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# **Impact on Entrepreneurship towards Economic** Performance in Malaysia

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#### **ABSTRACT**

Entrepreneurship has emerged as an important element in the organization of economies. The contribution of entrepreneurship towards economic growth has been discussed by a number of studies. Therefore, this study is to determine the relationship between entrepreneurship and economic growth in the context of Malaysia, by using self-employment to explain entrepreneurship while GDP is applied to explain economic growth. This study observed data from the year 1991 to 2016.

This study used empirical tests of Johannsen Cointegration to achieve the objectives. The outcomes show that there is a long run cointegration among variables. Additionally, when applying Granger Causality test, the study found that there is unidirectional causality from economic growth towards entrepreneurship.

**Key Words:** entrepreneurship, economic growth, Johannsen, causality

## 1. INTRODUCTION

The entrepreneur is an elusive character in economic theory due to the difficulty in providing an exact explanation. It appears impossible to produce a single definition of entrepreneurship and most theoretical approaches yield operational difficulties. By the same token, most operational definitions are incomplete and cover only single parts of the concept. According to Wennekers and Thurik (1999), entrepreneurship is an ability and willingness of individuals, on their own, in teams, within and outside existing organizations, to perceive and create new economic opportunities (new products, new production methods, new organizational schemes, and new product-market combinations) and to introduce their ideas in

the market, in the face of uncertainty and other obstacles, by making decisions on location, form, and the use of resources and institutions.

According to Omoruyi et al. (2017), entrepreneurship is generally described as the ability of an individual or a group of individuals to create or discover an opportunity and utilize it to the benefit of the society, which, in turn, will bring success to the innovators and their organization. For the past decades, numerous nations in developed and developing nations have moved their policies from being directed towards a managed economy to an entrepreneurial economy. In addition, entrepreneurship largely contributes to proper utilization of resources, the establishment of a developed self-sufficient society, and creation of employment opportunities. Eventually, entrepreneurship has emerged as an important element in the organization of economies. This emergence did not occur simultaneously in all countries. Differences in growth rates are often attributed to differences in the speed with which countries embrace entrepreneurial energy. According to Lucas (1978), entrepreneurship has been modelled as an occupational choice between self-employment and wage-employment. The statement was later approved by Evans and Jovanovic (1989) and Murphy et al. (1991) in their studies. Therefore, someone will become an entrepreneur if profits and the non-pecuniary benefits from self-employment exceed wage income plus additional benefits from being in wage employment. Today, emerging countries are also starting to direct their policies towards encouraging entrepreneurship. Moreover, international, regional and local media have also focused on entrepreneurship as a vehicle for growth.

## 1.1 Entrepreneurship-Growth in Malaysia

Malaysia is a fast-growing state located in Southeast Asia. The total area is 329,847 square kilometers which consist of the Peninsular Malaysia, Sabah, and Sarawak. Generally, Malaysia's GDP grew steadily over the past decades. However, growth was sluggish due to some events. In 1998, Malaysia was severely affected due to the Asian Financial Crisis, and in 2001, once again Malaysia was facing challenges due to slow growth of export activities. Besides that, Malaysia was also adversely affected by the slowdown of world economic activities in the last few years.

In October 2010, Malaysia has launched Economic Transformation Programme (ETP) to enhance the economy, and in the first year of implementation, gross domestic product (GDP) had risen 7.2% (Prime Minister's Office Malaysia, 2012). However, we believed that the economy of Malaysia could be growing more if resources such as land, labor, capital and entrepreneurship are used efficiently, where they should be allowed to flow in and out of the economy with minimum restrictions, especially entrepreneurship. This is because

entrepreneurship is considered as one of the main drivers of economic growth in which it creates wealth, innovation and technology deployment and reduces poverty. It is also one of the economic strategies to perpetuate the country's competitiveness in dealing with the increasing trend of globalization (Venkatachalam and Waqif, 2005). This statement has been previously conveyed by Soete and Stephen (2004) where they proposed that when a country focused on entrepreneurship, we shall witness stronger economic growth.

In Malaysia, entrepreneurship activities have been given a lot of attention by the government as they recognize the importance of entrepreneurship development for economic development. Hence, the government has continuously encouraged the involvement of its people, especially the Bumiputera or the Malays in entrepreneurship. This is demonstrated by the number and diversity of programs and policies that have been formulated to boost the growth of entrepreneurs. One of the indications that can be observed is the establishment of several agencies such as TEKUN Nasional and Amanah Ikhtiar Malaysia (AIM) which provides micro-credit facilities for the entrepreneurs. Moreover, these facilities are provided together with entrepreneurship training to build their entrepreneurial skills. In order to encourage more young people to get involved and interested in entrepreneurship, the Malaysian government has introduced the Malaysian Global Innovation and Creativity Centre (MaGIC), and Graduate Entrepreneurship Fund, and also has implemented various programs which offers courses and training, related to entrepreneurship. Besides, special programs for women entrepreneurs were also introduced, such as skills training in micro enterprises through the program of Women Entrepreneurship Incubator (I-KeuNITA). Also, the government through the Department of Women Development has organized the incubator Skills Training for Single Mothers (I-KIT) to generate income for single mothers.

# 2. LITERATURE REVIEW

The performance of an economy is usually assessed in terms of the achievement of economic objectives. These objectives can be long term, such as sustainable growth and development, or short term, such as the stabilisation of the economy in response to sudden and unpredictable events. Gross domestic product (GDP) is the most commonly used measure of a country's economic activity. In short, GDP reflects the value of all final goods and services legally produced in an economy in a given time period. Kitov (2005) and Ikovic (2016) describes GDP as a constant growth increment and also a measure of progress, prosperity and even well-being. Therefore, GDP is an unsurpassed indicator to explain economic performance of a country. A number of factors may influence the GDP which directly impact the economic

performance of a country, some of which show an inverse relationship while other factors show a direct relationship. In this study, we try to study the impact of entrepreneurship towards GDP.

Entrepreneurship is widely believed to be a main source of economic growth. Therefore, for a few decades, the concept of entrepreneurship has become an active research. It has been discussed in different perspectives and disciplines, where the outcomes have diverged, depending upon several factors such as economic performance, social conditions, political system and government policies. According to Henrekson and Stenkula (2007) one way of classifying the multitude of economic theories that have evolved is to divide them according to the function of entrepreneurship. We can distinguish theories that focus on the entrepreneur as an innovator (Schumpeter 1911), as an arbitrator (Kirzner 1973), and as a risk-taker and decision-maker (Knight 1921). A fourth function is the coordinator (Say 1816).

In classical economy, Smith (1776) perceives no substantial role of entrepreneurship in economic development. The reason is that economic growth in the traditional growth models is achieved by capital accumulation and exogenous technological progress, both of which leave little room for any entrepreneurial role whatsoever (Baumol, 1968). The idea that entrepreneurship and economic growth are very closely and positively linked together has undoubtedly made its way since the early works of Schumpeter (1911). He suggested that an increase in the number of entrepreneurs leads to an increase in economic growth. This effect is a result of the concrete expression of their skills, and more precisely, their propensity to innovate. Later, the statement was sustained with the study by Penrose (1959), who study discovered that entrepreneurial activities create job opportunities which subsequently enhance the economic growth and socio-economic well-being of the people.

Afolabi (2015) has discussed the evolution and current development of principles and practice of entrepreneurship in Nigeria and at the same time examined the effect of entrepreneurship in fostering economic growth and development. By applying narrative-textual case study (NTCS) method, the study found that Nigeria's economy has continued to grow. The study proposed that by generating employment and fostering the growth of entrepreneurship, economic growth and development in Nigeria can be improved. The result is supported by Ogunlana (2018), whom also found that entrepreneurship can play a significant role in achieving economic growth for the country to overcome economic crisis by generating employment, innovation, increase production, and diversify the economy source of revenue while fostering the development of small and medium enterprises.

In addition, evidence from West Germany also indicates positive outcome of the relationship between entrepreneurship and economic growth. Audretsch et al. (2008) in a study declared that innovation efforts have an indirect effect on economic performance through entrepreneurship. Then, Mueller (2006) when conducting a test to demonstrate connection concerning entrepreneurship and economic growth in West German regions between 1992 and 2002, reported that regions with a prominent level of entrepreneurship record greater productivity, and consequently, economic growth. Investigating further, they found that north start-ups in innovative industries and university research in engineering science are found to advance economic growth. In a broader scope, Stefanescu (2012) examined the correlation between economic development and entrepreneurial activity in the European context. The survey on 22 European countries discovered that nations with diverse economic development level are distributed based on their entrepreneurial activity, particularly during the international crisis. Kardos (2012) investigated the connections between sustainable entrepreneurship and sustainable development in European Union countries. His results indicate that sustainable entrepreneurship is part of the support system for sustainable development. Also, Zsuzsanna and Herman (2012) when analyzing the relationship between entrepreneurship, innovative entrepreneurship, and economic development in the EU, established that economic development can be explained by innovative entrepreneurship. Meanwhile, Harbi et al. (2011) when exploring the causal relationship between entrepreneurship and economic growth in 34 OECD countries, reported that there is a unidirectional causality running from entrepreneurship to economic growth. The results also suggest that increases in self-employment stimulate economic growth over the short term but reduce economic growth in the long-term.

A dominating paradigm views entrepreneurship as an endogenous component of economic growth, maintaining a positive, causal relationship between entrepreneurial activity and growth (Audretsch and Thurik, 2004). This positive relationship, it is claimed, has been empirically verified across a wide spectrum – from the enterprise, the industry, the region, to the country (Thurik and Wennekers, 2004). On the contrary, some empirical evidence on the relationship between entrepreneurship and economic growth had showed inconsistency. Based on the study conducted by Van Stel et al. (2005), entrepreneurship has a positive correlation with per capita GDP growth in wealthy countries. However, for poor countries, its relationship with economic growth is negative. In another study, Reynolds et al., (2003) revealed that there is a negative correlation between real per capita GDP among all countries and the entrepreneurial activity. Also, some other authors find the similar outcome in their studies. Zaki and Rashid (2016) had conducted a regression analysis to investigate the impact of entrepreneurship on the economic growth in seven emerging countries. Results have revealed a significant negative relationship between entrepreneurship and economic growth. It indicates

that the relationship between these two variables is attributed by the importance of the role of other factors.

Reviewing past literatures, they brought attention to the impact of entrepreneurship development on the economic growth. Therefore, this study tries to determine the relationship between entrepreneurship and economic growth in the context of Malaysia, by using self-employment to explain entrepreneurship while GDP is applied to explain economic growth. This study uses some empirical tests to achieve the objectives.

## 3. DATA AND METHODOLOGY

Secondary data is used to examine the relationship between entrepreneurship and economic growth in Malaysia, which is the unit of observation used in this study for the period of year 1991 to 2017. GDP, S\_EMPL\_, INF, PAT and TRADE were used to represent economic growth (GDP), entrepreneurship (self-employment), inflation, patent application and trade, respectively. All data are taken from World Bank which available online. For the purpose of the analysis, the variables were then transformed into natural logarithms.

In order to answer the main research question as to whether a relationship exists between the level of entrepreneurial activity and economic growth, this study used correlations and regression analysis. The analyses have produced a model consisting of two equations to examine the relationship between the self-employed and GDP. Below is the equation for this regression, which explores the relationship between GDP growth and the set of independent variables:

$$( ) = _{0} + _{1}{ln( -)}_{-1} + _{2}{ln()}_{-1} +$$
 ( 
$$_{3}{ln()}_{-1} + _{3}{ln( )}_{-1}$$
 ( )

The unit root tests are implemented to look at the level of joining between variables. It has been prescribed as an option for inspecting the causal relationship between entrepreneurship (self-employment) and economic growth (GDP). Unit root test are conducted using both the Augmented Dickey-Fuller (ADF) and the Philip-Perron (PP) tests. Both techniques employed are based on the McKinnon critical values. If the calculated statistic is higher than McKinnon's critical value then we do not reject  $_0$  and the considered variable is non stationary, if not, it is stationary. First, tests in levels and then in first differences were carried out, with and without a linear trend.

Once the determination of integration in previous test are completed, then it is possible to implement tests of co-integration to check the existence of a long run relationship between entrepreneurship and economic growth. The tests of cointegration between variables are based on a vector autoregression (VAR) approach initiated by Johansen (1988). Johansen and Juselius (1990) developed two likelihood ratio tests: the Maximum Eigen Value test, which evaluates the null hypothesis of r cointegrating vectors against the alternative of (r+1) cointegrating vectors and the Trace test, which evaluates the null hypothesis of, at most, r cointegrating vectors versus the general null of p cointegrating vectors. In the case of a bivariate VAR, the null hypotheses is that there is no cointegration between the variables and the alternative one is the existence of only one cointegrating vector. If the variables are cointegrated, we use an error correction model to test causality between financial development and growth since cointegration implies the existence of an error correction model (ECM).

#### 4. RESULTS AND DISCUSSION

All data were tested for stationarity using Augmented Dickey-Fuller and Phillips and Perron Tests. The test for each variable was performed on both levels and first difference with two stages; for intercept and for intercept & trend. Table 1 represents the results of Augmented Dickey-Fuller and Philips-Perron unit root tests to determine the order of integration of each variable. The results reveal that the null hypothesis of non-stationary is rejected for all variables in their first difference at the 5% level of significance. Therefore, all the time series are integrated of order one, I (1).

Table 1: Result of Unit Root Tests Results for Stationarity: ADF and PP at levels

		ADF	PP		
Vari ables	Inte rcept	Intercept and Trend	Inter cept	Intercept and Trend	
GDP	- 4.598797 (-	-5.037389	4.593869	-5.037389	
	0.0013)	(0.0023)	(0.0013)	(0.0023)	
MPL S_E	3.744268	-3.212043	3.994531	-3.212043	
WI L_	(0.0095 )	(0.1048)	(0.0053)	(0.1048)	
INF	4.109258	-4.464749	4.109258	-4.464749	
	(0.0041 )	(0.0082)	(0.0041)	(0.0082)	
	1.304415	-2.081621	1.304415	-2.088537	

	PAT	(0.6112 )	(0.5305)	(0.6112)	(0.5269)
DE	TRA	0.04919 5 (0.9547	-1.643854	0.265415	-0.995095
		)	(0.7414)	(0.9170)	(0.9268)

Note: significance at 1% Level and \* at 5% Level. Figures within parenthesis indicate p-values.

Table 2: Result of Unit Root Test for Stationarity: ADF and PP at First Difference

Varia	Acsult of Chit	ADF			PP	
bles	Inter	Intercept an	d Inter	Intercept ar	nd	
	cept	Trend	cept	Trend		
	-		-			
GDP	8.622457	-8.432572	24.77255	-26.41017		
	(0.0000		(0.0001			
	)	(0.0000)	)	(0.0000)		
S_EM	-		-			
PL_	7.205683	-7.788073	7.364714	-9.911837		
	(0.0000		(0.0000			
	)	(0.0000)	)	(0.0000)		
	-		-			
INF	5.912929	-5.858473	18.49262	-24.16272		
	(0.0001)	(0.00.5)	(0.0001	(0.000)		
	)	(0.0005)	)	(0.0000)		
	-		_			
PAT	5.805955	-1.046646	5.901833	-5.76022		
	(0.0001	(0.0104)	(0.0001	(0.000 5)		
	)	(0.9134)	)	(0.0005)		
TRAD	-		-	. =		
E	3.203927	-4.506045	3.203927	-4.718476		
	(0.0322)	(0.00=0)	(0.0322			
	)	(0.0079)	)	(0.0050)		

Note: significance at 1% Level and \* at 5% Level. Figures within parenthesis indicate p-values.

Since all the variables have been integrated of the same order, Johansen's cointegration based on Trace and Maximum Eigenvalue tests was applied to test the cointegration between the study variables. The results are shown in Table 3 and Table 4, respectively.

Table 3: Result of Johansen Unrestricted Cointegration Rank Test (Trace)

		Trac		
Hypothesized		e	0.05	
	Eigenval	Statis	Critical	Prob.
No. of CE(s)	ue	tic	Value	**
		102.3		0.00
None *	0.801076	385	69.81889	00
		63.58		0.00
At most 1 *	0.694753	248	47.85613	09

		35.10		0.01
At most 2 *	0.598539	326	29.79707	11
		13.19		0.10
At most 3	0.314288	976	15.49471	77
		4.144		0.04
At most 4 *	0.158604	623	3.841466	18

Table 4: Result of Johansen Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesize			Max-		
d		Eigen		0.05	
No. of	Eigenva		Statisti	Critical	
CE(s)	lue	c		Value	Prob.**
	0.80107		38.7560		
None *	6	0		33.87687	0.0121
	0.69475		28.4792		
At most 1 *	3	3		27.58434	0.0383
	0.59853		21.9034		
At most 2 *	9	9		21.13162	0.0389
	0.31428		9.05514		
At most 3	8	0		14.26460	0.2816
	0.15860		4.14462		
At most 4 *	4	3		3.841466	0.0418

<sup>\*</sup>Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

The p-value associated with Trace test reveals that there is at most three cointegration equation between the variable, since null hypothesis cannot be rejected. Therefore, the results show that there is long-run cointegration among variables. Even though the cointegration has shown a long run association between the variables, there may be some deviation from the equilibrium in short run. Therefore, Vector Error Correction Model (VECM) was performed to investigate the short-run disequilibrium converges to the long-run equilibrium. The results are shown in Table 5.

**Table 5: Result of Error Correction Model** 

	Coefficien		t-
Variables	t	Std. Error	Statistic
ECM	-1.144070*	0.560807	-2.040043
D.LS_EMPL_(-1)	-5.766411	4.474255	-1.288798
D.LINF_(-1)	-0.322994	0.356595	-0.905773
D.LPAT_(-1)	0.307721	0.909072	0.338501
D.LTRADE(-1)	3.145473	3.466912	0.907284
С	-0.098142	0.181176	-0.541696

<sup>\*</sup> denotes 10% level of significance

Based on the result above, the error correction term (ECM) has a negative value and is statistically significant. It means that the results are in line with expectation which reveals that the long-run relationship between the variables would not be influenced by short run dynamics. The absolute value of the error correction term indicates that the variables adjust very quickly towards their long-run equilibrium position. The model is generally robust; this is shown by the value of the F-statistic which is statistically significant at 10%. The model has a good statistical fit. The Durbin-Watson statistic, which is 1.8297, suggests that the model does not suffer from first order autocorrelation. Thus, the estimates of the model are reliable and should be taken with high degree of confidence.

To observe the causality direction among variables, the study conducted a Pair wise Granger Causality test. The results are shown in the Table 6.

**Table 6: Result of Pair wise Granger Causality Tests** 

	1	F-	Pro
Null Hypothesis	bs	Statistic	b.
LS_EMPL_ does not Granger Cause LGDP	4	1.44858	0.2 597 0.0
LGDP does not Granger Cause LS_EMPL_		4.32689	283
LTRADE does not Granger Cause LGDP	4	1.49253	0.2 500 0.6
LGDP does not Granger Cause LTRADE		0.50660	105
LINF_ does not Granger Cause LS_EMPL_	4	4.53290	0.0 246 0.0
LS_EMPL_ does not Granger Cause LINF_		3.62932	462
LTRADE does not Granger Cause LPAT_	4	4.04055	0.0 345 0.0
LPAT_ does not Granger Cause LTRADE		6.45640	073

<sup>\*</sup>Denotes significance at 5% level

From the table above, it shows the rejection of the null hypothesis GDP does not Granger Cause self-employment while self-employment does not Granger cause GDP. This implies a unidirectional causation between economic growth rates towards entrepreneurship in Malaysia during that time period. The outcome is similar with the study conducted by Audretsch and Keilbach (2004), where the result demonstrating that the economic growth is expected to drive entrepreneurship as high rates of economic growth lead to increasing wealth, which in turn stimulates consumption and investment. This implies an enhanced consumer

<sup>\*</sup> *R-squared* = 0.541800, *Adjusted R-squared* = 0.297426, *F-statistic* = 2.217096, *Durbin-Watson stat* = 1.829690

demand for variety (increasing the market size), which creates more entrepreneurial opportunities and therefore confirms the Baumol's theory (Baumol, 1990). The theory demonstrating that a good economic atmosphere may favour the development of productive entrepreneurship sustaining economic growth.

In the meantime, the result indicate that inflation and self-employment has bidirectional causality and also, patent application is impacted by the trade, vice versa.

# 5. CONCLUSION

Entrepreneurship has become one of the main focus nowadays as the world now is moving towards industrial revolution 4.0 which focuses more on human capital or talent. Traditional economy which involves land, labor and substantial capital should be improved by emphasising more on another factor of production, namely entrepreneurship. The element of entrepreneurship, as proven by a number of studies, could contribute to the development of economy. Entrepreneurship has emerged as an important element in the organization of economies. For that reason, governments around the world have been implementing various policies to promote entrepreneurship. However, this emergence did not occur in all countries. The relationship between entrepreneurship and economic growth has been debated for years as there are several found negative, instead of positive relationship among both.

This study focuses on Malaysia due to some factors, specifically because Malaysia is now moving towards becoming a high-income nation. Thus, this study is to observe if the entrepreneurship is indeed contributing towards economic growth. By using GDP and self-employment, together with the data of inflation, patent application and trade in Malaysia, an empirical study has been conducted. Based on the outcomes, this study found long-run cointegration among variables. In further investigation, this study establishes that there is unidirectional causality running from economic growth towards entrepreneurship. Therefore, we can conclude that the upsurge in entrepreneurial activities in Malaysia is due to the growth in the economic development. Thus, Malaysia should take advantage of growing economic development to boost the entrepreneurial activities and consequently the entrepreneurship shall become the main component to increase economic growth in the future. Extra comprehensive policies and measures regarding entrepreneurship, include the entrepreneurial training and financing, should be considered by the Malaysian government. This is important in order to achieve rapid economic growth, and to stop wasting time and factors of production.

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