Research Article

Revitalization of Value - Based Industry

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ABSTRACT

Abstract:

Participation in global industrial markets, innovation, and the unique challenges of competition are central themes. In an environment characterized by changeability, adaptability, and creative growth, the ability to identify and create ideas and foster creativity becomes crucial and vital. A value-based industry approach focuses on studies aiming to create creativity advantages. Innovation generates ideas, market research, and problem-solving, leading to the flourishing and institutionalization of idea generation in industries. A creative industrial ecosystem is the basis of research.

In this regard, studies and research have been conducted and the industry structure has been examined and analyzed. By using the qualitative method of content analysis, dimensions and components of the industry ecosystem based on value delivery, determination of value network paradigm has been introduced. The value network paradigm emphasizes the collaboration between institutions, individuals, technology, structures, and objects. Converting an idea into value within an industry ecosystem involves a structured process that transforms a raw concept into a product, service, or innovation, that delivers measurable benefits and values to market. Process includes ideation, validation, development, integration into the ecosystem, commercialization, value creation and realization, feedback and iteration.

Keywords:

Innovation; Industrial Ecosystem; Value Network; University; Competitive Advantage

1. Introduction

The effective relationship between industry and the market, with the aim of offering new value to the market, is the foundation of the value-based industry approach.

The "Value Industry Map" approach incorporates research methods for industrial managers and market researchers, aiming at exploration and analysis of industry dimensions. Identifying shortages and challenges, seeking solutions, implementing corrective actions, and making changes can lead to a deep analysis of consumer attitudes and imagination. Another approach emphasizes user-generated content on platforms that allow access to shared searches, data, and related ideas produced by users, creating a valuable source of content. This approach applies to both manufacturing and service industries and addresses consumer expectations and demands. Establishing a value network through cooperation among institutions, individuals, and organizations—based on sharing knowledge, experiences, and resources—creates an efficient network capable of offering a unique and distinctive advantage to society. The global competition landscape in industry requires the creation of innovative processes and transformation of ideas into value and market offerings. Industry and market processes are interconnected and networking, the effective communication between all institutions, disciplines and experiences, is essential in the sciences. Sharing relevant data and forming corporate databases creates networks. In the industrial sector, due to the lack of a comprehensive and holistic approach of managers, there is a need to change mental models and paradigms of thought. Collaborative strategies between universities and industries strengthen the exploratory nature of research topics and lead to the production, sharing, and application of knowledge for industrial development. Innovation processes that originate from society's collective mindset and consumer behavior are critical for offering market-driven value. Reidentifying, rediscovering, and reshaping societal mindsets, beliefs, and assumptions is necessary to stimulate industry revitalization and academic and industrial research advancement.

1-1. Value Network and Innovation

The evaluation of perceived advantages based on consumer expectations defines the structure, volume, and type of demand, and shapes the dynamics of the environment and technological growth. In active industry organizations, this leads to intense and complex competition and heightened consumer awareness. Managers have realized that in global markets, the concepts of "idea, "innovation," and "value creation" are inherently tied to industrial growth. (Allee,2008)

Unique and distinctive advantages depend on the ability to create innovation and value. Cultural heritage, collective mindsets, and societal assumptions can foster different approaches to value creation.

Technological growth and innovation form a continuous spectrum that drives improvements and advancements. Organizations currently seek to innovate products, services, and systems to maintain competitiveness. (Al-Momani et al.,2024) For instance, Apple, through every new model release, introduces technological innovations that significantly change mobile phone capabilities, such as faster software processing, improved camera quality, and the integration of new technologies that create added value in products and services. Innovation that positively impacts the market and increases market share is transformative. The use of artificial intelligence has already enhanced employee performance and market operations, and in the future, AI will be a key innovation driving market transformations. New industry platforms like Google Cloud have attracted shared innovations by offering a range of cloud services, data storage, and processing. (Keesara, 2025) They leverage existing technological infrastructure and expand their applications to attract new

users and create new value streams by recombining product components. An example is the multi-core processor, an integrated circuit that connects two or more processors to achieve better performance with lower energy consumption. (Kogabayev & Maziliavskas,2017)

In an environment characterized by changeability, adaptability, and creative growth, the ability to identify and create ideas and foster creativity becomes crucial. The challenge of uncovering hidden innovative technologies within society's collective consciousness is a significant and programmatically manageable task. Digital platforms and the growth of online communications have transformed the data landscape and the way consumers interact, reshaping society. The possibility of instant, unrestricted communication without traditional limitations has brought about new consumer behaviors and altered the dynamics of market interaction. Observing and analyzing consumer behavior and user-generated content provides opportunities for defining attractive projects and offering innovative approaches to the market. (Soomro et al.,2021)

Innovations that stem from analyzing new technologies, developing applications, and inspiring organizations enable dynamic and agile responses to the market.

Organizations can innovate by improving employee capabilities, facilitating access to information, and promoting creative participation. As social systems, organizations play a vital role in nurturing and cultivating ideas. Developing a culture of creative thinking and providing platforms for skill-building, participation, and teamwork foster industry growth. Empowering employees through different thinking models enhances creativity, solution-finding abilities, and diversity in ideas and participation. This collective knowledge-building leads to varied perspectives and analyses, allowing organizations to capitalize on the community's potential creativity. (Borgatti & Foster,2003)

Building partnerships with suppliers, intermediaries, manufacturers, and consumers leads to alliances, associations, and research institutions, shaping a system of value networks based on financial and non-financial value creation such as knowledge, convenience, speed, and health. Organizations' human resources, data, technology, structures, and cultures are all integral parts of the value network. The development of innovative value networks focuses on creating, selecting, and transforming shared data into valuable sources through collaborative innovation, production, supply, design, marketing, and assessment of market reactions. (Peppard & Rylander,2006)

This requires coherent, research-oriented, interdisciplinary, and coordinated collaborations between educational and research institutions, and individuals. Without establishing a research-based, interconnected communication network, a value network cannot be effectively realized. Cross-disciplinary research enriches education and research, nurturing problem-solving skills and fostering creative, systemic approaches to industrial networks. (Van Broekhoven,2023)

In a dynamic and ever-changing environment, innovative responses to changes strengthen competition and research planning capabilities. Thus, the "value network paradigm" focuses on the interactions between organizations and other actors within an industrial ecosystem, promoting purposeful and intelligent collaborations with environmental factors to create an interconnected, innovative system.

1-2. Industrial Research Paradigms

Changes in researchers' mental models and thought patterns lead to shifts in the assumptions underlying industrial research. A comprehensive approach to "problem-solving" in industry requires inter-organizational and networked analyses and processes. Thus, industrial research is formed through mastery of various research methods and approaches. Research strategies, approaches, and paradigms are determined based on understanding the research context.

Paradigms are a set of assumptions, beliefs, and attitudes that, over time, become rules, tools, and applications guiding the thoughts and actions of specialists and experts in a particular field. (Rehman & Alharthi,2016)

Paradigms are adopted by a community after repeated validation and form the dominant framework for research. Thomas Samuel Kuhn (1922–1996) profoundly influenced scientific thinking by proposing that scientific progress is not purely linear and cumulative but occurs through "scientific revolutions" that shift dominant paradigms. According to Kuhn, a paradigm shift occurs when existing theories fail to explain observations adequately, and a new, better model emerges. Different paradigms are based on different assumptions. For example, in positivism, knowledge of reality is based on sensory experiences and empirical evidence. Positivists emphasize observable, measurable data and often use quantitative tools such as statistical analyses, structured surveys, and predefined questionnaires. This paradigm is particularly successful in natural sciences research. In interpretivism, researchers believe reality is socially constructed and shaped by individual experiences and interpretations. Thus, results and findings are influenced by researchers' perspectives and cannot be fully objective. Interpretivists use qualitative research methods like interviews, focus groups, observation, and content analysis to gather data and analyze social phenomena. This paradigm is especially effective for research in social sciences. (Chali et al,2022)

In quantitative research designs, researchers formulate hypotheses and test them based on measurable data. They use deductive reasoning to validate existing theories and models. In qualitative research designs, researchers use inductive reasoning, seeking to explore, understand, and explain phenomena based on participants' experiences. If discrepancies arise, researchers adapt their initial assumptions or develop new theories. Mixed-methods research combines both quantitative and qualitative approaches, aiming to benefit from the strengths of each to more comprehensively address research questions. (Corbin & Strauss,2014)

The evolution of data gathering, analysis methods, and collaborative, cross-organizational research networks has enhanced the co-creation of value across industry. Research in the value network paradigm is based on multi-dimensional interactions and mutual dependencies among organizations, leading to impactful outcomes. Increasing technological advances, new business models, changes in consumer behavior, the growth of digital platforms, artificial intelligence, and the Internet of Things have transformed the complexity and dynamism of industrial research environments. Thus, research must now prioritize capabilities like value-adding, flexibility, collaboration, and adaptability across entire value networks. Value creation has become a dynamic, non-linear process requiring the continuous redefinition and adjustment of roles within industrial ecosystems. (Burstrom, et al,2024)

1-3. The Double Helix of University–Industry Collaboration

Launching startups, transferring knowledge, fostering talent, consultancy services, training workshops, and applied education are examples of university–industry collaborations. Such collaborations contribute directly to industrial growth. Universities, by conducting applied research, help solve industrial problems using their specialized expertise and skills. Through collaboration with industry, universities provide human resources training, helping to adapt academic education to real-world industrial needs. Cooperation and joint participation between universities and industries in shaping the capabilities of graduates plays an important role in executing successful industrial projects and innovation initiatives. University involvement in industry strengthens industrial competitiveness, fosters long-term innovation, and supports sustainable development by nurturing creativity and practical problem-solving. Moreover, the synergy between academic researchers, entrepreneurs, and industry experts

transforms universities into dynamic innovation hubs that address industrial challenges. Such collaboration emphasizes:
- Systemic thinking,
- Mindset transformation towards holistic models,
- Strengthening innovation and problem-solving capabilities. (Estrada et al.,2016)

By creating and expanding interdisciplinary, transdisciplinary, and multidisciplinary sciences, universities play a vital role in updating the mental frameworks of researchers and industry professionals. This systemic understanding enables them to perceive the whole system, recognize its components and interconnections, and inspire new ideas and imaginative seeds within the industrial ecosystem.

Establishing smart, value-driven networks based on learning and mutual adaptation becomes crucial for surviving and thriving in today's complex, competitive global environment. Organizations capable of smart collaboration and agile adaptation in dynamic ecosystems, using fluid value delivery models and co-evolution of network components, are more likely to sustain competitive advantages

2. Methodology

The ability to learn and continuously regenerate the value network is a competitive advantage, increasingly critical as environmental variables and the interactions among ecosystem entities evolve. The continuous recreation and redefinition of value networks, alongside systemic learning and intelligent interaction, shapes the future of industry. Dimensions and components of an ecosystem based on value creation, by reviewing research and the studies conducted have been identified using a qualitative content analysis method. Information codes were extracted from the articles and grouped to form related concepts. The core dimensions of industrial ecosystem based on value creation are: energy, material, environment, policy, regulators, geography and stakeholders. After collection and analysis, data related to different parts of the industry ecosystem was coded. The general parts that form the industry ecosystem were isolated and then examined based on the sequence of activities, the process of identifying and converting ideas into value. Each process section includes dimensions and components based on the collected data that can be used as a tool to measure process activities in any industry. The main dimensions in the extracted model are idea creation, product cultivation, . The components and indicators identified and created are shown in Table 1.

3. Discussion

Participation of researchers, professors, and students as consultants, researchers, and workforce members in industry has strengthened the structure of innovation-oriented thinking and boosted the effectiveness of value networks. Research-driven innovation is shaping the mental models of global universities and researchers, expanding collaboration between academia and entrepreneurs. Universities, entrepreneurs, and industry experts play a major role in confronting the country's challenges by cooperating, exchanging knowledge, and innovating.

However, cooperation is not without its complexities. Differences in objectives: Universities prioritize the production and dissemination of knowledge, while industries focus on market profitability and competitiveness. These differences can sometimes lead to misalignments in expectations and goals. Academic institutions often define research projects with long-term horizons, while industries prioritize fast solutions to changing market needs. Furthermore, different interpretations of specialized terms and methods between academic researchers and industry professionals can lead to management conflicts in collaborative

projects. It's important to note that changes in managers' mindsets are crucial for adapting collaboration strategies.

The facilitation of flexible, responsive, and adaptable networks — along with skills in system behavior analysis, business model design, and intelligent communication — has become essential for shaping smart value networks. These capabilities enable organizations to adapt, survive, and grow amidst increasingly complex global competition. The ability to learn from the environment, evolve with changes, and offer flexible value propositions is vital for sustaining innovation and competitiveness. Thus, constant recreation and dynamic reconfiguration of value networks in response to technological and environmental changes have become fundamental.

Converting an idea into value within an industry ecosystem involves a structured process that transforms a raw concept into a product, service, or innovation that delivers measurable benefits. Here's a framework for how this conversion typically happens:

Table 1. Dimensions, components and indicators value based industry

| Stage	Sub-Stage	Activities / Focus Areas
Idea creation	Ideation	- R&D - Market gaps - Tech advancement - Customer feedback - Brainstorming - Problem solving
	Validation	- Feasibility studies - Financial analysis - Operational analysis - Technical analysis - Assessing practicality - Market research - Create prototype - Get feedback - Test prototype - Ecosystem fitting
Product Cultivation	Development	-Product/ Service design- Tech integration – Pilot testing - IP protection- Full scale development – Make partnership
Value Creation	Integration to Ecosystem	-Value chain collaboration – Standardization- Compliance- Business model- Regulatory fitting – Intellectual property
	value	-Social responsibility- Brand equity – Strategic value -Revenue generation- Competitive advantage- Sustainability
Market Cultivation	Commercialization	-Customer acquisition -Accelerators- Marketing strategy -Improve offering
	Feedback and Iteration	-Market feedback - Customer feedback -Partner feedback - Scalability- Expanding- Continuous improvement -Data driven refinement
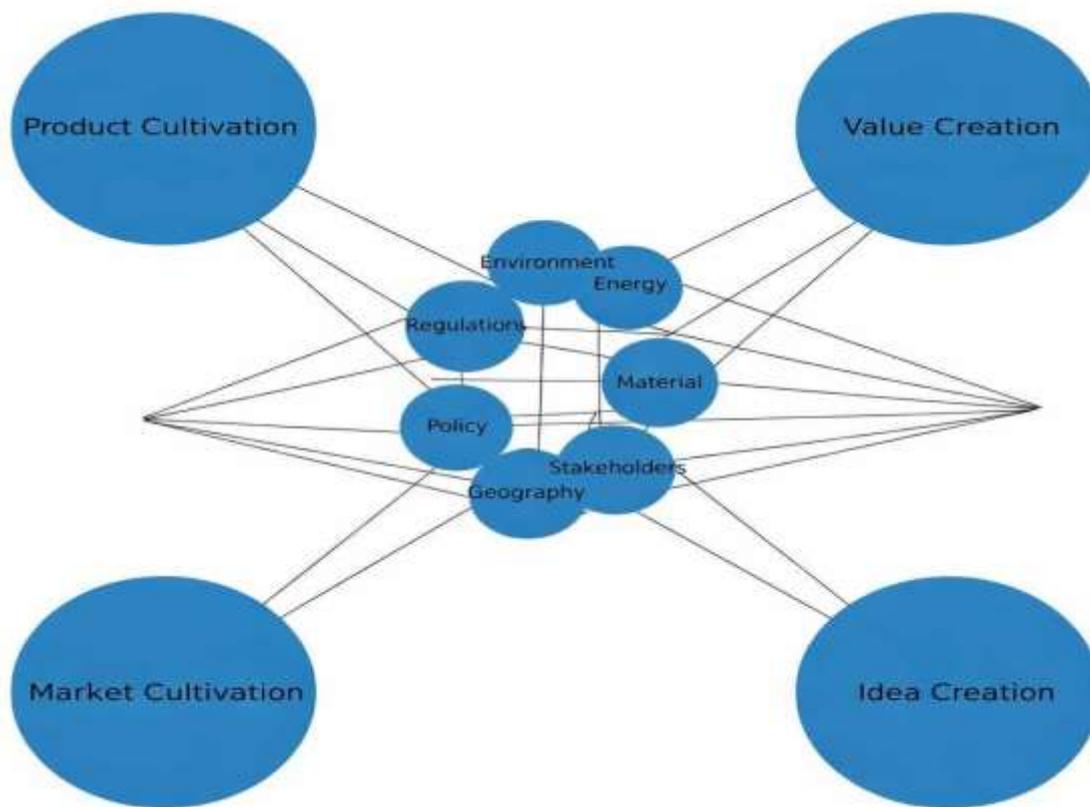
Figure 1. Value base ecosystem model

4. Conclusion

Industrial ecosystems today face rapidly increasing complexity and dynamism due to technological advances, new business models, shifting consumer behaviors, the rise of digital platforms, artificial intelligence, and the Internet of Things. These factors continuously reshape competitive landscapes and market demands.

In this context, the ability to create value has evolved into a dynamic, non-linear process that demands, fluid value delivery across all network participants, continuous learning and adaptation, co-creation through flexible, intelligent collaborations, and ongoing reconfiguration of roles and relationships within the ecosystem.

The "value network paradigm" provides a holistic framework for understanding and designing these interconnected systems. By emphasizing multi-dimensional interactions, shared resources, and mutual dependencies, it guides researchers and practitioners in:

- Building interdisciplinary, research-driven platforms
- Fostering university–industry partnerships that align long-term knowledge generation with rapid market responsiveness; and
- Implementing agile, adaptive models that continuously reinvent the network as environmental conditions and technologies evolve

Ultimately, sustaining competitive advantage in today's global markets depends on an ecosystem's capacity for dynamic innovation, systemic thinking, and collaborative value co-creation. Embracing the value network paradigm equips organizations and researchers with the mindset and tools needed to navigate complexity, seize opportunities, and drive transformative growth.

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