

Identification of Intervening Factors Affecting Knowledge-Based Social Responsibility Strategies in the Insurance Industry

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ABSTRACT

The general objective of the present study was to identify the intervening factors affecting knowledge-based social responsibility strategies in the insurance industry. In terms of purpose, this study was applied research, and in terms of data type, it employed an exploratory mixed-methods design. In the qualitative phase, grounded theory was used, while in the quantitative phase, a descriptive-survey method was applied. The statistical population consisted of managers and senior experts in the insurance industry in the qualitative phase, and employees and experts familiar with social responsibility and knowledge management at Dana Insurance in Tehran in the quantitative phase. In the qualitative phase, 12 participants were selected using snowball sampling and based on the principle of theoretical saturation, while in the quantitative phase, 278 participants were selected as the statistical sample using convenience sampling. Data were collected through semi-structured interviews in the qualitative phase and a researcher-made questionnaire in the quantitative phase. The validity and reliability of the instruments were confirmed. Structural equation modeling was used for data analysis. The results showed that society, media and public opinion, the legal environment, economic and market dynamics, and global developments are among the intervening factors affecting knowledge-based social responsibility strategies in the insurance industry. Furthermore, the dimension of economic and market dynamics, with an R^2 value of 0.661, was the strongest and most effective predictor among the intervening conditions.

Keywords: social responsibility strategies, knowledge-based, insurance industry

Introduction

Corporate social responsibility has increasingly become a strategic requirement for organizations that operate in complex, competitive, and socially visible environments. In contemporary management literature, CSR is no longer regarded merely as a philanthropic or voluntary activity, but as a multidimensional organizational approach through which firms respond to economic, legal, ethical, social, and environmental expectations while simultaneously strengthening legitimacy, stakeholder trust, and long-term performance. Carroll conceptualized CSR as an integrative responsibility framework that connects business obligations to society with organizational continuity and value creation (1). This view is particularly important in service industries, where organizational performance depends not only on financial outcomes but also on credibility, transparency, perceived fairness, and the quality of



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relationships with customers, regulators, employees, and the broader public. Accordingly, CSR has moved from the margins of corporate policy to the center of strategic management, because organizations are increasingly evaluated based on how they balance profitability with social accountability and sustainable conduct.

The strategic relevance of CSR is especially evident in industries that manage risk, trust, and long-term contractual commitments. The insurance industry occupies a distinctive position in this regard because its core function is based on the management of uncertainty, the distribution of risk, and the creation of institutional confidence among policyholders and society. Insurance companies are expected to act responsibly not only in claim settlement and customer service but also in public education, risk prevention, financial transparency, environmental responsibility, and social protection. Recent studies in the insurance sector have emphasized that CSR can improve business performance when it is aligned with stakeholder expectations, organizational capabilities, and institutional requirements (2). In such a context, CSR strategies are not limited to reputational campaigns; rather, they become mechanisms for strengthening trust, improving service legitimacy, reducing stakeholder conflict, and enhancing the adaptive capacity of insurance firms in changing social and economic environments.

The growing importance of CSR is also associated with the transformation of organizations into knowledge-based systems. In knowledge-based organizations, competitive advantage is shaped by the ability to acquire, process, share, and apply knowledge in decision-making and strategic action. Knowledge management provides the infrastructure through which organizations can identify stakeholder needs, learn from environmental changes, design socially responsive policies, and convert dispersed information into responsible organizational practices. The relationship between human resource management, knowledge management, and CSR has been emphasized in strategic management studies, indicating that CSR becomes more effective when it is supported by internal knowledge systems, employee capabilities, and organizational learning processes (3). Therefore, knowledge-based CSR can be understood as a strategic orientation in which social responsibility is designed and implemented through systematic knowledge creation, knowledge sharing, evidence-based decision-making, and continuous learning from stakeholders and the external environment.

The knowledge-based perspective is particularly relevant for organizations operating in societies where the relationship between scientific knowledge, socioeconomic systems, and institutional decision-making may be fragmented or asynchronous. Ghaneirad's analysis of the asynchrony of knowledge highlights the importance of aligning knowledge systems with social and economic structures in Iran, suggesting that organizational strategies may remain ineffective when knowledge production is disconnected from practical institutional needs (4). In the field of CSR, this means that responsible strategies should not be formulated as isolated managerial statements but should be embedded in mechanisms that connect organizational knowledge with social realities, regulatory expectations, customer experiences, market signals, and public concerns. For insurance companies, such alignment is essential because responsible behavior requires accurate knowledge about risk patterns, customer vulnerability, social expectations, legal developments, and economic instability.

Higher education and knowledge-based society studies also show that institutions are increasingly expected to perform social roles beyond their traditional functional boundaries. Hosseingholizadeh emphasized the relevance of higher education to society and the social role of universities in a knowledge-based society, demonstrating that knowledge institutions must contribute to societal development and responsiveness (5). This logic can be extended to knowledge-driven business organizations, including insurance companies, because they also operate within knowledge-intensive environments where expertise, data, professional judgment, and social awareness influence

public outcomes. Thus, knowledge-based CSR requires organizations to integrate specialized knowledge with social accountability and to use internal capabilities for addressing public concerns, improving stakeholder welfare, and supporting sustainable development.

The literature on knowledge-based companies further confirms that CSR can be designed as an organizational model rather than a peripheral activity. Mehdizadeh developed a social responsibility model for knowledge-based companies and highlighted the need to adapt CSR to the characteristics of knowledge-intensive firms, where innovation, expertise, human capital, and stakeholder interaction are central to organizational effectiveness (6). Similarly, studies on CSR, knowledge management infrastructure, and sustainable performance indicate that organizational ambidexterity can mediate the effect of CSR and knowledge management on sustainability outcomes, showing that firms must simultaneously exploit existing capabilities and explore new social and strategic opportunities (7). These findings suggest that knowledge-based CSR strategies are most effective when organizations can combine internal learning, innovation capacity, strategic flexibility, and stakeholder-oriented responsibility.

CSR is also closely related to organizational performance and financial outcomes. A systematic review of CSR and corporate financial performance showed that the relationship between social responsibility and performance has become a central topic in management research, although the strength and direction of this relationship may depend on industry characteristics, measurement approaches, and contextual conditions (8). In banking and financial services, CSR has been shown to affect corporate reputation and brand equity, indicating that socially responsible conduct can enhance intangible assets that are crucial for customer trust and institutional legitimacy (9). Evidence from Vietnam also indicates that CSR contributes to brand image, particularly when stakeholders perceive responsible activities as credible, relevant, and aligned with organizational identity (10). These findings are highly relevant to insurance companies, because the insurance business relies heavily on reputation, customer confidence, perceived reliability, and long-term relational commitment.

Beyond reputation and financial outcomes, CSR may also function as a protective mechanism in risk-intensive environments. Bamiatzi and colleagues showed that CSR may serve as a form of insurance against cyber security incidents, suggesting that responsible corporate behavior can create reputational and stakeholder-based buffers during crises (11). This perspective is particularly significant for the insurance industry because insurers are themselves risk-management institutions and are exposed to reputational, operational, legal, technological, and market risks. When CSR is knowledge-based, organizations may become better equipped to anticipate risks, communicate transparently with stakeholders, and mobilize internal and external knowledge to respond to crises. Therefore, CSR in insurance can be interpreted not only as a moral or reputational practice but also as a strategic risk-management capability.

Human resource management is another important foundation of knowledge-based CSR. Employees are the main carriers of organizational knowledge, and their engagement, competencies, ethical awareness, and learning orientation determine how CSR strategies are implemented in practice. Recent research on green human resource management and work engagement shows that sustainability-oriented HRM practices can strengthen employee engagement through the meanings employees attribute to HRM performance (12). Similarly, research on sustainable organizations and CSR-oriented human resource management has identified challenges and contradictions in aligning HRM with sustainable organizational development (13). These studies indicate that CSR strategies require internal organizational alignment; employees must understand, accept, and operationalize

responsible policies through daily routines, service interactions, knowledge sharing, and decision-making processes.

The generational composition of the workforce also affects CSR implementation. Generation Z employees enter organizations with distinct expectations regarding competence development, digital interaction, transparency, social value, and organizational purpose. Research on the competency model for Generation Z employees highlights the importance of identifying and prioritizing competencies that match new workforce characteristics (14). In insurance companies, where service quality, advisory roles, ethical judgment, and customer interaction are central, employee competencies can influence the successful implementation of knowledge-based CSR strategies. If CSR is to become an operational strategy rather than a formal declaration, organizations must develop employees who are capable of using knowledge responsibly, responding to social expectations, and communicating organizational commitments credibly.

Good governance also intersects with knowledge management and CSR. In Iranian sports federations, the relationship between good governance, knowledge management, and social responsibility has been modeled, showing that governance mechanisms and knowledge processes can jointly support responsible organizational behavior (15). In the insurance industry, governance is especially important because insurance companies operate under regulatory oversight and must maintain transparency, solvency, fairness, and accountability. Knowledge-based CSR strategies therefore depend on governance structures that support ethical decision-making, data-based policy formulation, stakeholder responsiveness, and compliance with legal and professional standards. Without governance support, CSR may remain symbolic and disconnected from actual organizational behavior.

The financial performance of knowledge-based companies is also influenced by the interaction among knowledge management strategies, innovation capabilities, and CSR. Shahbeyki and Jafari Titkanlou showed that knowledge management strategies can affect the financial performance of knowledge-based agricultural companies through the mediating roles of innovation capabilities and corporate social responsibility (16). This finding supports the argument that CSR should be analyzed as part of a broader strategic system rather than an isolated social program. In insurance companies, knowledge management can improve product design, customer segmentation, risk assessment, service innovation, and stakeholder communication, while CSR can strengthen legitimacy and public trust. The integration of these components may enhance both social value and organizational performance.

At the same time, CSR strategies are shaped by intervening conditions that can facilitate, constrain, or redirect managerial action. Aguinis and Glavas emphasized that CSR is connected to sensemaking and the search for meaningfulness through work, meaning that organizational actors interpret CSR through social, ethical, and contextual frames (17). Consequently, CSR strategies are not implemented in a vacuum; they are influenced by public opinion, media discourse, cultural norms, legal requirements, market pressures, economic instability, global standards, and stakeholder expectations. In the insurance industry, these intervening factors may be particularly powerful because public trust is sensitive to claim disputes, regulatory developments, economic pressures, and social perceptions of fairness.

Society, media, and public opinion can significantly affect how CSR strategies are perceived and evaluated. Public expectations concerning transparency, accountability, customer rights, environmental responsibility, and social justice can pressure insurance companies to adopt more responsive policies. Media coverage can amplify both positive and negative organizational behaviors, shaping reputation and stakeholder trust. Cultural and social norms also define what stakeholders consider responsible or irresponsible conduct. In markets where customers

may have limited technical knowledge about insurance products, public perception and social narratives can strongly influence confidence in insurers. Therefore, knowledge-based CSR requires organizations to monitor social discourse, interpret stakeholder concerns, and use knowledge systems to respond to public expectations in a timely and credible manner.

The legal environment is another key intervening factor. Insurance companies operate within complex regulatory frameworks that include local, national, and international rules related to financial reporting, solvency, consumer protection, data privacy, environmental commitments, and corporate governance. Legal pressures can shape CSR by transforming voluntary responsibility into institutional obligation. In this regard, CSR strategies must be compatible with compliance systems and should anticipate regulatory changes rather than merely react to them. Knowledge-based CSR is particularly valuable because legal adaptation requires systematic knowledge about regulations, standards, stakeholder rights, and policy trends. In the absence of such knowledge, organizations may face compliance gaps, reputational risks, or strategic inconsistency.

Economic and market dynamics also influence CSR strategies. Economic instability, inflationary pressures, shifts in customer purchasing power, changes in risk exposure, and intensified competition can affect how insurance companies allocate resources to CSR and how they prioritize stakeholder needs. In competitive markets, CSR can become a differentiation strategy, especially when products are similar and customer trust is decisive. At the same time, economic constraints may limit the scope of CSR initiatives or encourage firms to focus on those responsibilities that produce measurable strategic value. Knowledge-based CSR helps organizations evaluate these trade-offs by linking social responsibility to market intelligence, customer knowledge, risk analysis, and performance indicators.

Global developments further intensify the need for knowledge-based CSR in insurance. International trends in CSR, sustainability, transparency, environmental protection, and responsible governance increasingly influence domestic industries. Global standards create expectations for reporting, accountability, and sustainable conduct, even for firms operating primarily in national markets. As insurance companies encounter global risk patterns such as climate change, cyber threats, financial volatility, and social vulnerability, CSR must be connected to international knowledge flows and global best practices. In this sense, knowledge-based CSR strategies allow insurance companies to translate global norms into locally relevant actions while maintaining strategic coherence and institutional legitimacy.

Despite the growing body of research on CSR, knowledge management, governance, human resources, reputation, and performance, there remains a need to identify the contextual and intervening factors that specifically affect knowledge-based social responsibility strategies in the insurance industry. Existing studies have examined CSR models in knowledge-based companies (6), the effect of CSR and knowledge management infrastructure on sustainable performance (7), the role of knowledge management and CSR in organizational performance (16), and factors affecting CSR in insurance companies (2); however, less attention has been paid to how social, media-related, legal, economic, market, and global conditions intervene in the formation and implementation of knowledge-based CSR strategies in the insurance sector. Addressing this gap is important because intervening conditions can determine whether CSR strategies become operational, credible, and performance-enhancing or remain formal, fragmented, and symbolic.

Therefore, the aim of the present study is to identify the intervening factors affecting knowledge-based social responsibility strategies in the insurance industry.

Methods and Materials

In terms of purpose, this study is applied research; in terms of data type, it is an exploratory mixed-methods study; and in terms of the time of data collection, it is cross-sectional. In the qualitative phase, grounded theory with the approach of Strauss and Corbin (2007) and the analysis of semi-structured interviews with experts were used, while in the quantitative phase, a descriptive-survey method was employed. The statistical population consisted of managers and senior experts in the insurance industry with more than five years of work experience and educational qualifications higher than a bachelor's degree in the qualitative phase, and employees and experts familiar with social responsibility and knowledge management at Dana Insurance in Tehran in the quantitative phase. In the qualitative phase, 12 participants were selected using snowball sampling and based on the principle of theoretical saturation, while in the quantitative phase, 278 participants were selected as the statistical sample using convenience sampling.

The data collection instrument in the qualitative phase was semi-structured interviews, and in the quantitative phase, a researcher-made questionnaire was used. The face and content validity of the instruments were confirmed by experts, and their convergent validity was calculated using the average variance extracted (AVE) coefficients. The AVE values for all components were greater than 0.50; therefore, the questionnaire had acceptable convergent validity. In addition, Cronbach's alpha and composite reliability were used to assess reliability, and values above 0.70 were obtained for all dimensions, which is acceptable. Data analysis in the qualitative phase was conducted through open, axial, and selective coding, while in the quantitative phase, structural equation modeling was used to examine the research question. Data analysis was also performed using SPSS, PLS, and MAXQDA software.

Findings and Results

In this study, qualitative data analysis was conducted using the grounded theory approach in three stages: open, axial, and selective coding. Intervening conditions refer to conditions that influence and moderate the adopted strategies and interactions. Based on the results of the secondary coding of the study, the indicators of media and public opinion; social and cultural norms of society; laws and regulations at the local, national, and global levels; economic and market dynamics, including the country's economic conditions and competition in the insurance industry; and global developments, including international trends in the field of CSR and the obligation to comply with global guidelines and international standards, such as environmental sustainability, global economic standards, and transparency, were selected as the category of intervening conditions in presenting an applied model of knowledge-based social responsibility in the insurance industry.

Table 1: Categories of Intervening Conditions

No.	Dimension	Main Category	Subcategory
1	Intervening factors	Society, media, and public opinion	Media and public opinion
2	Intervening factors	Society, media, and public opinion	Social and cultural norms of society
3	Intervening factors	Legal environment	Laws and regulations at the local, national, and global levels
4	Intervening factors	Economic and market dynamics	The country's economic conditions
5	Intervening factors	Economic and market dynamics	Competition in the insurance industry
6	Intervening factors	Global developments	International trends in the field of CSR; the obligation to comply with global guidelines and international standards, including environmental sustainability, global economic standards, and transparency

In the quantitative phase, structural equation modeling was used to examine the relationship between intervening factors and knowledge-based social responsibility strategies in the insurance industry. The results are presented in Table 2.

Table 2: Relationship Between Intervening Factors and Knowledge-Based Social Responsibility Strategies

Variables	Path Coefficient	t Statistic	R ²
Intervening factors → Knowledge-based social responsibility strategies	0.338	8.290	0.779
Intervening factors → Society, media, and public opinion	0.784	24.761	0.615
Intervening factors → Legal environment	0.693	28.696	0.480
Intervening factors → Economic and market dynamics	0.813	43.323	0.661
Intervening factors → Global developments	0.713	28.662	0.508

According to Table 2, intervening factors have a significant effect on knowledge-based social responsibility strategies in the insurance industry, with an effect coefficient of 0.338 and a t statistic of 8.290. Therefore, at the 95% confidence level, it can be claimed that intervening factors, including society, media and public opinion, the legal environment, economic and market dynamics, and global developments, have a positive and significant effect on knowledge-based social responsibility strategies in the insurance industry. Moreover, among the dimensions of intervening factors, the dimension of society, media, and public opinion, with an effect coefficient of 0.784 and an R² value of 0.615; the legal environment, with an effect coefficient of 0.693 and an R² value of 0.480; economic and market dynamics, with an effect coefficient of 0.813 and an R² value of 0.661; and global developments, with an effect coefficient of 0.713 and an R² value of 0.508, have the ability to predict intervening factors. Furthermore, the dimension of economic and market dynamics, with an R² value of 0.661, was the strongest and most effective predictor among the intervening conditions.

Discussion and Conclusion

The findings of the present study showed that intervening factors had a positive and significant effect on knowledge-based social responsibility strategies in the insurance industry. The path coefficient of intervening factors on knowledge-based social responsibility strategies was 0.338, with a t statistic of 8.290, indicating that these contextual and environmental conditions play a meaningful role in shaping the strategic orientation of insurance companies toward knowledge-based social responsibility. This result suggests that CSR strategies in the insurance industry are not formed only through internal managerial intention, organizational resources, or formal policies, but are also influenced by broader social, legal, economic, market, and global conditions. This finding is consistent with the contemporary understanding of CSR as a strategic and context-dependent construct rather than a purely voluntary or philanthropic practice. Carroll argues that CSR reflects the interaction between business responsibility and social expectations, meaning that responsible corporate behavior must be interpreted in relation to the economic, legal, ethical, and social environment in which organizations operate (1). Therefore, the significant effect of intervening factors in this study confirms that knowledge-based CSR strategies in insurance companies should be understood as adaptive responses to complex stakeholder pressures and institutional expectations.

The first identified dimension was society, media, and public opinion, which had a strong predictive role among the intervening factors, with a path coefficient of 0.784 and an R² value of 0.615. This finding indicates that the social environment, media discourse, cultural expectations, and public perceptions significantly shape how insurance companies design and implement knowledge-based CSR strategies. In the insurance industry, public

trust is a critical intangible asset because customers purchase protection against future risks and therefore rely heavily on the credibility, fairness, and transparency of the insurer. This result aligns with studies showing that CSR strengthens corporate reputation, brand equity, and stakeholder confidence in financial and service industries (9). It also supports evidence that CSR can improve brand image when stakeholders perceive corporate actions as socially meaningful and credible (10). In this regard, media and public opinion can function as both a pressure mechanism and a reputational opportunity: they can expose irresponsible conduct, but they can also amplify responsible actions and convert CSR into a source of legitimacy.

The importance of society, media, and public opinion can also be interpreted through the sensemaking perspective of CSR. Aguinis and Glavas emphasize that CSR is connected to the search for meaningfulness through work and to how organizational actors interpret social responsibility within broader moral and social contexts (17). Accordingly, employees, managers, and stakeholders do not evaluate CSR merely as a formal organizational program; rather, they interpret it through social norms, public narratives, and perceived organizational sincerity. In the context of insurance companies, this means that knowledge-based CSR strategies must be supported by accurate knowledge about public concerns, customer experiences, media narratives, and social expectations. The result is also consistent with the argument that the relationship between knowledge and socioeconomic systems is sometimes asynchronous, especially when scientific or managerial knowledge is not fully translated into institutional practice (4). Therefore, insurance companies must reduce this gap by transforming public knowledge, stakeholder feedback, and social signals into actionable CSR strategies.

The second dimension was the legal environment, which showed a positive and meaningful predictive role with a path coefficient of 0.693 and an R^2 value of 0.480. This finding indicates that local, national, and global laws and regulations influence the development of knowledge-based CSR strategies in the insurance industry. Insurance firms operate in a highly regulated environment, and their social responsibilities are closely linked to legal obligations such as transparency, consumer protection, fair claim settlement, financial reporting, risk disclosure, and compliance with governance standards. This result is consistent with the view that CSR includes legal and ethical responsibilities and that organizations cannot separate social responsibility from institutional accountability (1). It also aligns with studies emphasizing the role of good governance and knowledge management in strengthening social responsibility, because effective CSR requires structures that support accountability, data-based decisions, transparency, and regulatory responsiveness (15). Therefore, the legal environment can be considered an enabling and controlling condition that directs knowledge-based CSR toward formal responsibility, compliance, and institutional legitimacy.

The legal environment also has a knowledge-based dimension because compliance with regulations requires systematic knowledge acquisition, interpretation, and implementation. Insurance companies must continuously monitor legal changes, regulatory expectations, professional standards, and international guidelines, and this requires strong knowledge management systems. Previous research has shown that knowledge management and CSR are strategically related, especially when organizations seek to align internal capabilities with external responsibilities (3). Similarly, studies on knowledge-based companies indicate that CSR models are more effective when they are integrated with organizational knowledge, innovation, and strategic learning (6). Thus, the finding of the present study suggests that the legal environment affects CSR strategies not only by imposing formal requirements but also by increasing the need for institutional learning, regulatory intelligence, and evidence-based managerial decision-making.

The strongest predictive dimension among the intervening conditions was economic and market dynamics, with a path coefficient of 0.813 and an R^2 value of 0.661. This finding shows that economic conditions and competition in the insurance industry have the greatest role in explaining intervening factors affecting knowledge-based CSR strategies. This result is theoretically meaningful because insurance companies are highly sensitive to macroeconomic instability, inflation, purchasing power, investment conditions, market competition, customer risk perception, and the financial capacity of policyholders. In unstable or competitive markets, CSR becomes more than a symbolic practice; it becomes a strategic tool for differentiation, trust-building, customer retention, and long-term sustainability. This finding is consistent with the systematic review by Coelho and colleagues, who showed that CSR is closely related to corporate financial performance, although this relationship depends on contextual, organizational, and industry-specific conditions (8). In the insurance industry, where financial credibility and customer confidence are essential, economic and market pressures can intensify the strategic value of CSR.

The strong role of economic and market dynamics is also aligned with evidence that CSR can improve performance through reputation, innovation, and stakeholder-based value creation. Shahbeyki and Jafari Titkanlou showed that knowledge management strategies can influence financial performance through innovation capabilities and CSR, indicating that CSR contributes to organizational outcomes when it is embedded in strategic knowledge processes (16). Similarly, Pazhoohan and colleagues found that CSR and knowledge management infrastructure affect sustainable performance through organizational ambidexterity, suggesting that firms must simultaneously exploit existing resources and explore new opportunities in changing environments (7). Based on this logic, the high R^2 value of economic and market dynamics in the present study indicates that insurance companies are more likely to adopt knowledge-based CSR strategies when they perceive CSR as a mechanism for managing competition, improving performance, and responding to economic uncertainty.

The finding related to economic and market dynamics also supports the idea that CSR may function as a protective resource in risk-intensive contexts. Bamiatzi and colleagues found that CSR can operate as a form of insurance against cyber security incidents by creating reputational buffers and stakeholder goodwill (11). This interpretation is particularly relevant to the insurance industry because insurers themselves are risk-management organizations and must manage operational, reputational, financial, technological, and social risks. Knowledge-based CSR can therefore help insurers anticipate market threats, understand customer vulnerabilities, design socially responsive services, and maintain credibility during crises. In this sense, the strong predictive role of economic and market dynamics shows that CSR strategies in insurance companies are closely tied to risk governance, competitive positioning, and sustainable value creation.

The fourth dimension was global developments, which had a meaningful predictive role with a path coefficient of 0.713 and an R^2 value of 0.508. This finding indicates that international CSR trends, global guidelines, environmental sustainability standards, economic transparency norms, and international expectations influence knowledge-based CSR strategies in the insurance industry. This result is consistent with the growing view that CSR is no longer confined to local philanthropic activities but is increasingly shaped by global sustainability discourses, responsible governance frameworks, and cross-border standards of transparency. Studies on sustainable organizations and CSR-oriented human resource management show that organizations face multiple challenges and contradictions when trying to align internal systems with sustainability and CSR requirements (13). Therefore, global developments create both pressure and opportunity: they pressure insurance companies to comply with

emerging standards, but they also provide models, benchmarks, and knowledge resources for developing more advanced CSR strategies.

Global developments also affect the internal human and organizational capabilities required for CSR implementation. Gupta and Jangra's study on green human resource management and work engagement indicates that sustainability-oriented organizational practices can influence employee engagement through the meanings employees attribute to those practices (12). In addition, the identification of competency indicators for Generation Z employees suggests that new workforce generations bring different expectations regarding social responsibility, digital awareness, transparency, and organizational purpose (14). These findings support the present study by showing that global CSR trends are translated into organizational strategies through human resources, employee competencies, and internal knowledge systems. For insurance companies, this means that knowledge-based CSR must be institutionalized through employee training, learning systems, ethical awareness, stakeholder communication, and the development of competencies suited to a knowledge-based and globally connected business environment.

The results are also consistent with studies emphasizing the social role of knowledge institutions and knowledge-based organizations. Hosseingholizadeh argues that institutions in a knowledge-based society must respond to social needs and contribute to broader societal development (5). This perspective supports the central premise of the present study: insurance companies, as knowledge-intensive service organizations, should not treat CSR as a marginal responsibility but as an integrated strategic function supported by knowledge management. Rouhi Khalili and Ranjbar also identified factors affecting social responsibility in improving the business performance of insurance companies, confirming that CSR in this sector is connected to organizational performance and sector-specific conditions (2). Therefore, the present findings extend previous research by showing that intervening conditions—particularly economic and market dynamics, society and media, the legal environment, and global developments—shape the way knowledge-based CSR strategies are formulated and operationalized in the insurance industry.

Overall, the findings indicate that knowledge-based CSR strategies in the insurance industry must be developed through a systemic and context-sensitive approach. The significant effect of intervening factors shows that CSR is not merely an internal managerial decision but a strategic response to a network of external and internal pressures. The strongest role of economic and market dynamics suggests that insurance companies are particularly influenced by competitive and financial conditions when designing CSR strategies. However, the strong roles of society, media, public opinion, the legal environment, and global developments show that CSR must also be socially legitimate, legally compliant, and aligned with international sustainability and transparency expectations. Therefore, an effective knowledge-based CSR strategy in the insurance industry should integrate stakeholder knowledge, regulatory intelligence, market analysis, employee competencies, organizational learning, and global standards into a coherent strategic framework.

The present study had several limitations. First, the quantitative phase was conducted among employees and experts of Dana Insurance in Tehran, and this may limit the generalizability of the findings to other insurance companies, regions, or organizational contexts. Second, the study used a cross-sectional design; therefore, it was not possible to examine how intervening factors and knowledge-based CSR strategies change over time. Third, although the mixed-methods design provided both qualitative depth and quantitative validation, the interpretation of intervening factors may still be influenced by the perceptions of the selected participants. Fourth, the study focused

on intervening conditions, while other dimensions of the broader model, such as causal conditions, contextual conditions, strategies, and consequences, may require further empirical examination.

Future studies should examine knowledge-based social responsibility strategies in different insurance companies and compare public, private, and semi-public insurers to identify possible structural differences. Researchers can also use longitudinal designs to evaluate how legal changes, economic instability, market competition, media pressure, and global sustainability requirements affect CSR strategies over time. Comparative studies across industries may also help determine whether the intervening factors identified in the insurance industry are sector-specific or applicable to other knowledge-intensive service industries. In addition, future research can test the mediating or moderating roles of organizational learning, digital transformation, innovation capability, stakeholder engagement, and employee competencies in the relationship between intervening factors and CSR strategy implementation.

From a practical perspective, insurance managers should treat knowledge-based CSR as a strategic system rather than a set of scattered social activities. Companies should establish mechanisms for monitoring public opinion, media discourse, legal developments, market changes, and global sustainability standards, and they should convert this information into practical policies and measurable CSR programs. Insurance companies should also strengthen knowledge management infrastructure, employee training, ethical decision-making, and stakeholder communication so that CSR becomes embedded in daily operations. Because economic and market dynamics were identified as the strongest predictor, managers should design CSR initiatives that simultaneously improve social value, customer trust, competitive differentiation, and long-term organizational sustainability.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

This study was conducted in accordance with the ethical principles of scientific research and under the ethics code IR.IAU.SARI.REC.1404.159 from Islamic Azad University, Sari Branch. The participants took part in the study with full awareness and informed consent, and their information was kept confidential. The results of this study were used solely for scientific purposes, and the disclosure of the participants' names or personal identifying information was avoided.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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