

International Bank's Decision to Expand into Malaysia, the Economic Determinants

¹NuhaKasemDamag, ^{1,2}Behrooz Gharleghi, ¹BehrangSamadi and ^{1,2}Benjamin Chan Yin Fah

¹Faculty of Business and Management,

²Centre for the Socio-Economics of Aging (CSEA),

Asia Pacific University of Technology and Innovation, Technology Park Malaysia,
57000 Bukit Jalil, Kuala Lumpur, Malaysia

Abstract: This study aims to identify the economic determinants of the international bank's decision to expand into Malaysia. This objective is examined via regression analysis through the effect of exchange rate, growth rate, inflation rate and foreign direct investment, towards the number of international banks in Malaysia. The secondary quarterly time series data is collected from the International Monetary Fund spanning from 2000-Q1 to 2013-Q4. The empirical findings show that exchange rate and foreign direct investment have a significant negative effect, towards the number of international banks in Malaysia. In the other hand, growth and inflation rate have a positive but not significant effect, toward the number of banks in Malaysia. Therefore, more consideration should be given to the stability of exchange rate and sustain ability of foreign direct investment in Malaysia.

Key words: Exchange rate, growth rate, inflation rate, FDI, empirical findings

INTRODUCTION

The single global banking space is almost a reality (Mullineux and Murinde, 2003). Internationalization of banks has grown rapidly since 1960 (Auerbach, 1975). This expansion reflects, the huge increase of international interdependence of the world changing financial environment and the world's economy as a whole. Due to the expansion of businesses overseas, banks followed to continue providing services to long standing customers (Baldwin *et al.*, 1988). As Malaysia being one of the most developed countries with very few barriers to enter its market, we will head the research, towards Malaysia as a host country for international banks.

Malaysia has been known as a federal constitutional monarchy which consists of thirteen states and three federal territories. The government system closely modelled the Westminster parliamentary system. The banking industry in Malaysia has continued, its steady growth and expansion, since 1900's and has a diversified range of institutions to serve the complex needs of its domestic economy. Malaysia's financial system includes both the conventional financial system and the Islamic financial system.

In this study, we will examine how the economic determinants may affect the entry of international banks into Malaysia's banking market. We will get deep explaining about four main economic determinants starting with: firstly, exchange rate which is the price for which the currency of home country can be exchange with foreign currency (MacDonald, 2007). Secondly, economic growth that can be defined as an increase in the amount of the produced goods and services by a certain economy over a period of time. Thirdly, inflation rate that is a continuous rise in price levels (Makinen, 2003). Fourthly, Foreign Direct Investment (FDI) which refers to receiving investment from outside the country or an effective control over a foreign interest outside of the economy.

The research's general objective is to illustrate the determinants of an international bank's decision to expand into Malaysia by examining the four independent variables which are exchange rate, growth rate, inflation rate and FDI and their effects, toward the dependent variable which is the number of foreign banks in Malaysia.

Literature review

International banks: According to Tsai *et al.* (2009), banks which have been motivated by internationalization

mostly expand abroad to support existing clients with an international business and to develop new businesses in foreign countries to increase their overall profitability. Studies have described what drives multinational banks to expand abroad. For example, larger banks are more likely to expand their businesses to foreign countries to follow their customers, however, restrictions may reduce banks foreign direct investments incentives to enter other countries. Moreover, banks mostly prefer expanding to host countries with larger economic size and development. In contrast, Barro (2003) suggested that countries with less developed financial systems provide a wider range of possibilities for banks to enter their market.

According to Baldwin *et al.* (1988), banks internationalization has been well established where foreign banking institutions can be seen prominent in almost all financial centres of the world. However, despite the apparent ease where banks businesses have crossed national boundaries, banks have been getting through many obstacles to finally serve customers in host countries markets. These obstacles mostly arise due to the special nature of banking services which can get affected by slight changes in the external or internal surroundings and also because all countries place several regulations and restrictions for banking operations. These regulations and restrictions done by nations are intended to ensure banking systems stability in the country to provide national authorities on foreign investments to ensure that investments have a positive effect on the economy, etc.

Exchange rate: According to Parkin (2008), the price caused by exchanging one currency to another foreign currency is called exchange rate. When there is a change between the country's currency in terms of monetary value and the host (foreign) country's currency, it can increase or decrease the company's investment returns. For banks this can happen when they convert the cash they have received from international investments to their home countries currency. At some time when the host countries currency is strong compared to the value of the home countries currency, this strength increases banks investment returns because their foreign earnings translate into more cash when converted to their home countries currency. However, if the host countries currency is weak compared to the value of the home countries currency, this weakness reduces banks investment returns because earnings will be translated into fewer cash when converted to their home countries currency.

Exchange rate depends on both the home and host countries' monetary conditions. The constant change in exchange rate hardly predictable, since it depend on expectations about home and host countries economic factors such as interest rates which may itself be affected by a policy change. The changes in exchange rate most of the time leads to changes in the relative prices of both home and host countries goods and services for banks though some of these prices may take several months to change and affect the pattern of spending (Favero *et al.*, 1999). According to Wezel (2004), banks usually interested in knowing whether the constant change in exchange rate may affect their businesses in foreign markets since it sometimes send fault indications. As a result, there is a reason why banks tend to be agnostic about different exchange rate volatility measures. In the other hand, exchange rate may be affected by other macro variables (Gharleghi and Nor, 2012; Gharleghi *et al.*, 2014).

Growth rate: Growth rate refers to economies ability to increases the amount of goods and services produced during a time period. It has been argued that the higher the growth rate of host countries compared to the growth rate of home countries, the higher the number of foreign banks entering the host countries is expected. Furthermore, if the difference between the home countries growth rate and the host countries growth rate is low, the higher the probability that banks will enter the host countries. The economic growth of the parent bank in the home country and the level of development shapes the foreign banks' presence in the foreign (host) country.

As claimed by Mejia (2011), banks usually seek countries with high growth rates and developing financial markets, since they represent markets of the future. Improving economies represent increase in the purchasing power of these economies, thus creates more demand for banks products and services. Investing in highly developed and growing economies may have a positive effect on shareholders wealth where they can capture part of the growth and establish an identity in the future markets. According to Wezel (2004), the foreign banking market size could also be measured by sectorial GDP or loan volume. Thus, the size of the host countries' banking markets should feed into the investing banks' utility functions because large markets tend to offer the potential for practicing strategies such as economies of scale which aid in decreasing marginal costs of production.

Inflation: According to Makinen (2003), inflation happens when there is a sustainable rise in the general price level

of a country. As argued by Barro (1999), many researches have pointed out to the long run influence of inflation on economies growth and financial system development. As for the inflation influence on growth rates, it has a negative temporary impact. This negative impact can be significant and can generates a permanent reduction in the per capital income level. However, the inflation impact on the financial system development not only decreases the investment level but also the productive factors efficiency. For those reasons, Tsai *et al.* (2009) claimed that banks are expected to avoid countries with a high level of inflation.

According to Demirhan and Masca (2008), inflation is an indicator of foreign host economies stability. Countries always try hard to cut down and decrease the level of inflation where low inflation rates represent a good sign of the country's economy. If the foreign country has a low inflation rate, it is likely to attract foreign investments. As argued by Yesilyurt and Elhorst (2014), countries with high inflation rates indicate bad economic conditions since high inflation increases capital loses value. Thus, the prices of banks products and services should be increased to capture the value destruction. As a result, inflation has a significant effect on shareholder wealth. International banks macroeconomic indicators in the target home country should be high growth rate and low inflation in order to success and shareholders be positively affected.

Foreign direct investment: According to Goldberg (2006), Foreign Direct Investment (FDI) refers to an international flow of capital that gives a parententity in the home country or a multinational organization the ability to control its foreign affiliates in the host country. As argued by Tsai *et al.* (2009), most time banks would be more attracted to a foreign (host) country when it attracts large FDI because for banks this may indicate large business opportunities. Furthermore, a host country with high FDI frequently attracts banks entrance with the association of more foreign subsidiaries. Many banks believe in follow the client theory which makes them observe the high percentage of FDI great business opportunities and are willing to establish foreign affiliates in host countries.

According to Buch (2000), foreign direct investment could negatively influence international banks investments, since a high rate of FDI indicates an intense competition. Thus, several banks may choose to serve a foreign market by setting up affiliates rather than carrying out their services from their home countries to minimize possible failure costs. This type of act can be analysed

based on the eclectic paradigm which assumes that specific factors such as ownership or location factors may have the most effect on decision of banks to set up their affiliates in foreign markets (Sagari, 1992). In addition to ownership and location factors, the size of the foreign banking market, restrictions and regulations can also have a huge effect on banks foreign direct investment decisions. Furthermore, beside the factors that banks consider before investing in new foreign markets, banks also look into three cost components that may have also an effect of their investment decisions. These costs are the fixed costs to enter the foreign market, the fixed costs to leave the foreign market and operating costs.

MATERIALS AND METHODS

Research framework: This research framework illustrates the main purpose of doing this study. It starts by providing the research's independent variables which are exchange rate, growth rate, inflation rate and FDI which are implied to represent the determinants of a bank's decision to expand into Malaysia. On the other hand, the framework presents the research's dependent variable which is the number of foreign banks in Malaysia that might be affected by any if not all of the independent variables. Figure 1 presents the research framework.

Based on the research framework, mentioned the following hypotheses are developed and they are stated in forms of null hypothesis:

- H_1 : exchange rate has no significant relationship with the number of foreign banks in Malaysia
- H_2 : growth rate has no significant relationship with the number of foreign banks in Malaysia
- H_3 : inflation rate has no significant relationship with the number of foreign banks in Malaysia
- H_4 : FDI has no significant relationship with the number of foreign banks in Malaysia

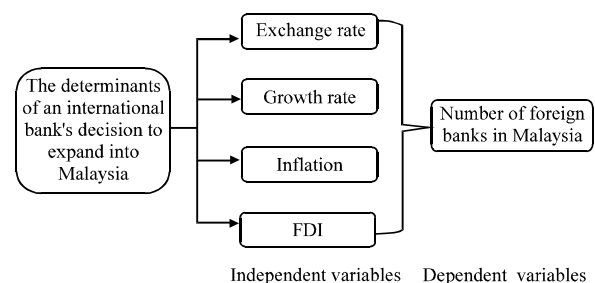


Fig. 1: Research frame work

Secondary data: This research will be using secondary data analysis, some of the data collected by secondary data was not obtained to answer the researcher's specific research questions but it could solve and relate different issues that may help the researcher's in his or her research topic. Normally, secondary data provides high quality and larger databases that would be impossible of a single researcher to obtain alone. Most secondary data users are analysts of social and economic matters who consider secondary data essential to finish their studies.

The research is based on secondary data, since it is dealing with economic statistics for its variables, exchange rate, growth rate, inflation and Foreign Direct Investment (FDI) which can only be obtained from reliable resources that monitor fluctuations in values.

Since, there is no direct data for some of these variables, researchers use a proxy for them, mentioned before is the variables and their proxies.

Number of foreign banks: In order to overcome any possible inconvenience, disruption and difficulty in measuring the data of the dependent variable, the number of foreign banks, the study used the percentage of foreign lending, as a proxy. As claimed by Mariassunta and Ongena (2005), a possible proxy for the number of foreign banks in a certain economy is the percentage of foreign lending. The percentage of foreign lending is defined as the ratio of loans extended by foreign banks to total bank loans in the given economy (loans by foreign banks/total bank loans). Thus according to their assumption, the study has used the percentage of foreign lending as the number of Foreign Banks proxy.

Exchange rate: The data of the independent variable, exchange rate has been obtained quarterly starting from the first quarter of 2000 until the fourth quarter of 2013 and it is defined as the rate of Malaysian Ringgit against the US dollar.

Growth rate: Since, the data for the independent variable growth rate is difficult to be gathered and obtained in quarterly time series, the study calculated the growth rate using changes in GDP as compared to previous period.

Inflation rate: It is calculated using Consumer Price Index (CPI).

FDI: Since, the data for the independent variable, Foreign Direct Investment (FDI) is difficult to be gathered and obtained in quarterly time series, the study has used the ratio of total trade to GDP as a proxy. According to Wahid *et al.* (2009), the ratio of trade to GDP can give a

good measure of the Foreign Direct Investment (FDI) in a given economy since it is highly motivated by the export market.

Regression analysis: This study will be using the regression analysis to ascertain the causal effect of its independent (predictor) variables upon dependent (response) variable. It will be using the multiple regression analysis, since it involves >2 independent (predictor) variables. Thus, it will examine the effect of exchange rate, growth rate, inflation rate and FDI upon the number of Foreign Banks in Malaysia. To explore the issue, the study will assemble data about the research variables and use regression to estimate the quantitative effect of the independent (predictor) variables upon the dependent (response) variable. Furthermore, the regression analysis will also identify a curve which provides the best fit using data points to identify a trend in the data. As a result, the study's regression analysis will be as follows:

$$Y(\text{number of foreign banks}) = a + b_1(\text{exchange rate}) + b_2(\text{growth rate}) + b_3(\text{inflation rate}) + b_4(\text{FDI})$$

RESULTS AND DISCUSSION

Model summary: Table 1 represents the model summary of the multiple regression analysis. According to Leech *et al.* (2005), the model summary table gives goodness of fit measures between the dependent and the independent variables. It starts with the R^2 value estimate how much the dependent variable, number of foreign banks, can be explained by the independent variables foreign direct investment, exchange rate, growth rate and inflation combined. In this case, the $R^2 = 0.226$ that means 22.6% only of the dependent variable can be explained by the independent variables which is moderate.

Analysis of Variance (ANOVA): Table 2 represents ANOVA analysis of the multiple regression analysis. The ANOVA concludes the results of a test of significance for R and R^2 using F-statistics. In this case, looking at the

Table 1: Regression model summary

Tests	Values
Change statistics	
R^2	0.226
Adjusted R^2	0.165
SE of the estimate	0.0061
R^2 change	0.226
F change	3.723
df1	4
df2	51
Sig. F change	0.010

regression row under Sig. the $p < 0.05$. Therefore as a conclusion, the R and R^2 between the dependent variable, number of Foreign Banks and the independents variables, foreign direct investment, exchange rate, growth rate and inflation combined is statistically significant.

Pearson correlation: Table 3 represents Pearson Correlation of the multiple regression analysis. The correlation table mainly presents the degree of correlation between the dependent variable, each independent variable and the correlations among different independent variables. Table 3 is used to observe the level of correlation between the dependent variable, each independent variable and to ensure low multi-collinearity between the independent variables.

Table 3 implies that the independent variable growth rate has the highest positive correlation with the dependent variable number of Foreign Banks, compared to other independent variables, followed by inflation. However, there is a negative correlation among the dependent variable, number of foreign banks and the independent variables exchange rate and Foreign Direct Investment (FDI), since they carry negative values of correlation. This means that the dependent variable, number of Foreign Banks and the independent variables growth rate and inflation have a direct correlation. However, the dependent variable, number of Foreign Banks and the independent variables exchange rate and Foreign Direct Investment (FDI) have an inverse correlation. On the other hand, the table also indicates low multi-collinearity between the independent variables since all values are relatively below 0.75. This means, the independent variables are not significantly correlated.

Regression analysis coefficients: Table 4 represents the coefficients of the multiple regression analysis. It provides useful information for understanding the regression equation:

Table 2: Analysis of Variance (ANOVA)

Models	Sum of squares	df	Mean square	F-Stat.	Sig.
Regression	0.001	4	0.000	3.723	0.010
Residual	0.002	51	0.000		
Total	0.002	55			

Table 3: Pearson correlation analysis

Variables	Number of foreign banks
Exchange rate	-0.368
Growth rate	0.109
Inflation rate	0.058
FDI	-0.281

Table 5: Summary of hypotheses testing

Hypotheses	p-values	Results
Exchange rate has no significant effect on the number of foreign banks in Malaysia	0.013	Reject null hypothesis
Growth rate has no significant effect on the number of foreign banks in Malaysia	0.577	Failed to reject null hypothesis
Inflation rate has no significant effect on the number of foreign banks in Malaysia	0.287	Failed to reject null hypothesis
Foreign Direct Investment (FDI) has no significant effect on the number of foreign banks in Malaysia	0.024	Reject null hypothesis

$$Y (\text{number of foreign banks}) = a + b_1(\text{exchange rate}) + b_2 (\text{growth rate}) + b_3 (\text{inflation}) + b_4 (\text{FDI})$$

Thus, the regression equation that predicts number of Foreign Banks based on the linear combination of exchange rate, growth rate, inflation and Foreign Direct Investment (FDI) is:

$$\text{Number of foreign banks} = 0.058 - 0.007 (\text{exchange rate}) + 0.015 (\text{growth rate}) + 0.001 (\text{inflation}) - 0.041 (\text{FDI})$$

To begin, this equation indicates that the intercept is 0.058 when all the independent variables are zero in value. Looking at exchange rate in the equation, there is a negative and significant relationship between exchange rate and number of Foreign Banks since, the t-test value is -2.585 which is out of the (+1.97 and -1.97) range and the p-value (0.013) is < 0.05 . Thus, the number of Foreign Banks decreases by 0.7% for each additional increase in the exchange rate. Likewise, Foreign Direct Investment (FDI) implies a negative and significant relationship between FDI and number of Foreign Banks since the t-test value is -2.323 and the p-value (0.024) is < 0.05 . As a result, the number of Foreign Banks decreases by 4.1% for each additional increase in the FDI. On the other hand, growth rate in the equation represents a positive but insignificant relationship between growth rate and number of Foreign Banks, since the t-test value is 0.562 which is in the (+1.97 and -1.97) range and the p-value (0.577) is > 0.05 . Lastly, Inflation in the equation implies a positive but insignificant relationship between inflation and number of foreign banks since the t-test value is 1.077 and p-value (0.287) is > 0.05 . From the regression results we can conclude with hypothesis testing that is summarized in Table 5.

Table 4: Regression coefficients

Variables	Coefficients	SE	t-Stat.	Sig.
Constant	0.058	0.010	5.614	0.000
Exchange rate	-0.007	0.003	-2.585	0.013
Growth rate	0.015	0.027	0.562	0.577
Inflation	0.001	0.001	1.077	0.287
Foreign direct investment	-0.041	0.017	-2.323	0.024

CONCLUSION

To sum up, the study has conducted data analysis and presentation using regression analysis in SPSS. It started with providing an overview of the variables data and how it were collected whether by obtaining the actual data for the variable like what happened in independent variables exchange rate and inflation, calculating the data from other predictors which was the case for the independent variable growth rate or by using proxy variables like what happened in the dependent variable, number of foreign banks and the independent variable Foreign Direct Investment (FDI). The study then provided descriptive statistics for the data which includes measures in both the central tendency and the dispersion. Furthermore, the study conducted the multiple regression analysis to present the relationships the independent variables have with the dependent variable. Both the independent variables exchange rate and foreign Direct Investment (FDI) have negative and significant relationships with the dependent variable number of foreign banks. However, the independent variables growth rate and inflation have positive but insignificant relationships with the dependent variable number of foreign banks. Lastly, hypotheses' testing was applied and it resulted in rejecting the null hypotheses for both exchange rate and FDI. However, it failed to reject Null hypotheses for growth rate and inflation.

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