

Determining Macroeconomic Factor of Trade Policy: An Empirical Analysis of South Asia

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Abstract. Trade policy debate surrounds within three major uncommon issues. One of them has investigated “whether export-oriented or import-substitutes policies lead to higher-level of economic growth”. The mainstream of research is to contribute in the field of international trade by analyzing the influence of potential variable. We measured the variable in favor of China’s growth with Hausman model which detects endogenous regressor and gives a more precise choice of accuracy in model selection. Pooled OLS regression model, the fixed effect of LSDV and random effect have been applied to see the relationship. The research output presents evidence of trade and exchange rate is positively correlated with economic growth. However, the existence of some neglected trade barriers in South Asian region which may cause to discourage trade openness and unwelcomed to FDI. The output tends to recommend potential feedback to liberalize trade and positively stress on FDI between neighboring countries that have high economic prospects.

1. Introduction

Global growth became fragile after the crisis of 2008-2009 as last two decades trade growth became weaker at any time while policy makers are on firefighting mode focusing on macroeconomic policies. According to the Neoclassical model of exogenous growth, trade openness as statistically proxy factor of trade policy can be a hurdle or beneficial for product specialization’s pattern while economic growth wouldn’t affect in long term. On other hand, trade policy is only influencing component to change in long term economic growth in both ways. As international trade openness is the key to leads growth in GDP volatility^[1]. Although openness can lead to lower GDP volatility. Particularly, it may the reason for exposure to domestic shocks and push forward to country’s demand and supply towards diversification. The advantage of only export-oriented policies overstated. Global Competitiveness Report 2016-2017 stated, decline in economies openness about 10 years at development stages poses a risk on the ability of a country’s growth and innovation. As finding a direction to accelerate their already achieved steady state of the economy is a big challenge of Sri Lanka. Chinese economy slows as compare to past but growth remain anemic in the developed world^[2]. China’s trade volume expanded 6.5 billion to 73.9 billion USD from 2001-2012 which accounts 26% average rate of growth. Besides this, concluded compassion based index on the trading structure and evaluated ties between China and its potential corporate 14 countries. Another analysis examined by using the Gravity model that showed the great potential in trade structure among China and India under Belt and Road Initiative. Observes, China’s engagement has been raised dramatically in recent years in the South Asian region. China has been followed the export-oriented model to get higher economic development and now ultimate it has moved into the main fount of outward FDI. Investigated, China’s FDI still not kept the stride in term of trade^[3]. This research is useful to quantify the significant effect of China’s GDP.

2. Literature Review

Trade policy debate surrounds within three major uncommon issues. Whether export-oriented or import-substitutes policies lead to higher-level of economic growth. Secondly, perhaps trade openness is only one of the promoter of economic. However recently, trade openness becomes “free

trade” where almost all obstacles are eliminated. “Trade intensity of an economy is trade openness” concluded ^[4]. More precisely, trade openness has directly associated to impose barriers by the government on international trade, explained. Analyzed that biggest FDI recipient was US in 2016 where inflow compassed \$391 billion as the UK \$254 and China \$134 billion US dollars. An illustration question: how trade openness and FDI linked with economic growth and focus on policy, this needs to be a more theoretical and empirical literature review. Technology shift and spillovers might be a paramount. Initially, Theory of economics does not clarify how economic growth affected by the exchange rate regime. Discussed peg has an absolute influence on investment and quick growth can derive from floating in the regime. Thought, the fixed exchange rate could lead to higher economic growth, in the long run, considering the supporter of trade openness. The existence of a relationship between economic growth and exchange rate indicates vaguely: argued by who elicited, the flexible exchange rate is more helpful to accelerate economic shocks towards the rapid side. Furthermore, as stated in FDI is one strong tool of growth and to increase prosperity worldwide. Professor Eswar ^[5] said on President Trump imposed tariff on Chinese import actually targeted industrial policy “We are looking for to go into trade war where both would be suffered. According to World Economic Forum report, the Chinese government could convince enterprises to cut the US business services or shift from US Boeing aircraft to Airbus. Which may lose 179000 jobs in the aviation industry and 85000 reductions due to cut off business services for US.

3. Methodology

FDI over trade openness has a bidirectional relationship by getting an advantage or recent progress in Granger non-causality heterogeneous econometrics model ^[6]. Initially, regression analysis, Fixed and random effect test are applied to see association among GDP and explanatory variable. This study obtained data from WBG and IMF to mainly check explanatory variables of 4 countries over China’s GDP included Pakistan, India, Bangladesh, and Sri Lanka by using cross-sectional panel data from the year 1990 to 2016.

4. Measurement and interpretation

Regarding Pooled regression model, it doesn’t distinguish among the different countries that we selected. In another way, using pooling method we combined all countries to deny the existence of heterogeneity effect. Initially, we checked the pooled OLS regression model as it reveals whether China’s GDP has a correlation between explanatory variable. In Table 1, Y as GDP and our other variables are trade openness, foreign direct investment, exchange rate, export, and import respectively. The standard regression equation may write as: by using matrix equation.

$$y = X\beta + \epsilon \quad (1)$$

Where y is a T-dimensional vector obtaining observations on the dependent variable, X is a T * k is the matrix of the explanatory variable. Beta is a k-vector of the coefficient with the addition of disturbances or standard error.

Table 1

Method: Panel EGLS (Cross-section random effects)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.50E+11	8.76E+10	3.99895	0.0001
TRADEOPENNESS	-8.38E+09	2.19E+09	-3.830744	0.0002
FDI	-3.83E+10	2.62E+10	-1.459076	0.147
EXCHANGERATE	9.31E+08	1.03E+09	0.907209	0.366
EXPORTS	4.148304	0.061937	66.97667	0
R-squared	0.978093	Durbin-Watson stat		0.742528
GDP = C(1) + C(2)*TRADEOPENNESS + C(3)*FDI + C(4)*EXCHANGERATE + C(5)*EXPORTS + [CX=R]				

Table 2

Hausman Test				
Cross-section random effects test comparisons				
Variable	Fixed	Random	Var(Diff.)	Prob.
TRADEOPENNESS	-1.3906E+10	-8377924068	6.24901E+18	0.027
FDI	-3.5507E+10	-38266141142	7.5381E+20	0.92
EXCHANGERATE	-189819115	930923833.7	1.04185E+18	0.2722
EXPORTS	4.148543	4.148304	0.001526	0.9951
Chi-Sq. Statistic	9.046184		Prob.	0.06

Hausman test recommended us to choose Random effect rather Pooled regression. According to table 1, Our Durbin-Watson statistic 0.74 value shows positive auto correction and probability of T-statistics shows more than 0.05 for FDI and exchange rate and less than 0.05 for trade openness and export. Prob. (F Statistic) is overall significant results are 0.00 and R-squared also shows the variation ratio of all variable's value is 0.97%. With the objective to check either fixed effect or random effect is more close to factual results, we analyzed the Hausman Test. We designed the hypothesis to check the appropriate model. *H0*: Random effect model is appropriate, *H1*: Fixed effect model is appropriate

We anatomize the random effect in favor of China as well whereas results depicts that openness has a negative correlation, but others like import, exchange rate, FDI and especially export has positively correlated with China's GDP. Durbin-Watson statistic value is 1.05 and positively autocorrelation and Prob. (F statistic) value was 0.00. Overall random effect model reveals the model is most fitted and significant. Moreover, R-squared value is 0.98% as variation rate is too high for our selected variable which ultimately positive in favor of China's GDP.

5. Concluding remarks

Research suggests that GDP has a strong correlation with the exchange rate and export of a country. We have removed the "import" factor for the sake of required implication of random effect while it was there in Pooled OLS regression with resulting negatively. Trade openness and FDI result negative correlated with economic growth means existence of some neglected barriers in South Asian region which may cause to stop trade liberalization. Overall results give the answer that export-oriented policies are more favorable to adopt for those countries, though it may because of selected countries that already been on developing stage. The random effect in favor of China's GDP against Pakistan, Sri Lanka, Bangladesh, and India have a negative relationship with trade openness but rest of factors are strongly correlated and have a significant impact for China's economic growth. Moreover, the government should focus on trade policies especially for trade liberalization and encourage FDI. The outputs tend to recommend potentially strong feedback on trade openness and FDI as it should be on priority for states and need to find a way where they can eliminate levies, tariff or it may involve some serious factor. Possibilities are so high to dramatically enhance economic condition by coping up that unsupported component with neighboring countries.

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