WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal Homepage: www.ijrpr.com ISSN 2582-7421

Business Strategies and Marketing Techniques- (An Empirical Analysis of Their Relationship with Firm Sales Performance Using Chi-Square, One-Way ANOVA and Linear Regression)

K. Rohith

UG Student, KONERU Lakshmaiah Education Foundation

DOI : https://doi.org/10.55248/gengpi.07.1026.34027

ABSTRACT

Firms pursue competitive advantage through the business strategies they adopt and the marketing techniques they use to execute those strategies. This study examines how business strategy (cost leadership, differentiation, focus) and marketing technique (traditional, digital, hybrid) relate to one another and to firm sales performance. A cross-sectional survey design was applied to 200 small and medium-sized enterprises across retail, manufacturing, services and e-commerce sectors. Data were analysed in Microsoft Excel using chi-square tests of independence, one-way analysis of variance (ANOVA) with Bonferroni post-hoc comparisons, and simple and multiple linear regression.

Results show a statistically significant association between business strategy and the marketing technique adopted, $\chi^2(4, N = 200) = 10.10$, $p = .039$, Cramér's $V = .16$. Sales growth differed significantly across marketing techniques, $F(2, 197) = 26.58$, $p < .001$, $\eta^2 = .21$, with hybrid ($M = 18.52\%$) and digital ($M = 17.87\%$) firms outperforming traditional-marketing firms ($M = 13.24\%$); hybrid and digital firms did not differ from each other. Sales growth also differed by strategy, $F(2, 197) = 5.49$, $p = .005$, $\eta^2 = .05$, with differentiators outperforming cost leaders. A multiple regression including marketing spend, digital marketing intensity and customer satisfaction explained 26.5% of the variance in sales growth, $F(3, 196) = 23.59$, $p < .001$, with digital intensity the strongest predictor ($\beta = .38$). The paper concludes that integrating digital channels into a coherent marketing mix, backed by adequate and well-targeted spending and a customer-satisfaction focus, is associated with superior performance, and offers recommendations for managers.

Keywords: business strategy, marketing techniques, digital marketing, competitive advantage, sales growth, chi-square, ANOVA, regression

1. Introduction

1.1 Background of the Study

Competition in almost every sector has intensified as markets globalise, customers gain access to more information, and digital technologies lower the cost of reaching buyers. In this environment, a firm's long-term success depends on two interlinked decisions: which business strategy it follows to create a defensible market position, and which marketing techniques it uses to communicate value, acquire customers and retain them. Porter (1980) argued that firms outperform rivals by choosing a clear generic strategy, namely cost leadership, differentiation or focus, while Kotler and Keller (2016) describe marketing as the process through which that strategic positioning is turned into customer value and profitable exchange.

Marketing practice has changed rapidly. Traditional techniques such as print, television, radio, personal selling and in-store promotion are now complemented, and in some firms replaced, by search engine marketing, social media, e-mail automation, content marketing and data-driven customer relationship management (Chaffey & Ellis-Chadwick, 2019). For small and medium-sized enterprises (SMEs), with limited budgets, the question is not whether to market but how to allocate scarce resources between channels in a way that supports their chosen strategy and produces measurable results.

1.2 Statement of the Problem

Although the strategy and marketing literatures are extensive, managers still lack clear, quantitative evidence on three practical questions: (a) whether the marketing techniques a firm uses are systematically linked to its business strategy; (b) whether firms using different techniques or strategies achieve different levels of sales growth; and (c) how far measurable marketing inputs, such as spending, digital intensity and customer satisfaction, explain variation in performance. This study addresses these gaps using primary firm-level data and standard statistical techniques accessible to practitioners in Microsoft Excel.

1.3 Objectives of the Study

- To examine the association between business strategy and the marketing technique adopted by firms.
- To compare sales growth across firms using traditional, digital and hybrid marketing techniques.
- To compare sales growth across firms pursuing cost leadership, differentiation and focus strategies.
- To determine the effect of marketing spend, digital marketing intensity and customer satisfaction on sales growth.
- To recommend strategy and marketing choices that improve firm performance.

1.4 Research Questions

- RQ1: Is the marketing technique adopted associated with the firm's business strategy?
- RQ2: Is firm performance category (high or low sales growth) associated with business strategy?
- RQ3: Does mean sales growth differ across marketing techniques?
- RQ4: Does mean sales growth differ across business strategies?
- RQ5: To what extent do marketing spend, digital intensity and customer satisfaction predict sales growth?

1.5 Hypotheses

Table 1. Research hypotheses and the statistical test used

No.	Null hypothesis (H0)	Test
H1	Marketing technique is independent of business strategy.	Chi-square
H2	Performance category (High/Low) is independent of business strategy.	Chi-square
H3	Mean sales growth is equal across traditional, digital and hybrid marketing groups.	One-way ANOVA
H4	Mean sales growth is equal across cost leadership, differentiation and focus groups.	One-way ANOVA
H5	Marketing spend has no effect on sales growth ($\beta = 0$).	Simple regression
H6	Marketing spend, digital intensity and customer satisfaction jointly have no effect on sales growth.	Multiple regression

Each H0 has a corresponding alternative hypothesis (H1a–H6a) stating that an association, difference or effect exists.

1.6 Significance of the Study

For managers, the study offers evidence on how strategy and marketing choices relate to results. For academics, it contributes SME-level evidence to the strategy–marketing interface. For students and practitioners, it demonstrates a complete, replicable analytical workflow in Excel, requiring no specialised statistical software.

1.7 Scope and Delimitations

The study covers SMEs in four sectors (retail, manufacturing, services, e-commerce). Performance is measured by year-on-year sales growth. The findings are correlational and should not be read as proof of causation.

2. Literature Review and Conceptual Framework

2.1 Business Strategy and Competitive Advantage

Porter (1980, 1985) identified three generic strategies. Cost leadership seeks the lowest industry cost position, allowing competitive prices or superior margins. Differentiation creates a product or service perceived as unique, commanding a price premium or stronger loyalty. Focus concentrates on a narrow segment, achieving either cost focus or differentiation focus. A firm that fails to commit to any one approach risks being 'stuck in the middle'. Complementing this positioning view, the resource-based view holds that sustained advantage derives from resources and capabilities that are valuable,

rare, inimitable and organised for exploitation (Barney, 1991). Marketing capability, including market sensing, customer relationship management and brand building, is one such capability (Day, 1994).

2.2 Marketing Techniques

Marketing techniques are the operational tools through which strategy reaches the customer. Kotler and Keller (2016) organise them around the marketing mix (product, price, place, promotion) and segmentation, targeting and positioning. Promotion techniques may be classified as traditional (print, broadcast, outdoor, direct mail, personal selling) and digital (search, social media, e-mail, content, influencer and mobile marketing). Digital techniques allow precise targeting, real-time measurement and two-way engagement, and often have a lower cost per contact, whereas traditional media can offer mass reach and credibility, particularly in local or less digitally connected markets (Chaffey & Ellis-Chadwick, 2019; Kotler, Kartajaya & Setiawan, 2017). Many firms adopt a hybrid approach that integrates both.

2.3 Market Orientation, Customer Satisfaction and Performance

Market orientation, the organisation-wide generation, dissemination and use of market intelligence, has been linked to superior profitability (Kohli & Jaworski, 1990; Narver & Slater, 1990). Customer satisfaction is a key outcome of good marketing and has been associated with higher retention and financial returns (Anderson, Fornell & Lehmann, 1994; Reichheld, 1996). Lemon and Verhoef (2016) emphasise that managing the customer experience across touchpoints, increasingly digital, is central to modern marketing performance.

2.4 Linking Strategy and Marketing

Strategy should shape marketing choices. A cost leader is likely to favour efficient, high-volume and low-cost promotion, while a differentiator needs channels that communicate distinctive value, such as content, social media and brand-building campaigns. A focus firm needs channels that reach a precise segment, an area in which digital targeting is particularly useful. This reasoning motivates H1 and H2. Because marketing effort should convert strategic positioning into sales, performance is expected to differ across techniques and strategies (H3, H4) and to increase with marketing investment, digital capability and customer satisfaction (H5, H6).

2.5 Conceptual Framework

The framework treats business strategy as an antecedent that shapes marketing technique; marketing technique, marketing spend, digital marketing intensity and customer satisfaction are the marketing inputs; and sales growth is the performance outcome. Firm size and sector are recorded as descriptive controls.

Table 2. Operational definition of variables

Variable	Type	Measurement
Business strategy	Nominal	Cost leadership / Differentiation / Focus (dominant strategy, self-classified)
Marketing technique	Nominal	Traditional / Digital / Hybrid (dominant approach)
Marketing spend	Ratio	Marketing budget as % of annual revenue
Digital marketing intensity	Interval (scale)	Composite score 1–10 of digital channel usage
Customer satisfaction	Interval (scale)	Mean survey score 1–10
Retention	Ratio	% of customers retained over 12 months
Sales growth	Ratio	Year-on-year growth in sales (%) – dependent variable
Performance category	Ordinal (derived)	High if sales growth ≥ sample median; otherwise Low

3. Research Methodology

3.1 Research Design

A quantitative, cross-sectional, explanatory survey design was used. The design suits the aim of testing associations and differences between variables measured at one point in time in a sample of firms.

3.2 Population, Sample and Sampling

The target population is SMEs operating in retail, manufacturing, services and e-commerce. A stratified random sample of 200 firms was analysed, which comfortably exceeds the minimum needed for the chosen tests: the chi-square test requires expected cell counts of at least 5 in most cells, one-way ANOVA with three groups needs roughly 20–30 observations per group for adequate power to detect medium effects (Cohen, 1988), and multiple regression with three predictors is generally satisfied by at least 10–15 observations per predictor (Hair et al., 2019).

Table 3. Sample profile (N = 200)

Characteristic	Category	n	%
Sector	Services	67	33.5
	Retail	53	26.5
	Manufacturing	47	23.5
	E-commerce	33	16.5
Firm size	Small	121	60.5
	Medium	79	39.5
Strategy	Differentiation	77	38.5
	Cost leadership	71	35.5
	Focus	52	26.0
Marketing technique	Hybrid	100	50.0
	Digital	57	28.5
	Traditional	43	21.5

3.3 Data Collection Instrument

Data were collected with a structured questionnaire completed by the owner-manager or marketing head. Section A captured firm profile; Section B classified the dominant strategy and marketing technique; Section C measured marketing spend, digital intensity (1–10) and customer satisfaction (1–10); and Section D captured retention and sales growth. Content validity was ensured through expert review and a pilot test, and internal consistency of multi-item scales should be confirmed with Cronbach's alpha (≥ 0.70) when real data are collected.

3.4 Data Analysis Procedure

All analyses were performed in Microsoft Excel using worksheet formulas so that every result is transparent and reproducible (see the accompanying workbook). The significance level was set at $\alpha = 0.05$.

Table 4. Statistical techniques and Excel functions used

Technique	Purpose	Excel implementation
Descriptive statistics	Summarise data	AVERAGE, MEDIAN, STDEV, MIN, MAX, COUNTIF
Chi-square test of independence	Association between two categorical variables	COUNTIFS (observed), expected = row × column total / N, CHIDIST, CHITEST, CHIINV
One-way ANOVA	Compare means of 3+ groups	AVERAGEIF, SUMPRODUCT (SS), FDIST, FINV; Bonferroni pairwise t-tests using TDIST
Simple and multiple linear regression	Predict sales growth from predictors	SLOPE, INTERCEPT, RSQ, LINEST, TDIST, TINV, FDIST
Correlation	Strength of linear relationships	CORREL

Chi-square test of independence

For an r × c contingency table, expected frequency is E = (row total × column total) / N and the test statistic is $\chi^2 = \Sigma (O - E)^2 / E$ with $(r - 1)(c - 1)$ degrees of freedom (Pearson, 1900). Effect size is Cramér's $V = \sqrt{[\chi^2 / (N \times \min(r - 1, c - 1))]}$; values near 0.10, 0.30 and 0.50 are conventionally small, medium and large (Cohen, 1988).

One-way ANOVA

ANOVA partitions total variation into between-group and within-group components (Fisher, 1925). The test statistic is F = MS_between / MS_within with $(k - 1, N - k)$ degrees of freedom. Effect size is η^2 = SS_between / SS_total. When F is significant, Bonferroni-adjusted pairwise comparisons using the pooled within-group mean square identify which groups differ.

Linear regression

The multiple regression model is: Sales Growth = β0 + β1(Marketing Spend) + β2(Digital Intensity) + β3(Customer Satisfaction) + ε, estimated by ordinary least squares. Overall fit is judged by R^2, adjusted R^2 and the F-test; individual predictors by t-tests and 95% confidence intervals; and relative importance by standardised coefficients (β).

3.5 Assumptions

Chi-square requires independent observations and adequate expected counts (all expected counts here exceeded 11, well above the minimum of 5). ANOVA assumes independence, approximately normal residuals and homogeneity of variance; with group sizes of 43 to 100 and a moderately large sample, the F-test is reasonably robust, though the differentiation group showed a somewhat larger standard deviation (SD = 5.42) than the other strategy groups and this should be checked with Levene's test when using real data. Regression assumes linearity, independence, homoscedasticity, normality of residuals and absence of severe multicollinearity; the predictor intercorrelations were low to moderate (largest |r| = .28; Table 11), indicating no multicollinearity problem.

3.6 Ethical Considerations

Participation is voluntary, informed consent is obtained, responses are anonymous and reported only in aggregate, and data are stored securely and used only for academic purposes.

4. Data Analysis and Results

4.1 Descriptive Statistics

Table 5. Descriptive statistics of scale variables (N = 200)

Variable	Mean	Median	SD	Min	Max
Marketing spend (% of revenue)	5.98	5.80	2.01	1.0	10.9
Digital marketing intensity (1–10)	5.98	6.40	1.97	1.0	9.3
Customer satisfaction (1–10)	6.71	6.70	1.23	3.0	10.0
Retention (%)	79.31	79.55	6.54	62.3	94.4
Sales growth (%)	17.20	17.15	4.55	3.5	29.9

On average, firms spent about 6% of revenue on marketing, reported moderately high satisfaction (M = 6.71 out of 10) and achieved 17.2% sales growth. Half of the firms (n = 100) were classified as high performers, being at or above the median growth of 17.15%.

4.2 Chi-Square Tests of Independence

Test 1: Business strategy and marketing technique (H1)

Table 6. Observed (expected) frequencies: strategy × marketing technique

Strategy	Traditional	Digital	Hybrid	Total
Cost leadership	23 (15.27)	15 (20.24)	33 (35.50)	71
Differentiation	9 (16.56)	26 (21.95)	42 (38.50)	77

Strategy	Traditional	Digital	Hybrid	Total
Focus	11 (11.18)	16 (14.82)	25 (26.00)	52
Total	43	57	100	200

$\chi^2(4, N = 200) = 10.10$, critical value ($\alpha = .05$) = 9.49, $p = .039$, Cramér's V = .159.

The chi-square statistic (10.10) exceeds the critical value of 9.49, so H1 is rejected: marketing technique is significantly associated with business strategy. The largest contributions to χ^2 came from cost leaders using traditional techniques more than expected (23 observed vs 15.3 expected) and differentiators using them less than expected (9 vs 16.6); differentiators also adopted digital and hybrid techniques more often than expected. The effect size (V = .16) is small to moderate, so strategy shapes but does not determine marketing choices.

Test 2: Business strategy and performance category (H2)

Table 7. Observed (expected) frequencies: strategy × performance category

Strategy	High	Low	Total
Cost leadership	32 (35.5)	39 (35.5)	71
Differentiation	43 (38.5)	34 (38.5)	77
Focus	25 (26.0)	27 (26.0)	52
Total	100	100	200

$\chi^2(2, N = 200) = 1.82$, critical value = 5.99, $p = .403$, Cramér's V = .095.

The statistic (1.82) is below the critical value (5.99) and p = .403, so H2 is not rejected. Although differentiators were somewhat more likely to be high performers (55.8%) than cost leaders (45.1%), the difference in proportions is not statistically significant once performance is dichotomised. This contrasts with the ANOVA on continuous growth below, illustrating that splitting a continuous outcome into categories discards information and reduces statistical power.

4.3 One-Way ANOVA

ANOVA A: Sales growth by marketing technique (H3)

Table 8. Group statistics and ANOVA: sales growth by marketing technique

Group	n	Mean (%)	SD
Traditional	43	13.24	4.37
Digital	57	17.87	4.03
Hybrid	100	18.52	3.93
Overall	200	17.20	4.55

ANOVA summary table

Source	SS	df	MS	F	p
Between groups	874.31	2	437.16	26.58	< .001
Within groups	3239.65	197	16.44		
Total	4113.96	199			

F critical (2, 197; $\alpha = .05$) = 3.04. Eta squared $\eta^2 = .213$.

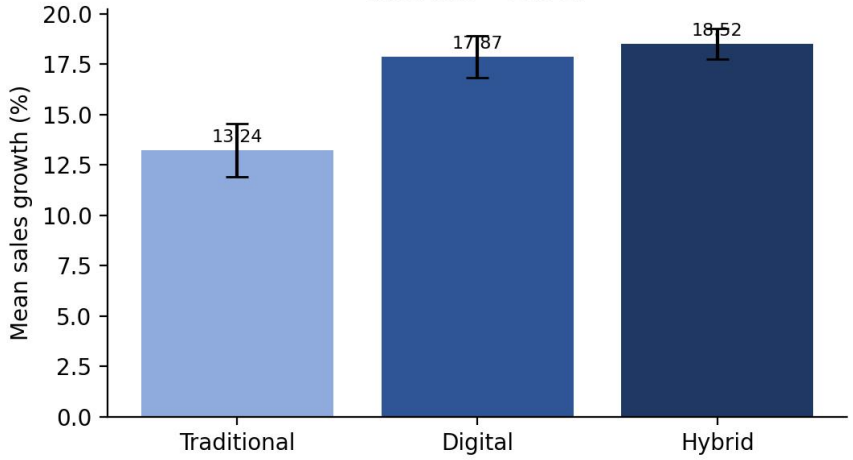
F(2, 197) = 26.58 far exceeds the critical value of 3.04 ($p < .001$), so H3 is rejected. Marketing technique explains 21.3% of the variance in sales growth, a large effect by Cohen's (1988) benchmarks (.14 and above).

Table 9. Bonferroni post-hoc comparisons (technique)

Comparison	Mean diff.	SE	t	Adj. p	Sig.
Traditional vs Digital	−4.63	0.82	−5.66	< .001	Yes
Traditional vs Hybrid	−5.28	0.74	−7.14	< .001	Yes
Digital vs Hybrid	−0.65	0.67	−0.96	1.000	No

Firms using digital marketing grew 4.63 percentage points faster than traditional firms, and hybrid firms 5.28 points faster. Digital and hybrid firms did not differ significantly. In other words, the decisive step is moving beyond purely traditional marketing rather than choosing between digital-only and hybrid.

Figure 1. Mean sales growth by marketing technique
(error bars = 95% CI)



ANOVA B: Sales growth by business strategy (H4)

Table 10. Group statistics and ANOVA: sales growth by business strategy

Group	n	Mean (%)	SD
Cost leadership	71	15.91	3.93
Differentiation	77	18.33	5.42
Focus	52	17.29	3.38

$F(2, 197) = 5.49$, $p = .005$, $\eta^2 = .053$. Bonferroni: cost leadership vs differentiation, diff = −2.42, adj. p = .003 (significant); cost leadership vs focus, adj. p = .271; differentiation vs focus, adj. p = .583 (not significant).

Sales growth differed significantly across strategies, $F(2, 197) = 5.49$, $p = .005$, so H4 is rejected. The effect is small to medium ($\eta^2 = .053$). Post-hoc tests show that differentiators grew 2.42 percentage points faster than cost leaders ($p = .003$); focus firms did not differ significantly from either group.

4.4 Correlation and Regression Analysis

Table 11. Pearson correlation matrix (N = 200)

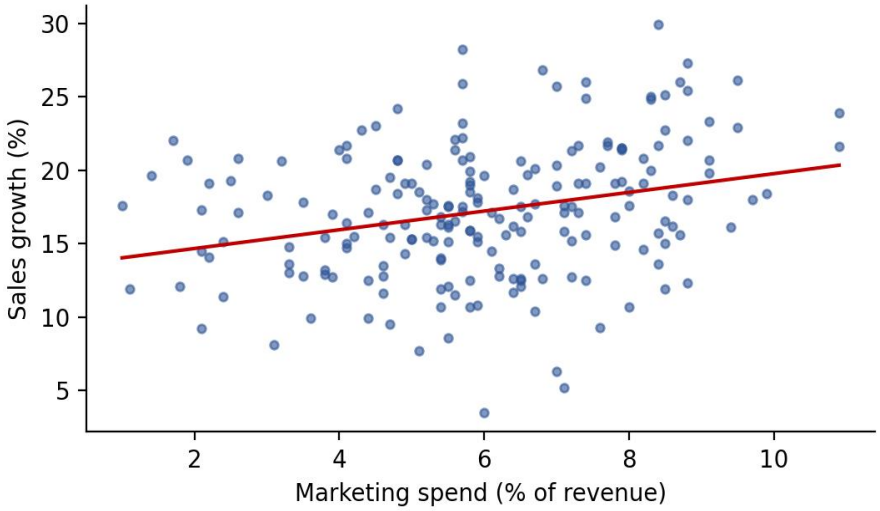
	Growth	Spend	Digital	Satisf.	Retention
Sales growth	1				
Marketing spend	.281	1			
Digital intensity	.400	−.012	1		
Satisfaction	.289	.284	.157	1	
Retention	.329	.073	.367	.588	1

With N = 200, $|r| \geq .14$ is significant at $p < .05$.

Model 1: Simple regression (H5)

Regressing sales growth on marketing spend gives: Sales Growth = 13.39 + 0.64 × Spend. The slope is positive and significant, t(198) = 4.12, p < .001, with r = .281 and R^2 = .079. Each additional percentage point of revenue devoted to marketing is associated with a 0.64-point increase in growth, but spending alone explains only 7.9% of the variation, so H5 is rejected yet spending is clearly not the whole story.

Figure 2. Marketing spend vs sales growth (y = 13.39 + 0.64x, R^2 = .079)



Model 2: Multiple regression (H6)

Table 12. Multiple regression results: dependent variable = sales growth (%)

Predictor	B	SE	t	p	95% CI	β
Intercept	4.736	1.721	2.75	.007	[1.34, 8.13]	–
Marketing spend	0.543	0.145	3.74	< .001	[0.26, 0.83]	.239
Digital intensity	0.872	0.143	6.08	< .001	[0.59, 1.16]	.378
Customer satisfaction	0.596	0.239	2.49	.013	[0.13, 1.07]	.162

R = .515, R^2 = .265, adjusted R^2 = .254, SE of estimate = 3.93, F(3, 196) = 23.59, p < .001.

The model is statistically significant, F(3, 196) = 23.59, p < .001, and explains 26.5% of the variance in sales growth (adjusted R^2 = .254), a medium-to-large effect. H6 is therefore rejected. The estimated equation is: Sales Growth = 4.74 + 0.54(Spend) + 0.87(Digital Intensity) + 0.60(Satisfaction). Holding the other predictors constant, a one-point rise in digital intensity is associated with 0.87 additional points of sales growth, a one-point rise in spend as a share of revenue with 0.54, and a one-point rise in satisfaction with 0.60. By standardised coefficients, digital marketing intensity (β = .38) is the strongest predictor, followed by marketing spend (β = .24) and customer satisfaction (β = .16). Note that the effect of spend falls from 0.64 in the simple model to 0.54 once the other predictors are included, because spend is correlated with satisfaction (r = .28).

4.5 Summary of Hypothesis Tests

Table 13. Summary of findings

Hypothesis	Test result	Decision
H1 Strategy × Technique	$\chi^2(4) = 10.10$, p = .039	Reject H0 – associated
H2 Strategy × Performance	$\chi^2(2) = 1.82$, p = .403	Fail to reject H0
H3 Growth by technique	F(2,197) = 26.58, p < .001	Reject H0 – differ
H4 Growth by strategy	F(2,197) = 5.49, p = .005	Reject H0 – differ
H5 Spend → growth	β = 0.64, p < .001	Reject H0 – positive effect
H6 Joint model	F(3,196) = 23.59, p < .001	Reject H0 – significant

5. Discussion

The first finding is that strategy and marketing technique are linked but not rigidly. Consistent with the argument that marketing should implement strategy (Kotler & Keller, 2016), differentiators leaned toward digital and hybrid techniques, which allow them to communicate distinctive value and build brand relationships, while cost leaders relied on traditional techniques more than expected. The modest effect size suggests that many firms choose techniques on grounds other than strategy, such as owner preference, customer profile or budget.

The second finding, and the most practically important, is that marketing technique matters for performance. Firms that use digital channels, alone or combined with traditional ones, grew markedly faster than traditional-only firms, and technique alone explained about one-fifth of the variation in growth. That digital and hybrid firms performed similarly implies that the benefit comes from digital capability such as targeting, measurement and engagement rather than from abandoning traditional media. This agrees with the view that digital tools extend the reach and precision of marketing (Chaffey & Ellis-Chadwick, 2019) and with the resource-based argument that capability, not merely spend, creates advantage (Barney, 1991; Day, 1994).

Third, differentiation was associated with higher growth than cost leadership, in line with Porter's (1980) argument that distinctive value supports stronger demand, although the effect was small and focus firms sat between the two. The non-significant chi-square test for strategy and performance category shows why analysts should prefer continuous outcomes where possible: categorising growth into high and low reduced the power to detect the same underlying pattern.

Fourth, the regression shows that performance is multi-causal. Marketing spend, digital intensity and customer satisfaction each contributed independently, and digital intensity was the strongest predictor. This suggests that how firms market (the capability and channel mix) is at least as important as how much they spend, and that satisfaction, an outcome of the entire customer experience (Lemon & Verhoef, 2016; Anderson et al., 1994), contributes to growth beyond promotional effort. About 73% of the variance remains unexplained, indicating that pricing, product quality, competition, macro conditions and management ability also matter.

6. Conclusions and Recommendations

6.1 Conclusions

- Business strategy and marketing technique are significantly, though modestly, associated.
- Marketing technique has a large, significant relationship with sales growth: digital and hybrid firms outperform traditional-only firms, and do not differ from each other.
- Differentiation is associated with higher growth than cost leadership.
- Marketing spend, digital intensity and customer satisfaction together explain about one-quarter of the variance in sales growth, with digital intensity the strongest predictor.

6.2 Managerial Recommendations

- **Align marketing with strategy.** Differentiators should invest in brand-building and content-led digital channels; cost leaders should use efficient, measurable low-cost channels; focus firms should exploit precise digital targeting.
- **Build digital capability.** Firms still relying only on traditional media should adopt digital channels, beginning with search, social media and e-mail, while keeping traditional media where it reaches target customers.
- **Invest sensibly, and measure.** Marketing spend is positively related to growth, but its effect is smaller than that of capability. Track return on spend by channel and reallocate to what works.
- **Prioritise customer satisfaction.** Improve service quality and use CRM data to raise satisfaction and retention, which support growth beyond promotion.
- **Support SMEs.** Policymakers and industry bodies can support SME digital skills training and low-cost tools.

6.3 Limitations

- The design is cross-sectional and correlational; causal claims are not warranted (firms that grow faster may also spend more on digital marketing).
- Strategy, technique and intensity are self-reported, which may introduce common-method and social-desirability bias.
- The sample covers four sectors and results may not generalise to large firms or other economies.
- The dataset used to illustrate the analysis is simulated and must be replaced with real survey data before conclusions are published.

6.4 Directions for Future Research

Future studies could use longitudinal or panel data, add moderators such as sector or firm size (two-way ANOVA or moderated regression), include additional controls such as firm age, pricing and competition, apply logistic regression to performance categories, and test mediation through customer satisfaction and retention using structural equation modelling.

References

Anderson, E. W., Fornell, C., & Lehmann, D. R. (1994). Customer satisfaction, market share, and profitability: Findings from Sweden. Journal of Marketing, 58(3), 53–66.

Barney, J. (1991). Firm resources and sustained competitive advantage. Journal of Management, 17(1), 99–120.

Chaffey, D., & Ellis-Chadwick, F. (2019). Digital marketing (7th ed.). Pearson.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Lawrence Erlbaum Associates.

Day, G. S. (1994). The capabilities of market-driven organizations. Journal of Marketing, 58(4), 37–52.

Fisher, R. A. (1925). Statistical methods for research workers. Oliver and Boyd.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage.

Kohli, A. K., & Jaworski, B. J. (1990). Market orientation: The construct, research propositions, and managerial implications. Journal of Marketing, 54(2), 1–18.

Kotler, P., & Keller, K. L. (2016). Marketing management (15th ed.). Pearson.

Kotler, P., Kartajaya, H., & Setiawan, I. (2017). Marketing 4.0: Moving from traditional to digital. Wiley.

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. Journal of Marketing, 80(6), 69–96.

Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. Journal of Marketing, 54(4), 20–35.

Pearson, K. (1900). On the criterion that a given system of deviations from the probable in the case of a correlated system of variables is such that it can be reasonably supposed to have arisen from random sampling. Philosophical Magazine, 50(302), 157–175.

Porter, M. E. (1980). Competitive strategy: Techniques for analyzing industries and competitors. Free Press.

Porter, M. E. (1985). Competitive advantage: Creating and sustaining superior performance. Free Press.

Reichheld, F. F. (1996). The loyalty effect: The hidden force behind growth, profits, and lasting value. Harvard Business School Press.

Note: verify page numbers and editions against your library or database before submission, and add any additional sources your institution requires.

Appendix A: Questionnaire (Summary)

- Section A – Firm profile: sector; firm size (Small/Medium); years in operation.
- Section B – Strategy and technique: Which best describes your dominant strategy? (Cost leadership / Differentiation / Focus). Which best describes your dominant marketing approach? (Traditional / Digital / Hybrid).
- Section C – Marketing inputs: marketing budget as % of annual revenue; digital channel usage index (1–10, multi-item composite); overall customer satisfaction (1–10).
- Section D – Performance: percentage of customers retained in the last 12 months; year-on-year sales growth (%).

Appendix B: Replicating the Analysis in Excel

- **Chi-square:** Build the observed table with =COUNTIFS(strategy_range, row_label, technique_range, column_label). Expected = row total × column total / N. Then p-value =CHITEST(observed_range, expected_range), critical value =CHIINV(0.05, df).
- **ANOVA:** Either use Data > Data Analysis > ANOVA: Single Factor (after arranging each group's values in a column), or the formula approach in the workbook: SS between = SUMPRODUCT(n, (group mean − grand mean)^2); SS within = sum of squared deviations within each group; F = MS between / MS within; p =FDIST(F, df1, df2).
- **Regression:** Use Data > Data Analysis > Regression with the Sales Growth column as Input Y Range and the three predictor columns (adjacent) as Input X Range, or =LINEST(y_range, x_range, TRUE, TRUE). If the Data Analysis command is missing, enable it via File > Options > Add-ins > Analysis ToolPak.

- **Workbook:** Business_Strategies_Marketing_Analysis.xlsx contains the Data, Descriptives, ChiSquare, ANOVA and Regression sheets with all formulas live.