

ARAŞTIRMA MAKALESİ / RESEARCH ARTICLE

THE MULTIDIMENSIONAL MARKETING CULTURE AND ITS IMPACT ON MARKETING INNOVATION IN HOSPITALS ACROSS NORTHERN IRAQ

KUZNEY İRAK'TAKİ HASTANELERDE ÇOK BOYUTLU PAZARLAMA KÜLTÜRÜ VE PAZARLAMA YENİLİĞİNE ETKİSİ

Dr. Rizgar Saed HUSSEİN¹
Prof. Dr. Cuma AKBAY²

ABSTRACT

This study investigates the complex, multidimensional characteristics of marketing culture (MC) and its influence on marketing innovation (MI) within public and private hospitals in Northern Iraq. Grounded in Webster's theoretical framework, the research assesses six dimensions of MC: service quality, personal contact, sales emphasis, organizational structure, internal relations, and innovation orientation. Correspondingly, six key components of MI are explored: technological advancement, pricing strategies, resource optimization, risk management, creative ideation, and progressive creativity. Data derived from 392 survey responses collected in 2018 were analyzed through Structural Equation Modeling (SEM) to assess these relationships. Results indicate that service quality, internal relations, and invention significantly enhance MI, while personal contact, selling importance, and organizational factors do not show significant relationships. The study highlights the need for improved relationships between managers and employees and recommends providing constructive feedback to enhance performance.

Keywords: Innovation, Marketing culture, Hospital, Structural equation modelling, Iraq

ÖZET

Bu çalışma, Kuzey Irak'taki kamu ve özel hastanelerde pazarlama kültürünün çok boyutlu doğasını ve bunun pazarlama yeniliği üzerindeki etkisini incelemektedir. Webster'ın teorik çerçevesine dayanan araştırma, pazarlama kültürünün altı boyutunu değerlendirmektedir: hizmet kalitesi, kişisel temas, satış vurgusu, organizasyon yapısı, iç ilişkiler ve inovasyon yönelimi. Buna karşılık, pazarlama inovasyonunun altı temel bileşeni incelenmektedir: teknolojik ilerleme, fiyatlandırma stratejileri, kaynak optimizasyonu, risk yönetimi, yaratıcı fikir oluşturma ve ilerici yaratıcılık. Toplanan 392 anket yanıtından elde edilen veriler, bu ilişkileri değerlendirmek amacıyla Yapısal Eşitlik Modellemesi kullanılarak analiz edilmiştir. Sonuçlar, hizmet kalitesinin, iç ilişkilerin ve icadın pazarlama inovasyonunu önemli ölçüde artırdığını, kişisel temasın, satış öneminin ve organizasyonel faktörlerin ise önemli ilişkiler göstermediğini göstermektedir. Çalışma, yöneticiler ve çalışanlar arasındaki ilişkilerin iyileştirilmesi ihtiyacını vurgulamakta ve performansı artırmak için yapıcı geri bildirim sağlanmasını tavsiye etmektedir.

Anahtar Kelimeler: İnovasyon, Pazarlama kültürü, Hastane, Yapısal eşitlik modellemesi, Irak

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¹ Soran University, Business Management Department, Iraq, rizgar.hussein@soran.edu.iq, ORCID: 0009-0007-1163-4374,

² Kahramanmaraş Sutcu İmam University, Agricultural Faculty, Department of Agricultural Economics, cakbay@ksu.edu.tr
ORCID: 0000-0001-7673-7584

1. INTRODUCTION

In today's dynamic business environment, organizations face rapidly evolving conditions that present formidable challenges. To address these challenges effectively, organizations must embrace innovative paradigms. One such approach is the cultural philosophy of marketing, which provides a structured framework for navigating complex market dynamics while enhancing profitability. As a recognized economic and management philosophy, it promotes an organizational culture that prioritizes ethical practices, strategic activities, and competitiveness, fostering sustainable growth in volatile markets.

This paradigm is particularly relevant in the healthcare sector of northern Iraq, where hospitals grapple with resource constraints, rapidly evolving patient needs, and a competitive service delivery landscape. In this context, marketing culture (MC) becomes essential for fostering cohesive strategies that enable institutions to navigate dynamic market conditions while enhancing patient care and satisfaction (Younus et al., 2022; Alamro, 2024).

MC encourages knowledge sharing across organizational levels, fostering a unified response that ensures the delivery of continuous value to customers. This collective effort enhances adaptability, equipping organizations to navigate the inherent transformations of dynamic markets. Effective market management focuses on understanding and fulfilling customers' evolving needs by offering differentiated products and services. A customer-centric approach not only drives innovation but also enables organizations to strategically achieve their goals.

Innovation refers to the practical implementation of novel ideas, encompassing enhanced products, services, or processes (Millson & Wilemon, 2008; Hermundsdottir & Aspelund, 2021). It encompasses, as well as, new marketing strategies or organizational methods within both internal and external business contexts (OECD, 2005). Recent literature emphasizes the dynamic role of innovation in sustaining competitiveness, particularly within healthcare systems that face rapid technological and organizational changes (Younus et al., 2022; Samuelsson, 2023; Alamro, 2024). Marketing innovation involves adopting new approaches to redefine product design, packaging, placement, promotion, or pricing while integrating strategies aligned with organizational goals and frameworks (Robinson & Pearce, 1988; Gharghina et al., 2020; Samuelsson, 2023). It is crucial to align these strategies with customer preferences, as rapid technological advancements can quickly shift customer loyalty and priorities. By enabling firms to adapt to market changes and customer needs, marketing innovation plays a vital role in maintaining competitiveness (Rosli, & Sidek, 2013; Yelmi et al., 2021; Olawore et al., 2024). Moreover, marketing innovation involves creating and executing novel ideas to deliver, communicate, and maximize value for customers while fostering strong customer relationships (Tinoco, 2005).

While previous studies have examined marketing culture and innovation across various service sectors, limited research has examined how this relationship plays out specifically in the healthcare sector, particularly in fragile and resource-constrained environments like the Northern Region of Iraq. Hospitals' unique organizational structures, regulatory pressures, and service delivery challenges create a distinct context in which the MC-MI relationship may operate differently than in traditional market environments. This study fills a significant gap in the literature by examining this relationship in the Northern Region of Iraqi hospitals and offers previously unexplored, context-specific theoretical and managerial insights.

The current study illuminates both the facets of MC and their efficacy, along with their application concerning elements of MI. This is achieved through the development of conceptual and field frameworks aimed at understanding the interconnection between MC and

innovative marketing elements. Furthermore, the study analyzes the relationships and abstract effects of these dimensions. Recognizing the importance of these factors, this research endeavors to comprehensively delve into these topics and underscore their central roles in examining organizations operating within hospitals in the northern region of Iraq.

The relationships between MC and its effects on MI and customer satisfaction have been studied by various scientists (Webster, 1993 and 1995; Appiah-Adu & Singh, 1999; Appiah-Adu et al., 2000; Homburg & Pflesser, 2000; Mavondo & Farrell, 2003; Harrison & Shaw, 2004; Deshpandé & Farley, 2004; Gainer & Padanyi, 2005; Karatepe et al., 2005; O'Cass & Viet Ngo, 2007; Ali & Anwar, 2021; Younus et al., 2022; de Oliveira et al., 2024). Webster (1993 and 1995) asserted that MC encompasses evolving trends, political dynamics, and timely strategies. This cultural framework directs employees towards proactive behaviors, emphasizing the organization's commitment to marketing and the execution of marketing initiatives. Conversely, recent studies, such as those by Appiah-Adu & Singh (1999), and other researchers and professionals, have underscored the potential of embedding cultural services within organizations and implementing highly regulated marketing practices. Studies conducted across diverse regions globally have consistently demonstrated a critical correlation between MC and various performance metrics, including service quality, consumer loyalty, employee satisfaction, and key execution indicators such as population, gross operating margin, and market share (Ali & Anwar, 2021; Younus et al., 2022; de Oliveira et al., 2023). Gainer & Padanyi (2005) conducted research revealing a robust positive correlation between market-oriented behavior and organizational performance. Their seminal work introduced a pivotal concept: the mediating role of a market-oriented culture in this relationship. By exploring this dynamic, their study not only enhanced comprehension of the theoretical linkage between culture and market-oriented behavior within non-profit organizations but also elucidated effective administrative strategies for cultivating market orientation within these entities. Webster et al. (2005) identified that market orientation was perceived more strongly by deans at private business schools than those at public institutions, emphasizing the role of organizational culture in shaping market orientation and performance across various sectors. Leaders in private business education displayed particularly high levels of market orientation. Similarly, O'Cass & Viet Ngo (2007) found that organizational culture exerts a more substantial influence on organizational performance than market orientation alone. Moreover, de Oliveira et al. (2024) found that a significant relationship between innovative culture and organizational performance, supportive culture and market orientation and organizational performance.

In contrast, other research indicated that market orientation positively impacts development outcomes, though competitor orientation's effect requires a minimum level of customer orientation to be effective. This study further suggested that the link between market orientation and innovation is stronger in highly competitive contexts but weaker in volatile environments. Additionally, Grinstein (2008) reported that this relationship is more pronounced in large firms, service sectors, and in countries with high individualism and power distance. Dobni (2008) also proposed a seven-component framework to support an innovation-driven culture, encompassing innovation mindset, structured support, organizational learning, creativity and empowerment, market orientation, value orientation, and execution.

While the significance of MC and innovation dimensions is well-recognized, limited studies have directly investigated the connection between these areas. Thus, a comprehensive understanding of their interplay remains underdeveloped. Past research linking MC dimensions to innovation often faced methodological constraints, with relatively few studies

utilizing rigorous statistical approaches like multivariate or principal component analysis for validation.

This study aims to bridge this research gap by investigating the multidimensional aspects of MC and their impact on MI within the hospital sector in northern Iraq. Employing Structural Equation Modeling (SEM), the research develops a comprehensive framework to analyze the interplay between key MC dimensions - such as service quality, organizational structure, and personal contact - and their effects on marketing innovation. By doing so, this study not only contributes to the academic literature but also offers actionable insights for healthcare administrators seeking to enhance innovation and performance.

The study's hypotheses are presented as follows:

H1a: Service quality positively and significantly influences MI,

H1b: The importance of selling has a positive and significant effect on MI,

H1c: Personal contact positively and significantly impacts MI,

H1d: Organizational structure positively and significantly influences MI,

H1e: Internal relations have a positive and significant effect on MI,

H1f: Invention positively and significantly impacts MI.

2. MATERIALS AND METHODS

2.1. Data Collection

The selection of a study area is crucial in research, aligning directly with the research problem. This study focuses on the northern region of Iraq bordered by Syria, Iran, and Turkey (Hennerbichler, 2018). A self-administered questionnaire was distributed to participants from both private and public hospitals in the northern region of Iraq in 2018. The questionnaire was carefully designed for clarity and brevity, avoiding repetitive or negatively phrased questions, and was completed directly by respondents. Its primary aim was to gather insights into the constructs of MC and innovation, with distinct sections organized under clear headings for easy navigation.

The first section focused on respondents' demographic characteristics, including gender, marital status, age, educational attainment, income, occupation, experience, working hours, training participation, and hospital type. The second section comprised 34 questions focused on six dimensions of MC: service quality (eight items), personal contact (five items), sales emphasis (seven items), organizational policies (five items), internal relations (six items), and the necessity for innovation (three items). Participants rated each dimension using a five-point Likert scale, where 1 indicated "strongly disagree" and 5 represented "strongly agree."

The marketing innovation section included 52 questions examining six dimensions: technology development (seven items), customer value (11 items), resource value (seven items), unanticipated risk (nine items), creative imagination (nine items), and focus on creativity (eight items). Items in this section were measured on a seven-point Likert scale, also from 1 (strongly disagree) to 5 (strongly agree), providing a comprehensive assessment of each dimension. Items were adapted and validated based on recent literature, including studies by Ali & Anwar (2021), Younus et al. (2022) and de Oliveira et al. (2023), to ensure alignment with contemporary innovation practices.

2.2. Data Analyses

This study seeks to explore the relationship between MC and MI through the utilization of SEM. The research framework integrates latent variables that represent the various dimensions of MC and MI. Specifically, six observed variables (service quality, personal contact, sales emphasis, organizational structure, internal relations, and innovation) are employed as indicators of the MC construct, which is analyzed comprehensively in this research.

To test the hypotheses, SEM was performed using IBM SPSS Amos 21 (Kline, 1998). SEM is a valuable tool in social science research, particularly for quantitative analysis, as it allows for effective refinement and evaluation of theoretical models (Bentler, 1983; Meyers et al., 2013; de Oliveira et al., 2023). This analysis involved generating the covariance matrix and Maximum Likelihood Estimate, a standard approach that is particularly appropriate when multivariate normality assumptions hold (Speckmayer et al., 2010).

The Chi-square (χ^2) probability ratio was used as a primary index for absolute model fit. Additionally, the Goodness-of-Fit Index (GFI) was applied, analogous to R^2 in multiple regression, to measure the proportion of variance and covariance explained by the model, with values ≥ 0.90 indicating satisfactory fit (MacCallum & Austin, 2000). The Normed Fit Index (NFI) was also calculated to compare Chi-square values between the hypothesized and null models, with a target value of 0.95 suggesting a strong fit. Further, the Comparative Fit Index (CFI) assessed the alignment between empirical data and the theoretical model. Finally, the Root Mean Square Error of Approximation (RMSEA) provided an estimate of approximation error between observed covariance and the covariance of the proposed model (Lambert et al., 2015). Together, these indices offer a comprehensive evaluation of the model's fit and validity.

3. RESULT AND DISCUSSION

3.1. Socio-Demographic Characteristics of Respondents

Table 1 details the socio-demographic characteristics of respondents, covering aspects such as gender, education level, marital status, occupation, working hours, property ownership, age, income, years of experience, and participation in training courses or conferences. The findings indicate that 57.4% of respondents were male, 61.7% were married, and 55.1% had an educational level beyond high school. These results are consistent with previous research findings, such as those by Karatepe et al. (2005), Funk & Bruun (2007) and Abdulaali et al. (2022), which reported similar socio-demographic trends.

Furthermore, among the 392 respondents who were employed, 33.2% held executive or managerial roles, 28.0% were physicians, and 38.8% were nurses. The data suggest that the occupational distribution significantly influences marketing roles within the sector. Notably, occupational categories can vary widely by region; for instance, Appiah-Adu et al. (2000) found that over 80% of respondents in their study were marketing managers. This underscores the need for the hospital sector in Northern Iraq to consider enhancing the role of marketing managers to foster greater innovation.

The table presents a breakdown of respondents' work hours, revealing that 43.4% work less than 8 hours per day, and 39.8% work eight hours daily. Notably, 16.8% of respondents reported working over eight hours per day. These findings suggest that a significant proportion of the hospital's management staff adhere to an eight-hour workday. Additionally, the data highlights respondents' affiliations with either the public or private sector, with proportions in each sector being nearly equivalent.

The results also show that 18.1% of respondents are over 45 years old, while 27.8% are under 30. The majority, however, are between 30 and 45 years old (54.1%), indicating a relatively young workforce. This demographic distribution aligns with other studies, such as Lukas & Ferrell (2000) and Abdulaali et al. (2022), which report similar age-related response rates, validating the acceptability of the response rate in this study.

The mean income among hospital employees in Northern Iraq was found to be 948,000 Iraqi Dinar (ID) per month. Skill level and work experience are vital for organizational effectiveness, particularly under stable working conditions. A majority (56.1%) of respondents had less than ten years of experience, indicating a mix of diverse backgrounds and specializations among the workforce. This diversity underscores the need for targeted training programs to help employees develop essential skills and enhance their competencies, ensuring consistent ethical standards across the organization.

Overall, the analysis of respondents' feedback suggests that the organization prioritizes training initiatives tailored to meet its specific operational needs. Identifying gaps between current and desired performance levels is essential for designing training programs that enhance organizational effectiveness.

Table 1. Socio-demographic characteristics of respondents

Variables	Definition	Frequency	Percentage
Gender	Male	225	57.4
	Female	167	42.6
Education levels	Primary school	55	14.0
	High school	121	30.9
	Bachelor	117	29.8
	Master or PhD	99	25.3
Marital status	Single	150	38.3
	Married	242	61.7
Occupations	Manager	130	33.2
	Doctor	110	28.0
	Nurse	152	38.8
Working hours	6-7 hours	119	43.4
	8 hours	156	39.8
	≥9 hours	66	16.8
Hospital Ownership Status	Private	195	49.7
	Public	197	50.3
Respondent age	≤29	109	27.8
	30-45	212	54.1
	≥46	71	18.1
Monthly income (1000 ID))	≤500	133	33.9
	501-1000	143	36.5
	≥1001	116	29.6
Years of experience	≤10	220	56.1

	11-19	125	31.9
	≥20	47	12.0
Participation in courses (Frequency)	≤5	214	54.6
	5-10	120	30.6
	≥11	58	14.8

3.2. Determinants of Marketing Culture Dimensions in Hospital Services

To explore the relationship between dimensions of MC and MI, SEM was utilized. Notably, no prior research has investigated MI specifically within hospitals in northern region of Iraq. The proposed model includes six dimensions of MC: service quality, sales importance, personal contact, organizational structure, internal relations, and innovation. For both the dependent and independent variables, responses were measured on a Likert scale from 1 to 5, where 1 represents “strongly disagree” and 5 represents “strongly agree.”

To assess the measurement properties of the scale, indicators of the six-factor correlated model were examined as second-order factors representing MC. The scales for each dimension were standardized by setting their variance to 1. The model’s fit indices indicate a satisfactory fit: Chi-square (CMIN) = 2.34, Incremental Fit Index (IFI) = 0.94, Tucker-Lewis Index (TLI) = 0.92, CFI = 0.94, and RMSEA = 0.06. The significant result from the normalized chi-square test further supports that the model aligns well with the data, indicating robust measurement validity for examining MC and innovation.

Table 2. Model fit for independent variables

Indices	Model fit results	
	Initial (34 items)	Final (15 items)
X ²	183.204	334.205
CMIN	2.670	2.336
IFI	0.803	0.944
TLI	0.784	0.920
CFI	0.801	0.943
RMSEA	0.065	0.058

The individual measurement models for all independent variables were assessed in both the proposed and alternative frameworks. To improve data compatibility, nineteen variables were eliminated from the individual models. Subsequently, a thorough evaluation of the revised measurement model was performed to ensure its adequacy. The fit statistics, displayed in column 1 of Table 2, demonstrate that the model is well-suited to the data.

Consequently, the final measurement model was tested using the remaining 15 elements retained during the individual model test phase, as detailed in Tables 3 through 8. The model fit statistics for the final, comprehensive measurement model are shown in column 2 of Table 2.

Table 3. Service quality dimension

	Variables	Mean	Std.
Service quality dimension			
SQ2	The hospital administration ensures that employees deliver high-quality services.	3.06	1.15
SQ7	The hospital highly values and recognizes the communication skills of its employees	3.20	1.15

The importance selling dimension			
IS1	The hospital selects employees based on comprehensive information to ensure suitability.	3.08	1.07
IS2	The hospital proactively enhances service employees' skills through targeted training and information sessions.	3.11	1.11
Personal contact dimension			
PC1	The hospital prioritizes attention to employees' emotional well-being.	3.13	1.17
PC3	Employees feel comfortable knowing their opinions are considered by upper management.	3.16	1.16
PC4	Managers and supervisors implement an open-door policy, fostering accessibility and communication.	3.06	1.13
PC5	Hospital management actively maintains communication with employees and external entities.	3.08	1.14
Service quality dimension			
O1	The hospital adheres to a policy of placing employees in roles that align with their strengths.	3.04	1.09
O3	Employees show strong dedication to their responsibilities.	3.09	1.06
O4	Organizational structure addresses the comprehensive needs of all employees.	3.17	1.07
Internal relations dimension			
IR1	The hospital's work policies are structured to accommodate employee requirements as needed	3.14	1.05
IR2	Managers and department heads respond effectively to employee requests.	3.20	1.03
Invention dimension			
IN1	Employees demonstrate a willingness to embrace change.	3.14	1.15
IN2	The hospital is committed to initiating and implementing new ideas in service delivery	3.11	1.11

A similar approach was utilized by Gainer & Padanyi (2005), who applied the Wald and Lagrange multiplier tests to identify modifications that could enhance model fit through specific additions and deletions. However, despite these adjustments, the model's fit remained unsatisfactory. Consequently, Model 1 was rejected, and further analysis of individual parameter estimates for this preliminary model was deemed unnecessary.

Additionally, as reported by Karatepe et al. (2005), initial confirmatory factor analysis (CFA) results indicated inadequate fit between the six-factor measurement model and the data based on numerical adaptation statistics. One factor within the initial measurement had a loading below 0.5, and several items did not significantly contribute to the average variance extracted for each construct. Final CFA results demonstrated a stronger fit of the six-factor measurement model with the data, achieving a more acceptable level of fit in terms of the Normed Fit Index (NFI). As shown in Table 4, only two of the six hypotheses (H5 and H6) were supported, with H1, H2, H3, and H4 being rejected. The hypotheses accepted are summarized in Table 5.

Table 4. Standardized estimated regression coefficient (first model)

Variables	Path	Variables	Estimate	Std. Er	Ratio	P-value
Innovation	<---	Service Quality	0.362	0.223	1.623	0.105
Innovation	<---	Importance Selling	0.079	0.122	0.644	0.519
Innovation	<---	Personal Contact	-0.126	0.212	-0.596	0.551
Innovation	<---	Organization	0.108	0.095	1.137	0.255
Innovation	<---	Internal Relations	0.185	0.093	1.982	0.047

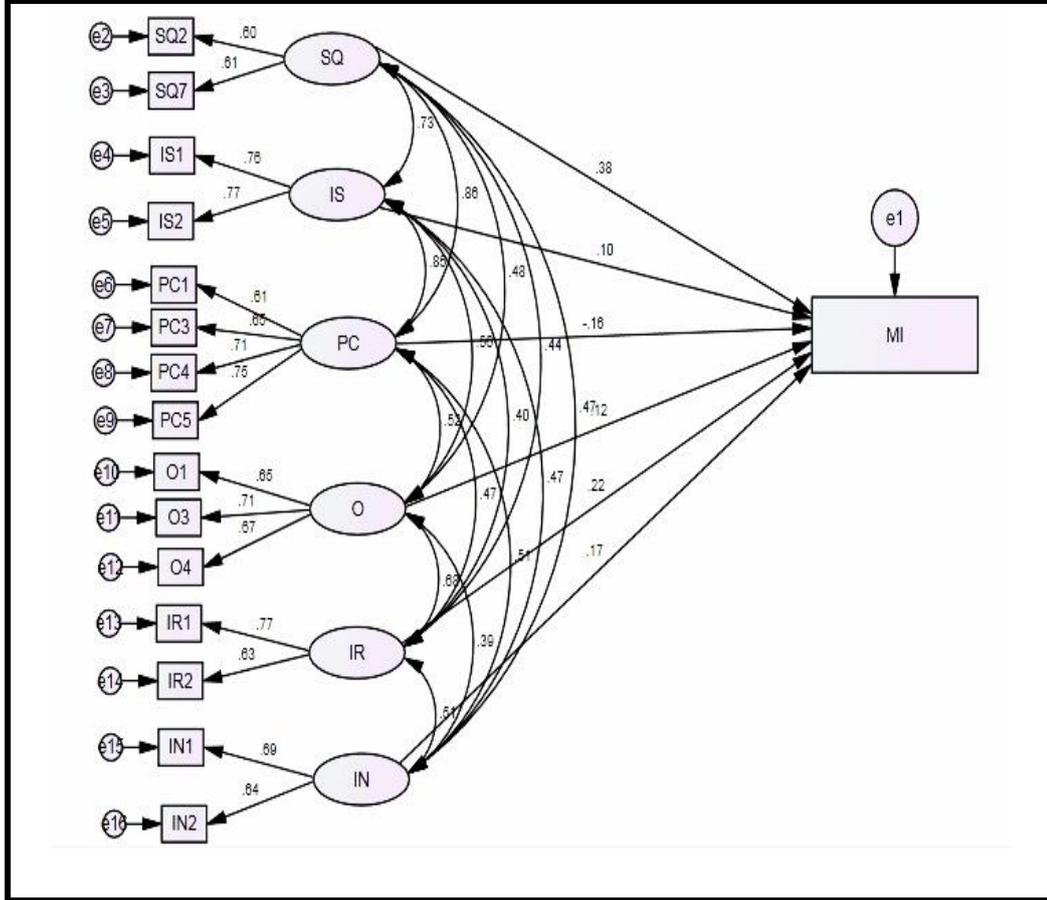
Innovation	<---	Invention	0.144	0.072	1.992	0.046
SQ7	<---	Service Quality	1.000			
SQ2	<---	Service Quality	0.980	0.114	8.621	***
IS2	<---	Importance Selling	1.000			
IS1	<---	Importance Selling	0.948	0.072	13.255	***
PC5	<---	Personal Contact	1.000			
PC4	<---	Personal Contact	0.943	0.071	13.215	***
PC3	<---	Personal Contact	0.879	0.073	11.995	***
PC1	<---	Personal Contact	0.824	0.074	11.206	***
O4	<---	Organization	0.946	0.091	10.409	***
O3	<---	Organization	1.000			
O1	<---	Organization	0.939	0.092	10.202	***
IR2	<---	Internal Relations	0.804	0.088	9.177	***
IR1	<---	Internal Relations	1.000			
IN2	<---	Invention	0.900	0.125	7.223	***
IN1	<---	Invention	1.000			

Table 5. Hypothesis testing results

Hypothesis	Remarks
H1: Service quality positively and significantly influences MI	Not Supported
H2: The importance of selling has a positive and significant effect on MI	Not Supported
H3: Personal contact positively and significantly impacts MI	Not Supported
H4: Organizational structure positively and significantly influences MI	Not Supported
H5: Internal relations have a positive and significant effect on MI	Supported
H6: Invention positively and significantly impacts MI	Supported

The path analysis results for all hypotheses are presented in Figure 1. However, to improve the model's goodness of fit, it is essential to remove non-significant paths and re-evaluate the model accordingly.

Figure 1. Structural model illustrating the relationship between MC and MI (1)



SQ = Service Quality, IS = The Important of Selling, PC = Personal Contact, O = Organization, IR = Internal Relation and IN = Invention

Table 6. Measures of the model' goodness of fit

	CMIN	GFI	AGFI	CFI	NFI	RMSEA
Recommended value	≤ 3.00 ^a	≥ 0.90 ^a	≥ 0.90 ^a	≥ 0.90 ^a	≥ 0.90 ^a	≤ 0.08 ^b
Structural model	2.144	0.948	0.916	0.950	0.912	0.054

In the subsequent phase of the analysis, dimensions that did not exhibit significant relationships - namely the importance of selling → marketing innovation, personal contact → marketing innovation and organization → marketing innovation were subjected to re-evaluation.

Following the removal of non-significant paths, the model was re-tested, as shown in Figure 2. Changes in the significance levels of latent variables are detailed in Table 7, and the finalized model is illustrated in Figure 2.

Figure 2. Structure model of the relationship between MC and MI (final)

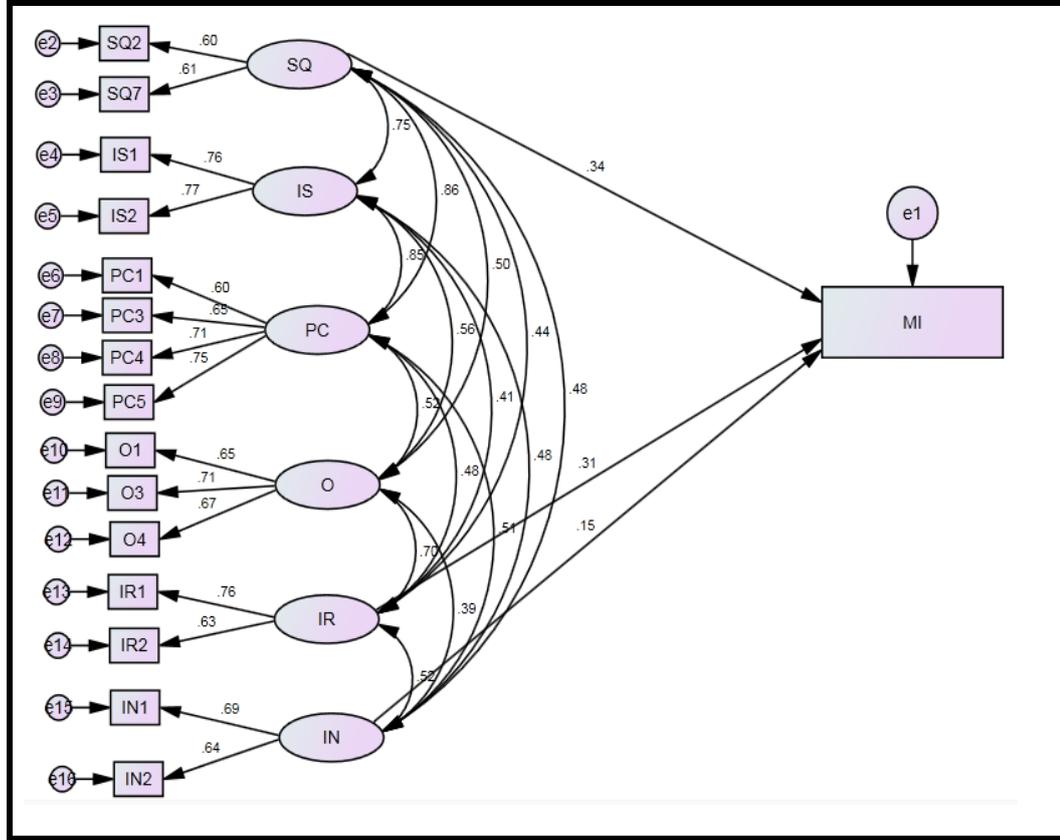


Table 7. Standardized estimated regression coefficient (final model)

Variables	Path	Variables	Estimate	Std. Er	Ratio	P-value
Innovation	<---	Invention	0.127	0.069	1.854	0.064
Innovation	<---	Service Quality	0.330	0.070	4.715	***
Innovation	<---	Internal Relations	0.262	0.063	4.187	***
SQ7	<---	Service Quality	1.000			
SQ2	<---	Service Quality	0.982	0.114	8.609	***
IS2	<---	Importance Selling	1.000			
IS1	<---	Importance Selling	0.946	0.071	13.246	***
PC5	<---	Personal Contact	1.000			
PC4	<---	Personal Contact	0.942	0.071	13.232	***
PC3	<---	Personal Contact	0.877	0.073	11.991	***
PC1	<---	Personal Contact	0.821	0.073	11.190	***
O4	<---	Organization	0.948	0.091	10.390	***
O3	<---	Organization	1.000			
O1	<---	Organization	0.940	0.092	10.181	***
IR2	<---	Internal Relations	0.806	0.086	9.334	***
IR1	<---	Internal Relations	1.000			
IN2	<---	Invention	0.903	0.125	7.218	***
IN1	<---	Invention	1.000			

In the finalized model, the H1 hypothesis was accepted, resulting in the acceptance of three out of six hypotheses, with the remaining three rejected (see Table 8). The findings indicate that service quality significantly influences MI within hospital services in the Northern Region of Iraq. This suggests that hospital management places a high value on the quality of services provided to customers, a crucial factor for successful marketing. Product quality, in particular, plays an essential role in attracting new customers, and the results demonstrate that hospital administrations have been effective in motivating staff to deliver high-quality services.

The results also reveal that emphasizing sales negatively impacts the development of a MC among hospital staff, and personal contact similarly has a negative effect on MI. Additionally, organizational structure showed no significant association with MI in the hospital context.

Conversely, internal relations positively impact MI, highlighting the importance of teamwork in achieving organizational success. To foster efficiency, a decentralized system is recommended, as it allows managers to address employees' needs directly, minimizing delays and reducing potential issues.

The study further shows that innovation positively influences MI. Organizations should remain adaptable to change, as flexibility leads to quality improvements that attract and retain customers who value advancements. This suggests that innovation and creativity foster an environment where significant, community-driven innovation can thrive. With improved system management, cumulative customer feedback can inspire new frameworks that enhance business operations and drive growth in marketing practices.

Table 8. Hypothesis testing results

Hypothesis	Remarks
H1: Service quality positively and significantly influences MI	Supported
H2: The importance of selling has a positive and significant effect on MI	Not Supported
H3: Personal contact positively and significantly impacts MI	Not Supported
H4: Organizational structure positively and significantly influences MI	Not Supported
H5: Internal relations have a positive and significant effect on MI	Supported
H6: Invention positively and significantly impacts MI	Supported

Table 9 presents the results of the SEM. The chi-square statistic, which serves as the primary indicator of model fit, was found to be statistically significant ($p \leq 0.01$). It is important to note that the chi-square value is highly sensitive to sample size; a value less than 3 ($X^2/df < 3$) suggests that the overall fit of the model is acceptable, even if it remains statistically significant. The other fit indices for the final model configuration indicate a good fit, with values as follows: Root Mean Residual (RMR) = 0.04, RMSEA = 0.05, IFI = 0.951, CFI = 0.950, and TLI = 0.931.

Table 9. Measurement model fit for independent variables

Fit indices	Items	Measurement
X ² CMIN	183.204	
P value	0.000	
DF	87	
CMIN/DF	2.106	<3
RMR	0.040	<0.05
IFI	0.951	>0.90
TLI	0.931	>0.90

CFI	0.950	>0.90
RMSEA	0.050	<0.08

The results of the SEM, as illustrated in Figure 1 and presented in Table 10, demonstrate that service quality, internal relations, and innovation are the most influential variables affecting innovation outcomes. Figure 2 indicates that the coefficient for the relationship between service quality and innovation is estimated at 0.34, while the relationship between internal relations and innovation is estimated at 0.31. The coefficient for the invention dimension's impact on innovation is 0.15.

Table 10 further quantifies these relationships, showing that a one-unit increase in service quality corresponds to an increase in innovation of 0.34 units. Similarly, a one-unit increase in internal relations results in a 0.31 unit increase in innovation. In contrast, a one-unit increase in the invention dimension leads to only a 0.15 unit increase in the dependent variable of innovation.

$$Y = 0.34 \text{ service quality} + 0.31 \text{ internal relations} + 0.15 \text{ invention}$$

(0.000) (0.000) (0.064)

Table 10. Innovation structural results (latent variables)

Dimensions	Path analyses
Service quality	0.34
Internal relation	0.31
Invention	0.15

The latent variable of service quality has a significant positive effect on innovation, as evidenced by two observable variables that contribute to this relationship. Both observed variables were found to be statistically significant and display similar coefficients of approximately 0.61 and 0.60. The statements "The hospital administration ensures that employees" and "The hospital highly values and recognizes the communication skills of its employees" indicate that improvements in these areas lead to an increase in innovation, as detailed in Table 11. Abdullah et al. (2021) highlight that internal service quality directly effects employees' satisfaction, commitment, well-being of employees in healthcare centres operating in Pakistan.

Table 11. The observed coefficients of service quality dimension

Code	Variables	Paths coefficient
SQ2	The hospital administration ensures that employees deliver high-quality services	0.60
SQ7	The hospital highly values and recognizes the communication skills of its employees	0.61

Table 12 indicates that two observed variables related to internal relations are statistically significant, both exhibiting positive path coefficients. Among these, the variable with the highest coefficient is "The hospital's work policies are structured to accommodate employee requirements as needed" with a coefficient of 0.76. This finding suggests that as this observed variable increases, the level of innovation also rises. Another notable observed variable is "Managers and department heads respond effectively to employee requests" which has a

coefficient of 0.63. This implies that an increase in this factor is also associated with an enhancement in innovation.

Table 12. Observed coefficients for the internal relations dimension

Code	Variables	Paths coefficient
IR1	The hospital's work policies are structured to accommodate employee requirements as needed	0.76
IR2	Managers and department heads respond effectively to employee requests	0.63

The invention dimension, which influences innovation, is represented by two observed variables that demonstrated statistical significance with positive coefficients. The path coefficients for the statements "Employees demonstrate a willingness to embrace change" and "The hospital is committed to initiating and implementing new ideas in service delivery" are 0.69 and 0.64, respectively. These findings indicate that as these observed variables increase, innovation also increases, as illustrated in Table 13.

Table 13. The observed coefficients of invention dimension

Code	Variables	Paths coefficient
IN1	Employees demonstrate a willingness to embrace change	0.69
IN2	The hospital is committed to initiating and implementing new ideas in service delivery	0.64

In summary, the results of the SEM indicate that service quality, internal relations, and invention significantly influence innovation. Conversely, factors such as the importance of selling, personal contact, and organizational structure were found to be statistically insignificant. Enhancements in management practices have enabled employees to provide high-quality services. Additionally, factors such as employees' communication skills, policies for fulfilling staffing management requirements, and support for the implementation of changes all contribute to increasing innovation.

The finding that personal contact, sales emphasis, and organizational structure do not have a significant impact on marketing innovation may initially appear contradictory to some previous studies. However, this result appears theoretically and contextually plausible within the Northern Region of Iraq healthcare system. Hospitals in the region operate under resource constraints, bureaucratic procedures, and heavy workloads, leading to innovation efforts being focused primarily on technical improvements and process optimization. Therefore, personal contact is more related to employee motivation and internal communication rather than directly driving innovation. Similarly, sales emphasis in healthcare is shaped by organizational quality standards and service delivery strategies rather than individual sales performance. A lack of organizational structure can be attributed to rigid, hierarchical regulations that can restrict flexibility and limit innovation capacity. This result is consistent with studies suggesting that a high level of formalization tends to suppress innovation capacity (Grinstein, 2008; Dobni, 2008).

The effect of invention size on marketing innovation was found to be marginally significant ($p = 0.064$). In the social sciences, particularly in organizational behavior and marketing

research, threshold values of $p < 0.10$ are generally considered acceptable. Therefore, this result suggests a statistically weak but theoretically significant relationship. Given that hospitals in the Northern Region of Iraq are in the early stages of innovation development due to technical and financial constraints, staff openness to new ideas may not immediately translate into strong innovation outcomes. Therefore, the marginal significance of the invention dimension is theoretically plausible and contextually consistent with the region's innovation environment.

This research highlights the importance of personal selling and organizational factors in shaping satisfaction with MI. However, it also demonstrates that certain organizational factors do not significantly impact this satisfaction, underscoring the critical need for highly qualified personnel within organizations and emphasizing the vital role of effective personnel selection.

The relationship between manager and employees is crucial for organizational success. While management's emphasis on quality is essential, it must also consider the emotional needs of employees. Neglecting employees' emotional well-being can adversely affect performance.

Effective management involves making key decisions, such as aligning individuals with appropriate roles. It is evident that individuals who are well-matched to their positions tend to deliver superior results, particularly in problem-solving scenarios. Therefore, ensuring a strong alignment between individuals and their roles is essential for fostering innovation and achieving overall organizational success.

4. CONCLUSIONS AND RECOMMENDATIONS

This research enhances existing theories on MC and MI by exploring the structural relationships between these two concepts. However, several limitations must be acknowledged. Firstly, all variables in the proposed model were assessed using data collected exclusively from frontline employees. The study aims to identify the factors influencing the relationship between MC and MI within the northern region of Iraq. Statistical analyses were performed on categorical variables to determine their frequencies and percentages, while SEM was utilized to investigate the interrelations among these variables.

The results indicate that MC has a significant and positive influence on MI. However, the dimensions of personal contact and organizational structure exhibited a non-significant relationship with MI. Specifically, a one-unit increase in service quality corresponds to a 0.330 unit increase in MI. Additionally, increases of one unit in the dimensions of invention and internal relations are associated with increases of 0.127 and 0.262 units in MI, respectively.

The findings underscore the critical role of service quality in attracting new customers. Results indicate that hospital administrations have effectively motivated their staff to deliver high standards of care and service, contributing positively to customer acquisition and satisfaction. Insufficient communication with customers can lead to dissatisfaction and potential loss of clientele. Employees should receive adequate information and training to deliver accurate information to customers, ensuring effective communication that fosters customer satisfaction.

There exists a direct correlation between success and effective organizational planning. A well-structured organization guarantees that all members are aware of their roles and responsibilities. Organizations must remain adaptable to market demands to maintain competitiveness. Continuous improvement and innovation are essential for thriving in the market.

Based on the study's findings, several recommendations are proposed to enhance marketing in Northern Iraq:

1. The Health Ministry should promote the adoption of modern, effective practices by enhancing targeted counseling initiatives and implementing tailored strategic planning in the region.
2. Strategies should be developed to promote the adoption of commercially viable innovations in both public and private healthcare facilities.
3. Elevating the levels of education, information, and experience can assist in identifying gaps between actual and expected organizational performance.
4. Offering a range of professional and organizational training courses to employees can strengthen their marketing competencies.
5. The study also suggests fostering stronger relationships between general managers and employees, alongside conducting regular performance evaluations.

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