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Research Article

Social Media Marketing and Promotional Cost Efficiency: Evidence from Selected Indian Two-Wheeler Companies

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Abstract

India's rapidly evolving digital economy has transformed the way businesses communicate with consumers, manage promotional activities and evaluate marketing performance. The growing use of social media, mobile internet and data-driven communication has created new opportunities for automotive companies to strengthen brand visibility, engage potential customers and support purchase decisions. However, increased digital engagement does not necessarily translate into lower promotional costs or improved business performance. In this context, the present study proposes to examine the relationship between social-media marketing capability and promotional cost efficiency among Hero MotoCorp, TVS Motor Company and Bajaj Auto, with particular reference to consumers in Indore district, Madhya Pradesh. The study adopts a quantitative, explanatory research design, targeting approximately 500 respondents, supplemented by verified company disclosures and campaign-level data wherever available. Its theoretical foundation integrates the Resource-Based View, Dynamic Capabilities Theory, Integrated Marketing Communications and consumer brand-engagement literature. Social-media marketing capability is conceptualised through content relevance, audience targeting, consumer interaction, cross-channel coordination, analytics and campaign optimisation. Consumer engagement is proposed as a mediating variable, while analytics capability is examined as a potential moderator of the relationship between marketing capability and promotional efficiency. Purchase intention and perceived marketing performance are considered downstream outcomes. A central methodological distinction is maintained between consumer-perceived promotional efficiency and objective efficiency indicators, such as cost per qualified lead and customer acquisition cost, which require comparable expenditure and outcome data. The proposed analysis will examine relationships among the study variables and compare the selected brands where sample adequacy and measurement equivalence permit. As primary data collection and statistical analysis have not yet been completed, the hypotheses remain untested and no empirical findings or company rankings are claimed. The study is expected to contribute to the understanding of digital marketing productivity in India's two-wheeler industry by developing a measurement-oriented framework that connects consumer engagement with the economic evaluation of promotional activities. Its conclusions will depend on data quality, construct validity, sampling adequacy and the availability of comparable campaign-level evidence.

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KEYWORDS: social-media marketing capability; promotional cost efficiency; marketing productivity; consumer engagement; analytics capability; dynamic capabilities; two-wheeler industry; Indore; India.

1. INTRODUCTION

The expansion of social platforms has altered not only the channels through which organisations communicate but also the ways in which promotional activity can be observed, evaluated and governed. Digital communication can combine paid exposure, owned content, consumer-generated discussion and direct interaction in a shared environment. It can also shorten the interval between campaign execution and feedback. These properties create the possibility of more granular targeting and faster optimisation, but they do not guarantee that resources are used productively. Digital activity can generate substantial impressions and interaction while producing few qualified enquiries or incremental purchases; conversely, a campaign with modest visible engagement may reach a narrowly defined audience with high commercial relevance.

This distinction is particularly important in the two-wheeler market. A vehicle purchase is generally a consequential, multi-stage decision shaped by price, mileage, product design, reliability, service infrastructure, financing, resale expectations, family preferences and peer recommendations. Social media may contribute to awareness, information search and brand consideration, but the purchase pathway can also include dealer conversations, test rides, offline advertising and previous brand experience. Any account of marketing performance must therefore avoid attributing the entire outcome to a single digital touchpoint without a defensible attribution design.

The proposed study focuses on Hero MotoCorp, TVS Motor Company and Bajaj Auto, using Indore district as its empirical setting. Its central concern is the relationship between social-media marketing capability and promotional cost efficiency. Three concepts are analytically separated. Promotional expenditure is an input; promotional cost efficiency expresses the relationship between that input and a defined output; and organisational performance includes broader outcomes such as sales, customer acquisition, brand strength and profitability. The distinction is essential because lower expenditure can coexist with lower efficiency, while higher expenditure can be justified if it generates proportionately greater valuable outcomes.

The manuscript is designed as a doctoral-level research protocol rather than a report of completed fieldwork. Its contribution is to specify a coherent theoretical mechanism, clarify the levels of analysis, establish measurement rules and identify the evidence required to test the model. All hypotheses remain provisional until empirical analysis is completed.

2. Context, Scope and Unit of Analysis

2.1 Industry and regional context

The selected firms operate in a competitive two-wheeler market in which product portfolios, dealer networks, brand positioning and consumer information needs may differ. Indore district provides a bounded regional setting in which consumer exposure to digital brand communication can be examined. It should not be treated as representative of all of Madhya Pradesh or India without an appropriate sampling and external-validity argument.

2.2 Scope of the inquiry

The consumer component examines respondents' exposure to, perceptions of and responses to social-media communication associated with the selected brands. The organisational component seeks verified company- or campaign-level information on expenditure and outcomes where available. These components are complementary but not interchangeable: an individual consumer cannot reliably estimate a company's campaign budget, and an aggregate company metric cannot explain every individual's purchase intention.

2.3 Units of analysis

The primary survey unit is the individual respondent. Objective efficiency measures are calculated at the campaign, brand-period or organisational level, depending on the granularity of the source data. The analysis must not merge individual-level perceptions and firm-level ratios as though they were observations at the same level. If the objective data are insufficient, the study should retain perceived promotional efficiency as a separate consumer-level construct and explicitly limit claims about actual cost efficiency.

3. Research Problem and Questions of Inference

The research problem arises from a mismatch between the availability of digital activity metrics and the evidence needed to evaluate economic productivity. Reach, impressions, views, likes, shares and comments measure different forms of exposure or response; none independently demonstrates cost efficiency, incremental sales or profitability. A robust evaluation requires a defined outcome, a consistent cost boundary, a relevant time period and an attribution rule.

A further difficulty concerns causal inference. Consumers are exposed to multiple promotional channels and may already prefer a brand before encountering a social-media post. Cross-sectional self-reports can identify associations but cannot, by themselves, establish that social-media capability caused a purchase or reduced company expenditure. The present study therefore frames its principal hypotheses as associations unless the eventual design includes temporal, experimental or quasi-experimental evidence capable of supporting stronger causal claims.

3.1 Research questions

1. To what extent are the dimensions of social-media marketing capability associated with consumer engagement and perceived promotional efficiency?
2. Is consumer engagement a plausible intervening mechanism between perceived social-media marketing capability and perceived promotional efficiency?
3. Does analytics capability strengthen the association between social-media marketing capability and efficiency?
4. How are perceived promotional efficiency and engagement associated with purchase intention and perceived marketing performance?
5. Do construct levels or structural relationships differ across the three selected brand groups?

6. To what extent can consumer-perception evidence be triangulated with comparable company- or campaign-level indicators?

4. Research Gap and Originality

1. Conceptual separation: social-media activity, promotional expenditure, promotional efficiency and organisational performance are often discussed together, although they represent different constructs and levels of analysis.
2. Resource productivity: engagement metrics are frequently reported without a transparent denominator showing the promotional resources required to generate them.
3. Mechanism specification: the role of engagement as a potential pathway between capability and efficiency, and the contingent role of analytics, require explicit testing.
4. Contextual contribution: a comparative study of three major two-wheeler brands within a defined regional consumer setting can add context-specific evidence, provided sampling and measurement limits are acknowledged.
5. Multi-source measurement: combining consumer perceptions with verified company or campaign records can reduce reliance on a single data source, but only if the measures are aligned and not conflated.

The proposed originality is therefore integrative and measurement-oriented rather than a claim that social-media marketing or efficiency has not previously been studied. The final literature review should verify the novelty claim through a reproducible search strategy, explicit inclusion criteria and synthesis of recent as well as foundational studies.

5. LITERATURE REVIEW AND CRITICAL SYNTHESIS

5.1 Resource-Based View

Wernerfelt (1984) and Barney (1991) frame firm resources and capabilities as potential sources of competitive advantage. In this context, access to social platforms is unlikely to be rare, since competitors can use the same infrastructures. More plausible differentiators include accumulated audience knowledge, creative routines, response quality, analytics competence, integration with sales and dealer operations, and the ability to convert campaign feedback into organisational learning. RBV thus supports a capability-centred rather than platform-presence-centred model.

5.2 Dynamic capabilities

Teece, Pisano and Shuen (1997) distinguish ordinary resource deployment from the higher-order ability to sense changes, seize opportunities and reconfigure resources. Digital promotional environments are dynamic because audience preferences, formats, platform algorithms and campaign costs change. A firm may possess analytics tools but lack routines for acting on their outputs; the construct should therefore capture interpretation and adaptation, not technology ownership alone.

5.3 Social-media marketing activities

Kim and Ko (2012) examined social-media marketing activities and their relationships with customer equity and purchase intention in a luxury-fashion setting. Their dimensions—including entertainment, interaction, trendiness, customisation and word of mouth—provide a useful starting point for consumer-facing measurement. However, product category and decision complexity matter. Two-wheeler consumers may place greater emphasis on specifications, mileage, service, safety and financing information. Items should be adapted through expert review and pilot testing rather than assumed to transfer unchanged.

5.4 Organisational use and performance

Parveen, Jaafar and Ainin (2015) examined social-media use and organisational performance through interviews with managers, discussing applications such as promotion, branding, information search and customer relations. Ainin et al. (2015) studied factors influencing social-media use among SMEs and related performance outcomes. This work motivates examination of cost effectiveness, interactivity and organisational use, but it should not be read as proof that social media reduces costs in every sector or company. Different organisational scale, industry structure and outcome definitions limit direct generalisation.

5.5 Engagement and social CRM

Hollebeek, Glynn and Brodie (2014) conceptualised and validated consumer brand engagement in social media. Trainor et al. (2014) examined social-media technology use and customer-relationship performance through a capabilities-based social CRM perspective. Together, these studies support a model in which technology becomes valuable through customer-centred routines and engagement. Engagement should nevertheless be treated as a theoretically plausible mediator, not as an automatic synonym for commercial success.

5.6 Measurement and methodological implications

Yadav and Rahman (2017) developed a measure of consumer perceptions of social-media marketing activities in e-commerce. Their work highlights the need for construct-specific scale development and validation. For the current study, a critical distinction is required between perceptual survey items and objective cost ratios. The former capture consumer assessments; the latter require verified expenditure and outcome records. Using consumer perceptions to infer actual company costs would produce a construct-validity problem.

5.7 Synthesis

The literature supports three propositions: capabilities matter more than simple platform presence; engagement may be a mechanism linking activity to consumer outcomes; and efficiency requires explicit measurement of outputs relative to resources. The proposed study integrates these propositions

while retaining caution about causality, cross-industry transfer and the limits of publicly available company data.

6. THEORETICAL FRAMEWORK

6.1 Integrated theoretical logic

The Resource-Based View explains why firm-specific knowledge and routines may differentiate performance. Dynamic Capabilities Theory explains how these resources are adjusted in response to changing digital environments. Integrated Marketing Communications provides a channel-coordination perspective, while social-media marketing and brand-engagement research inform the consumer-facing portion

of the model. These perspectives operate at different but complementary levels; they should not be treated as interchangeable theories.

6.2 Conceptual model

Social-media marketing capability → campaign reach and consumer engagement → promotional cost efficiency → purchase intention / perceived marketing performance
Analytics capability is proposed to moderate the capability–efficiency association. Brand group is included for comparative analysis. The diagram expresses proposed relationships rather than established findings.

Construct	Analytical role	Proposed dimensions / indicators
Social-media marketing capability (SMMC)	Explanatory construct	Content usefulness, interaction, targeting, customisation, coordination, analytics use and optimisation
Consumer engagement (ENG)	Potential mediator	Attention, cognitive involvement, interaction, sharing, information search and enquiry
Analytics capability (ANALYTICS)	Potential moderator	Measurement routines, segmentation, testing, attribution discipline and evidence-based reallocation
Promotional cost efficiency (PCE)	Focal outcome	Objective cost ratios where available; perceptual efficiency kept distinct
Purchase intention (PI)	Downstream outcome	Consideration, information-seeking, enquiry and stated likelihood of purchase
Perceived marketing performance (PERF)	Downstream outcome	Perceived awareness, responsiveness, relationship outcomes and usefulness
Brand group	Grouping variable	Hero MotoCorp, TVS Motor Company and Bajaj Auto

7. RESEARCH OBJECTIVES

1. To develop a theoretically grounded operationalisation of social-media marketing capability relevant to the two-wheeler sector.
2. To examine associations between social-media marketing capability, consumer engagement and perceived promotional cost efficiency among respondents in Indore district.
3. To test whether consumer engagement statistically mediates the relationship between capability and perceived efficiency.
4. To test whether analytics capability moderates the relationship between capability and efficiency.
5. To examine the relationship of perceived efficiency with purchase intention and perceived marketing performance.
6. To compare the selected brand groups where sample size, measurement equivalence and data quality permit.
7. To triangulate consumer-level results with verified company- or campaign-level evidence where comparable records are accessible.
8. To formulate evidence-based recommendations for campaign governance and performance measurement.

Hypotheses

Code	Hypothesis
H1	Social-media marketing capability is positively associated with consumer engagement.
H2	Consumer engagement is positively associated with perceived promotional cost efficiency.
H3	Social-media marketing capability is positively associated with perceived promotional cost efficiency.
H4	Analytics capability positively moderates the association between social-media marketing capability and promotional cost efficiency.
H5	Consumer engagement statistically mediates the association between social-media marketing capability and perceived promotional cost efficiency.
H6	Perceived promotional cost efficiency is positively associated with purchase intention.
H7	Perceived promotional cost efficiency is positively associated with perceived marketing performance.
H8	Selected construct means or structural associations differ across the three brand groups, subject to measurement equivalence and adequate subgroup sizes.

The hypotheses are directional where theory supports a direction, but the analysis should report effect estimates and uncertainty rather than treating statistical significance as the sole criterion of theoretical importance.

9. RESEARCH METHODOLOGY

9.1 Design

An explanatory, multi-source design is proposed. The main quantitative component is a structured survey of approximately 500 eligible respondents. A secondary-data component will examine official company disclosures and campaign-level records where accessible. If interviews are added, they should be treated as a defined qualitative component with an interview protocol, purposive sampling rationale, coding method and

integration plan. The design is mixed-method only if qualitative evidence is actually collected and systematically analysed.

9.2 Population and eligibility

The target population comprises adults in Indore district who use social media and have encountered, or have sufficient awareness of, at least one selected brand. Screening should distinguish current owners, recent purchasers, prospective buyers and respondents with no current purchase plans. Questions about a specific brand should be asked only when respondents have enough exposure to judge it.

9.3 Sample size and sampling

The proposed target is 500 valid responses. The final sample-size rationale should consider model complexity, expected effect sizes, desired statistical power, missingness and planned brand-group comparisons. Stratified random sampling is defensible only where an adequate sampling frame supports genuine random selection within strata. Recruitment through online links, dealer networks or open social-media posts should instead be described as non-probability sampling, with its selection limitations stated.

9.4 Data collection protocol

1. Obtain institutional approval where required and use a clear informed-consent statement.

2. Conduct a pilot with approximately 30–50 respondents to assess comprehension, burden and preliminary measurement performance.
3. Use neutral, single-concept items and provide a 'not sure / unable to judge' response where consumers cannot reasonably evaluate a company capability.
4. Record recruitment channel, eligibility screening, dates, completion counts, exclusions and the final usable sample.
5. Collect official secondary data with source title, reporting period, page number or stable URL and definitions of every metric.

9.5 Pilot study

The pilot should evaluate item clarity, response distributions, missingness, completion time and preliminary reliability. Changes made after the pilot should be documented. Pilot cases should not be pooled into the main sample if the instrument or administration protocol changes materially.

9.6 Data-source alignment

Campaign-level ratios should be calculated only where expenditure and outcomes align in time, channel, campaign and attribution window. If only annual advertising expenditure is available but social-media outcomes are not, the data cannot support a social-media-specific cost-per-lead calculation. Missing company-level data should be recorded as unavailable rather than imputed without a defensible model.

10. Measurement and Operationalisation

Variable	Definition	Measurement strategy
SMMC	Perceived quality and capability of brand social-media communication	Multi-item Likert scale; consumer-perceived, not a direct audit of company operations
ENG	Consumer attention and behavioural involvement	Multi-item scale; platform metrics reported separately if verified
ANALYTICS	Capacity to measure, interpret and optimise campaigns	Consumer perceptions labelled as perceptions; objective capability requires managerial/documentary evidence
PCE	Meaningful promotional output relative to promotional resources	Objective ratios from comparable campaign records; perceptual scale reported separately
PI	Stated likelihood of considering or enquiring about the brand	Multi-item Likert scale
PERF	Perceived communication and relationship outcomes	Multi-item Likert scale; not equivalent to audited company performance

10.1 Objective efficiency indicators

Metric	Formula	Conditions for interpretation
CPM	$\text{Eligible expenditure} \div \text{impressions} \times 1,000$	Consistent impressions definition, channel and period required.
CPE	$\text{Eligible expenditure} \div \text{meaningful engagements}$	Specify which actions count as meaningful engagement.
CPL	$\text{Eligible expenditure} \div \text{qualified leads}$	Define qualified lead and remove duplicates.
CAC	$\text{Attributable marketing and sales expenditure} \div \text{new customers acquired}$	Requires transparent cost boundary, attribution window and customer definition.
Conversion efficiency	$\text{Attributed conversions} \div \text{eligible expenditure}$	State units and attribution rules; do not confuse with cost per conversion.
Engagement efficiency	$\text{Meaningful engagements} \div \text{eligible expenditure}$	An activity productivity measure, not proof of sales or profit.

If a composite index is used, the researcher should justify indicator selection, direction, standardisation and weighting.

Sensitivity analyses should examine whether conclusions change under alternative reasonable specifications. Objective

and perceptual efficiency scores should not be combined automatically.

11. Proposed Questionnaire

Scale for Sections B–E: 1 = Strongly disagree; 2 = Disagree; 3 = Neither agree nor disagree; 4 = Agree; 5 = Strongly agree. A separate 'not sure / unable to judge' option should be available where appropriate and should not be coded as the neutral midpoint.

Section A: Respondent profile and brand exposure

1. Age group, gender (including prefer not to say), education and occupation.
2. Current two-wheeler ownership and current brand, if applicable.
3. Purchase status: recent purchaser, current owner, prospective buyer or not currently considering a purchase.
4. Frequency of social-media use and main platforms used.
5. Selected brand encountered and approximate recency of exposure.
6. Brand most likely to be considered for the next purchase, if any.

Section B: Social-media marketing capability as perceived by consumers

1. The selected brand provides useful product information through social media.
2. The brand's content is relevant to my information needs.
3. The brand explains product features and offers clearly.
4. The brand interacts with consumers through social media.
5. The brand responds helpfully to questions or comments.
6. The brand updates its content regularly.
7. The brand's communication is reasonably consistent across the platforms I use.
8. The brand's content helps me compare models or features.
9. The content is relevant to consumers with needs similar to mine.
10. The brand communicates information that supports informed consideration.

Section C: Engagement

1. I pay attention when I encounter the selected brand's social-media content.
2. I spend time viewing or reading the brand's content.
3. I sometimes react to, comment on, save or share the brand's content.
4. I discuss useful brand content with other people.
5. After seeing the content, I sometimes search for additional information.
6. The content increases my involvement with the brand.

Section D: Perceived promotional efficiency

1. The brand's social-media communication appears relevant to its intended audience.
2. Useful digital information can reduce the effort needed to compare products.

3. Social-media communication allows consumers to access product information conveniently.
4. Timely digital responses can help consumers resolve questions efficiently.
5. The brand's digital communication provides useful information relative to the effort required to access it.
6. Social media can complement other promotional channels by making information easier to obtain.

These items measure perceived usefulness and efficiency from the consumer perspective. They do not measure actual company costs. The scale should be piloted and its construct validity established before it is used as a research outcome.

Section E: Purchase intention and perceived outcomes

1. Useful social-media information increases my willingness to consider the brand.
2. I am more likely to seek further information after encountering useful content.
3. Social-media information can influence the brands I shortlist.
4. The brand's content improves my awareness of models and features.
5. I would share product information that I consider useful and credible.
6. Social-media information can support my purchase decision, although it is not the only influence.

Section F: Open-ended item

What changes would make two-wheeler companies' social-media communication more useful, credible or relevant to consumers?

12. Data Analysis Strategy

12.1 Data screening and descriptive analysis

Document missingness, duplicate handling, response quality, exclusions, coding and outlier decisions before hypothesis testing. Report categorical distributions and scale means and standard deviations as appropriate. The data-cleaning protocol should be defined before examining whether results support the hypotheses, reducing the risk of outcome-driven decisions.

12.2 Reliability and construct validity

Content validity should be supported through literature review, expert assessment and pilot feedback. Internal consistency may be assessed using Cronbach's alpha and/or composite reliability, alongside item diagnostics. Exploratory factor analysis is appropriate where the structure is not established; confirmatory factor analysis is appropriate for a specified measurement model. Convergent and discriminant validity should be assessed under the chosen method. For brand comparisons, measurement invariance or an appropriate equivalence assessment should precede comparisons of latent means or paths.

12.3 Regression and mediation

A baseline model may estimate the association between social-media marketing capability and perceived efficiency while controlling for theoretically justified respondent characteristics: $PCE_i = \beta_0 + \beta_1 SMMC_i + \beta_2 Controls_i + \varepsilon_i$

The proposed indirect pathway $SMMC \rightarrow ENG \rightarrow PCE$ can be evaluated using bootstrap confidence intervals. A statistically significant indirect effect is evidence consistent with the specified mediation pattern, but cross-sectional data do not establish temporal order or causal mediation.

12.4 Moderation

Moderation can be tested with an interaction term between SMMC and analytics capability. The analysis should inspect multicollinearity, centre or standardise predictors where justified, and interpret significant interactions through predicted values or simple slopes rather than relying solely on the interaction p-value.

$PCE_i = \beta_0 + \beta_1 SMMC_i + \beta_2 ANALYTICS_i + \beta_3 (SMMC_i \times ANALYTICS_i) + \beta_4 Controls_i + \varepsilon_i$

12.5 Group comparison and SEM

13. Comparative Company Analysis

Dimension	Hero MotoCorp	TVS Motor Company	Bajaj Auto
Consumer-perceived capability	Estimate from valid survey responses	Estimate from valid survey responses	Estimate from valid survey responses
Engagement	Estimate from valid survey responses	Estimate from valid survey responses	Estimate from valid survey responses
Perceived efficiency	Estimate from valid survey responses	Estimate from valid survey responses	Estimate from valid survey responses
Purchase intention	Estimate from valid survey responses	Estimate from valid survey responses	Estimate from valid survey responses
Objective campaign efficiency	Only if comparable verified records are available	Only if comparable verified records are available	Only if comparable verified records are available
Company-level context	Official, cited reporting	Official, cited reporting	Official, cited reporting

This is an analysis template, not an empirical ranking. Comparisons should account for unequal brand exposure, differences in respondent familiarity and the possibility that

ANOVA may compare observed scale scores across brands if independence, residual and variance assumptions are adequately addressed; robust alternatives should be considered when assumptions are violated. Chi-square analysis may test categorical associations when expected-frequency requirements are satisfied. SEM can estimate measurement and structural models jointly; PLS-SEM should be chosen only where its prediction-oriented rationale fits the question and measurement design. The report should state estimator, missing-data procedure, model diagnostics, effect sizes and confidence intervals.

12.6 multi-source triangulation

Survey results and objective campaign ratios should first be analysed at their appropriate levels. Triangulation can then compare whether consumer-perceived patterns are consistent with verified company-level evidence. If objective data are sparse or non-comparable, the limitation should be reported rather than concealing it through aggregation or proxy substitution.

consumers who already prefer a brand evaluate its content more favourably.

14. Secondary-Data Protocol

Field	Required recording rule
Company and period	Company, financial year, campaign dates and reporting period
Expenditure	Exact accounting category, included costs and whether paid social media is separately disclosed
Reach / impressions	Platform, metric definition and reporting window
Engagement	Actions included, counting rules and whether paid/organic results are separated
Leads / conversions	Qualification rules, deduplication and attribution window
Sales / volume	Official company or industry source and matching time period
Source trail	Document title, publisher, publication date, page or stable URL
Comparability	Metric changes, missing fields, currency and accounting differences

Annual advertising expenditure should not be treated as social-media expenditure unless the source explicitly supports that interpretation. A company may disclose a broad expense category that combines multiple channels; allocating that total to social media without evidence would create a misleading estimate.

15. Validity Threats, Bias and Robustness

15.1 Common-method variance

Collecting predictor and outcome measures from the same respondent at one time creates potential common-method variance. Procedural safeguards include anonymity, neutral wording, separation of sections, and reducing evaluation

apprehension. Statistical checks may be informative but cannot conclusively prove that common-method bias is absent.

15.2 Selection and non-response bias

Respondents recruited online may be more digitally engaged than the wider population. Compare early and late respondents where feasible, document recruitment channels and describe the limits of the sampling frame. Do not claim district-level representativeness unless the design supports it.

15.3 Endogeneity and reverse direction

Brand preference may influence both exposure to brand content and evaluation of its usefulness. Purchase intention may also motivate information search rather than result from it. Include prior brand familiarity and ownership status where theoretically appropriate, test alternative specifications and avoid causal language when temporal or exogenous variation is unavailable.

15.4 Robustness

Where feasible, test alternative scale specifications, compare results with and without influential observations under pre-specified rules, and assess whether conclusions depend on a particular operational definition. Report all meaningful departures from the original analysis plan.

16. Ethical Considerations

1. Obtain informed consent and any required institutional ethics approval.
2. Make participation voluntary and explain the right to discontinue.
3. Collect only data necessary to answer the research questions.
4. Protect confidentiality and store records securely.
5. Use official company information and scholarly sources accurately.
6. Do not fabricate observations, manipulate analyses or suppress results that contradict expectations.
7. Report null and unexpected findings and disclose material limitations.
8. Retain an auditable record of data cleaning, variable construction and analytical decisions.

17. Expected Contributions and Implications

17.1 Theoretical contribution

The study can contribute by treating promotional cost efficiency as a distinct outcome, integrating resource and adaptation perspectives with consumer engagement, and making explicit the boundary between perceived and objective measures. Its value will depend on whether the empirical analysis demonstrates construct validity and whether the data permit a defensible test of the proposed mechanisms.

17.2 Methodological contribution

The proposed multi-source design provides a protocol for aligning individual-level perceptions with company- or

campaign-level records without treating them as interchangeable. It also makes sampling assumptions, attribution limits and measurement decisions explicit.

17.3 Managerial implications

1. Use cost-per-outcome metrics where the underlying expenditure and outcomes are traceable.
2. Do not treat followers, impressions or likes as sufficient evidence of commercial effectiveness.
3. Integrate analytics with decisions about targeting, content revision and budget allocation.
4. Coordinate digital communication with dealer enquiries, test rides and offline promotion.
5. Define qualified leads, conversions and attribution windows before campaign comparisons.
6. Use consumer feedback as structured intelligence while protecting customer privacy.

18. Limitations

1. Indore district is a bounded regional setting and cannot automatically represent other markets.
2. Cross-sectional survey data are limited for causal inference.
3. Self-reported perceptions may be influenced by prior brand preference and recall error.
4. Publicly available company disclosures may not provide comparable social-media expenditure or conversion data.
5. Purchases are influenced by multiple digital and offline touchpoints, making single-channel attribution difficult.
6. Platform metrics and reporting conventions may change over time.
7. Three selected companies do not represent the entire automobile sector.
8. True stratified random sampling depends on access to a suitable sampling frame and actual random selection.

19. CONCLUSION

The present study proposes an examination of the relationship between social-media marketing capability and promotional cost efficiency among Hero MotoCorp, TVS Motor Company and Bajaj Auto, with particular reference to consumers in Indore district, Madhya Pradesh. The relevance of this investigation has increased with the expansion of India's digital advertising ecosystem during 2023–2025. According to the FICCI–EY industry report, digital advertising grew by 15% in 2023 and by 17% in 2024, reaching approximately ₹700 billion in 2024 (FICCI–EY, 2024; FICCI–EY, 2025). These developments demonstrate the growing importance of digital channels in India's promotional environment, while also highlighting the need to evaluate whether increased digital expenditure generates meaningful consumer and commercial outcomes. [Source: FICCI–EY, 2024](#); [Source: FICCI–EY, 2025](#). The central argument of this research is that social-media presence and visible consumer engagement should not be treated as sufficient evidence of marketing productivity. Promotional cost efficiency requires a systematic relationship

between clearly defined inputs and measurable outputs, supported by transparent expenditure categories, consistent reporting periods and defensible attribution procedures. For two-wheeler companies, the evaluation must also recognise that purchase decisions are influenced by product characteristics, affordability, dealer interactions, after-sales service, brand reputation and competing promotional channels. Consequently, digital marketing performance should be examined within the broader consumer decision-making process rather than in isolation.

The proposed theoretical framework integrates the Resource-Based View, Dynamic Capabilities Theory, Integrated Marketing Communications and consumer brand-engagement research. This integration provides a basis for examining how content relevance, audience targeting, interaction management, cross-channel coordination and analytical decision-making may contribute to consumer engagement and perceived promotional efficiency. The methodology proposes a survey of approximately 500 respondents, supported by official company disclosures and comparable campaign-level records wherever accessible. An essential methodological distinction is maintained between consumer-perceived efficiency and objective indicators, including cost per qualified lead and customer acquisition cost. These measures cannot be treated as equivalent because consumer perceptions do not directly establish a company's actual promotional expenditure or financial returns.

The period from 2023 to 2025 provides a relevant context for investigating these relationships, but industry-wide digital advertising growth does not, by itself, establish the efficiency of social-media campaigns conducted by the three selected companies. Similarly, differences in consumer engagement cannot automatically be interpreted as differences in sales performance or profitability. The proposed hypotheses therefore remain subject to empirical testing, and no comparative ranking or causal conclusion can be justified before the collection and analysis of appropriate data.

The study is expected to contribute to research on digital marketing productivity in India by developing a measurement-oriented framework that connects organisational marketing capabilities with consumer responses and the economic evaluation of promotional activities. Its practical relevance lies in encouraging evidence-based campaign planning, clearer performance indicators, improved coordination between digital communication and dealer networks, and more accountable allocation of promotional resources. Ultimately, the validity of its conclusions will depend on reliable measurement, defensible sampling, transparent statistical analysis and the availability of comparable campaign-level evidence. By maintaining these standards, the research can provide a useful foundation for understanding the conditions under which social-media marketing may contribute to promotional efficiency in India's competitive two-wheeler industry.

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Appendix A: Final Pre-Analysis Checklist

1. Complete and document the literature search and confirm bibliographic details.
2. Obtain any required ethics approval and consent materials.
3. Pilot the questionnaire and document all changes.
4. Confirm whether the sampling method is probability-based or non-probability-based.
5. Predefine screening, exclusion, missing-data and scale-scoring rules.
6. Verify company-level numerical claims against official sources.
7. Keep perceived and objective efficiency measures separate.
8. Report effect sizes, confidence intervals and limitations alongside p-values.
9. Do not report hypothesis results before the actual data are analysed.
10. Use the citation style required by the university or target journal.