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Investigating the Moderating Role of Relationship Marketing In the Relationship Between Business Intelligence and the Quality of Social Security Insurance Services (Case Study of the Kerman Province Social Security Organization)

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ABSTRACT:

This study aimed to investigate the moderating role of relationship marketing in the relationship between business intelligence and the quality of social security insurance services. The study was a descriptive-survey research in terms of its applied purpose and its nature of implementation. The statistical population of the study was all employees of the Social Security Organization of Kerman Province, of whom 360 people were selected as a statistical sample using a cluster random sampling method. The research data were collected using a standard questionnaire. Data analysis was performed using SPSS version 26 and SmartPLS version 3 software. The results of the study showed that relationship marketing moderates the relationship between business intelligence and the quality of social security insurance services.

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I. Introduction

In recent years, attention to service quality has increasingly become a key performance indicator for service organizations, especially public institutions and social insurance systems. The increasing expectations of stakeholders, the increasing complexity of service delivery, and the need to improve productivity and accountability have forced social insurance organizations to use new management and technology-based approaches to improve the quality of their services [1], [2]. In the meantime, the Social Security Organization, as one of the most important public service providers, faces significant challenges in improving the satisfaction of insured persons and improving the service experience [3]. Along with the expansion of digital transformation and the increase in the volume of organizational data, business intelligence, as a strategic capability, plays a prominent role in improving decision-making and improving the performance of organizations. By creating analytical infrastructures and decision support systems, business intelligence enables the extraction of knowledge and practical insights from operational and behavioral data, and in this way can lead to the optimization of service processes and the improvement of service quality [4], [5]. Recent research findings indicate that organizations with advanced analytical capabilities and effective business intelligence systems perform better in responding to customer needs and improving service quality [6], [7]. However, empirical results show that the impact of business intelligence on service quality is not always direct and uniform and depends on contextual factors and supporting management approaches [8]. In this regard, relationship marketing, as one of the central approaches in service management, can play an important intermediary role in transforming business intelligence analyses into perceived value for service recipients. This approach, focusing on continuous interaction, building trust, mutual commitment and personalization of services, provides the necessary context for the effective exploitation of customer information [9], [10]. New research evidence shows that relationship-oriented strategies, especially in long-term services such as social insurance services, have a significant impact on improving service quality, increasing satisfaction and strengthening customer loyalty [11], [12].

Despite the importance of this issue, a large part of previous research has examined business intelligence and relationship marketing independently, and the interaction of these two constructs within an integrated framework has been less studied. In particular, the role of relationship marketing as a moderating variable that can affect the intensity and effectiveness of the relationship between business intelligence and service quality still faces a research gap in the field of social insurance organizations [13]. This gap becomes more important in organizations such as social security that deal with large volumes of data and extensive interactions with stakeholders [14]. Accordingly, the present study aims to explain the moderating role of relationship marketing in the relationship between business intelligence and the quality of social security insurance services, and the Kerman Provincial Social Security Organization has been selected as a case study. It is expected that the results of this study, in addition to enriching the theoretical literature in the field of business intelligence and service management, will provide valuable executive guidelines for managers of social insurance organizations in order to improve the quality of services and improve the management of relationships with the insured.

II. Litureture rivew

A. Service quality

Service quality has gradually become a central concept in the literature on service management and marketing in response to the distinctive characteristics of services compared to goods. Recent studies define service quality as the customer's overall and perceptual assessment of the level of excellence of the service provided in comparison with his expectations and accumulated experiences; an assessment that is dynamic, subjective, and context-dependent [15], [16]. In his initial theoretical explanations, Grönroos considered service quality to be the result of a comparison between customer expectations and his perception of the actual performance of the organization, and by distinguishing between technical quality and functional quality, he emphasized the importance of how the service is provided along with its content [17]. This theoretical framework provided a basis for the development of subsequent models of measuring service quality. In the same vein, Parasuraman, Zeitaml, and Berry conceptualized this concept as the gap between customer expectations and their perception of the actual performance of the organization by presenting the service quality gap model [18]. However, more recent studies emphasize the limitations of this approach and the need to pay attention to the dynamics of the customer experience [15]. In contemporary literature, service quality is often considered as a multidimensional construct that is formed during repeated interactions between the customer and the organization and is influenced by behavioral, technological, and relational factors [16], [19]. Especially in the field of public services and social insurance, service quality does not simply reflect operational efficiency, but also includes the customer's perception of responsiveness, fairness, transparency, and trust in the service provider [20]. At the same time, performance-based approaches have gained a more prominent position in measuring service quality. According to these views, customer judgments about service quality mainly stem from the assessment of the actual performance of the service and the experience of interacting with the organization and rely less on a priori expectations [21]. Research evidence shows that this approach has higher explanatory power, especially in digital and complex service environments [15], [19].

B. Business intelligence

Business intelligence, as a management philosophy and a set of tools, helps organizations systematically manage, refine, and analyze business information, thereby making more effective decisions in a competitive business environment. The term business intelligence can be used to refer to a set of activities, capabilities, and functions that aim to improve the decision-making process in an organization. Business intelligence allows companies to perform tasks such as analysis, strategy formulation, and forecasting in a systematic and largely automated manner to make more accurate and effective decisions. Business intelligence is also known as a facilitator for creating new connections in organizations that cause information to be transferred to a centralized repository in real time and produce analyses that can be exploited at various vertical and horizontal levels, both within the organization and in interaction with the external environment. In this framework, business intelligence is defined as a comprehensive framework including various processes, tools and technologies that are designed to move from data to information and from information to knowledge and create added value for the organization through the application of the resulting knowledge. Accordingly, organization managers can develop more effective action plans and direct business activities more efficiently by relying on the extracted knowledge. Business intelligence is not just a technological tool, but a comprehensive architecture that uses a set of interconnected processes and various tools in the process of identifying, collecting, processing and drawing conclusions from data.

C. Relationship marketing

Relationship marketing has been proposed in contemporary marketing literature as a strategic response to the limitations of short-term transaction-based approaches, and its focus is on developing sustainable and value-creating relationships between the organization and customers. This concept was first formally introduced by Berry and refers to the systematic process of creating, maintaining, and deepening long-term relationships with customers with the aim of realizing mutual benefits [22]. Such an approach changes the traditional transaction-based view to a relationship-oriented and interactive view. In the theoretical development of this concept, Morgan and Hunt, by proposing the commitment-trust model, explained relationship marketing based on two key constructs of trust and commitment, and showed that the formation of these factors is a prerequisite for creating stable relationships and long-term cooperation between the parties [23]. According to this view, trust and commitment reduce uncertainty, increase the desire

to continue the relationship, and improve the quality of service interactions. More recent studies present relationship marketing not simply as a communication tactic, but as a dynamic organizational capability that increases perceived value through integrated management of customer information, customization of interactions, and continuous responsiveness to their needs [24], [25]. In this framework, the link between relationship marketing and information technologies, especially analytical systems and business intelligence, is highlighted, and the targeted use of data is considered as a foundation for deepening relationships [26]. In public service organizations, and especially social insurance, relationship marketing is of particular importance because the interactions between the organization and stakeholders are long-term, repetitive, and based on institutional trust. Recent empirical evidence shows that adopting relationship-oriented approaches in these organizations can lead to improved perceptions of service quality, increased satisfaction of policyholders, and strengthened legitimacy and credibility of the organization [27], [28]. Furthermore, research results indicate that relationship marketing can play a facilitating role in the effective exploitation of analytical capabilities and enhance the impact of business intelligence on service quality [25], [26]. Accordingly, in the present study, relationship marketing is considered as a moderating construct that is expected to influence the manner and intensity of the impact of business intelligence on the quality of social security insurance services; a role that has so far been less empirically investigated in the context of social insurance organizations [28].
In view of the reviewed literature, this study proposes the following hypothesis:
H1: Business intelligence has a meaningful relationship with the quality of social security insurance services in the Kerman Province Social Security Organization.
H2: Business intelligence has a meaningful relationship with relationship marketing in the Kerman Province Social Security Organization.
H3: Relationship marketing has a meaningful relationship with the quality of social security insurance services in the Kerman Province Teachers' Social Security Organization.
Based on the literature reviewing, researchers proposed the following research Investigating the moderating role of relationship marketing in the relationship between business intelligence and the quality of social security insurance services (Case study of the Kerman Province Social Security Organization) in figure1.

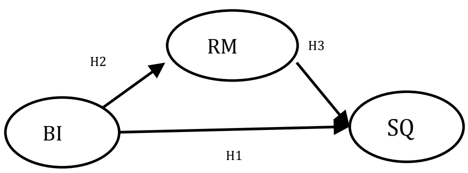

Figure1: The Research Model

III. methodology

Research in behavioral sciences is classified according to two criteria: the research objective and the method of data collection. In this regard, this research is applied in terms of its purpose and is descriptive-survey in terms of the nature and method of data collection. Statistically, this research is a survey research because it uses a questionnaire to collect the opinions of the statistical community and is included in the number of statistical research; and because it studies what is, it is descriptive. The statistical community is a set of individuals or units that have at least one common attribute. Usually, in each study, the studied community is a statistical community that the researcher wishes to study. The sample is a part of the community that represents it. The statistical community in this study is all employees of the Social Security Department of Kerman Province, which, according to the statistics of the Human Resources Unit, was 360 people, which was selected as a statistical sample using a cluster random sampling method. Cluster random sampling method is one of the sampling methods in which the existing statistical units are first divided into groups with similarities, which are called clusters. Then, by randomly selecting several clusters, a sample is selected from each cluster for analysis and investigation. Finally, the collected data were analyzed using descriptive and inferential statistics and with the help of SPSS26, PLS3 software.

IV. finding

In this research, the validity of the questionnaire was examined through content and construct validity. Thus, at first, the questions of the questionnaire were reviewed and confirmed by a number of professors and marketing specialists, and then the validity of the construct was tested by examining convergent and divergent validity and reliability using PLS3 software. Factor loadings, composite reliability (CR), average variance extracted (AVE) of all constructs are shown in Table 1.

Table1. Constructs with reliability and validity

Constructs	*Number of question*	*AVE*	*Cronbach's alpha*
BI	24	0.604	0/865
RM	12	0.743	0.847
SQ	22	0.732	0.907

V. Hypothesis testing

To check the research hypotheses, it is necessary to calculate the model in the mode of significant coefficients (t); in this way, if the significant coefficients are greater than the absolute value of 1.96, the research hypotheses are confirmed with 95% confidence. The results of the model test in the case of significant coefficients showed that this condition has been fulfilled and as a result the research hypotheses have been confirmed. Table (2) shows the results of the test of hypotheses and significant coefficients.

Table2.Hypothesis testing

Theories	**Path coefficient**	**Results**
Business intelligence has a meaningful relationship with the quality of social security insurance services in the Kerman Province Social Security Organization.	0.671	Confirmed
Business intelligence has a meaningful relationship with relationship marketing in the Kerman Province Social Security Organization.	0.447	Confirmed
Relationship marketing has a meaningful relationship with the quality of social security insurance services in the Kerman Province Teachers' Social Security Organization.	0.417	Confirmed

VI. RESULT AND DISCUSSION

The main objective of this study was to investigate the moderating role of relationship marketing in explaining the relationship between business intelligence and the quality of social security insurance services. The results of this study, by expanding the existing literature, contribute to a deeper understanding of the factors affecting the improvement of service quality in social insurance organizations and emphasize the importance of service quality in social security organizations. The findings show that relationship marketing, in addition to having an independent role, acts as a significant moderating variable in the relationship between business intelligence and service quality. According to the first finding of the study, relationship marketing significantly enhances the effect of business intelligence on the quality of social security insurance services. This result is consistent with previous studies that have confirmed the pivotal role of relationship marketing in improving service quality and increasing the effectiveness of organizational capabilities in the insurance industry [29]. Focusing on the specific context of the Kerman Province Social Security Organization, the present study extends this evidence and shows that purposeful reliance on relationship-based approaches can facilitate the exploitation of business intelligence outputs to improve service quality. The second finding of this study indicates the existence of a positive and significant relationship between business intelligence and the quality of social security insurance services. This result is consistent with the findings of recent studies that have reported the positive impact of business intelligence capabilities on improving service quality in service and health organizations [30]. By generalizing this relationship to the field of social insurance, the present study shows that the effective use of intelligent data and analytics can play an important role in improving the quality of services provided to the insured. Overall, the results of this study emphasize the importance of synergy between business intelligence and relationship marketing in improving service quality and provide new empirical evidence in the context of social insurance organizations, especially the Kerman Province Social Security Organization.References. The third finding of this study indicates the existence of a significant relationship between business intelligence and relationship marketing in the Social Security Organization of Kerman Province. This result is consistent with previous studies and shows that business intelligence capabilities can play a key role in the formation and strengthening of relationship marketing strategies. This finding is consistent with the results of a study conducted in the banking industry that indicated the existence of a significant relationship between business intelligence and relationship marketing [31]. By focusing on the context of social security organizations, the present study extends this perspective and shows that business intelligence can play a significant role in facilitating the design and implementation of effective relationship marketing approaches in social insurance organizations. The fourth finding indicates the existence of a positive and significant relationship between relationship marketing and the quality of social security insurance services. This result is consistent with the findings of previous studies in the field of insurance that have emphasized the decisive role of relationship marketing in improving service quality [32]. By confirming this relationship in the Social Security Organization of Kerman Province, the present study highlights the importance of relationship-oriented approaches in improving the quality of insurance services, especially in the context of public and social services. Overall, the results of this study provide valuable insights into the interaction between business intelligence, relationship marketing, and the quality of social security insurance services. The findings, while consistent with previous research, confirm the vital role of relationship marketing as a moderating variable in strengthening the relationship between business intelligence and service quality [33]. In addition, the existence of significant relationships between business intelligence and relationship marketing, as well as between relationship marketing and service quality, indicates the importance of an integrated view of these constructs in the management of services in social security organizations. The results of this study are consistent with studies that have reported the moderating role of relationship marketing in the relationship between business intelligence and service quality in service industries [33]. Also, the alignment with studies that have shown the positive impact of business intelligence on service quality in other sectors, including healthcare, indicates the generalizability of this relationship to social security organizations [34]. In addition, the confirmation of the positive relationship between business intelligence and relationship marketing extends the findings of studies conducted in retail industries to the context of social insurance organizations [35]. From a practical perspective, the results obtained have important implications for managers and policymakers of the Social Security Organization of Kerman Province. First, the moderating role of relationship marketing shows that targeted investment in relationship-oriented strategies can increase the effectiveness of business intelligence initiatives in improving service quality. Focusing on building lasting relationships, personalizing interactions, and strengthening the trust of insureds provides the basis for better utilization of business intelligence analytical outputs. Second, the significant relationship between business intelligence and service quality emphasizes the necessity of developing and applying advanced data analysis tools and technologies in the organization, so that informed decision-making, identification of areas for improvement, and continuous promotion of the quality of insurance services become possible. Finally, it is suggested that future research should deepen and complete the findings of this study in the social security sector by considering other contextual factors and examining the long-term effects of business intelligence and relationship marketing strategies on service quality. The significant relationship between business intelligence and relationship marketing suggests that the Kerman Province Social Security Organization should integrate its business intelligence efforts with its relationship marketing strategies. The organization can use the insights gained from data analytics to adjust its marketing and communication efforts, personalize its interactions with customers, and strengthen customer relationships. This integration can lead to improved customer satisfaction, loyalty, and ultimately better quality of social security insurance services. In addition, the significant relationship between relationship marketing and social security insurance service quality highlights the importance of investing in customer-centric initiatives. The Kerman Province Social Security Organization should prioritize building strong relationships with its clients by providing personalized and responsive services. By focusing on meeting customers' needs, addressing their concerns, and maintaining open lines of communication, the organization can increase the overall quality of its insurance services and strengthen the trust and satisfaction of its customers. The alignment of the results obtained from this study with previous research provides valuable insights for the Social Security Organization of Kerman Province. By recognizing the moderating role of relationship marketing, the importance of business intelligence, and the interaction of these factors and the quality of social security insurance services, the organization can make informed decisions and implement effective strategies. By prioritizing relationship marketing, utilizing business intelligence, and focusing on customer-centric initiatives, the organization can optimize its service delivery, improve customer satisfaction, and ensure the provision of quality social security insurance services in Kerman Province.

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