

# The Impact of Trade Promotion on Economic Growth — The Emperical Evidence From A Panel Dataset

Huong Le<sup>1,2</sup>, Ly Bui<sup>1</sup>

(1. School of International Business and Economics, Foreign Trade University, Vietnam; 2. Colorado State University, USA)

**Abstract:** Marketing in general and trade promotion strategy, particularly, have to play an important role in promoting development of countries, especially of developing countries that seek to make exports as an engine for economic growth. This paper reviews the roles of marketing by investigating the impacts of trade promotion on development which is proxied by the growth rate of GDP. The authors test the hypothesis that the more spending of government on trade promotion activities leads to higher rate of economic growth. The study is applied for a sample of 30 countries including 15 developed and 15 developing countries in the period of 1970-2015. The results of a fixed effect regression model show that an increase in government expenditure of trade promotion also plays an important role on international trade. The estimation results also suggest that countries with higher levels of government expenditure on trade promotion activities will have higher degrees of its trade openness.

**Key words:** economic growth; development; marketing; trade promotion; government expenditures **JEL codes:** E01, M3

## **1. Introduction**

Marketing has been playing an important role as a functional discipline of business and economy. It might be defined as a dynamic process of society through which business enterprise is integrated productively with purpose of societies, economies and human values. Marketing helps satisfying individual and social values, needs and wants. Marketing has its focus on the customer and on the individual making decisions within a social structure and within a personal and social value system. The marketing is considered as the process through which economy is integrated into society to serve human needs (Alex, 2005).

Therefore, in macroeconomic, marketing has been holding a crucial position in promoting development and economic growth in almost all countries (Kawaku, 2014). It is considered as the most effective stimulus of economic development, especially in developing entrepreneurs and managers speedily and effectively. Moreover, marketing satisfies what is the greatest need of the governments of a developing country; and provides a systematic strategy in a vital domain of economic activity. It is also the central in a liberalized developing economy through its strategies on trade promotion.

Huong Le, Ph.D., Foreign Trade University, Colorado State University; research area/interest: international economics, marketing. E-mail: huongle@colostate.edu.

Ly Bui, Ph.D., School of International Business and Economics, research area/interest: international trade, international economics.

Recent studies suggest that marketing in general and trade promotion, particularly, has an impact on exports. However, these studies have not fully explored the roles of trade promotion on economic growth, in general. This paper focuses on an empirical estimation to evaluate the role of marketing in the context of economic development and economic growth by employing a fixed effect model to test the correlation between trade promotion strategy and economic growth in a sample of 30 countries. The role of trade promotion strategy is proxied by the government expenditure on its trade promotion activities.

This paper is organized into five sections. The second section reviews the literature of the relationship between economic growth and trade promotion activities as well as the determinants of economic growth. The third section will introduce hypothesis, data and econometric models. The results of empirical investigation will be analyzed in the fourth section. Conclusions with some recommendations are provided in the fifth section.

### 2. Literature Review

### 2.1 The Relationship between Economic Growth and Trade Promotion Strategy

2.1.1 Economic Growth

The topic of economic development and economic growth have been one of the most enduring concerns of economists. Economic development is defined as an increase in national production that result in an increase in average per capita gross national product (GNP) (Alex, 2005).

Economic development is also considered as rapid growth improvement achieved in decades rather than centuries (Kenen, 2000). The strategies of economic development among others include industrialization and international trade as well as trade promotion which incidentally, are the fundamental objectives of most developing countries. Most countries consider economic growth as the achievement of social and economic targets including satisfaction of needs such as higher living standard, better education, more effective government, less inequalities; as well as improvements in moral and ethical responsibilities of both the public and private sectors of the economy. In recent decades, marketing in general and trade promotion particularly, has been used by most governments to achieve the above objectives.

Economic growth is defined as an increase in the inflation adjusted market value of the goods and services produced by an economy over time. Economic growth is driving by exports and government strategies to boost exports, international trade, labor workforce, technology progress or government expenditures. IMF (2012) measures economic growth as the percent rate of increase in real gross domestic product, usually in per capita terms.

There are many empirical and theoretical studies focusing on determinants of economic growth. However, the roles of trade promotion strategies have been neglected. This paper employs the growth rate of GDP per capita as a proxy for economic growth to investigate the relationship between trade promotion strategies and economic growth.

2.1.2 Trade Promotion Strategy

Trade promotion is one of the most effective strategies in Marketing. Trade promotion strategies have not only been used by enterprises but they are also used by governments to promote their exports and international trade as well as their economic growth.

At company level, trade promotion strategies have been known as sales promotion. According to Blattberg and Levin (1987), sales promotion are special incentives, which are offered by manufacturers to their distribution

channel members. Similarly, Nwielaghi (2003) considers trade promotion as an aspect of sales promotion which creates incentives for channel members to share with consumers and create sales for manufacturer's merchandise. This strategy is also called "push strategy", which includes a forward thrust of effort whereby a manufacturer employs personal selling, trade advertising, and trade-oriented sales promotion to wholesalers and retailers. The objective of this strategy is to encourage both wholesalers and retailers to stock the product and provide strategic shelve space for it and stimulate consumers to buy from their outlets.

At government and macroeconomic level, trade promotion strategies include trade contest, trade fair, trade allowance, which are used to push exports and imports as well as international trade or to attract more FDI for the country (Michael & Ogwa, 2013).

2.1.3 Government Expenditure on Trade Promotion: Share of GDP

Government expenditure relative to GDP or government share of GDP has been used to proxy for government activities and intervention. Government expenditure is one of the main driving factors of economic growth. However, the correlation between government spending and economic growth is still controversial.

There are few studies found that more government expenditures can stimulate growth. For example, Ram (1986), Holmes and Hutton (1990) found a positive relationship between government expenditures and growth with bidirectional causation then in turn economic growth caused government spending to expand. Harrison (2002) argued that government spending relative to GDP means a higher and better government intervention in the economy. Therefore, an increase in the government expenditure leads to a better economic management of the government.

However, government expenditure in the economy is constrained by financial integration hence we might expect to see a negative relationship between the government expenditure and economic growth in the context of financial liberalization. For example, studies of Grier Tullock (1989), Barro (1990), Miler and Russek (1997), found a negative effect of government expenditures on economic growth. This indicates that an increase in share of government expenditures to GDP would lead to a decrease in economic growth.

Trade promotion strategies have been used by governments to boost their exports and economic growth. There are few studies investigating the roles of trade promotion strategies on exports while ignoring its impacts on economic growth. Therefore, the linkage of economic growth and trade promotion strategies is still an open question. Government expenditure on trade promotion is used as a proxy for trade promotion. In this paper, authors try to test a hypothesis that more government spending on trade promotion leads to higher growth rate of GDP.

# 2.2 The Determinants of Economic Growth

### 2.2.1 Trade Openness

International trade and exports have been considered as the main determinant of economic growth. Heckscher-Ohlin's general equilibrium model of trade between two countries with two factors of production and two goods suggests that countries should focus on area of comparative advantage. In particular, countries will export goods whose production is intensive in the factor they are abundantly endowed. The model indicates that an increase in the exports will lead to an upward trend in the real returns to the factor used in the production of the exported goods and a decline in the returns to the other factor. Hence, factor-abundant countries would gain from international trade, while factor-scarce countries would lose (Stolper & Samuelson, 1941). For example, Tyler (1981) employed a sample of 55 developing countries and found that exports and investments are the main driving factors of economic growth.

However, trade openness might depress economic growth. Economists may argue that the effect of FDI on economic growth is dependent on absorption's abilities of the host country such as its technological advance, the economic stability, the state investment policy and the level of financial integration as well as trade openness. Capital formation, which can be affected by FDI inflows, is one of the most important driving factors of economic growth. If FDI depresses domestic capital formation the FDI may cause a decrease economic growth.

2.2.2 Technological Progress

Recent studies found that technological progress and economic growth are truly correlated to each other, which indicated that technological progress is the main determinant of economic growth. For example, the study of Boskin & Lau (1992) showed that technological progress generated about 49 to 76 percent on economic growth in developed countries. Solow (1956) also found that technological progress contributes 87.5 percent on economic growth of the US's economy since technological progress has improved labor productivity then the growth rate of GDP.

The authors expect a positive effect of technological progress on economic growth. In this paper, the number of patents is proxied for technological development.

2.2.3 Unemployment Rate

According to Martin and Rogers (2000), unemployment indicates a high social cost for the individual and represents a high economic cost for the society. Recent empirical studies suggest a negative effect of unemployment on economic growth.

High unemployment implies an inefficient use of resources and a lower aggregate demand which harming current growth and reducing private investment in physical and human capital as well as harming future production capacities. Unemployment causes an erosion of human capital since people unemployed for long periods may become less skillful. Martin and Rogers (2000) suggest that economic growth is generated by learning-by-doing then unemployment reduces human capital accumulation and therefore economic development. Andrienko and Guriev (2004) studied unemployment and liquidity constraints and showed that unemployment lead to restriction in labor migration and may result in lower economic growth.

Unemployment situation might erode individual self-esteem and life satisfaction as well as confidence in the society (Ochsen & Welsch, 2011), which causes social dislocation, leading to unrest and conflict and decreasing labor market performance, therefore depressing economic growth.

2.2.4 Population

Population is the other determinant of development or economic growth since the growth of population, especially the working-age population, is related to the size of labor workforce. There are two alternative explanations for the relationship between population and economic growth. One expected a positive effect might argue that an increase in the number of people in a country leads to an increase in the total workforces and therefore a higher rate of income shares and higher rate of economic growth. On the other hand, an increase in population generates a higher rate of unemployment and results in a decrease in the labor share of income then leads to a downward trend of economic growth. This paper utilizes log population as a proxy for the size of labor workforce.

# 3. Hypotheses, Methodology and Data

This paper examines the relationship between trade promotion which is proxied by government expenditure

on trade promotion strategies and economic growth of 30 countries. The authors try to test the following hypotheses:

- The more spending of government on trade promotion leads to higher rate of economic growth
- The higher level of government expenditure on trade promotion activities leads to higher degrees of trade openness.

The paper employs the fixed effect regression to test the relationship between government spending on trade promotion and economic growth of 30 countries. The advantage of the fixed-effects model is that it can control for all time-invariant different countries. Moreover, the fixed-effect can reduce omitted variable bias due to time invariant characteristics (Torres-Reyna, 2007). In addition, panel data are more informative and efficient than pure time-series or pure cross-sectional datasets, and their econometric analysis better captures the complexity of economic behavior (Torres-Reyna, 2007). One drawback of the fixed-effects model is that it can only explain variations within a country and we may lose information from cross-country variations (Dunhaupt, 2013).

The log-linear form (with an error term,  $\varepsilon_{it}$ ) is utilized to estimate the coefficient of variables. The value of coefficients could then be interpreted in terms of percentages or elasticities (Trinh & Nguyen, 2015). The baseline specification for the sample with all countries in is as follows:

# $LogGDPgrowth_{it} = \beta_1 + \beta_2 LogGovshare_{it} + \beta_3 LogTrade_{it} + \beta_4 LogPatent_{it} + \beta_5 Logunem + \beta_6 Logpop_{it} + \gamma_2 E_2 + ... \gamma_n E_n + \varepsilon_{it}$

Where *i* and *t* designate country and time period respectively. The dependent variable is the GDP growth rate. Govshare is the total government expenditure on trade promotion in each country; Trade openness is measured as the ratio of the sum of imports and exports and GDP; Patent is total patent application per year and used as a proxy for the technological progress, Unem is unemployment rate of each country; Pop is the working-age population;  $\beta_k$  is the coefficient for the independent variables.  $\varepsilon_{it}$  is the error term.  $E_n$  is the entity n.  $\gamma_n$  is the coefficient for the binary country regressors, while  $\delta_n$  is the coefficient for the binary time regressors.

Table 1 presents the data sources of trade openness, technological progress and the other explanatory variables. Log per capita GDP is a proxy for economic development or economic growth from Penn World Table 8.1. Trade openness is measured as the ratio of the sum of imports and exports and GDP. The data of trade openness index, government expenditure on trade promotion strategy as share of GDP and unemployment rate are from WDI.

Variables	Definitions	Sources	
Economic Growth	The growth rate of GDP per capita	Penn World Table 8.1	
Trade Openness	Exports+imports/GDP	WDI	
Government Expenditure on Trade Promotion Unemployment Rate	The government share of expenditures on trade promotion, as a percentage of GDP Unemployed persons/Labor force	WDI, and statistical dataset of individual country. WDI	
Population	The working-age population (defined in this study as ages 16-60, in thousands)	Penn World Table 8.1	
Technological Progress	Total of patent applications	WDI	

 Table 1
 Definitions of Variables

Patent (Total patent application per year), following (Guerriero & Sen, 2012), is used as a proxy for the technological progress. The total patent applications per year are calculated by the sum of total patent applications of countries' residents and countries' non-residents. Log population is a proxy for the size of labor workforce. The

data of total patent application and population are collected from Penn World Table 8.1 as well. Table 2 is the summary statistics for those above control variables.

Variables	Obs	Mean	Std. Dev.	Min	Max
LogGDPpcpt	1320	8.785112	1.462294	4.716616	26.00782
Logpop16_60	1320	3.239044	1.446383	0.5990447	7.217087
Govshare	1283	0.1570083	0.05335895	0.02975538	0.2898661
Unemrate	902	7.240133	4.206879	.7	25
Patent_A	1104	35330.6	84423.47	0	652777

Table 2 Summary Statistics of Variables

Source: Author's calculation

# 4. Results and Analysis

Table 3 reports the relationship between government expenditure on trade promotion activities and economic growth. The estimated results indicate that the effect of government spending of trade promotion on economic growth which is proxied by the growth rate of GDP is positive and strongly significant in all models.

Each table includes five columns. Column (1) considers the linkage of the dependent variable and government expenditure on trade promotion activities. Column (2) evaluates the partial impact of government spending on economic growth controlling for the degree of trade openness and adding the proxy for technology progress in Column (3). We introduce unemployment rate and logpop as a proxy for the size of total labor workforce is added in Column (4) and (5), respectively.

The results are generally consistent with the hypothesized relationships introduced in the previous section, in almost all specification. As hypothesized, the government expenditure on trade promotion has a positive and strongly significant impact on economic growth. The results are consistent with the postulated hypothesis that more government spending on trade promotion leads to an increase in economic growth. A one percent increase in the government expenditure is associated with an increase of one percent in economic growth rate (Table 3, Column 1-5). The results are consistent with other study of ITC (2016) which concludes that GDP returns are larger than export returns: a one percent increase in export budgets generates a 0.065 percent increase in GDP. The study of ITC also found that a \$384 increase in GDP for every extra dollar spent in export promotion in the median country.

Table 3 also display a strongly significant and positive effect of trade openness measured as the ratio of the sum of exports and imports volumes and GDP in all specifications. In general, a one percent increase in trade openness results in a 1.9 percent increase in economic growth. The results are consistent with many previous studies, which show that the more open of the economy leads to a higher rate of economic growth.

As expected, the unemployment rate has negative and strongly significant effects on the growth rate of GDP for all specifications. The effect is big in size, a one percent increase in unemployment rate results in a 2 percent decline in economic growth. The results are associated with most of previous theoretical literature and empirical studies which indicated that the higher unemployment rate would be accompanied by a decrease in development. One reasonable explanation for this result is that higher unemployment rate weakens the economies, create more problems and expenditures of government such as unemployment benefits.

The increase of the numbers of total patent applications lead to an increase in economic growth. To put it differently, technological progress proxied by the number of total patent applications motivate economic health.

The coefficient of the size of economy proxied by log population is positive and strongly significant, which suggests that an increase in the amount of population is consistent with a higher rate of economic growth since it expands the size of labor workforce.

Dependent variable: GDP growth						
		(1)	(2)	(3)	(4)	(5)
Variables		GDPgrowth	GDP growth	GDP growth	GDPgrowth	GDPgrowth
logGovshare		1.741***	1.011***	0.929***	0.678***	0.244**
		(0.155)	(0.135)	(0.117)	(0.117)	(0.0990)
logTrade			1.946***	1.856***	1.061***	0.456***
			(0.0875)	(0.0780)	(0.0767)	(0.0710)
logPatent				0.116***	0.271***	0.0749***
				(0.0274)	(0.0264)	(0.0241)
logunem					-0.319***	-0.225***
					(0.0474)	(0.0394)
logpop						3.004***
						(0.160)
Constant		4.140***	-1.691***	-2.054***	1.214***	-3.711***
		(0.418)	(0.444)	(0.407)	(0.373)	(0.404)
Observations		1,283	1,271	1,093	779	779
R-squared		0.091	0.349	0.460	0.450	0.626
Number	of	30	30	30	29	29
Country_name1						
Fe		Yes	Yes	Yes	Yes	Yes

Table 3	The Correlation between Government Spending on Trade Promotion and Economic Growth:
	Dependent variable: CDP growth

 Table 4
 The Correlation between Government Spending on Trade Promotion and Trade Openness:

 Dependent Variable – Trade Openness

Dependent variable – Trade Openness					
	(1)	(2)	(3)	(4)	(5)
VARIABLES	logTrade	logTrade	logTrade	logTrade	logTrade
logGovshare	0.354***	0.105***	0.0317	0.0519	0.00389
	(0.0426)	(0.0377)	(0.0382)	(0.0508)	(0.0499)
logGDPgrowth		0.147***	0.188***	0.192***	0.115***
		(0.00659)	(0.00788)	(0.0139)	(0.0179)
logPatent			0.0370***	0.0473***	0.0219*
			(0.00872)	(0.0119)	(0.0122)
logunem				-0.319***	0.0263
				(0.0207)	(0.0202)
logpop					0.625***
					(0.0948)
Constant	3.069***	2.441***	1.901***	1.695***	0.658***
	(0.115)	(0.101)	(0.117)	(0.147)	(0.213)
Observations	1,271	1,271	1,093	779	779
R-squared	0.053	0.323	0.426	0.344	0.380
Number of Country_name1	30	30	30	29	29
Fe	Yes	Yes	Yes	Yes	Yes

The paper also employs the role of trade promotion on the degrees of trade openness. The proxy of trade openness is the ratio of the sum of exports and imports volumes and GDP. The higher ratio means higher level of trade openness. The results of a fixed effect regression, which is reported in Table 4 indicates that more

government spending on trade promotion activities is consistent with a higher degrees of trade openness. The result suggests that government activities on trade promotion plays a very important role in exports and imports.

# 5. Conclusions and Recommendations

Recent studies on the role of marketing in general and trade promotion, particularly focus on its impacts on exports. This paper employs a fixed effect regression model to test the linkage between the role of trade promotion on economic growth using an annual dataset of 30 countries. The growth rate of GDP and the government expenditure on trade promotion strategies are proxied for economic growth and the role of trade promotion, respectively. The hypothesis is postulated that more government spending on trade promotion leads to higher rate of economic growth as well as higher level of trade liberalization in that country.

Few interesting stylized facts emerge from the results:

- The government expenditure on trade promotion has a positive and strongly significant impact on economic growth which suggests trade promotion has played an important role in stimulating economic growth.
- Trade openness, technological advance and size of labor workforces are the main determinant of economic growth, while unemployment depresses economic development.

The estimation results indicate the effectiveness of trade promotion strategies of governments on stimulating exports and economic growth. Macroeconomic policy should include export and promotion strategy. To make trade promotion strategies are more effective, government should link them with other economic strategy initiatives. Private enterprise should fully involve and committed with public enterprises and government in activities of trade promotion strategies.

### References

- Alex N. Ifezue (2005). "The role of marketing in economic development in developing countries", *Innovative Marketing*, Vol. 1, No. 1.
- Andrienko Y. and Guriev S. (2004). "Determinants of interregional mobility in Russia: Evidence from panel data", William Davidson Working Paper Number 551.
- Barro R. J. (1990). "Government spending in a simple model of endogenous growth", *Journal of Political Economy*, Vol. 98, No. 1, pp. 103-125.
- Blattberg and Levin (1987). "Modeling the effectiveness and profitability of trade promotions", *Marketing Science Journal*, Vol. 6, pp. 125-127.
- Boskin M. J. and Lau L. J. (1992). "Capital, technology and economic growth", in: Rosenberg R., Landau R., and Mowery D. C. (Eds.), *Technology and the Wealth of Nations*, Stanford, California: Stanford University Press.
- Dunhaupt P. (2013). "The effect of financialization on labor's share of income", Institute for International Political Economy Berlin, Working Paper, No. 17/2013.
- Grier K. B. and G. Tullock (1989). "An empirical analysis of cross-national economic growth, 1951-1980", *Journal of Monetary Economics*, Vol. 24, pp. 259-276.
- Guerriero M. and Sen K. (2012). "What determines the share of labor in national income? A cross-country analysis", IZA DP No. 6643.
- Harrison A. E. (2002). "Has globalization eroded labor's share", Mimeo, University of California Berkeley.
- Holms J. M. and P. A. Hutton (1990). "On the causal relationship between government expenditures and national income", *Review of Economics and Statistics*, Vol. 72, pp. 87-95.
- IMF (2012). "Statistics on the growth of the global gross domestic product (GDP) from 2003 to 2013".
- ITC (2016). "Investing in trade promotion generates revenue", technical paper.
- Kenen P. B. (2000). The International Economy (4th ed.), Cambridge University Press.

Kwaku A. (2014). "The role of marketing in development", LCBR European Marketing Conference.

Martin P. and Roger C. (2000). "Long-term growth and short-term economic instability", *European Economic Review*, No. 44, pp. 359-381.

Miller S. M. and Russek F. S. (1997). "Fiscal structures and economic growth: International evidence", *Economic Inquiry*, Vol. 35, pp. 603-613.

- Nwielaghi B. M. and Ogwo E. (2013). "Trade sales promotion strategies and marketing performance in the soft drink industries in Nigeria", *International Journal of Marketing Studies*, Vol. 5, No. 4.
- Nwielaghi B. M. (2003). "Trade sales promotion strategies and marketing performance in the soft drink industries in Nigeria", University of Port-Harcourt.
- Ochsen C. and Welsch H. (2011). "The social costs of unemployment: Accounting for unemployment duration", *Applied Economics*, Vol. 43, No. 27, pp. 3999-4005.
- Ram R. (1986). "Government size and economic growth: A new framework and some evidence from cross-section and time series", *American Economic Review*, Vol. 76, pp. 191-203.

Solow R. M. (1956). "A contribution to the theory of economic growth", *Quarterly Journal of Economics*, Vol. 70, No. 1, pp. 65-94.

Stolper W. and Samuelson P. (1941). "Protection and real wages", Review of Economic Studies.

Torres-Reyna O. (2007). Panel Data Analysis: Fixed and Random Effects Using Stata, Princeton University.

Trinh N. and Nguyen Q. (2015). "The impact of foreign direct investment on economic growth: Evidence from Vietnam", *Developing Country Studies*, Vol. 5, No. 20.

#### Appendix

Country Listings				
Country	Developing Countries	Country	Developed Countries	
1	Argentina	16	Australia	
2	Brazil	17	Austria	
3	Chile	18	Canada	
4	China	19	Finland	
5	Colombia	20	France	
6	Costa Rica	21	Germany	
7	Dominican Republic	22	Ireland	
8	Hong Kong	23	Italy	
9	Iran	24	Japan	
10	Mexico	25	Netherlands	
11	Paraguay	26	New Zealand	
12	Philippines	27	Spain	
13	Republic of Korea	28	Sweden	
14	Singapore	29	United Kingdom	
15	Thailand	30	United States	

Table A1Country Listings

Tyler W. (1981). "Growth and export expansion in developing countries: Some empirical evidence", *Journal of Development Economics*, Vol. 9, pp. 121-310.