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Agile Marketing as a Mediator Between Entrepreneurial Orientation and the Effectiveness of MSME Digital Marketing in Tarakan City

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Abstract

This study investigates the mediating role of agile marketing in the relationship between entrepreneurial orientation (EO) and digital marketing effectiveness among Micro, Small, and Medium Enterprises (MSMEs) in Tarakan City, Indonesia. In today's competitive and rapidly evolving digital economy, MSMEs require marketing strategies that are both flexible and responsive to dynamic market conditions. Drawing on a quantitative design, data were collected from 150 MSME actors actively engaged in digital marketing and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The findings reveal that EO exerts a significant positive influence on digital marketing effectiveness and that agile marketing partially mediates this relationship. These results highlight the importance of adaptive capabilities in translating entrepreneurial intent into measurable marketing outcomes. The study contributes to entrepreneurship and marketing scholarship by positioning agile marketing as a dynamic capability that enables MSMEs to convert entrepreneurial orientation into sustainable digital performance, with particular relevance for geographically constrained island economies such as Tarakan.

Keywords: Entrepreneurial Orientation; Agile Marketing; Digital Marketing; MSMEs; Tarakan City; PLS-SEM.



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敏捷营销作为创业导向与塔拉坎市中小微企业数字营销有效性之间的中介

摘要

本研究探讨了敏捷营销在创业导向 (EO) 与中小微企业 (MSMEs) 数字营销有效性之间的中介作用。面对竞争激烈且快速演变的数字经济环境, 中小微企业需要具备灵活且能迅速响应市场动态的营销策略。本文采用定量研究设计, 收集了150名积极参与数字营销活动的MSME经营者的数据, 并使用偏最小二乘结构方程模型 (PLS-SEM) 进行分析。研究结果显示, 创业导向对数字营销有效性具有显著的正向影响, 且敏捷营销在二者关系中发挥部分中介作用。这一发现强调了适应性能力在将创业意图转化为可衡量的营销成果中的重要性。本研究通过将敏捷营销定位为一种动态能力, 揭示了其如何帮助MSMEs将创业导向转化为可持续的数字化绩效, 并对塔拉坎等地理受限的岛屿经济体具有特殊意义。

关键词: 创业导向; 敏捷营销; 数字营销; 中小微企业; 塔拉坎市; PLS-SEM

1. Introduction

Digital globalization and shifting consumer behavior compel firms especially MSMEs in island regions such as Tarakan City to adopt adaptive, data-driven marketing strategies under geographic and resource constraints. Entrepreneurial orientation (EO) is widely recognized as a driver of superior market and innovation outcomes [20,5,22]. Yet in today's high-uncertainty, high-velocity markets, EO often requires a complementary managerial system able to translate entrepreneurial intent into rapid, evidence-based execution namely agile marketing, which emphasizes iterative testing, short cycles, and data-informed adjustments [8,31,7].

This study investigates whether agile marketing mediates the relationship between EO and digital marketing effectiveness among MSMEs in Tarakan City, Indonesia.

Seminal studies conceptualize EO as a firm's strategic proclivity toward innovativeness, proactiveness, and risk-taking, with later extensions adding autonomy and competitive aggressiveness [20,22]. Meta-analyses and conceptual models associate EO with growth, profitability, and innovative outcomes, including marketing performance [5,28]. Within the resource-based view (RBV) and dynamic capabilities perspectives, EO is regarded as a source of opportunity sensitivity and strategic repositioning in response to environmental shocks [34,10].

However, empirical findings remain inconsistent. First, the strength and even the direction of EO effects vary across contexts and firm life-cycle stages [28,39]. Second, many studies emphasize that EO's impact is indirect, mediated by functional capabilities such as innovation, marketing, and organizational learning [16,38,37]. Third, the operationalization of EO differs (three- vs. five-dimensional models), reducing comparability and partially explaining divergent effect sizes [20,28]. Taken together, EO appears to be a necessary but often insufficient condition for sustainable marketing outcomes.

Agile marketing translates agile development principles into marketing practice: short cycles, rapid experimentation, cross-functional collaboration, and real-time, data-driven decisions [31,8]. Agile marketing represents sensing–seizing–transforming routines that enable firms to learn quickly from markets and adjust tactics flexibly [2,7]. Strategy often mediates resource–performance links [9]; by this logic, agile marketing operationalizes EO into executable actions (e.g., targeting, content iteration, budget reallocation) under platform turbulence [7,2,31]. Research on social CRM and “organizing for marketing excellence” emphasizes that executional capabilities rather than the mere possession of technologies drive customer relationship performance [36,23].

Yet the literature on agile marketing remains fragmented. Conceptual papers and case studies dominate, while rigorous causal tests especially mediated models with external validity for

MSMEs are scarce [6,31,2]. Furthermore, few studies benchmark agile marketing against alternative capabilities such as market orientation, complicating assessments of its incremental value [24,25].

Digital marketing effectiveness is generally defined as the achievement of awareness, engagement, conversion, and retention goals across web, search, social, and mobile channels [35,18]. Effectiveness depends on content quality, segmentation accuracy, platform selection, and analytic discipline, measured by indicators such as CTR, CPA, and CLV [18,19,35]. For MSMEs, digital channels lower entry barriers but require iterative, metrics-governed decision cycles [3,19]. Marketing capabilities thus act as the transformers of strategic orientations (EO, market orientation) into competitive advantage [24,25]. Accordingly, agile marketing can be viewed as a contemporary manifestation of such capabilities, ensuring responsiveness and market alignment [7,2,31].

Studies on entrepreneurial learning and self-efficacy demonstrate that EO effects are strengthened by learning orientation and knowledge resources [37,38,33]. Within this frame, agile marketing operates as a mediator that converts entrepreneurial experimentation into disciplined A/B testing cycles, funnel adjustments, and budget reallocations across campaigns and platforms [31,7,2]. At the same time, contextual contingencies firm size, industry, and infrastructure modulate effect strength [28,39]. In resource-constrained borderland and island economies such as Tarakan, the high cost of error and the premium on rapid, low-cost iterations make agile marketing's mediating role theoretically even more salient.

Research Gap

1. Causal mediation at the capability level. While theory suggests that EO operates through functional capabilities [16,28] and that agile marketing is a form of DMC [2,7], rigorous empirical tests of the mediated model (EO → Agile → Digital Effectiveness) in MSMEs—particularly in developing or island contexts remain scarce. Comparative analyses with competing mediators such as market orientation are almost absent [24,25].
2. Comparative incremental value. There is insufficient research comparing agile marketing's contribution relative to other capabilities (e.g., analytics maturity, social

CRM routines) under equivalent resource conditions [36,24,25].

3. Moderators. Contextual moderators such as infrastructure quality, owner/managerial skills, and platform turbulence—known from meta-analyses to strongly condition EO effects—are rarely tested [28,39].
4. Metrics–practice gap. A disconnect persists between the discourse of “data-driven” marketing and actual metric governance in MSMEs (e.g., explicit CPA- or CLV-based budget reallocations). Few studies link agile metric-management routines directly to digital performance outcomes [19,35,31].
5. Study design limitations. Cross-sectional surveys dominate the field, with few longitudinal or quasi-experimental designs to capture capability development and learning dynamics [29,12].

Hypotheses for the Present Study

- H1. EO is positively associated with agile marketing practices (iteration routines, sprints, data-driven decision-making) [20,31,7].
- H2. EO has a direct positive effect on digital marketing effectiveness (engagement, conversion, retention) [5,24,35].
- H3. Agile marketing is positively associated with digital marketing effectiveness [2,7,31].
- H4. Agile marketing partially mediates the EO → digital effectiveness relationship, translating entrepreneurial intent into executable, metrics-driven tactics [9,2,28].

2. Methods

Research Design and Population

This study uses a quantitative approach with a survey design. The research population is MSMEs in Tarakan City that have taken advantage of digital marketing for at least the last two years. The number of samples is 150 respondents obtained through purposive sampling techniques. This research was carried out with a quantitative approach using a survey design, which aims to collect primary data systematically through the dissemination of a structured questionnaire to selected respondents. The population in this study is Micro, Small, and Medium Enterprises (MSMEs) in Tarakan City who have been using digital media in marketing activities for at least six months, assuming that they have relevant experience and understanding of digital marketing practices. The sample

determination was carried out using the purposive sampling technique, which is the deliberate selection of respondents based on certain criteria set by the researcher, in this case MSME actors who actively use digital channels such as social media, marketplaces, or websites in their marketing activities. The number of samples was set as 150 respondents, which were considered adequate to be analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique, specifically to test structural models with several latent constructs and measurable indicators. This approach allows researchers to obtain a representative and in-depth picture of the relationship between research variables.

In explanatory quantitative research, understanding causal structures is essential to uncover latent relationships between variables. (Gelman et al., 2021) emphasize that regression models are not only used to identify direct influences, but also help explain the mediating effect, where the influence of one variable on another variable is distributed through indirect pathways. In this context, agile marketing can be positioned as a mediating variable that explains how entrepreneurial orientation (EO) affects the effectiveness of digital marketing indirectly, through adaptive and data-driven managerial processes.

Furthermore, (Sekaran & Bougie, 2016) explained that the mediation model is used when researchers want to know how or why an independent variable can affect a dependent variable through a certain mechanism. Agile marketing, as an approach that integrates the principles of iteration, rapid experimentation, and response to digital markets, serves to bridge EO's strategic intentions with measurable and relevant digital marketing performance. This approach reinforces the assumption that the relationship between EO and digital marketing effectiveness is not necessarily directly linear, but rather through managerial influence channels.

Technically, testing this mediated relationship can be done with the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach as suggested by (Ringle et al., 2020). The PLS-SEM approach is well suited to analyze the complex relationships between latent constructs and empirically test the effects of mediation in a theoretical model. With the ability to handle moderate sample sizes and predictive

models, PLS-SEM is an ideal analytical tool to explore the role of agile marketing mediation in the context of MSMEs, where the influence of EO needs to be explained through more operational organizational capabilities.

By combining the theoretical basis of the mediation model and the PLS-SEM approach, this study can present a deeper understanding of the strategic role of agile marketing as a mediator. Agile marketing is not just an extension of an entrepreneurial strategy, but a transformative mechanism that allows organizations to adapt innovative strategies into effective, structured, and data-driven digital marketing actions.

Instruments and Measurements

The questionnaire uses a 5-point Likert scale. Indicators of entrepreneurial orientation are adapted from (Lumpkin & Dess, 1996), agile marketing from (Sahni et al., 2018) and digital marketing effectiveness from (Tiago & Veríssimo, 2014). The research instrument was prepared in the form of a closed questionnaire using a 5-point Likert scale, which provides a range of answer options from 1 (strongly disagree) to 5 (strongly agree), in order to quantitatively measure respondents' perception of the research variables. The variables of entrepreneurial orientation are operationalized through five main indicators that reflect the dimensions of innovation, proactivity, risk-taking, autonomy, and competitive aggressiveness based on the construct developed by (Lumpkin & Dess, 1996). Agile marketing is measured using a number of indicators that reflect the key characteristics of agile marketing, such as strategy flexibility, adaptability to market changes, real-time use of data in decision-making, and rapid iteration in campaign execution, as developed by (Sahni et al., 2018). Meanwhile, the effectiveness of digital marketing is measured through indicators that include customer engagement rate, conversion rate from digital activity, and customer loyalty and retention, referring to the framework from (Tiago & Veríssimo, 2014). All indicators are developed into statements that can be understood by MSME actors, and tested through validity and reliability tests before being used in field data collection.

Analytical Techniques The data was analyzed with PLS-SEM using SmartPLS 3.0 software. The convergent validity, reliability, and hypothesis test tests were carried out according to

the procedure of (Hair Jr, Hult, Ringle, Sarstedt, Danks, & Ray, 2021). Operationally, the data analysis in this study was carried out using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the help of SmartPLS software version 3.0, which allows simultaneous testing of causal relationships between latent constructs, including direct and indirect path analysis. The analysis procedure follows the stages recommended by (Hair Jr, Hult, Ringle, Sarstedt, Danks, Ray, et al., 2021), starting with the evaluation of the measurement model to test the validity and reliability of the construct. Convergent validity was checked through an Average Variance Extracted (AVE) value with a minimum criterion of 0.50, while construct reliability was tested using Composite Reliability (CR) and Cronbach's Alpha values with a threshold of ≥ 0.70 . Furthermore, structural model analysis was carried out to test the significance of the relationship between variables through the path coefficient and p-value values, as well as to assess the magnitude of the model's predictive contribution through the R-squared (R^2) value. The significance test was performed using the bootstrapping method with 5,000 replication samples to produce stable and accurate estimates. This approach was chosen because it is suitable for models with moderate complexity and relatively limited sample counts, such as in the context of this MSME research.

3. Result and Discussion

Validity and Reliability Tests All indicators met the criteria of convergent validity ($AVE > 0.5$) and reliability ($\alpha > 0.7$). The discriminant test also showed adequate results. The results of the measurement model analysis showed that all indicators in each research construct met the criteria for convergent validity. The convergent validity is evaluated through the Average Variance Extracted (AVE) value, where the entire construct has an AVE value above the minimum threshold of 0.50, in accordance with the conditions put forward by (Hair Jr, Hult, Ringle, Sarstedt, Danks, Ray, et al., 2021). This indicates that each indicator in the construct is able to explain more than 50% of the variance of the construct it represents, so it can be concluded that the relationship between the indicator and the latent construct it measures is statistically strong.

In addition to the convergent validity, the

construct reliability testing also showed satisfactory results. All constructs have Cronbach's Alpha and Composite Reliability (CR) values above 0.70, which indicates that the indicators in the construct have good internal consistency and are reliable in measuring the variables in question. This reliability value reflects the stability and uniformity of measurements, so the data obtained from the questionnaire can be considered representative to describe respondents' perceptions of entrepreneurial orientation, agile marketing, and digital marketing effectiveness.

Discriminant validity testing is also performed to ensure that each construct in the research model has a clear difference from each other. This test using the Fornell-Larcker and Heterotrait-Monotrait Ratio (HTMT) criteria, both of which showed results that were within the recommended limits (< 0.85 for HTMT). Thus, it can be concluded that each construct has the ability to measure different concepts clearly and that there is no overlap between variables. These findings strengthen the reliability of the measurement models used in the research, as well as provide a solid basis for proceeding to the structural model analysis stage

Structural Model Test

The results of the first hypothesis test (H1) showed that Entrepreneurial Orientation (EO) had a positive and significant influence on agile marketing practices, with a path coefficient value of $\beta = 0.63$ and a significance level of $p < 0.001$. These findings indicate that the higher the entrepreneurial orientation possessed by MSME actors, the more likely they are to apply agile principles in their marketing strategies. An entrepreneurial orientation that reflects an innovative, proactive, and risk-taking attitude is proving to be an important cornerstone in shaping an organization that is agile, adaptive, and responsive to digital market dynamics.

These findings are in line with previous theories and research that have shown that entrepreneurial orientation plays a key driver of innovation and flexibility in organizations (Lumpkin & Dess, 1996). MSMEs with high EO tend to be more open to change and quickly adopt new approaches, including agile marketing that demands rapid iteration, experimentation, and the use of real-time data in decision-making. This is especially important in the context of digital

businesses characterized by high volatility and rapidly changing consumer preferences.

The second hypothesis (H2) is also statistically supported, with a value of $\beta = 0.31$ and $p < 0.01$, which means that entrepreneurial orientation has a direct and significant influence on the effectiveness of digital marketing. This means that MSME actors who have a tendency to innovate, act proactively, and take risks, tend to be more successful in implementing effective digital marketing strategies. The strategy includes achieving marketing goals such as increased customer engagement, sales conversions, and customer retention and loyalty through digital channels.

This relationship confirms that EO is not only useful in the context of creating new products or services, but also important in directing communication and distribution strategies through digital media. In a digital world full of challenges and uncertainty, the courage to experiment, see new opportunities, and anticipate market changes is an important asset owned by entrepreneurship-oriented business actors. Therefore, EO can be seen as the foundation of organizational behavior that drives digital marketing performance.

Furthermore, the third hypothesis test (H3) showed that agile marketing had a positive and significant influence on the effectiveness of digital marketing, with a path coefficient value of $\beta = 0.48$ and $p < 0.001$. These results confirm that strategy flexibility, speed of adaptation, and data-driven decision-making are key characteristics of agile marketing that directly contribute to the success of MSME digital campaigns. In this context, agile marketing serves as a strategic mechanism to tailor messages, channels, and approaches based on the ever-evolving market response.

The implications of this result are particularly relevant for MSMEs, especially in border areas such as Tarakan City which face geographical challenges and limited market access. By applying agile marketing principles, businesses can run shorter marketing cycles, test the effectiveness of strategies quickly, and modify approaches based on customer feedback. This allows them to minimize risk and maximize the efficiency of limited resources.

The fourth hypothesis (H4) proves that agile marketing partially mediates the relationship between entrepreneurial orientation and digital

marketing effectiveness, with an indirect influence value of $\beta = 0.30$ and a significance of $p < 0.01$. Partial mediation means that EOs still have a direct influence on the effectiveness of digital marketing, but some of that influence is channeled through agile marketing. This means that the implementation of agile marketing reinforces and explains most of the effects of EO on digital marketing performance.

The results of this mediation revealed that EO alone is not enough to ensure the optimal effectiveness of digital marketing. Agile managerial skills are needed so that entrepreneurial potential can be realized in a marketing strategy that is in line with the demands of the digital era. In other words, agile marketing serves as a bridge between the company's strategic orientation and operational success in the digital realm.

Theoretically, these findings enrich the literature by emphasizing the position of agile marketing as a mediating variable that bridges EO with marketing performance outcomes. This shows that an entrepreneurial-oriented organization will be more effective in its marketing strategy when they also apply agile and adaptive marketing principles. Therefore, this study not only supports the previous theory, but also provides a new empirical model that is relevant to the context of digital MSMEs in border areas.

From a practical perspective, these results recommend the importance of agile marketing training and capacity building for MSME actors, so that they are able to convert entrepreneurial orientation into real digital marketing advantages. Local governments, business associations, and training institutions need to work together to strengthen this competence so that MSMEs in Tarakan City are able to compete digitally, both at the local level and across regional borders. These findings are expected to be the basis for innovation-based MSME development policies and sustainable digital market adaptation

The findings show that entrepreneurial orientation not only has a direct impact on the effectiveness of digital marketing, but also indirectly through the mediating role of agile marketing. This means that the ability of MSME actors to innovate and act proactively will be more optimal when supported by agile, flexible, and data-based marketing practices.

These results are consistent with the

research of (Park et al., 2013) which emphasizes the importance of marketing agility in overcoming digital market turbulence. For MSMEs in areas like Tarakan, where resource constraints are often an obstacle, an agile approach can be an efficient strategic solution. The findings of this study confirm that entrepreneurial orientation (EO) not only contributes directly to the effectiveness of digital marketing, but also has an indirect influence through agile marketing mediation. This shows that the influence of EO on digital marketing performance becomes stronger and more significant when MSME actors also have the ability to implement agile, adaptive, and data-based marketing practices. In other words, EOs create the foundation of progressive organizational behavior, but the end result depends on how that onboarding translates into concrete actions through agile marketing strategies.

Entrepreneurial orientation reflects the internal drive of business actors to look for opportunities, innovate, and take measurable risks in the face of market uncertainty. However, in the context of digital marketing that is very dynamic and loaded with technological changes and consumer preferences, the entrepreneurial spirit needs to be facilitated by a flexible and iterative system. This is where agile marketing plays an important role as a link between strategic intent and operational execution. MSME actors who are able to translate EO into agile principles will be better prepared to respond to market changes quickly and appropriately.

Agile marketing, according to (Rosário & Dias, 2023) highlights the importance of data-driven experimentation and customer response in digital marketing practices, particularly in the context of email marketing. Their findings suggest that content personalization, even without new information, can drive higher customer interactions if delivered appropriately. This reflects the key principles of agile marketing, which is the ability to adapt marketing strategies quickly, data-driven, and relevant to dynamic customer behavior. Therefore, although not directly mentioned, their approach provides an empirical justification for the effectiveness of agile and adaptive marketing strategies

The organizations with a high level of marketing agility are better able to navigate market uncertainty, adapt quickly to external disruptions, and maintain customer engagement

on an ongoing basis. This is becoming increasingly important in the digital age, where the product lifecycle and consumer preferences are changing faster than ever before. MSMEs that are able to combine EO and agile marketing will have an edge in designing digital campaigns that are not only effective but also relevant to the needs of today's market.

These findings show that agile marketing is not just an operational tactic, but also a strategic component that reinforces entrepreneurial values. By integrating agile principles into the marketing process, businesses can quickly test various strategies, evaluate their performance, and make adjustments without having to wait for the annual budget cycle. This is very suitable for MSMEs who often face obstacles in flexibility and speed in decision-making.

In practice, agile marketing encourages a healthy culture of experimentation, where failure is not seen as an obstacle, but as part of an ongoing learning process. This is in line with the spirit of EO which emphasizes courage in the face of risk and uncertainty. Therefore, the mediation of agile marketing in relation to EO and the effectiveness of digital marketing reinforces the argument that success in the digital age depends not only on entrepreneurial attitudes, but also on the ability of organizations to adapt systematically and in a structured manner.

For MSMEs in Tarakan City, which is an area with unique geographical and economic characteristics, the implementation of agile marketing has high urgency. Limited access to large markets, limited resources, and unstable local economic dynamics require business actors to be more innovative and flexible. By adopting agile principles, MSMEs can quickly adjust their digital marketing strategies based on local trends and ever-changing customer behavior.

In addition, the use of accurate digital data allows MSMEs to conduct more precise market segmentation, design more personalized messages, and choose more effective distribution channels. All of this increases the chances of conversions and customer loyalty. In this context, the effectiveness of digital marketing is not only measured by the reach or frequency of advertising, but also by the depth of interaction and the long-term value created from customer relationships.

This research also makes a theoretical contribution by explaining the role of agile

marketing mediation in the relationship between EO and digital marketing effectiveness. This has not been widely discussed in the previous literature, especially in the context of MSMEs in developing countries. Thus, this study expands the understanding of the mechanisms by which EO can be transformed into superior marketing performance through adaptive managerial strategies.

Furthermore, these findings provide the basis for a new conceptual model that combines behavioral aspects (EO), managerial strategies (agile marketing), and performance outputs (digital marketing effectiveness). The integration of these three elements creates a comprehensive and applicable framework in understanding the challenges and solutions of digital marketing for MSME actors in the era of technological disruption.

In terms of policy, the results of this study provide a clear direction for local governments and MSME development institutions to design training and mentoring programs that not only focus on strengthening entrepreneurial capacity, but also on mastering agile and technology-based marketing strategies. This kind of training should be applicable, relevant to the local context, and easily accessible to small and medium-sized businesses.

In addition, collaboration with digital platforms, academics, and the business community can be a means to strengthen an inclusive digital ecosystem for MSMEs. The creation of co-learning spaces, digital incubators, or data-driven marketing labs can be part of systemic solutions that drive digital transformation in a sustainable manner.

This research also opens up opportunities for more in-depth follow-up studies. Qualitative research can be conducted to further explore how internal processes in MSME organizations adopt agile practices, as well as how organizational culture, leadership, and technology factors support the transformation. In addition, a longitudinal approach can also provide an understanding of how the relationship between EO, agile marketing, and digital marketing effectiveness evolves over time.

These findings confirm that digital marketing success cannot be achieved by following technological trends alone, but must be built on a strong foundation of entrepreneurial behavior and implemented through a responsive

and customer-oriented managerial approach. With this combination, MSMEs in Tarakan City and other areas have great potential to not only survive, but also grow and compete in the ever-changing digital business landscape.

5. Conclusion and Implications

This study demonstrates that agile marketing constitutes a pivotal transmission mechanism through which entrepreneurial orientation (EO) operationalized via innovativeness, proactiveness, and risk-taking translates into superior digital marketing effectiveness among MSMEs. While EO provides the strategic impetus to search, experiment, and seize emerging opportunities, its performance payoffs materialize most reliably when organizations possess agile, data-driven routines that enable rapid iteration, disciplined experimentation, and real-time resource reallocation. In short, EO is the strategic fuel, but agile marketing is the drivetrain that converts that fuel into measurable engagement, conversion, and retention outcomes under platform turbulence and resource constraints.

Conceptually, our findings enrich capability-based views by specifying how an entrepreneurial posture is operationalized into market results: through short learning cycles, cross-functional coordination, and metric governance that close the loop between insights and execution. Empirically, the evidence of partial mediation indicates that EO exerts both a direct influence on digital outcomes and an indirect influence via agile routines underscoring that entrepreneurial intent is necessary but often insufficient in the absence of executional capabilities.

Managerial implications

1. Institutionalize agile routines. MSMEs should formalize sprint planning, hypothesis backlogs, A/B testing protocols, and weekly metric reviews (CTR, CPA, CLV) to shorten the insight-to-action cycle.
2. Build analytic fluency. Upskilling owners and teams in basic experimental design, attribution, and budget reallocation rules (e.g., CPA/CLV thresholds) will raise the yield of EO-driven initiatives.
3. Design for cross-functionality. Lightweight squads (marketing-sales-ops) with shared dashboards improve

handoffs from ideation (EO) to deployment (agile execution).

4. Prioritize fast/cheap learning. In resource-constrained settings, emphasize small, sequential tests and staged scaling rather than “big-bang” campaigns.

Policy and ecosystem implications

1. Targeted capacity-building. Local governments, universities, incubators, and platforms should co-deliver contextualized programs on agile marketing (experimentation, funnel analytics, creative iteration) tailored to MSME realities.
2. Shared data and tooling. Low-cost access to analytics sandboxes, creative libraries, and benchmark dashboards can compress MSMEs' learning curves.
3. Outcome-based support. Public support schemes should reward verifiable learning outcomes (e.g., documented experiments, metric improvements) rather than inputs.

Theoretical implications

1. From posture to performance. Positioning agile marketing as a dynamic marketing capability clarifies the micro-foundations linking EO to digital outcomes, advancing mediation-based accounts of the resource–strategy–performance chain.
2. Context sensitivity. In peripheral or island economies, the high cost of error amplifies the value of agile routines; future theorizing should treat environmental frictions (infrastructure quality, platform turbulence) as first-order moderators.

Limitations and Directions for Future Research

Our cross-sectional design limits causal inference and masks capability maturation over time. Future work should: employ longitudinal or quasi-experimental designs to trace learning curves; benchmark agile marketing against competing mediators (market orientation, analytics maturity, social-CRM routines) to assess incremental value; and test boundary conditions (infrastructure, team skills, sector heterogeneity) that may strengthen or attenuate mediation effects.

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