



COOISO – A CONCEPTUAL MODEL FOR INNOVATION MANAGEMENT UNITING COLLABORATION, OPEN INNOVATION, STRATEGY AND OKR.

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Resumen: *Este artículo presenta el COOISO, un modelo conceptual que integra colaboración, innovación abierta, estrategia y Objetivos y Resultados Clave (OKR) para fomentar la innovación en las organizaciones. A través de una revisión de la literatura, explora las sinergias entre estos elementos y propone un marco para una gestión eficaz de la innovación. El modelo COOISO enfatiza la importancia de definir metas claras, planificación estratégica y trabajo en equipo para alcanzar los objetivos organizacionales. El problema radica en el desafío que enfrentan las organizaciones para alinear eficazmente los recursos internos con las oportunidades externas en un entorno empresarial de rápido cambio. Al cultivar una cultura de colaboración y adaptabilidad, las organizaciones pueden navegar por la complejidad y mantener el éxito a largo plazo.*

Palabras clave: Gestión de la Innovación; Colaboración; Innovación Abierta; Estrategia; OKR.

Abstract: *This article presents COOISO, a conceptual model that integrates collaboration, open innovation, strategy, and Objectives and Key Results (OKRs) to foster innovation within organizations. Through a literature review, it explores the synergies among these elements and proposes a framework for effective innovation management. The COOISO*

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model emphasizes the importance of setting clear goals, strategic planning, and teamwork to achieve organizational objectives. The challenge lies in the difficulty organizations face in effectively aligning internal resources with external opportunities in a rapidly changing business environment. By cultivating a culture of collaboration and adaptability, organizations can navigate complexity, seize opportunities, and maintain long-term success.

Keywords: Innovation Management; Collaboration; Open Innovation; Strategy; OKR.

1. INTRODUCTION

In today's dynamic business environment, innovation has become a cornerstone of organizational success and sustainability (Tushman & O'Reilly, 1996). As companies strive to stay competitive amidst rapid technological advancements and shifting consumer demands, effective management of innovation has become crucial (Christensen, 1997). This multifaceted challenge requires a comprehensive and integrated approach (Chesbrough, 2003). So, the problem addressed in this paper is how organizations can effectively align internal resources with external opportunities in rapidly changing business environments. To address this issue, this paper proposes a conceptual model for innovation management that integrates key elements such as collaboration, open innovation, strategy, and Objectives and Key Results (OKR) (Doerr, 2018).

Despite the existing literature, there remains a significant gap in understanding how to effectively integrate these elements in practice. This paper addresses that gap by clearly articulating the contribution of the proposed model (COOISO) to Knowledge and Innovation Management. By synthesizing ideas from diverse literature streams and established frameworks, the model aims to provide a framework for fostering innovation excellence.

1.1. THEORETICAL FOUNDATION COLLABORATION

Collaboration enhances organizational cohesion and responsiveness while fostering an environment that supports innovation. Strategy and OKR Strategy is a concept that links capabilities and aspirations. Four broad types of strategists (as individuals, teams,



organizations, and collaborations) exist: the reactor (low aspirations, low capabilities), the dreamer (high aspirations, low capabilities), the underachiever (low aspirations, high capabilities) and the savvy strategist (high aspirations, high capabilities). (Bryson, & George, 2020). The other authors contribute to understanding which kind of management practices, exploitative and/or explorative, have greater performance impacts under certain competitive strategy conditions. (Castillo Apraiz et al., 2021). Collaboration also cultivates an environment that fosters sustainable growth. By leveraging strategic frameworks and aligning management practices with competitive conditions, organizations can optimize performance and drive long-term success.

Thus, effective collaboration, supported by clear strategic objectives and appropriate management practices, is essential for fostering a culture of continuous improvement and achieving organizational goals.

1.2 INNOVATION

Innovation is a crucial element for the success and sustainability of organizations in the contemporary business environment. Tidd and Bessant (2020) define innovation as the process of transforming opportunities into new ideas and widely putting them into practice. This process goes beyond the mere generation of creative ideas, encompassing the successful implementation of these ideas in a way that adds value to the organization. The innovation model proposed by Tidd and Bessant (2020) highlights four main dimensions of innovation: Firstly, product/service innovation: changes in the products/services that an organization offers. Secondly, process Innovation: changes in the way products/services are created and delivered. Thirdly, position innovation: changes in the context in which products/services are introduced. Finally, paradigm innovation: changes in the underlying mental models that guide what the organization does.

These dimensions align with the proposed COOISO model, especially in the integration between strategy and OKRs. The organizational strategy should consider these four dimensions when defining innovation objectives, while OKRs can be used to measure progress in each of them. Tidd and Bessant (2020) also emphasize the importance of innovation management as a structured process, which involves: Search, Selection,



Implementation, Value Capture. Tidd and Bessant (2020) emphasize the importance of innovation as a process of organizational learning.

1.1.1. Strategy and OKR

Strategy is a concept that links capabilities and aspirations. The other authors contribute to understanding which kind of management practices, exploitative and/or explorative, have greater performance impacts under certain competitive strategy conditions. (Castillo Apraiz et al., 2021). So, strategy plays a fundamental role in the success and sustainability of organizations in a dynamic and competitive business environment. Its importance is evident in various aspects, and its influence is profound at all levels of the organization. Strategy also helps organizations define their objectives, identify opportunities and threats, align resources and capabilities, and guide their actions towards achieving long-term goals. For Hunger, (2020) As top managers attempt to better deal with their changing world, strategic management within a firm generally evolves through four sequential phases of development:

Phase 1. Basic Financial planning: Seeking better operational control by trying to meet annual budgets.

Phase 2. Forecast-based planning: Seeking More Effective planning for growth by trying to predict the future beyond the next year.

Phase 3. Externally oriented strategic planning: Seeking increased responsiveness to market and competition by trying to think strategically.

Phase 4. Strategic management: Seeking a competitive advantage by considering implementation and evaluation and control when formulating a strategy.

In summary, strategy, innovation and collaboration are interconnected elements that play essential roles in the growth and competitiveness of organizations.

2 METHODOLOGY



The integrative review methodology provides a comprehensive approach to synthesizing existing literature on the intersections of strategy, collaboration, and innovation. By examining a multitude of sources, it aims to uncover trends that contribute to a deeper understanding of these interconnected concepts. It used platforms: ScienceDirect and Scopus, the review identified a significant body of research, yielding 4,568 results on ScienceDirect and 439 results in Scopus. Focusing on studies published between 2020 and 2024, with a preference for open access articles in English.

The initial selection of studies was based on: Impact (significant effects on practice), Innovation (new solutions), and Collaboration Strategies (effective teamwork for broader outcomes). For the final analysis, studies were evaluated on quality, relevance of methodology, timeliness, and contribution to ensure a thorough and impactful review. The review narrowed down its scope to 11 selected studies. So, the review endeavors to shed light on the dynamics between strategy, collaboration, and innovation, exploring their interplay and impact across various contexts. The selected studies offer valuable insights and solutions on how organizations leverage collaboration and innovation to effectively execute their strategic objectives.

3. DISCUSSION AND RESULTS

So, table 1 offers a structured depiction of the findings derived from the integrative review conducted in this study. It serves as a comprehensive snapshot of the review literature, organizing key themes, and trends identified across the selected studies. By categorizing and presenting the structure of the reviewed literature, the Table 1 provides /researchers, practitioners, and stakeholders with a clear roadmap to navigate and understand the collective body of knowledge in the field:

Table 1- Structure of Selected Studies



Authors	Title	Objective /research question:	Methodology	Results
Audretsch, et al., (2023)	Collaboration strategies and SME innovation performance	is to investigate the role of collaboration as a key source of new knowledge and innovation in small and medium-sized enterprises (SMEs).	Using panel data from 9,213 SMEs in the United Kingdom (UK) during the period 2002–2014,.	Collaboration with suppliers, customers, universities, and international competitors enhances SME innovation, providing key insights for improving performance and competitiveness.
Ciulli et al., (2022)	Sustainable business model innovation and scaling through collaboration	The objective of this study is to explore sustainable business models (SBMs)	The methodology involves analyzing scaling-through-collaboration strategies in the context of sustainable business models (SBMs).	Demonstrates how collaboration with other actors can serve as a key scaling strategy for firms aiming to upscale SBMs. By leveraging collaboration, firms, both newcomers and incumbents, can contribute to sustainability transitions and scale their SBMs effectively.



Authors	Title	Objective /research question:	Methodology	Results
Mascarenhas et al.. (2021)	The Influence of Research and Innovation Strategies for Smart Specialization (RIS3) on University-Industry Collaboration	Specifically, the study aims to understand the challenges and outcomes associated with the implementation of RIS3 measures, particularly in Portugal and Spain.	The study employs a mixed-methods approach.	The study underscores the need for more effective strategies to foster collaboration between universities and industries.
Arekrans, J., Ritzén, S., & Laurenti, R. (2023)	The role of radical innovation in circular strategy deployment	The objective of this study is to scrutinize the experiences of three large established industrial firms identifying exploitation and exploration approaches to CE and problematizing how these approaches relate to radical innovation, which is critical for achieving CE.	Semi-structured interviews were conducted with a total of 30 participants. The interviews were conducted with representatives from companies that have a clear CE agenda and are front-runners in CE strategy deployment.	The results revealed key issues: aligning existing norms with CE ambitions, establishing active collaborations within the innovation ecosystem, carefully selecting goals and metrics for circular strategies, and addressing resource allocation and coordination challenges for CE initiatives.



Authors	Title	Objective /research question:	Methodology	Results
Zaridis, A., Vlachos, I., & Bourlakis, M. (2021)	SMEs strategy and scale constraints impact on agri-food supply chain collaboration and firm performance	The objective of this study was to investigate the impact of collaboration within agri-food supply chains on firm performance, while considering the moderating effects of scale constraints and firm strategy.	The study conducted a survey of 504 agri-SMEs to test the research hypotheses developed based on the resource-based view. Data analysis involved a moderated hierarchical analysis	The results indicated that supply chain collaboration has a positive impact on agri-SME performance.
Grimaldi, M., Greco, M., & Cricelli, L. (2021)	A framework of intellectual property protection strategies and open innovation	This article aims to present an intellectual property (IP) strategic framework designed to sustain competitive advantage and manage outbound open innovation (OI)	The study surveyed 158 Italian firms to analyze the relationships between IP strategies, outbound OI, and innovation performance.	Most firms used an ad-hoc IP strategy. Lack of IP protection hinders outbound innovation. Defensive IP strategies are more open to outbound innovation, but collaborative strategies yield better innovation performance.



Authors	Title	Objective /research question:	Methodology	Results
Ismail et al., (2023)	Enhancing open innovation: Managing not invented here syndrome in collaborative projects	Investigating the impact of individual unwillingness, known as "not-invented-here syndrome" (NIHS), on innovation performance achieved through collaboration.	Conducting quantitative surveys with 250 firms in France, Italy, Spain, and Sweden to examine the relationship between NIHS and innovation performance	Additionally, discovering that the impact of NIHS on inbound open innovation performance is mediated through external social capital, rather than being a direct influence.
Pichlak, M., & Szromek, A. R. (2021)	Eco-Innovation, Sustainability and Business Model Innovation by Open Innovation Dynamics	The paper aims to analyze the environmental aspects of innovation activity undertaken by companies and, in particular, to assess sustainable business leaders' propensity to generate eco-innovation.	It was based on a non-random sample and was conducted—using the Computer Assisted Telephone Interview (CATI) method—in 2019 among 54 of the most eco-innovative Polish companies.	The results can provide a frame for developing new business models incorporating collaboration in eco-innovation activities.
Abdelaty, H., & Weiss, D. (2023)	Coping with the heterogeneity of external knowledge sources: Corresponding	This study aims to investigate the relationship between different openness strategies and firms'	Through regression analysis on data from 3294 German firms	These findings offer valuable insights for innovation managers in formulating

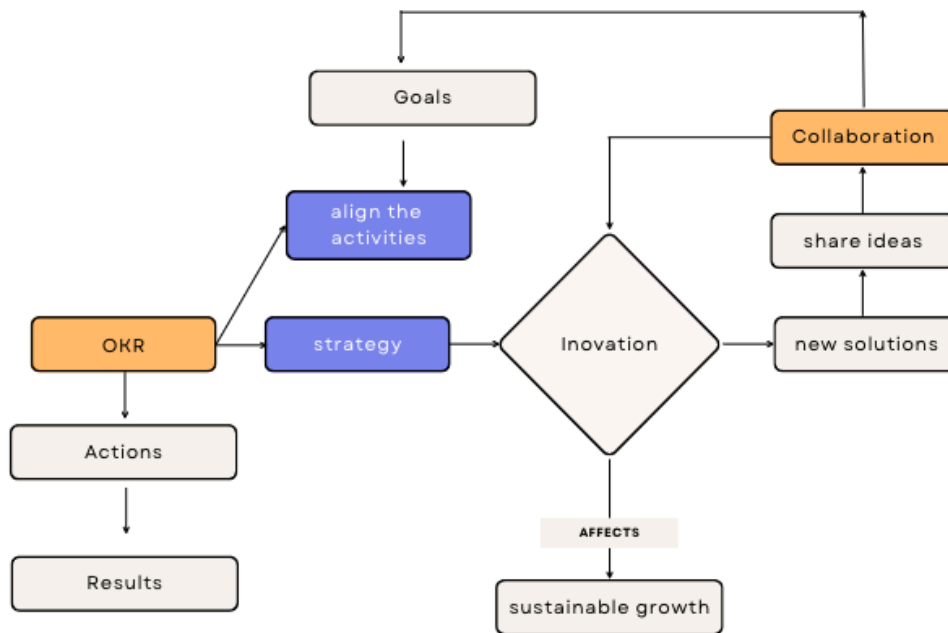


Authors	Title	Objective /research question:	Methodology	Results
	openness strategies and innovation performance	innovation performance.		effective openness strategies.
Almeida, F. (2024)	Causes of Failure of Open Innovation Practices in Small- and Medium-Sized Enterprises	The objective of the study is to explore the causes of failure in open innovation practices	The study employs a quantitative approach, utilizing a sample of 297 Portuguese SMEs	SMEs mainly struggle with resources and management processes in open innovation.

Font: Authors (2024)

Such contributions mentioned before enriched the COOISO model by integrating concepts of collaboration, open innovation, strategy and results, promoting a continuous cycle of learning and improvement. The creation of the COOISO model is expected to yield significant results in the realm of innovation management. Through a process of literature review and integration, the model emerged as a comprehensive framework that harmonizes collaboration, open innovation, strategy, and Objectives and Key Results (OKR). The synthesis of these key components has enabled organizations to streamline their innovation efforts and achieve greater alignment with overarching objectives. Preliminary insights suggest that by implementing the COOISO model, organizations have reported enhanced clarity in goal-setting, improved strategic planning processes, and strengthened teamwork dynamics. However, these outcomes are theoretical projections based on literature synthesis and require empirical validation. Furthermore, the model's emphasis on fostering a culture of collaboration, transparency, and adaptability is intended to empowered organizations to navigate complexities and seize opportunities in today's dynamic business landscape. Overall, the creation of the COOISO model has provided organizations with a structured approach to innovation management, driving continuous improvement and sustainable growth.

Figure 1- Conceptual Model COOISO



Font: Authors (2024)

Thus, the COOISO model contributes to the Knowledge Management literature by proposing an integrated approach that connects key elements of innovation management, collaboration, open innovation, strategy, and Objectives and Key Results (OKRs). The description of Figure 1 clarifies the relationships between the elements of the COOISO model, drawing from Tidd & Bessant's framework. Strategy defines the organization's long-term direction and innovation priorities, aligning with business objectives and external environment analysis. Objectives and Key Results (OKRs) translate strategy into SMART goals linked to key performance indicators (KPIs). Collaboration involves mechanisms to integrate different organizational areas and external partnerships, accelerating innovation by leveraging diverse knowledge and resources. Open Innovation complements collaboration by incorporating external knowledge through technology licensing, crowdsourcing, and startup incubators. Outcomes represent the tangible results of innovation efforts, such as new products, processes, business models, and increased competitiveness, with feedback mechanisms for continuous improvement. The relationships between these elements involve strategy driving OKRs, which in turn direct collaboration



and open innovation efforts. Innovation outcomes provide feedback to refine strategy, OKRs, and collaboration processes, creating a continuous cycle of learning and improvement.

This framework fills a crucial gap by offering a cohesive approach to managing innovation, enhancing the understanding of how strategy, OKRs, and collaboration interact to drive organizational innovation. It aligns clear objectives with strategic goals, guiding the search for new solutions and fostering sustainable growth through teamwork and partnerships, ultimately enriching existing theory and providing a strong basis for future research.

Thus, the model shows that sustainable growth results from integrating OKRs, strategy, collaboration, and innovation, creating a cycle of goal-setting and long-term success. Thus, future research should investigate how the COOISO model's effectiveness varies across different industries and organizational sizes, as well as the role of technology in enhancing collaboration and feedback. Longitudinal studies could also assess the model's long-term impact on organizational performance.

To conclude, the COOISO model enhances relevance and originality in the field of Knowledge Management by offering an integrated approach that connects collaboration, open innovation, strategy, and Objectives and Key Results (OKRs). It provides a cohesive framework that improves understanding of how these elements interact to drive organizational innovation. In doing so, the model enriches existing theory and establishes a solid foundation for future research. Moreover, some limitations of the study include its conceptual nature, which may limit practical applicability without empirical validation. Further research is needed to test the model in diverse real-world settings and to refine its components based on empirical data.

4. FINAL CONSIDERATIONS

In summary, this conceptual model illustrates how OKRs, strategy, and collaboration are interconnected elements that drive organization. By aligning objectives with strategic priorities, fostering collaboration among teams, and creating feedback mechanisms for continuous improvement, organizations can effectively execute their



strategies and adapt to changing market conditions. However, while this study presents a well-founded conceptual framework, it is important to recognize that the COOISO model is currently positioned as a theoretical proposal. Although it is grounded in comprehensive literature and offers significant potential, the model has not yet been tested in real-world organizational settings. The lack of empirical validation presents an opportunity for further research to confirm and expand upon the model's applicability across different scenarios, refine its components, and realize its potential in practice.

To conclude, this model emphasizes the importance of clear goal-setting, effective strategic planning, and cohesive teamwork in achieving organizational objectives. By embracing a culture of collaboration, organizations can navigate complexities, seize opportunities, and sustain long-term success in today's ever-evolving business landscape. This paper also emphasizes the importance of these studies: Mascarenhas et al. (2021) significantly advanced R&D by illustrating how innovation processes create competitive advantage. Abdelaty & Weiss (2023) concentrated on performance, revealing how robust R&D strategies improve organizational outcomes. Levine & Prietula (2014) explored the principles of successful innovation, highlighting essential theories that underpin effective R&D practices. Collectively, these studies offer a thorough understanding of how R&D, performance metrics, and core principles are interconnected to drive innovation.

In conclusion, this model underscores the criticality of clear goal-setting, effective strategic planning, and cohesive teamwork in achieving organizational objectives. So, by embracing a culture of collaboration, transparency, and adaptability, organizations can navigate complexities, seize opportunities, and sustain long-term success in today's ever-evolving business landscape. The interconnectedness of OKRs, strategy, and collaboration highlights the need for organizations to continuously refine their approaches, leveraging feedback mechanisms for ongoing improvement.

Ultimately, by aligning objectives with strategic priorities and fostering collaboration among teams, organizations can enhance performance and agility, positioning themselves for success in dynamic and competitive environments. Furthermore, fostering a culture that values continuous learning and innovation is crucial.



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