"Relationship between marketing strategy and profitability in industrial firms: Evidence from Jordan"

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RELATIONSHIP BETWEEN MARKETING STRATEGY AND PROFITABILITY IN INDUSTRIAL FIRMS: EVIDENCE FROM JORDAN

Abstract

A marketing strategy is a firm's overall plan for reaching prospective consumers and turning them into permanent customers of their services or products. This paper aims to investigate the link between profitability and marketing strategy to understand how firm profitability influences marketing strategy. Moreover, it assesses the impact of return on assets (ROA) on the company's marketing strategy. The study uses random effect regression models; a marketing strategy is measured using a sales expenses ratio, which equals sales expenses over total assets. The firm size is a control variable represented by the total sales normal logarithm. The study sample comprises Jordanian industrial shareholder companies; the analysis period is from 2005 to 2020. The study collected 808 annual observations. The findings reveal that ROA has a statistically significant effect on marketing strategy, but its components have no effect. The adj-R2 (the explanatory power) for model 1 is 18.8%, and for model 2 is 11.4%. Therefore, the main conclusion is that ROA components do not have any incremental information content in explaining the marketing strategy variance. The study recommends industrial firms in Jordan increase their profitability by adopting a diverse marketing strategy, focusing on customer satisfaction, investing in market research, using social media, and developing a strong brand image.

Keywords

profitability, marketing strategy, industrial firms, sales expense, firm size, Jordan

JEL Classification M37, M31, D41

INTRODUCTION

A proper marketing strategy allows the company's management to choose between several investments and not lose the opportunity cost. Therefore, company's management has to concentrate on marketing strategy management to avoid losing profitable projects because it has to balance a high level of marketing and sales expenses.

In general, there are two essential policies: aggressive and conservative. A firm chooses a conservative policy to minimize its marketing strategy risk by maximizing the sales expense amount. On the other hand, an aggressive sales expense policy consists of decreasing marketing strategy levels and increasing short-term marketing strategy problems to maximize profitability. Low marketing strategy ratios like current ratio, sales expenses ratio, and quick ratio characterize this policy.

In this study, return on assets (ROA) is divided into two main items: profit margin, which equals net income over net sales, and assets turnover, which equals net sales over average total assets. ROA links the balance sheet figures with income statement data and refers to the firm efficiency in managing assets and investments by choosing the suitable assets that can generate more profits. This measure is valuable because marketing strategy figures come from the balance sheet and are part of total assets (the denominator of this ratio).

1. LITERATURE REVIEW

A marketing strategy refers to firms' willingness to market their products using existing reserves available (Han et al., 2020; Wijaya et al., 2020; Bui et al., 2020; Li et al., 2020; Grossmann & Hottiger, 2020). Sales expense is a topic that has received considerable attention of many economic and financial thinkers, researchers, and analysts. They formulated a concept combining all the elements produced and consumed by the individual during the production process. It dictates the necessity of having a sufficient reserve of products to maintain the continuity of the production process without causing any disruption, such as raw and semi-manufactured materials. Economic thought considers capital as an element produced by the individual to use in the production process (Ukaegbu, 2014).

Gavalas and Syriopoulos (2019) investigated whether sales expenses increase more than profits decrease when operations decrease equally. The study revealed that total labor costs had a lower level of stickiness, but sales and marketing expenses still had stickiness. Bosch et al. (2017) considered cost stickiness between current income and future sales revenue and found that changes in current firm profits and expected sales revenue increase when sales revenue drops. According to Subramaniam and Weidenmier (2016), sticky costs exist because the sales and marketing expenses rise by 0.9% for every 1% increase in sales revenues and decrease by only 0.9% for every 1% decrease in sales.

Da Silva et al. (2019) analyzed the link between earnings management practices and sales cost asymmetry behaviors of Brazilian companies. The result was that earnings management and sticky costs behavior influenced net profit. Net sales expense is one of the indicators of measuring marketing strategy, expressed mathematically from the statement of financial position and income statement. So net sales equal marketing and distribution expenses (Wijaya et al., 2020). Current assets are used to finance daily activities and operations. They represent what the institutions have of short-term assets that are quickly convertible into cash within one year. They are financed through the long-term capital available to the institution and current liabilities. Current assets include cash, short-term investments, letters of credit, loans granted short-term, inventory, and accounts receivable. Inventory is one of the marketing strategy elements and is considered one of the items on the balance sheet (Hussain et al., 2020).

Current liabilities are the obligations of the institutions payable (debts) to external suppliers during one year. They include commercial papers and credit balances and are one of the existing elements on balance sheets.

Bianchi and Bigio (2022) aimed to develop a marketing strategy management model for bank systems. The study suggested that this model mitigates the deposit risks. In addition, they found that suitable policies minimize the marketing strategy problem's significance and enhance interbank markets' functioning. However, Czyzewski and Hicks (1992) concluded that companies with high inventory levels could generate a higher return on assets.

On the contrary, Hager (1976) reached that companies with fewer inventory levels usually perform better. According to Kamath (1989), there is a negative link between profitability and the net trade cycle in the retail grocery industry. Jose et al. (1996) found that managing marketing strategy will enhance operating performance. On the other hand, Czyzewski and Hicks (1992) showed that successful companies have a high inventory level and produce a higher return on assets.

Charitou et al. (2000), Dechow et al. (1998), and Sloan (1996) supported the information content of cash flow. Shubita (2019), sampling 62 Jordanian industrial companies from 2006 to 2016, analyzed the effect of sales expense on cash holdings. The study found that big companies hold more current assets than small companies. Finally, Sharawi (2021) considered how operating cash flows were used to estimate future cash flows of companies in Saudi Arabia and Egypt. The study found that expected future cash flows contain information about both countries' operating and income cash flows.

The other subject related to the study problem is profitability. The income statement gave several indicators, especially profitability, which means a firm can generate income and manage expenses. For example, earnings per share equal net income divided by total shares, which is crucial for investors and shareholders. Return on equity is another vital measure that evaluates the firm ability to increase and maximize the shareholders' equity wealth. Therefore, profitability is generally seen as a primary objective of the organization, and a measure of judging its efficiency in performing its activities and business and its ability to survive and continue. In addition, it reveals the competitive position of the institution and the quality of its management within several institutions belonging to the same sector. Finally, profitability allows industrial companies to maintain a particular risk and guarantee protection against crises and shortterm obstacles.

Profitability is also an indicator that measures the financial performance of industrial firms and reflects the ability and efficiency of the marketing management in exploiting its capabilities and financial resources in a way that contributes to achieving its objectives in obtaining profits (Cherian et al., 2019). Therefore, this study measures enterprises' profitability using ROA (Subramanyam & Shalini, 2019).

ROA is a measure of financial performance that reflects the ability and efficiency of a private enterprise to generate profits from its assets. It is expressed mathematically by dividing the net profit after taxes from the income statement by the net assets from the balance sheet (Kalbuana et al., 2021).

Kartikasary et al. (2020) and Nazar et al. (2018) aimed to show the association between the effectiveness measures of firm profitability (ROE and ROA) and the marketing value in the insurance and banking companies. Pramartha et al. (2020) found that several factors positively influenced the marketing value, where dividend policies, investment, and funding decisions affect 18% of changes in the firm value. Klobučar and Orsag (2019), Uddin et al. (2017), and Munangi and Sibindi (2020) aimed to show that the growth and leverage ratios have a direct influence on ROE and ROA, thus improving the firm value.

Fekadu (2020), Cherian et al. (2019), Samo and Murad (2019), Alareeni and Hamdan (2020), Purbawangsa et al. (2020), Subramanyam and Shalini (2019), and Lim and Rokhim (2020) investigated the association between ROA and ROE and the firm value. They found a positive relationship.

Sabri (2012) used ROA as the company's profitability measurement and divided the sample of 45 industrial firms listed for the period 2000 to 2007 into two main categories relative to the accounts payable (AP) period, inventory period, receivables period, and the cash conversion cycle (CCC), to study the difference in profits between the firms with high CCC and those with low CCC. The findings indicated a statistical difference among these firms and reached that the profits of the firms with a low AR period were higher than firms with a high AR period.

Wahyuni and Hariyanto (2022) determined the influence of ROA and ROE on the company market value using the company dividends as an intervening variable. The result found that ROE and ROA simultaneously have no critical impact on dividends, and ROE and ROA with dividends do not have a vital influence on the company value.

Lastly, several studies investigated the connection of sales expenses with the most necessary items of the companies' financial position statements. It is characterized by the diversity of its components and varying nature, its instability in response to the change in sales, and its increasing importance compared to the total assets of industrial companies. Therefore, it was necessary to have sales expense management that provides guarantees for the continuity of operations and allows obtaining sufficient cash flow to meet all accrued short-term obligations and required and expected operating expenses to the volume of investment in the components of the assets (Lim & Rokhim, 2020). There is an inverse association between investment volume in liquid assets and marketing strategy risk. This is evident in conservative and adventurous policies, as the low volume of investment in current assets means the firm's inability to provide a suitable marketing strategy to meet its target, low inventory, and inability to provide the needs and desires of customers (Kalbuana et al., 2021). On the other hand, the high volume of investment in assets reflects the institution's weakness in managing its operational operations, which is attributed to many reasons, including the lack of sales and interest in collecting its debts on time (Alareeni & Hamdan, 2020).

Saini and Sharma (2009) indicated a positive link between generating profit and marketing level, reflecting the favorable influence of generating profit and marketing strategy and a negative link between risk and profitability. In addition, Wang (2002) investigated the association between marketing strategy and firm value among firms in Taiwan and Japan. The results indicated that an aggressive marketing strategy improves firm performance and increases firm value. However, Soenen (1993) showed that the net trade cycle (NTC) is not associated with the ROA. On the other hand, Shin and Soenen (1998) reached a negative association between the firm's NTC and its profits. Companies with shorter NTC had more profits than longer NTC.

Al-Debi'e (2011) examined the link between profitability and the cash conversion cycle in Jordan. The study used control variables for the growth in GDP, size, and leverage. The results indicated a negative and significant association between the cash conversion cycle and profitability.

Mahjabeen et al. (2018) analyzed the sales expense management impact on the firm cash holdings in Pakistan and reached that small and large companies need to keep high cash levels. Yunos et al. (2018) used panel data analysis to examine the impact of sales expense management on profits in Malaysian businesses. The study found that the collection period and sales inventory days influenced industrial-listed Malaysian businesses' income. Finally, Al-Naif and Al Shra'ah (2019) investigated the relationship between the WC components of Jordanian industrial firms – inventory conversion period, payment period, receivables collection period, and CCC – and the firm income. The control variables in this study were the debt ratio and the company size. Using panel data, the study found that company profitability negatively correlated with its debt ratio, sales expense management significantly negatively correlated with profitability, and firm size positively correlated with profitability.

The literature review illustrates a good picture of the link between profitability and sales expense; several studies showed a negative link, and others found a positive one. At the same time, few studies found no relationship between marketing strategy and profitability.

2. AIM AND HYPOTHESES

This study aims to investigate the role of return on assets in determining the marketing strategy level and to study the incremental information content of return on assets components in explaining the marketing strategy level over the return on assets. The hypotheses are:

- $H_{_{01}}$: ROA does not have a statistically significant impact on marketing strategy.
- *H*₀₂: ROA components do not have a statistically significant impact on marketing strategy.

3. METHODS

The study uses regression models to investigate the connection between dependent and independent variables. Regression models assist in comprehending the relationships between changes in one variable and those in another variable. These models are fundamental for analyzing and comprehending the relationships between variables in many fields, such as the social sciences, economics, engineering, and health sciences.

The first model is:

$$WC_{it} = A_0 + A_{1t}ROA_{it} + A_{2t}S_{it} + \varepsilon_{it}, \qquad (1)$$

where WC - sales expense ratio, ROA - return on

Table 1. Study variables

Variable Type		Equation
Sales Expense Ratio	Dependent	Sales Expense/Total Assets
ROA	Independent Net Income/Average Total Assets	
Profit Margin	Independent	Net Sales/Net Income
Assets Turnover	Independent	Total Sales/Average Total Assets
Total Sales	Control	Normal logarithm for total sales

assets, *S* – normal logarithm for total sales, A_0 , $A_{1,}$, A_2 = OLS regression coefficients, *i* – firm, *t* – year, ε – error.

The second model is:

$$WC_{it} = A_0 + A_{1t}PM_{it} + A_{2t}AT_{it} + A_{3t}S_{it} + \varepsilon_{it},$$
 (2)

where WC – sales expense ratio, PM – profit margin, AT – assets turnover, S – normal logarithm for total sales, A_0 , $A_{1,}A_{2,}A_{3,-}$ OLS regression coefficients, i – firm, t – year, ε – OLS regression error.

Table 1 represents the study variables and the measurement methods.

4. RESULTS

The sample contains listed Jordanian industrial companies; the period is from 2005 to 2020. The total number of observations is 808. The descriptive statistics for the variables following the elimination of the outliers are shown in Table 2.

The figures indicate that Jordanian industrial companies generate losses on average and need to employ their assets and resources more efficiently. The profit margin is also negative, which means that on average, for each sales dollar, there is a 0.383\$ loss. Asset turnover refers to the firm's ability to generate sales from its selected assets. Table 2 refers to the high assets turnover for the study sample; each invested dollar in assets can generate 0.588\$ as sales.

6.927

0.188

Jordanian companies can generate a sound level of sales from their assets, but these sales cannot generate profits. Therefore, companies have good marketing strategies, so the main issue here is the product cost or bad market environment.

Tables 3 and 4 show the correlation between the study variables; Spearman and Pearson's coefficients are positive and significant for the study variables. As expected, there is a high correlation between ROA and its two main components (assets turnover and profit margin). In addition, the dependency ratio has a positive and significant ratio with the three independent variables and the control one. With every dollar invested, the sales expense will increase the ROA ratio by 43.7%.

Table 3. Pearson correlation matrix

Variable	Profit Margin	Assets Turnover	Size	Sales Ratio
ROA	163.0**	0.308**	0.433**	0.437**
Profit Margin		0.193**	0.352**	0.266**
Assets Turnover			0.496**	0.268**
Size				0.185**

Note: ** significant at 0.01 level.

Table 4. Spearman correlation matrix

Variable	Profit Margin	Assets Turnover	Size	Sales Ratio
ROA	0.944**	0.382**	0.427**	0.462**
Profit Margin		0.316**	0.413**	0.442**
Assets Turnover			0.552**	0.298**
Size				0.105**

3.458

-3.536

Note: ** significant at 0.01 level.

1.104

30.760

Item	Mean	Median	Std.	Skewness	Kurtosis	Minimum
ROA	-0.011	0.009	0.121	-1.614	7.521	-0.857
Profit Margin	-0.383	0.015	3.018	-19.15	448.013	-74.131
Assets Turnover	0.588	0.556	0.369	1.424	5.479	0.00

0.802

0.298

-0.437

-2.965

6.96

0.211

Table 2. Descriptive results

Size

Sales Expense Ratio

Maximum

0.433

2.367 3.215

8.926

0.819

Table 5 shows the OLS results of the association between marketing strategy and profitability. The independent variable is significant and the Adj-R² is 18.8%, which means that ROA has a statistically significant impact on marketing strategy. This means the firm can generate a good marketing strategy and profitability level simultaneously if its management is good (the first null hypothesis is accepted).

Table 5. Results for the first model

Item	Coefficient	Error	t.	Sig.
Constant	0.213	0.091	2.335	0.020
ROA	1.079	0.087	12.449	0.00
Size	-0.002	0.013	-0.129	0.897
R2	0.190	Adj R2		0.188
F-Statistics	94.559	Sig.		0.00
VIF	1.231	D-W		0.779

Table 6 shows the results of the second model testing. The independent variables coefficients are still significant, but the Adj-R² coefficient decreases to 11.4%, which means that the break-down of ROA into its two components cannot enhance its information content; thus, the study accepts the second null hypothesis: ROA components do not have a statistically significant impact on marketing strategy.

Table 7 shows the coefficients, standard errors, t-statistics, and probability values for each of the variables included in the study model, including the R-squared value of 0.19 and the adjusted R-squared value of 0.18,8, which indicate that the model explains 19 % of the variance in ROI. The F-statistic value of 94.559 and the probability value of 0.00 indicate that the overall model is statistically significant. Finally, the Durbin-Watson statistic value of 0.77 indicates that there is no significant autocorrelation in the residuals of the regression model.

Table 8 reports the coefficients for a second model used to investigate the relationship between marketing strategy and profitability in industrial firms in Jordan. The R-squared value of 0.118 indicates that the model explains 11.8% of the variance in ROI. The F-statistic value of 35.6 and the probability value of 0.0 indicate that the overall model is statistically significant.

Table 6.	Results	for	the	second	model
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Item	Coefficient	Error	t.	Sig.
Constant	0.102	0.096	1.055	0.292
Profit Margin	0.022	0.003	6.334	0.00
Assets Turnover	0.178	0.031	5.802	0.00
Size	-0.001	0.015	-0.084	0.933
R2	0.117	Adj R2		0.114
F-Statistics	35.598	Sig		0.00
VIF	1.458	Durbin V	Vatson	0.731

Table 7. OLS findings for the study models

Item	Coefficient	Std. E	t-stat.	Prob	
ROI	1.079128	0.086650	12.45382	0.0000	
SIZE	-0.001685	0.013017	-0.129466	0.8970	
Constant	0.212658	0.091054	2.335515	0.0198	
R2	0.190527	Prob. (F) 0.000000			
Adjusted R2	0.188514	D-W 0.773877			
F	94.61957	-			

Table 8. Coefficients for the second model

Item	Coefficient	Std. Error	t-statistic	Prob.
Profit Margin	0.022036	0.003480	6.331634	0.0000
Assets Turnover	0.178072	0.030701	5.800268	0.0000
Size	-0.001230	0.014799	-0.083119	0.9338
Constant	0.101572	0.096383	1.053836	0.2923
R ²	0.117334	Prob. (F)	0.000	000
Adjusted R ²	0.114036	D-W 0.729767		
F	35.58124		-	

Husman test helps in determining which method is better (random or fixed effect model) (Ahmed et al., 2021). Table 9 findings suggest that the random effect model is better (Gujarati, 2021).

Table 9. Husman Test

Equation	Chi Sq. Stat.	Chi Sq. d.f.	Prob.	Results
Model 1	0.00	2	1.00	Random
Model 2	0.00	3	1.00	Random

The Husman test also helps determine the superior method (fixed effect or random model) (Ahmed et al., 2021). According to Table 10, the random effect model is superior (Gujarati, 2021).

The results emphasize the importance of return on assets and its components in determining the firm's marketing strategy level. The multicollinearity problem is examined using VIF; it was less than five, indicating no multicollinearity problem in the study models (Gujarati, 2021).

Model 1				
Item	Coefficient	Std. E	t-statistic	Prob.
Constant	0.519298	0.139129	3.732496	0.0002
ROI	0.329276	0.082840	3.974838	0.0001
Size	-0.027362	0.020928	-1.307473	0.1913
		Effects Specification		
	Cross-s	ection fixed (dummy variables)	
R2	0.016752	Prob. (F)	1.000000	
Adjusted R2	-0.049861	D-W	0.164446	
F	0.251489			
Model 2				
Variable	Coefficient	Std. Error	t-statistic	Prob.
Constant	4.243978	0.084939	49.96481	0.0000
SIZE	-0.651282	0.013374	-48.69729	0.0000
Assets Turnover	0.962024	0.010830	88.82719	0.0000
Profit Margin	0.432369	0.009426	45.86840	0.0000
		Effects Specification		
Cross-section fixed (dummy variables)				
R2	0.895358	Prob. (F)	0.000000	
Adjusted R2	0.888162	D-W	1.748286	
F	124.4240			

Table 10. Random effect model results

The study accepts the first null hypothesis and second null hypothesis so ROA components do not have a statistically significant impact on marketing strategy.

5. DISCUSSION

Many Jordanian companies' sales cannot generate a net profit; thus, their marketing strategies are generally not problematic. The results found that the return on assets includes two indicators: the firms' ability to generate sales from their investments (this ratio has a reasonable figure in the sample) and the firm sales' ability to generate profits (Jordanian firms failed to generate profit from the total sales).

This means that companies have to change their marketing strategies to enhance the profitable inner environment. This will lead to an increase in the profit margin and return on assets. Lastly, for the dependent variables, it is evident that about 18.8% of the total firm assets are from its sales expense, which refers to the firm's ability to keep a reasonable percentage of its assets as a liquid asset that helps a company pay its obligations. The acceptance of the first null hypothesis can be explained by the fact that firm profitability affects the marketing level so that profitable firms can maintain a good marketing strategy ratio. This helps these firms to avoid marketing strategy problems and pay their current obligations.

The study also finds a significant relationship between ROA and marketing strategy. However, there is no incremental information content for ROA components in explaining the marketing strategy variation over return on assets. These results agree with Mahjabeen et al. (2018) and Junli (2011). Zuhroh (2019) found that the optimal level of liquid assets will vary depending on the type of industry; e.g., heavy industries should have a sound level of current assets to pay the operating expenses because their sales may be irregular. In contrast, the grocery sector has a high inventory level and cannot hold more sales (Gleim & Flesher, 2018).

These results indicated that financial and economic events and crises experienced by major international companies and institutions had shaken confidence in many companies' performance. There is also a fear of investing money without obtaining confirmation showing the soundness of the financial position of the institution, its efficiency in managing its marketing strategy, and implementing its operational operations. Therefore, it has become imperative for institutions to carry out efficient marketing strategy management, including planning and controlling current assets and supplier obligations to mitigate these effects and risks. The responsibility for managing sales expenses rests with the financial manager of the institution.

CONCLUSION

The purpose of the study was to investigate marketing policies and their effects on firm profitability. The study models use firm size as a control variable to examine its role in this crucial association. The study found that the negative return on assets comes from a negative profit margin, so the Jordanian firms need assistance generating profit from their sales. This result demonstrated that the company needs to keep adequate cash, inventory, and supplies available and minimize the payables amount. Therefore, the company should keep additional current assets and forget the higher returns from keeping fixed assets.

The main conclusion is that proper policy will lead to high marketing strategy ratios like current ratios (current assets over current liabilities), sales expenses, and quick ratios (quick assets over current liabilities). From this conclusion, the study recommends pursuing effective marketing strategies. Future studies can add factors like leverage and inventory turnover to the study models.

AUTHOR CONTRIBUTIONS

Conceptualization: Mohammad Fawzi Shubita. Data curation: Mohammad Fawzi Shubita. Formal analysis: Mohammad Fawzi Shubita. Funding acquisition: Mohammad Fawzi Shubita. Investigation: Mohammad Fawzi Shubita. Methodology: Mohammad Fawzi Shubita. Resources: Mohammad Fawzi Shubita. Writing – original draft: Mohammad Fawzi Shubita. Writing – review & editing: Mohammad Fawzi Shubita.

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