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Analyzing Drivers and Barriers of IMC in Healthcare: A Structural Approach Using M-TISM and Micmac

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Abstract

This study explores the structural relationships among the barriers and drivers influencing the adoption of Integrated Marketing Communications (IMC) using the Modified Total Interpretive Structural Modeling (M-TISM) technique. Through an extensive literature review and expert interviews, ten critical variables were identified, including regulatory constraints, budget limitations, lack of expertise, and technological challenges. The analysis involved creating a Structural Self-Interaction Matrix (SSIM), Reachability Matrix (RM), and Final Reachability Matrix (FRM) to examine the direct and indirect influences between these variables. The study applied MICMAC analysis to categorize these variables based on their driving and dependence power, revealing that high-driving-power variables like Budget Limitations (B2) and Regulatory Constraints (B1) are key drivers in overcoming barriers to IMC adoption, while variables like Internal Coordination Issues (B10) and Cultural Differences (B6) are more dependent. The study also utilized Level Partitioning and Conical Matrix methods to uncover the hierarchical relationships, providing a clear pathway for addressing the most influential barriers. The findings highlight the need for strategic focus on the most impactful drivers to enhance the adoption and effectiveness of IMC strategies. This research offers a valuable framework for practitioners and decision-makers in overcoming challenges and improving communication integration within organizations.

Keywords: Integrated Marketing Communication (IMC), healthcare, M-TISM, MICMAC, barriers to IMC, regulatory compliance, technological challenges

1. INTRODUCTION

In the rapidly evolving healthcare sector, Integrated Marketing Communication (IMC) has emerged as a critical strategy for enhancing organizational effectiveness and patient engagement. IMC involves the strategic coordination of various marketing channels to deliver a consistent and coherent message, thereby optimizing the impact of communication efforts (Kotler & Keller, 2016). With the increasing complexity of healthcare services and the growing importance of patient-centric approaches, the need for effective IMC strategies has become more pronounced. Healthcare organizations must integrate multiple communication tools and channels to address the diverse needs of patients and stakeholders, ensuring that their messaging is not only persuasive but also aligns with regulatory requirements and organizational goals (Harris & Reid, 2020).

Despite its potential benefits, the implementation of IMC in healthcare faces several challenges. Barriers such as budget constraints, regulatory compliance, and organizational resistance often hinder the effective deployment of integrated communication strategies (Pitt, Parent, & Berthon, 2018). Additionally, the dynamic nature of the healthcare industry requires constant adaptation of marketing practices to keep pace with technological advancements and shifting patient expectations (Kotler & Keller, 2016). Understanding the drivers and barriers of IMC in this context is essential for developing strategies that enhance communication effectiveness and improve patient engagement.

This study aims to analyze the drivers and barriers of IMC in healthcare using a structural approach based on M-TISM and MICMAC methodologies. By identifying and evaluating the factors that influence the effectiveness of IMC strategies, the study seeks to provide insights into how healthcare organizations can better align their marketing efforts to achieve greater impact and efficiency in their communication practices.

2. LITERATURE REVIEW

Budget constraints are a significant barrier to implementing effective Integrated Marketing Communication (IMC) strategies in healthcare. Financial limitations can restrict the range and scope of communication activities, affecting the quality and reach of marketing efforts (Luo & Bhattacharya, 2006). Healthcare organizations often face tight budgets due to high operational costs and regulatory requirements, which can limit their ability to invest in comprehensive IMC programs (Lee, 2015). Studies have shown that organizations with constrained budgets tend to prioritize immediate financial returns over long-term strategic investments, leading to suboptimal marketing outcomes (Verhoef & Lemon, 2013). Furthermore, budget limitations can impact the ability to utilize advanced marketing technologies and analytics, which are crucial for effective IMC (Kumar & Shah, 2004).

Regulatory compliance poses a significant challenge for IMC in the healthcare sector. The healthcare industry is heavily regulated, with stringent rules governing advertising, patient privacy, and data security (Krogsgaard, 2019). Compliance with regulations such as the Health Insurance Portability and Accountability Act (HIPAA) in the United States can restrict the types of marketing messages and channels used (Nair, 2017). Moreover, healthcare organizations must navigate a complex landscape of local and international regulations, which can complicate the development and execution of integrated communication strategies (Zineldin, 2006). Ensuring compliance requires additional resources and expertise, which can further strain limited marketing budgets (Cottam et al., 2020).

Organizational resistance to change can hinder the successful implementation of IMC strategies. Resistance often arises due to a lack of buy-in from key stakeholders, such as senior management and department heads, who may be skeptical of the benefits of IMC (Kotter, 1996). Research has indicated that organizations with entrenched cultures and traditional marketing practices may struggle to adapt to new, integrated approaches (Burnes, 2017). Resistance can also stem from employees who are accustomed to established workflows and may perceive IMC as an unnecessary disruption (Bovens et al., 2014). Overcoming this resistance requires effective change management strategies and clear communication of the benefits of IMC (Armenakis et al., 1999).

Technological challenges can impede the effective implementation of IMC in healthcare. The rapid pace of technological advancements requires organizations to continuously update their marketing tools and platforms (Chaffey & Ellis-Chadwick, 2016). Healthcare organizations may face difficulties integrating new technologies with existing systems, leading to inefficiencies and data silos (Hossain et al., 2021). Additionally, the adoption of advanced analytics and digital marketing tools requires significant investment and training, which can be a barrier for organizations with limited resources (Hennig-Thurau et al., 2010). Effective IMC relies on the seamless integration of various technological platforms to provide a unified customer experience (Grewal et al., 2017).

Data security and privacy concerns are critical barriers to IMC in healthcare. Protecting patient information is a top priority, and any breach or misuse of data can have serious legal and reputational consequences (Elovainio et al., 2021). The stringent requirements for data protection, such as those outlined by the General Data Protection Regulation (GDPR), necessitate rigorous security measures and protocols (Sørensen & Jørgensen, 2019). Ensuring compliance with these regulations can complicate the implementation of IMC strategies, particularly those that involve collecting and analyzing customer data (Martin et al., 2021). Balancing effective marketing with the need to protect sensitive information remains a significant challenge for healthcare organizations (Kraemer-Mbula & Wamae, 2018).

Fragmented communication channels present a significant challenge for IMC in healthcare. Many healthcare organizations use a variety of communication channels, such as print media, social media, and digital platforms, but these channels are often not integrated effectively (Wirtz et al., 2013). This fragmentation can lead to inconsistent messaging and reduced overall effectiveness of marketing efforts (Berger & Schwartz, 2011). Research has shown that integrated communication strategies are more successful when organizations can unify their messaging across multiple channels (Rust et al., 2004).

Overcoming fragmentation requires a coordinated approach and the use of integrated marketing technologies (Keller & Lehmann, 2003).

Limited human resources can impede the successful implementation of IMC strategies in healthcare. Effective IMC requires skilled personnel to manage and execute complex marketing campaigns (Kotler et al., 2017). However, many healthcare organizations face challenges in recruiting and retaining qualified marketing professionals due to competitive job markets and limited budgets (Baines et al., 2016). The shortage of skilled staff can result in inadequate planning, execution, and evaluation of IMC strategies (Homburg et al., 2015). Addressing this barrier involves investing in training and development programs to enhance the capabilities of marketing teams (Day, 2011).

A lack of strategic alignment between marketing and organizational goals can hinder the effectiveness of IMC strategies. Research indicates that successful IMC requires alignment between marketing objectives and overall business strategies (Morgan et al., 2009). When marketing efforts are not closely aligned with organizational goals, there is a risk of misallocation of resources and suboptimal outcomes (Collins & Rukstad, 2008). Achieving strategic alignment involves integrating marketing plans with broader business objectives and ensuring that all stakeholders are on the same page regarding marketing priorities (Porter, 1985).

Changing patient expectations pose a significant barrier to effective IMC in healthcare. Patients increasingly demand personalized and relevant communication, driven by advancements in digital technology and greater access to information (Osei-Frimpong et al., 2015). Healthcare organizations must adapt their marketing strategies to meet these evolving expectations, which can be challenging given the need to balance personalization with regulatory constraints (B2B Marketing, 2018). Understanding and responding to patient needs requires ongoing research and analysis, which can strain resources (Sweeney et al., 2014).

Integrating multichannel data for a cohesive IMC strategy can be challenging for healthcare organizations. The ability to collect and analyze data from various channels, such as social media, email, and website interactions, is essential for effective IMC (Lamberton & Stephen, 2016). However, many organizations struggle with data integration due to disparate systems and data silos (Bauer et al., 2018). Successful integration involves leveraging advanced analytics and data management tools to create a unified view of customer interactions (Huang et al., 2019). Addressing this challenge requires investment in data infrastructure and technology (Kim & Mauborgne, 2005).

The study identified 10 Barriers to IMC in Healthcare:

1. **Regulatory Constraints** (B1) – Strict regulations in the healthcare and pharmaceutical sector that limit promotional activities.
2. **Budget Limitations** (B2) – Limited funds available for extensive marketing communication efforts.
3. **Lack of IMC Expertise** (B3) – Insufficient knowledge and expertise within healthcare organizations to implement IMC effectively.
4. **Resistance to Change** (B4) – Reluctance of stakeholders to adopt new IMC strategies due to traditional marketing approaches.
5. **Fragmented Communication Channels** (B5) – Lack of integration between different communication channels, leading to disjointed messaging.
6. **Cultural Differences** (B6) – Diverse patient demographics with varying cultural perspectives that hinder standardized communication strategies.
7. **Technological Challenges** (B7) – Difficulty in adopting digital platforms and technologies for IMC purposes.
8. **Privacy Concerns** (B8) – Sensitivity around patient data and confidentiality that restricts personalized marketing.
9. **Inconsistent Messaging** (B9) – Difficulty in maintaining consistent messaging across all platforms and departments.
10. **Internal Coordination Issues** (B10) – Lack of collaboration between departments within the healthcare organization, leading to siloed marketing efforts.

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3. METHODOLOGY

The methodology for this study, Analyzing Drivers and Barriers of Integrated Marketing Communication (IMC) in Healthcare: A Structural Approach Using M-TISM and MICMAC, combines qualitative and quantitative techniques to assess the factors influencing the effectiveness of IMC implementation in the healthcare sector. This study employs an exploratory research design to identify the key drivers and barriers of IMC in healthcare and apply structural modeling techniques to analyze their interrelationships. The methodology consists of three key phases:

Phase 1: Identification of barriers and drivers through literature review and expert interviews.

Phase 2: Application of the Modified Total Interpretive Structural Modeling (M-TISM) technique to map relationships among the identified barriers.

Phase 3: MICMAC analysis to determine the influence and dependence of the barriers.

A comprehensive literature review was conducted to identify common barriers and drivers of IMC in healthcare. Scholarly articles, industry reports, and case studies related to IMC and healthcare marketing were analyzed to develop an initial list of factors. Further, to refine the list of identified barriers and drivers, semi-structured interviews were conducted with 15 experts from the healthcare and pharmaceutical sectors, including marketing professionals, healthcare managers, and policy regulators. The selection was based on purposive sampling, targeting professionals with at least five years of experience in IMC-related roles. The interviews aimed to validate and expand upon the factors identified in the literature review. The interviews were transcribed, and content analysis was used to extract relevant themes.

TISM software was used for structural modeling and transitivity checks and Fuzzy MICMAC software was utilized for fuzzy analysis and classification of barriers. The model was validated through triangulation, using both literature review and expert inputs. The reachability matrix and MICMAC results were reviewed and revised based on feedback from a panel of experts to ensure consistency and reliability.

4. MODIFIED TOTAL INTERPRETIVE STRUCTURAL MODELING (M-TISM) & MICMAC ANALYSIS

The Modified TISM technique was applied to determine the structural relationship among the barriers and drivers identified in the literature review and expert interviews.

Structural Self-Interaction Matrix (SSIM)

Variables	1	2	3	4	5	6	7	8	9	10
Regulatory Constraints (B1)		A	V	X	V	V	V	V	V	V
Budget Limitations (B2)			V	V	V	V	V	V	O	V
Lack of IMC Expertise (B3)				A	O	A	A	A	V	V
Resistance to Change (B4)					A	V	V	V	O	V
Fragmented Communication Channels (B5)						V	V	O	O	V
Cultural Differences (B6)							V	V	V	V
Technological Challenges (B7)								A	V	A
Privacy Concerns (B8)									A	A
Inconsistent Messaging (B9)										A
Internal Coordination Issues (B10)										

The above table displayed represents a **Structural Self-Interaction Matrix (SSIM)**, commonly used in MICMAC analysis to assess relationships between variables. In this table, 10 variables (e.g., Regulatory Constraints, Budget Limitations, Lack of IMC Expertise) are analyzed for how they influence each other. The interactions between the variables are marked with symbols such as "V", "A", "X", and "O", each of which typically has a specific meaning (e.g., V = variable i influences j, A = j influences i, X = mutual influence, O = no influence). For example, regulatory constraints (B1) are shown to have various levels of influence (V, A, O, X) on other factors such as resistance to change, technological challenges, and budget limitations. This matrix is a foundational step in understanding the driving and dependent relationships among variables, which are later categorized in the MICMAC analysis.

The **Reachability Matrix (RM)** table given below shows binary relationships between the variables from the Structural Self-Interaction Matrix (SSIM), with "1" indicating a direct influence and "0" indicating no direct influence. The driving power represents the total number of variables that each factor influences (row-wise total), while dependence power indicates how much a factor is influenced by other variables (column-wise total). For instance, "Regulatory Constraints (B1)" and "Budget Limitations (B2)" have high driving powers of 9, meaning they influence most other variables. On the other hand, "Inconsistent Messaging (B9)" has the lowest driving power of 2, showing it influences very few other variables. This matrix helps in identifying key drivers and dependent factors in the system. High-driving-power variables are considered critical drivers of change.

Reachability Matrix(RM)

Variables	1	2	3	4	5	6	7	8	9	10	Driving Power
Regulatory Constraints (B1)	1	0	1	1	1	1	1	1	1	1	9
Budget Limitations (B2)	1	1	1	1	1	1	1	1	0	1	9
Lack of IMC Expertise (B3)	0	0	1	0	0	0	0	0	1	1	3
Resistance to Change (B4)	1	0	1	1	0	1	1	1	0	1	7
Fragmented Communication Channels (B5)	0	0	0	1	1	1	1	0	0	1	5
Cultural Differences (B6)	0	0	1	0	0	1	1	1	1	1	6
Technological Challenges (B7)	0	0	1	0	0	0	1	0	1	0	3
Privacy Concerns (B8)	0	0	1	0	0	0	1	1	0	0	3
Inconsistent Messaging (B9)	0	0	0	0	0	0	0	1	1	0	2
Internal Coordination Issues (B10)	0	0	0	0	0	0	1	1	1	1	4
Dependence Power	3	1	7	4	3	5	8	7	6	7	

The table below shown is a Final Reachability Matrix (FRM), which helps analyze the relationships among various variables and their driving power and dependence power. The variables listed include regulatory constraints, budget limitations, lack of expertise, resistance to change, communication issues, cultural differences, technological challenges, privacy concerns, inconsistent messaging, and internal coordination issues. Each variable is analyzed in terms of its reachability with other variables (1 indicates direct influence, 0 indicates no influence, and 1* indicates a self-loop or reflexive influence). Driving power represents how much influence a variable has on others (summing the rows), while dependence power indicates how influenced a variable is by others (summing the columns). The matrix shows that "Budget Limitations (B2)" has the highest driving power (10), indicating it strongly influences many other factors, while "Dependence Power" has the highest overall dependence. Conversely, variables such as lack of expertise, technological challenges, and privacy concerns have lower driving power.

Final Reachability Matrix(FRM)

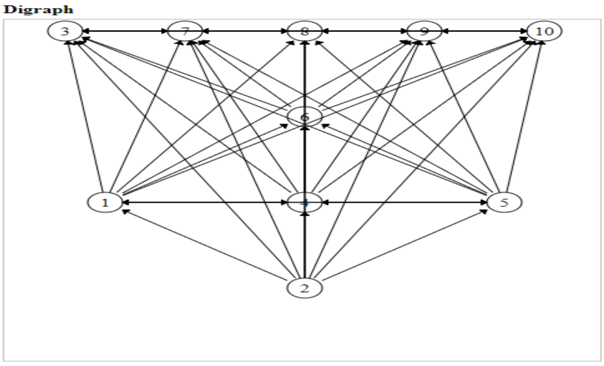
Variables	1	2	3	4	5	6	7	8	9	10	Driving Power
Regulatory Constraints (B1)	1	0	1	1	1	1	1	1	1	1	9
Budget Limitations (B2)	1	1	1	1	1	1	1	1	1*	1	10
Lack of IMC Expertise (B3)	0	0	1	0	0	0	1*	1*	1	1	5
Resistance to Change (B4)	1	0	1	1	1*	1	1	1	1*	1	9
Fragmented Communication Channels (B5)	1*	0	1*	1	1	1	1	1*	1*	1	9
Cultural Differences (B6)	0	0	1	0	0	1	1	1	1	1	6
Technological Challenges (B7)	0	0	1	0	0	0	1	1*	1	1*	5
Privacy Concerns (B8)	0	0	1	0	0	0	1	1	1*	1*	5
Inconsistent Messaging (B9)	0	0	1*	0	0	0	1*	1	1	1*	5
Internal Coordination Issues (B10)	0	0	1*	0	0	0	1	1	1	1	5
Dependence Power	4	1	10	4	4	5	10	10	10	10	

The Level Partitioning (LP) table given below organizes the variables based on their reachability, antecedents, and intersections to determine their hierarchical levels. Elements with higher levels, such as 2 and 6, are more dependent on other elements, indicating they are influenced by multiple factors. In contrast, elements like 3, 7, 8, 9, and 10 have lower levels, signifying stronger driving power and influence over others. The reachability sets show what each element can influence, while the antecedent sets display what influences each element. The intersection sets highlight commonalities between what an element influences and what influences it, helping to assign the final levels. This hierarchy shows how certain variables are more foundational in the system, while others are more dependent.

Level Partitioning(LP)

Elements(Mi)	Reachability Set R(Mi)	Antecedent Set A(Ni)	Intersection Set R(Mi)∩A(Ni)	Level
1	1, 4, 5,	1, 2, 4, 5,	1, 4, 5,	3
2	2,	2,	2,	4
3	3, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	3, 7, 8, 9, 10,	1
4	1, 4, 5,	1, 2, 4, 5,	1, 4, 5,	3
5	1, 4, 5,	1, 2, 4, 5,	1, 4, 5,	3
6	6,	1, 2, 4, 5, 6,	6,	2
7	3, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	3, 7, 8, 9, 10,	1
8	3, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	3, 7, 8, 9, 10,	1
9	3, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	3, 7, 8, 9, 10,	1
10	3, 7, 8, 9, 10,	1, 2, 3, 4, 5, 6, 7, 8, 9, 10,	3, 7, 8, 9, 10,	1

The digraph given below represents the relationships and hierarchical structure between the elements based on the previously discussed reachability matrix and level partitioning. Each node in the graph corresponds to one of the elements, and the directed arrows between nodes show the influence one element has over another. Elements like 3, 7, 8, 9, and 10, which are positioned at the top, are more foundational with higher driving power, as they influence many others. Elements such as 1, 2, and 5 are more dependent, indicated by their lower positioning and the incoming arrows from the more influential nodes. The connections highlight the complex interdependencies and feedback loops within the system, demonstrating both direct and indirect influences among the variables.

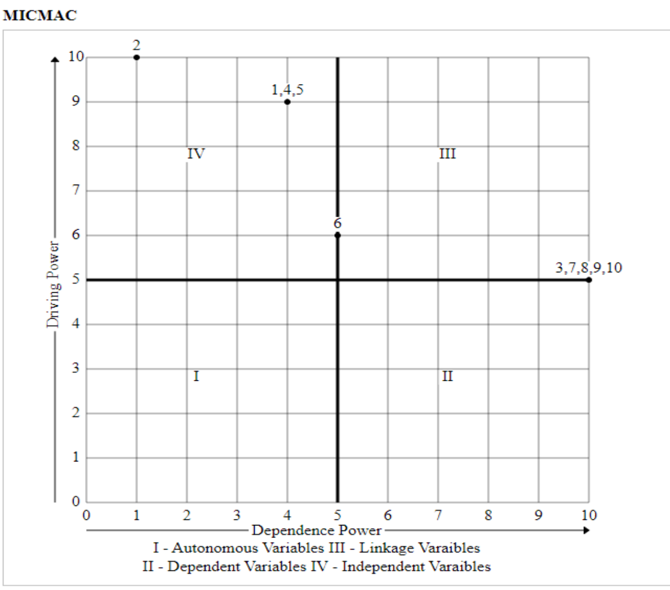


The **MICMAC** (Matrice d'Impacts Croisés Multiplication Appliquée à un Classement) analysis chart is used to categorize variables based on their driving power (influence on other variables) and dependence power (how much they are influenced by others).

The chart is divided into four quadrants:

- **Quadrant I (Autonomous Variables)**: Contains variables with weak driving and dependence power, indicating they are relatively disconnected from the system. This quadrant is empty in the diagram.
- **Quadrant II (Dependent Variables)**: Contains variables with low driving power but high dependence power. Variable 6 falls in this quadrant, meaning it is highly influenced by others but has limited influence on the system.
- **Quadrant III (Linkage Variables)**: Contains variables with both high driving and dependence power. These variables (none shown in this diagram) would typically be unstable and cause feedback loops within the system.
- **Quadrant IV (Independent Variables)**: Variables in this quadrant (2, 1, 4, 5, and 3, 7, 8, 9, 10) have high driving power but low dependence, meaning they strongly influence others but are not easily influenced themselves. Specifically, variables 3, 7, 8, 9, and 10 are highly independent with the most significant influence, while variables 1, 4, 5, and 2 are also influential but slightly less dominant.

This helps identify which variables drive the system and which ones are more reactive or dependent.



The **Conical Matrix (CM)** table given below provides an integrated view of the relationships between variables based on both their driving power and dependence power, which are derived from the reachability matrix. The table below shows variables 2 and 5 have the highest driving power (10), suggesting they exert strong influence over the system, variables 3, 7, 8, 9, and 10 have lower driving power (5) but are still important as foundational elements in the system (Level 1) and variable 6 is in Level 2, acting as both a dependent and influential variable, while variables 1, 4, and 5 have high driving power (9) and are in Level 3, indicating significant influence but also dependence on other variables. The CM helps visually align the variables based on their structural hierarchy and importance in the system.

Conical Matrix(CM)

Variables	3	7	8	9	10	6	1	4	5	2	Driving Power	Level
3	1	1*	1*	1	1	0	0	0	0	0	5	1
7	1	1	1*	1	1*	0	0	0	0	0	5	1
8	1	1	1	1*	1*	0	0	0	0	0	5	1
9	1*	1*	1	1	1*	0	0	0	0	0	5	1
10	1*	1	1	1	1	0	0	0	0	0	5	1
6	1	1	1	1	1	1	0	0	0	0	6	2
1	1	1	1	1	1	1	1	1	1	0	9	3
4	1	1	1	1*	1	1	1	1	1*	0	9	3
5	1*	1	1*	1*	1	1	1*	1	1	0	9	3
2	1	1	1	1*	1	1	1	1	1	1	10	4
Dependence Power	10	10	10	10	10	5	4	4	4	1		
Level	1	1	1	1	1	2	3	3	3	4		

The **Reduced Conical Matrix (CM)** provides a more focused view of the relationships between the key variables affecting the system. The matrix aligns variables based on their driving power and dependence power, helping to identify which factors are more influential and which are more reactive.

- **Driving Power**: This represents how much a variable influences others. Variables like **Budget Limitations (B2)** have the highest driving power (10), making them highly influential.
- **Dependence Power**: This shows how much a variable is influenced by others. Variables **3, 7, 8, 9, 10** have high dependence power (10), indicating they are highly affected by other factors in the system.
- **Level**: This column organizes the variables into hierarchical levels. **Level 1** variables (such as Lack of IMC Expertise, Technological Challenges, Privacy Concerns, etc.) have moderate driving power but are critical in the system. **Level 4** variables, such as Budget Limitations, are the most influential and foundational to the entire system.

Variables like Regulatory Constraints (B1), Resistance to Change (B4), and Fragmented Communication Channels (B5) are in Level 3, meaning they are both influential and dependent, acting as intermediaries in the system. Meanwhile, Cultural Differences (B6) in Level 2 is also influential but less so compared to Level 3 variables.

Reduced Conical Matrix(CM)

Variables	3	7	8	9	10	6	1	4	5	2	Driving Power	Level
Lack of IMC Expertise (B3)	1	1*	1*	1	1	0	0	0	0	0	5	1
Technological Challenges (B7)	1	1	1*	1	1*	0	0	0	0	0	5	1
Privacy Concerns (B8)	1	1	1	1*	1*	0	0	0	0	0	5	1
Inconsistent Messaging (B9)	1*	1*	1	1	1*	0	0	0	0	0	5	1
Internal Coordination Issues (B10)	1*	1	1	1	1	0	0	0	0	0	5	1
Cultural Differences (B6)	1	1	1	1	1	1	0	0	0	0	6	2
Regulatory Constraints (B1)	0	0	0	0	0	1	1	1	1	0	9	3
Resistance to Change (B4)	0	0	0	0	0	1	1	1	1*	0	9	3
Fragmented Communication Channels (B5)	0	0	0	0	0	1	1*	1	1	0	9	3
Budget Limitations (B2)	0	0	0	0	0	0	1	1	1	1	10	4
Dependence Power	10	10	10	10	10	5	4	4	4	1		
Level	1	1	1	1	1	2	3	3	3	4		

5. FINDINGS OF THE STUDY:

The Modified Total Interpretive Structural Modeling (M-TISM) method was employed to explore and understand the structural relationships among the barriers and drivers affecting Integrated Marketing Communications (IMC) adoption. By integrating insights from literature reviews and expert interviews, the study identified ten key variables, such as regulatory constraints, budget limitations, and lack of IMC expertise. The Structural Self-Interaction Matrix (SSIM) displayed the interactions among these variables, representing whether one variable influenced another. The analysis of these relationships formed the foundation for understanding which variables acted as drivers and which were more dependent on others. The SSIM results provided valuable insight into the underlying structure of the relationships, setting the stage for further analysis.

The Reachability Matrix (RM) and Final Reachability Matrix (FRM) refined the analysis by determining the binary relationships between the identified variables. These matrices demonstrated the direct influences (1) or lack of influence (0) between the variables, with self-loops indicated by (1*). The driving power and dependence power of each variable were calculated, with factors like Budget Limitations (B2) and Regulatory Constraints (B1) emerging as key drivers due to their high driving powers. On the other hand, variables such as Inconsistent Messaging (B9) had lower driving power, indicating they played a more reactive role in the system. This categorization of variables helped highlight which factors were more crucial in driving the adoption of IMC.

The Level Partitioning (LP) table provided a hierarchical classification of the variables, based on their reachability and dependencies. Variables at higher levels, like Cultural Differences (B6) and Internal Coordination Issues (B10)**,** were more dependent on other factors. In contrast, variables such as Regulatory Constraints (B1)**,** Resistance to Change (B4), and Fragmented Communication Channels (B5) had high driving power and played pivotal roles as drivers. The hierarchical structure illustrated in the LP table helped map out which factors were fundamental and needed attention for effective implementation of IMC. It also clarified how each factor interacted with others, providing a roadmap for prioritizing actions.

Lastly, the MICMAC analysis helped categorize variables based on their driving and dependence powers, organizing them into four quadrants. Variables in Quadrant IV such as Budget Limitations (B2) and Technological Challenges (B7) were identified as independent variables with high driving power, meaning they influenced many other variables but were not easily influenced themselves. These variables are crucial in the system as they hold the key to driving change. The Conical Matrix and Reduced Conical Matrix further streamlined the findings by visually aligning the variables according to their structural importance. This detailed analysis offers a strategic framework for stakeholders to focus on key drivers, like budget limitations and regulatory constraints, while also considering how dependent variables such as internal coordination and cultural differences could be addressed to promote successful IMC adoption.

6. MANAGERIAL IMPLICATIONS

The Modified Total Interpretive Structural Modeling (M-TISM) analysis, suggest to prioritize addressing the most influential drivers within the system, particularly Budget Limitations (B2) and Regulatory Constraints (B1). These variables were identified as having the highest driving power, meaning they significantly influence the other barriers to Integrated Marketing Communications (IMC) adoption. Organizations should focus on allocating sufficient resources and ensuring regulatory compliance to create an enabling environment for IMC implementation. By resolving financial constraints and adapting to regulatory requirements, companies can reduce resistance to change, foster internal coordination, and overcome other related challenges.

Further, it is necessary to strengthen the expertise in IMC and address technological challenges, both of which were highlighted as crucial but less independent drivers. By enhancing knowledge and skills in IMC practices through training programs and workshops, organizations can ensure that employees are better equipped to manage the complexities of communication integration. Additionally, investment in technology is necessary to streamline communication processes, reduce fragmentation, and improve message consistency across channels. Technological advancements can also mitigate privacy concerns, which were shown to have moderate dependence in the system, further supporting smoother IMC implementation.

Additionally, addressing Cultural Differences (B6) and Internal Coordination Issues (B10) should be considered key focus areas for organizations seeking to improve IMC adoption. These variables, while not as strongly influential, were found to be highly dependent on other factors. Organizations should work on fostering a unified internal culture that supports collaboration and communication across departments and regions. By improving internal coordination and addressing cultural barriers, companies can create a cohesive environment that facilitates the successful integration of marketing communications strategies, ultimately leading to more effective campaigns and improved organizational performance.

7. CONCLUSION

The study provides a comprehensive analysis of the barriers and drivers influencing the adoption of Integrated Marketing Communications (IMC) through the application of the Modified Total Interpretive Structural Modeling (M-TISM) technique. By systematically identifying and structuring key variables such as regulatory constraints, budget limitations, and technological challenges, the study highlights their interconnectedness and the extent to which they drive or depend on other factors. The analysis reveals that some variables, like Budget Limitations (B2) and Regulatory Constraints (B1)**,** are critical drivers with significant influence over the system, while others, like Internal Coordination Issues (B10) and Cultural Differences (B6)**,** are more dependent and reactive.

Through the application of the Structural Self-Interaction Matrix (SSIM), Reachability Matrix (RM), and Final Reachability Matrix (FRM), the relationships among these variables were clarified, showing that high-driving-power variables are key levers for change. The MICMAC analysis further categorized these variables, offering a strategic framework for decision-makers to focus on independent drivers that can initiate systemic improvements. Variables with low driving power but high dependence, such as Inconsistent Messaging (B9)**,** need special attention to mitigate their reactive effects within the system.

The Level Partitioning and Conical Matrix highlighted the hierarchical relationships, identifying foundational variables like budget limitations as pivotal in overcoming barriers to IMC adoption. These insights suggest that addressing the most influential drivers, while managing dependent factors, can lead to a more streamlined and effective IMC implementation strategy. The study concludes that organizations aiming to adopt IMC must prioritize overcoming financial, regulatory, and technological barriers while simultaneously fostering internal coordination and addressing cultural differences to achieve successful integration.

The study provides a robust framework for understanding the complex dynamics between the various barriers and drivers of IMC adoption. By prioritizing the most influential factors and addressing interdependencies, stakeholders can formulate more effective strategies to facilitate IMC adoption, ensuring a cohesive and well-integrated communication approach. This analysis serves as a guide for practitioners and policymakers to better navigate the challenges of IMC implementation, emphasizing the need to focus on key drivers while managing the broader organizational and environmental factors.

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