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The Nexus between Economic Growth and Intra-Industry Trade[1]

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Abstract

According to traditional trade theories, foreign trade affects economic growth via several channels such as knowledge and technology spillover, improvement of resources allocation, increasing productivity and competitiveness. Within the framework of new trade theories, the effect of foreign trade on economic growth is ambiguous, and this effect depends on the combination of the different effects specially the market structure. Regarding to the theoretical ambiguity and lack of the empirical studies on the topic, the present paper investigates the relationship between intra-industry trade and economic growth by using the Panel Vector Autoregressive (PVAR) method for selected developed and developing countries[4] during 2001-2014. The results of the model estimation showed that this relationship is positive for the developed countries, while interestingly we found the negative relationship for the developing countries. Despite the latter result, there are still high potentials for the developing countries to exploit their capability in the new trade to promote their economic growth if the new trade determinants will be considered in their policy making.

Keywords: Economic Growth, Intra Industry Trade, New Trade Theories, Developing and Developed Countries, Panel Vector Autoregressive (PVAR).
JEL Classification: F43, F12, F13.

1. Introduction

In recent years, the effects of international trade have been widely analyzed on economic growth. Within the framework of traditional theories, trade between countries is based on structural differences such as differences in technology, factor endowment and consumer preferences. In the framework of these theories, most economists believe that trade has a positive effect on economic growth through various channels, such as knowledge spread (Grossman and Helpman, 1991; Falvey et al., 2001), increased productivity (Andersen and Babula, 2008), technological advancement (Lin, 2000; Zhao, 1995; Gundlach, 2005) and improved

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[4] The list of selected countries is given in the appendix to this paper

resource allocation (Boltho, 1996; Dic Lo, 2004; Feder, 1983; Chang et al., 2009). In this framework, a large number of studies have been conducted. Several researches including Dollar (1992), Edwards (1993), Sachs and Warner (1995), Barro and Martin (1997), Frankel and Romer (1999) support the hypothesis that foreign trade leads to economic growth. A number of studies pointing to the effects of knowledge spread discovered the positive effect of foreign trade on economic growth. For example, Falvey et al., (2001) showed that trade facilitates economic growth through the absorption of advanced technologies. Many empirical studies also concluded that, on average, countries grow further after trade liberalization (Wacziarg and Welch, 2008; Salinas and Aksoy, 2006; Salinas et al., 2015; Falvey et al., 2012).

However, in new trade theories (NTT), the issue of economic growth was less considered. In the new trade theories, as the endogenous economic growth models, the conditions resulting in increased returns and imperfect competition are taken into consideration (Gandolfo, 2014). Based on these theories, with the formation of intra-industry trade, the market structure will change, and product differentiation will enhance (Lancaster, 1980; Krugman, 1980). In this framework, the international trade affects on economic growth through the market structure (Hall, 1988; Smulders and Klundert, 2004; Gali, 1994; Melitz, 2000), product differentiation (Romer, 1990; Segerstrom, 1998; Bajona et al., 2008), and scale economies (Eicher and Turnovsky, 1998; Ambrose et al., 2000; Graham, 2001; Tsionas and Loizides, 2001; Nemoto and Asai, 2002). In addition, market size changes can be effective on intra-industry trade by changing the product diversity (Gandolfo, 2014). A review of previous studies shows that there are few studies on the effect of intra-industry trade on economic growth and there is no empirical research on the relationship between them. Bhattacharyya (2005) has shown that intra-industry trade spurred Korea's economic growth. Funke and Ruhwedel (2005) examined the effect of product diversity on economic growth for 14 transitional economies of Eastern Europe and showed that the diversification of the export product would increase economic growth. Hess (2008) investigated the effect of export diversification on economic growth and concluded that exports have a positive effect on economic growth. Kato (2012), using Melitz (2000) model, examined productivity and returns to the scale of Japan for 1995-2004, and concluded that the increase in scale economies and product diversity had a positive effect on firm income and productivity growth.

Leitão (2012) concluded that intra-industry trade, globalization and foreign direct investment would boost economic growth.

The main purpose of the present research is to examine the relationship between foreign trade and economic growth in the 50 selected developing and developed countries during 2001-2014.. As table (1) shows with the increase in the average IIT during 2001-2014, more observations in the developed countries will move toward higher-than-average growth and in the developing countries, moves toward lower-than-average growth. Therefore, we expect that the relationship between economic growth and intra-industry trade in the developed countries is positive and negative in developing countries.

Table 1: Distribution of the IIT in relation to the economic growth

Developed Countries		
IIT > $\overline{IIT} = 0.54$	IIT <$\overline{IIT} = 0.54$	
Denmark, Netherlands, Germany, UK, France, Spain, Italy, Austria, (8 Countries, 112 Observations)	Norway, Japan, Finland, Greece, Portugal, (5 Countries, 70 Observations)	Growth < $\overline{\mathbf{Growth}} = \mathbf{1.01}$
Switzerland, USA, Canada, Singapore, Hong Kong, Sweden, Hungary, Czech Republic, (8 Countries, 112 Observations)	Australia, Ireland, New Zealand, Korea. Rep, (4 Countries, 56 Observations)	Growth > $\overline{\mathbf{Growth}} = \mathbf{1.01}$
Developing Countries		
IIT > $\overline{IIT} = 0.28$	IIT < $\overline{IIT} = 0.28$	
Argentina, Brazil, Romania, Mexico, Bulgaria, Poland, Thailand, South Africa, (8 Countries, 112 Observations)	Iran Rep, Chile, Uruguay, Russian, Ukraine, Ecuador, Colombia, Senegal, (8 Countries, 112 Observations)	Growth < $\overline{\mathbf{Growth}} = \mathbf{1.04}$
Malaysia, Belarus, China, Turkey, India, Bangladesh (6 Countries, 84 Observations)	Azerbaijan, Jordan, Sri Lanka, (3 Countries, 42 Observations)	Growth > $\overline{\mathbf{Growth}} = \mathbf{1.04}$

Source: Present research

This article is organized in five parts. After introduction in the first part, the theoretical background is given in the second part. The third part represents the empirical results. The fourth part deals with the conclusion and finally, the last part is dedicated to the references.

2) Theoretical Background

Economists generally agree that open economies have faster economic growth than their counterparts (Grossman and Helpman, 1991; Edwards, 1993). According to Grossman and Helpman (1991), trade openness facilitates technological advances, improved productivity and the transfer of

new technologies. Pointing out the trade reduces the inappropriate allocation of resources and facilitates technology transfer, Zahonoge (2017) argues that trade through these channels increases productivity and subsequently economic growth. In the framework of traditional theories, trade has a positive effect on economic growth through specialization, productivity promotion and resource allocation improvement. International trade also boosts economic growth by facilitating knowledge spread and technology, through high-tech imports (Barro and Martin, 1997; Baldwin et al., 2005; Almeida and Fernades, 2008). Contrary to many theoretical analyses that consider trade as a factor having significant effect on economic growth, many studies have shown that increasing trade is not always beneficial for economic growth. If the economy is specialized in sectors with relative disadvantages, or if technological innovations or learning by doing are largely exhausted, the trade openness will reduce economic growth (Redding, 1999; Young, 1991; Lucas, 1988). In addition, while trade openness facilitates the spread of technology and innovation (Krueger and Berg; 2003; Lucas, 1988), technology adoption depends on the absorption capacity of countries, as well as human capital, research and development (Verpagen, 1991; Fagerberg, 1994). Also, due to technological and financial constraints, the developing countries cannot take full advantage of this technology transfer, and as a result, the effect of international trade on economic growth varies at different levels of economic development.

In the framework of traditional theories, the effect of economic growth on foreign trade is divided into the production and consumption effects according to Johnson (1955, 1959). The production effect will examine how economic growth influences the production of exported and imported goods. If the home production of imported goods increases in proportion to the increase of national income, the country will become more self-sufficient leading to anti-trade biased growth. The consumption effect poses the question about how the consumption pattern of imported and exported goods of the country changes due to economic growth. If the increased import demand exceeds national income growth, it will be a pro-trade biased growth. The effect of the economic growth on international trade depends on the outcome of both effects. If the production and consumption effects do not have the same effect on trade, the volume of trade changes will depend on the outcome of these two effects.[1] Given the theoretical

[1] For more details see Gandolfo (2014).

foundations, the relationship between trade and economic growth is not clear based on traditional theories.

Based on Lancaster (1980) trade between identical economies cannot be predicted on the basis of traditional trade theories, and because there are no structural differences between countries, trade between them is only an intra-industry one. In these situations, countries form a single market, the structure of the global market in conditions of perfectly informed firms and consumers, the lack of collusion, free entry, the diversity of preferences, will be a monopolistic competition. Thus, intra-industry trade changes the market structure toward monopolistic competition, in which neither two firms produce the same product. In fact, Lancaster (1980) argues that when similar countries are structurally trading with one another, the structure of the market will change, the number of consumers with various preferences will increase, and by entering new firms, the differentiation will enhance, but the goods will get closer together in terms of specification. By reducing the differences in the specification, the demand elasticity increases and the price-to-marginal costs ratio (markup) decreases. Also, with the increase in the number of varieties and the less production of each variety, the scale economies are reduced. Vertical differentiation in imperfect competition market leads to economic growth (Young, 1998). In the Young (1998), N firm invests on R&D to improve the quality of the current generation of products. Since monopoly profits are greater than individual firms in duopoly, no two firms produce the same product, and since all firms are extremely small, the structure of the market is monopolistic competition. In each period, new firms should choose a product and its quality level. The investment of firms consists of two parts. 1) Investing in the workforce to produce an intermediate input; and 2) the cost of investing on R&D to increase the quality of goods, which is upward regarding the quality of goods. In this model, total output of the economy equals to the multiplication of the intermediate input demand, product quality, and the number of firms (varieties), and because in each period N firms invest in R&D in order to improve the quality of existing products, the increase in production in each period will be due to the increase in product quality and increase of the number of product varieties. Thus, in the Young (1998) model, due to the general feature of the knowledge spillover, firms invest in R&D in each period. Therefore, in each period, the product must be produced in a higher quality than the current quality so that taking such costs would be reasonable. Moreover, due to the structure of the monopolistic

competition market, in equilibrium does not enter the new firm, so the number of varieties remains constant. Therefore, in this model, economic growth is the only result of product quality involving with intra industry trade. Furthermore, using heterogeneous firms framework, Perla, Tonetti, and Waugh (2015) indicate that firms choosing the foreign markets pay fixed costs for differentiation and then by the scale effect they will be able to decrease (increase) their trade cost (productivity). The other firms having lower productivity choosing the home to supply their products upgrades their technology to compete with their rivals. These stimulate the economic growth.

Referring to Solow (1957), Hall (1988) argues that in competitive conditions (markup equals one), the growth rate of total factor productivity is equal to the growth rate of technology, but in monopolistic conditions (markup greater than one), the growth rate of total factor productivity increases as "the multiplication of the markup by the output growth due to the production factors". In this way, there is a positive relationship between markup and total factor productivity growth in imperfect competition markets. As a result, reducing the gap between price and the marginal cost (Lancaster, 1980) will reduce the total factor productivity (Hall, 1988) and, consequently, decline in the economic growth. Graham (2001) decomposes the output growth into the inputs growth and the total factor productivity growth, and presents the scale economies as a factor affecting on the total factor productivity. Nemoto and Asia (2002) also decompose the growth rate of total factor productivity into three parts of growth resulting from the scale economies, capital adjustment, and technical changes. Therefore, there is a direct relationship between the scale economies, total factor productivity and consequently, the economic growth. In addition, the reduction of the average long-term cost (or scale economies) will ultimately increase the economic growth by lowering prices, increasing the competitiveness of firms, and increasing firms' production. Although there is a direct relationship between the scale economies and the total factor productivity (Graham, 2001; Nemoto and Asia, 2002), and the increase in the output of firms leads to increased economic growth, there are two different views in the framework of the new trade theories. Based on the Lancaster (1980), the increase in differentiation is accompanied by a reduction in the scale economies, but the scale economies increases by increasing the differentiation based on the Krugman (1980). So, in the framework of new trade theories, the reduction or increase of scale economies is not certain.

Furthermore, based on Grossman and Helpman (2015), the scale effect motivates knowledge acquisition. In this framework, the research experience in one country has some spillovers in other trade partner in the form of increasing research productivity and consequently, affects positively on the long run economic growth. On the other hand, Grossman and Helpman (2014) show that competition effect may prevent the research effect of scale from taking an impact on the economic growth since decreasing trade cost due to spillovers may be compensated by losing the foreign market to the rivals. Therefore the effect of scale economies on economic growth is unclear.

R&D expenditures boost economic growth. According to Wu (2011), output per worker depends on innovation and physical capital per worker and on this note innovation is the result of R&D efforts. In this model, the growth rate is the sum of the growth rate of innovation and the growth rate of physical capital per worker. According to Jones (2005), in the long run, due to decreasing returns to capital, the growth rate converges to a balanced growth path in which all variables grow at a constant rate. Therefore, along the balanced growth path, the rate of the economic growth is proportional to the rate of innovation and function of research and development efforts. But the effect of these expenditures on intra-industry trade is unclear. It is more intra-industry trade found in sophisticated manufacturing products requiring higher levels of research and development (Krugman and Obstfeld, 1994). Also, the research and development is a determinant factor of product differentiation (Andresen, 2003). Therefore, if R&D increases the differentiation, intra-industry trade will increase. But intra-industry trade will be reduced if these costs within the framework of R&D and new technology hypotheses give a rise to the absolute advantage or comparative advantage of a country. In addition, significant amounts of R&D can act as a barrier to the intra-industry specialization (Greenaway and Milner, 1984). In this way, the effect of R&D costs along with intra-industry trade is unclear on economic growth.

Within the framework of new trade theories, market size changes are associated with product differentiation (Gandolfo, 2014), and thus economic growth can affect on intra-industry trade. As the utility function of Spence (1976) indicates and according to Dixit and Stiglitz (1977) assuming other things held constant, the utility increases with increasing number of varieties. Therefore, the consumer will demand all existing varieties of differentiated goods. According to Lancaster's theory (1980), the consumer

does not want a commodity for itself, but the characteristics embodied in that. In this case, if consumers have different tastes about these features, they will demand a different variety of the product. Both of these preferences approaches lead to a monopolistically competitive equilibrium in which different firms produce differentiated goods (Krugman, 1990). On the production side, it is assumed that technology and factor proportions are the same between countries and there is no comparative advantage. Due to the fact that monopoly profits are larger than duopoly profits and consumers like variety, each firm produces a differentiated product. In addition, the firm has a monopolistic condition for its varieties and will have a monopoly power (markup). Similarly, firms face similar demands since consumers like all varieties with the same intensity and free entry leads to zero profit. In the autarky if the taste for varieties is high, the consumer will be reluctant to replace varieties with another, the demand curve will be inelastic and markup will be high. In other words, with a higher taste for variety (markup), the balanced price will increase and the size of firms will decrease. Since in the autarky, the total demand is constant, the smaller size of the firm is possible only by increasing the number of varieties. Therefore, in the autarky there is an inverse relationship between the firm size and number of varieties. In free trade, based on the two preference approaches, the varieties are both domestically demanded and exported. This kind of trade is done because of the love of variety and single-plant production (with scale economies), and it is intra-industry trade, and it is also formed in the absence of comparative advantage. In free trade, due to the love of variety, each variety is domestically demanded and exported, thus the total demand, firm production, volume of trade, and market size of countries are increased, but because the total demand also increases there is no indication of increase or decrease in the number of varieties produced and exported in each country. Based on the new trade literature, the effect of trade on the economic growth depends on the outcome of the effect of differentiation, scale economies, markup, and research and development expenditures. The effect of economic growth (market size) on trade is also uncertain. Therefore, there is no obvious theoretical relationship between intra-industry trade and the economic growth.

3) Empirical analysis

The general form of a K variable panel VAR model of ρ order is as follows (Abrigo & Love, 2015):

$$Y_{it} = A_1 Y_{it-1} + A_2 Y_{it-2} + \ldots + A_{\rho-1} Y_{it-\rho+1} + A_\rho Y_{it-\rho} + BX_{it} + u_{it} + e_{it} \qquad i \in \{1,2,\ldots N\}, t \in \{1,2,\ldots T_i\} \qquad (1)$$

Where, Y_{it} represents the vector of endogenous variables. X_{it}, u_{it}, and e_{it} are the vector of exogenous covariates, vector of dependent variable-specific fixed-effects and idiosyncratic errors, respectively. Also, matrices A and B are parameters to be estimated. Since the specified model is a dynamic model of panel data, in order to achieve a consistent and unbiased estimator, the General Method of Moments (GMM) is used to estimate the model. If we represent the matrix of all instrument variables with W, then the GMM estimator is obtained as follows (Arrelano and Bond, 1991; Abrigo and Love, 2015):

$$A = \left(\bar{Y}^{*\prime} Z \widehat{W} Z' \bar{Y}^{*}\right)^{-1} \left(\bar{Y}^{*\prime} Z \widehat{W} Z' Y^{*}\right). \qquad (2)$$

In this paper, the relationship between economic growth and intra-industry trade is examined based on the following equation, in which the vector of endogenous variables includes the variables of intra-industry trade and economic growth:

$$Y_{it} = (Growth_{it}, IIT_{it}) \qquad (3)$$

The model of this article is estimated by using package developed by Abrigo and Love (2015). The definition of variables is presented in Table (2).

Table 2: Variables descriptions

Description	Name	Measurement	Source
Intra Industry Trade (Grubel and Lloyd Index)	IIT	$GL_{it} = 1 - \frac{\sum_{j=1} \lvert X_{ijt} - M_{ijt} \rvert}{\sum_{j=1} (X_{ijt} + M_{ijt})}$	Http://www.intracen.org
Economic Growth	Growth	GDP growth (annual %)	WDI, 2016

The results presented in Table (3) indicate that all variables are stationary at 99% level of confidence.

Table 3 :LLC Unit Root Test for variables

variable	Developed Countries		Developing Countries	
	Statistic	P-value	statistic	P-value
Log (IIT)	-7.2096	0.0014	-7.5579	0.0001
Growth	-12.4801	0.0000	-14.3618	0.0000

Source: Present research

The results of optimal lag selection are given in Table (4).

Table 4: PVAR's optimal moment and model selection criteria for the research model

Lag	CD	J	J Pvalue	MBIC	MAIC	MQIC
Developed						
1	0.9933213	21.48456	0.0437194	-43.1843	-2.51544	-18.9404
2	0.9932668	12.44222	0.1324969	-30.66935	-3.556779	-14.50675
3	0.993805	6.012429	0.1981476	-15.54286	-1.986571	-7.461556
Developing						
1	0.96537	21.79831	0.0398434	-43.19489	-2.201687	-18.74671
2	0.9500806	10.25534	0.2475601	-33.07347	-5.744664	-16.77468
3	0.9462082	1.401862	0.8438713	-20.26254	-6.598138	-12.11315

Source: Present research

According to MBIC and MQIC statistics in both samples of countries, the first lag is optimal. The PVAR model is estimated with one lag, and the results are reported in Table (5).

Table 5: PVAR's estimates for the selected models

	Developed countries		Developing countries	
	Log IIT	Growth	Log IIT	Growth
Log IIT (-1)	0.64*	9.26	0.56***	-1.18
	(0.3315416)	(24.6257)	(0.183961)	(5.671273)
	[0.053]	[0.707]	[0.002]	[0.835]
Growth (-1)	0.0006	0.388***	0.002	0.67***
	(0.000849)	(0.08859)	(0.0036427)	(0.1126403)
	[0.430]	[0.000]	[0.549]	[0.000]
Obs	297	297	300	300

Notes: Obs = number of observations. *** ** * indicate significance at 1%, 5% and 10% levels, respectively. Standard errors in ( ) and t statistics in [ ].

Source: Present research

Before estimating the impulse response functions, the stability condition of the panel VAR must first be checked. This condition indicates that the panel VAR is invertible and has an infinite-order vector moving mean display that provides a known interpretation of the estimated impulse response functions and forecast-error variance decompositions (Abrigo and Love, 2015). Figure (1) confirms that the estimation of the model is stable in both samples of countries.

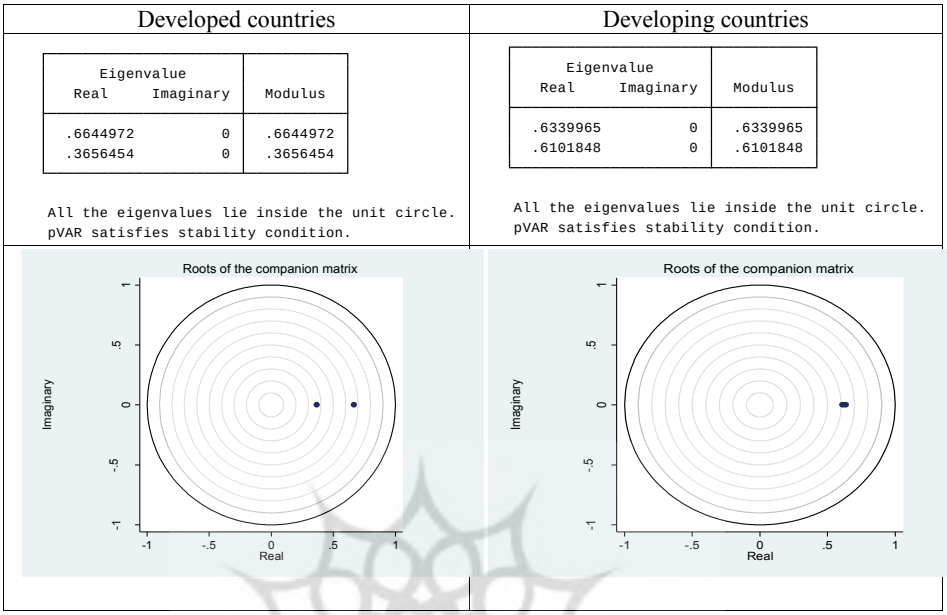

Figure 1: PVAR's post-estimation test for the selected models
Source: Present research

In Table (6), the results of the causality test are presented. The results of Table (6) indicate that there is no causal relationship between variables. In the following, the impulse-response functions are investigated.

Table 6: Granger causality Wald tests for the selected models

Null hypothesis	Prob.	
	Developed	Developing
IIT does not cause Growth	0.707	0.835
Growth does not cause IIT	0.430	0.549

Source: Present research

According to Figure (2), in the sample of developed countries, the occurrence of a positive impulse to the IIT creates a positive deviation in the economic growth of these countries, and similarly, a positive impulse in the economic growth, will increase their IIT. Both reactions peak in the second year and are adjusted at the end of the period with a downtrend. These results indicate that there is a positive relationship between IIT and economic growth in developed countries. Findings from Leitão (2012) confirm this conclusion for the United States of America.

In the sample of developing countries, the positive impulse in the economic growth also creates a positive deviation in the IIT of the countries that peaks in the second year. But a positive impulse in intra-industry trade reduces economic growth. The downtrend peaks in the second year and both reactions return to equilibrium at the end of the period. These results indicate that the relationship of growth and intra-industry trade in developing countries is negative. The results of Capolupo and Celi (2005) obtained from 11 developing countries on the positive impact of intra-industry trade on economic growth do not support this conclusion.

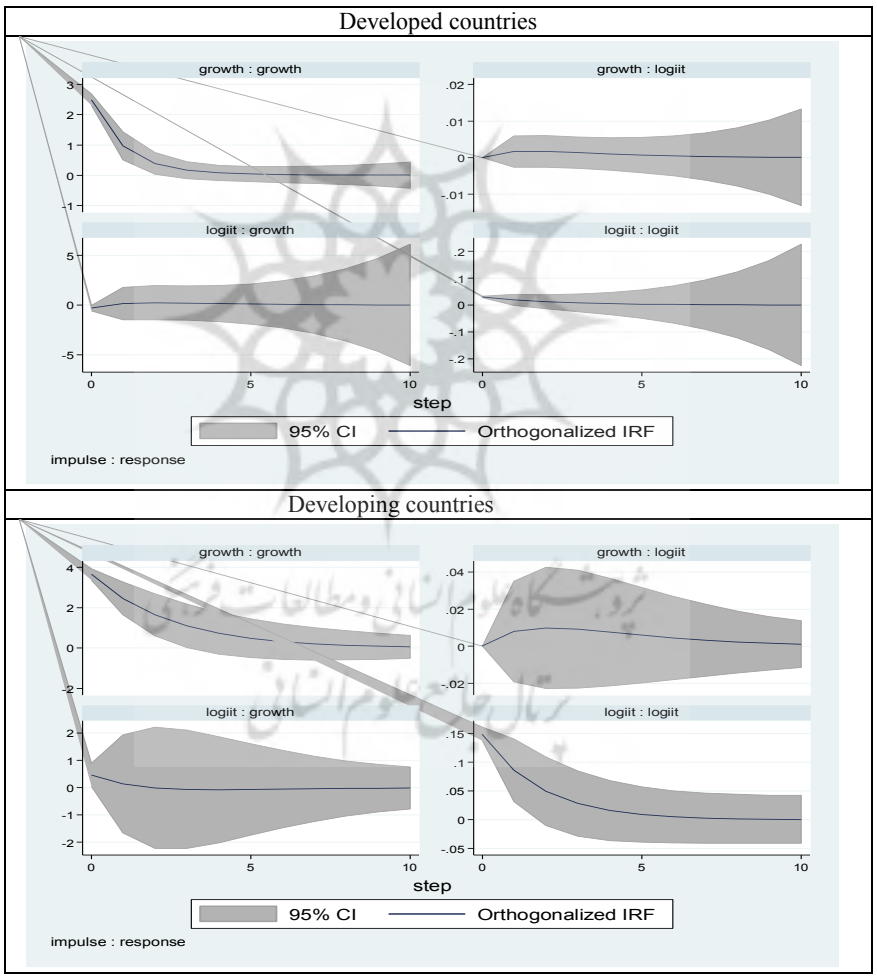

Figure 2: IRFs for the selected models

Source: Present research

In the following, Table (7) indicates the analysis of variance decomposition. According to this Table, in the both samples of countries, a major part of the change in IIT is a result of the variable itself, but over time, the share of the economic growth variable in explaining the fluctuations of this variable increases. According to this table, the share of the economic growth variable in explaining IIT fluctuations in developed and developing countries in the long run is 0.6 and 1%, respectively. Also the share of the IIT variable in explaining the economic growth fluctuations of developed and developing countries in the long run is 3 and 1%, respectively. In the long run, the share of the IIT variable has grown in explaining the economic growth fluctuations in developed countries.

Table 7 :Variance decomposition analysis for the selected models

	Variance decomposition of IIT, Impulse: Growth.		Variance decomposition of Growth, Impulse: IIT	
	Developed countries	Developing countries	Developed countries	Developing countries
0	0	0	0	0
1	0	0	0.0150228	0.0159051
2	0.0021662	0.0021353	0.016596	0.0119326
3	0.0039773	0.0050135	0.023863	0.0104823
4	0.0050313	0.0074638	0.0294036	0.010118
5	0.0055685	0.0091557	0.0325169	0.010135
6	0.0058252	0.0101865	0.0340669	0.0102392
7	0.0059437	0.0107649	0.0347957	0.0103326
8	0.0059974	0.0110712	0.0351287	0.0103954
9	0.0060214	0.0112266	0.0352784	0.0104324
10	0.0060321	0.0111303	0.0353452	0.0104526

Source: Present research

4) Conclusions

The purpose of this paper is to investigate the relationship between intra-industry trade and economic growth in two different classes of developing and developed countries during the period of 2001-2014 using the Panel Vector Autoregressive method. In this paper, the theoretical foundations of the relationship between intra-industry trade and economic growth were first examined based on the following pattern (Figure 3). Subsequently, the intra-industry trade was calculated on the basis of Grubel and Lloyd (1975) index and at the aggregation level of four figures of the Standard International Trade Classification (SITC) for 50 selected countries.

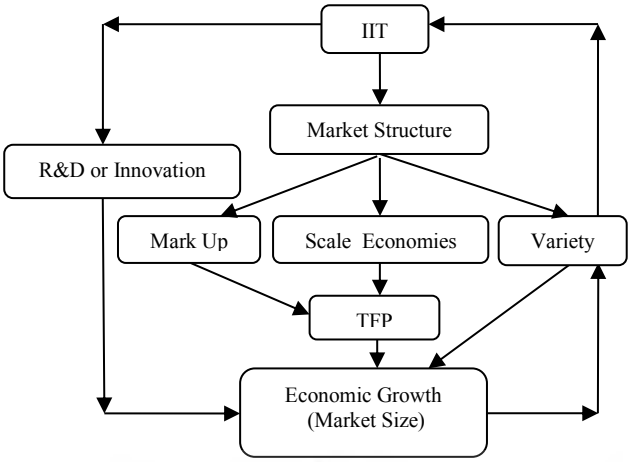

Figure (3): The conceptual pattern of IIT and economic growth nexus
Source: Present research

Our findings about the positive (negative) relationship between intra industry trade and economic growth in developed (developing) countries indicate that the effect of intra-industry trade varies at different levels of development. This result for the developing countries could be due to less differentiation, research and development, innovation, low labor skill and production capacity. Also, due to technological and financial constraints, these countries cannot take full advantage of the technology transfer. Moreover, a larger share of developing country trade is associated with primary resource based commodities with low value added and low quality. These types of commodities have low competitiveness in global markets and this also reduces access to international markets.

As a matter of fact, in the short run, the comparative advantage based trade will be a motor of economic growth for developing countries, but passing time, they should exploit their home market and move toward an optimum combination of scale intensive and differentiated products. In this regard, we suggest that it should be paid attention to the combination of tradable commodities with emphasis on technology and scale intensive products. In this case, the developing countries will be able to exploit the trade structure to promote their economic growth. Furthermore, they should support their firms to invest on research and development and differentiate their products horizontally and vertically. It is expected that with the shift in the combination of trades of these countries to commodities with high value added and high quality, research and development investment, and increased products competitiveness, the expected benefits of the trade would increase.

Appendix: List of selected countries

List of selected countries

Developed countries		Developing countries	
Australia	UK	Argentina	Belarus
Norway	Korea, Rep	Brazil	Ecuador
Switzerland	Japan	Iran Rep	Colombia
Denmark	France	Chile	Jordan
Netherlands	Spain	Romania	Turkey
Germany	Italy	Uruguay	Thailand
Ireland	Finland	Mexico	China
USA	Greece	Malaysia	Sri Lanka
Canada	Hungary	Bulgaria	South Africa
New Zealand	Czech Republic	Russian Federation	India
Singapore	Austria	Azerbaijan	Bangladesh
Hong Kong SAR, China	Portugal	Ukraine	senegal
Sweden		Poland	

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