Strategic Marketing Investment and Firm Performance: Evidence from Selected Listed Companies in Bangladesh

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ABSTRACT

This study aims to investigate the relationship between strategic marketing investment and firm performance among selected listed companies in Bangladesh for 2021-2025. The research sources are quantitative secondary financial data, which are derived from the annual reports of the companies. The data included 50 company-year observations from 10 selected companies. Marketing Investment Intensity was calculated as the ratio of marketing expenditure to revenue, and firm performance was measured using Sales Growth and Net Profit Margin.

This study used a positivist philosophy and a deductive approach. Data were analysed using IBM SPSS Statistics descriptive statistics, Pearson and Spearman correlation analyses and Generalised Estimating Equations (GEE). The models included Year, and GEE accounted for repeated observations within companies. The Sales Growth model used an AR(1) structure, and the Net Profit Margin model used an exchangeable structure QIC.

The results indicate that Marketing Investment Intensity was not statistically significant for Sales Growth. The last GEE model yielded a coefficient of −0.036 ($p = .778$). Likewise, Marketing Investment Intensity was not significantly related to Net Profit Margin, with a coefficient of −0.421 ($p = .182$). Therefore, the results provide no statistical support for either H1 or H2. The results suggest that differences in measures of firm performance may not be explained simply by the intensity of marketing investment.

The study suggests that the level of the allocated marketing investment should not be the only criterion for evaluating the investment, but rather the allocation and use of the resources. It also points to the need for marketing capabilities, longer-term results, broader performance measures and more future studies with larger samples and longer observation periods.

Keywords: Strategic Marketing Investment; Marketing Investment Intensity; Sales Growth; Net Profit Margin; Firm Performance

INTRODUCTION

Problem Statement

Strategic marketing is a key business activity, as companies invest in marketing to convey messages to customers, build brands and support sales (Wienclaw, 2019). However, the link between marketing spending and business outcomes is not always obvious or direct. Marketing expenditure is not always correlated with increased sales growth or increased profitability, as company performance may depend on the economic climate, competitors, pricing, operating costs and other company-specific elements. Financial analysis is therefore a better way to determine whether differences in marketing investment lead to differences in business performance.

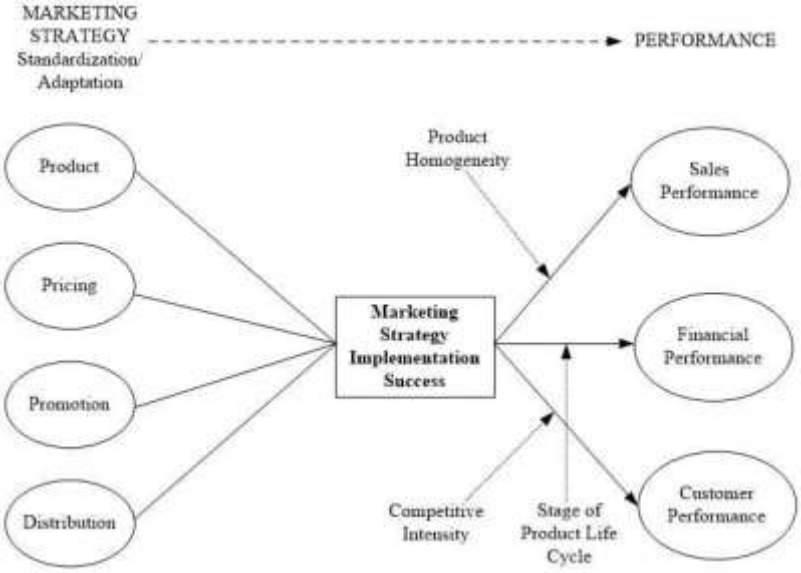


Figure: Relationship between Marketing Strategy and Firm Performance (Saif, 2015).

Bangladesh's business environment is highly competitive and dynamic, making resource allocation crucial. This study analyses strategic marketing investment intensity using two business performance indicators: sales growth and net profit margin in selected Bangladeshi companies. The study uses secondary numerical data spanning five years (2021 to 2025) and 10 selected companies, yielding 50 company-year observations. A key variable is marketing investment, expressed as a proportion of the company's revenue. The study therefore provides evidence based on reported financial information, not primary opinion or interviews.

Research Aim

This study aims to analyse the relationship between strategic marketing investment and organisational performance of selected listed companies in Bangladesh during 2021-2025.

Research Objectives

The research has three objectives:

1. To investigate the correlation between strategic marketing investment intensity and sales growth of selected Bangladeshi companies during 2021-2025.

2. To explore the correlation between strategic marketing investment intensity and net profit margin of selected companies in Bangladesh during 2021–2025.

3. To examine the overall effects of strategic marketing investment intensity on the performance of selected firms in Bangladesh based on secondary financial data.

Research Questions

The study aims to answer three questions:

1) Is there a relationship between strategic marketing investment intensity and marketing performance, in terms of sales growth, among selected companies in Bangladesh during 2021-2025?

2) From 2021 to 2025, how is strategic marketing investment intensity related to the net profit margin of selected Bangladeshi companies?

3) What are the overall implications of strategic marketing investment intensity for the business performance of the selected companies, using secondary financial data from Bangladesh?

Significance of the Research

This study is important because it offers a quantitative analysis of strategic marketing investments and the outcomes of marketing activities on business performance based on company-reported information (Taylor, 2020). The results can help managers determine whether marketing investment intensity is related to sales growth and profitability. This can support better decision-making on allocating and assessing marketing efforts. It can give students, researchers and other academic users useful information for their own research on the strategic marketing performance of investment and business in Bangladesh. Furthermore, analysing multiple companies over multiple years offers greater insight than analysing a single company or a single financial year.

Methodological Considerations

This study uses quantitative research based on secondary numerical data. This study uses financial information from 10 selected companies in Bangladesh for 2021-2025, yielding 50 observations. Data are gathered from company financial statements and transformed into statistical variables. Data will be analysed using SPSS (Rahman & Muktadir, 2021). Data will be summarised using descriptive statistics, and relationships between the key variables will be explored using Pearson and Spearman correlation analyses. Generalised Estimating Equations (GEE) will account for repeated observations within companies over the five years. The GEE models account for year; the working correlation structure is chosen using the Quasi-likelihood under Independence Model Criterion (QIC). A 5% significance level is used for statistical decisions.

Report Structure

The report is broken down into six chapters. Chapter 1 introduces the study background, problem, aim, objectives, research questions, significance and methodological considerations. Chapter 2 reviews relevant literature, theoretical perspectives and previous empirical studies, including the research gap and a conceptual model. Chapter 3 explains the research methodology, including the research design, research philosophy and approach, secondary panel data, sampling, variable measurement, data collection, SPSS analysis and ethical considerations. Chapter 4 presents the data analysis, Statistical Results and key findings. Chapter 5 discusses and interprets the findings with reference to previous literature and outlines their practical and theoretical implications. Finally, Chapter 6 presents the conclusions, recommendations, implementation considerations, research limitations and directions for future research.

LITERATURE REVIEW

Introduction to the Theoretical Framework

The theoretical framework offers the academic basis for discussing potential links between strategic marketing investments and firm performance. The Resource-Based View (RBV) is particularly relevant to this study because it explains how firms can create competitive advantage and improve performance by leveraging valuable resources and capabilities. According to Davcik & Sharma (2016), marketing resources can drive competitive advantage and firm performance through their development and deployment within the organisation. Likewise, Cacciolatti & Lee (2016) show a relationship between marketing capabilities and firm performance, and how

marketing strategy can influence it. This perspective matters because marketing expenditure is a resource organisations use for market activities. The study therefore uses marketing investment intensity as an indicator of the strategic allocation of marketing resources. The study evaluates firm performance using the following measurable results: sales growth and Net profit margin. The RBV thus offers a suitable theory for examining whether differences in marketing investment intensity correlate with differences in these performance measures.

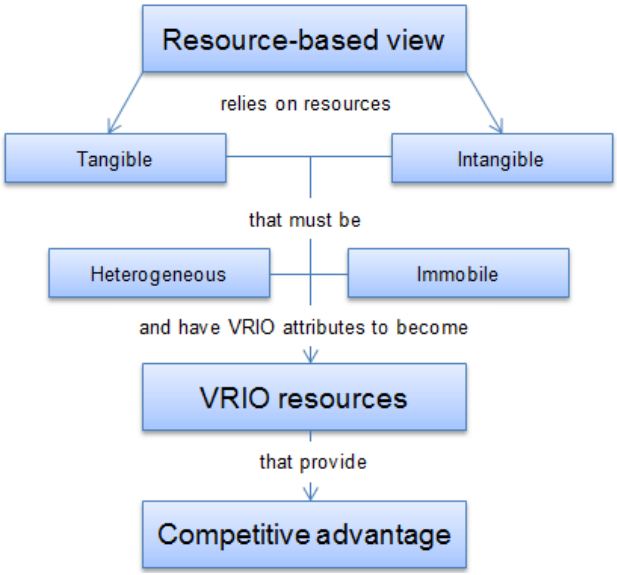


Figure: The resource-based view (RBV) model (Jurevicius, 2023).

Strategic Marketing Investment

Strategic marketing investment is the commitment of organisational resources to marketing initiatives that aim to enhance market development, customer relationships and longer-term business performance. Marketing expenditure is an important organisational investment; Markovitch *et al.* (2020) explain a positive association between marketing intensity and profitability when measuring actual marketing expenditure. Likewise, Haryanto & Retnaningrum (2020) concluded that marketing expenditure significantly influenced firm performance, such as profit margin on sales, return on investment and return on equity. The results indicate that marketing costs should be viewed less as an operating expense and more as a means of contributing to financial results. However, the strategic return on marketing investments depends on resource allocation and how firms manage those resources. Wang & Lou (2020) show that firms respond to performance feedback through marketing investment, suggesting that marketing resource allocation can be part of strategic decision-making. Thus, in this study, strategic marketing investment is defined as marketing investment intensity, and marketing investment is measured relative to the company's revenue. This provides a clear basis for exploring its link to sales growth and net profit margin.

Marketing Investment Intensity and Firm Performance

Marketing investment intensity is marketing investment relative to revenue or another firm-specific measure, allowing comparison across firms of varying sizes. Marketing intensity based on actual marketing spending showed a positive relationship with current profitability and expected future earnings. It highlighted the measurement issues inherent in using broader marketing expenses as proxies for marketing (Markovitch *et al.,* 2020). Marketing investment intensity using the resource-and-capability view, and their results showed that the relationship between marketing investment intensity and shareholder value is non-linear. The results suggest that marketing spending and firm performance can be related not only by the quantity of marketing spending, but by its intensity and direction. Palomino-Tamayo *et al.* (2020) showed that financial constraints can reduce marketing effort and ultimately affect firm value and performance. Thus, marketing investment intensity is an appropriate instrument for studying marketing strategy and resource allocation. This study tests whether differences in marketing investment intensity are statistically related to sales growth and net profit margin among the sample companies in Bangladesh.

Sales Growth and Marketing Investment

Sales growth is a critical performance indicator because it shows changes in a company's revenues over time and can be used to measure the firm's capacity to increase its market activities. Marketing expenditure is linked to firm performance, but this relationship varies depending on how marketing investment is measured. Likewise, Bayer *et al.* (2020) found that advertising costs were positively associated with firms' sales performance and firm value, especially spending on online display and paid search advertising. The findings indicate that marketing investment can grow revenue by enhancing customer awareness, market reach and demand. However, the relationship is not always consistently positive. Evidence on advertising expenditure and revenue for Philippine corporations is inconclusive, as reported by Manala-O & Atienza (2020), and advertising spending does not necessarily lead to better financial performance. To test whether marketing intensity is related to revenue growth, sales growth is an appropriate measure. In this study, sales growth is measured by the change in a company's revenue over the year and analysed against the marketing investment intensity of selected Bangladeshi companies.

Net Profit Margin and Marketing Investment

Net profit margin is a key measure of financial performance that shows the percentage of revenue left over after a company subtracts its expenses. Marketing investment, measured as marketing intensity (actual marketing expenditure), was positively related to firms' profitability, providing evidence that marketing investment can affect financial outcomes. Similarly, Molla & Rahaman (2022) reported that advertising spending positively affected the accounting returns of listed banks in Bangladesh, but with different effects across performance measures and over time. These results suggest that marketing expenditure can contribute to profitability, although this may vary by marketing activity, industry and time period. Mixed evidence emerged on the relationship between advertising expenditure, revenue and net profit of listed corporations, as identified by Manala-O & Atienza (2020), implying that higher advertising expenditure does not necessarily lead to higher net profit. Accordingly, net profit margin is a financially relevant measure for evaluating the relationship between marketing investment intensity and firms' profitability. This study aims to analyse the net profit margin of selected Bangladeshi companies for the five years from 2021 to 2025 and relate it to marketing investment intensity.

Previous Empirical Studies

Empirical studies have found evidence that the relationship between marketing-related investment and dimensions of firm performance can be positive or negative and of varying strength, depending on the context. Based on a review of 101 empirical studies, Kamboj & Rahman (2015) found a generally positive relationship between marketing capabilities and firm performance, with sales growth and profitability as common performance measures. Likewise, Markovitch *et al.* (2020) analysed the actual marketing spending. They found a positive association between marketing intensity, profit rates and forecasted future earnings, and they noted the need to measure marketing expenditure correctly.

More specifically, Hughes *et al.* (2019) reported that returns from marketing investment could be U-shaped, depending on the amount of investment and the marketing mix bundled with the organisation's other resources. Using panel data analysis, Palomino-Tamayo *et al.* (2020) found that financial constraints reduced marketing intensity, which in turn negatively affected firm value and performance. These findings show that marketing investments should be viewed in a broader financial and organisational context.

Overall, as mentioned before, previous studies have found relationships between marketing investment, marketing capabilities and performance, but these findings are inconsistent. These differences may be due to measurement, industry, country and financial conditions. This reinforces the need for future empirical research using company-level longitudinal financial data, especially in Bangladesh. The present study addresses this gap by analysing the relationship between marketing investment and sales growth and net profit margin in selected Bangladeshi companies from 2021 to 2025.

Research Gap and Hypothesis Development

Previous studies have established relationships between marketing investment, marketing capabilities and firm performance, but gaps remain. Most of the current literature is based on developed markets or uses a general indicator of marketing capability rather than marketing investment intensity derived from company financial data. Moreover, limited evidence examines the relationship between marketing investment intensity, sales growth and net profit margin in the Bangladeshi corporate environment. The relationship may differ by country, industry and financial conditions, as findings vary across previous studies. Hence, this study aims to fill this gap by examining secondary financial data from selected Bangladeshi companies for five years, from 2021 to 2025.

Based on the reviewed literature, the following hypotheses are developed:

H1: Marketing investment intensity is statistically related to sales growth among selected Bangladeshi companies.

H2: Marketing investment intensity is statistically related to net profit margin among selected Bangladeshi companies.

Conceptual Framework

The conceptual framework shows the proposed relationship between marketing investment intensity and firm performance. Marketing investment intensity is the independent variable, which is defined as the ratio of marketing expenditure to company revenue. The framework includes two dependent variables: sales growth and net profit margin. The framework proposes that marketing investment intensity may be associated with sales growth through increased market activity and customer engagement. It suggests a relationship with net profit margin, considering the financial outcomes of marketing resource allocation. Thus, H1 explores the relationship between marketing investment intensity and sales growth, and H2 explores the relationship between marketing investment intensity and net profit margin.

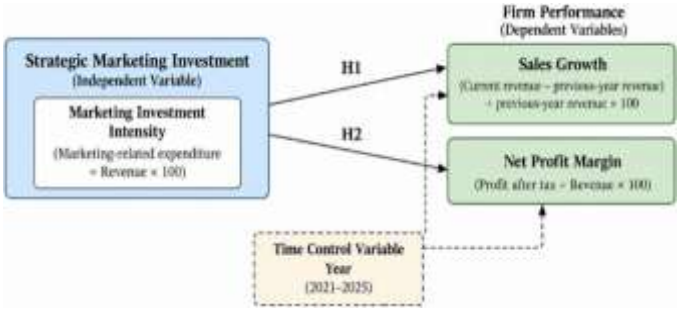


Figure: Conceptual Framework (self-made).

Chapter Summary

This chapter analysed the theoretical and empirical work on strategic marketing investment and firm performance. It examined the intensity of marketing investments, sales growth and net profit margin, identified research gaps and formulated the study's hypotheses. The conceptual framework was developed to suggest the possible linkages between the marketing investment intensity and the two selected measures of firm performance.

RESEARCH METHODOLOGY

Introduction to Research Methodology

This chapter discusses the methodology used to examine the relationship between strategic marketing expenditure and firm performance in selected Bangladeshi firms (Markovitch *et al.,* 2020). This study used a quantitative research method and secondary financial data of 10 companies in the period 2021-2025. It outlines

the research philosophy, approach, data sources, sampling procedure and variable measurement. The chapter describes the statistical procedures used in SPSS, including descriptive statistics, correlation analysis and Generalised Estimating Equations (GEE) and discusses pertinent ethical matters.



Figure: Overview of the Research Methodology (self-made).

Research Philosophy

This research is positivist because it examines relationships between measurable variables using objective numerical evidence. This approach is appropriate because the study is based on secondary data rather than the researcher's observation or interpretation. Marketing investment intensity, sales growth and net profit margin are measured numerically and analysed statistically in SPSS. The study tests hypotheses to determine whether significant relationships exist between the variables. The research emphasises observable financial data and systematic statistical analysis to produce results from empirical evidence rather than the researcher's perception. A positive orientation is appropriate for quantitative research in which data are numerical and statistical (Saunders *et al.,* 2019).

Research Approach

The study uses a deductive approach, starting with theories and past studies to develop testable hypotheses. The deductive method brings theory into empirical data by proposing hypotheses followed by systematic data analysis (Bryman & Bell, 2015). The hypotheses in this study focus on the relationship between marketing investment intensity, sales growth and net profit margin. Secondary financial data from 2021-2025 are statistically analysed in SPSS to test whether the empirical data support the proposed relationships.

Data Sources and Sampling

This study used financial data from 10 selected companies in Bangladesh for the period 2021-2025. When a researcher analyses information already collected and published for research purposes other than the one being studied, secondary data are appropriate (Johnston, 2017). The companies were selected using purposive sampling, which involved selecting companies with information relevant to the study's variables. The chosen companies cover various business activities, providing variation in marketing investment intensity and firm performance. The 10 companies' five years of data yielded 50 firm-year observations. The companies and observation periods selected appear in the table below.

No.	Selected Company	Observation Period	No. of Observations
1	ACI PLC	2021–2025	5
2	Bata Shoe Company Bangladesh	2021–2025	5

3	Marico Bangladesh	2021–2025	5
4	RAK Ceramics Bangladesh	2021–2025	5
5	Renata PLC	2021–2025	5
6	Olympic Industries	2021–2025	5
7	Singer Bangladesh	2021–2025	5
8	Golden Harvest Agro Industries	2021–2025	5
9	LafargeHolcim Bangladesh	2021–2025	5
10	Square Pharmaceuticals	2021–2025	5
Total	**10 companies**	**2021–2025**	**50**

Table: Selected Companies and Observations.

Variable Measurement

The main independent variable was Marketing Investment Intensity, calculated by dividing marketing-related expenditure by annual revenue and multiplying by 100. The selling, marketing, distribution, advertising and promotional expense disclosures in the annual reports for the selected companies for 2021-2025 were used to obtain the expenditure figures. Because companies used different accounting classifications for marketing expenditure, we used the most relevant marketing expenditure reported by each company, rather than a single classification across all companies. This method is based on information contained in the companies' published financial statements. The resulting measure reflects marketing expenditure intensity, not a fully standardised accounting measure of total marketing expenditure. This measurement issue is significant because previous studies have highlighted the challenge of obtaining comparable marketing expenditure data from company financial statements (Markovitch *et al.,* 2020).

Sales Growth was calculated as the percentage change in annual revenue from the previous year, and Net Profit Margin was calculated by dividing profit after tax by annual revenue and multiplying by 100. Sales Growth for 2021 is based on 2020 revenue.

Variable	Role	Definition / Calculation
Marketing Investment Intensity	Independent	Marketing-related expenditure ÷ Revenue × 100
Sales Growth	Dependent	(Current Revenue − Previous Revenue) ÷ Previous Revenue × 100
Net Profit Margin	Dependent	Profit After Tax ÷ Revenue × 100
Year	Time factor	2021–2025
Company ID	Subject identifier	Identifies each selected company

Table: Variables, Definitions and Calculations.



Figure: SPSS Variable View for the Study Variables.

Data Analysis Methods

The secondary data were analysed with IBM SPSS Statistics Version 32. The study variables were summarised using descriptive statistics. Pearson and Spearman correlation analyses were then performed to explore correlations between Marketing Investment Intensity, Sales Growth and Net Profit Margin. The repeated observations in the same company were taken into account by the use of Generalised Estimating Equations (GEE), as each company supplied observations for five consecutive years. GEE was found to be appropriate for clustered and longitudinal data where the observations within subjects might be correlated (Liang & Zeger, 1986).

Two different GEE models are estimated with the dependent variables Sales Growth and Net Profit Margin. The specification used a normal distribution with an identity link function because both dependent variables are continuous. Subject was set to Company ID with 10 company-level clusters, and Year was specified as the within-subject variable and treated as a categorical factor. Marketing Investment Intensity was added as the primary continuous predictor, and Year was added as a time control. The models were specified as $\boldsymbol{SG_{it} = \beta_0 + \beta_1 MII_{it} + \beta_2 Year_{it} + \epsilon_{it}}$ **and** $\boldsymbol{NPM_{it} = \beta_0 + \beta_1 MII_{it} + \beta_2 Year_{it} + \epsilon_{it}}$**.** The QIC values of independent, exchangeable and AR(1) working correlation structures were compared, and the one with the lowest QIC value was chosen. A robust estimator was used, as well as Type III Wald statistics and 95% confidence intervals, where statistical significance was considered at $p < .05$. There were no missing data in the dataset.

Analysis	Purpose
Descriptive statistics	To summarise the distribution and characteristics of the study variables
Pearson correlation	To examine linear relationships between the variables
Spearman correlation	To assess monotonic relationships where variables showed departures from normality
Generalised Estimating Equations (GEE)	To examine the relationships while accounting for repeated observations within companies
QIC	To compare alternative GEE working correlation structures
Wald test	To assess the statistical significance of the predictor in the GEE models
95% Confidence Interval	To indicate the range of plausible values for the estimated coefficient
p-value	To determine statistical significance at the 5% level

Table: Statistical Analysis Techniques Used in the Study.

Ethical Considerations

This study relied on secondary data from public records in companies' annual reports. Individuals were not asked to provide any personal or confidential information. The data were used only for academic purposes, and sources were referenced correctly. Data were collected and analysed correctly, without deliberate manipulation or misrepresentation. This study aligned with the university's research ethics requirements and ensured transparency in data collection, analysis and reporting.

Chapter Summary

This chapter discussed the methodology used in this study. It presented the research design, research philosophy, approach, research data and sampling. It discussed the intensity of marketing investment and the growth of sales and net profit. The chapter described the use of some statistical tools in SPSS such as descriptive statistics, correlation analysis and GEE. Finally, it discussed ethical issues related to using secondary data.

DATA ANALYSIS, RESULTS AND FINDINGS

Introduction

This chapter presents the study's analysis and findings based on secondary data collected from selected Bangladeshi companies for the 2021-2025 study period. This analysis used IBM SPSS Statistics to analyse marketing investment intensity and firm performance. The study first presents descriptive statistics, normalisation and correlation analysis, followed by Generalised Estimating Equations (GEE) to analyse relationships between variables. The results are then analysed to test the study's hypotheses and address the research questions.

Descriptive Statistics

Descriptive statistics were first computed to summarise the characteristics of the main study variables for 50 company-year observations of 10 selected companies from 2021 to 2025. These analysis measures are Marketing Investment Intensity, Sales Growth and Net Profit Margin. To identify the central tendency and variation in the data, the mean, standard deviation, minimum and maximum values were assessed.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Marketing_Investment	50	135.500	14088.043	3727.17463	4041.992697	16337704.960
Revenue	50	553.011	59979.146	22441.25466	16207.215241	262673825.88
Profit_After_Tax	50	-2249.146	16470.228	3282.17392	4570.585293	20890249.918
Marketing_Investment_Intensity	50	1.998	31.673	15.39470	9.361390	87.636
Sales_Growth	50	-37.526	52.810	10.26116	14.593124	212.959
Net_Profit_Margin	50	-22.771	48.531	10.90680	13.594146	184.801
Valid N (listwise)	50					

Figure: SPSS Descriptive Statistics Output.

The SPSS output shows no missing data in any of the three main variables, with 50 valid data points. The mean, minimum and maximum values of Marketing Investment Intensity were 15.395%, 1.998% and 31.673%, respectively. The standard deviation was 9.361, indicating variation in marketing investment intensity across the selected company-year observations.

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Marketing Investment Intensity (%)	50	1.998	31.673	15.395	9.361
Sales Growth (%)	50	-37.526	52.810	10.261	14.593
Net Profit Margin (%)	50	-22.771	48.531	10.907	13.594

Table: Descriptive Statistics of the Study Variables.

Sales Growth had a mean of 10.261%, ranging from −37.526% to 52.810%. The negative minimum means that, at some point in a company's history, revenue dropped; the maximum means revenue increased in another observation. The standard deviation is 14.593, which is relatively high and indicates substantial variation in sales growth across observations.

Net Profit Margin averaged 10.907%, ranging from −22.771% to 48.531%. Some observations show losses (negative compared to revenue), while others show a very high profit margin. Another sign of the large differences in profitability among the selected observations is the standard deviation of 13.594.

Overall, the descriptive findings indicate significant differences in the three selected variables across the selected companies and years. This variation provides a foundation for the forthcoming correlation and GEE analyses of the relationship between marketing investment intensity and firm performance.

Assessment of Data Distribution

The Shapiro–Wilk test and boxplots were used to assess the distribution of the three main study variables. The below figure presents the Shapiro-Wilk results, and the table summarises them. Marketing Investment Intensity had a significance value of .007, and Sales Growth had a significance value of .002. Both values are less than .05, suggesting evidence of nonnormality. Net Profit Margin, however, had a significance value of .379, which is greater than .05 and therefore does not indicate nonnormality.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Marketing_Investment_Intensity	.125	50	.048	.933	50	.007
Sales_Growth	.162	50	.002	.917	50	.002
Net_Profit_Margin	.139	50	.017	.975	50	.379

a. Lilliefors Significance Correction

Figure: SPSS Tests of Normality Output.

Variable	Shapiro–Wilk Sig.
Marketing Investment Intensity	.007
Sales Growth	.002
Net Profit Margin	.379

Table: Shapiro–Wilk Test Results.

Boxplots were also examined to identify potential outliers and complement the normality test.

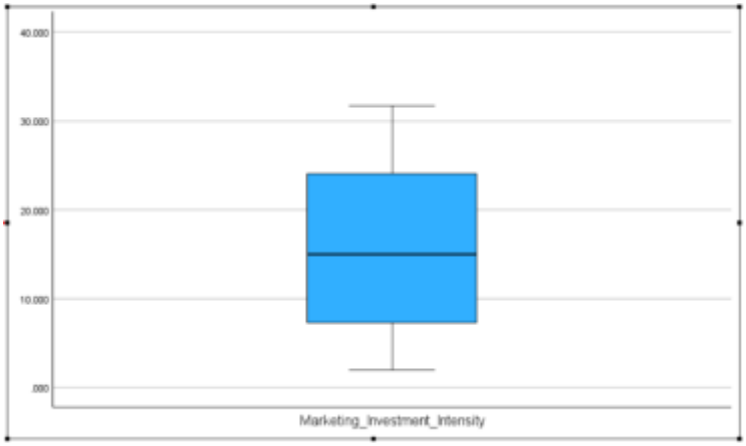


Figure: Boxplot of Marketing Investment Intensity.

This figure shows the boxplot for Marketing Investment Intensity, and no potential outliers are labelled.

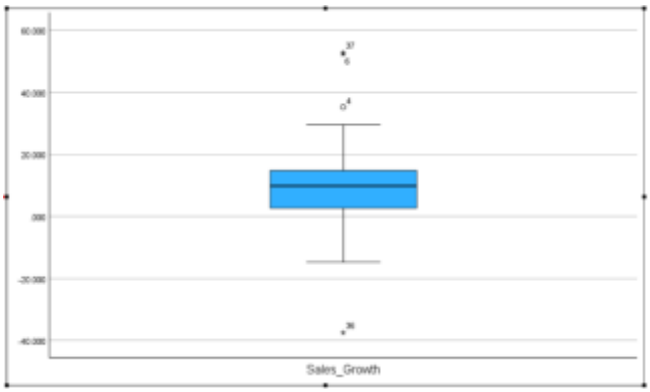


Figure: Boxplot of Sales Growth.

This figure shows the boxplot of Sales Growth, and observations 4, 6, 36 and 37 are potential outliers.

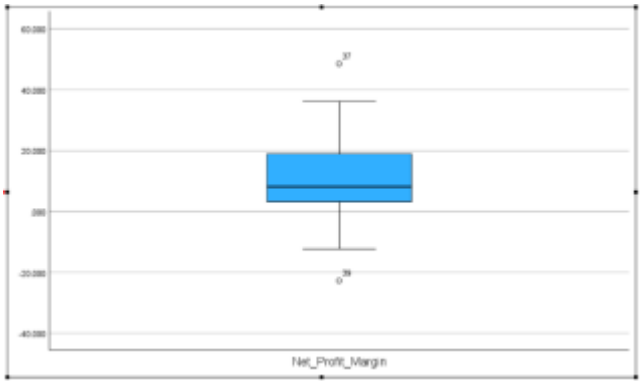


Figure: Boxplot of Net Profit Margin.

The Figure presents the Net Profit Margin boxplot; observations 37 and 39 appear to be potential outliers.

Retained these observations because they are actual, not confirmed data-entry errors, company-year observations. The results suggest that should account for the observed distributional properties when choosing appropriate statistical procedures for further analysis.

Correlation Analysis

Pearson and Spearman correlations were analysed to assess the direction and strength of the relationship between Marketing Investment Intensity, Sales Growth and Net Profit Margin. A linear relationship was evaluated using Pearson correlation, and a non-parametric evaluation was performed using Spearman correlation due to the deviations from normality noted above.

In the Pearson correlations, the relationship between Marketing Investment Intensity and Sales Growth was very weak, negative, and not significant ($r = -.053$, $p = .716$), while with Net Profit Margin, it was weak, negative, and not significant ($r = -.152$, $p = .293$). However, neither relationship was significant at the 5% level. However, Sales Growth and Net Profit Margin showed a positive, statistically significant relationship ($r = .357$, $p = .011$).

Correlations

		Marketing_Investment_Intensity	Sales_Growth	Net_Profit_Margin
Marketing_Investment_Intensity	Pearson Correlation	1	-.053	-.152
	Sig. (2-tailed)		.716	.293
	N	50	50	50
Sales_Growth	Pearson Correlation	-.053	1	.357*
	Sig. (2-tailed)	.716		.011
	N	50	50	50
Net_Profit_Margin	Pearson Correlation	-.152	.357*	1
	Sig. (2-tailed)	.293	.011	
	N	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Figure: SPSS Pearson Correlation Output.

The Spearman results were similar to the Pearson results. The correlation between Marketing Investment Intensity and Sales Growth was not significant ($\rho = -.111$, $p = .443$), and the correlation between Marketing Investment Intensity and Net Profit Margin was not significant ($\rho = -.205$, $p = .154$). Net Profit Margin remained significantly and positively correlated with Sales Growth ($\rho = .288$, $p = .042$).

Correlations

			Marketing_Investment_Intensity	Sales_Growth	Net_Profit_Margin
Spearman's rho	Marketing_Investment_Intensity	Correlation Coefficient	1.000	-.111	-.205
		Sig. (2-tailed)	.	.443	.154
		N	50	50	50
	Sales_Growth	Correlation Coefficient	-.111	1.000	.288*
		Sig. (2-tailed)	.443	.	.042
		N	50	50	50
	Net_Profit_Margin	Correlation Coefficient	-.205	.288*	1.000
		Sig. (2-tailed)	.154	.042	.
		N	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Figure: SPSS Spearman Correlation Output.

Relationship	Pearson r	p-value	Spearman ρ	p-value
Marketing Investment Intensity – Sales Growth	−.053	.716	−.111	.443
Marketing Investment Intensity – Net Profit Margin	−.152	.293	−.205	.154
Sales Growth – Net Profit Margin	.357	.011	.288	.042

Table: Pearson and Spearman Correlation Results.

Generally, neither measure of firm performance was significantly related to Marketing Investment Intensity.

GEE Analysis

The relationships between Marketing Investment Intensity and overall company performance were analysed using Generalised Estimating Equations (GEE), which account for repeated observations within the same companies over the 2021-2025 period. Year was the within-subject factor, and company ID was the subject variable. In addition to Marketing Investment Intensity, the model included year. The Quasi-likelihood under the Independence model Criterion (QIC) was calculated to compare independent, exchangeable and AR(1) working correlation structures; the one with the lower QIC was preferred.

The lowest QIC for Sales Growth was 9,129.416 with the AR(1) structure. The coefficient of Marketing Investment Intensity in the corresponding parameter estimate is −0.036, the Wald chi-square is 0.079, and the significance value is .778. The 95 % Wald confidence interval was between −0.288 and 0.215. Thus, the correlation was not significant at the 5% level.

Goodness of Fit[a]

	Value
Quasi Likelihood under Independence Model Criterion (QIC)[b]	9129.416
Corrected Quasi Likelihood under Independence Model Criterion (QICC)[b]	9130.632

Dependent Variable: Sales_Growth
Model: (Intercept), Year, Marketing_Investment_Intensity

a. Information criteria are in smaller-is-better form.

b. Computed using the full log quasi-likelihood function.

Figure: Sales Growth – Goodness of Fit.

Parameter Estimates

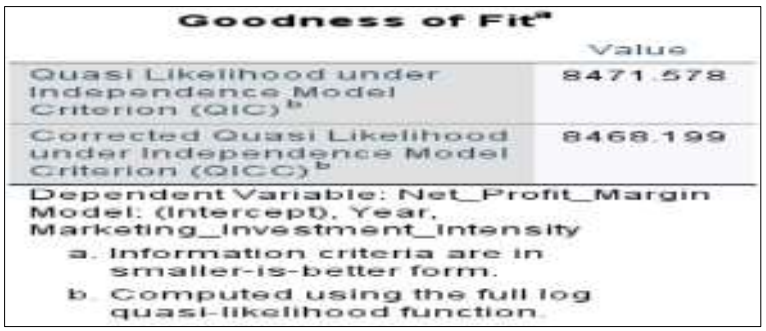
Parameter	B	Std. Error	95% Wald Confidence Interval Lower	95% Wald Confidence Interval Upper	Hypothesis Test Wald Chi-Square	Hypothesis Test df	Hypothesis Test Sig.
(Intercept)	7.716	1.5388	4.700	10.732	25.142	1	<.001
[Year=2021]	7.665	6.5277	-5.129	20.459	1.379	1	.240
[Year=2022]	10.195	6.1064	-1.773	22.164	2.788	1	.095
[Year=2023]	1.296	3.4435	-5.453	8.046	.142	1	.707
[Year=2024]	-3.653	3.5108	-10.534	3.228	1.083	1	.298
[Year=2025]	0[a]	.	.	.	.	.	.
Marketing_Investment_Intensity	-.036	.1283	-.288	.215	.079	1	.778
(Scale)	207.242						

Dependent Variable: Sales_Growth
Model: (Intercept), Year, Marketing_Investment_Intensity

a. Set to zero because this parameter is redundant.

Figure: Sales Growth – Parameter Estimates.

Net Profit Margin had the lowest QIC (8,471.578) with the Exchangeable structure. The coefficient of Marketing Investment Intensity was −0.421, Wald's χ^2 value was 1.785, and the significance value was .182. The 95% Wald Confidence interval is from −1.040 to 0.197. Therefore, there was also no significant relationship between the two.



Goodness of Fit[a]

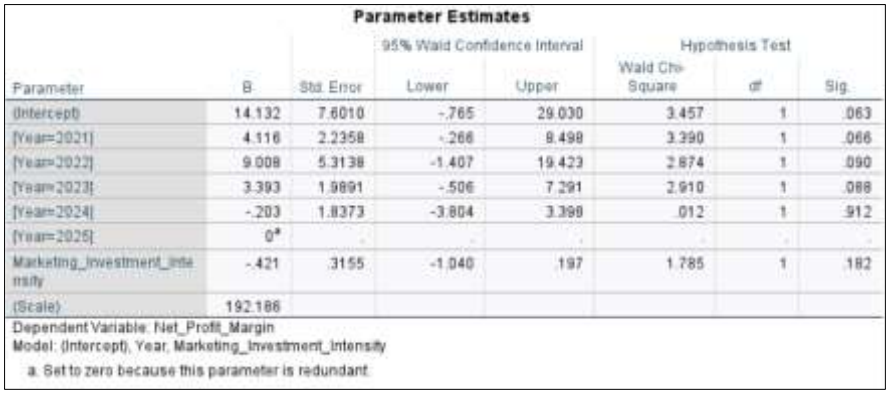
	Value
Quasi Likelihood under Independence Model Criterion (QIC)[b]	8471.578
Corrected Quasi Likelihood under Independence Model Criterion (QICC)[b]	8468.199

Dependent Variable: Net_Profit_Margin
Model: (Intercept), Year, Marketing_Investment_Intensity

a. Information criteria are in smaller-is-better form.

b. Computed using the full log quasi-likelihood function.

Figure: Net Profit Margin – Goodness of Fit.



Parameter Estimates

Parameter	B	Std. Error	95% Wald Confidence Interval Lower	95% Wald Confidence Interval Upper	Hypothesis Test Wald Chi-Square	Hypothesis Test df	Hypothesis Test Sig.
(Intercept)	14.132	7.6010	-.765	29.030	3.457	1	.063
[Year=2021]	4.116	2.2358	-.266	8.498	3.390	1	.066
[Year=2022]	9.008	5.3138	-1.407	19.423	2.874	1	.090
[Year=2023]	3.393	1.9891	-.506	7.291	2.910	1	.088
[Year=2024]	-.203	1.8373	-3.804	3.398	.012	1	.912
[Year=2025]	0[a]	.	.	.	.	.	.
Marketing_Investment_Intensity	-.421	.3155	-1.040	.197	1.785	1	.182
(Scale)	192.186						

Dependent Variable: Net_Profit_Margin
Model: (Intercept), Year, Marketing_Investment_Intensity

a. Set to zero because this parameter is redundant.

Figure: Net Profit Margin – Parameter Estimates.

The overall GEE results suggest that the relationship between Marketing Investment Intensity and Sales Growth and Net Profit Margin is not significant after controlling for repeated company observations and Year.

Hypothesis Testing and Findings

The hypotheses were examined using the final GEE models, and the 5% significance level ($\alpha = .05$) was used to determine statistical significance. The table below summarises the results for both hypotheses.

Hypothesis	Relationship Tested	B	Wald χ^2	p-value	Decision
H1	Marketing Investment Intensity → Sales Growth	−.036	.079	.778	Not supported
H2	Marketing Investment Intensity → Net Profit Margin	−.421	1.785	.182	Not supported

Table: Summary of Hypothesis Testing.

The results did not support H1. According to the GEE analysis, the results did not indicate a statistically significant relationship between Marketing Investment Intensity and Sales Growth ($B = -0.036$, $p = .778$). Because the p-value exceeded the 0.05 significance level, the null hypothesis could not be rejected. Thus, there was insufficient statistical evidence to support a relationship between marketing investment intensity and sales growth.

H2 was not supported. The GEE analysis showed that Marketing Investment Intensity was not statistically significantly related to Net Profit Margin ($B = -0.421$, $p = .182$). The p-value was greater than the set significance level of 0.05, so the null hypothesis was not rejected. Thus, there was not enough statistical evidence to determine that there was a statistically significant relationship between Marketing Investment Intensity and Net Profit Margin.

Overall, neither hypothesis was supported statistically. Thus, the results suggest that, for the selected companies and time frame studied, changes in Marketing Investment Intensity are not significantly related to changes in Sales Growth and Net Profit Margin when Year and repeated observations of Marketing Investment Intensity within companies are controlled for.

Chapter Summary

The empirical analysis used data from 50 company-years for the period 2021 to 2025, as presented in this chapter. Descriptive statistics and distributional assessments showed differences in the study variables. Pearson and Spearman correlations showed that neither performance measure was significantly related to Marketing Investment Intensity. The GEE analysis also accounted for repeated company observations and Year and did not reveal any statistically significant relationships with Sales Growth or Net Profit Margin. As such, the two hypotheses were not statistically supported.

DISCUSSION OF FINDINGS AND RESULTS

Introduction

This chapter addresses the findings of Chapter 4 in light of the study's objectives, hypotheses, theoretical framework and previous empirical studies. The chapter focuses on the relationships between Marketing Investment Intensity and two indicators of firm performance: Sales Growth and Net Profit Margin. The chapter compares the findings with previous studies and discusses possible explanations for the results. Finally, the chapter discusses the implications of the results for understanding strategic marketing investment.

Discussion of H1: Marketing Investment Intensity and Sales Growth

H1 suggested a statistically significant relationship between Marketing Investment Intensity and Sales Growth. The GEE analysis produced a negative but non-significant coefficient ($B = -0.036$, $p = .778$). The Spearman correlation showed a weak and non-significant relationship ($\rho = -.111$, $p = .443$). Thus, the results provide no statistical support for H1 in selected Bangladeshi companies for 2021-2025.

This study's results contrast with previous studies that suggest a positive marketing intensity-performance relationship (Jaisinghani *et al.,* 2020). However, these differences may reflect variations in performance measures, country context, and study design. Marketing investment can take time to yield measurable financial returns, especially when it focuses on activities that build brands and customer relationships that do not lead to immediate sales (Markovitch *et al.,* 2020).

This finding suggests that marketing investment intensity, in terms of sales revenue, does not always correlate with increased annual sales growth. The link between marketing resources and marketing performance may depend on how firms build marketing capabilities and how they transform resources into market outcomes that benefit the firm (Cacciolatti & Lee, 2016). Therefore, the lack of significance should not be interpreted as marketing investment being ineffective. Instead, in this sample and study period, the study found no statistically significant relationship between Marketing Investment Intensity and Sales Growth.

Discussion of H2: Marketing Investment Intensity and Net Profit Margin

The results show that H2 suggested a statistically significant relationship between Marketing Investment Intensity and Net Profit Margin. However, the GEE analysis produced a negative but non-significant coefficient ($B = -0.421$, $p = .182$). The Spearman correlation showed a small, non-significant negative association ($\rho = -.205$, $p = .154$). Hence, the evidence does not support H2 for the selected Bangladeshi companies for the study period 2021-2025.

This result contrasts with other researchers who found evidence that marketing intensity can positively affect profitability when defined directly by actual marketing expenditure (Markovitch *et al.,* 2020). Likewise, advertising spending has been seen to enhance accounting returns in listed banks in Bangladesh, but its impact

could vary depending on the financial performance measure (Bhowmik *et al.,* 2022). These differences may stem from differences in industry, measurement, sample composition and analytical methods. The present study includes marketing investment intensity across industries in relation to sales, rather than advertising expenditure.

The non-significant result may reflect that marketing investment is not always directly associated with profitability. Marketing activities can benefit brand development, customer relationships and other aspects that may take time to affect accounting performance (Markovitch *et al.,* 2020). Furthermore, marketing resource allocation may differ between companies, which could affect financial results from comparable investments. Therefore, this finding does not prove that marketing investment leads to a decline in profitability. On the contrary, it shows that, in the given sample and study period, no statistically significant relationship was found between Marketing Investment Intensity and Net Profit Margin.

Discussion in Relation to the Theoretical Framework

The Resource-Based View (RBV) holds that a company can gain a competitive edge by leveraging valuable resources and capabilities that are effectively developed and used. Finally, marketing resources can contribute to firm performance when they are transformed into practical market outcomes (Cacciolatti & Lee, 2016). However, the present study found no statistically significant relationship between Marketing Investment Intensity and Sales Growth or Net Profit Margin. This implies that the marketing investment–to–revenue ratio alone does not explain firm performance. However, the results suggest that the development, management and use of marketing resources matter more than the level of investment. The results therefore offer a more complex application of the RBV, indicating that marketing capability can affect how much marketing resources contribute to firm performance beyond expenditure intensity.

Implications of the Findings

The results indicate that marketing expenditure should not be judged based on its share of revenues. Instead, more attention should be paid to how marketing resources are allocated and used to meet business goals. The lack of statistically significant relationships means that high levels of marketing investment do not necessarily lead to higher short-term sales growth or profitability. The results highlight the importance of assessing marketing investment's contribution by examining its capabilities as a marketing function, the quality of its investments, and its longer-term performance.

Chapter Summary

This chapter discussed the study's findings in the context of the research hypotheses, theoretical framework and previous literature. Neither hypothesis was statistically supported, since there were no significant relationships between Marketing Investment Intensity and Sales Growth, or between Marketing Investment Intensity and Net Profit Margin. The results indicate that marketing investment alone is not a sufficient condition for firm performance. The chapter identified implications for managers and researchers, including the need for effective marketing resource utilisation and capability development.

CONCLUSION & RECOMMENDATIONS

Introduction

This chapter brings together the study's key findings and answers its aim, objectives and research questions. It provides the overall findings of the analysis of Marketing Investment Intensity and firm performance. In addition, the chapter offers practical recommendations, acknowledges the study's limitations, and suggests further research based on the results.

Conclusions

The study explored the relationship between Strategic Marketing Investment and firm performance of selected listed companies in Bangladesh during 2021-2025. The results suggest no significant relationship between

Marketing Investment Intensity and Sales Growth, or between Marketing Investment Intensity and Net Profit Margin, for the 50 company-years observed. The GEE analysis revealed no significant relationship between Sales Growth (B = −0.036, p = .778) and Net Profit Margin (B = −0.421, p = .182). Therefore, the results provide no statistical evidence to support H1 or H2. The results indicate no significant relationship between the increase in the percentage of marketing revenue spent on marketing expenses and the selected annual performance measures during the study period. The findings suggest that marketing investment intensity may not fully explain differences in firm performance. Other factors may be relevant, such as how marketing resources are allocated, the effectiveness of marketing capabilities, industry conditions, and the time it takes for marketing results to materialise. Consequently, the results indicate no statistically significant relationship between Marketing Investment Intensity and the two measures of company performance for the selected companies in the period 2021-2025.

Recommendations

Following the study, the following recommendations are made:

1. Evaluate marketing investment beyond expenditure levels: Marketing investment should be judged by what it brings, not just its share of sales.

2. Improve strategic allocation: Target marketing activities to those that clearly support specific business and performance objectives.

3. Monitor marketing outcomes regularly: Businesses need to consider the ROI of marketing spend, including customer engagement, sales development and profitability.

4. Consider longer-term outcomes: Managers need to recognise that some marketing activities take time to deliver measurable monetary returns and should not judge annual performance alone.

5. Strengthen marketing capabilities: Companies need to facilitate marketing planning, implementation and evaluation to use available marketing resources better.

6. Expand future research: Further research is needed to build on these results by using larger sample sizes, longer observation periods, and additional performance indicators and industry-specific analyses to understand marketing investment and firm performance better.

Limitations of the Study

The study is limited in its conclusions, and the following should be taken into account:

1) **Limited sample:** The analysis was limited to 10 companies and 50 company-year observations, so the results may not be generalisable.

2) **Study period:** The study focused on 2021–2025 and did not account for longer-term relationships between marketing investment and firm performance.

3) **Secondary data:** The study relied solely on publicly available annual report information and, as such, could not capture managerial perceptions or the qualitative dimensions of marketing investment.

4) **Measurement differences:** Companies accounted for marketing expenditures differently, creating potential comparability issues.

5) **Performance measures:** Other financial and non-financial measures could provide additional insight, but this study did not use them to assess firm performance.

Further Research

Further research should use a wider sample of companies and a longer time period to improve the results' generalisability. The relationship between marketing investment and firm performance could be examined industry-wise to determine whether it differs across industries. Future studies could add other financial indicators, such as return on assets and ROE, alongside non-financial indicators. Primary data could be collected to explore marketing capabilities, managerial decision-making, and the impact of different marketing investment choices. Finally, further studies could examine the performance outcomes of marketing investments over the years rather than annually.

Chapter Summary

This chapter summarised the investigation and found that neither hypothesis was supported statistically. It recommended strategies to improve the use of marketing resources and noted the study's limitations, as well as directions for future research. In conclusion, the chapter highlighted the importance of taking a long-term perspective on marketing investment and firm performance, and of considering performance indicators beyond marketing capabilities.

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