Macroeconomic Variables And Corruption In Malaysia

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Abstract

Despite the government's effort to eradicate corruption, it is still impossible to combat it as long as individuals with no integrity and sense of responsibility exists in organizations. ca This study is to investigate the relationship between several macroeconomics variables with corruption. The macroeconomics variables include government spending, human capital, investment and trade openness. This study uses time series data from the year 1994-2016. The data were obtained from Political Risk Service (PRS) and World Development Indicator from World Bank. Ordinary Least Square (OLS) method is used to examine the relationship between all the macroeconomic variables and corruption. The macroeconomic variables found to be significantly related to corruption in Malaysia were human capital and trade openness. However changes in the corruption in Malaysia may not necessarily be influenced by government spending and investment. Furthermore, all variables are found to have a positive relationship with corruption. The general findings of this paper strongly suggested that corruption in Malaysia is increasing continuously. Therefore efforts by the Malaysian government and policy makers are badly needed to fight corruption in order to foster better economic growth through improved business operations, employment and investments.

Keyword: Macroeconomic Variables; Corruption; Malaysia

1. Introduction

Corruption has been challenging in terms of defining the true definition of it. This is because some individuals who carry out these illegal activities will always find new ways to cover up their wrongdoings. Transparency International firmly defines corruption as *the abuse of entrusted power for private gain.* The three elements involved in corruption includes public and private sector, anyone to anybody can be involved in this situation, the abuse of power, and the last one is benefit, which explain that both parties will gain benefit either in monetary form or intangible gain (U4 Anti-Corruption Resources Centre, 2016).

There are two types of corruption namely grand corruption and petty corruption. Though these two types of corruption is also known as a conventional type of corruption. Grand corruption is also referred as political corruption It involves those who are the high-ranking government and elected officials and also the higher-ups in private business. These officials usually exploit opportunities that is presented to government work such as tenders. The bribes offered are usually on the larger scale such as for government projects for their infrastructure and construction tenders. Grand corruption is known for political corruption because of the serious involvement of high-ranking officers in the negative influence of money in political activities such as campaigns and the parties' own advantage. Petty corruption also knows as administrative corruption often involves on a smaller-scale, the kind

of corruption that can be consider the 'everyday' bribery. It happens between public or private institution and citizens (Boisvert, 2014).

Jain (2001) stated that grand corruption can be considered as the most serious type of corruption as it involves the politicians as well as the elected elites. This is due to the fact that all of these corrupted decisions is decided by those who are on top of the government hierachy, these government elites are those who the public put their votes into and have put their trust to balance up the society's interest as a whole, this kind of corruption can influence everybody in the nation. He also explained that there are two connections between bureaucratic corruption, the first one being the corruption that happens between political elites with the bureaucrats, follow by the more of a low-level of corruption which usually involves within the executives or managers in the environment of the office.

Corruption is a debatable problem globally, regardless of whether developing or unde veloped nations, democracies or dictatorship, capitalist or socialist. From prior research, the connection has been shown between some of the macroeconomic indicators namely human capital, trade openness, investment and government spending with corruption are ambiguous. Researchers like Mauro, Corruption and Growth (1995), and Stephen and Philip (1995) found that corruption has negative relationship with the said indicator. The same result also supported by a research done by Gyimah-Brempong (2002). On the other hand, there's also results that show that none of the variables is significant to corruption (Brunetti, Kisunko, & Weder, 1998). A rather interesting fact, a research by Jac and Benjamin (2010) even discovered that bribery can encourage economies in low-free nations which means a country that has low freedom of speech like Nigeria and Egypt. However, none of the country is able to be immuned from consequences of corruption. Some international organizations such as the Organization for Economic Co-operation and Development (OECD) are actively participating to combat corruption (Lauritzen & Sondergaard, 2012).

For the cases of corruption in Malaysia, based on the report by the Transparency International (2019), Malaysia settles in for Corruption Perception Index (CPI) score of 47 over 100 and ranked at 61st among more than 170 countries in the year 2018 and achieve the recognition as South East Asia's third least corrupt country following behind Singapore which ranked 6th and Brunei which rank at 32nd. Compared to the past year especially in 2014, Malaysia has dropped badly down by 12 spots from rank 50 to 61 in just 4 years' period of time. The collapse of CPI ranking of Malaysia questioned the effectiveness of the efforts by the Malaysian Government to fight corruption. The effectiveness in eliminating corruption and improvement in corruption level mostly depends on the functions of legislation and government strategies.
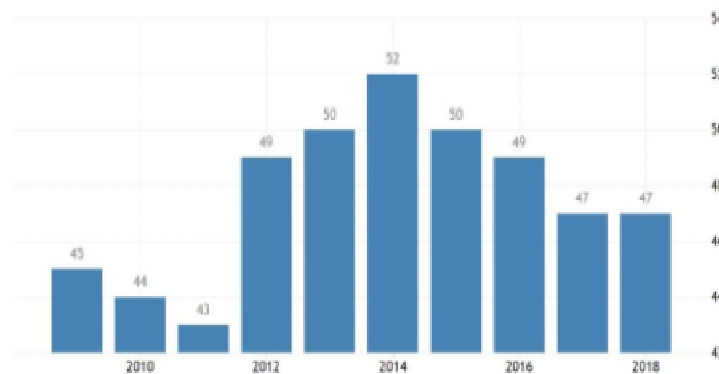

Figure 1 : The trends of Malaysia CPI score from the year 2009 to 2018

Hence, the main purpose of this study is to investigate the relationship between the macroeconomic variables namely the trade openness, investment, human capital and government expenditure with corruption. We will use these variables to investigate if any of these variables would initiate the corruption activities in the nation.

2. Literature Review

2.1 Corruption

Corruption happens as a type of conduct that violates the formal ethics of public service (Park & Blenkinsopp, 2011) .Barker and Carter (1994) describe bribery as acts comprising three aspects: infringements of law, laws, regulations or ethical norms; misuse of the role of an officer; and recognition of some real or anticipated material reward or benefit. Corruption, irrespective of its types, undermines public service efficiency and diminishes satisfaction. Perceived corruption erodes public respect for the state as a service provider and deceives people, promoting government cynicism (Park & Blenkinsopp, 2011).

Corruption is a worldwide phenomenon (Adzalena, 2011). It is happening all over the globe, but not in the same manner affecting all societies / countries. It is the extent to which it impacts an average or a non-privileged citizen in their daily lives that makes the distinction across societies / stateIt is precisely in this sense that corruption is linked to human rights and human dignity. There are two kinds of corruption, as Adzanela (2011) has mentioned ; small corruption and big corruption or the formal name for it which is petty corruption and grand corruption respectively. Petty corruption referring to corruption experienced by individuals in their meetings with government authorities and when using public services while grand corruption is the corruption of state leaders, ministers and senior officials and generally includes big number of assets. From the above explanation, it is possible to define corruption in many respects, bringing with it the distinct significance of corruption behaviour. Corruption occurs throughout the globe as confirmed by Lee (2013) that Malaysia scored 47; ranking 61 out of 180 countries surveyed compared to 2013 score which see no change in score of 47 and rank 62 out of 180 countries. Ademu (2013) said that corruption is a workplace public official's actions that are contrary to the guidelines laid down whether it involves cash, time or relationships with others.

2.2 Trade Openness

Corruption is quite prevalent in international trade. This is due primarily to two variables: first, the government's desire to regulate foreign trade and second, the elevated importance of enterprise access to fresh markets. In regulating foreign trade, each nation has its own ground rules. These laws are regulated by customs officials and include prohibitions on imports, such as drug trafficking, import limitations or import tariffs for products. It's hard to regulate the job of the agent because once the products are in the nation it's hard to trace them and there's no paperwork required to leave a trace of the agreement depending on the corrupt agreement. The corrupt official charges a greater "fee" than the formal customs duties when theft corruption prevails. In this case, at the expense of the state, both sides profit from the corrupt deal, and there is no incentive on either side to uncover the agreement. There is a lot of discretionary power for customs officials to support corruption. High and less transparent regulations increase their discretion and offer numerous possibilities for extortion of bribes (Enste & Heldman, 2017).

A large number of businesses are facing competitive disadvantages in the trade world with corrupted countries. They got two choices in which, either they must slip in big bucks a.k.a heavy bribe to bring their products to the nation or if they refuse to pay bribes, the corrupt official keeps their products out of the market. Apart from that, there's also result that shows companies originating from Australia, Malaysia or Sweden face a significant competitive disadvantage in bilateral trade with corrupt countries, while Belgium, France, Italy, the Netherlands and South Korea have competitive advantages. This may have cultural and moral reasons, e.g. the society in the specific home country condemns corruption, or it has legal reasons (Lambsdorff & Cornelius, Corruption, Foreign Investment and Growth, 2000). In Malaysia corruption is severely punished even when a Malayan company bribes foreign officials (Malaysia Anti-Corruption Act 1997, 2016) .There is no study concerning the direct effects of corruption on the level of imports in a corrupt country.

2.3 Investment

What are the effects of corruption on total investment? Empirical research demonstrates a very clear outcome: corruption lowers overall investment. Total investment involves both government and private investment. While economists agree on the overall effect of corruption on private investment, there is widespread dispute over the impacts of corruption on public investment. We address the public investment issues later when we interpret corruption's impact on government spending. The perception on how corruption affects private investment is quite straightforward. Private investors keep in mind that to get the permits and licenses for their projects, they have to bribe several authorities. This would only increase the cost of personal projects and the time involved, resulting in a lower level of appeal. Projects that would have been lucrative without bribes are therefore not realized due to the bribes (Enste & Heldman, 2017).

Studies on this subject show a general adverse correlation between corruption and the investment ratio of GDP (Mauro, 1995). If the corruption index increases and thus improves by one-standard-deviation, the investment rate increases by 2.9 percent of the GDP. Several economists argue that the impacts rely on the type of bribery and its institutionalization that these findings are debatable. They claim that investment is not affected by complete corruption, but by the predictability of corruption ((Campos, Dimova, & Saleh, 2010), (Chhibber, et al., 1997)). On the other hand, (Lambsdorff, 2006) Claims that it is the type of bribery – small or big corruption – that affects the behavior of investors. The author describes that for several reasons, big corruption is preferred to small corruption: It is more effective because the investor is dealing with just one official and one bribe is getting him all he wants. In addition, the prospect of obtaining insider information increases the value of the bribe.

Grand corruption is probable to be more predictable because the investor is dealing with just one corrupt official or politician who is liable for the entire operation. Great corruption often goes hand in hand with top-down corruption in the civil service, as the corrupt official likely has to pay to meet the requirements of the bribery payer (Rose-Ackerman, 1999). By all means, after getting the first bribe, the corrupt official may attempt to extort more cash, but there are two reasons to limit his greed. First and foremost, demanding more bribes would give him a reputation for a dubious reliability that would distort prospective investors. Second, the investor might take reciprocal action. This means that he will withdraw from the contract by uncovering the official's illegal behavior and could threaten the corrupt official position. Hence, a correlation between the predictability of corruption and investment as a ratio on GDP exists, but another researcher's regression has stronger explanatory power (Lambsdorff, 2005).

2.4 Government Spending

According to (Shleifer & Vishny, 1993) point of perspective, the public expenditure system has always changed in favor of the civil servant because of the chance to participate in rent-seeking operations. Many scientists have shown how corruption affects a part of a country's government spending. The elevated level of corruption connected with inefficient public education service has been noted. Corruption will adversely influence the level of adult learning owing to distortion of the composition of government spending (Mauro, 1998). Corruption also found to reduces the allocation of government spending on children healthcare (Gupta, de Mello, & Sharan, 2001). Poor road quality and more frequent disruption of electricity exist when corruption occurs in the budgetary distribution of government (Wade, 1982).

Corruption impacts the structure of public expenditure through government project supply and demand. According to (Delavallade, 2006), government officials with public project allocation authority could lead to the development of rent-seeking conduct because most of them have elevated bargaining power. Delivering the state project to local or foreign contractors will put the government in a situation of oligopsis. It's because government provides a restricted and enormous quantity of cash contract, while many contractors accept this public contract. Company or contractor is more prepared to bid high bribes because they expect high returns from large-scale development project by the government (Beck & Maher, 1986)

A decrement of government spending on public sector wages will cause corruption to arise. Rijckeghem and Weder (2001) stated that lower public-sector salaries may improve an incentive for a person to engage in rent-seeking operations, such as corruption. Altering the government spending towards public servant income can slow down the economic growth (Baldacci, Hillman, & Kojo, 2004). Alesina and Angeletos (2005) argue that civil servant find less opportunity to manipulate structure of government spending for their own interest if size of government is small. Contrary with the view of Mendez and Sepulveda (2006) argue that bigger size of government create more opportunity to engage in bribe seeking activities on government spending.

2.5 Human Capital

Rumyantseva (2005) stated the low quality of human capital will triggers the existence of the activities of corruption. Transmission of knowledge is the main function of education institutions, high level of educational achievement means that high quality of human capital as stated by Sleezer, Conti and Nolan (2004). The existence of bribes will cause the suboptimal use of human capital, thus harm a country economic development. It is because people without skill and knowledge have chances to obtain high level of profession by offering bribe to the education institution (Murphy, Schleifera & Vishny, 1991).

A 'Rent-seeking' happens when a person or business uses their position or resources to get some additional benefit from the government. The most common occurrence is when a company or industry lobbies the government to receive special subsidies, grants, and tariff protection. The term "rent" in economics means receiving a payment that is over the costs involved in the production of the item or keeping the item in service. These actions do not produce any benefit for the community-at-large but only redistribute taxpayer's resources. Rent-seeking activities exist when an individual have incentive to bribe and incentive to accept bribe. Drury et al. (2006) found that grading corruption is a kind of supply side of corruption, lecturers or universities are willing to receive bribe due to extra money earned

without any additional effort. In the other hand, Heyneman (2004) stated that student willing to offer bribe in order get better grade or result without any knowledge transmission. Education system with corruption may lower the quality of human capital through no actual knowledge learned by student (Latova & Latov, 2008).

Lederman, Loayza and Soares (2005) argued that high level of education achievement associated with low level of corruption. This argument agreed by Beets (2005). The author found that benefit of education reduces the corruption participation in a country. Schooling can reduce the likelihood of participate in crime, increased tendency to exhibit good citizenship as pointed by Heynemann (2002). Therefore, high education may decrease the potential of corruption occur. Less educated person has little understanding regarding the law and regulation of illegal activities such as bribe, red tape, and so on. As stated by Graeff and Mehlkop (2003) corruption is more favourable with high level of illiteracy individuas. The corruption continues to spread because most of the uneducated person are less aware of anti-corruption programs.

3. Research Design

The discussion will focus on the estimation model used for the selected macroeconomic variables and corruption. The dependent variable is represented by corruption in Malaysia. The independent variables consist of government spending, human capital, investment and trade openness. A multiple regression analysis is employed to estimate the ordinary least square (OLS) analysis in the yearly period from 1984 until 2016. This study using 33 observations which covers for thirty-two years

3.1 The model

The basic variables model follows Tavares and Wacziarg (2001). The regression model for corruption and macroeconomic variables can be written as follows:

$$CORRUPTION = \alpha + \beta_1 \, TRADE + \beta_2 \, INV + \beta_3 \, GOVT + \beta_4 \, HC + \mu$$

Where CORRUPTION is the ICRG corruption index. TRADE is trade openness, INV represent investment, GOVT is the government spending and HC is human capital.

3.2 Data description

The main variable, the corruption index, is accessible in two alternative measures, the International Country Risk Guide (ICRG), released by a private company called the Political Risk Services Group (PRS) and the Corruption Perception Index (CPI) supplied by Transparency International. The ICRG corruption index varies from 0 to 6, while the reduced point shows greater levels of corruption, while the greater point shows reduced levels of corruption. On the other side, Transparency International assembles CPI and this index varies between 0 and 100. Like the ICRG corruption index, reduced CPI shows greater perceived levels of corruption while greater CPI shows reduced perceived levels of corruption in a nation (Yadav, 2011). We are going to use the ICRG corruption index from PRS Group

because they assess risk from three main categories of risk which is political, financial and economic risk. We concluded that it is much accurate to use as a measurement for the study

Net investment expressed as a share of GDP from the World Development Indicator. Data on trade variable was collected from World Development Indicator. We took the total of exports and imports of goods and services declared as current USD

As for human capital, gross secondary school enrolment will be taken as the proxy for the study. The data was retrieved from the World Bank data collection, World Development Indicator. All the data is obtained yearly from the year 1989-2018.

4. Analysis and findings

Model 1,

$$CORRUPTION = \alpha + \beta1\ TRADE + \beta2\ INV + \beta3\ GOVT + \beta4\ HC + \mu$$

Where CORRUPTION is the ICRG corruption index. TRADE is trade openness, INV represent investment, GOVT is the government spending and HC is human capital.

4.1 Unit Root Test

Table 1 Unit Root Test

Variables	p-value NON- STATIONARY)	p-value (1ˢᵗDIFFERENCE LEVEL = STATIONARY)
CORRUPTION	0.2881	0.0003
GOVT	0.8401	0.0286
HC	0.7697	0.0001
INV	0.0790	0.0003
TRADE	-1.209297	0.0001

Each variable in this study has been tested individually at the constant level in order to detect the non-stationary. There are some ways to identify the non-stationary which the easiest way is to examine the p-value. When the p-value is over than 5% its indicate that the variable is non-stationary. When the p-value is less than 5%, its mean that the variable is stationary. As we can see in the Table 1, all the variables are show non-stationary at the constant level. After implies the 1stdifference level, all the variable shows a stationary.

Lastly, after the model is already show the stationary time series. The model of this study need to revised as all the variable shows a stationary after undergo the 1stlevel difference.

Model 2, .

CORRUPTIOND = α+ β1 TRADED + β2 INVD + β3 GOVTD + β4 HCD + μ

Where CORRUPTIOND is the ICRG corruption index after 1stdifference level. TRADE is trade openness 1stdifference level, INV represent investment 1stdifference level, GOVT is the government spending 1stdifference level and HC is human capital 1stdifference level.

4.2 Diagnostic Check

4.2.1 Autocorrelation

Table 4.2 Durbin-watson stat

Durbin – Watson stat	1.055493

Durbin-Watson Test is, $d^* = 1.055493$ as shown in Table 2 which falls between upper between d-value (dU) and 4 minus upper d-value (dU), the test falls under the area of positive correlation. Thus, H_o is rejected as there is problem of serial correlation exist in the model. .

4.2.1.1 The Breusch-Godfrey (BG) test
The Breusch-Godfrey (BG) test need to be performed in order check for the serial correlation problems, whereas if the probability chi square is less than 0.05 significant level, the model has a problem of serial correlation. If Breusch-Godfrey test is significant, the null hypothesis needs to be rejected.

Table 3 Breusch-Godfrey test

Breusch-Godfrey Serial Correlation LM Test	
Null hypothesis: No serial Correlation at up to 1 lag	
Prob. F (1,26)	0.0254
Prob. Chi-Square (1)	0.0171

Based from the result in Table 3, the value of chi-square is less than 0.05 which means it is significant. Thus, we reject the null hypothesis. The model has a problem of serial correlation.

4.2.2 Multicollinearity

4.2.2.1 Variance Inflation Factor (VIF)

Table 4 Variance Inflation Factors (VIF)

Variance Inflation Factors (VIF)	
Variables	Centered VIF
GOVTD	2.471949
HCD	3.115792
INVD	1.152300
TRADED	3.639720

Table 4 shows Variance Inflation Factor (VIF) of all independent variables which are government spending, human capital, investment and trade openness. If the value of VIF greater than 5 then the multicollinearity is severe. The Variance Inflation Factor from table 4.2.3.1 of all independent variables are less than 5 hence it shows that multicollinearity is low. If there are any independent variables which the VIF are more than 5, it indicates there is existence of multicollinearity problem. VIFs greater than 5 represent critical levels of multicollinearity where the coefficients are poorly estimated.

4.2.1.2 Newey-wey test

Table 5 Newey-wey test

Dependent Variable: CORRUPTIOND				
HAC standard errors & covariance (Newey-West fixed bandwith = 4.0000)				
Variables	Coefficient	Standard Error	t-stat	Prob
GOVTD	-1.19E-12	6.00E-12	-0.197596	0.8448
HCD	-0.072304	0.016772	-4.311019	0.0002
INVD	-0.047241	0.037102	-1.273280	0.2138
TRADED	-1.75E-11	3.51E-12	-4.980451	0.0000

By running the Newey-West test, it will consist of new t-statistic value. P-value approach is used to examine all the independent variables. From table above, it shows that the two variables which are human capital (HCD) and trade openness (TRADED) remain significance at 5% significant level as illustrated in Table 5.

4.2.2.2 Correlation between variables

Table 6 Correlation between variables

	CORRUPTIOND	GOVTD	HCD	INVD	TRADED
CORRUPTIOND	1.000000				
GOVTD	-.0716441	1.000000			
HCD	-0.912406	0.689301	1.000000		
INVD	0.203442	-0.133412	-0.324278	1.000000	
TRADED	-0.858138	0.750421	0.805665	-0.284454	1.000000

The variables that can influence the corruption is human capital (HC) and investment (INV) as they have high correlation of more than 0.5 with corruption. Meanwhile, the table shows variables government spending (GOVT) and trade openness (TRADE) have low influence with corruption as they have weak correlation of less than 0.5 with corruption.

4.3 Heteroskedasticity

Table 7 White test

Heteroskedasticity Test: White	
Null hypothesis: Homoskedasticity	
Prob. F(14,17)	0.7600
Prob. Chi-Square (14)	0.6431
Prob. Chi-Square (14)	0.5205

Based on the result in Table 7, H_0 is rejected as the value of chi-square, 0.5205 is more than the significance level which 0.05. The value of chi-square is not significant at 5 percent. The model is considered good when the chi-square is more than 0.05. Therefore, the problem of heteroscedasticity in this model does not exist.

4.4 Multiple Linear Regression

Table 8 Multiple Linear Regression

Variable	Probability	Coefficients
Constant	(0.0000)*	9.110773
GOVTD	(0.8563)	-1.19E-12
HCD	(0.0000)	-0.070513
INVD	(0.1233)	-0.046129
TRADED	(0.0089)	-1.75E-11
R^2	0.887091	
Adjusted R^2	0.870363	
F-statistic	53.03248	
Prob(F-stat)	0.0000	
Durbin-Watson Stat	1.055493	

*Significant at 5% level of significance

The effects of the macroeconomic variables need to be interpreted cautiously in order to avoid misleading conclusion. Positive sign indicates negative relationship because an increase in the ICRG index is associated with lower corruption level. Negative sign indicates positive relationship because an increase in the ICRG index is associated with lower higher corruption level.

From the table above, we can conclude that all variables have positive relationship with corruption. Government spending (GOVT) and investment (INV) is shown to be statistically insignificant at 5% significance level with corruption. As for human capital (HC) and trade openness (TRADE), the result shows that the variables are significant at 5% level of significance. The F-test shows significance at 1% level of significance. This indicates that at least one of the independent variables has an influence on the corruption. Apart from that, the coefficient of determination ($R2$) shows that 88.70% of the total variation in dependent variables, corruption can be explained by the changes of all independent variables namely government spending (GOVT), human capital (HC), investment (INV) and trade openness (TRADE). The remaining 0.1129% cannot be explained.

When there is an increase in government spending by 1 unit, corruption increase by 1.19E-12 unit. This shows that there is a positive relationship between corruption and government spending. The probability t-test is 0.8563 which is more than 0.05. Hence, based on the result, it shows that t-test is statistically not significant at 5% level of confidence and variable government spending has no high influence on corruption. Thus, H0 is not rejected. There is a positive relationship between government spending and corruption. This result is supported by a research conducted by Jajkowicz & Drobiszova (2015) which explains that government spending is disbursed in a lot of channel or sector such as health, education, recreation, economic affair and security or military. Corruption may affect government spending allocation in terms of defence and general public services. However, it is not significant in terms of social protection, public order and safety, as well as recreation, culture and religion.

In other say, further explain by Jaikowicz & Drobiszova (2015), corruption have positive relationship and is significant to government spending in terms of education and health.

As there is an increase in human capital by 1 unit, corruption increase by 0.070513 unit. This shows that there is a positive relationship between corruption and human capital. The probability t-test is 0.0000 which is less than 0.05. Hence, based on the result, it shows that t-test is statistically significant at 5% level of confidence and variable human capital have influence in corruption. Thus, H0 is not rejected. There is a positive relationship between human capital and corruption. Based on the findings of Rumyantseva (2005), he mentioned that low quality of education will leads to higher corruption. This is because those who lack of skills and knowledge will tend to have high opportunity in getting high level of profession by offering bribes to the institution (Murphy, Schleifera & Vishny, 1991). Educational institute that have existence of corruption may weaken the quality of human capital because the students basically obtain eminently low skills and knowledge (Latova & Latov, 2008). The activities of corruption are prone to be done by those who are less educated. This is because they tend to have low knowledge of the law enforcement and all the regulation on unlawful activities that includes bribing, red tape and others. It is likable to be done by individuals with high level of illiteracy. And also because they are unaware of most of the anti-corruption programs (Graeff and Mehlkop, 2003).

When there is an increase in investment by 1 unit, corruption increase by 0.046129 unit. This shows that there is a positive relationship between corruption and investment. This is supported by Liu (1985), stated that payments of bribes will eventually help firm to obtain license easily and minimize the opportunity cost of time in order to enhance the growth rate of investment in a rapid time. Romer (1994) stated that monopolistic corruption may attract more investment in a country because firm have the property right in running their business after getting the government produced goods such as business license or permit, right to use government road. The supply of bribes by firm or entrepreneur is good for investment because bribes speeds up procedure in obtaining government produced goods. Corruption allows entrepreneur to overcome the complex and difficult regulation as stated out by Shleifer et al. (1993). However, investment is statistically insignificant to corruption. This is probably due to three large fluctuations on investment inflow to Malaysia happened in the year from 1987 to 1995, 1998 to 2000 and 2007 to 2009. Therefore, the effect of investment inflow to corruption is statistically insignificant and is similar with the results from the researches done by Mauro (1995), Mo (2001), Pellegrini and Gerlagh (2004) and Pellegrini (2011).

As for trade openness, if there is an increase in trade openness by 1 unit, corruption increase by -1.75E-11 unit. This shows that there is a positive relationship between corruption and trade openness. The probability t-test is 0.0089 which is less than 0.05. Hence, based on the result, it shows that t-test is statistically significant at 5% level of confidence and variable trade openness has influence to corruption. The results are consistent with the study by Hodge et al. (2009). The rationale behind is that when a country imposed high trade barriers, it provides incentive for government officers to engage in rent-seeking activities. In addition, global competitiveness becomes more intensive when Malaysia is moving towards trade liberalization. Therefore, exporters and importers are more willing to corrupt the government officers in order to ease the trade activities. When trading environment becomes more liberalized, this will encourage the transfer of technology between countries and hence increase the factor productivity and economic growth. This finding is also supported by rent seeking theory.

5.0 Conclusion and recommendations

The research was conducted to verify the relationship between macroeconomic variables and corruption in Malaysia. There are four macroeconomic variables in this research that that could affect the dependent variable which is corruption namely government spending (GOVT), human capital (HC), investment (INV) and trade openness (TRADE). The data for all variables were collected yearly starting from 1984 until 2016 with. We extracted the data from International Country Risk Guide (ICRG) and the World Bank. Next, based on the analysis that has been collected in this study, it shows that all independent variables have negative relationship with corruption. However, since the corruption index indicates higher value refers to negative results while lower number indicates positive result, this means that all variables have positive relationship with corruption. On the other hand, we found that two variables which is human capital (HC) and trade openness (TRADE) is statistically significant with corruption while the other two variables government spending (GOVT) and investment (INV) are found statistically insignificant.

On the other hand, variables namely government spending and investment both shows that they have positive relationship however, it is statistically insignificant with corruption. Jajkowicz & Drobiszova (2015) elaborate that government spending is disbursed into a few other channel or function including defence, education, health, social protection, economic affair and some others.

To live in a corrupt-free environment is nearly impossible in the world today. It may sound harsh but it is definitely a reality we are living in. However, we must take a leap to at least control and just reduce the number of corruption cases. Though, we must not set up an over-the-top goals because unrealistic goals are just simply a vision of impossibility. Some efforts could be done. There is some basis for concepts that can be executed that can curb corruption by their very nature. First and foremost, the recruitment of police officers with an excellent background and renowned for their integrity. To be honest, it is difficult for numerous of reasons. Officers are people. The policeman can be an unpredictable individual. But what can happen, namely corruption, is predictable, as history so well shows. It is also predictable that a big majority will do their work and do it professionally and honestly. Stricter and thorough screening techniques for the background need to be implemented to reduce the likelihood of corruption of a prospective officer. Checks must not be confined to the operations of criminal history. If the candidate is able to finish all the demands for integrity effectively, it becomes more probable to be frank. Unfortunately, since enforcement officers are human, no department has succeeded in establishing tests that will reliably predict the behaviour of these officers.

If an enforcement officer, supposedly the pillar of the law, can challenge it, why are the people unable to do the same? These enforcement officers ' credibility will be gone. A corrupt officer can't efficiently convey why people ought to follow the law because they have no consistency and therefore no confidence in upholding law and order in society. Continuing training and education are therefore instrumental in strengthening officers ' integrity.

Organizational and anti-corruption regulations are important and the effect is also important. In law enforcement organizations, nepotism and cronyism are weaknesses that render corrupt acts and unethical behavior sometimes becomes the norm. Some amendments are needed to our anti- corruption legislations. If we were to discuss an example, when an officer possessed wealth that is unaccounted, it does not prove that there's possibility of the crime of bribery. It is different with Hong Kong, where any officer that is found to possess wealth that is unaccounted for may face the charges of crime of bribery. To explore corruption instances efficiently, we need to equip the Malaysian Anti-Corruption

Commission with the suitable legislations. There must be the political will to do so. These 'kind-hearted donor' need to stop corrupting and the one accepting should be imprisoned. The key is to have zero tolerance and there are no exceptions. Leadership is making the distinction. We must therefore solve it as a matter of utmost urgency and without fear or favor (Saieed, 2018).

In order for to get much more accurate results, future researcher can look into more specific analysis or much specific variables. Especially in terms of government spending where it was disbursed in few other channels or function. It will be more accurate, and researchers may really understand and identify the industries that may influence corruption the most.

Future researchers may try to analyse the trends of corruption that is going on in the country. Instead of just analysing the relationship between other variables, researchers can analyse the corruption index itself, why do the country's index went up in certain years and why do the country's index went down in other years? Any political incident that happened within certain years or any other type of incident that causes the country's corruption index to increase or decrease could be looked into.

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