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Key Factors of Digital Service Innovation Capability in Multi-Level Marketing-Top Management Perspective

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Abstract

The Multi-level Marketing (MLM) industry has traditionally relied on interpersonal networks and relationship-based marketing. In the context of the rapidly evolving digital economy. Accordingly, how MLM firms enhance their service innovation capabilities through digital transformation has emerged as a salient managerial concern.

The present study adopts a top management viewpoint and further incorporates the Bottom of the Pyramid (BoP) framework as a foundational theoretical lens, emphasizing value creation and innovation practices in low-income yet high-potential markets.

The study proposes four core capability dimensions (Persuasion, Co-creation, Adaptation and Self-sustainability) to capture the essential competencies required in digitally enabled and AI-augmented environments, denoting individuals' capacity for continuous learning, self-development, and long-term business sustainability in digital contexts.

The empirical analysis employs the AHP to examine the relative effects of different capability dimensions on digital service innovation performance. This research contributes by integrating the BoP perspective with digital service innovation literature, thereby addressing a notable gap in existing MLM-related studies. From a managerial perspective, the results offer actionable insights for top management, providing clear guidance on capability development priorities and resource allocation strategies in the context of digital transformation and BoP market positioning.

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1. Introduction

Among various industries, the Multi-level Marketing (MLM) sector is characterized by a strong reliance on interpersonal networks and social interactions. MLM firms typically promote products and deliver services through multi-tiered distribution networks, where success critically depends on trust building, relationship management, and network expansion. However, with the rapid advancement of e-commerce and social media, MLM firms have increasingly digitalized their sales and service activities, including social media–based selling, digital customer relationship management systems, and online community engagement. Consequently, the integration of digital technologies with traditional relational networks has emerged as a central challenge for organizational development.

With the proliferation of information technologies and digital platforms, firms are progressively engaging in digital transformation to enhance service value and customer experience. In a service-oriented economy, competitive advantage is no longer derived solely from product differentiation but increasingly from the ability to redesign service processes and customer interaction models digital technologies. As such, Digital Service Innovation has become a key driver of firm competitiveness. Prior research suggests that digital technologies not only reshape firm–customer interactions but also fundamentally reconfigure value creation mechanisms (Vargo & Lusch, 2016).

From the perspective of the Bottom of the Pyramid (BoP) framework, the MLM industry possesses inherent advantages in emerging markets due to its strong penetration capabilities and community embeddedness. Its network-based structure enables effective access to low- and middle-income populations while providing opportunities for micro-entrepreneurship and social participation. This people-centric diffusion mechanism aligns closely with the inclusive innovation principles emphasized in BoP theory.

During the process of digital transformation, top management decision-making and organizational capabilities are widely recognized as critical determinants of innovation success. According to Dynamic Capabilities Theory, firms must continuously sense opportunities, integrate resources, and reconfigure competencies to respond to rapidly changing environments (Teece, 2007). In addition, the Service-Dominant Logic underscores the importance of value co-creation between firms and customers, suggesting that organizations must develop service systems that facilitate interaction and collaboration (Prahalad & Ramaswamy, 2004).

Despite these advancements, existing research on the MLM industry has largely focused on sales performance, incentive systems, and organizational structures. There remains a lack of systematic investigation into how top management drives digital service innovation through organizational capabilities. Notably, during digital transformation, top executives play a pivotal role in strategic formulation, resource integration, and organizational culture shaping.

Against this backdrop, this study adopts a top management perspective to examine

the key determinants of digital service innovation capabilities in MLM firms and develops a research framework to analyze the impact of different capability dimensions on innovation performance.

This study aims to achieve the following objectives

(1) To investigate how top management in MLM firms leverages organizational capabilities to drive digital service innovation and to identify the core dimensions influencing innovation capability.

(2) To integrate the social network characteristics of MLM, digital service innovation mechanisms, and the inclusive market perspective of the Bottom of the Pyramid (BoP), thereby elucidating the interactions among these elements.

(3) To analyze the critical role of top management in the digital transformation process.

This study is expected to contribute to the literature by addressing the research gap at the intersection of digital service innovation and the MLM industry. From a practical perspective, it provides actionable insights for firms in formulating digital transformation strategies and enhancing capability development.

2. Literature Review

2.1 Multi-level Marketing, MLM

The Multi-level Marketing (MLM) business model is characterized by a structurally complex system in which participants are incentivized not only to sell products but also to recruit additional members in order to earn commissions. This multi-layered structure inherently increases organizational and operational complexity, which often poses significant challenges for MLM firms operating in highly competitive markets (Reingewertz, 2021). Within this context, economic modeling provides a valuable analytical lens for understanding the operational dynamics of MLM organizations and for identifying their structural constraints in competitive environments (Reingewertz, 2021).

Moreover, such models offer important insights into participant behavior by explaining why individuals choose to become distributors. In many cases, individuals are motivated by limited external economic opportunities and are attracted to MLM participation as a means of accessing potential financial gains (Reingewertz, 2021).

Concurrently, the MLM industry is confronting both challenges and opportunities associated with digital service innovation, which are reshaping its traditional business model. A key challenge lies in effectively integrating advanced technologies — particularly artificial intelligence and data analytics — to enhance customer experience and optimize supply chain processes (Simhadri, 2025). These innovations not only improve firm competitiveness but also enable more seamless and convenient service experiences for consumers (Simhadri, 2025).

More broadly, these developments underscore the necessity for continuous innovation in response to rapidly evolving market conditions and shifting consumer expectations (Simhadri, 2025). The integration of emerging technologies has the

potential not only to enhance operational performance but also to fundamentally reconfigure the competitive landscape of the MLM industry (Simhadri, 2025). Consequently, firms are increasingly compelled to explore new business models grounded in digital service innovation in order to address ongoing technological disruptions and market demands.

Taken together, these challenges and opportunities highlight the critical importance of innovation and data-driven strategies in the digital transformation process, as firms seek to strengthen their competitive positioning in an increasingly dynamic environment (Simhadri, 2025).

2.2 Digital Service Innovation Capability

In the process of Digital Service Innovation (DSI), digital transformation serves as a critical bridge linking AI empowerment with value co-creation. The evolution of digital services not only enhances customer experience but also improves firm performance in competitive environments. In this regard, firms must develop a nuanced understanding of how digital service transformation influences customer participation and value perception in order to optimize overall performance (Payne et al., 2021).

With the integration of artificial intelligence into Digital Service Innovation, the operational logic of the Multi-level Marketing (MLM) industry is shifting from a relationship-driven model toward an intelligence-enabled collaborative paradigm. This emerging model combines technological augmentation with interpersonal trust, thereby creating a novel form of organizational dynamism. Such a transformation not only enhances customer experience but also facilitates supply chain optimization, highlighting the transformative potential of AI in MLM contexts (Simhadri, 2025).

At the same time, firms must adapt to new business models in order to fully leverage the opportunities afforded by AI and data analytics (Simhadri, 2025). This transition requires organizations not only to prioritize technological integration but also to address critical challenges related to change management and workforce capability development, ensuring sustained competitiveness in increasingly dynamic markets (Astawa & Arsha, 2024).

Furthermore, organizations must adopt flexible organizational designs that enable more efficient resource allocation and responsiveness to evolving market demands. This new operational paradigm necessitates not only technological infrastructure but also systematic training and capability development to foster an adaptive and resilient workforce. The integration of technological capabilities with relational trust mechanisms is expected to drive superior competitive advantage for MLM firms undergoing digital transformation (Simhadri, 2025).

Importantly, the success of this transformation hinges on firms' ability to effectively align AI integration with change management strategies, thereby enabling continuous innovation and long-term growth. Firms must continuously evaluate and recalibrate their strategic orientations to remain competitive in rapidly evolving

environments. As such, this transformation represents not merely a technological upgrade but a comprehensive reconfiguration of organizational culture and structure, enhancing firms' sensitivity to customer needs and their responsiveness to market changes.

Overall, this emerging operational model underscores the pivotal role of artificial intelligence in enhancing customer experience and optimizing supply chains, while simultaneously highlighting the necessity of effective change management to ensure successful implementation (Simhadri, 2025; Astawa & Arsha, 2024). Well-designed change management strategies can further enable firms to achieve superior business performance and sustained competitive advantage throughout the digital transformation process (Mandava, 2023).

2.3 Bottom of the Pyramid (BoP)

The Bottom of the Pyramid (BoP) perspective is critical for addressing the needs of low-income populations while simultaneously creating sustainable business opportunities. Innovations targeting BoP markets enable firms to achieve growth while contributing to broader societal welfare (Sunder & Modukuri, 2024). Such innovations not only enhance firm competitiveness but also generate tangible improvements in the living conditions of underserved communities, thereby fostering inclusive societal progress.

Importantly, this approach emphasizes reconceptualizing low-income populations as active business partners rather than passive consumers, facilitating mutual value creation and shared development. In doing so, it challenges traditional market assumptions and highlights the dual role of innovation in driving both economic and social advancement. By adopting BoP-oriented innovation strategies, firms can improve the quality of life for marginalized populations while simultaneously unlocking new market opportunities, resulting in a win–win outcome. Consequently, this people-centric innovation paradigm is likely to become a cornerstone of future business strategy, promoting both economic development and social inclusion.

The BoP refers to the lowest socioeconomic segment of the global population, encompassing a vast number of consumers with largely unmet needs. This segment presents significant opportunities for firms to innovate and develop solutions that simultaneously address these needs and generate economic value. Given the heterogeneity of BoP consumers, firms must cultivate a deep understanding of their lived experiences, expectations, and constraints in order to build trust and establish collaborative relationships (Prahalad, 2013).

This dual-value proposition enables firms to pursue both commercial objectives and social responsibility when engaging with BoP markets. Accordingly, effective BoP strategies require careful consideration of market diversity and complexity to ensure that solutions are contextually relevant and impactful. Such processes of deep engagement and co-creation not only enhance brand loyalty but also contribute to sustainable economic growth and broader societal benefits.

The effectiveness of BoP strategies ultimately depends on firms' ability to remain adaptive and continuously innovate in response to the diverse and evolving needs

of low-income consumers. This approach underscores the importance of collaborative relationships between firms and BoP communities, facilitating the simultaneous creation of social value and economic returns. Successful BoP strategies not only drive firm growth but also deliver meaningful improvements in the livelihoods of impoverished populations, thereby advancing long-term sustainable development goals.

3. Research Design

Modeling Employee Capabilities for Digital Service Innovation in Multi-level Marketing Firms

3.1 Research Framework

Grounded in the Bottom of the Pyramid (BoP) perspective (Sunder & Modukuri, 2024), this study conceptualizes four core dimensions and, adopting a top management perspective, constructs a hierarchical capability structure comprising twelve sub-dimensions for digital service innovation in the Multi-level Marketing (MLM) context (Figure 1).

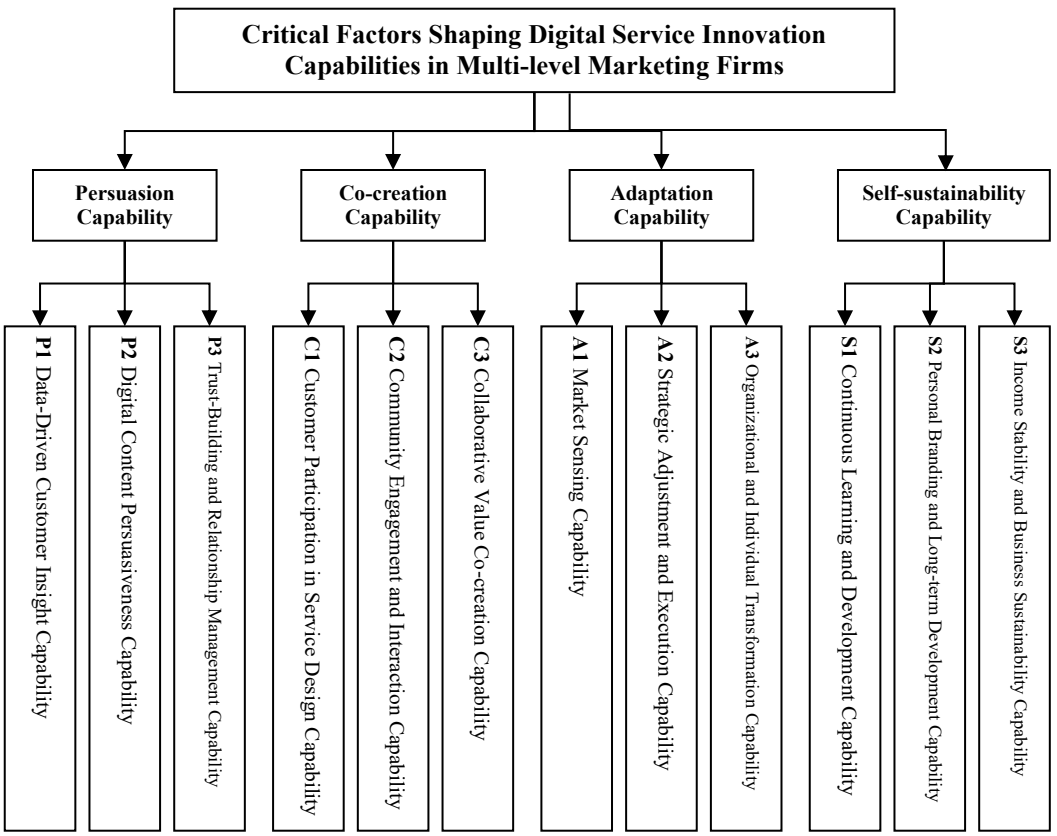

Figure 1: A Hierarchical Modeling of Key Determinants of Digital Service Innovation Capabilities in Multi-level Marketing Firms

3.2 Operational Definition

Grounded in prior literature, this study articulates the operational definitions of the primary constructs and their corresponding sub-dimensions, as detailed below.

3.2.1 Persuasion Capability

This capability reflects a firm's ability to strategically influence customers' cognitive evaluations, attitudinal orientations, and behavioral intentions through the integration of persuasive message design, emotional engagement, and trust-building mechanisms in both digital and relational interaction contexts.

P1 Data-Driven Customer Insight Capability
This capability refers to a firm's ability to leverage AI and data analytics to understand customer needs and behavioral patterns, thereby enabling more precise communication and personalized recommendations.
P2 Digital Content Persuasiveness Capability
This capability denotes a firm's ability to create and deliver influential digital content across social media, short-form video, and live-streaming platforms, as well as to effectively employ storytelling and value communication to shape customer perceptions and decisions.
P3 Trust-Building and Relationship Management Capability
This capability reflects a firm's ability to cultivate long-term customer relationships and to convert online interactions into trust-based relational bonds through sustained engagement and credibility-building mechanisms.

3.2.2 Co-creation Capability

This capability refers to a firm's ability to facilitate interactive participation among customers, partners, and the organization through digital platforms and social networks, thereby jointly designing, creating, and delivering service value.

C1 Customer Participation in Service Design Capability
This capability refers to a firm's ability to involve customers in the optimization of products and services, enabling customized and interactive service experiences through active engagement.
C2 Community Engagement and Interaction Capability
This capability denotes a firm's ability to establish and manage digital communities (e.g., social media platforms) and to enhance customer participation, engagement, and retention through continuous interaction.
C3 Collaborative Value Co-creation Capability
This capability reflects a firm's ability to foster teamwork and cross-level collaboration, as well as to develop co-creative business models that enable joint value creation among stakeholders.

3.2.3 Adaptation Capability

This capability refers to a firm's ability to sense opportunities and threats in rapidly evolving digital and market environments and to continuously adjust its service and operational models through resource integration and organizational reconfiguration.

A1 Market Sensing Capability
This capability refers to a firm's ability to monitor and interpret market trends and evolving customer needs in real time, supported by digital tools for enhanced decision-making.
A2 Strategic Adjustment and Execution Capability
This capability denotes a firm's ability to rapidly adjust sales and service strategies and to effectively translate identified opportunities into tangible performance outcomes.
A3 Organizational and Individual Transformation Capability
This capability reflects a firm's ability to develop digital competencies, facilitate individual and organizational transformation, and implement new tools and processes to support continuous change.

3.2.4 Self-sustainability Capability

Self-sustainability capability refers to a firm's ability to sustain growth, innovation, and competitive advantage through internal learning mechanisms, resource circulation, and organizational resilience, without heavy reliance on external inputs. ◦

S1 Continuous Learning and Capability Development
This capability refers to a firm's ability to promote self-directed learning in digital skills and AI applications, thereby continuously enhancing professional competencies.
S2 Personal Branding and Long-term Development Capability
This capability denotes a firm's ability (at the individual level) to establish personal branding and cultivate a stable customer base for long-term business development.
S3 Income Stability and Business Sustainability Capability
This capability reflects a firm's ability to develop sustainable revenue models and maintain resilience against market fluctuations and environmental uncertainties.

4. Research Subjects

To investigate the key determinants of digital service innovation capabilities in the Multi-level Marketing (MLM) industry in Taiwan from a top management perspective, this study targets local MLM practitioners as the research population. Specifically, respondents were selected based on the following criteria (1) possessing at least 3–5 years of experience in the MLM industry (2) having direct involvement in digital transformation or digital service–related decision-making processes (3) holding roles associated with team management or strategic planning; and (4) demonstrating familiarity with Bottom of the Pyramid (BoP) markets or

frontline operational practices.

A purposive sampling approach was employed to identify qualified participants who meet these criteria. General MLM distributors were not included in the sample, as the Analytic Hierarchy Process (AHP) emphasizes expert judgment and strategic-level decision-making, requiring respondents to possess a comprehensive understanding of organizational operations and digital transformation beyond individual sales experience.

The study recruited a total of 12 experts, consistent with recommended sample sizes for AHP-based research. To ensure the appropriateness and depth of expertise, purposive sampling was complemented by a snowball sampling technique, leveraging industry networks and expert referrals to identify suitable participants. All selected respondents are senior managers within MLM organizations, possessing extensive industry experience and strategic decision-making capabilities, thereby enabling them to provide informed evaluations of the key factors influencing digital service innovation capabilities.

5. Empirical Results on the Key Determinants of Digital Service Innovation Capabilities in Multi-level Marketing Firms

This study employs the Analytic Hierarchy Process (AHP) as the primary analytical method, given its capability to systematically integrate both quantitative and qualitative factors in complex decision-making contexts. AHP facilitates structured evaluation processes, enabling decision-makers to derive optimal choices by simultaneously considering measurable data and subjective judgments (Enlong, 2007).

Moreover, AHP has demonstrated strong applicability in multi-objective and multi-criteria decision-making environments, providing a scientifically grounded framework for decision support (Sun et al., 2013). Within statistical and managerial analysis, this method effectively assists decision-makers in evaluating diverse criteria, thereby enhancing the rationality and robustness of decision outcomes (Sun et al., 2013). Its versatility allows for broad application across various domains characterized by complexity and uncertainty (Enlong, 2007).

A key strength of AHP lies in its hierarchical and systematic structure, which enables decision-makers to clearly assess the relative importance of different factors (Hong, 2010). In the context of quantitative analysis, AHP serves as a powerful decision-support tool, particularly when addressing multi-criteria problems. By integrating qualitative insights with quantitative evaluation, the method enhances analytical rigor and supports effective decision-making in complex environments (Meade, 1989).

Furthermore, the structured nature of AHP allows for systematic pairwise comparisons among criteria, improving decision efficiency and transparency. It also facilitates consensus-building among stakeholders by providing a clear and logical

evaluation framework. As such, AHP has been widely adopted not only in academic research but also in practical applications, including business management and policy decision-making, where it serves as a reliable tool for addressing complex problems.

In this study, the global weights are derived by multiplying the weights of the four primary dimensions with those of the corresponding twelve sub-dimensions. The resulting values represent the overall weights of each sub-dimension within the hierarchical structure.

Table 1: Overall Weights of Key Determinants of Digital Service Innovation Capabilities

Primary Dimension	Weight	Sub-dimensions	Weight	Overall Weight
Persuasion	0.185	P1 Data-Driven Customer Insight Capability	0.288	0.053
		P2 Digital Content Persuasiveness Capability	0.300	0.056
		P3 Trust-Building and Relationship Management Capability	0.412	0.076
Co-creation	0.389	C1 Customer Participation in Service Design Capability	0.298	0.116
		C2 Community Engagement and Interaction Capability	0.324	0.126
		C3 Collaborative Value Co-creation Capability	0.378	0.147
Adaptation	0.174	A1 Market Sensing Capability	0.218	0.038
		A2 Strategic Adjustment and Execution Capability	0.395	0.069
		A3 Organizational and Individual Transformation Capability	0.387	0.067
Self-sustainability	0.252	S1 Continuous Learning and Development Capability	0.383	0.096
		S2 Personal Branding and Long-term Development Capability	0.325	0.082
		S3 Income Stability and Business Sustainability Capability	0.292	0.074

CI < 0.1 and CR < 0.1

Data source: summarized by this study.

5.1 Analysis of Primary Dimensions

As shown in Table 1, based on the evaluations of 12 MLM practitioners, Co-creation Capability (0.389) emerges as the most important among the four primary dimensions, followed by Self-sustainability Capability (0.252), Persuasion Capability (0.185), and Adaptive Capability (0.174).

The findings indicate that Co-creation Capability (0.389) holds the highest weight, suggesting that in the current digital service environment, the interactions among firms, customers, channel partners, and distributors have evolved from a unidirectional sales model to a multi-actor value co-creation system. This result is consistent with the principles of Service-Dominant Logic, which posits that value is not created solely by firms but is co-generated through interactive processes. Such a shift is particularly salient in the MLM industry, where interpersonal networks constitute the foundation of business operations.

Self-sustainability Capability (0.252) ranks second, indicating that top management increasingly recognizes the importance of continuous learning, self-development, and adaptability among distributors in digitally enabled environments. This capability is not only critical for individual performance but also for sustaining organizational competitiveness during digital transformation.

Persuasion Capability (0.185), ranked third, remains a core competency in MLM. Despite the growing prevalence of digital tools, interpersonal interaction and trust-building continue to play a decisive role in influencing purchasing decisions. In particular, within social media and live-streaming contexts, the ability to effectively communicate value propositions and resonate with customers remains essential for driving sales outcomes.

Finally, although Adaptive Capability (0.174) ranks lowest among the four dimensions, it remains a foundational capability in highly dynamic and uncertain digital markets. Its importance lies in enabling firms to respond to environmental changes, adjust sales strategies, and adopt emerging digital tools in a timely manner.

Overall, these findings suggest that the core of digital service innovation in the MLM industry has shifted from traditional sales-oriented capabilities toward a co-creation-centered paradigm, supported by individual sustainability and digital interaction competencies. This contributes to the literature by addressing gaps in MLM digital transformation research and offers practical guidance for talent development and strategic planning.

5.2 Analysis of Sub-dimensions

With respect to the sub-dimensions, the top five ranked factors based on global weights are as follows:

- Collaborative Value Co-creation Capability (0.147)
- Community Engagement and Interaction Capability (0.126)
- Customer Participation in Service Design Capability (0.116)
- Continuous Learning and Capability Development (0.096)
- Personal Branding and Long-term Development Capability (0.082)

The remaining sub-dimensions are ranked as follows:

- Trust-Building and Relationship Management Capability (0.076)
- Income Stability and Business Sustainability Capability (0.074)
- Strategic Adjustment and Execution Capability (0.069)
- Organizational and Individual Transformation Capability (0.067)
- Digital Content Persuasiveness Capability (0.056)
- Data-Driven Customer Insight Capability (0.053)
- Market Sensing Capability (0.038)

The AHP results reveal a clear structural transformation in the capability configuration of the MLM industry under digital service innovation. The highest-ranked factor, Collaborative Value Co-creation Capability (0.147), further reinforces the centrality of co-creation within MLM systems. Competitive advantage is no longer driven solely by individual sales performance but increasingly depends on collaborative interactions and resource integration among team members, uplines and downlines, and customers. This finding also reflects the rise of platform-based and community-driven economies, where cross-role collaboration becomes essential for generating higher value.

The second - and third - ranked factors—Community Engagement and Interaction Capability (0.126) and Customer Participation in Service Design Capability (0.116)—highlight the critical role of social media as a central arena for service innovation. MLM distributors are no longer merely sales agents but must also act as content creators and relationship managers, engaging customers in co-design processes to enhance engagement and brand loyalty.

The fourth and fifth factors—Continuous Learning (0.096) and Personal Branding (0.082)—underscore the importance of long-term capability development. In rapidly evolving digital environments, continuous learning is essential for maintaining competitiveness, while personal branding serves as a key mechanism for differentiation and trust-building.

Although the remaining sub-dimensions exhibit relatively lower weights, they collectively form the supporting infrastructure of the capability system. For instance, Trust-Building and Income Sustainability reaffirm the enduring importance of relational trust and long-term business development in MLM. Meanwhile, Strategic Adjustment, Transformation Capability, and Market Sensing reflect the need for adaptability under environmental uncertainty.

Notably, Data-Driven Customer Insight Capability and Digital Content Persuasiveness Capability rank relatively lower, suggesting that the MLM industry still has substantial room for development in data utilization and digital persuasion techniques.

In summary, this study demonstrates that the core capability structure of digital service innovation in the MLM industry has shifted from an individual sales-driven orientation to a relationship- and co-creation-driven paradigm, with a strong emphasis on community engagement and continuous learning. These findings

provide important implications for firms in designing talent development programs and formulating digital transformation strategies.

6. Conclusions and Recommendations

This study identifies several key findings regarding the critical determinants of digital service innovation capabilities in the Multi-level Marketing (MLM) industry. The major conclusions and ecommendations are summarized as follows.

6.1 Conclusion

6.1.1 Trust-Building and Relationship Management as the Core of Persuasion Capability

The findings indicate that within the Persuasion Capability dimension, Trust-Building and Relationship Management Capability emerges as the most critical sub-dimension. This suggests that, even in the era of digital service innovation, the MLM industry remains fundamentally rooted in interpersonal interaction and trust. Compared to traditional one-way selling approaches, contemporary MLM has increasingly evolved into a relationship-oriented and customer-centric service model. Persuasion is no longer driven solely by the transmission of product information but is instead grounded in trust capital accumulated through long-term interactions. In digital and social media environments, customers are exposed to information overload and heightened choice diversity, leading to increased skepticism toward marketing messages. Consequently, without the establishment of strong trust relationships, even highly sophisticated marketing techniques are unlikely to translate into actual sales performance.

In this sense, trust has shifted from a supporting factor to a core determinant of persuasive effectiveness. Furthermore, relationship management implies the ability to sustain long-term customer engagement through continuous care, timely responsiveness, and personalized service offerings. This capability becomes even more critical in digital contexts, where customer touchpoints are more fragmented and switching costs are lower.

Overall, this study demonstrates that the essence of Persuasion Capability has shifted from message delivery skills to trust-based relationship building, aligning with the relational and interactional emphasis of Service-Dominant Logic. From a managerial perspective, firms should reorient training programs from sales techniques toward relationship management capabilities to strengthen long-term competitive advantage.

6.1.2 Collaborative Value Co-creation as the Core of Co-creation Capability

The results reveal that within the Co-creation Capability dimension, Collaborative Value Co-creation Capability holds the highest importance. This indicates a structural shift in value creation within the MLM industry—from an individual-centered model to a collaborative network-based model.

In the context of digital service innovation, individual distributors can no longer independently deliver customer value. Instead, value creation increasingly relies on teamwork, cross-level interaction, and resource sharing. This finding highlights that hierarchical relationships within MLM systems function not only as sales structures but also as platforms for value co-creation.

Through knowledge exchange, experience sharing, and collaborative operations among partners, firms can accelerate the development of innovative service models and enhance the consistency and quality of customer experiences. The integration of digital tools(e.g., social platforms and AI applications)further facilitates scalable and real-time collaboration.

Importantly, collaborative capability extends beyond internal networks to include customer participation. Distributors are required to actively involve customers in the value creation process through feedback mechanisms, community engagement, and co-design of service experiences, thereby enhancing customer engagement and loyalty.

In sum, this study underscores that the core of Co-creation Capability lies in collaboration, suggesting that MLM firms should prioritize the development of collaborative cultures and mechanisms rather than focusing solely on individual performance. This finding also contributes to digital service innovation literature by emphasizing the centrality of multi-actor interaction in value creation.

6.1.3 Strategic Adjustment and Execution as the Core of Adaptive Capability

The findings indicate that within the Adaptive Capability dimension, Strategic Adjustment and Execution Capability is the most critical sub-dimension. This highlights that in rapidly evolving digital environments, the ability to translate environmental changes into actionable strategies is more important than merely sensing those changes.

In the context of digital service innovation, market conditions, consumer behavior, and technological tools are constantly evolving—for instance, changes in social media algorithms, the rise of live-streaming commerce, and the adoption of emerging AI tools. These dynamics require distributors to continuously adjust their sales strategies and service models in real time.

Thus, the ability to sense environmental changes alone is insufficient; the key lies in the ability to formulate and execute appropriate strategic responses swiftly. Moreover, strategic execution capability reflects individuals' capacity to integrate and utilize limited resources effectively. Given that MLM distributors often operate with high autonomy—managing marketing activities, customer relationships, and digital tools independently—execution capability becomes particularly critical.

Overall, the findings suggest that the essence of Adaptive Capability lies not in abstract adaptability but in concrete strategic action and execution. From a managerial standpoint, firms should enhance employees' strategic thinking and execution skills through case-based learning, practical training, and data-driven feedback mechanisms.

6.1.4 Continuous Learning as the Core of Self-sustainability Capability

The study finds that within the Self-sustainability Capability dimension, Continuous Learning and Capability Development is the most important sub-dimension. This underscores that in the context of rapid digital transformation and service innovation, individual learning capability has become a key source of sustained competitive advantage.

While the MLM industry has traditionally relied on experiential knowledge and interpersonal networks, the accelerated pace of knowledge renewal in digital environments makes continuous learning indispensable. Distributors must continuously acquire new digital skills (e.g., social media tools, AI-driven marketing applications), stay abreast of market trends, and enhance their professional competencies to meet evolving customer demands.

Furthermore, continuous learning contributes to higher self-efficacy and stronger career motivation, which in turn supports long-term retention and business sustainability. Importantly, this study emphasizes that capability development extends beyond knowledge acquisition to include practical application and capability transformation. Learning must be translated into actionable outcomes and performance improvements to generate real value.

In conclusion, the core of Self-sustainability Capability lies in the establishment of continuous learning mechanisms, which influence not only individual performance but also organizational adaptability and long-term development in the digital transformation process. Firms should therefore develop systematic learning platforms and knowledge-sharing mechanisms to support ongoing employee growth.

6.2 Managerial Implications

Drawing upon the four core capability dimensions identified in this study, the managerial implications for the Multi-level Marketing（MLM） industry under digital service innovation can be synthesized into four key transformation directions.

6.2.1 From a sales-driven orientation to a trust-based orientation

Firms should shift their focus from short-term transactional selling toward the development of long-term trust-based relationships, emphasizing credibility, authenticity, and sustained customer engagement.

6.2.2 From individual performance to collaborative networks

Organizational success should no longer be evaluated solely based on individual sales outcomes but rather on the effectiveness of collaborative networks, including team-based interactions, partner coordination, and multi-actor value co-creation.

6.2.3 From static strategies to agile execution

In rapidly evolving digital environments, firms must prioritize agility by continuously adapting strategies and emphasizing swift and effective execution in response to market dynamics and technological change.

6.2.4 From experience reliance to continuous learning

Firms should move beyond dependence on accumulated experience and instead foster a culture of continuous learning, capability development, and digital skill enhancement to sustain long-term competitiveness.

Collectively, these findings suggest that the MLM industry has evolved from a traditional relationship selling model toward a hybrid service system characterized by digital enablement, relational networks, and continuous innovation.

6.3 Recommendations

6.3.1 Future Research Directions

Building on the findings of this study, future research may be advanced along three major directions.

a. Theoretical Advancement

Future studies may further develop integrative theoretical frameworks by combining Dynamic Capabilities Theory, Service-Dominant Logic, and Bottom of the Pyramid (BoP) perspectives. Such integration would enable a more comprehensive understanding of how firms develop and deploy digital service innovation capabilities across different market contexts, particularly in digitally enabled and resource-constrained environments.

b. Methodological Enhancement

Subsequent research may adopt more advanced and diverse methodological approaches to strengthen empirical robustness. For instance, researchers could employ structural equation modeling (SEM) to validate causal relationships among constructs, or integrate AHP with SEM (AHP–SEM hybrid models) to combine expert judgment with statistical inference. In addition, longitudinal research designs would allow for the examination of capability evolution over time, providing deeper insights into dynamic processes and causal mechanisms.

c. Contextual Expansion

Future studies may extend the research scope by exploring diverse contexts. Cross-national comparisons between developed markets and BoP markets could reveal contextual differences in capability development and strategic priorities. Moreover, applying the proposed model to industries beyond MLM would enhance its generalizability. Finally, incorporating AI-enabled contexts（e.g., AI-enabled MLM）would further illuminate how emerging technologies reshape managerial cognition, organizational capabilities, and service innovation practices across different environments.

Taken together, these future research directions highlight the importance of advancing theory, methodology, and contextual scope to deepen our understanding of digital service innovation capabilities. By integrating multiple theoretical perspectives, adopting more rigorous analytical approaches, and examining diverse empirical settings, future studies can further enrich both academic discourse and managerial practice in the evolving digital economy.

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