through (5), 'INGDP_t' is industrial GDP regression for the period of 1990-2018, 'IT_t' is the import trade, 'ET_t' is the export trade, 'TB_t' is the trade balance, 'TOI_t' is trade openness index, 'InFL_t' is the inflation, β_0 is constant, and β_1 , β_2 , β_3 , β_4 and β_5 are coefficient parameters.

STUDY RESULTS AND DISCUSSION

The present study attempts to examine the impact of trade liberalization on Nepalese economy. The impact is particularly assessed from the overall examination of trade liberalization and impact on foreign trade, FDI and economic growth. As per the objectives of the study, present study has extensively examined the trends of foreign trade and economic growth of Nepal. Most of the data and info of the study are concerned with past phenomena of the performance.

Table 1: Results of import trade analysis

Regression Statistics				
Multiple R	R Square	Adjusted R	Standard Error	Observations
0.9924	0.9849	0.984	118008.3	29
	df	SS	MS	F
Regression	1	2.46E+13	2.46E+13	1770.50
Residual	27	3.76E+11	1392	
Total	28	2.50E+13		
	Coefficients	Standard Error	t Stat	P-value
Intercept	173299.9	29665.01	5.84	3.21
Import trade	24.70	0.5871	42.07	3.72E-26

Source: Author's calculation.

In Table 1, the result shows that there is a significant positive association between INGD and import trade during 1990-2018. The results are statistically significant ($R^2=0.98$), indicating that import trade accounted for 98 percent of the variance in trade from world.

Table 2: Results of export trade analysis

Regression Statistics				
Multiple R	R Square	Adjusted R	Standard Error	Observations
0.836	0.699	0.688	527787.05	29
	df	SS	MS	F
Regression	1	1.75E+13	1.75E+13	62.86
Residual	27	7.52E+12	2.78E+11	
Total	28	2.50E+13		
	Coefficients	Standard Error	t Stat	P-value
Intercept	-621838.49	228489.99	-2.72	0.011
Export Trade	312.66	39.43	7.92	1.59E-08

Source: Author's calculation.

In Table 2, the results of regression analysis show that there is a significant positive relationship between INGD and export trade during 1990-2018. The results are statistically significant ($R^2=0.699$, $p < 0.011$), indicating that export trade accounted for

69 percent of the variance in trade from world. The coefficient for export trade Index is -621838. The result shows that export trade influence their overall performance in world trade.

Table 3: Results of trade balance analysis

Regression Statistics					
Multiple R	R Square	Adjusted R	Standard Error	Observations	
0.97	0.95	0.95	207430	29	
	df	SS	MS	F	
Regression	1	2.38E+13	2.30E+13	554.771	
Residual	27	1.16E+12	430272		
Total	28	2.50E+13			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	262428.5	50036.27	5.244	1.57E-05	
Trade Bal.	-27.72	1.17	-23.55	1.55E-19	

Source: Author's calculation.

In Table 3, the result reveals that there is a significant positive relationship between INGDP and trade balance during 1990-2018. The results are statistically significant ($R^2=0.95$), indicating that trade balance accounted for 95 percent of the variance in trade from world. The coefficient for trade balance is 262428 ($t = -23.55$). The results show that trade balance influence their overall performance in world trade.

Table 4: Results of trade openness analysis

Regression Statistics					
Multiple R	R Square	Adjusted R	Standard Error	Observations	
0.57	0.32	0.30	789352.6	29	
	df	SS	MS	F	
Regression	1	8.20	8.20E+12	13.17	
Residual	27	1.68	6.230E+11		
Total	28	2.50			
	Coefficients	Standard Error	t Stat	P-value	
Intercept	-4147510	1429729.06	-2.90	0.007	
TOI	140517083	38713049.3	3.62	0.001	

Source: Author's calculation.

In Table 4, the result reveals that there is a statistically significant association between GDP and economic openness during 1990-2018. The results are statistically significant ($R^2=0.327$, $p < 0.007$), indicating that Economic Openness Index (EOI) accounted for 32 percent of the variance in trade from world. The coefficient for Economic Openness Index is 140517083 ($t = -2.90$, $p < 0.001$). These results direct that Economic Openness Index (EOI) influence their overall performance in world trade.

Table 5: Results of overall effect analysis

Regression Statistics				
Multiple R	R Square	Adjusted R	Standard Error	Observations
0.998	0.997	0.996	56467.6	29
	df	SS	MS	F
Regression	5	2.49E+13	4.99E+12	1565.49
Residual	23	7333	3188	
Total	28	2.50E+13		
	Coefficients	Standard Error	t Stat	P-value
Intercept	3773338	136036	2.77	0.01
Import trade	21.56	0.54	39.31	1.3
Export Trade	53.54	7.47	7.16	2.6
Trade bal	-2.23	0.60	-3.69	0.001
TOI	-12315453	3598607	-3.42	0.002
Inflation %	325219.6	331576	0.98	0.33

Source: Author's calculation.

In Table 5, the results of multiple regression analysis indicate that there is a positive significant association between GDP and other independent variables like import, export, total trade, economic openness index (EOI) or Trade Openness index (TOI) and inflation rate in the country during 1990-2018. The results are statistically significant ($R^2=0.9$), indicating that all independent variables accounted for 99 percent of the variance in trade from world. The coefficient for independent variables is 3773338. These results indicate that all defined independent variables influence their overall performance in world trade.

CONCLUSION

Trade liberalization is the burning issues of in the last decades of 2020. The trade liberalization is the policy practices for creating trade and investment friendly

environment of the economy. Trade liberalization requires all countries remove trade barriers such as tariffs and discriminatory treatment to expand domestic market access to foreign trade through multilateral trade negotiations.

The present study attempts to examine the trade liberalization and its impact on Nepalese economy over the period of 1990-2018 AD. This study finds that increase in import, export, total trade, trade openness index and the other most important factor inflation has been played the important role for the increase in industrial GDP. All these factors influence the increase in trade but increase in industrial GDP does not influence the total trade. The relationship between INGDP, import trade, export trade, trade balance and TOI i.e. EOI is explained in Table 1, Table 2, Table 3 and Table 4, respectively. The relation between EOI and INGDP has been relatively low at 37 percent, with INGDP having the highest R² ratio of 98 percent with import trade.

Also multiple regression analysis in Table 5 shows positive relation with INGDP and import trade, export trade, total trade, EOI and inflation. It shows R² is 99 percent and constant term is 377388. Nepal's INGDP has shown a positive relation with the various independent variables mentioned. That is to say, although inflation and INGDP are not explained separately in this study, it seems necessary to increase import trade, export trade, total trade, EOI in order to increase INGDP. But even if it raises the normal inflation rate, it also raises the INGDP.

Thus, this study seeks to further clarify the general regression model and the multiple regression models by comparing import trade, export trade, total trade, EOI, as well as inflation in general to increase industrial GDP, but also an increase in INGDP. It can be linked to the development of the country.

REFERENCES

- Adhikary, B.K. (2011). Foreign direct investment, trade openness, capital formation and economic growth in Bangladesh: A linkage analysis. *International Journal of Business and Management*, 6(1),15-25.
- Agbeyegbe, T.D., Stotsky, J.G., & Woldemariam, A. (2004). *Trade liberalization, exchange rate changes and tax revenue in Sub-Saharan Africa*. IMF Working Papers 04(2), 261-284.
- Asfaw, H. A. (2015). Trade policy and economic growth in Sub-Saharan Africa: A panel data approach. *Journal of Economics and Sustainable Development*, 6(3),105-113.
- Azhar, U. (2012). Effects of trade liberalization on economic growth of Pakistan. *Journal of Applied and Emerging Sciences*, 3(1), 72-78.

- Babula, R., & Andersen, L. (2009). The link between openness and long-run economic growth. *Journal of International Commerce and Economics*, 2, 31-50.
- Bhagwati, J., & Srinivasan, T. (1999). *Outward orientation and development: Are revisionists right?* New Haven, USA: Yale University.
- Blavasciunaite, D., Garsviene, L., & Matuzeviciute, K. (2020). Trade balance effects on economic growth: Evidence from European Union countries. *Economies* 2020, 8(54), 1-15. www.mdpi.com/journal/economies.
- Chaudhary, S. K. (October, 2011). Sensitivity of the trade openness in Nepal. *NRB Economic Review*, 23(2), 52-63.
- Cuadros, A., Orts, V., & Alguacil, M. T. (2001). *Openness and growth: Re-examining foreign direct investment, trade and output in Latin America*. CREDIT Research Paper No.01/04. CREDIT, University of Nottingham.
- Das, R.U. (2010). *Impact of trade and investment liberalization on productivity in organized manufacturing in India*. RIS for Developing Countries, India.
- Felicitas, N.D. (2003). Trade policy and its impact on economic growth: The Chilean experience (1960-1998). *Applied Econometrics and International Development*, 3(2), 25-53.
- Fitzova, H., & Zidek, L. (2015). Impact of trade on economic growth in the Czech and Slovak Republics. *Economics & Sociology*, 8(2), 36-50.
- Frank, I. (2009). *The role of trade in economic development*. International Organization, Cambridge University Press, 22(1), 44-71.
- Garibaldi, P., Mora, R., & Zettlemeier, J. (2001). What moves capital to transition economies? *IMF Staff Papers*, Vol.48, Special Issue. Washington, D.C.: International Monetary Fund.
- Goldberg, L.S., & Klein, M.W. (1997). *FDI, trade and real exchange rate linkages South East Asia and Latin America*. NBER Working Paper 6344, Cambridge: Cambridge University Press.
- Hitiris, T. (1990). The completion of the internal market. *European Journal of Political Economy*, 6(4), 584-587.
- IMF Staffs. (2001). *Global trade liberalization and developing countries*. International Monetary Fund, Geneva.
- Jones, E., & Morrissey, O. (2008). Are imports in Africa responsive to tariff reductions? *CREDIT Research Paper 08/02*, School of Economics, University of Nottingham,
- Katz, B. & Istrate, E. (January 2011). *Boosting exports, delivering jobs and economic growth*. Brooking-Rockefeller Foundation: Project on State and Metropolitan Innovation. Washington D.C.
- Khattry, B., & Rao, M.J. (2002). Fiscal faux pas? An analysis of revenue implication of trade liberalization. *World Development*, 30(8), 1431-1444.
- Lee, J. (1997). Government interventions and productivity growth. *Journal of Economic Growth*, Springer, 1(3), 391-414.

- Makhmutova, D.I., & Mustafin, A.N. (2017). Impact of international trade on economic growth. *International Journal of Scientific Study*, 5(6), 140-144.
- Manni, U.H., & Afzal, M. N. I. (2012). Effect of trade liberalization on economic growth of developing countries: A case of Bangladesh economy. *Journal of Business, Economics and Finance*, 1(2),37-44.
- MoF. (2010). Economic Survey 2010-11. Ministry of Finance, Kathmandu: Government of Nepal.
- MoF. (2019). Economic Survey 2019-20. Ministry of Finance, Kathmandu: Government of Nepal.
- MOICS. (2018). *Nepal trade policy review-2018*. Kathmandu: Government of Nepal. www.moics.gov.np
- Morrison, W. M. (2019). *China's economic rise: History, trends, challenges and implications for the US*. Congressional Research Service, www.crs.gov
- Muhammad, Q., Zhu, Y., Yu, Y., Momon, J.A., & Ali, M. (2020). Impact of services trade liberalization on economic growth. *Journal of Critical Reviews*, 7(7),281-285.
- Pack, H., & Page, J.M. (1994). Accumulation exports and growth in the high performing Asian economies. *Carnegies-Rochester Conference Series on Public Policy*. 40, 199-236.
- Parkh, A., & Stirbu, C. (2004). *Relationship between trade liberalization, economic growth and trade balance: An econometric investigation*. HWWA Discussion Paper 282, Hamburg Institute of International Economics, Germany. ISSN: 1616-4714.<http://www.hwwa.de>
- Paulino, A.S., & Thirlwall, A.P. (2004). The impact of trade liberalization on exports, imports and balance of payments of developing countries. *Economic Journal*, 114 (493),50-72. <https://doi.org/10.1111/j.00133.2004.00187.x>
- Rao, J.M. (1999). Globalization and fiscal autonomy of the State. *Background Paper for Human Development Report-1999*, Oxford University Press, New York: UNDP.
- Rodriguez, F., & Rodrik, D.(2000).*Trade policy & economic growth: A skeptic guide to the cross-national evidence*. University of Maryland & Harvard University, USA. <https://drodrik.scholar.harvard.edu>.
- Sun, P., & Heshmati, A. (2010). International trade and its effects on economic growth in China. *Discussion Paper No.5151*, August 2010, Institute for the Study of Labour, <http://hdl.handle.net/10419/46020>.
- Winters, L.A., McCulloch, N., & McKay, A. (2004). Trade liberalization and poverty: The evidence so far. *Journal of Economic Literature*,42(1), 72-115.
- World Bank Group. (April, 2018). *Stronger open trade policies enable economic growth for all*. IBRD.IDA, The World Bank.
- WTO (2003). *Trade and Development*. World Trade Report- 2003. www.wto.org
- Zahonogo, P. (2016). Trade and economic growth in developing countries: Evidence from Sub-Saharan Africa. *Journal of African Trade*, 3(1-2), 41-56.