

THE IMPACT OF TRADE LIBERALIZATION ON BALANCE OF PAYMENTS OFETHIOPIA

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ABSTRACT-This study examines the impact of trade liberalization on the Ethiopia's balance of Payment using the data over the period from 1981to 2012. In order to capture the partial effects of trade liberalization on the balance of payments different variables were included into the model and long run and short run relationships were analyzed with the use of ordinary least square (OLS) method and Error Correction Method (ECM) respectively. The results of the study show that the trade liberalization dummy variable and terms of trade variable is statistically significant and negative, implying that the trade liberalization deteriorates the balance of payments. Therefore in order to mitigate this negative impact and to ensure that trade liberalization will increase both the growth of exports and imports and consequently improve welfare, the government should complement the trade liberalization with a well designed macroeconomic reforms along with specific conditionalities.

JEL CLASSIFICATIONS:C22,C51,E20,F13,F43

KEY WORDS: Balance of Payments, Ethiopia, TradeBalance, TradeLiberalisation

1, INTRODUCTION

Trade liberalization since 1980s has become an increasingly common feature of economic policy in developing countries and most countries in Sub Saharan Africa have moved away from inward looking development strategies as a reaction to the failure of previous import substitution policies. The reforms were generally undertaken within the framework of structural adjustments programs under the auspices of International Financial Institutions. However, they intensively continue with the reform process in the 1990s without being necessarily under the pressure of the institutions. They have liberalized their trading regime with hope of gaining static and dynamic gains from trade, and that the liberalization will increase both the growth of exports and imports and consequently improve welfare, however, its final effect on the balance of payment depends on which one outweigh and the level of prices of traded goods (Santos-Paulino, Thirlwall 2004). Ostry (1991) developed a theoretical framework that took into account different economic circumstance under which trade liberalization policies could be imposed and concluded that trade liberalization policies do not necessarily lead to deterioration of the current account and, hence,

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the balance of payments. Khan (1985) used a Dynamic Computable General Equilibrium model to examine the transitional macroeconomic effects of change in the balance of trade and capital flow. He concluded that the final outcome depends on the structure of the economy and added that for trade liberalization to help improve the balance of payment it must be accompanied by active domestic macroeconomic management. Parikh (2006) concluded that trade liberalization affects output growth in most cases but the growth itself has a negative impact on the trade balance and adverse terms of trade.Rodrik (2006) recommended trade liberalization as the most common policy reform to developing countries but emphasized that it must be accompanied by complementary adjustment policies, particularly macroeconomic reforms along with various conditions in order to be effective and to be ensured to enhance growth.

After nearly two decades of centralized economic policy a new government took over in 1991, and it has since then started extensive policy reforms to transform the economy into market oriented one. The government adopted a Structural Adjustment Program in 1992/93 and this reform package was formulated with regard to the complementarity between trade liberalization and macroeconomic management in shaping the reform outcomes. Finally in 1996 Ethiopia fully adopted trade liberalization based on the extended Sachs and Warner (1995) liberalization dates. The condition for a country to be considered to have liberalized trade is to continue all tariff rates below 40%, non Tarff barriers covering less that 40% of trade, a black marker rate that is less than 20% below the official rate, no state monopoly on major exports and a non- socialist country (Wacziarg, 2008).

2, TRADE LIBERALIZATION AND BALANCE OF PAYMENT

The theory of trade liberalization includes two alternative arguments namely neo liberal and neo structuralist arguments regarding the effectiveness of trade liberalization policies. The economists in support of the neo – liberal view towards trade liberalization argue that trade liberalization is the right policy to solve the problem that had resulted from the inward looking policies adopted by most of the developing countries in the 1950's.According to Milner (1990) trade reforms raise the attractiveness of exports to producers and stimulate their competitiveness in the international trade by removing anti-export bias. Nishimizu and Robinson (1984), and Dorn busch(1992) argue that greater competition leads to better utilization of resources which results in higher growth of productivity due to the easier access to imported inputs that lead to a more complete utilization of productive capacity. In addition, Jenkins (1997) argues that trade liberalization reduces the unproductive rent –seeking activities that are associated with the intervention of government and improves the distribution of income by increasing labor intensive activities that would in turn increase employment.

On the other hand the neo-structural list economists argue that developing countries must adopt policies that protect strategic industries in a way that achieves that dynamic comparative advantage rather than the wholesale policies advocated by the World Bank and the International Monetary Fund which promotes low and uniform tariff rates. Pack (1991), argument for infant industry protection is strengthened by the gains of productivity obtained through learning which

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is normally reflected through dynamic analysis than static. Similarly, Devarajan and Rodrik (1989) argue that even though the theoretical argument for the static case of trade liberalization is convincing, it tends to have a weaker theoretical groundwork when its dynamic aspects are taken into consideration. The inclusion of increasing returns to scale or imperfect competition may lead to a result where trade liberalization causes losses instead of gains depending on which sector expands and which sector contracts. In addition, Ostry and Rose(1992) and Rodrik (2006) argue that an equilibrium real appreciation or depreciation may result from deterioration in the terms of trade depending on the values of a variety of elasticities and thus trade liberalization must be accompanied well designed macroeconomic policies along with different specific conditionalities.

3, EMPIRICAL EVIDENCE

Santos-Paulino and Thirlwall (2004) by using least squares and the general method of moments examined the the impact of trade liberalization between period 1972-1997 on the trade balance and the current account of the balance of payments of different countries of Africa, Latin American and Asia and found that the impact of liberalization is same across all of the regions which is a deterioration of the trade balance and the current account of the balance of payment. However, the extent of the impact of trade liberalization on the trade balance and on the current account was found to depend on the level of protection the country had initially. Lopez (2005) after conducting the study on Mexico using an Autoregressive Distributed Lag model based the theoretical ground work on Thirlwall's balance of payment Constrained Model emphasizes the importance of the balance between the exports and imports and the position of the current account of the balance of payment for the effectiveness of trade liberalization polices in bringing about growth. Whereas, Parikh (2006) concluded that trade liberalization promotes growth but it has a negative impact on trade balance and adverse terms of trade. Similarly, studies done by Melo and Vogt(1984), Bertola and Faini(1991), Thomas and Nash(1991), Greenaway and Sapsford(1994), Jenkin(1996), Joshi and Little(1996), Ahmed(2000), Svedberg(2000), Thomas et al(1991),Helleiner(19994),Bleany(1999) as well as by UNCTAD(1999),they all found quite a mix results of the impact of trade liberalization on exports and imports. The reasons of the conflicting results might be based on the degree and importance of complementary reforms, pre trade liberalization developmental stage, sequence and degree of liberalization of the country as well as the measurement and methodological issues.

Given these ambiguities about the impact of trade liberalization on balance of payment and the caveat used by researchers to generalize the impact on balance of payment through current account and trade balance, it is important to investigate the performance of the balance of payment of Ethiopia before and after the year in which trade liberalization measures where fully implemented (1996) according to the extended Sachs and Warren (1995) trade liberalization dates by using complete data of balance of payments.

4, DATA AND MODEL SPECIFICATION

Time series data covering the period from 1981 to 2012 G.C. from various Institutions namely, UNCTAD, World Bank, Ministry of Finance and Economic Development (MoFED), and



National Bank of Ethiopia (NBE) is obtained to analyze the relationship between trade liberalization and balance of payment.

The model used for the analysis of the impact of trade liberalization on balance of payment is an equation where balance of payment is a function of the growth of world income ,growth of domestic income ,terms of trade, ratio of foreign trade tax revenue to value of total international trade and a trade liberalization dummy.

 $BoP_{t} = \alpha_{0} + \alpha_{1}W_{t} + \alpha_{2}Y_{t} + \alpha_{3}DFTT_{t} + \alpha_{4}TOT_{t} + \alpha_{5}Lib + U_{t}$

Where, BoP is the Balance of Payment, W is the Growth of World income, Y is the Growth of domestic income, DFTT is the ratio of foreign trade tax revenue to value of total international trade, TOT is the Terms of trade, Lib is the Liberalization dummy and U is the Error term, α 's are parameters to be estimated and t is time period (1981-2012).

5, RESULTS AND DISCUSSION

Multivariate time series model enable one to estimate the dynamic effects of the explanatory variables on the dependent variable. However, to undertake estimation or testing procedures it is important to make sure that the variables are stationary. Accordingly, a stationarity test was conducted on the variables that are under study and found that all the said variables became stationary at first difference. After finding that variables are stationary the long run relationship i.e., cointegration were tested by performing an Augmented Dicky Fuller test on the residual from the regression of the dependent variable on the independent variables. If one rejects the null hypothesis that there exists a unit root then the distribution of the error term is stationary which therefore, indicates that there exists long run equilibrium.

Table1: Results of the Long Run model; Dependent Variable: Logarithm of Balance of Payments

Variable	Coefficient	t-value	P-value
Log (Growth of domestic income)t	-0.018	-0.13	0.89
Log (Growth of world income)	-0.241	-1.43	-0.19
Log (Terms of Trade)t	-1.945	-2.19**	0.06
Log (foreign trade taxes ratio)t	-0.556	-0.61	0.59
Liberalization Dummy	-0.723	-2.09**	0.07

** Significant at 5% significance level

Source: Own Computation

Table2: Augmented Dicky Fuller Test Statistics for the Residual Error Term

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	Test statistic	1%Critical Value	5%Critical Value	10%Critical Value
Z(t)	-6.546***	-3736	-2.994	-2628

***Significant at 1% significance level

Source: Own Computation

As can be observed from Table 2, the error term from the regression of the logarithm of balance of payment on the other explanatory variables is stationary indicating the existence of co integration, hence, a long run relationship between the variables. Table 1 shows that trade liberalization dummy has a significant and deteriorating effect on the balance of payment. Similarly, terms of trade found to be statistically significant but with negative sign indicating that terms of trade affects other components of the balance of payments negatively even if it improves the trade balance or the current account. However, the logarithm of foreign trade taxes ratio is statistically insignificant may be because of trade liberalization is applied more on non tariff barriers than on taxes on both imports and exports.

Now in order to capture how much of the disequilibrium is being corrected in every period error correction mechanism has been used. The Granger representation theorem (Verbeek 2004) states that there exists an error correction mechanism if a set of variables are found to be cointegrated. Accordingly the error correction model was examined and in order to ensure that model is correct and results are robust different tests such as Ramsey Regression Equation Specification Test(RESET) misspecification, Breusch-Pagan/Cook-Weisberg Error for test for hetroskedasticity, Lagrange Multiplier test for Autoregressive Conditional Hetroskedasticity (ARCH) effects ,Durbin's alternative test for autocorrelation and Bruesch-Godfrey Lagrange multiplier test for serial correlation were conducted. All of the tests for the existence of misspecification, heteroskedasticity and autocorrelation show that none of these problems significantly exist. Therefore, the error correction term of the model is areliable estimate and the result is robust.

As can be observed from the table below there is a statistically significant error correction term where the short term fluctuations adjust to the long run equilibrium at a 135% per annum. This indicates that the fluctuations take less than a year to go back to their initial level of equilibrium

Variable	Coefficient	t-value	p-value
Δ Log (Growth of domestic income)t	.033	0.27	0.81
Δ Log (Growth of world income)	129	-0.98	0.37
Δ Log (Terms of Trade) t	.997	0.89	0.41

Table3: Estimation Results of the ECM; Dependent Variable: Δ Log (Balance of Payment)

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Δ Log (foreign trade taxes ratio)t	.119	0.15	0.91
Liberalization Dummy	-165	0.65	0.55
e _{t-1}	-1.35	-5.83***	0.00
F (6, 20) = 7.39			
Number of Observation			27

*** Significant at 1% significance level

Source: Own Computation

6, CONCLUSION AND POLICY IMPLICATION

Since almost all existing literatures argue that consequences of trade liberalization measures on balance of payments are ambiguous(Ostry 1991,Khan 1985,Santous-Paulino 2004),this research has put particular emphasis on the impact of trade liberalization on Ethiopia's balance of payment during the sample period 1981-2012,particularly since 1996 when trade liberalization were fully adopted by the country.

In this endeavor, time series econometrics was applied to examine the relationship between trade liberalization and the balance of payments of Ethiopia. OLS was used to obtain the long run relationship between the variables and ECM to know the adjustment of the short run fluctuations to the long run equilibrium. The existence of long run relationship was also tested by conducting an Augmented Dicky Fuller (ADF) test on the error term from the regression run to obtain the long run relationship. The error term was found to be stationary indicating the existence of a coitegration, i.e., long run relationship between the variables, whereas the adjustment of the short run fluctuations to the long run equilibrium was found to be in less than a year as the coefficient of the lagged error term was found to be statistically significant even at 1% significance level.

The result of the study showed that, the trade liberalization measures adopted by Ethiopia have adversely affected the balance of payment as demonstrated by the negative and statistically significant coefficient of the liberalization dummy variable used to capture the pure effects of trade liberalization on the balance of payment. Similarly, the terms of trade also found to be statistically significant and negative implying that imports growth outweigh the exports growth. However, the ratio of foreign trade tax revenue to value of total international trade was found to be statistically insignificant. Therefore, in order to reduce the negative impact of trade liberalization the government should select some industries that are strategic to the economy and protect these industries rather than allowing a full-fledged removal of all trade barriers. In nutshell, in order to change negativity into positivity and to have the desired outcome of the trade

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liberalization policy the government must complement it with well-designed and active macroeconomic reforms along with specific conditions.

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