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Developing an organizational innovation model with the intellectual capital approach of Ur Iraq

ABSTRACT

The purpose of this study was to design a paradigmatic model of organizational innovation with an intellectual capital approach in organizations, specifically focusing on Ur Company in Iraq. The research employed a qualitative methodology using Strauss and Corbin's grounded theory approach. From the perspective of its purpose, the study is applied in nature. The statistical population included 17 individuals consisting of experts, managers, supervisors, and board members from various subsidiaries of the Ur Holding Company in Iraq (including human resources specialists within the holding, university professors experienced in intellectual capital collaboration, and experts in knowledge and technology management). Participants were selected using the snowball sampling method. The research instrument was semi-structured interviews, and its validity was assessed through face validation techniques. Data analysis was conducted using open, axial, and selective coding methods. Findings indicated that the causal conditions include social responsibility, corporate mission, and organizational maturity, all of which directly affect organizational innovation. Contextual and intervening conditions were identified respectively as innovation systems, participatory management, organizational trust, organizational support, and organizational culture; and internal and external organizational factors, all of which influence organizational innovation. The strategies derived from the data include formalization of knowledge and skill transfer, development of intellectual property regulations, and outsourcing of knowledge transfer. The identified consequences were enhancement of organizational knowledge, establishment of win-win relationships, and increased relational capital. It can be concluded that organizational innovation with an intellectual capital approach in Ur Holding Company in Iraq depends on multiple factors. Therefore, the company's decision-makers can take action to improve organizational innovation based on these influential factors and underlying causes.

Keywords: organization, intellectual capital, organizational innovation, Ur Company, Iraq.

Introduction

In today's increasingly knowledge-driven and hyper-competitive business environment, organizational innovation has emerged as a key strategic imperative for achieving sustainable growth and adaptation. As firms navigate technological disruption, global market volatility, and complex stakeholder expectations, the need to develop dynamic innovation models grounded in intellectual capital has become more pronounced than ever. Organizational innovation is no longer limited to product or process development—it encompasses the continuous capacity to transform structures, systems, and cultures to

foster agility, creativity, and long-term value creation [1, 2]. In this context, intellectual capital—including human, structural, and relational capital—acts as a foundational resource that fuels innovation potential and determines a firm's ability to compete in knowledge-intensive environments [3, 4].

Scholars have increasingly emphasized the centrality of organizational climate and culture in fostering innovation. Research demonstrates that when organizations promote a culture that supports learning, collaboration, and openness, they are more likely to leverage intellectual capital effectively for innovative outcomes [5, 6]. Such environments encourage knowledge sharing and creative behaviors, particularly when aligned with strategic human resource practices and supportive leadership [7, 8]. The integration of innovation practices with organizational learning and digital capabilities further enhances adaptive capacity and accelerates organizational transformation in volatile contexts [9, 10].

The intellectual capital approach provides a useful framework for understanding how intangible assets contribute to innovation. Human capital, which refers to employees' skills, experience, and creativity, plays a central role in knowledge creation. Structural capital—including organizational systems, databases, and innovation infrastructure—supports the efficient dissemination and codification of knowledge. Relational capital, built through trust-based networks and external collaborations, enables the absorption and exploitation of external knowledge sources [11-13]. The synergistic interaction of these forms of capital creates a fertile ground for innovation by supporting continuous learning and knowledge integration [14].

Organizational innovation, when grounded in intellectual capital, is particularly important in knowledge-intensive and globally oriented firms such as multinational holdings. The ability to implement innovation through open, dynamic, and collaborative processes reflects the organization's capacity to mobilize its intangible assets across geographical and structural boundaries. In this regard, the paradigm of open innovation—characterized by the inflow and outflow of knowledge across organizational borders—has received significant attention. Studies show that open innovation enhances sustainable competitive advantage and accelerates innovation performance when supported by organizational learning mechanisms [9, 15].

The effectiveness of such innovation strategies is contingent upon organizational conditions. These include participatory management, innovation-oriented culture, top-level support, and robust knowledge management systems [16, 17]. The presence of digital capabilities and digital culture further strengthens these mechanisms by enabling rapid knowledge transfer, employee engagement, and agile responses to environmental shifts [18, 19]. Moreover, intellectual property frameworks and policies play a mediating role in regulating knowledge flows and incentivizing creative contributions [20].

Despite the strategic importance of intellectual capital for innovation, many organizations face challenges in operationalizing these assets. Issues such as lack of knowledge sharing, hierarchical decision-making, inadequate incentive systems, and resistance to change limit the full potential of innovation frameworks [21, 22]. In this regard, structural enablers—such as innovation intermediaries, formal knowledge-sharing platforms, and external collaborations—can act as catalysts for building learning organizations and strengthening innovation ecosystems [23, 24].

The paradigm model proposed in this study addresses these multidimensional challenges by integrating the causal, contextual, and intervening factors that shape the innovation trajectory of an organization. It recognizes that innovation is not only a function of internal capabilities but also of external contingencies such as industry dynamics, national culture, and

regulatory frameworks [5, 6]. In this view, organizational maturity, global alignment, and social responsibility form the foundation for innovation orientation and are critical causal drivers of innovation capability [1, 7].

In organizations like the Ur Holding Company in Iraq—a large, multinational conglomerate operating in a knowledge-intensive industry—such a model provides a roadmap for institutionalizing innovation through systematic knowledge exchange, learning from external environments, and fostering intellectual openness. The company's willingness to adopt open innovation practices, collaborate with international experts, and formalize knowledge flows through structured HR and knowledge systems reflects a high level of organizational readiness for intellectual capital-based innovation [13, 14, 19].

The research contributes to the growing body of literature on innovation management by presenting a contextually grounded and theoretically robust model that emphasizes the strategic interplay between organizational conditions and intellectual capital. It also aligns with recent scholarship advocating for the use of agile and responsive HR practices to support innovation capacity, particularly in dynamic and uncertain environments [6, 17]. Furthermore, the model highlights the role of leadership, organizational learning, and culture as mediators between structural enablers and innovation outcomes [8, 22]. Thus, this study to design a paradigmatic model of organizational innovation with an intellectual capital approach in organizations, specifically focusing on Ur Company in Iraq.

Methods and Materials

This research was conducted using a qualitative approach, specifically Strauss and Corbin’s grounded theory methodology. In terms of its purpose, the study is applied. The statistical population in this method included 17 experts, managers, supervisors, and board members from various subsidiaries of Ur Holding Company in Iraq. These individuals were specialists in human resources, university professors with experience in intellectual capital, and experts in knowledge and technology management. They met the necessary criteria, including at least 5 years of expertise and experience, their role in the organization, networking and referrals from experts, willingness to collaborate, acceptance, and diversity in expertise. During the process, these individuals were asked to introduce other specialists and experts. Judgmental and snowball sampling methods, both non-random, were employed. Thus, after identifying and interviewing a few initial participants, other experts were added to the sample through referrals from previous interviewees. The sampling process continued until theoretical saturation was reached. This means that in-depth semi-structured interviews were conducted with company experts in human resources and innovation management until no new responses were received, and the answers from new participants were similar to those provided by previous participants. After this stage, the sampling process and data collection from experts were stopped. The validity of the instrument was assessed through face validity. For data analysis, the coding method (open, axial, and selective) was used.

Findings and Results

In this study, approximately 219 propositions were extracted from the interviews, which were initially coded. During the analysis process, redundant propositions were removed, and the initial propositions were summarized into scientific concepts. It is worth mentioning that to obtain a wide range of concepts related to the topic, the researcher conducted extensive studies on commonly used concepts in this field, so that a broad range of terms from the fields of innovation and knowledge management were available for selecting words and concepts.

In subsequent stages of analysis, propositions with similar concepts were merged and unified (axial coding), and finally, each of the similar codes was grouped into key categories. It should be noted that at each stage of coding and summarizing the data, the selection and placement of propositions in appropriate conceptual categories were continuously reviewed and consulted with interviewees and experts, ensuring that the propositions were placed in the correct categories. After finalizing the initial concepts, a reexamination of the concepts and the interview text was conducted, and the data were organized into categories such as causal, contextual, intervening, strategic, and outcomes. Additionally, the core phenomenon of this model, which is innovation with an intellectual capital approach, was extracted from the data after discussion with experts.

The following are examples of key points from the interviewees and the open coding process, presented in Tables 1 to 2.

Table 1

Open Coding of Selected Participant Statements

Data Code	Initial Coding	Concept	Category
IN-H-E01-1	Knowledge transfer – workflow of knowledge transfer in the industrial engineering unit	Formal processes for knowledge, skill, and experience transfer	Knowledge Management System
IN-H-E01-2	Open human resource approach in the holding	Open HR approach to partners	Organizational Innovation with Intellectual Capital
IN-H-E01-3	Coordination with other holding companies when knowledge or experience is needed	Exchange of knowledge, skills, and experience	Knowledge and Experience Transfer
IN-H-E01-4	Most companies operate in oil and gas sector	Formal processes for knowledge, skill, and experience transfer	Knowledge Management System
IN-H-E01-5	Holding coordination meetings to gather requests	Formal processes for knowledge, skill, and experience transfer	Knowledge Management System
IN-H-E01-6	Distribution of needs to other departments	Formal processes for knowledge, skill, and experience transfer	Knowledge Management System
IN-H-E01-7	Schedule provided by the requesting organization	Formal processes for knowledge, skill, and experience transfer	Knowledge Management System
IN-H-E01-8	Continuous exchange of personnel among holding companies	Human resource exchange and knowledge/skill transfer	Intellectual Capital and Innovation
IN-H-E01-9	Invitation of top external experts for training	Use of external consultants' knowledge	Knowledge and Talent Acquisition
IN-H-E01-10	Mentioning the invitation of top professors for training	Utilizing external expertise for training enhancement	Talent Acquisition
IN-H-E01-11	Utilization of foreign consultants' knowledge (e.g., Chinese)	Foreign consultants' knowledge	Talent and Knowledge Acquisition
IN-H-E01-12	The Ur Holding Company uses external knowledge sources for projects	Strategy of external knowledge sourcing	International Knowledge Transfer
IN-H-E01-13	Open approach has existed since the founding of Ur Holding	Use of open approach from the beginning	Organizational Open Philosophy
IN-H-E01-14	Open contracts of Ur Holding since its inception	Open approach in contracts with partners	Organizational Open Philosophy
IN-H-E01-15	Open approach enhances the company's credibility	Gaining credibility through the open approach	Credibility from Intellectual Capital
IN-H-E01-16	Managers support cooperation with foreign companies	Senior management support for open approach	Top Management Support
IN-H-E01-17	Collaboration of other countries with Ur Company	Knowledge and experience exchange with foreign firms	International Knowledge Transfer
IN-H-E01-18	Ur Company's management shares information and experiences with partner companies	Knowledge and experience sharing with partner firms	Intellectual Capital and Innovation
IN-H-E01-20	Restriction in internal knowledge and information transfer	Limitation in knowledge and information sharing	Internal Policies and Restrictions
IN-H-E01-21	Learning from external sources and adapting to internal needs	External knowledge adaptation to internal requirements	Organizational Learning
IN-H-E01-22	Unwritten limitations in sharing information	Restrictions in knowledge sharing	Internal Organizational Regulations
IN-H-E01-23	No resistance to sharing knowledge and information with others	Open approach to information and knowledge sharing	Knowledge and Information Transfer
IN-H-E01-24	Acquiring knowledge and experience from external sources	Using external sources for knowledge acquisition	Intellectual Capital
IN-H-E01-25	Formulating policies for knowledge sharing	Organizational policies on knowledge sharing	Knowledge Sharing
IN-H-E01-26	Transferring knowledge and skills to new employees	Training and knowledge transfer to new staff	Knowledge Management System

IN-H-E01-33	Not believing one knows everything and desire to learn from other organizations	Learning from external entities	Organizational Culture

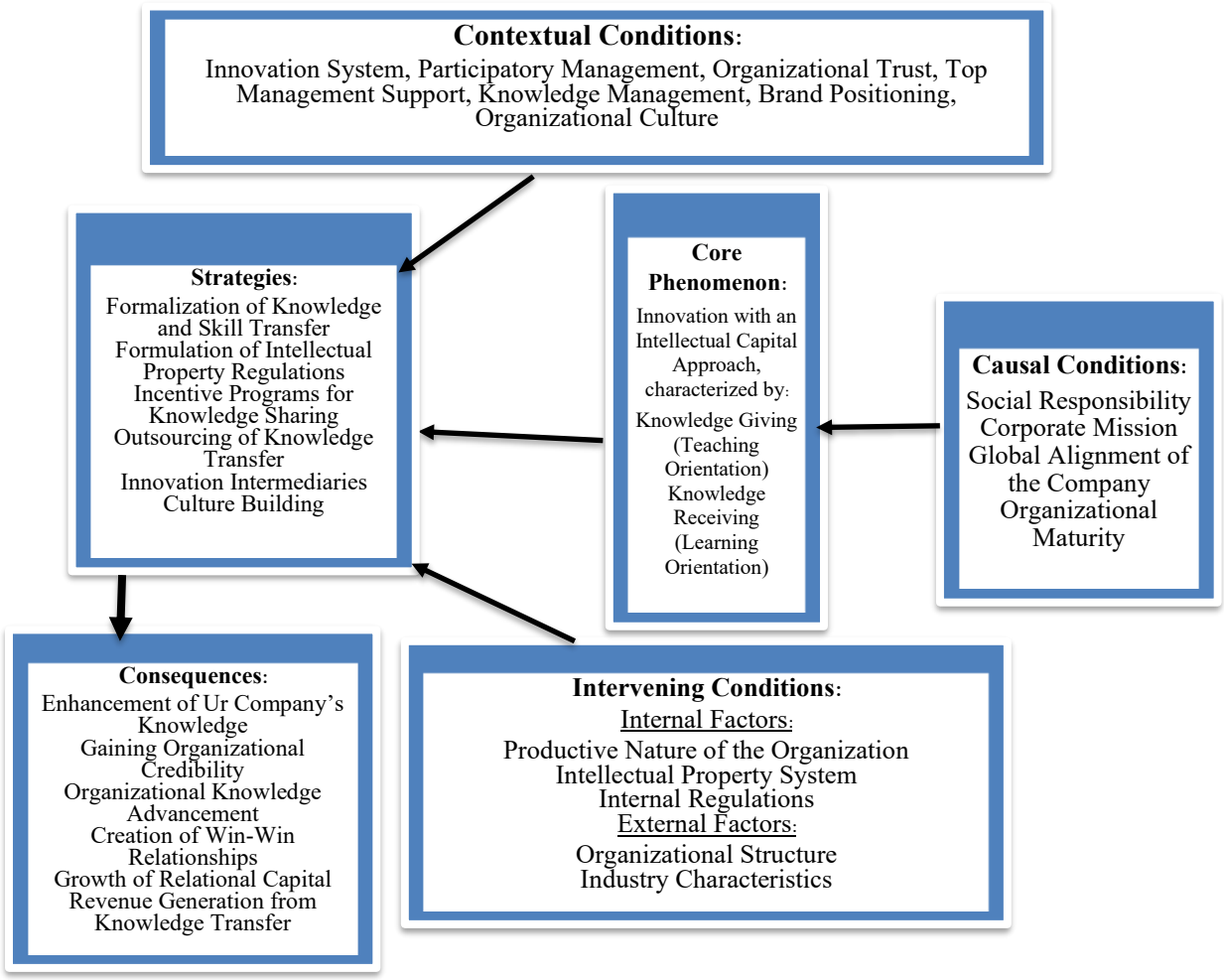
Table 2

Open Coding of Selected Participant Statements

Code	Initial Coding	Concept	Category
IN-H-E02-1	Organization's legal and regulatory approach limits employees' pursuit of higher education	Legal restriction on continuing education	Rules and Regulations
IN-H-E02-2	There are policies and incentive programs for employee education at Ur Company	Organizational encouragement of employee education	Rules and Regulations
IN-H-E02-3	Legal restrictions on sharing knowledge and information with others	Legal limitations on knowledge dissemination	Rules and Regulations
IN-H-E02-4	Need to prepare organizations for knowledge transfer	Knowledge transfer in Ur Company	Organizational Culture
IN-H-E02-5	New information and knowledge management systems	Innovation in knowledge management systems	Knowledge Management System
IN-H-E02-6	Necessity of using the experience of seasoned personnel for knowledge transfer	Leveraging prior experience for knowledge transfer	Knowledge Management System
IN-H-E02-7	Documentation and transfer of knowledge across organizational generations	Knowledge transfer between generational cohorts	Knowledge Management
IN-H-E02-8	Outsourcing human resources to deliver knowledge and skills	Outsourced knowledge transfer	Outsourcing Strategy
IN-H-E02-9	Knowledge-based organizational culture at Ur Company	Innovation in organizational culture centered on knowledge	Organizational Culture
IN-H-E02-10	Knowledge and experience transfer to new managers	Transferring experience and knowledge to new leadership	Knowledge Management System
IN-H-E02-11	Evaluating Ur Company's position in knowledge productivity compared to other firms	Analysis of Ur Company's position in knowledge utilization	Knowledge Management
IN-H-E02-12	Ur Company as a successful model in knowledge management	Ur Company's success in implementing knowledge management	Organizational Advancement in Industry
IN-H-E02-13	Sharing knowledge and information through organizational knowledge transfer	Successful knowledge transfer at Ur Company	Organizational Culture
IN-H-E02-14	Organizational planning for enhancing intellectual and knowledge capital	Enhancing intellectual capital at Ur Company	Organizational Capital and Capability Advancement
IN-H-E02-15	Organizational strategies for improving knowledge transfer	Improving knowledge transfer through organizational strategies	Knowledge Transfer Strategy
IN-H-E02-16	Knowledge-oriented culture at Ur Company for knowledge sharing	Knowledge-based organizational culture	Organizational Culture
IN-H-E02-17	Ur Company as a model in innovation and knowledge management	Innovation and knowledge management at Ur Company	Knowledge-Oriented Culture
IN-H-E02-18	Organization as a learning model in knowledge utilization	Learning organization in knowledge management	Organizational Learning Process
IN-H-E02-19	Utilizing experience and intellectual capital to enhance innovation	Using intellectual capital to improve innovation	Knowledge Management Strategy
IN-H-E02-20	Organization adopts an open approach to knowledge management and experience transfer	Organization's open approach to knowledge management	Organizational Learning

Figure 1

Paradigmatic Model of Organizational Innovation in the Holding Company



Accordingly, at the end of this stage, the final model of the study—focused on "Developing a Model of Organizational Innovation with an Intellectual Capital Approach in Organizations"—emerges based on the paradigmatic model. This model provides a theoretical account of how innovation is implemented through an intellectual capital approach in Ur Company, Iraq, and is presented as a conceptual narrative supported by relevant diagrams and descriptive components.

In this study, the central phenomenon is a model of innovation based on intellectual capital. This model explains the meaning of innovation with an intellectual capital approach and identifies the factors that contribute to its formation. It also outlines the organizational characteristics that influence the development of this model, along with internal and external factors that may either reinforce or constrain its application. Additionally, the strategies for implementing this model and the resulting outcomes are analyzed.

Innovation with an intellectual capital approach refers to the necessity for companies to adopt an open stance in various domains of their intellectual capital. This means that organizations should engage in the exchange of knowledge and skills with external environments and other institutions. As the core phenomenon of the study, this concept encompasses learning

from the external environment, attracting top talent and experts, and utilizing the knowledge of consultants, competitors, and academics, while also disseminating the organization's knowledge to others.

Ur Company in Iraq, due to its global nature and its organizational philosophy and mission—founded on knowledge sharing and continuous learning—as well as its organizational maturity and commitment to social responsibility, is inclined to share its knowledge and experience in intellectual capital systems with others. The characteristics of Ur Company, including its strong organizational culture, active innovation system, dynamic knowledge management, distinguished position and brand reputation, support from top management, participatory management, and organizational trust, all create a suitable foundation for the implementation of an innovation model based on intellectual capital.

On the other hand, factors such as organizational nature, intellectual property systems, internal regulations, motivational elements, and organizational structure (as internal factors), and aspects like industry characteristics, national culture, and political conditions (as external factors), can either facilitate or constrain the implementation of innovation through the intellectual capital approach.

Given the specific context and circumstances of Ur Company in Iraq, the realization of innovation through an intellectual capital approach requires the adoption of strategies such as promoting an open culture, outsourcing knowledge transfer, employing innovation intermediaries, designing incentive programs for knowledge sharing, formulating intellectual property regulations, and formalizing the processes of knowledge and skill transfer. The implementation of these strategies will yield positive outcomes, including the enhancement of industrial knowledge, the improvement of organizational knowledge, revenue generation from knowledge transfer, establishment of win-win relationships, growth in relational capital, and increased credibility and influence in the industry.

Discussion and Conclusion

The results of the present study led to the development of a paradigmatic model for organizational innovation based on the intellectual capital approach, applied within the context of Ur Holding Company in Iraq. This model identifies and explains the complex interrelationships among causal conditions, contextual and intervening factors, strategic actions, and outcomes, all centered around the core phenomenon: innovation driven by intellectual capital. The findings underscore that innovation in knowledge-intensive and globally oriented organizations is fundamentally rooted in the capacity to mobilize and manage intangible assets—namely, human, structural, and relational capital.

The causal conditions identified in this study—social responsibility, corporate mission, organizational maturity, and global orientation—reflect the foundational elements that catalyze innovation in organizations like Ur Holding. These elements not only inform the organization's strategic vision but also act as moral and operational compasses for engaging with innovation ecosystems. This aligns with previous literature emphasizing that organizations with a strong sense of mission and external alignment are better equipped to engage in sustainable and knowledge-based innovation practices [1, 7]. Furthermore, global competitiveness and maturity were found to influence the willingness of firms to share and acquire knowledge, which is essential in open innovation models [9, 15].

The study also revealed that contextual factors—such as innovation systems, participatory management, organizational trust, top-level support, knowledge management, brand status, and organizational culture—play a critical role in facilitating the implementation of innovation strategies. These contextual enablers create a climate conducive to experimentation,

shared learning, and cross-boundary collaboration. The emphasis on participatory governance and trust reflects findings from Chandel et al. (2025), who highlighted the role of inclusive culture and employee engagement in fostering innovation [6]. Similarly, the role of dynamic knowledge management systems in sustaining innovation echoes prior research that links structured knowledge flows with improved innovative capacity [8, 22].

A key insight from the research is the centrality of the intellectual capital-based innovation model. Within this framework, "teaching" (knowledge giving) and "learning" (knowledge receiving) are not isolated acts but are mutually reinforcing processes embedded in the organizational culture and structure. This dynamic mirrors the conceptualization of open innovation systems, where organizational learning serves both as an enabler and outcome of innovation [9, 10]. The model reinforces the argument made by Cozzarin (2017), who asserted that organizational innovation is positively influenced by the internal integration of knowledge infrastructure with employee competencies and external collaborations [20].

In terms of strategic actions, the findings emphasize the role of formalized knowledge and skill transfer mechanisms, intellectual property regulations, incentive programs for knowledge sharing, outsourcing of knowledge transfer, utilization of innovation intermediaries, and cultural development. These strategies provide practical pathways for operationalizing the innovation model. In particular, the formalization of knowledge flows and IP frameworks resonates with prior studies that have shown the necessity of clear institutional arrangements for knowledge governance in complex organizations [19, 24]. Additionally, the outsourcing of knowledge through external experts and consultants reflects a deliberate open innovation stance that allows organizations to absorb external knowledge while enhancing their relational capital [5, 15].

The model also underscores the importance of learning from the external environment, which includes engaging with international experts, competitors, and academic institutions. This approach supports the notion of absorptive capacity, where organizations develop the capability to recognize the value of new external information, assimilate it, and apply it for commercial ends [4, 18]. The findings show that Ur Holding's commitment to external collaboration is reinforced by its philosophy of continuous learning and knowledge sharing, consistent with the perspectives of Demircioglu (2018), who argues that innovation is most effective when organizations open their boundaries to external inputs and learning opportunities [2].

Intervening conditions were also identified as significant moderators in the innovation process. Internally, factors such as the organization's nature, intellectual property systems, and regulatory constraints influence the effectiveness of innovation strategies. Externally, industry dynamics, national culture, and political factors can either support or hinder innovation adoption. These findings are consistent with the work of Romanelli et al. (2022), who highlighted that socio-political and institutional contexts shape how organizations engage with intellectual capital frameworks [14]. Furthermore, the interplay between internal enablers and external constraints reflects the complex systemic view of innovation ecosystems discussed by Katz (2016), where innovation is embedded within and shaped by multilayered contextual conditions [24].

The outcomes of implementing innovation with an intellectual capital approach were found to be multifaceted. These include enhancement of organizational knowledge, increased credibility, win-win partnerships, growth in relational capital, and revenue generation from knowledge transfer. Such results confirm previous studies indicating that strategic use of intellectual capital not only drives innovation but also strengthens organizational resilience and competitive positioning [3, 16]. The case of Ur Holding exemplifies how a knowledge-sharing philosophy and an open culture can yield tangible benefits in terms of both economic performance and reputational capital.

Ultimately, this study contributes to bridging the gap between theory and practice by offering a context-sensitive, multi-level model of innovation rooted in intellectual capital. It affirms the interconnectedness of cultural, strategic, and structural variables in shaping innovation outcomes. Moreover, it advances a pragmatic framework for implementing innovation strategies in real-world organizations, particularly in emerging markets where knowledge infrastructures and innovation systems are still evolving.

This study is limited in several respects. First, the research was conducted using a qualitative grounded theory approach, which, while suitable for theory generation, limits the generalizability of the findings to other organizational or national contexts. The focus on a single case—Ur Holding in Iraq—provides rich contextual insight but may not reflect the dynamics present in firms operating under different regulatory, economic, or cultural conditions. Second, the reliance on semi-structured interviews as the primary data collection method introduces subjectivity, both in participant responses and in researcher interpretation. Although triangulation and validation techniques were employed, the possibility of bias cannot be fully eliminated. Third, the study does not account for longitudinal effects; it provides a snapshot of innovation at a particular moment, without tracking the long-term outcomes of the implemented strategies.

Future research could build upon the findings of this study in several meaningful ways. First, quantitative validation of the proposed model across different industries and geographical regions would strengthen its generalizability and offer comparative insights. Employing structural equation modeling (SEM) or confirmatory factor analysis (CFA) could provide empirical evidence for the relationships between the identified variables. Second, longitudinal studies are recommended to evaluate the long-term impact of intellectual capital-based innovation strategies on organizational performance and resilience. Third, future investigations might explore the role of digital transformation, artificial intelligence, and data analytics in enhancing intellectual capital deployment for innovation. Finally, research could also examine the effectiveness of various incentive structures and cultural interventions in reinforcing open knowledge-sharing behaviors among employees and stakeholders.

From a managerial perspective, organizations aiming to foster innovation should begin by cultivating a culture that values intellectual openness, collaboration, and continuous learning. Investment in knowledge management infrastructure and capacity building is crucial to support the formalization of knowledge flows and enable effective integration of external expertise. Leaders should establish clear policies on intellectual property and incentivize behaviors that contribute to innovation, such as cross-functional collaboration, idea sharing, and problem-solving. Moreover, partnerships with academic institutions, consultants, and international entities should be leveraged as strategic assets for acquiring and co-developing new knowledge. Finally, innovation strategies must be embedded into the core mission and governance structures of the organization to ensure alignment with long-term objectives and societal responsibilities.

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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

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

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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