

THE IMPACT OF ADVERTISING EXPENDITURE ON THE PERFORMANCE OF ISLAMIC BANKS IN MALAYSIA

Maisyarah Stapah @ Salleh^a, Nizam Ahmat^{b1*} & Caroline Rosie Jeffrey Nasah^c

^{ac} *Labuan Faculty of International Finance, Universiti Malaysia Sabah, Malaysia*

^b *Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Malaysia.*

ABSTRACT

This paper investigates the impact of advertising expenditure on the performance of Islamic banks in Malaysia. A static panel data employed to analyse the data gathered from each Islamic banks annual report over the period of 2008 to 2021. The finding reveals that advertising expenditure (InADT) has significant impact on both Return On Assets (ROA) and Return On Equity (ROE) where the higher the advertising expenditure, the higher the ROA and ROE. Logarithm of the bank net income (InINC) also has the same significant relationship towards ROA and ROE. On the other hand, logarithm of total financing (InTF) significant only to ROE while logarithm of total customer deposit (InDEP) not significant to both ROA and ROE. In conclusion, the Islamic banks need to spend on advertising expenditure to boost its performance. At the same time, the management of the Islamic banks need to carefully plan their advertising strategy based on the segmentation of the customers in order to increase the performance of the Islamic banks. Meanwhile, future study may include macroeconomic variables in the model, investigate the impact of InADT towards conventional banks in Malaysia and examine the long-run impact of advertisement expenditure on the banking performance.

Keywords: Advertising; performance; profitability; return on assets; Islamic bank.

ABSTRAK

Makalah ini mengkaji kesan perbelanjaan pengiklanan terhadap prestasi bank-bank Islam di Malaysia. Data panel statik digunakan untuk menganalisis data yang dikumpulkan daripada laporan tahunan setiap bank Islam bagi tempoh 2008 hingga 2021. Penemuan ini mendedahkan bahawa perbelanjaan pengiklanan (InIKL) mempunyai kesan yang signifikan terhadap Pulangan Terhadap Aset (PTA) dan Pulangan Terhadap Ekuiti (PTE) di mana semakin tinggi perbelanjaan pengiklanan, semakin tinggi PTA dan PTE. Logaritma pendapatan bersih bank (InPEN) juga mempunyai hubungan signifikan yang sama terhadap PTA dan PTE. Sebaliknya, logaritma jumlah pembiayaan (InPEM) hanya signifikan kepada PTE manakala logaritma jumlah deposit pengguna (InDEP) tidak memberi kesan signifikan kepada PTA dan PTE. Kesimpulannya, bank-bank Islam perlu membelanjakan perbelanjaan pengiklanan untuk meningkatkan prestasinya. Pada masa yang sama, pengurusan bank-bank Islam perlu berhati-hati merancang

^{1*} Corresponding author; Nizam Ahmat, Lecturer at Faculty of Business, Economics and Social Development, Universiti Malaysia Terengganu, Malaysia. E-mail: nizamahmat@umt.edu.my

strategi pengiklanan mereka berdasarkan segmentasi pelanggan untuk meningkatkan prestasi bank-bank Islam. Manakala, kajian akan datang boleh memasukkan pemboleh ubah makroekonomi di dalam model, mengkaji kesan InIKL terhadap bank-bank konvensional di Malaysia serta mengkaji kesan jangka panjang perbelanjaan pengiklanan terhadap prestasi perbankan.

Kata kunci: Pengiklanan; prestasi; keuntungan; pulangan terhadap aset bank Islam.

1. Introduction

Advertising plays an important role in the process of creating value (Mulchandani, et. al., 2019) and an important marketing technique for communicating product availability, features, and benefits, as well as developing a company's brand (Peterson and Jeong, 2010). It is used to impact customer attitudes and perceptions (Wies et al., 2019) besides informing clients about new products and services, which helps to increase market competitiveness and demand (Ali Shah and Akbar, 2008). Advertising also acts as a value relevant indication of future earnings, promotes financial institutions' goods and services, boosts cash flows, and is regarded as an investment for wealth maximization impacting investor behaviour (Chen, 2020; Lou, 2014; Joshi and Hanssens, 2010). Some of the examples of paid advertising involves several channels such as through printed, television, radio, and social media.

The banking sector, like any other, relies on marketing communications such as advertising to inform customers about many services available at the bank (Acar and Temiz, 2017). Furthermore, today's banking industry is intensely competitive, which required each bank to spend considerably on advertising to capture the market. Same goes to the Islamic banks as the products and services provided by these Islamic banks differ in nature and have distinct characteristics from the conventional banks. Therefore, it is critical for the growth and development of the Islamic banking industry that these characteristics be communicated through promotional activities (Muhammad, Basha and AlHafidh, 2019). As a result, it is hope that the Islamic banks will be able to compete in the market in terms of getting new and retain customers for their services (i.e deposits and financing) and getting better profitability from the business to ensure the sustainability of the Islamic banks.

Table 1: Islamic Banking Total Deposits, Financing, and Net Income and Year-on-Year Growth (in thousand MYR)

Years	Total Deposit	Growth (%)	Total Financing	Growth (%)	Total Net Income	Growth (%)
2008	124484132	(-)	94691771	(-)	2892329	(-)
2009	149508911	20.10	118361639	25.00	4656769	61.00
2010	176052309	17.75	144420819	22.02	5761679	23.73
2011	233040437	32.37	189905468	31.49	5314434	-7.76
2012	280005543	20.15	230421852	21.34	7569096	42.43
2013	315562250	12.70	278818972	21.00	9062598	19.73
2014	355118417	12.54	331619746	18.94	9399334	3.72
2015	376952997	6.15	382079717	15.22	9914355	5.48
2016	397859392	5.55	426238221	11.56	10093193	1.80
2017	461256731	15.93	472535653	10.86	12055051	19.44
2018	515750854	11.81	527005244	11.53	13497653	11.97
2019	560091472	8.60	574596533	9.03	14961566	10.85
2020	600512118	7.22	621506401	8.16	12750448	-14.78
2021	642133850	6.93	650422071	4.65	16465119	29.13

Note:

Figure in () stands for year-on-year growth

Source: Islamic Banks Annual Report (2008-2021)

Table 1 outlines the consecutive growth patterns of total deposits, financing, and net income in Malaysian Islamic banking. Based on the table, the highest growth for deposit and financing are in year 2011, where the growth for deposit reported 32.37% and followed by 31.49% for financing. However, in the same year, total net income shown a decrease in growth which is -7.76%. In general, each year, there is a positive growth for both deposit and financing but over the time the percentage of growth is deteriorating. For example, in year 2021, the growth for deposit is 6.93% and 4.65% for financing. As an intermediary, accepting deposits and giving financings to customers is the Islamic banks main businesses. The small percentage of growth of the deposits and financing are matters and need further attention as it might deteriorate the profitability of Islamic banks. Thus, in order to ensure the sustainability of the Islamic banks in general and specifically in Malaysia, study need to be done to know whether there is an impact of advertising expenditure, deposits, financings and net income towards the performance of Islamic banks.

Basically, many studies in various industries have been conducted to investigate the effect of advertising expenditure on firm performance as measured by sales, stock returns, and profitability (Spotts et. al, 2020; Kim, et. al, 2011; Angulo-Ruiz et. at., 2018; Xu et. al., 2018; Rahman, et. al., 2020). However, little is known whether advertising expenditure would contribute to a performance of Islamic banks. Hence, the findings of this study are likely to provide insight into research regarding marketing aspects of financial services especially when Xu, Liu and Chen (2019) have reported that advertising does contributes to organizations' value, profitability and at the same time the performance of its product. In regard to this, the paper is organized as follows: Section 2 discusses the literature related to marketing and performance.

Section 3 and 4 present the methodology and discussion of the results, while the final Section 5 presents the conclusions.

2. Literature Review of Advertising on Bank Performance

Mola and Rahaman (2022) focussed on effect on advertising expenditure on several performance indicator in Bangladesh banks. The dependent variables used in this study are the log of operating profit (OP), return on assets (ROA), return on equity (ROE), and Tobin's Q. The result shows that the advertising expenditure has positive and significant impact on OP, ROA, ROE of Bangladesh banks. However, marketing seems to report insignificant impact towards Tobin Q. As the result is positive, therefore, any increase in advertising expenditure will result in the increased of profitability of all banks in Bangladesh. Besides that, Mola and Rahaman (2022) separately analysed the impact of advertising expenditure on conventional and Islamic banks. The results prevailed that there was no impact of advertising expenditure on both banks towards OP, ROE, and Tobin's Q. However, the Islamic banks showed a positive relationship between advertising expenditure towards ROA. The insignificant result reported for the conventional banks.

Earlier, Mullineaux and Pyles (2010) uncover the impact of advertising and promotions towards profits and market share of bank deposits within the US banks. By using fixed effects panel, this study found that advertising and promotions expenditure had positive effect on the bank profits. Also, the spending on advertising and promotion will give the same impact towards the market share of bank deposits. This certainly because spending on advertising and promotion increases the brand equity of the banks. This brand equity can be referred to brand loyalty, brand awareness, brand associations, and perceived quality. However, Metwally (1993) shown that advertising and market shares are non-linearly related.

Mulchandani et. al. (2019) used Koyck's distributed lag model to examine the long-run impact of advertisement on financial performance. This study involved 14 private sector banks and 19 public sector banks. This study was analyzed during the period of 2004 until 2017. The spending on advertising is more by private sector banks as compared to its counterpart. The result revealed that for interest income, the effect of advertising on both private and public sector bank disappear after two years and five years respectively. Meanwhile, for ROA, the effect of advertising is longer for private sector banks which is four years and only two years for public sector banks.

Using the same Koyck's distributed lag model, Acar and Temiz (2017) which focused on Turkey banking found that advertising expenditure have significant positive effects on all performance measurement such as ROA, interest income and total operating income up to five, five and two years respectively but in a declining pattern. AlAli et. al. (2021) used advertisement expenses apart from some other independent variables such as number of ATM machines, number of bank branches, number of staff, bank's total assets, and assets per employees. This study used panel data and involved ten banks listed at Kuwait stock exchange (KSE). It is found that advertising expenditure will increase the ROA of the bank in Kuwait.

In general, previous study has put their attempt to study the impact of advertising on the banks performance. However, it seems that there is still lack of study focussed specifically on the

impact of advertising towards Islamic banks and little is known about the relationship between advertising expenses towards total financing and deposits. Understanding these relationships is crucial and may benefits the key players such as the bank management to make informed decisions relating to spending more on advertising especially for the growth of the Islamic banks.

3.0 Research Methodology

The method of quantitative analysis was applied in this research. Basically, secondary data from financial bank statements is used in this study. Based on the availability of data, thirteen Islamic banks that reported data on total advertising expenditure in their bank statements have been chosen as a sample. These banks are Kuwait Finance House, Muamalat Bank, RHB Islamic Bank, Affin Islamic Bank, Hong Leong Islamic Bank, Public Islamic Bank, Maybank Islamic Bank, Alliance Islamic Bank, OCBC Islamic Bank, Bank Islam Malaysia Berhad, Standard Chartered Saadiq Bank, CIMB Islamic Bank, and Al 'Rajhi Bank are among the banks covered on the list of Syariah institutions. All data utilized in this study came from their financial report, which covered 14 years from 2008 to 2021. Total assets, total equity, total advertisement expenditure, total financing, total deposit, and net income are the data obtained from the financial report statement of every bank that has been mentioned above. The detail of the measurement used in this study are as Table 2.

Table 2: Variable Description

Variable	Description
ROA	Net income to total assets
ROE	Net income to total equity
lnINC	Logarithm of bank net income
lnDEP	Logarithm of the total customer deposit
lnTF	Logarithm of total financing
lnADT	Logarithm of advertisement expenditure

3.1 Model specification

To ascertain the impact of advertising, financing, and deposits on Islamic banks' Return on Assets (ROA) and Return on Equity (ROE). This model specification adopted from a previous study was done by Mola and Rahaman (2022). The model specification can be expressed as equation (1) and equation (2) below:

$$ROA_{it} = \beta_0 + \beta_1 \ln INC_{it} + \beta_2 \ln DEP_{it} + \beta_3 \ln TF_{it} + \beta_4 \ln ADT_{it} + \mu_i + \varepsilon_{it} \quad (1)$$

$$ROE_{it} = \beta_0 + \beta_1 \ln INC_{it} + \beta_2 \ln DEP_{it} + \beta_3 \ln TF_{it} + \beta_4 \ln ADT_{it} + \mu_i + \varepsilon_{it} \quad (2)$$

Where i and t denote the number of countries $i= 1, \dots, N$ and time $t=1, \dots, T$ respectively. The variable ROA_{it} represents the earnings per asset measure in percentage for bank i at time t , ROE_{it} represents the earnings per equity measure in percentage for bank i at time t , $\ln INC_{it}$ represents

the logarithm of the bank net income i at time t , $\ln\text{DEP}_{it}$ represents the logarithm of total customer deposit i at time t , $\ln\text{TF}_{it}$ represents the logarithm of total financing by bank i at time t , $\ln\text{ADT}_{it}$ logarithm of advertisement expenditure by bank i at time t the logarithm of the value of total damage. In addition to equation (1), β_0 is a constant, $\beta_1 \dots \beta_4$ is an unknown parameter to be estimated, μ_i is an individual specific random error component of country i , and ε_{it} is the remainder error term or idiosyncratic random term (Bhaumik, 2015) and fulfil assumption $N\sim(0, \sigma^2)$. These assumptions imply that individual error components are not correlated with each other and are not correlated across banks and time series.

Model selection

As estimate approaches, the pooled regression method, random effect, and fixed effect are chosen. Using a separate statistics test strategy, the most appropriate ways will be chosen between both techniques. The first technique uses the Breusch-Pagan Lagrange Multiplier (BPLM) to test the pooling model and the random effect model (Breusch & Pagan, 1980), while the second approach employs the Hausman statistic test to test the random effect model and the fixed effect model (Hausman, 1978). The first procedure (BPLM) testing is deciding between a pooled model versus a random effect model for model estimation. H_0 : Pooled Model in opposition to H_1 : Random Effect Model hypotheses are tested. When the value obtained in the BPLM test exceeds the tabulated chi-squared value, the random effect model is better than the pooled model. However, a pooled model is appropriate when the obtained BPLM value is smaller than the tabulation chi-square value.

The second approach is for choosing between the fixed effect model and the random effect model. H_0 : FEM and REM are consistent, but FEM is inefficient (Random Effect Model) vs H_1 : FEM is consistent and efficient, while REM is inconsistent (Fixed Effect Model). When the Hausman statistic is greater, or the p-value of the test is less than 5% (prob 0.05), the random effects model is not applicable, and the fixed effects specification is recommended. However, if the error terms are correlated and more than zero, FEM is not appropriate because inferences might become inefficient. As a result, REM is an appropriate option to consider. This is because the composite error term is composed of two-component errors: the country component (i) and the series and country error component (it), as shown in equation (1). As a result, the Generalized Least Squares (GLS) estimator is an appropriate strategy for solving the correlation problem among the composite error component.

Besides that, granger causality also used to investigate the causal relationship between advertising and variables such as $\ln\text{TF}$, $\ln\text{DEP}$. These two variables were chosen because both are the main services of the Islamic banks. So, this study uses a simple Granger-causality test as in equation 3 to investigate whether there exists a relationship between advertising expenses towards both services that are important to Islamic banks.

$$\ln\text{ADT}_{it} = \alpha_0 + \sum_{k=1}^{\rho} \rho_1 \ln\text{ADT}_{it-k} + \sum_{j=1}^q \theta_1 \ln X_{it-j} + \varepsilon_{it} \tag{3}$$

$$\ln X_{it} = \alpha_0 + \sum_{k=1}^{\rho} \rho_1 \ln X_{it-k} + \sum_{j=1}^q \theta_1 \ln\text{ADT}_{it-j} + \varepsilon_{it} \tag{4}$$

In the context of this analysis, $\ln\text{ADT}_{it}$ represents the natural logarithm of the advertising

expenditure/ x variables for bank i at time t, while $\ln ADT_{it-k} / \ln X_{it-k}$ refers to the logarithm value of advertising expenditure or x variable for the different banks at time t-k. Similarly, $\ln X_{it-k}$ signifies the logarithm value of the variables either $\ln TF$ or $\ln DEP$ for bank i at time t-k. Lastly, ϵ_{it} represents the disturbance term for bank i at time t. The hypothesis testing of the granger-causality test for equations (3) and (4) is $H_0: \theta_1 = \theta_2 = \dots = \theta_q = 0$ verse H_1 : at least one of the coefficients testing not equal zero. If the Granger-causality test result is rejected, it indicates the presence of directional relationships between the two variables of this study, or vice versa. Also, the researcher must then efficiently carry out various diagnostic checks to identify problems like heteroskedasticity, autocorrelation, and normal distribution in the error terms in the chosen model. These three tests should be conducted to obtain the best, most consistent, and most efficient panel model.

4.0 Result and Discussion

Table 3: Correlations Analysis

Exogenous Variable	Dependent Variable	
	ROA	ROE
InINC	0.673** [0.000]	0.621** [0.000]
InTF	-0.002 [0.980]	0.219** [0.003]
InADT	0.159** [0.033]	0.202** [0.006]
InDEP	0.043 [0.564]	0.302** [0.000]

Table 3 represents the correlation coefficient among variables in this present study. Bank net income (InINC) are significantly positively correlated with ROA and ROE. Also, advertising bank expenditures (InADT) are significantly positively correlated with ROA and ROE. However, the bank’s total financial (InTF) and bank’s total depositor (InDEP) are significantly positively correlated with ROE only.

4.1 Panel Regression Results

Table 4: Results of Panel Data Estimation ROA Model

	Pooled	FEM	REM
Exogenous Variable			
intercept	3.954* (0.983)	3.511* (1.221)	3.460* (1.000)
InINC	0.387* (0.067)	0.357* (0.018)	0.361* (0.018)
InTF	-0.394**	-0.1209	-0.170

		(0.168)	(0.018)	(0.134)
InADT		0.116**	0.100*	0.103*
		(0.053)	(0.030)	(0.029)
InDEP		-0.083	-0.297	-0.249
		(0.184)	(0.177)	(0.156)
R ²		0.635	0.797	0.694
Adjusted R ²		0.627	0.778	0.686
F-Statistic		77.106 *	40.576*	100.219*
Redundant Effect Test	Fix	10.991 [0.000]		
Hausman Test		6.621 [0.1573]		
Breusch Pagan Test	LM	166.656 [0.000]		
Robustness test				
χ ² LM white		-	-	127.56 [0.00]
χ ² LM		-	-	47.86 [0.00]
Jarque-Bera		-	-	0.653 [0.72]

Note: Asterisks *, **, and *** denote significance at 1%, 5%, and 10% critical values, respectively. The () & [] denote standard error and probability figure. Results REM after using robustness White diagonal standard error and covariance method.

Table 4 shows the results of the panel data estimations for the ROA model. Three models have been estimated, column 2 represents the Pooled estimation result, column 3 for FEM results, and column 4 shows the REM estimation results. By using model selection results among the model, the appropriate model is REM. The estimation results are still robust because the REM method chosen has overcome the problem of heteroskedasticity after considering across banks in panel effect ($X^2=166.56$, $p\text{-value}=0.00$). Nonetheless, the heteroskedasticity test ($X^2=47.86$, $p\text{-value}=0.00$) and autocorrelation test ($X^2=127.56$, $p\text{-value}=0.00$) results on the REM model are significant at the 5% significance level, indicating that the model is not resilient. The researcher employed the White diagonal standard error and covariance method to remedial the problem, as shown in Table 4. Furthermore, the normality test using the Jarque-Bera statistic shows that the residual distribution is normally distributed, indicating that the REM model fulfills the assumption. So, the explanation for this section only focuses on REM results in Table 4. From the results in Table 4, can be seen that 69.6 % of variations in ROA are explained by InINC, InTF, InADT and InDEP and supported by F-value (100.219; $p\text{-value}<0.05$) statistically significant with a 5% level of the test. Variable InINC and InADT have a positive effect and significance at a 5% level on the ROA, which means on average increasing by 1% in InINC and InADT respectively, will increase ROA on average 0.361% and 0.103% yearly. These results are supported by the previous findings for example Suprayitno & Sinansari (2019), Sumantri et al. (2022), Mekonen et al. (2022), and Molla and Ibrahim (2021). However, the factors InTF and InDEP have no effect on ROA because they are not significant at the 5% level.

Table 5: Results of Panel Data Estimation ROE Model

Exogenous Variable	Pooled	FEM	REM
intercept	-3.430 (10.821)	41.225* (15.862)	16.557 (12.411)
InINC	3.507* (0.351)	2.511* (0.231)	2.952* (0.262)
InTF	-8.425* (2.094)	-4.641** (1.961)	-6.396* (1.847)
InADT	0.584 (0.472)	1.925* (0.436)	1.488* (0.404)
InDEP	7.199* (2.173)	0.862 (2.507)	3.972 (2.060)
R ²	0.450	0.782	0.416
Adjusted R ²	0.438	0.760	0.403
F-Statistic	36.238	36.91	31.537
Redundant Effect Test	Fix 14.197 [0.000]		
Hausman Test	39.561 [0.000]		
Breusch Pagan LM Test	LM 168.310[0.000]		
Robustness test			
χ^2 LM white	-	94.420 [0.000]	-
χ^2 LM	-	25.218 [0.000]	-
Jarque-Bera	-	0.083 [0.959]	-

Next, Table 5 shows the results of the panel data estimations for the ROE model. Three models were estimated; column 2 provides the Pooled estimation result, column 3 indicates the FEM estimation outcome, and column 4 shows the REM estimate result. FEM is the most suitable model according to model selection outcomes among the models. As a result, the description in this section is limited to the FEM results in Table 5. Meanwhile robustness testing must be conducted to support it, and the findings indicate that the estimated model is not robust due to problems with autocorrelation ($\chi^2=25.22$, p-value=0.00) and heteroskedasticity ($\chi^2=94.42$, p-value=0.00), both of which are significant at the 5% level. Using the Huber-White advanced estimator (Brunnerl & Ludwig, 2015), which can account for both autocorrelation and heteroskedasticity problems in the estimated model, to address the autocorrelation and heteroskedasticity problems in the FEM model. Furthermore, the residual distribution of the estimated FEM model is identically normally distributed, as demonstrated by the normality test against the error term. So, based on the findings in Table 5, it can be observed that InINC, InTF, InADT, and InDEP explain 76% of variations in ROE, and this is confirmed by an F-value (36.910; p-value 0.05) that is statistically significant at the five percent significance level of the test. Except for InDEP, three of the four explained variables have an influence and significance at a 5% level on ROE, which implies that increasing InINC, InADT, and InTF by 1% will raise

ROE by 2.511%, 1.925%, and decrease 4.641% yearly, respectively. Previous findings, such as Sumantri et al. (2022), Mekonen et al. (2022), and Molla and Ibrahim (2021), support these findings. However, the variable InDEP has no effect on ROE because it is not significant at the 5% level.

Table 6: Granger-Causality Results

Nul Hypothesis	Lag	F-Statistics	Decisions
InADT does not Granger cause INDEP	3	5.896 * [0.000]	Bidirectional relationship between InADT and InDEP
InDEP does not Granger cause InADT		3.156 ** [0.026]	
InADT does not Granger cause InTF	1	2.680 [0.104]	Unidirectional between InADT and InTF
InTF does not Granger cause InADT		3.001*** [0.085]	

Note: Asterisks *, **, and *** denote significance at 1%, 5%, and 10% critical values, respectively. The lag optimum is determined by AIC criteria.

The Granger causality test results reveal a significant directional relationship at the 1% significance level between InADT and InDEP. Likewise, the direction of the relationship between InDEP and a bank's InADT is significant at the 5% significance level. As a result, the study's findings suggest a bidirectional causal relationship between InADT and InDEP, and potentially between InDEP and the InADT of the banks under investigation.

However, the Granger causality test outcomes do not show significance at the 10% level when testing for a causal link between advertising expenditures (InADT) and total loan financing (InTF) by the bank. Nevertheless, a significant result is achieved at the 10% significance level when assessing the causal relationship between total loan financing (InTF) and advertising expenditure (InADT). These findings indicate a one-way causal relationship between InTF and InADT, with no observed Granger causality between InADT and InTF.

5. Conclusion and Discussion

This study is conducted to determine the relationship between several variables such as InINC, InDEP, InTF and InADT towards ROA and ROE. Static panel data consisting of the pooled regression method, fixed effect, and random effect were used for this purpose. The result reported that the higher the InADT, the higher the ROA and ROE. InINC also has the same significant relationship towards ROA and ROE. Surprisingly, this study discovered that InTF significant only to ROE while InDEP does not significant to any. Meanwhile, for Granger causality result, InADT does not significantly influence the InTF. However, for InDEP and InADT, there are bidirectional relationship of both variables.

This study discovered that advertising plays a significant role in Malaysia Islamic banks performance both in ROA and ROE. There is a need for Islamic banks to develop advertising strategies and allocate a substantial portion of their budget to advertising. A good advertisement can enhance the trust and loyalty of customers, enhance the brand and product image of Islamic banks, and increase the performance of Islamic banks. The Islamic banks need to identify specific customer segments that it wants to target for example targeting the new generation. Therefore, it must develop tailored marketing strategies for this segment based on their need, behavior, and preference. The Islamic banks should also employ a diverse range of marketing channels, including digital marketing, social media, traditional advertising, email marketing, and in-branch promotions, to reach a wider audience and engage customers across different touchpoints.

Although this study provided insightful findings, it should be noted that it also has some limitations. For example, this study did not include all Islamic banks operating in Malaysia as a sample and did not include any macroeconomic variables in the model. Besides that, this study also did not investigate the long-run impact of advertising on the performance of Islamic banks. Therefore, future research could enhance this study by focussing on these aspects. In addition, as Malaysia practices a dual banking system, future research could also examine the impact of advertising on the conventional banks too.

References

- Abdullah, F., Hassan, T., & Mohamad, S. (2007). Investigation of performance of Malaysian Islamic unit trust funds: Comparison with conventional unit trust funds. *Managerial Finance*, 33(2), 142–153. <https://doi.org/10.1108/03074350710715854>
- Acar, M. & Temiz, H. (2017) Advertising effectiveness on financial performance of banking sector: Turkey case. *International Journal of Bank Marketing*, 35(4), pp. -, <https://doi.org/10.1108/IJBM-03-2016-0036>
- AlAli, M. S., AlKulaib, H. A., Abuzarqa, R. & AlSalem, A.S. (2021) Marketing expenditure impact on bank's financial performance: A case study on Kuwaiti banks. *European Journal of Economic and Financial Research*, 5 (1), 1-7.
- Ali Shah, S.Z. & Akbar, S. (2008), Value relevance of advertising expenditure: A review of the literature. *International Journal of Management Reviews*, 10(4), 301-325, doi: 10.1111/j.1468-2370.2007.00228.x.
- Angulo-Ruiz, F., Donthu, N., Prior, D., & Rialp, J. (2018). How does marketing capability impact abnormal stock returns? The mediating role of growth. *Journal of Business Research*, 82, 19-30.
- Bhaumik, S.K. 2015. Principles of Econometrics. A Modern Approach using Eviews. Oxford University Press: New Delhi.
- Breusch, T. S. & Pagan, A. (1980) The lagrange multiplier test and its applications to model specification in econometrics. *Review of Economic Studies*, 47(1), 239-253.
- Chen, K. (2020), The effects of marketing on commercial banks' operating businesses and profitability: Evidence from US bank holding companies. *International Journal of Bank*

- Marketing*, 38(5), 1059-1079, doi: [10.1108/IJBM-08-2019-0301](https://doi.org/10.1108/IJBM-08-2019-0301).
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46(6), 1251-1271.
- Joshi, A. & Hanssens, D. M. (2010). The direct and indirect effects of advertising spending on firm value. *Journal of Marketing*, 74, 20-33.
- Kim, C., Xu, Y., & Hyde, K.F. (2011). Advertising versus Sales Promotion: An Examination of the Japanese Food Industry, 1976–2008. *Journal of Global Scholars of Marketing Science*, 21, 193 - 200.
- Lee J-S, Deng X-Y, & Chang C-H. (2023) Examining the interactive effect of advertising investment and corporate social responsibility on financial performance. *Journal of Risk and Financial Management*. 16(8),362. <https://doi.org/10.3390/jrfm16080362>
- Lou, D. (2014), Attracting investor attention through advertising. *The Review of Financial Studies*, 27(6), 1797-1829, <https://www.jstor.org/stable/24465651>.
- Metwally, M.M. (1993) Effectiveness of the advertising expenditure of Australian banks. *International Journal of Bank Marketing*, 11(7), 20-28. <https://doi.org/10.1108/02652329310046278>
- Molla, M. I. & Rahaman, M. K.B. (2022) Effect of advertising spending on operating and market performance of banks: empirical evidence from Bangladesh. *Asian Journal of Accounting Research* , 7 (1), 97-110, <https://doi.org/10.1108/AJAR-06-2021-0084>.
- Muhammad, A. M., Basha, M. B., & AlHafidh, G. (2020). UAE Islamic banking promotional strategies: An empirical review. *Journal of Islamic Marketing*, 11(2), 405-422.
- Mulchandani, K., Mulchandani, K. & Attri, R. (2019) An assessment of advertising effectiveness of Indian banks using Koyck model. *Journal of Advances in Management Research*, 16(4), 498-512.
- Mullineaux, D.J. & Pyles, M.K. (2010) Bank marketing investments and bank performance. *Journal of Financial Economic Policy*, 2(4), 326-345. <https://doi.org/10.1108/17576381011100856>.
- Peterson, R.A. & Jeong, J. (2010), Exploring the impact of advertising and R&D expenditures on corporate brand value and firm-level financial performance. *Journal of the Academy of Marketing Science*, 38, 677-690, doi: 10.1007/s11747-010-0188-3.
- Rahman, M., Rodríguez-Serrano, M. Á., & Lambkin, M. (2020). Advertising efficiency and profitability: evidence from the pharmaceutical industry. *Industrial Marketing Management*, 89, 619-629.
- Spotts, H.E., Weinberger, M.G., & Weinberger, M.F. (2020). Advertising and Promotional Effects on Consumer Service Firm Sales. *Journal of Advertising Research*, 60, 104 - 116.
- Wies, S., Hoffmann, A.O., Aspara, I.J. & Pennings, J.M. (2019), Can advertising investments counter the negative impact of shareholder complaints on firm value?. *Journal of Marketing*, 83(4), 58-80, doi: 10.1177/0022242919841584.
- Xu, J., Liu, F., & Chen, Y. H. (2019). R&D, advertising and firms' financial performance in South Korea: Does firm size matter?. *Sustainability*, 11(14), 3764.
- Zephaniah, C.O., Ogbab, Ike-Elechi & Izogob, E. E. (2020) Examining the effect of customers' perception of bank marketing communication on customer loyalty.