

Value Network Development Model Through Cooperation Strategy Approach: Theoretical Review & Proposed Model for Universities



DOI: 10.46970/2024.30.2.04
Volume 30, Number 2
June 2024, pp. 63-89

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Drawing upon the literature of Strategic Management, this research advances our understanding by proposing a novel, systematic approach for the application and deployment of the emergent Cooperation & Development Model (CDM). This model presents a comprehensive framework for universities seeking to develop their own value networks. The intellectual and philosophical underpinnings of the research were established through a review of literature focused on the diagnostic dimensions of successful cooperation strategies for value network development. In this theoretical study, a conceptual and analytical model for value-creating networks was developed. The model is comprised of four critical elements: Balance, Communication, Adaptation, and Coordination. The findings suggest that the adoption of this model could offer universities enhanced opportunities to improve their responses to dynamic environments, while reducing costs and discrepancies in service delivery. Furthermore, the study advocates that universities should prioritise the integration of capabilities and resource reconfiguration, with careful scheduling of these decisions in alignment with the developmental needs of the sectors in which they operate.

Keywords: Capabilities Integration, Cooperation strategies, University Value Networks, Cooperation and Development Model.

Introduction

In the knowledge economy, universities are increasingly recognised for their dynamic role in fostering innovation and driving economic growth (O'Reilly et al., 2019). Consequently, research on the strategic management of universities has primarily centred on topics such as technology transfer management and the role of university incubators (Siegel et al., 1999; Clarysse et al., 2007; Rothaermel & Thursby, 2005). As universities seek additional funding sources and contribute to regional development, scholars are posing more profound questions regarding the need for universities to not only embrace entrepreneurship but also be managed and led more strategically through the development of their value networks (Leih & Teece, 2016).

Afuah (2009) highlighted that creating and capturing value are core concepts in strategic management for businesses aiming to achieve high profitability. Rusko (2011) contended that the primary motivations for collaboration among organisations within a value network are to realise greater benefits or value, thereby enhancing organisational performance through cooperative actions. A value network is described as "a collection of complex value chain structures, with interests converging to form groups of stakeholders in one place, which is the value network" (Liu et al., 2010). The central premise of the research is that universities should not only focus on their internal operations but also engage with their value networks. For instance, Laesser and Jäger (2001) emphasised that organisations should operate within value-building systems that involve various stakeholders. Similarly, Lenka et al. (2013) highlighted that the success of organisations is closely tied to their ability to restructure and strengthen their value network systems in collaboration with key partners.

While the value network of universities has been explored in strategic management, the mechanisms driving successful collaboration within this network are less understood. This paper argues that universities' success depends on their ability to reinvent their value-building systems and collaborate with key stakeholders. We address the question: "How can strategic cooperation mechanisms help universities develop their value networks, reduce costs, meet environmental demands, and achieve service differentiation?" The study introduces a model with four key dimensions—balance, communication, adaptation, and coordination—aiming to assess their role in shaping and developing universities' value networks.

This article is structured as follows. The next section outlines the study's methodology and focus, providing the relevant background and context for the concept of cooperation strategies. The subsequent section offers a theoretical review of the relevant literature, discussing the mechanisms that underpin the success of value network development strategies. Following this, we analyse the mechanisms of successful cooperation strategies and propose a value network model for universities. Finally, the concluding section summarises the key findings of the paper.

Research Methodology and Research Focus

The perspective adopted in the current study highlights the importance of discussing cooperation strategies in a manner that more accurately reflects the ongoing changes in the business environment. A comprehensive theoretical review of the dominant strategic schools that have shaped the strategic landscape may reveal that these

traditional frameworks are encountering substantial challenges (Thomas & Pollock, 1999). These challenges arise from their ability to adapt to continuous changes and technological advancements, on one hand, and their alignment with market expectations and the objectives of participants, on the other (Teece et al., 1997). Recent literature suggests that concepts and approaches that once prioritised sustainable profits through securing a competitive advantage in business sectors may no longer be valid. Factors such as shifts in industry structures and market volatility have diminished the role of structural advantages as a primary source of profit (Barney, 1991).

New insights have emerged, shifting the focus towards alternative management schools and a contemporary perspective centred around resource-based views, core capabilities, and the explicit emphasis on achieving competitive advantage through distinctive internal capabilities (Barney, 1991; Wernerfelt, 1984). Modern strategic thinking now highlights strategic cooperation schools, or more specifically, a value network-building approach. With the ongoing integration of information and communication technology supporting electronic cooperation structures, the concept of the "value network" is gaining traction. This approach underscores the development of capabilities in collaboration with network participants, with an increased emphasis on opportunities to gain competitive advantage by acquiring capabilities beyond organisational boundaries (Barney, 1991; Teece et al., 1997; Wernerfelt, 1984; Zollo & Winter, 2002).

Through a theoretical literature review and content analysis approach, this paper proposes a "Cooperation & Development Model" to structure the overall patterns of interaction and integration between universities engaged in successful cooperation strategies. In this context, a specific research methodology has been employed to explore all dimensions of the model within its framework. The "Cooperation & Development Model" seeks to delineate the patterns of interaction and integration between organisations involved in successful cooperation strategies, ultimately providing a comprehensive and integrated perspective on the content of value network development.

The intellectual and philosophical foundations of this research are based on a structured approach to thinking, while also reflecting the mechanisms behind successful collaborative strategies between organizations. The significance of the study lies in the growing interest in cooperation strategies and value networks (Adner, 2017). Furthermore, its importance is underscored by the aim to adapt and enhance these strategies within the framework of "Towards a more developed and proposed framework for the university value network."

The value of this study lies in its importance as a methodological roadmap for applying the success mechanisms of cooperation strategies, which can contribute to improved strategic performance for organisations working on developing their value networks, particularly in alignment with the proposed network. Additionally, the study offers a forward-looking perspective on advancing university value networks, culminating in the dissemination of conclusions to organisations that may be interested in the successful implementation of these cooperation strategies more broadly.

Theoretical Framework

From Value Chain-Based to Value Network –Based Perspective

Contemporary organisations are increasingly confronted with the reality that, regardless of their capabilities, they cannot rely solely on their own resources to meet the full range of value chain requirements. As a result, organisations must collaborate to build their value networks, through which resources are continually directed, distributed, and exchanged (Huabai, 2013). Traditional value chains are no longer sufficient to meet the strategic positioning needs of organisations. They are simplistic linear chains that focus solely on value-added activities from Porter's perspective. In contrast, the value network perspective views the organisation as part of a more complex structure, characterised by dynamic relationships among organisations and diverse interactions between organisations and industrial groups. These relationships often take the form of long-term partnerships (Jinsong & Shufang, 2010). Furthermore, traditional value chains overlook the intangible benefits of exchange and knowledge, whereas modern business models encompass three types of value exchange: 1) Knowledge, 2) Intangible value, and 3) Goods, services, and revenues (Li et al., 2008). Business activities now focus not only on value creation but also on the process of re-innovation, necessitating a shift away from isolated, static groupings of activities in strategic analysis. This implies that organisations should not only focus on their internal operations or industry but must also consider a value-building system that incorporates key stakeholders (Laesser & Jäger, 2001). The success of organisations is increasingly linked to their ability to re-innovate their value-building systems in collaboration with key stakeholders, such as distributors, competitors, customers, and business partners, thereby building value within the value network (Lenka et al., 2013). This describes a set of complex value chain structures, which, through collaboration, bring together various stakeholders into a unified network (Liu et al., 2010).

The Value Network Implications

Integrating individual entities such as customers, suppliers, producers, and other stakeholders within ICT applications and value networks can enhance organizational capacity and competence (Vlckova et al., 2014). An open system perspective, where organizations interact with their environment, is crucial for building and capturing sustainable value. Interaction occurs in two main ways: cooperation away from customers and competition near them (Golnam et al., 2010; Ling et al., 2013). Cooperative initiatives, such as setting market criteria and resource exchange, lead to competition to capture added value, including price, quality, or service (Albers & Schweiger, 2011). The primary motive for cooperation in value networks is to maximize organizational performance by building value through collaboration, while capturing value is achieved through competition (Rusko, 2011). Figure 1 illustrates the value network perspective.

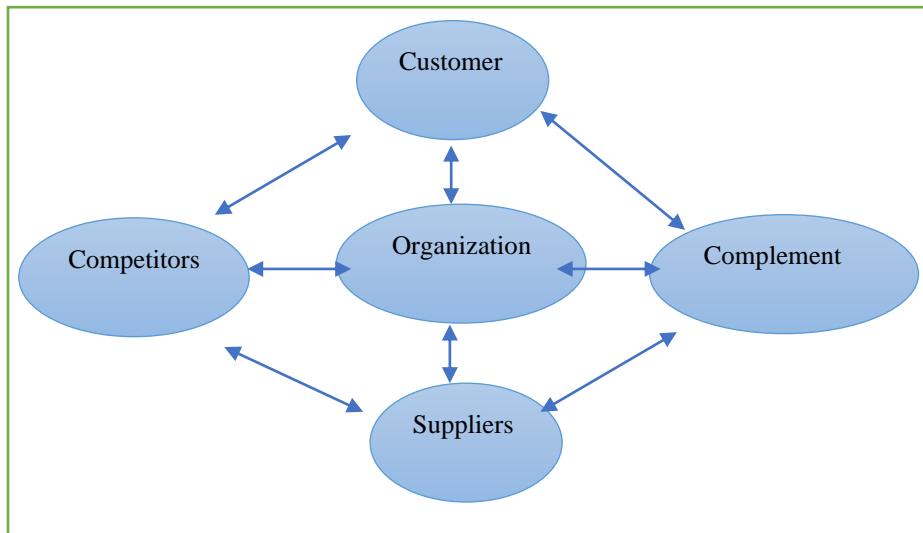


Figure 1: Key Network Player at the Industry (Source: (Rusko, 2011). Exploring the Concept of Coopetition: A Typology for the Strategic Moves of the Finnish Industry, *Journal of Industrial Marketing Management*, 40, P. 312.)

It can be argued that organisations have the ability to develop their networks both strategically and formally. They can select their alliances and determine the manner of collaboration within the framework of an integrated vision shared by all participants. This process involves leveraging key network characteristics, as outlined by (Zhan et al., 2009):

1. Network Membership: Refers to the unique traits and resources of network members and their capacity to contribute.
2. Network Structure: Describes the pattern of relationships among organizations within the network. Diverse relationships typically enhance performance by providing access to varied resources.
3. Condition of Balance: Refers to the exit of organizations unable to maintain the required balance in cooperative or opportunistic relations with network participants (Zhan et al., 2009).
4. Economic System Connections: The links between the components of the economic system can regularly influence the network's impact (M'Chirgui et al., 2010). Organizations may need to coordinate their relationships, both vertically and horizontally, to ensure stable connections and an optimal position within the network. Continuous analysis of relationships helps develop a better understanding of the network's dynamics (Kock et al., 2003). This conceptual framework explains developments in the logistics industry, emphasizing the dynamic relationships between organizations (Fulconis et al., 2011) and promoting cooperation under conditions that allow organizations to acquire capabilities, access new markets, and strengthen their network position (Osarenkhoe, 2010).

Mechanisms of Successful Cooperation Strategy Targeted toward Development of Value Network

Despite numerous studies highlighting the significance of cooperation as a strategy for building and acquiring value, research on the operational mechanisms and determinants of success often relies on traditional factors. These studies focus on the integration process, assuming the sharing of risk and cost, which are crucial for understanding why organizations collaborate and how they can succeed. However, these factors may not capture the unique aspects of cooperation strategies, which primarily aim to maximize added value. Such strategies are better developed and utilized within strategic alliances, supported by information and communication technology, to achieve competitive advantages. Researchers have increasingly recognized the sensitivity and complexity of cooperative relationships. Achieving optimal results may require focusing on mechanisms that govern participant interactions, with management efforts directed at planning, organizing, and guiding joint actions towards constructive behaviours. This approach aims to strengthen network management, build value, and develop its content while balancing the cooperation strategy's outcomes and ensuring its continued success. The results of the theoretical review of related studies on successful cooperation mechanisms highlight the impact of four key factors that contribute to the success of cooperation strategies in developing value networks. These factors are: Balance, Communication, Adaptability, and Coordination, as illustrated in [Figure 2](#).

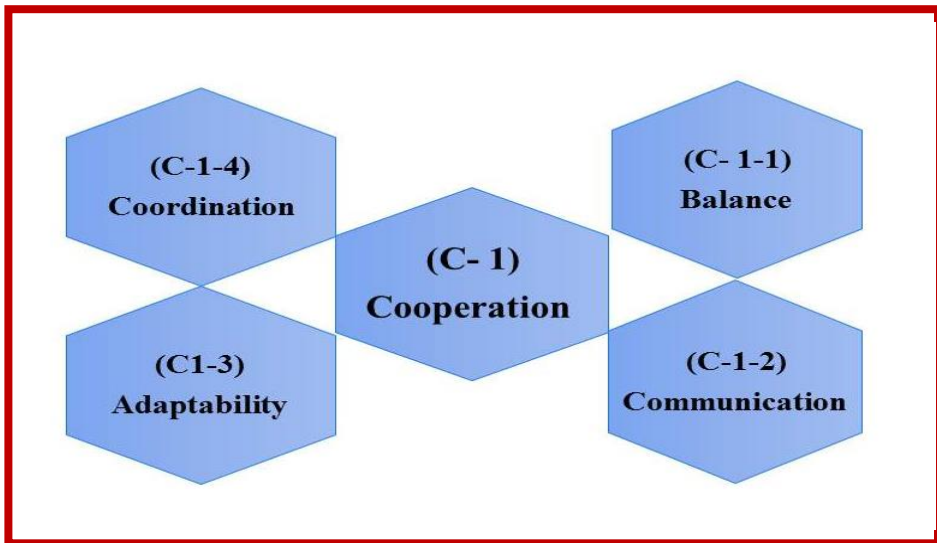


Figure 2: Mechanisms of Successful Cooperation Strategy. (Source: Created by the Researcher Based on Theoretical review of Related Literature)

These are the factors contributing to the development of the value network, as outlined in the current sections, which include the following:

(C1-1) Balance and Development of Value Network

The current study adopts a perspective that emphasizes the necessity of viewing cooperation strategy as an intentional approach. It relies on the proposed framework to describe the management of cooperation strategy and its successful mechanisms. The images and contents of the management process become more apparent during the phases of establishing mechanisms for the success of collaborative efforts, within the framework of the organisations' cooperative strategy. This framework seeks to represent the structure of value networks on one hand and the dynamic connections between participants on the other. Others assert that the value of networks has significantly advanced, paralleling the development of communication and information technology. This suggests that a stronger value network can be created by enhancing virtual connections between organisations (W. M & M. Kh. Al-Sabaawe, 2018). This dynamic fosters value creation within work groups, business organisations, and networks, supporting the exchange of both tangible and intangible value. Furthermore, it facilitates the achievement of common social and economic goals (Allee, 2008).

The perspective of balance within the framework of cooperation and competition holds particular significance, as it underscores the need for regular follow-up. This viewpoint aligns with the strategic vision, which suggests that it is possible to effectively manage the cooperation process while maintaining equilibrium between collaborative and competitive elements. Through careful planning and direction of follow-up activities towards specific targets (Tidström, 2008), as well as continuous and effective management of conflicting interactions, organizations can build new capabilities and accelerate the development of modern and distinctive value for both themselves and their customers (Ritala et al., 2009). By adopting various roles and reshaping multiple relationships within a cooperative framework, organizations can ensure openness, resource pooling, and adequate resource allocation for successful cooperation (Johansson et al., 2012). However, the cooperative force must balance the risks involved (Nemeh & Yami, 2012), as excessive risk can hinder the organization's ability to identify and invest in innovative opportunities for successful cooperation (Johansson et al., 2012). Conversely, conflict may arise from participants' individual goals, but intense competition between parties can foster more beneficial interactions, enhancing participants' capabilities and improving the overall effectiveness of cooperation (Lin et al., 2010).

The reality may compel participants to uphold the principles of "strategic balance" within the cooperation process. If one participant relies excessively on cooperation with competitors, this could increase their vulnerability. Conversely, an overemphasis on competition may lead to harsh responses from other participants (Tidström, 2008). The mechanisms of cooperation strategy can be viewed within the network perspective as an organizational infrastructure that regulates relationships and enhances the efficiency of cooperation. Additionally, building value within the network depends on this organizational infrastructure (Luo, 2005). This infrastructure can be understood as mechanisms designed to promote positive behaviours and prevent the emergence of negative ones (Sauvé, 2002). Cooperative attitudes, therefore, represent a crucial factor in the success of the cooperation strategy, as they positively correlate with the value-network development perspective. These attitudes

contribute to achieving technical diversity and integration through coordination and problem-solving, ultimately adding value (Lin et al., 2010).

Robust cooperation typically leads to a lower level of competition within the challenges associated with relational behaviours, potentially driving relationships away from a cooperative perspective (Johansson et al., 2012). While literature often emphasizes the strength of relationships in a network, such as cooperation, trust, and commitment, few studies focus on the relationship between conflict and value building. Interestingly, conflict and tension can be either positive or negative depending on their outcomes, and the "win-win" perspective is useful here, as it focuses on efficient problem management among conflicting participants (Mele, 2011). To manage these conflicts, cooperation must be developed to efficiently address the conflicting nature of participants. Management should implement proactive measures to ensure flexibility in conflict resolution and foster a positive environment that prioritizes cooperation and knowledge exchange, both short- and long-term (Ritala et al., 2009). Developing capabilities to balance contradictory interactions, ensuring participants' rights and responsibilities, and dividing roles are key success factors in maintaining value development within the network (Gurau & Lasch, 2011). Additionally, upgrading tools for interaction and communication within a shared vision and mutual trust is essential to avoid opportunistic behaviours (Lin et al., 2010). A systematic analysis of the benefits and costs of sharing critical resources, such as knowledge and capabilities, can help build value. Ultimately, the expected value from sharing resources should outweigh the risks (Ritala et al., 2009). Constructive decisions that balance cooperation will strengthen relationships, enhance understandings, and increase the network's ability to build shared value (Mele, 2011). Figure 3 summarizes the mechanisms for achieving balance aimed at developing a value network.

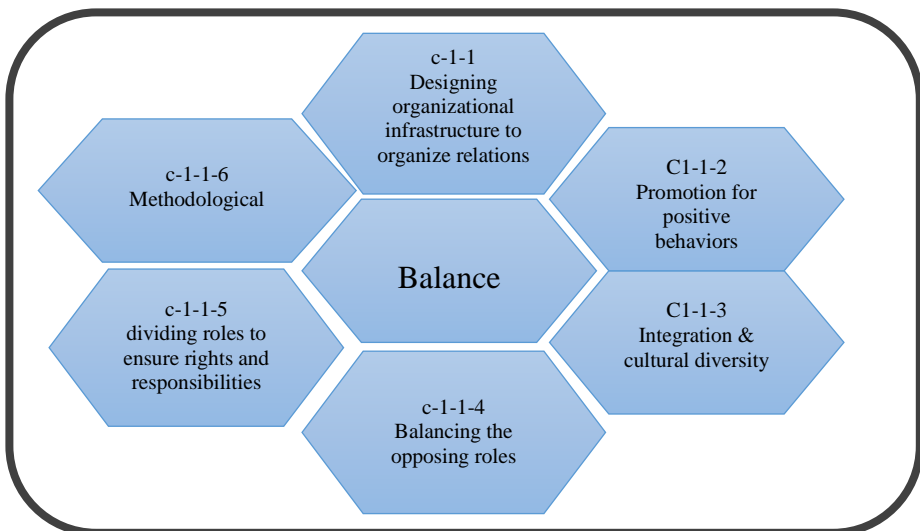


Figure 3: The Dimensions of Balancing Mechanisms for Successful Cooperation Strategies. (Source: Prepared by the Researchers Based on Theoretical Review)

The core philosophy underlying the cooperation relations within the value network perspective can be summarised as mobilising business activities to foster beneficial relationships with participants. The fundamental goal of the cooperation strategy is to create added value, primarily driven by the efficiency of support among participants. This reality necessitates that management apply the following key mechanisms:

- a. Design an organizational infrastructure to frame and implement cooperative relationships.
- b. Focus on selecting appropriate strategies to maintain balance in critical behavioural aspects, encouraging positive behaviours while minimizing negative ones.
- c. Improve organizational performance by balancing the integration of participants' capabilities and enhancing technical diversity.
- d. Achieve balance in role distribution while safeguarding the rights and responsibilities of participants.
- e. Conduct periodic, systematic analyses of those responsible for sharing critical resources, such as knowledge and capabilities, and assess the benefits accrued from these exchanges.
- f. Develop value-building content and its acquisition across the network.
- g. While balance mechanisms are crucial for the development of a value network, other mechanisms also play a significant role in managing and motivating cooperation. These mechanisms help control negative behaviours and enhance the building, development, and maintenance of value within the network. The role of electronic communication in facilitating these processes is particularly important and will be further explored in the following discussion.

C1-2 Communication and Developing the Value Network

New ICT and digital capabilities have empowered networks of organizations to play a pivotal role in fostering social and economic creativity within the framework of cooperation strategy. The remaining question concerns how multiple participants can integrate value activities and collaborate to generate value in the final outcomes (Möller et al., 2005). The literature review suggests that the provision of appropriate mechanisms for managing cooperation can lead to positive outcomes, with cooperation relations (Ahmed et al., 2018) contributing to value network performance. This, in turn, can enhance value for participants through joint mechanisms that facilitate the sharing or exchange of knowledge and information. Structural features and relational traits within the value network act as key sources of value (Johansson et al., 2012). Despite the integration achieved among participants through a set of joint standards, which is a positive and desirable factor, the complex nature of the value network system may require (Engelhardt-Nowitzki et al., 2011) continuous attention from the administration. This focus is necessary to promote transparency and trust among participants, thereby enhancing learning levels and reducing the costs associated with opportunistic behaviours (Phlippen & van der Knaap, 2007).

In a related context, discussions on the contents of cooperative relationships emphasize the connection between participants within the network (Yu-Chen & Xiao-Lan, 2013), forming joint value chains, including both external and internal chains, to

establish the fundamental structure of the value network. This structure facilitates the acquisition and sharing of information and knowledge across network nodes, contributing to superior value creation (Mingliang & Bin, 2008). This process operates within an integrated infrastructure that manages communication within the value network, accelerating the transformation of new knowledge into productive outcomes (Luo, 2005). Additionally, it addresses contracting risks and tensions by enhancing the ability to protect value creation within the network, ensuring the long-term success of cooperation strategies (Sauvée, 2002). In the context of ICT applications, the cooperative system relies on a set of tools that support participants in facilitating the flow and exchange of information and knowledge (Haag et al., 2006). This broad concept of electronic cooperation involves the use of technology to enable participants to work together toward common goals (Kock, 2008).

The infrastructure required for these networks includes skills in IT communication, information exchange standards, and equipment. Electronic cooperation technology is not confined to ICT alone but also encompasses operational and managerial technologies that support and implement cooperative efforts (Kock, 2008). The communication facilitated by these technologies can transform basic interactions among participants into positive outcomes, especially by influencing conflict management, trust-building, and fostering constructive personal interactions, which are pivotal to the success of cooperative work (Stokes et al., 2008). The major factors contributing to the success of joint value creation are the management of communication, particularly in the contexts of conflict management systems and information systems support (Chen & Liang, 2011; Chin et al., 2008). According to Chin et al. (2008), coordination and oversight of joint actions play a crucial role in fostering organizational and critical cooperation, thereby facilitating the exchange of vital value and ensuring successful cooperation (Chin et al., 2008). The commitment and support of the department are evident in the promotion of internal communications as a key factor for enhancing business performance. Additionally, managing external communications is essential for creating an environment that enables participants to overcome shared obstacles and tensions (Chen & Liang, 2011).

Reaching a consensus among participants on information levels, decision-making strategies, oversight systems, and organizational culture is crucial, as joint systems require collaborative management (Christiaanse & Markus, 2003). Effective communication management can mitigate or even eliminate misunderstandings and conflicts among participants within the cooperation network (Chen & Liang, 2011). This ensures participants can share accurate, relevant, and timely information, fostering robust knowledge-sharing practices that enhance the overall capabilities of the value network (Goswami et al., 2011). Figure (4) illustrates the outcomes of the theoretical review on the dimensions of the communication mechanism between participants in the cooperation strategy aimed at developing the value network.

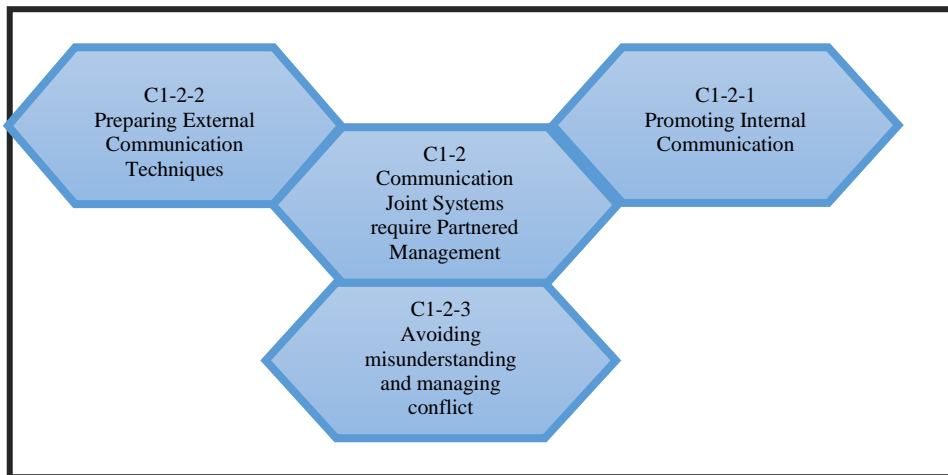


Figure 4: *Dimensions of Communication Mechanism for Successful Cooperation Strategies.* (Source: Prepared by Researchers Based on the Results of Theoretical Review of Relevant Literature).

In conclusion, communication and information technology (ICT) have a pivotal role in strengthening the infrastructure required for effective cooperation strategies. ICT not only facilitates communication among participants but also consolidates the cooperation efforts by designing systems and enhancing communication platforms across organizations. The most significant contribution of ICT is the creation of a communication environment that fosters the exchange of information and resources, thereby strengthening dynamic relationships within the value network. This environment is essential for managing tensions between participants, enabling the development of mutual cooperation mechanisms through knowledge exchange and sharing via electronic communication. This, in turn, enhances participation, interaction, and feedback, all of which are vital for ensuring compatibility and cooperation in building and acquiring value within the network. The adoption of new communication methods and innovative mechanisms to build and develop value requires participants to enhance their capacity to adapt to the evolving demands of the cooperation strategy. The ongoing use and development of e-cooperation tools, along with positive communication and interaction, will necessitate a shared vision among participants. This vision will guide them in adapting to the emerging needs of enhancing the overall value network content, which will be explored further in the following sections.

(C1-3) Adaptability and Developing Value Network

The contributions of researchers highlight the importance of effective adaptation actions in creating a positive working environment. These actions aim to address the inherent inconsistencies in the nature of cooperation relationships, while simultaneously leveraging the positive effects of participants' interactions to develop and enhance value-building content within the value network. Some scholars argue

that the key task of the adaptation strategy is to stabilize the value network, focusing on expected future gains and harmonizing roles by mitigating relationship complexities (Mankevich, 2014). Other perspectives suggest that management's adaptation efforts are crucial for building integration, which involves utilizing technology, constructing organizational structures to organize and coordinate cooperative work, and guiding the relationship toward enhancing value-building efforts (Salvetat & Géraudel, 2012). Additionally, some scholars emphasize the need for adaptation strategies to address high cooperation risks, such as opportunistic behaviour, misunderstandings, loss of control, management challenges, technical risks, and information leakage. This approach underscores the importance of focusing efforts on better adaptation to these challenges, which are key determinants of successful value-building outcomes (Kossyva et al., 2014).

In a related context, trends indicate that developing absorptive capacity is crucial for participants to adapt effectively within the network, using a value diagnosis framework that explores both internal and external value through joint understanding and interaction. This process has a positive relationship with value-building outcomes (Schmiele & Sofka, 2007). The success of participants is often linked to their ability to manage tensions between exploration and investment, as well as their capacity to adapt to shared resource management. Achieving higher levels of value depends on dynamic adaptation, technology adoption, information flow, and organizational culture (Fernandez et al., 2012). Participants face two basic approaches to managing these complex relationships: avoidance or adaptation. If an organization can adapt to the complexities of cooperation, it may need to restructure its organizational framework to handle contradictions effectively. This approach enables the organization to address challenges within the cooperative relationship, ultimately fostering a more flexible and resilient structure (Golnam et al., 2011).

Some researchers highlight the influence of both relational and structural conditions on the participants' ability to adapt and leverage the advantages of connections within the value network. These conditions can be examined through two dimensions. First, the time range of relationships among participants plays a crucial role, particularly in the context of practices that establish the requirements for cooperation and the creation of either short-term or long-term relationships. Second, the cognitive characteristics of the participants, including their abilities, whether they are complementary or unique, can significantly impact adaptability. These dimensions are essential in determining the participants' capacity to achieve effective adaptation within the network, influencing their ability to adapt and capitalize on the network's value-building opportunities.

Accessing the overlapping advantages within the value network while maintaining a degree of autonomy is crucial for participants (Johansson et al., 2012). Managerial perspectives emphasize that technological transformation, particularly electronic cooperation, is one of the most prevalent changes as it can fundamentally alter the nature of work. This transformation often necessitates flexibility and adaptability at both organizational and technological levels (Stokes et al., 2008). Adaptation processes, including the modelling, design, and analysis of various participants' activities, can foster the development of cooperative relationships, addressing the complexities and dynamism inherent in multifaceted relationships (Golnam et al.,

2011). In this context, the interdependence between participants plays a central role in achieving mutual goals, with high levels of cooperation simultaneously (Liu et al., 2010; Luo, 2007). The realization of value through these cooperative relationships is often linked to the fulfilment of preconditions that help reduce adaptation dilemmas, which can be understood across three distinct levels:

First, strategic levels involve conditions where participants possess sustainable resources and develop increased interdependence. Second, cultural adaptability is crucial for establishing a strong foundation for joint growth and cooperation. Third, organizational preparations are necessary to define optimal alliance forms, clarify participants' responsibilities, and establish mechanisms for conflict resolution. This suggests that organizations should not only focus on the adaptability and flexibility of electronic technology but also extend this to individuals, as their creative response capabilities are essential to the adaptation process (Stokes et al., 2008). A comprehensive view of the adaptation factor includes measures for effectively managing new roles and establishing a more reliable framework for participants within the network. This enables positive interaction among dynamic relationships and facilitates value-building and development (Alves, 2013). Figure 5 illustrates the dimensions of the adaptation mechanism within cooperation strategies aimed at developing the value network.

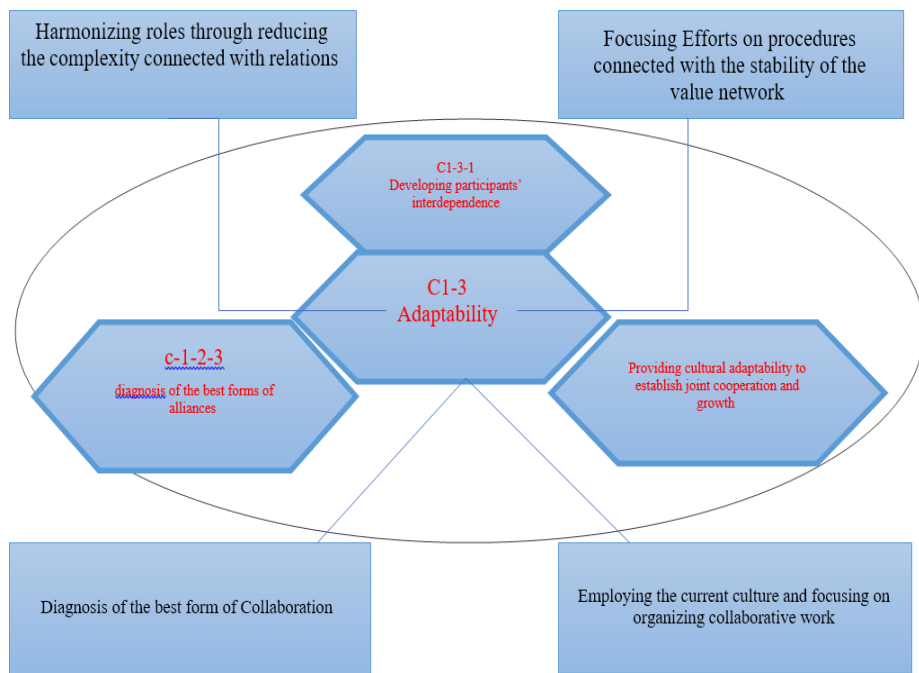


Figure 5: Illustrate Dimensions of the Adaptation Mechanism within the Cooperation Strategies targeting Development of the Value Network . (Source: This Figure prepared by the Researchers Based on Results of Related Theoretical Review of Literature).

From the previous discussions, it can be concluded that understanding the mechanisms for a successful cooperation strategy involves achieving balance across multiple areas. This includes the significant expansion of ICT adoption, which provides the flexibility needed to navigate the complexities of the cooperation strategy at various business levels. The aim is to enable participants to leverage benefits while mitigating risks, accelerating value-building, and continuously developing the value network. However, achieving common understanding and mutual adaptation is challenging. It may require proactive efforts from participants at the organizational, technical, and human levels. This process begins with developing organizational structures that facilitate the use of electronic cooperation tools, enhancing information flow through collective and social coordination to build value. Furthermore, it is essential to establish electronic communication mechanisms outside organizational boundaries to improve the absorptive capacity for exploring and investing in value within the network. This involves utilizing advanced technology to integrate participants and maintain an ongoing search for critical capabilities and knowledge that support value creation.

In addition, adapting to the roles defined by the cooperation strategy requires flexibility in accommodating the diverse cultural backgrounds of participants. Achieving consensus on embodying participants' cultural identities is crucial for optimal value network development. As cooperation strategy elements are subject to change over time, influenced by both internal and external factors, continuous coordination becomes vital to maintaining compatibility and harmony among participants. This coordination is key to improving value-building and development processes within the value network. The following section will further explore how coordination contributes to the development of the value network.

(C1-4) Coordination and Development of Value Network

The literature on strategic management highlights the evolution of a relational perspective, which helps answer key questions regarding why organizations focus on building linkages in a cooperation strategy. This perspective also addresses how coordination can be managed to add value to teamwork by securing critical resources and ensuring ongoing positive interaction within the network (Johansson et al., 2012). The transfer of value, particularly in the context of economic principles, is central to understanding value-building processes, acknowledging both material and intangible resources (Allee, 2008). While economic value can be created through various relationships, more significant value tends to emerge in networks where participants leverage efficient coordination strategies. These strategies often rely on multiple, diverse connections (Hagel & Brown, 2008). Furthermore, advancements in information and communication technology have altered organizational requirements, increasing the need for capabilities that enable dynamic connections. These connections help build new opportunities and integrate them into value networks, which can continuously evolve and develop within internal strategies (Vermeulen, 2012).

It can be asserted that contracts may not encompass or fully diagnose all aspects of a cooperation relationship, and therefore, controlling strategies should focus on managing the dynamic nature and changes inherent in these relations. This

management should occur within a framework of joint coordination, aiming to facilitate close interaction between participants, ensure mutual commitment, and structure the flow of resources and knowledge within the value network (Loebbecke et al., 1998). By leveraging group synergies and facilitating learning through the exchange of expertise and information, these strategies can enhance the overall organizational capacities. Coordination plays a crucial role in building and developing value (Tsai, 2002). This requires participants to synchronize their activities to bring them into harmony with one another, and coordination can also involve diagnosing practices that organize participants' roles in the cooperation (Kenny, 2009). Effective coordination can lead to the integration of cooperative activities, potentially creating influential organizational pressures (Thomason et al., 2012).

The complex nature of cooperation necessitates the development of coordination systems to plan, monitor, organize, and evaluate cooperative practices among participants across various locations within value networks (Luo, 2005). Coordination practices can be categorized into two main phases: the building phase and the management phase. The building phase involves procedures focused on developing tools that facilitate and diagnose areas for value creation, while the management phase addresses the tools necessary to access, disseminate, and preserve opportunities for value development (Ritala et al., 2013). ICT plays a crucial role in coordinating and controlling joint actions, serving as a key motivator in organizational cooperation by enabling accurate information exchange. ICT also facilitates communication and supports the development of value-added models for successful cooperation (Chin et al., 2008). Effective group cooperation requires adherence to agreed practices, availability of information about tasks to be accomplished, and shared awareness of the activities of others. This underscores the importance of the 3Cs model—communication, coordination, and cooperation—as essential elements for successful collaboration (Raposo & Fuks, 2003), as illustrated in Figure 6.

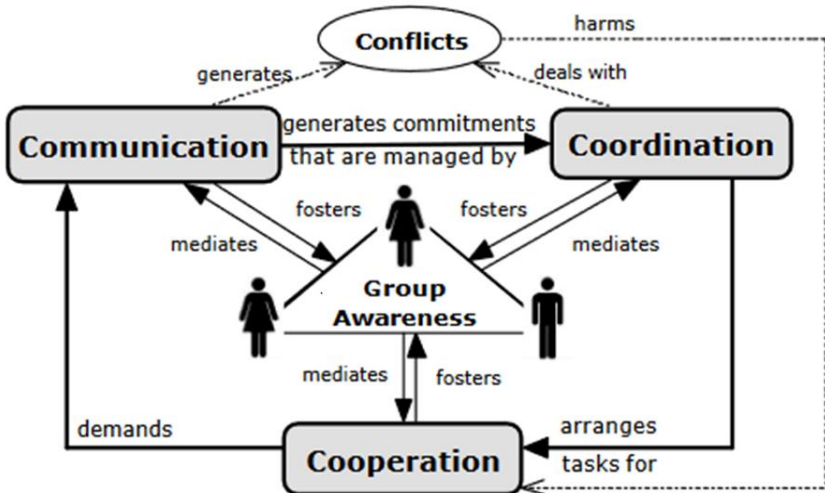


Figure 6: Overview of 3C Collaboration Model
Source: (Raposo & Fuks, 2003)

It is important to highlight that the concepts of communication, coordination, and cooperation are often analysed separately due to their interdependence and overlapping relationships, which make it difficult to treat them as a single entity (Asghar, 2011). Regarding coordination mechanisms, the development of the value network may be tied to planning value exchanges across the network within the framework of coordination between three key elements: roles, procedures, and delivery. Roles refer to the contributions and functions carried out by partners within the network, which involve creating interactions, adding value, making decisions, and taking initiative. Procedures emerge as activities that begin with one participant and end with another, describing the movement of connections and the functions of participants' roles. Delivery refers to the actual practices, both tangible and intangible, that occur as value moves from one role to another (Allee, 2008). To enhance coordination procedures among participants, focus should be placed on three main aspects, which can be viewed as strategic techniques within the framework of cooperation. These fields include: (Luo, 2007):

- a. **Analysing Boundaries:** This involves administrative efforts to identify and assess the key areas for cooperative action, which is a crucial step in establishing a collaborative structure.
- b. **Flexible Contract:** A strategic approach that uses a flexible contractual framework, aiming to strengthen cooperation and stability. This structure balances cooperative agreements with the flexibility needed to encourage competition.
- c. **Strategic Balance:** Refers to an organizational framework designed to balance cooperation and competition effectively, ensuring that both elements contribute to the process of value building within the network.

Development of Universities Value Networks

The concepts of value creation and acquisition are essential in strategic management, especially in the context of highly profitable activities (Afuah, 2009). In today's competitive environment, organizations must go beyond merely predicting customer needs. The focus of competition now shifts to creating new value offerings and discovering innovative ways to obtain them (Deniz et al., 2012). This shift moves away from traditional industrial value chain practices towards creating unique customer benefits while maintaining cost-efficiency (Afuah, 2009). The cooperative perspective is crucial for developing value networks, not only for high-tech firms but also for organizations with less advanced technologies (Bielawska, 2013). This perspective aligns with the value theory that "the whole is greater than the sum of its parts," emphasizing the potential of cooperative strategies to create superior value for participants compared to competitors (Maso & Lattanzi, 2014). Cooperative relationships contribute to several key aspects, as outlined by (Markiewicz & Adamus, 2012).

1. Reducing the time needed to acquire the resources necessary for achieving a quick response capability.
2. Lowering the costs of fundamental research for industry development by sharing costs among participants.
3. Applying contemporary technologies to deliver exceptional value to customers.

Proponents of these models recognize that the most effective solutions for achieving competitive advantage often reside within a multifaceted value network, an approach that integrates competitive strategies, organizational structure, and a collaborative environment grounded in mutual dependence and transparency (Walters, 2009). Additionally, cooperation through information and communication initiatives can achieve objectives that are difficult to attain through individual efforts alone, but can be realized through teamwork with direct competitors, ultimately benefiting the network as a whole (Al-Sabaawe et al., 2024).

Similarly, the network perspective can influence universities in developing new forms of relationships that enhance understanding of value network development. This involves interaction and integration between universities and external organizations, strengthening the universities' value network by sharing resources and capacities to address strategic challenges and improve educational quality. This shift may suggest a change in the conceptualization of value, moving from an abstract notion of value as a trade-off between benefits and sacrifices, to a more strategic concept of value-added, which emphasizes the co-creation of value. From this perspective, the value network of universities reflects the framework of exchange and interaction between participants' resources—such as customers, processors, competitors, and integrators—and their capabilities to achieve the best value. This framework supports the improvement of educational operations and the enhancement of higher education quality. The development of a university's value network can be understood through two key methods within the context of value development:

1. Formulating new patterns of value offered by universities.
2. Finding innovative ways to satisfy stakeholders.
3. Enhancing the benefits of stakeholders by maintaining low cost versus providing high value.

Moreover, the dimensions of developing university value networks can be articulated as outcomes derived from the successful implementation of cooperation strategies, along with active participation within the value network. These dimensions include:

1. Access to Critical Resources for Achieving Excellence: Through partnerships within the network, universities can gain quicker access to essential resources, enabling them to rapidly respond to environmental changes and demands. This facilitates the achievement of rapid response to environmental requirements, positioning the university as agile and responsive to external challenges and opportunities.
2. Reducing the Cost of Major Research: By sharing the costs of research and development efforts with network participants, universities can lower the financial burden of significant educational sector advancements. This practice supports the attainment of low-cost leadership, ensuring that universities remain competitive in offering high-quality research and education at affordable costs.
3. Application of Modern Technology for Distinctive Value Creation: Universities can leverage cutting-edge technologies to enhance the value offered to their stakeholders, including students, faculty, and industry partners. This enables universities to achieve differentiation, setting them apart from competitors by providing unique and valuable educational experiences and services.

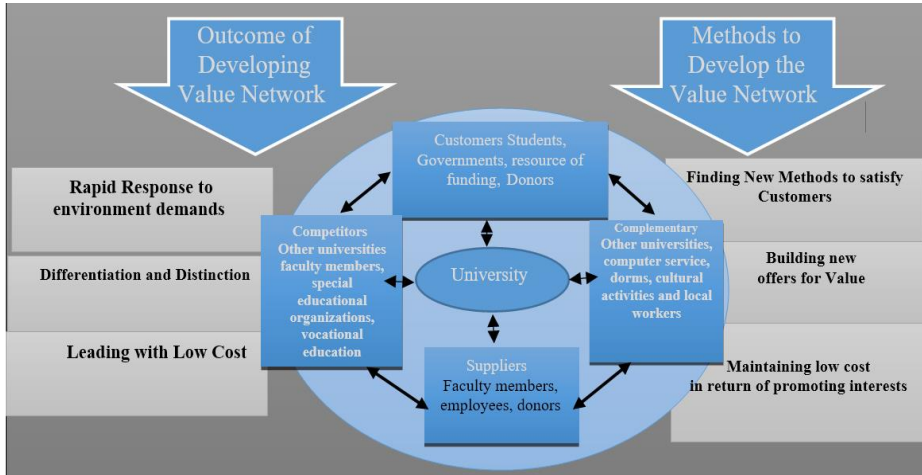


Figure 7: Framework of the Developed University Value Network
(Source: Prepared by Researchers)

The Proposed Framework for successful Cooperation Strategies

The steps to design, build, and implement the proposed framework can represent a comprehensive set of activities carried out by the organization's management. The process begins with the formulation of cooperation requirements (C1), which reflect the successful elements of the cooperation strategy. These elements include the availability of mechanisms for success, such as:

1. Balance (C1-1): Ensuring an equilibrium between cooperation and competition, critical for maintaining sustainable and strategic value creation.
2. Communication (C1-2): Facilitating effective and transparent communication among all participants to enhance collaboration and align goals.
3. Adaptability (C1-3): Enabling flexibility to respond to changing circumstances, both internally and externally, within the value network.
4. Coordination (C1-4): Managing joint actions and decision-making to optimize the outcomes of collaborative efforts.

Following the establishment of the foundational requirements, the next phase involves the implementation of cooperation processes aimed at developing the value network. This is achieved through the provision of procedures, mechanisms, and practices essential for executing the cooperative strategy. The goal is to ensure that the required support systems are in place for the successful realization of the cooperation strategy, leading to the development phase (C2). The targeted value of the cooperation strategy is expressed in terms of its contribution to building the value network of universities. This involves:

Response: Reducing the time needed to obtain critical resources, enabling rapid response to environmental demands.

Cost Leadership: Sharing the costs of industry development, particularly in the education sector, thereby achieving cost-effective solutions.

Differentiation: Adopting advanced technology and knowledge to provide

distinctive value to stakeholders, setting participants apart from competitors.

The continued availability of the mechanisms necessary for the success of the cooperation strategy, combined with a focus on monitoring its content and implementation, contributes to creating a comprehensive cooperative framework. This approach allows all participating organizations to meet their objectives in developing the value network, fostering mutual growth and success. This framework is illustrated in the Figure 8.

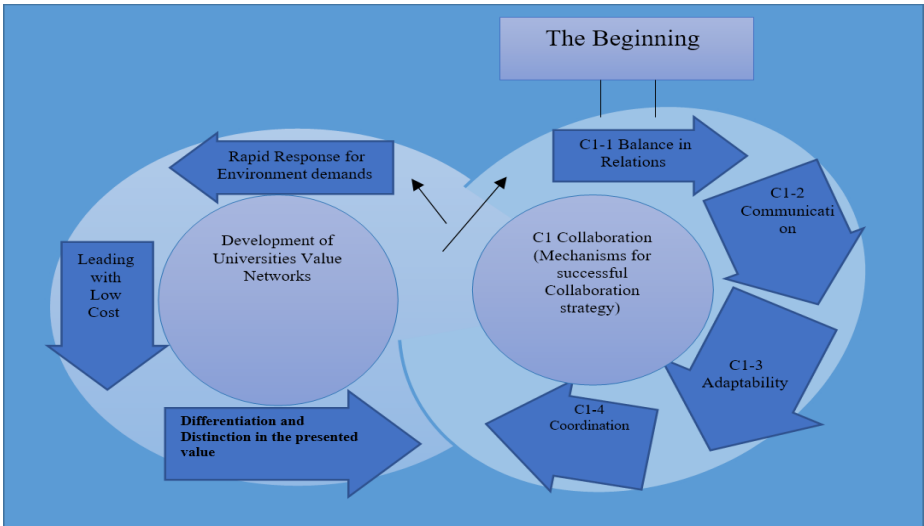


Figure 8: *The Proposed Development and Cooperation Model (Source: Prepared by Researchers)*

Cooperative relationships focused on shared value play a key role in enhancing learning outcomes, creativity, and knowledge investment within university value networks. These networks strengthen organizations, prompting them to adapt strategies that improve cooperation in ways suited to their business environment. Key questions include:

- Who are the potential network participants, and how can they cooperate to maximize value?
- What integrative relationships can enhance university offerings?
- How can mutually beneficial value-building strategies be implemented?
- What steps should be taken to strengthen relationships with customers and suppliers?
- How can organizations sustain their competitive advantage over time?

Given the rapid pace of technological change, organizations must adapt their strategies and relationships to the evolving business environment. This can be achieved through cooperation, alignment of interests, and identifying opportunities to overcome external obstacles and threats, while also supporting real-time design, experience exchange, and high-quality product delivery.

Conclusion, Recommendations, Suggestions and Directions for Future Research

Conclusion

The findings suggest that integrating key dimensions essential for the success of cooperation strategies can enhance systematic thinking, offering universities valuable opportunities to adapt to environmental changes, reduce costs, and improve service delivery. Cooperation models and value network frameworks are still scarce in Arab literature, despite considerable success in developed and developing countries. The key mechanisms for the success of cooperation strategies, aimed at developing value networks, include balance, communication, adaptation, and coordination. Adopting a value network perspective presents universities with an opportunity to establish dominant positions in the business environment, positioning them as successful participants in shaping the future business landscape. Cooperation strategies can achieve high efficiency when these success mechanisms are considered, forming the foundation for a reciprocal and interactive framework for value-building. The proposed cooperation and development model, based on thorough analysis, reflects contemporary organizational practices focused on developing value networks. It signifies a shift from traditional value chains to a broader value network strategy. Finally, the university value network framework offers a fertile perspective for future research, providing a systematic roadmap for analysing interactions and complementarity between participants and describing the collaborative process in organizational value networks.

Suggestions and Future Research Trends

Based on the results of the study, the following proposals are made to enhance the work of organizations seeking to develop their value network, first by adopting mechanisms for the success of the cooperation strategy, and second by utilizing these mechanisms for subsequent studies:

1. **Focus on Capacity Integration and Resource Management:**

Organizations should prioritize capacity integration, resource recollection, and the timely decision-making required for industry development. The cooperation and development model offers a valuable opportunity to adopt successful business mechanisms that align with the objectives of contemporary organizations in enhancing their value network.

2. **Deepen Understanding of Value Building:**

Greater attention should be given to the concepts of value building and acquisition, fostering a comprehensive understanding of developing a value network. This should involve the expansion of knowledge regarding the university value network, which includes suppliers, distributors, complements, customers, and even major competitors.

3. **Address Challenges in Initial Cooperation Projects:**

The first project in cooperation is often the most challenging, as it involves laying the foundation for balanced relationships with participants to enhance synergy. The following aspects should be considered by organizations:

- a. Strengthen relationships between employees at various administrative and technical levels, both formal and informal, to support communication bonds, reduce sensitivity, and facilitate initial official cooperation.
- b. Foster a cooperative spirit and principles of joint resource and solution use within the organization. This can promote teamwork and prepare participants psychologically for positive behaviour.
- c. Initiate simple, small-scale cooperation projects at the early stages, avoiding areas that could lead to competition. These projects should focus on building mutual trust and assessing the feasibility of further cooperation.

4. Develop Tools for Value Network Growth:

The following aspects should be prioritized to create effective tools for value network development:

- a. Management Cooperation Teams: Establish teams dedicated to formulating and implementing new methods of value creation and identifying innovative ways to satisfy customers.
- b. Enhance Expected Benefits: Prepare strategies that enhance the expected benefits for participants while ensuring cost reduction is maintained.
- c. Promote Integration of Resources and Capabilities: Work towards enhancing the integration of resources and capabilities among participants to achieve a quick response to industry requirements.

The study suggests the following areas for further research related to the electronic cooperation strategy management model:

1. The sequential impact of the success mechanisms of the cooperation strategy on enhancing organizational performance.
2. Strategic risk management within the context of the cooperation and development model.
3. The role of the cooperation strategy in fostering creative skills, with a focus on private universities.
4. The influence of strategic renewal on strengthening the value network, specifically in electrical industry companies.

Authors Contributions:

Younis Mohammad Al-Sabaawe: Writing – original draft, Software, Data curation, Conceptualization. Hamdan O. Mansoor: Writing – review & editing, Writing – original draft. Mohammed Alghaithani: Visualization, Validation, Supervision, Conceptualization. R. Abdullah: Writing – review & editing, Visualization, Supervision.

Declaration of Competing Interest:

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data Availability:

The data that support the findings of this study are available from the first author upon reasonable request.

Research Fund:

This research will be sponsored by the Qatar national library (QNL). Up the acceptance.

References

- Adner, R. (2017). Ecosystem as structure: An actionable construct for strategy. *Journal of management*, 43(1), 39-58. <https://doi.org/10.1177/0149206316678451>
- Afuah, A. (2009). *Strategic innovation: new game strategies for competitive advantage*. Routledge. <https://doi.org/10.4324/9780203883242>
- Ahmed, H. I., Al-Sabaawe, Y. M. K., & Al-Shammri, E. F. Y. (2018). Achieving an E-collaboration integration between the outputs of higher institutions and the requirements of the labor market. 2018 1st Annual International Conference on Information and Sciences (AiCIS), <https://doi.org/10.1109/AiCIS.2018.00048>
- Albers, S., & Schweiger, B. (2011). Network-based competition—antecedents, forms and research implications. 5th International Conference on Economics and Management of Networks, December ,
- Allee, V. (2008). Value network analysis and value conversion of tangible and intangible assets. *Journal of intellectual capital*, 9(1), 5-24. <https://doi.org/10.1108/14691930810845777>
- Al-Sabaawe, Y. M., Mansoor, H. O., Albayati, N. H. H., Abdullah, R. (2024). Resource Integration Advantage Across the Hierarchy: Bridging the Gap Between Theory and Practice in Multi-Level Asset Orchestration. *International Journal of Instructional Cases*, 8(1), 233-249. <https://ijicases.com/menuscript/index.php/ijicases/article/view/136/92>
- Alves, J. M. A. (2013). *Partner Selection in Domestic Co-Opetition: The Effect of Personal Ties-An Exploratory Analysis on Factors Leading to the Choice of Partners in Co-Opetition* <https://repositorio-aberto.up.pt/bitstream/10216/70755/2/25458.pdf>
- Asghar, Z. (2011). New approach to strategic planning: The impact of leadership and culture on plan implantation via the three Cs: Cooperation, collaboration and coordination. *Collaboration and Coordination (March 4, 2011)*. <http://dx.doi.org/10.2139/ssrn.1777307>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>
- Bielawska, Z.-., Agnieszka. (2013). Coopetition as a factor in the development of innovative and technologically advanced firms: an example of the high-tech sector. Proceedings of the international symposium on business and management, knowledge association of Taiwan Publisher, Kitakyushu, Japan, https://zakrzewskabielawska.pl/wp-content/uploads/2021/03/publikacja_II_26.pdf
- Chen, R & ,Liang, Z. (2011). Coopetition strategy management in SMEs: A case study of Nyhammers and Bäckströms Company. In. <https://www.diva-portal.org/smash/get/diva2:466449/fulltext01.pdf>

- Chin, K. S., Chan, B. L., & Lam, P. K. (2008). Identifying and prioritizing critical success factors for co-competition strategy. *Industrial Management & Data Systems*, 108(4), 437-454. <https://doi.org/10.1108/02635570810868326>
- Christiaanse, E., & Markus, M. L. (2003). Participation in collaboration electronic marketplaces. 36th Annual Hawaii International Conference on System Sciences, 2003. Proceedings of the, <https://doi.org/10.1109/HICSS.2003.1174383>
- Clarysse, B., Wright, M., Lockett, A., Mustar, P., & Knockaert, M. (2007). Academic spin-offs, formal technology transfer and capital raising. *Industrial and Corporate Change*, 16(4), 609-640. <https://doi.org/10.1093/icc/dtm019>
- Deniz, M., Seçkin, Ş. N., & Cüreoğlu, M. (2012). Two Strategic Success Factors for Firm Level Competitiveness: Innovation and Cooperation [Two strategic success factors for firm level competitiveness: Innovation and cooperation]. *International Journal of Social Sciences and Humanity Studies*, 4(2), 295-305. <https://dergipark.org.tr/en/pub/ijsshs/issue/26220/276097>
- Engelhardt-Nowitzki, C., Kryvinska, N., & Strauss, C. (2011). Strategic demands on information services in uncertain businesses: a layer-based framework from a value network perspective. 2011 International Conference on Emerging Intelligent Data and Web Technologies, <https://doi.org/10.1109/EIDWT.2011.28>
- Fernandez, A., Yami, S., & Fiona, J. (2012). How to Innovate with A Competitor: The Role of Ambidexterity as A Strategic Dynamic Capability. In .
- Fulconis, F., Hiesse, V., & Paché, G. (2011). The 3PL Provider as Catalyst of Cooperative Strategies-An Exploratory Study, *International Journal*, 12(2), 85-69. <https://doi.org/10.1080/16258312.2011.11517260>
- Golnam, A., Sanchez, R., & Wegmann, A. (2011). A Framework to Model and Analyze the WHY and the HOW of Co-competition. 21st Nordic Workshop on Interorganizational Research, <https://infoscience.epfl.ch/handle/20.500.14299/71774>
- Golnam, A., Sanchez, R., & Wegmann, A. (2010). A Systemic Approach for Modeling and Analysis of Co-competition. In *Proceedings of the 4th Workshop on Co-competition Strategy*. EIASM. <https://infoscience.epfl.ch/handle/20.500.14299/55515>
- Goswami, S., Ravichandran, T., Teo, H.-H., & Kremer, H. (2011). Achieving high performing supply networks through value network transparency. PACIS 2011 Proceedings. 68., <https://aisel.aisnet.org/pacis2011/68>
- Gurau, C., & Lasch, F. (2011). Co-competition as an Entrepreneurial Strategy: an Exploratory Study of UK Biopharmaceutical SMEs. ICSB World Conference Proceedings, <https://www.proquest.com/openview/1e25ebff5eed391caca48af6ef3e9d/1>
- Haag, S., Baltzan, P., & Phillips, A. (2006). *Business driven technology* (1st ed). McGraw-Hill/Irwin. <https://search.worldcat.org/title/1058022226>
- Hagel, I., John, & Brown, J. S. (2008). From transactional markets to relational networks: amplifying the innovation potential of high-tech regions. Paper submitted to Workshop on High Tech Regions, <https://johnseelybrown.com/amplifyinnovation.pdf>

- Huabai, B. (2013). New Created Enterprise Value Network Embeddedness, Strategic Positioning and Enterprise Growth Performance. *International Journal of Academic Research in Business and Social Sciences*, 3(4), 2222-6990. <https://hrmars.com/index.php/IJARBSS/article/view/9533/New-Created-Enterprise-Value-Network-Embeddedness-Strategic-Positioning-and-Enterprise-Growth-Performance>
- Jinsong, Z., & Shufang, W. (2010). Logistics network design based on Value Constellation. 2010 International Conference on Logistics Systems and Intelligent Management (ICLSIM), <https://doi.org/10.1109/ICLSIM.2010.5461181>
- Johansson, M., Bengtsson, M., Eriksson, J., & Wincent, J. (2012). *Study on balancing cooperation and competition in cooperative relationships through bridging and bonding*. <http://urn.kb.se/resolve?urn=urn:nbn:se:umu:diva-60588>
- Kenny, B. C. (2009). A network perspective on international business: Evidence from SMEs in the telecommunications sector in Ireland. *Unpublished PhD Dissertation, University of Limerick, Ireland*. <https://www.researchgate.net/publication/228375626>
- Kock, N. (2008). A basic definition of e-collaboration and its underlying concepts. In *Encyclopedia of E-Collaboration* (pp. 48-53). IGI Global. <https://doi.org/10.4018/978-1-59904-000-4.ch008>
- Kock, S., Bengtsson, M., & Slotte-Kock, S. (2003). To compete or cooperate—a strategic dilemma. Retrieved February, 1, 2017. https://gsom.spbu.ru/files/upload/niim/seminar/strategic_dilemma.pdf
- Kossyva, D., Sarri, K., & Georgopoulos, N. (2014). Co-opetition: A business strategy for SMEs in times of economic crisis. *South-Eastern Europe Journal of Economics*, 12(1), 89-106. <https://ideas.repec.org/a/seb/journal/v12y2014i1p89-106.html>
- Laesser, C., & Jäger, S. (2001). Tourism in the new economy. *Tourism growth and global competition*, 39-84. <https://www.alexandria.unisg.ch/handle/20.500.14171/73411>
- Leih, S., & Teece, D. (2016). Campus leadership and the entrepreneurial university: A dynamic capabilities perspective. *Academy of management Perspectives*, 30(2), 182-210. <https://doi.org/10.5465/amp.2015.0022>
- Lenka, B., Hana, L., & Zuzana, P. (2013). Increasing the value network performance by developing cooperation of companies with distribution intermediaries. *Recent Advances in Business Management and Marketing* <http://www.wseas.us/e-library/conferences/2013/Dubrovnik/MATREFC/MATREFC-20.pdf>
- Li, F., Tian, C., Cao, R., & Jiang, S. (2008). Value network model for service ecosystem in business environment. NOMS 2008-2008 IEEE Network Operations and Management Symposium, <https://doi.org/10.1109/NOMS.2008.4575256>
- Lin, C.-P., Wang, Y.-J., Tsai, Y.-H., & Hsu, Y.-F. (2010). Perceived job effectiveness in cooperation: A survey of virtual teams within business organizations. *Computers in Human Behavior*, 26(6), 1598-1606. <https://doi.org/10.1016/j.chb.2010.06.007>

- Ling, M., Jianlei, X., & Quanhong, P. (2013). Research on coepetition strategy in IPTV between SARFT and telecom operators in China. *Management Science and Engineering*, 7(2), 86. <http://dx.doi.org/10.3968/j.mse.1913035X20130702.3602>
- Liu, K., Wang, G., Sun, H., & Zhu, Y. (2010). A Structure Evolution Model for Enterprise Group's Value Network. 2010 WASE International Conference on Information Engineering, <https://doi.org/10.1109/ICIE.2010.162>
- Loebbecke, C., van Fenema, PC., & Powell, P. (1998). Knowledge transfer under coepetition. In T. Larsen, L. Levine, & J. DeGross (Eds.), *Current Issues and Future Changes. Working Conference on Information Systems* (pp. 215-229). <https://pure.eur.nl/en/publications/knowledge-transfer-under-coepetition>
- Luo, Y. (2005). Toward coepetition within a multinational enterprise: A perspective from foreign subsidiaries. *Journal of world business*, 40(1), 71-90. <https://doi.org/10.1016/j.jwb.2004.10.006>
- Luo, Y. (2007). A coepetition perspective of global competition. *Journal of world business*, 42(2), 129-144. <https://doi.org/10.1016/j.jwb.2006.08.007>
- M'Chirgui, Z., Chanel, O., & Calcei, D. (2010). *Why are some coalitions more successful than others in setting standards? Empirical evidence from the Blu-ray vs .HD-DVD standard war.* <https://ideas.repec.org/p/hal/wpaper/halshs-00543972.html>
- Mankevich, V. (2014). Managing innovation networks: exploring coepetition dynamics in innovation ecosystems. In. <https://www.diva-portal.org/smash/get/diva2:726092/FULLTEXT01.pdf>
- Markiewicz, P., & Adamus, M. (2012). Competition in the Context of Assumptions of the Resource Based View. Knowledge and Learning: Global Empowerment; Proceedings of the Management, Knowledge and Learning International Conference 2012, https://www.issbs.si/press/ISBN/978-961-6813-10-5/papers/ML12_189.pdf
- Maso, D., Lorenzo, & Lattanzi, N. (2014). Local firms' strategies and cluster coepetition in Tuscany: the case of "Toscana Promozione" Agency. *PROBLEMS & PERSPECTIVES IN MANAGEMENT*, 12(1), 131-141. <http://hdl.handle.net/11568/790177>
- Mele, C. (2011). Conflicts and value co-creation in project networks. *Industrial Marketing Management*, 40(8), 1377-1385. <https://doi.org/10.1016/j.indmarman.2011.06.033>
- Mingliang, W., & Bin, L. (2008). New Trend of Knowledge Transformation Research: Value Network. 2008 International Symposium on Knowledge Acquisition and Modeling, <https://doi.org/10.1109/KAM.2008.99>
- Möller, K., Rajala, A., & Svahn, S. (2005). Strategic business nets—their type and management. *Journal of Business research*, 58(9), 1274-1284. <https://doi.org/10.1016/j.jbusres.2003.05.002>
- Nemeh, A., & Yami, S. (2012). *Coepetition strategies and innovation in pre-competitive R&D programs: the case of wireless telecommunication sector.* <https://www.researchgate.net/publication/257323120>
- O'Reilly, N. M., Robbins, P., & Scanlan, J. (2019). Dynamic capabilities and the

- entrepreneurial university: a perspective on the knowledge transfer capabilities of universities. *Journal of Small Business & Entrepreneurship*, 31 .263-243 ,(3)<https://doi.org/10.1080/08276331.2018.1490510>
- Osarenkhoe, A. (2010). A coepetition strategy—a study of inter-firm dynamics between competition and cooperation. *Business Strategy Series*, 11(6), 343-362. https://doi.org/10.1108/17515631011093_052
- Phlippen, S., & van der Knaap, B. (2007). *When clusters become networks*. <http://dx.doi.org/10.2139/ssrn.1082689>
- Raposo, A. B., & Fuks, M. A. G. H. (2003). Modeling coordination in business-webs. In *IFIP Conference on E-commerce, E-business and E-government (I3E 2003)* (Vol. 2003, No. 21-24). <https://www.researchgate.net/publication/252517725>
- Ritala, P., Agouridas, V., Assimakopoulos, D., & Gies, O. (2013). Value creation and capture mechanisms in innovation ecosystems: a comparative case study. *International journal of technology management*, 63(3-4), 244-267. https://doi.org/10.1504/IJTM.2013.056_900
- Ritala, P., Hurmelinna-Laukkanen, P., & Blomqvist, K. (2009). Tug of war in innovation—coepetitive service development. *International Journal of Services Technology and Management*, 12(3), 255-272. <https://doi.org/10.1504/IJSTM.2009.02539>
- Rothaermel ,F. T., & Thursby, M. (2005). University–incubator firm knowledge flows: assessing their impact on incubator firm performance. *Research policy*, 34(3), 305-320. <https://doi.org/10.1016/j.respol.2004.11.006>
- Rusko, R. (2011). Exploring the concept of coepetition: A typology for the strategic moves of the Finnish forest industry. *Industrial Marketing Management*, 40(2), 311-320. <https://doi.org/10.1016/j.indmarman.2010.10.002>
- Salvetat, D., & Géraudel, M. (2012). The tertius roles in a coepetitive context: The case of the European aeronautical and aerospace engineering sector. *European Management Journal*, 30(6), 603-614. <https://doi.org/10.1016/j.emj.2012.04.004>
- Sauvée, L. (2002, 2002-06-07). *Efficiency, Effectiveness and the Design of Network Governance* 5 th International Conference on Chain Management in Agribusiness and the Food Industry, Noordwijk an Zee, Netherlands. <https://normandie-univ.hal.science/hal-04365452>
- Schmiele, A., & Sofka, W. (2007). Internationalizing R&D Co-opetition: Dress for the Dance with the Devil. *ZEW-Centre for European Economic Research Discussion Paper*(07-045). <http://dx.doi.org/10.2139/ssrn.1008243>
- Siegel, D.S., Waldman, D.A. and Link, A.N., (1999). Assessing the impact of organizational practices on the productivity of university technology transfer offices. https://www.nber.org/system/files/working_papers/w7256/w7256.pdf
- Stokes, C. K., Lyons, J. B., Schwartz, D. H., & Swindler, S. D. (2008). An adaptive workforce as the foundation for e-collaboration. In *Encyclopedia of E-collaboration* (pp. 7-13). IGI Global. <https://doi.org/10.4018/978-1-59904-000-4.ch002>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic

- management. *Strategic management journal*, 18(7), 509-533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7<509::AID-SMJ882>3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z)
- Thomas, H., & Pollock, T. (1999). From I-O economics' S-C-P paradigm through strategic groups to competence-based competition: reflections on the puzzle of competitive strategy. *British Journal of Management*, 10(2), 127-140. <https://doi.org/10.1111/1467-8551.00115>
- Thomason, S. J., Simendinger, E., & Kiernan, D. (2012). Constructive Collusion: Determinants of Successful Cooperation in Small Business. *United States Association for Small Business and Entrepreneurship Proceedings*.
- Tidström, A. (2008). Perspectives on cooperation on actor and operational levels. *Management Research: Journal of the Iberoamerican Academy of Management*, 6(3), 207-217. <https://doi.org/10.2753/JMR1536-5433060304>
- Tsai, W. (2002). Social structure of “cooperation” within a multiunit organization: Coordination, competition, and intraorganizational knowledge sharing. *Organization science*, 13(2), 179-190. <https://doi.org/10.1287.orsc.13.2.179.536>
- Vermeulen, B. (2012). Value network dynamics and industry evolution. <https://doi.org/10.6100/IR734105>
- Vlckova, V., Patak, M., & Lostakova, H. (2014). Minimizing the Bullwhip Effect—Strategic Benefit in Value Network of Fast Moving Chemical Goods. *AEBD*, 13, 308-314. <https://www.researchgate.net/profile/Michal-Patak/publication/316621823>
- W. M, M., & M. Kh. Al-Sabaawe, Y. (2018). The Reality of Electronic Cooperation Process Analytical Study for Opinions of A Sample of Managers in Zain Al-Iraq Co. For Telecommunication In Kirkuk Governorate-Iraq. *Journal of kirkuk University For Administrative and Economic Sciences*, 8(1), 62-91. https://ukjaes.uokirkuk.edu.iq/article_179615_a029ff158406d7a5add4142f3_e2aa9b4.pdf
- Walters, D. (2009). *Costing value chain relationships: A challenge for strategic cost management and value chain management*. <https://core.ac.uk/download/pdf/212695716.pdf>
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180. <https://doi.org/10.1002/smj.4250050207>
- Yu-Chen, H., & Xiao-Lan, H. (2013). Research on the cooperation relationship of cluster enterprises based on the network view-taking central-satellite type industry cluster as example. *Journal of Applied Sciences*, 13-1332 ,(8) .1338 <https://doi.org/10.3923/jas.2013.1332.1338>
- Zhan, Y., Wu, X., & Hong, R. (2009). Prominent network position: Value creation and value protection. 2009 IEEE International Conference on Industrial Engineering and Engineering Management, <https://doi.org/10.1109/IEEM.2009.5372987>
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization science*, 13(3), 339-351. <https://doi.org/10.1287/orsc.13.3.339.2780>