

The Implementation of Value Co-Creation in The Food Industry

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ARTICLE INFO	ABSTRACT
<p>Keywords: Value Co-creation Business strategy Food industry Foodservice Literature review.</p> <p>Kata Kunci: <i>value co-creation strategi bisnis, Industri pangan, Layanan makanan, Penelaahan literature.</i></p>	<p>In this study, we analyse, and classify the literature that discusses the implementation of value co-creation in the food industry. For this purpose, we conducted a systematic literature review identified from Scopus database search results. Then, it was further screened and filtered to obtain specific literature that could answer the proposed research question. Our analysis focuses on how those studies put value co-creation into real business and industrial contexts. We are looking at the value co-creation phases, mechanisms, and how those could create particular value. We found that value co-creation can be implemented in various ways tailored to the context that the actors wish to achieve. Another classification is made to find out the focus of the present research. This classification is based on the different functions they were focusing on across the food industry. Finally, we organise and summarise the suggestion for future research directions.</p>
<p>Corresponding author: Anita Meena asri_anisa@sbm-itb.ac.id</p>	<p>SARI PATI</p> <p><i>Dalam studi ini, kami menganalisis dan mengklasifikasikan literatur yang membahas implementasi value co-creation dalam industri pangan. Untuk tujuan tersebut, kami melakukan tinjauan literatur sistematis yang diidentifikasi dari hasil pencarian database Scopus. Selanjutnya, literatur tersebut disaring lebih lanjut untuk mendapatkan literatur spesifik yang dapat menjawab pertanyaan penelitian yang diajukan. Analisis kami berfokus pada bagaimana studi-studi tersebut menerapkan value co-creation ke dalam konteks bisnis dan industri yang nyata. Kami melihat pada fase-fase value co-creation, mekanisme, dan bagaimana hal tersebut dapat menciptakan nilai tertentu. Kami menemukan bahwa value co-creation dapat diimplementasikan dalam berbagai cara yang disesuaikan dengan konteks yang ingin dicapai oleh aktor terkait. Klasifikasi lain juga dibuat untuk mengetahui fokus penelitian saat ini. Klasifikasi ini berdasarkan pada fokus di industri pangan. Terakhir, kami mengorganisir dan merangkum saran untuk arah penelitian di masa depan.</i></p>
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INTRODUCTION

Food is a fundamental and essential need in our lives. The food industry is crucial to every nation in the world. It encompasses diverse activities such as food supply, production, harvesting, processing, packaging, transportation, distribution, consumption, and disposal (Sadiku et al., 2019). These activities connect to extensive industrial and business processes, where from another perspective, this means a mounting amount of challenges and problems around this industry. Those challenges are related to sustainability, food safety, and supply chain efficiency.

More challenges come from the dynamic business environment, characterised by rapid technological advancements, shifting consumer preferences, and increasing regulatory pressures (Gellynck et al., 2007). One example of the dynamic nature of the food industry is the growing importance of digital technology and e-commerce (Bachanová, 2018). Food companies need to embrace these new technologies to understand better and cater to the changing preferences and behaviours of their customers (Grewal et al., 2020). Another significant trend is the local food movement that has driven growing demand for organic, natural, and plant-based food products, as well as heightened expectations for transparent and awareness of the environmental and social benefits of supporting local producers (Dagevos & Ophem, 2013; Martinez et al., 2010). Food businesses must respond to these changes and align with consumer values and address environmental and social concerns.

In the face of these challenges, value co-creation offers a promising approach to address these issues by fostering collaboration among stakeholders in the food industry (Vargo & Lusch, 2008). The concept of value co-creation is rooted in service-dominant logic (SDL) and the resource-based view (RBV) of the firm (Vargo & Lusch, 2004; Barney, 1991). It emphasises the active and dynamic participation of consumers, producers, suppliers, and other stakeholders in creating value, leading to more

efficient and sustainable outcomes. Within the food industry, value co-creation has been acknowledged as a means of addressing contemporary challenges and driving innovation (Piller et al., 2010).

In this ever-changing landscape, value co-creation can be a powerful tool for food businesses to navigate the dynamic business environment and remain competitive (Dentoni et al., 2016). By actively involving consumers, suppliers, and other stakeholders in the innovation process, food companies can better anticipate and respond to market trends, technological advancements, and regulatory changes (Vargo & Lusch, 2008). This collaborative approach can lead to more resilient and adaptable business models that thrive in the face of uncertainty and change (Wieland et al., 2012).

Despite the growing body of literature on value co-creation and how essential sustainability of the food industry is, gaps remain in our understanding of the specific mechanisms and contextual implementation in the food industry. Many researchers have organised, analysed, and synthesised evidence of the current value co-creation research in the hospitality and tourism industry. However, to the extent of our search result, no one has conducted a literature review on value co-creation in the food industry. There is a need for more empirical research and case-based evidence to provide a comprehensive understanding of the phenomenon in this complex and diverse industry.

A literature review serves as an excellent means of consolidating research findings, demonstrating evidence at a meta-level, and identifying areas requiring further research, which are crucial aspects of developing theoretical frameworks and constructing conceptual models. A literature review may be the most suitable methodological instrument for providing answers. For instance, literature reviews are beneficial when the researcher aims to offer an overview of a specific issue or research problem. Generally, researchers conduct this kind of

literature review to assess current knowledge on a particular subject. It can establish research agendas, pinpoint gaps, or address a specific topic (Snyder, 2019). By conducting a systematic literature review, we want to address the following questions:

- a. What is the focus of current value co-creation research in the food industry?
- b. How is value co-creation implemented in the food industry?
- c. What are the impacts of implementing value co-creation in the food industry?
- d. What are the future research directions on value co-creation in the food industry?

By answering those questions, this study contributes to capturing the current research development and value co-creation practices in the food industry. This information is helpful for future research directions and creates innovation in the food industry. It can also be a reference on examples of value co-creation design and knowledge spread to the practitioner in the food industry to understand how value co-creation realise in the actual business case, how to create specific values through various value co-creation practices, and how value co-creation create benefits to businesses in the food industry.

METHODS

The method of this literature review adopts from other literature studies by Al Mahalah et al. (2022), Aquilani et al. (2020), Passafaro & Vechhione (2022), Ribeiro et al. (2023), and Yuanita et al. (2015) and to the guides provided by Pickering & Byrne (2014). The process begins with a search for pertinent literature in the Scopus database. Identified articles are then briefly evaluated by examining their titles and abstracts against predetermined criteria to determine their eligibility and relevance. The structured literature review in this study concentrates on value co-creation in the food industry.

The literature was collected from Scopus to get reliable literature sources regarding quality and

accessibility. The primary keywords “value co-creation” and “food” were used to capture all literature on value co-creation in the food industry. The food industry encompasses an intricate web of activities associated with providing, consuming, and catering food items and services. Instead of being a singular industry, the food industry consists of various sectors producing various food products. It includes agriculture, food production, processing, preservation, packaging, distribution, retail, and catering (Sadiku et al., 2019). In essence, the food industry is composed of the following elements. Hence, we use food as a keyword to capture a more thorough result rather than using “food industry.” This structured literature review results in 130 papers based on the Scopus database’s article title, abstract, and keyword search results. After that, we screened the paper by using filter limitation in Scopus. It was set to the field of business and management and the English language. Papers not containing the specific topic are excluded. From this screening, 48 papers were obtained. Then, abstract checking and speed reading were done to obtain eligible papers for further analysis and classification. The eligibility criteria are accessibility of the paper, journal article, actual relevancy to the value co-creation and food industry, and not a literature review article.

To answer the research questions, our analysis identifies the focus in the food industry discussed in the selected literature. This identification result is then classified according to functions across the food industry supply chain that they belong to. In constructing the classification, this study adopts the explanation from the Queensland government and a journal article by Sadiku et al. (2019). Therefore, we identify the different functions that exist across the food industry supply chain as follows:

- a. Food producers, which include farms that grow and harvest fruit and vegetables/agriculture, farms that raise livestock, farms that produce eggs, dairy farms, and commercial fishing boats.

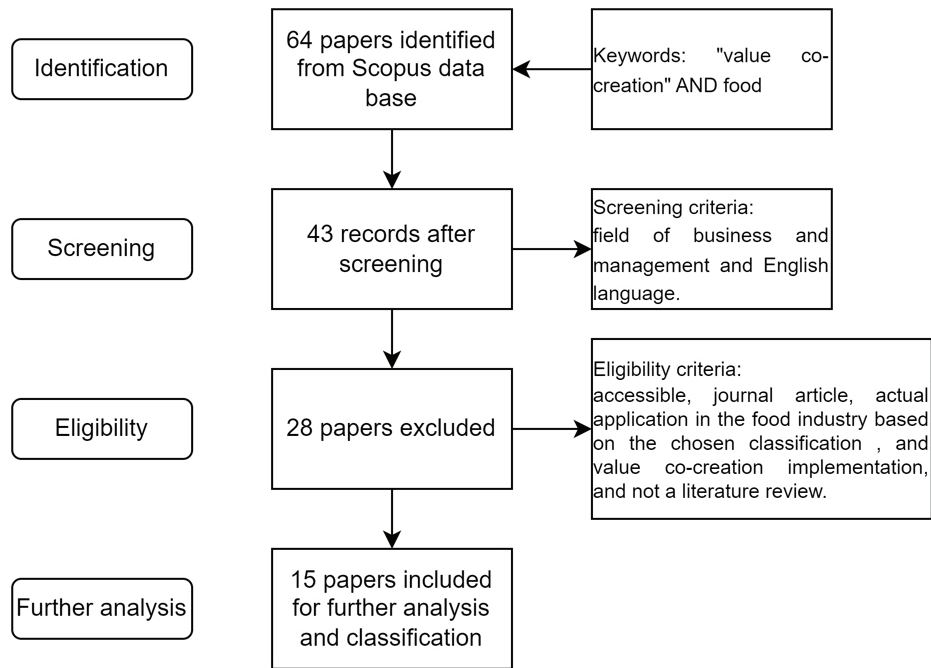


Figure 1. Data collection procedures

- b. Food processors and manufacturers include food manufacturers that process and package food to sell to food retailers, warehouses that store food for a supermarket, and meat processing plants.
- c. Distributors include companies that transport food, import food, export food, and food delivery companies.
- d. Retailers, which include
- e. Food service businesses include restaurants, café, takeaway stores, bakeries, commercial and non-commercial canteen, catering, and mobile food vehicles.
- f. Customers (in a B2C meaning)
- g. Authority, government, or any institutions related to the policy, safety and/or quality assurance in the food industry

Another comprehensive reading was conducted on the selected literature to organize and synthesize the value co-creation process and mechanism and the value co-created in the food industry. It was done to answer the research question about implementing value co-creation in the food industry and get a clear

idea of how it is carried out in the business context. Identification is also made to determine the value of the co-creation orchestration platform. Lastly, we organized and summarised opportunities for future research from each selected literature

RESULTS AND DISCUSSION

The Food Industry Focus in The Current Value Co-creation Studies

Based on the classification process explained in the previous section, the selected literature mainly discusses value co-creation in the producer stage, which is the agri-food sector. The majority also studied a more comprehensive range of value co-creation involving more than three actors, although some only focus on the dyadic relationship. Only two of the selected literature have involved authority in the value co-creation process.

The document is focused on the food service industry, which includes restaurants, cafés, takeaway stores, bakeries, commercial and non-commercial canteens, catering, and mobile food vehicles. The document explores how food waste

mobile apps can support sustainable value co-creation at the bottom of the pyramid, by reducing food waste and improving food security for low-income consumers. (Apostolidis et al., 2021)

The industry focus that is being discussed in the document is the food industry, specifically the food service sector. The document provides guidance on how to answer questions related to the case study of Pennine Pubs, a rural pub chain that adopted various co-creation strategies with its main brewer, customers and community members during the Covid-19 lockdowns. The document explains how Pennine Pubs and its stakeholders benefited from collaborating to deliver outcomes that are beneficial to all parties, such as online beer tasting sessions and meals on wheels for vulnerable customers. The document also discusses how Pennine Pubs can retain and expand its value co-creation activities in the post-lockdown period, and how it can incorporate them into a triple bottom line of social justice, economic prosperity and environmental quality. The document also identifies some potential advantages and disadvantages of implementing a dial-a-bus service to transport immobile customers to and from its pubs, such as increased revenue, customer loyalty and reputation, but also increased costs, risks and diversion of focus¹. The document suggests some strategic actions that Pennine Pubs and its community members can undertake to co-create value in its food and drink offerings, such as sourcing local ingredients, linking drinks to tasting sessions, and synchronising menu items with special occasions (Brown et al., 2022)

The industry focus that is being discussed in the document is the organic food product distribution system. The document is a study of how to improve the organic product distribution system by applying value co-creation process and knowledge management among all stakeholders in the distribution ecosystem. The document aims to answer three research questions related to the stakeholders, the values and processes, and the business model of the organic product market.

The document reviews the literature on knowledge management and value co-creation, and how they can be integrated to support customer relationship management and service innovation in the organic product market. The document uses a mixed-methodology design that combines qualitative and quantitative methods to collect and analyze data from various sources, such as interviews, questionnaires, cluster analysis, case studies, and business model design. The document presents the results and discussion of the data analysis, and proposes a new business model that incorporates value co-creation and knowledge management among all stakeholders in the organic product distribution system. The document also explains the roles and benefits of each stakeholder in the value co-creation process (Tjhi & Mulyani,)

The industry focus that is being discussed in the document is the food industry. The document provides a classification of the different functions that exist across the food industry supply chain, such as food producers, food processors and manufacturers, distributors, retailers, food service businesses, customers, and authority or government institutions. The document also mentions some examples of each function, such as farms, food manufacturers, transport companies, supermarkets, restaurants, and policy-makers. Therefore, the document is clearly focused on the food industry and its supply chain (Francois et al., 2017).

The industry focus that is being discussed in the document is the agri-food industry, which involves the production, processing, distribution, and consumption of food products derived from agriculture. The document specifically focuses on the horticulture industry in Indonesia, which produces and exports fruits and vegetables. The document proposes a conceptual model for simulating the value co-creation process in the agri-chains network, which is a type of exchange that involves information sharing and collective learning between different actors in the supply chain. The document uses agent-based modeling as

a method to capture the complexity and dynamics of interactions between agents in the supply chain. The document provides the stages of developing and operationalizing the model, and the case study of the Pangalengan cluster in West Java, which involves various actors such as farmers, exporters, supermarkets, and governmental institutions (Handayati et al., 2015).

The industry focus that is being discussed in the document is the food industry supply chain, which includes different functions such as food producers, food processors and manufacturers, distributors, retailers, food service businesses, customers, and authorities. The document provides a classification of these functions and their roles in the food industry (Radic et al., 2023).

The industry focus that is being discussed in the document is the agrifood sector, which is related to the production, processing, distribution, and

consumption of food and agricultural products. The document proposes a managerial vision of how knowledge sharing culture can facilitate the sustainable development of the agrifood sector, especially in the context of the Italian Agri-food Protection Consortia. The document also presents a conceptual and empirical model based on the combination of social cognitive theory and social capital theory to identify the determinants, descriptive variables, and operative activities that influence the knowledge sharing process. The document also describes the data collection and analysis methods, the results, and the discussion of the findings (Maizza et al., 2019).

Implementation of Value Co-creation in The Food Industry and Its Implication

Most value co-creation implementations studied in the current literature are desired as a development strategy for the businesses and actors involved with positive outcomes. However, the case study

Table 1. The present research focuses on the implementation of value co-creation in the food industry

Authors (Year)	Goal of value co-creation	Industry focus						
		Food producers (farm and agriculture)	Food processors and manufacturers	Distributors	Retailers	Foodservice	Consumers (as in B2C relationship)	Authority
Ngugi et al. (2010)	Sustain relationship with larger cutomers	√	√	-	√	-	-	-
Mariussen and Ndlovu (2012)	Internatinarisation of SMEs in the food and drink industry	√	√	√	-	√	-	-
Handayati et al. (2015)	Improve food supply	√	√	√	-	-	-	√
Francois et al. (2017)	Strengthen linkage across industries (tourism and agriculture)	√	-	-	-	√	√	√
Tardivo et al. (2017)	Overcome competitive business condition	-	√	-	-	-	√	-
Ngugi (2018)	Economical benefits, innovation, and social reputation	√	√	-	√	-	-	-
Palumbo et al. (2018)	Organisational change towards localise food supply, healthier food and sustainable operation (school food service)	√	-	-	-	√	√	√
Maizza at al. (2019)	Facilitate sustainable development in agrifood sector	√	√	√	-	-	-	√

Table 1. continued

Authors (Year)	Goal of value co-creation	Industry focus						
		Food producers (farm and agriculture)	Food processors and manufacturers	Distributors	Retailers	Foodservice	Consumers (as in B2C relationship)	Authority
Tjhi and Mulyani (2019)	Improve organic food product distribution system	-	-	√	-	-	-	-
Apostolidis et al. (2021)	Reduce food waste and improve food security at the bottom of pyramid	-	-	-	-	√	√	√
Utami et al. (2021)	Inclusive business practice and fair trade	√	-	√	√	-	√	-
Brown et al. (2022)	Pubs survival strategy during COVID-19 lockdowns	-	-	-	-	√	√	-
Mars (2022)	Sustainable local consumption space	-	-	-	-	√	√	-
Radic et al. (2023)	Sustainable localized food products	√	√	√	-	-	-	√

of Pennine Pubs by Brown et al. (2022) discusses interesting notes. The pub owner was experiencing a dilemma in whether to continue the innovative value co-creation that the pubs have done during the COVID-19 lockdown or not. He is concerned that he may have inadvertently established a long-term demand that negatively impacts his previously more profitable revenue stream by co-creating value with volunteers to provide meals for vulnerable customers. Surprisingly, this temporary co-creation initiative intended to help isolated, needy individuals and foster community spirit might cause a persistent change that further alienates these customers and threatens a treasured community asset's economic and social sustainability. Due to labour shortage, his pub needed to rely on voluntary participation for his other customers, raising concerns about turning the relationship more transactional.

Value co-creation occurs when two service systems share aligned expectations about utilising available resources during their interactions. However, this co-creation process is at risk if there are differences between the systems concerning anticipated appropriate behaviour (Hubbert et al., 1995 in Plé & Cáceres, 2010). In the example of Pennine Pubs, the misalignment of goals and

unmet capabilities may lead to value destruction rather than value creation. Value co-destruction is an interactive process between service systems that leads to a decrease in the well-being of at least one of the systems (which can be either individual or organisational). Throughout this process, the service systems engage with one another directly (person-to-person) or indirectly (through devices like goods), integrating and applying resources. Value co-destruction arises from the improper use of resources during interactions between various service systems, meaning that each service system can misuse its resources, the resources of the other service system, or both can misuse these resources (Plé and Cáceres, 2010).

A similar highlight was raised by Ngugi et al. (2018), who found that the relational capabilities of the service provider are essential for value co-creation with larger customers. These capabilities are technological relational capability, human relational capability, managerial system relational capability, and cultural relational capability. The technological relational capability enables service providers to fulfil their larger customer needs in higher production capacity, product quality, and a higher level of customisation. Human relational capability

can maintain a better stakeholder relationship, cutting the risk in partnership and reducing time in the product development process. Managerial system capability to take over several functions for the B2B customer allows the service provider to exploit a more comprehensive network and the customer to cut operational costs. Lastly, cultural relational capability makes the service provider more sensitive to shifting customer preferences and trend demand.

Some of the existing literature reviews address sustainability issues in the food industry. Apostolidis et al. (2021) proposed the potential value co-creation to reduce food waste and improve food security at the bottom of the pyramid (BoP) by using the Food Waste Mobile Application (FWMA). The interview results with potential BoP customers show that the FWMA could open access to affordable and quality food, reducing food waste. On the other hand, the foodservice businesses perceive that the FWMA could reduce their food waste generation, improve brand image, and create opportunities to reach new customers. However, the BoP customer is worried about the 'leftover food' and 'food waste' stigma that can be inferred from the app's current information. Like the BoP customers, foodservice businesses are concerned about the same stigma, which could infer that they are serving low-quality food. Another concern is opportunistic behaviour. They worried about the potential of the surplus food being resold.

Future Research Direction

In this section, we synthesized the future research suggestions from selected literature. Further endeavours with a more extensive data set, expanding the geographical scope of studies and more specific investigation on value co-creation are needed. Delving into diverse global contexts is essential to quarry both universal and region-specific dynamics of digital technology-facilitated value co-creation, offering a more holistic understanding that transcends the limitations imposed by a singular national focus. Simultaneously, there's an imperative need to diversify the investigation

across various industry sectors. While existing studies have provided valuable insights, particularly in agricultural domains, the exploration must extend to other sectors like manufacturing and services. This broader industry lens will enable a more comprehensive understanding of how digital technologies catalyze value co-creation across the economic spectrum.

Close observation with a longer span of data collection are strongly advised. The real application of value co-creation schemes that have been designed and simulated in some of the selected literature will provide essential insight towards a more sustainable process and operation in the food industry. Moreover, adopting a longitudinal approach to these studies is crucial. Such an approach would not only chronicle the immediate impacts of digital technology on value co-creation but also illuminate the sustainability and evolution of these impacts over time. This long-term perspective is vital in assessing the enduring benefits and adaptability of digital technology-driven value co-creation initiatives in bottom of pyramid (BOP) markets. A deeper exploration into the social justice implications of digital commerce in these markets also forms a critical avenue for future research. This exploration should rigorously assess how digital platforms can contribute to equitable economic development, focusing on income redistribution, empowerment, and sustainable development. Understanding the role of digital technology in promoting social justice within BOP markets is essential for developing inclusive economic strategies.

Additionally, future research should also focus on the role of policy and regulatory frameworks. The interplay between policy interventions and digital commerce is a complex yet underexplored area. Assessing how government actions facilitate or hinder value co-creation processes can provide vital insights for policymakers and stakeholders, helping them to create environments that foster effective and sustainable value co-creation. A significant

Table 2. Value co-creation mechanism in the selected literature

Authors	Value Co-creation Process/Phase	Value Co-creation Mechanism	Value Co-created	Value Orchestration Platform
Ngugi et al. (2010)	Customer value co-creation, co-design, co-production, co-development	Adopt an integrated system for the supply chain, customisation in product development and production, customer visits, collaborate with customers in business plan development, behavioural change in procurement, stakeholder meeting, undertook some functions for the customer	Enhance product innovation, enhance product quality, increase production capability, sustain as the preferred, provider by customers, acquire larger customer, lower cost for the B2B customer,	Technology and non technology-based
Mariussen and Ndlovu (2012)	Internet-enabled co-creation	Stakeholder engagement, company engagement and openness to customers, detailed customisation, contact accessibility	Internationalise the market scale regionally and globally	Technology-based (Websites, social media, email, online surveys) and non technology-based (exhibition, direct customer interaction)
Handayati et al. (2015)	Value co-creation in planning, co-creation in harvesting and cultivating, co-creation in consumption, and value co-creation in post-harvesting and distribution	Agro-input selection; sharing information about risk and requirement of particular agro products, quantity, and quality; collaboration in developing SOP, harvest scheduling, distribution scheduling and cold chain transport, and develop co-branding of the agro products.	Determine seed variety and quality; cultivating in time and quantity that is based on procedure, harvest with right quantity and time, good handling of harvest products to maintain quality, distribute the products in the right time and quantity, and product branding	Non technology-based (direct interaction)
Francois et al. (2017)	Co-creation, co-production	Information transfer (staff training and knowledge sharing); B2B, B2C, and C2B engagement and practices	Enhanced customer experience, create new market for local farmers, cultural preservation and promotion	Non technology-based (direct interaction and comment card)

Table 2. continued

Authors	Value Co-creation Process/Phase	Value Co-creation Mechanism	Value Co-created	Value Orchestration Platform
Tardivo et al. (2017)	Co-producer, co-distributor, co-promoter, co-consumer, co-evaluator, co-ideator, and co-tester	Inviting customers to the brewery and guided tour; collecting customer feedback through emails; self-service retail channels; word of mouth; invite customer for wine tasting and give feedback; survey during promotional period; held campaign for crowdfunding; asting during the early period of the product distribution and collect the feedback.	Enhance the process of new product creation, obtain new customers, understand customer preferences and assuring quality of the product	Non technology-based (direct interactions and personalisation) and technology-based (email, social media)
Ngugi (2018)	Open innovation, corporate social responsibility, interlinked technical system, co-planning, co-evaluation, interactive learning	Exchange of ideas in product development, collaboration in social activities, electronic data interchanged, developing business plan, evaluation of factory and staff, identifying training needs, sensitized on quality issue, supplier staff support on customer premises (retailer)	Increase revenue, increase ranges of successful products, enhanced public relation, higher sales, sustainable supply, guaranteed cashflow, improve quality, and enhance understanding of customer's needs	Non technology-based (direct dyadic relationships)
Palumbo et al.(2018)	Co-production	Collaboration with local family firms, formal agreement with local farmers, implement a new school food supply policy, partnership with farmers union, education about local food heritage and healthy eatings, create direct farming experience, redesign school meal menu, forming task force for additional sustainability measure	Increase children's satisfaction with the school meal, improve the quality of school meals, enhance children's healthy food habits, increase children's awareness of local products, significant cost savings from lower logistic expenditure and amount of meal provided, 15% reduction at operational cost, reduce food waste, lower unitary raw cost for foodstuff	Non technology-based (direct interactions)

Table 2. continued

Authors	Value Co-creation Process/Phase	Value Co-creation Mechanism	Value Co-created	Value Orchestration Platform
Maizza et al. (2019)	Stakeholder participation, collaborative relationships, and sustainable development	Knowledge sharing and model application	protect specific agricultural and food production, create a sense of identity and culture tie, and contributes to environmental conservation and awareness	Non technology-based (territorial relation systems and Consotia network)
Tjhi and Mulyani (2019)	Producer value co-creation and stakeholder value co-creation	Encourage the traditional farmer to adopt organic farming and obtain input for assessment; B2B, B2C, and C2C communication to promote the benefits of organic lifestyle	Enhanced the spread of knowledge and organic food product acceptance to new stakeholders	Non technology-based (direct relationships)
Apostolidis et al. (2021)	Identification of needs and opportunities, engagement and interaction, co-creation and feedback loop	Implementation through mobile application, consumer engagement, and business adaptation.	Access to affordable food, access to quality food, reduce food waste, reach new customers, improve brand image, improve the bottom line, support local communities	Technology-based (mobile application)
Utami et al. (2021)	Co-production, co-operatives, co-developers	Non-conventional farming practices, B2B and B2C exchange interactions, pull supply chain, and customisations	Profit, price stability, cost-efficient, commercialisation, social reinforcement, capability and knowledge enhancement, new business experience, social collectiveness, new partnership and networking, demand generation, product quality, product varieties, and service offerings.	Technology-based (E-commerce)

Table 2. continued

Authors	Value Co-creation Process/Phase	Value Co-creation Mechanism	Value Co-created	Value Orchestration Platform
Brown et al. (2022)	Multi-stakeholder value co-creation	Initiation, engagement with stakeholder, service innovation, adaptation and implementation, customer engagement, evaluation and adjustment	Obtain knowledge of customers' needs, enhanced customer experience, maintain business operation and revenue stream during the lockdown, strengthening community ties and goodwill	Technology-based (social media, email) and non technology-based (volunteer)
Mars (2022)	Establishment, empowerment, internationalization and sustainment	Community-supported business model (CSBM), community marketing strategy, and experiential connection	Increasing public knowledge and consumer interest in locally-sourced heritage grains, enhancing connections within the local food system by fostering more collaborations, and creating an extra revenue stream for the company without expanding beyond local boundaries	Technology-based (social media) and non technology-based (in person consumption routine)
Radic et al. (2023)	Co-producer	Maintanace of value, authenticity and integrity, trust, word of mouth	Building communities for transition towards sustainable origin food system	Non technology-based (direct relationships)

focus on deepening the analysis of social justice implications, particularly in digital commerce settings, alongside a thorough understanding of the policy environment. This is complemented by an exploration into consumer behavior, especially in sectors like organic food and beverages, to inform effective co-creation strategies.

The importance of stakeholder-specific and comparative studies to tailor strategies for diverse participants in the supply chain, thereby addressing unique challenges and opportunities in various business contexts. Deeper understanding of the concern of each actor is crucial. Different cultural settings and business climates in different community and regional settings can be factors that will affect the mechanism of value co-creation. More studies with different research approaches

and methods could contribute to more affluent research development.

Lastly, with the rapid advancement of digital technologies, future research must consider the implications of emerging innovations like artificial intelligence and blockchain. Exploring how these technologies might transform value co-creation processes offers a forward-looking perspective that is essential for staying abreast of how technological evolution can reshape market dynamics in BOP markets.

The future research directions in digital technology-enabled value co-creation should embrace a harmonious, multidimensional approach. This approach needs to encompass a range of geographical areas and industry sectors,

utilize longitudinal methodologies, delve into the social justice aspects, consider the impact of policy and regulatory frameworks, and stay attuned to technological advancements. Such a comprehensive exploration will undoubtedly enrich our understanding and effectiveness of value co-creation strategies in the ever-evolving landscape of BOP markets

MANAGERIAL IMPLICATIONS

This study offers critical insights for decision-makers and practitioners in the food industry who aim to leverage value co-creation for strategic advantage. The study highlights the importance of collaboration across various stages of the food supply chain. An important aspect of value co-creation is understanding and responding to customer needs and preferences. Managers should prioritize customer engagement and feedback mechanisms to align their products and services more closely with customer expectations. This customer-centric approach can lead to enhanced customer satisfaction, loyalty, and ultimately, business success. However, actors in food production, processing, distribution, and retail can benefit from understanding how value co-creation is not limited to the interaction between a company and its end consumers. Instead, it encompasses the entire network, including suppliers, distributors, and other partners. By fostering stronger relationships and open communication channels throughout this network, managers can facilitate a more integrated approach to value creation.

The systematic literature review result also underscores the role of digital technologies in facilitating value co-creation. Managers should consider investing in and adopting relevant digital tools and platforms to streamline operations, improve communication, and gather valuable customer data. These technologies can play a significant role in enhancing the efficiency of the value co-creation process, providing real-time insights, and enabling personalized customer experiences. Value co-creation in the food industry

demands innovation and adaptability. In practice, organization should be able to cultivate an organizational culture that encourages innovation, both in terms of products and processes. This includes being open to new ideas, experimenting with different approaches to value creation, and being adaptable to changing market trends and consumer preferences.

The study also highlights the need for managers to have a comprehensive understanding of the broader market context, including regulatory environments, sustainability concerns, and global market dynamics. Managers who are well-informed about these aspects can make more strategic decisions, ensuring their value co-creation strategies are not only effective but also socially responsible and compliant with industry standards.

Finally, the suggestions for future research outlined in the study can guide managers in future-proofing their business strategies. By staying abreast of emerging trends and potential areas of exploration in value co-creation, managers can ensure that their strategies remain relevant and competitive in a rapidly evolving industry. In conclusion, the findings of this study provide a roadmap for managers in the food industry to harness the potential of value co-creation. By embracing these insights, they can drive innovation, enhance customer engagement, and achieve sustainable growth in the highly competitive and dynamic landscape of the food industry.

CONCLUSION

This study examined the literature on value co-creation in the food industry by conducting a systematic literature review from the Scopus database. Our analysis revealed that value co-creation is predominantly discussed in the agri-food sector context, with most studies focusing on collaborations involving multiple actors. We found that value co-creation can be implemented in various ways, tailored to the context and goals of the involved actors, leading to positive outcomes in

most cases. However, we also identified potential risks and challenges associated with value co-creation, such as misalignment of goals, unmet capabilities, and value destruction.

Moreover, the study highlighted the importance of relational capabilities in successful value co-creation and the potential of value co-creation in addressing sustainability issues in the food industry, such as food waste reduction and food security improvement. Despite these findings, gaps remain in our understanding of the specific mechanisms and contextual implementation of value co-creation in the food industry. As such, we organized and summarized suggestions for future research directions from the selected literature. This study contributes to capturing the current research development and value co-creation practices in the food industry, providing valuable insights for future research and fostering innovation in the sector. It serves as a reference for practitioners in the food industry, helping them understand how value co-creation can be realized in real business cases, create specific values through various practices, and benefit businesses in the food industry.

Based on this systematic literature review, value co-creation in food industry still needs more

research and development. Most of the selected literature in this review identifies value co-creation merely on the collaboration and coordination that happened. Not many connect with co-creation theory, frameworks, or designed co-creation modeling. In a similar sense, more research is needed to implement existing co-creation theory, proposed frameworks, and models. More evidence of implementing value co-creation in each aspect of the food industry is needed with more quantified results. A value co-creation research that comes from a good understanding of the problem and challenges of all the involved actors may provide valuable information on a “successful” value co-creation. Value co-creation can be a practical solution in addressing sustainability challenges. One of them is addressing the food industry’s food loss and waste problem. Literature discussing this problem is still rare. The solution to overcome sustainability challenges requires a holistic approach, collected awareness and effort, and efficiency in each industry process where the mindset is to create a sustainable, even more circular business ecosystem. The sharing of knowledge, resources, and well-aligned goals that co-creation embodies is vital in creating a circular business ecosystem. ■

REFERENCES

- Apostolidis, C., Brown, D., Wijetunga, D., & Kathriarachchi, E. (2021). Sustainable value co-creation at the Bottom of the Pyramid: using mobile applications to reduce food waste and improve food security, *Journal of Marketing Management*. DOI: 10.1080/0267257X.2020.1863448
- Bachanová, P.H. (2018). The Future of Grocery E-commerce and Shopping Preferences of Consumer in the World of Digital Technologies. *NCM Conference*.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Brown, D.M., Apostolidis, C., Singh, P., Dey, B.L., & Chelekis, J. Exploring multi-stakeholder value co-creation as an entrepreneurial approach to survival and sustainability: The case of Pennine Pubs. (2022). *The International Journal of Entrepreneurship and Innovation*, 1-10. DOI: 10.1177/14657503221145101
- Dagevos, H., & Ophem, J. V. (2013). Food consumption value: Developing a consumer-centred concept of value in the field of food. *British Food Journal*, 115(10), 1473-1486.
- Dentoni, D., Bitzer, V., & Schouten, G. (2018). Harnessing Wicked Problems in Multi-Stakeholder Partnerships. *Journal of Business Ethics*, 150(2), 333-356.
- Gellynck, X., Vermeire, B., & Viaene, J. (2007). Innovation in food firms: contribution of regional networks within the international business context. *Entrepreneurship & Regional Development*, 19(3), 209-226.
- Grewal, D., Hulland, J., Kopalle, P. K., & Karahanna, E. (2019). The future of technology and marketing: a multidisciplinary perspective. *Journal of the Academy of Marketing Science*, 48(1), 1-8. <https://doi.org/10.1007/s11747-019-00711-4>
- Handayatia, Y., Simatupang, T. M., & Perdanac, T. (2015). Value co-creation in agri-chains network: an Agent-Based Simulation. *Procedia Manufacturing*, 4, 419-428.
- Hubbert, A.R., Sehorn, A.G. and Brown, S.W. (1995), Service expectations: the consumer versus the provider. *International Journal of Service Industry Management*, 6(1), 6-21.
- Mariussen, A., & Ndlovu, T. (2012). Internet-enabled value co-creation in SME internationalisation: current practices from the UK food and drink industry. *European J. International Management*, 6(5), 503-524.
- Maizza, A., Fait, M., Scorrano, P., & Iazzi, A. (2019). How Knowledge Sharing Culture Can Become a Facilitator of the Sustainable Development in the Agri-food Sector. *Sustainability*, 11, 95. doi:10.3390/su11040952
- Mars, M.M. (2022). Community and Cultural Entrepreneurship and Value Co-Creation in the Local Food Marketscape. *Sustainability*, 14, 16744. <https://doi.org/10.3390/su142416744>
- Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., & Newman, C. (2010). *Local food systems: Concepts, impacts, and issues (No. 673)*. United States Department of Agriculture, Economic Research Service.
- Ngugi, I.K., Johnsen, R.E., & Erdélyi, R. (2010). «Relational capabilities for value co-creation and innovation in SMEs. *Journal of Small Business and Enterprise Development*, 17(2), 260 - 278.
- Ngugi, I. K. (2018). Co-creating Value in the Dyadic Relationships of Small and Large Firms in the Agri-food Sector. *Journal of International Food & Agribusiness Marketing*. DOI:10.1080/08974438.2018.1471638
- Palumbo, R., Vezzosi, S., Picciolli, P., Landini, A., Annarumma, C., & Manna, R. (2018). Fostering organisational change through co-production: Insights from an Italian experience. *International Review on Public and Nonprofit Marketing*, 15, 371-391. <https://doi.org/10.1007/s12208-018-0205-7>
- Piller, F. T., Ihl, C., & Vossen, A. (2010). *A typology of customer co-creation in the innovation process*. Social Science Research Network
- Plé, L., & Cáceres, R.C. (2010). Not always co-creation: introducing interactional co-destruction of value in Service-Dominant Logic. *Journal of Services Marketing*, 24(6), 430-437.
- Radić, I., Monaco, C., Cerdan, C., & Peri, I. (2023). Establishing Communities of Value for Sustainable Localized Food Products: The Case of Mediterranean Olive Oil. *Sustainability*, 15, 2236. <https://doi.org/10.3390/su15032236>
- Tardivo, G., Thrassou, A., Viassone, M., & Serravalle, F. (2017) Value co-creation in the beverage and food industry. *British Food Journal*. <https://doi.org/10.1108/BFJ-02-2017-0119>
- Thomas-Francois, K., Joppe, M., & Von Massow, M. (2017). Improving linkages through a service-oriented local Farmers-Hotel supply Chain—An explanatory case in Grenada. *Tourism Planning & Development*, 15(4), 398-418. <https://doi.org/10.1080/21568316.2017.1338200>
- Tjhi, M., & Mulyani. (2019). Designing Value Co-Creation Process in Organic Food Product Distribution System. *International Journal of Engineering and Advanced Technology*, 9(1), 3815-3820. DOI: 10.35940/ijeat.A9834.109119
- Utami, H.N., Alamanos, E., & Kuznesof, S. (2021) 'A social justice logic': how digital commerce enables value co-creation at the bottom of the pyramid, *Journal of Marketing Management*, 37:9-10, 816-855

- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1-17.
- Vargo, S. L., & Lusch, R. F. (2008). Service-Dominant Logic: Continuing The Evolution. *Journal of The Academy of Marketing Science*, 36, 1-10.
- Wieland, H., Polese, F., Vargo, S., Lusch, R. (2012), "Toward a Service (Eco)Systems Perspective on Value Creation". *International Journal of Service Science, Management, Engineering and Technology*, 3(3), 12-24.