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Conceptual fragmentation in marketing science: insights from the value co-creation literature

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Abstract

Purpose – The concept of value co-creation occupies a central role in marketing and service research, yet its usage has often been fragmented and inconsistent. This study aims to examine value co-creation as a case of conceptual fragmentation, offering a large-scale reassessment of its conceptual development.

Design/methodology/approach – Analyzing 2,960 articles published between 2004 and 2019, the authors conduct an integrative literature review and statistical analysis. The authors introduce analytical comprehensiveness (AC) as a systematic measure to evaluate how thoroughly the foundational dimensions of value co-creation – value proposition and value-in-use – are engaged.

Findings – The longitudinal analysis reveals both intuitive and counterintuitive patterns. While integration has generally increased, trajectories differ across article positioning, journal types and rankings. These findings indicate that integration is not simply a function of time but reflects mechanisms of scholarly learning, diffusion and institutionalization.

Research limitations/implications – To the best of the authors' knowledge, this is the first quantified, large-scale review of value co-creation, clarifying its foundational dimensions and advancing conceptual fragmentation as an actionable research construct. It opens pathways for future work on conceptual stewardship and cumulative knowledge building.

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Practical implications – This study enhances practical understanding by refining value co-creation into actionable dimensions – value proposition and value-in-use – that can guide managerial application.

Originality/value – This paper contributes by elaborating conceptual fragmentation as a central phenomenon in marketing, introducing AC as a replicable measure, showing its contingency on structural contexts and refining value co-creation's conceptual core through the first large-scale empirical analysis of its fragmentation dynamics.

Keywords service-dominant logic, value co-creation, analytical comprehensiveness, conceptual fragmentation, conceptual clarity, value-in-use, value proposition, service, customer value

Paper type Research paper

1. Introduction

Robust theoretical constructs are essential for the cumulative advancement of scientific knowledge (Bacharach, 1989; Whetten, 1989). In marketing theory, this advancement depends on conceptual clarity, systematic integration and theoretical coherence (MacKenzie, 2003; MacInnis, 2011; Hunt, 1991; Bagozzi and Fornell, 1982). Yet, the discipline increasingly faces conceptual fragmentation: when core constructs are used inconsistently, partially or without sufficient conceptual integration (Taylor and Vickers, 2017; Gough, 2022). Often subtle and gradual, such fragmentation can go unnoticed as constructs initially rooted in coherent definitions evolve into umbrella terms encompassing diverse and sometimes contradictory meanings (Hirsch and Levin, 1999). In empirically oriented disciplines like marketing, this erosion of conceptual integration threatens theoretical precision (Hempel, 1952), giving rise to the ambiguity and vagueness that Voss *et al.* (2020) identify as persistent impediments to the field's progress. Conceptual fragmentation may result in isolated pockets of scholarship, fragmented research trajectories and limited capacity to translate academic insights into practice (Biraghi and Gambetti, 2015; Mencarelli and Riviere, 2015; Tronvoll and Edvardsson, 2022). For scholars, reviewers and editors alike, this poses a pressing question:

Q1. How can we determine whether a core concept is being meaningfully advanced or merely referenced in ways that obscure its theoretical origins?

To address this challenge, we examine the case of value co-creation, a widely adopted but variably defined concept, to provide insights into the nature, causes and implications of conceptual fragmentation within marketing science.

The value co-creation concept offers a particularly salient case for examining conceptual fragmentation due to its foundational role in the evolution of marketing theory. As a core concept within Service-Dominant Logic (Vargo and Lusch, 2016), value co-creation has significantly shaped the discipline by enabling theoretical development across micro-, meso- and macrolevels of analysis (Brodie *et al.*, 2019). It has informed key research streams, including actor engagement (Jaakkola and Alexander, 2014; Viglia *et al.*, 2023) and service ecosystems (Vargo and Lusch, 2017; Akaka *et al.*, 2025), underscoring its broad applicability and integrative potential. This conceptual relevance derives from its inherently multidimensional nature, which bridges the formulation of value propositions with the contextual determination of value-in-use. However, despite its holistic foundation, value co-creation is often engaged selectively or ambiguously, undermining its integrative character. This has contributed to the proliferation of related but theoretically divergent perspectives, such as Service Logic (Grönroos, 2011; Grönroos and Voima, 2013) and Customer-Dominant Logic (Heinonen and Strandvik, 2015). Although these approaches offer valuable insights, they also reflect and reinforce the conceptual fragmentation that characterizes the discourse on value co-creation, complicating theoretical coherence and impeding cumulative scientific progress (Ramaswamy and Ozcan, 2018).

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Despite increasing recognition of conceptual fragmentation as a barrier to cumulative knowledge development, there remains a lack of systematic, empirical studies that both diagnose its dynamics and propose operationalizable solutions within marketing theory. By building on the case of value co-creation, this study conducts a statistical analysis of the academic literature to assess the extent of conceptual fragmentation, its evolution and its current status within scholarly discourse. Thus, we also examine the structural conditions within the field that may shape or sustain this fragmentation. The study addresses the following research questions:

RQ1. How has the conceptual fragmentation of value co-creation evolved since Vargo and Lusch's seminal article?

RQ2. Does assigning a central versus marginal theoretical role to value co-creation influence the degree to which its dimensions are integrated or fragmented?

RQ3. How do journal-level factors, such as academic ranking (*RQ3a*) and thematic specialization on co-creation (*RQ3b*), affect the likelihood of conceptual fragmentation?

RQ4. Does the institutional prestige of an article's corresponding author predict the use of a more fragmented versus integrative conceptual treatment?

These research questions position conceptual fragmentation not merely as a byproduct of confusion or disciplinary divergence, but as a phenomenon shaped by more subtle forces embedded within scholarly practices. Accordingly, we adopt a holistic perspective on the value co-creation construct, examining how it functions in the theoretical positioning of individual studies. Particular attention is paid to the influence of publication outlets and the institutional affiliations of contributing authors, factors that may implicitly shape how concepts are framed, interpreted and applied. Prior research has offered limited insight into whether superficial or illustrative uses of core concepts, often described as theory-lite or peripheral citation practices (Gilbert, 1977; Teplitskiy *et al.*, 2022), are more likely to fuel conceptual fragmentation than instances in which a concept is a central theoretical anchor. The role of journals remains similarly underexplored. While prestigious outlets often favor mono-disciplinary contributions that support conceptual integration (Rafols *et al.*, 2012), they may paradoxically exacerbate fragmentation by prioritizing novelty over analytical precision (Dougherty and Horne, 2022). However, specialized journals may foster conceptual coherence by demanding more rigorous theoretical engagement. Authorial background also plays a potentially significant role: Scholars from elite institutions may reinforce dominant conceptualizations through adherence to established standards (Hazelkorn, 2015; Mizruchi and Fein, 1999) or contribute to fragmentation by promoting innovative yet ambiguous conceptualizations that disseminate more widely due to institutional prestige (Morgan *et al.*, 2018). Advancing our understanding of conceptual fragmentation in marketing thus requires attention to these structural influences. Identifying the institutional and publication-related drivers of fragmentation is a critical step for scholars, reviewers and editors aiming to manage and ultimately mitigate its adverse effects on theoretical coherence and scientific progress.

To empirically examine conceptual fragmentation in the context of value co-creation, we introduce the construct of analytical comprehensiveness (AC), a measure of the consistency and depth with which the value co-creation concept is applied across scholarly work. AC serves as an operational proxy for conceptual fragmentation: Higher levels of AC correspond to lower degrees of fragmentation. By systematically applying this measure to a data set of 2,960 peer-reviewed articles on value co-creation we answer the research questions.

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Against this backdrop, our study deepens the understanding of conceptual fragmentation in marketing science and offers a critical reassessment of the conceptual development of value co-creation (Taylor and Vickers, 2017; Voss *et al.*, 2020). Our findings show that while value co-creation initially suffered from divergent interpretations after its diffusion into Service-Dominant Logic (SDL) and adjacent frameworks, sustained scholarly engagement has led to increasing convergence and theoretical stabilization (see also Vargo *et al.*, 2023). Building on these insights, we make four contributions. First, we introduce and elaborate the notion of conceptual fragmentation (Taylor and Vickers, 2017; Gough, 2022) in marketing science. Second, we develop AC as a structured, replicable and scalable measure for evaluating how thoroughly a concept's foundational dimensions are engaged in scholarly work. Third, we demonstrate that fragmentation is contingent on structural contexts and therefore actionable, reflecting processes of scholarly learning, diffusion and institutionalization. From this perspective, we propose practices of conceptual stewardship aimed at preventing fragmentation and strengthening conditions for cumulative knowledge building in marketing science. Fourth, by using value co-creation as a substantive case, we provide the first large-scale, systematic analysis of fragmentation processes within academic discourse, particularly in marketing research. By fine-graining value co-creation into its two foundational dimensions, value proposition and value-in-use and systematically tracing their deployment in scholarly literature, we offer a more precise and empirically grounded conceptualization for future research. In doing so, we complement earlier reviews of value co-creation and SDL (e.g. Galvagno and Dalli, 2014; Pohlmann and Kaartemo, 2017; Alves *et al.*, 2016; Voorberg *et al.*, 2015; Rashid *et al.*, 2019), which primarily mapped broader thematic areas rather than examining the construct's internal structure and usage patterns.

2. Theoretical background

2.1 Dimensions of value co-creation

Although value co-creation has become a central concept in contemporary marketing thought, introduced by Vargo and Lusch (2004) within the broader framework of Service-Dominant Logic, its theoretical consolidation remains incomplete and contested. The literature presents a wide array of interpretations, frameworks and applications, raising questions about the coherence and consistency of its use. Several underlying reasons have contributed to this critique. First, the notion of value and its creation remains rather general within the SDL framework (Ranjan and Read, 2016). Second, the orientation toward value co-creation significantly diverges in SDL from traditional service and relationship marketing perspectives on value (Ravald and Grönroos, 1996; Grönroos, 2011) and related research on co-creation (Prahalad and Ramaswamy, 2004), collaborative value creation (Norman and Ramírez, 1993) and value co-production (Ramirez, 1999). These alternative perspectives have introduced differing assumptions and emphases, raising questions about the conceptual boundaries and internal coherence of value co-creation as it has developed across scholarly domains (Grönroos, 2008). Third, the literature has not extensively concentrated on the concept's constructive development beyond Vargo and Lusch (e.g. 2008, 2016) but often features criticisms without actively engaging in formulating compatible definitions, attempts at integration or synthesis (Hietanen *et al.*, 2018; Campbell *et al.*, 2013; Horbach *et al.*, 2021) or descriptively applying the concept, contributing to an early "zooming-out" effect and "blackboxification" (Leroy *et al.*, 2013). Overall, this implies that value co-creation is primarily a macro concept (Felin and Foss, 2005) with limited analytical applicability (Storbacka *et al.*, 2016).

While SDL proposes a high-level abstract orientation intended as the foundation for a general theory of markets and value creation (Vargo, 2011; Vargoe *et al.*, 2017), its semantic

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framing, particularly the central positioning of "service" as the basis of all exchange (Vargo and Lusch, 2004), has closely tied it to the established lexicon and research traditions of service marketing. While conceptually deliberate, this association may have shaped the reception and application of value co-creation in ways that reflect the strengths and constraints of its original disciplinary context. Despite the original focus of service marketing on services as a category of offering (goods/services) (Norman and Ramírez, 1993), transforming service marketing research into perspectives on value creation began well before the introduction of SDL (Ravald and Grönroos, 1996; Grönroos, 2012). Many key constituents of SDL, such as value-in-use, service exchange and the interlinked roles of customers and providers in value creation, were developed and extensively discussed within the service marketing streams of research (Grönroos, 2008; Firat and Dholakia, 2006). Against this backdrop, the service marketing perspective is a point of departure and framing for the academic audience to interpret SDL and its ideas on value co-creation in practice (De Solla Price, 1970). Consequently, while the notion of value co-creation resonates with the service marketing perspective, it also challenges some of the ideas presented within it. For instance, Service Logic (SL) (Grönroos, 2011; Grönroos and Voima, 2013) and Customer-Dominant Logic (CDL) (Heinonen and Strandvik, 2015) offer alternative perspectives that have emerged within the service marketing tradition, positioning themselves in critical dialogue with SDL.

In Table 1, we propose a classification highlighting the commonalities and distinctions among SL, CDL and SDL concerning their focus on the components of value co-creation, specifically the *value proposition* and *value-in-use*. These components constitute one classifying dimension in Table 1, while another dimension involves *activities* or *systems* orientation. The value proposition – value-in-use dimension is inherent in discussions regarding value co-creation (Vargo and Lusch, 2016; Grönroos and Voima, 2013). However, the dimension of activities – systems was less explicit in prior research. Altogether, these serve as a lens to comprehend the dynamic nature of value co-creation, encompassing deliberate actions by service process actors and a broader process wherein value emerges.

As shown in Table 1, the perspectives of SL and CDL are grounded in the service process, particularly in the interactive co-production of the value proposition (Grönroos and Voima,

Table 1. Activities – systems and value proposition – value-in-use dimensions for classifying perspectives on value co-creation

Idea of value co-creation	Value proposition orientation	Value-in-use orientation
Activities orientation: *the value proposition and value-in-use are connected to the activities through which a service provider and a customer interact directly, thereby giving rise to value co-creation (e.g. SL, CDL)*	Value co-creation primarily involves co-production, a direct interaction between provider and customer to produce the service (value proposition), which in turn results in the customer's perceived value-in-use	The provider facilitates the customer's value determination by potentially involving them in the service process and incorporating features into the service that are designed to address their needs
Systems orientation: *the value proposition and value-in-use co-emerge through direct and indirect interactions within a service system, thereby giving rise to value co-creation (e.g. SDL)*	The value proposition serves as an input for the beneficiary's use processes and may be co-created through direct and indirect interaction between various actors in a service system over time	The customer determines value-in-use through their experiences of the service, while the value proposition provides one input into this process

Source(s): Authors' own work

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2013). SDL, by contrast, emphasizes a more systemic view of value co-creation (see Jaakkola *et al.*, 2024). While Table 1 acknowledges these differences, it also highlights that SDL, SL and CDL all incorporate the value proposition and value determination within the broader notion of value co-creation. In this sense, these elements are more unifying than distinctive. The key difference lies in how the perspectives synthesize value proposition and value determination, whether through direct interaction or indirectly at the systems level.

We argue that the limited analytical treatment of action in value co-creation research has contributed to persistent ambiguities. Scholars within the service marketing paradigm, for instance, have criticized SDL for its perceived lack of agency, raising questions such as: Who creates and co-creates value? Where and when is value created? What role does value play in the service process? (Grönroos and Voima, 2013; Heinonen and Strandvik, 2015). However, as Table 1 indicates, SDL does not hinge on intentional activities; instead, it deliberately leaves such questions unanswered. In this framing, SDL synthesizes value proposition and value-in-use by portraying value co-creation as an emergent, relational process. This abstraction is intentional, as SDL is designed to apply across levels of aggregation (Vargo and Lusch, 2016; Jaakkola *et al.*, 2024). In contrast, SL and CDL adopt a more zoomed-in view (Leroy *et al.*, 2013), seeking to identify and interconnect the microfoundations of value co-creation (see Storbacka *et al.*, 2016). The next section introduces our analytical framework, which opens up the dimensions of value proposition and value-in-use and addresses the ambiguities that remain in current conceptualizations.

2.2 The measure of analytical comprehensiveness for the study of conceptual fragmentation

Building on the previous section, Figure 1 presents a framework that decomposes value co-creation into two core components: the co-creation of value propositions (Frow and Payne, 2011; Quero and Ventura, 2019) and the determination of value-in-use (Ballantyne and Varey, 2006; Sweeney *et al.*, 2018). We refer to the scholarly use of these dimensions as translations, identifying three distinct types: *collaboration*, *value determination and synthesizing*. We also acknowledge that some studies engage with value co-creation in ways that do not clearly align with any of these translations, falling into the category of *unclear*. Drawing on these distinctions, we introduce the concept of AC to measure how coherently

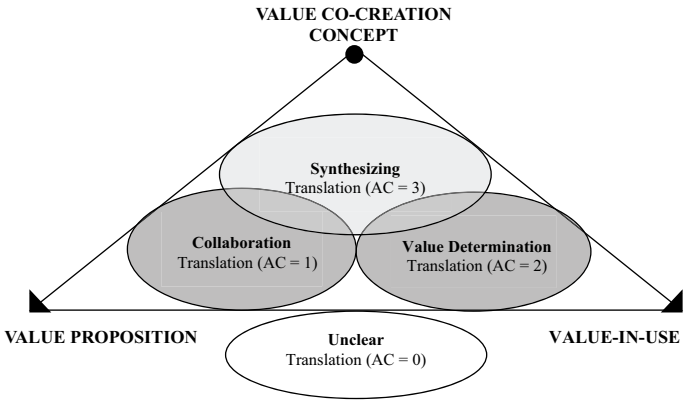

Figure 1. The measure of AC for the study of conceptual fragmentation
Source: Authors' own work

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the value co-creation concept is applied. AC serves to operationalize the idea of conceptual fragmentation: The greater the AC, the lower the degree of conceptual fragmentation.

Conceptual fragmentation in scholarly discussions of value co-creation can be understood through how scholars translate and apply its core dimensions (Taylor and Vickers, 2017; Gough, 2022). At one end of the spectrum, minimal conceptual fragmentation is associated with the synthesizing translation. In this translation, the use of value co-creation explicitly recognizes and integrates both key dimensions: the collaborative processes involved in creating value propositions and the subsequent determination of value-in-use. As this translation uses the concept in its entirety, no conceptual fragmentation exists and the level of AC (AC = 3) is at its highest. Here, collaborative actions may refer to direct interaction (Grönroos, 2011) and indirect systemic collaboration (Jaakkola *et al.*, 2024) as defined in Table 1. Similarly, determining value-in-use may refer to a customer's or any other actor's perception of their own value creation (Ballantyne and Varey, 2006). As long as value proposition and value determination are explicitly addressed, this translation represents the most comprehensive application of value co-creation, regardless of whether it is situated within SDL, SL or CDL perspectives (Vargo and Lusch, 2008; Grönroos and Voima, 2013; Heinonen and Strandvik, 2015).

In the right corner, a moderate form of conceptual fragmentation arises through the value determination translation. In this translation, scholars exclusively emphasize actors' interpretations and perceptions related to value-in-use (Alves *et al.*, 2016; Ranjan and Read, 2016). Although neglecting collaborative activities for value proposition, this translation still resonates with the core principle of SDL, SL and CDL: that value realization ultimately resides with the beneficiary (Vargo and Lusch, 2016; Grönroos and Voima, 2013; Heinonen and Strandvik, 2015). All three perspectives emphasize the phenomenological nature of value and the beneficiary's active role in realizing a value proposition through their own actions. As Kowalkowski (2011, p. 279) argues, value-in-use constitutes "the most relevant concept" for understanding value creation. This perspective aligns with the foundational premises of SDL: that value is co-created and realized through use, not embedded in offerings (Vargo and Lusch, 2004). Thus, the AC of this translation is relatively good (AC = 2). Given the central role of value-in-use in contemporary value discourse, the value determination translation is less fragmented than the collaboration translation. While value propositions may act as invitations to co-create value (Frow *et al.*, 2014), the study of value-in-use offers a more rigorous and context-sensitive understanding of value co-creation.

On the left corner, a more pronounced form of fragmentation emerges through the collaboration translation, in which discussions exclusively focus on the collaborative actions involved in formulating value propositions, neglecting the dimension of value-in-use (Alves *et al.*, 2016; Lusch *et al.*, 2007). This translation diverges from the integrative stance, which regards collaboration in producing value proposition as only a potential component on a route to value-in-use; therefore, its AC is low (AC = 1). Some of the one-sided consideration may stem from the controversy regarding the original concept of "value co-production" (Vargo and Lusch, 2004), which interpreted value co-creation as synonymous with service co-production. Previous research indicates a skew in the literature toward the collaboration translation of the term (see Ranjan and Read, 2016), portraying value co-creation as a straightforward new term for joint activities in service provision. As discussed, this has also introduced confusion on the differences and similarities between SDL and other perspectives like SL and CDL. By emphasizing only the co-production of value proposition, this selective focus increases fragmentation and can lead readers and scholars to conceptual confusion, undermining cumulative theoretical development. Therefore, we view the collaboration translation as offering a more partial and potentially fragmented interpretation of value co-

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creation, particularly when it overlooks the evaluative dimension of value-in-use that is central to SDL, SL and CDL alike.

The most extreme fragmentation occurs with "unclear" translation, in which the discussion of value co-creation lacks explicit reference to either of its core dimensions. In this translation, the concept has not been used analytically, meaning the AC is nonexistent (AC = 0). These studies result from the lack of a common understanding among diverse perspectives on value co-creation and the lack of explicit definitions and nuanced analyses for operationalizing the concept and explicating its microfoundations (Ranjan and Read, 2016). This has resulted in a too-early zooming-out effect (Leroy *et al.*, 2013) and a metaphorical use of the concept (Grönroos, 2012) manifested in the "unclear" translation. Such ambiguous or superficial applications amplify fragmentation by exacerbating conceptual ambiguity, diminishing theoretical clarity and severely impairing cumulative scholarly contributions. This framework and the measure of AC are applied to the scholarly literature through an integrative literature review; the following section outlines this methodology.

3. Method

3.1 Integrative literature review process

To examine how the value co-creation concept has been applied in academic literature, we conducted an integrative literature review guided by established frameworks for conceptual analysis and theory development in marketing research (MacInnis, 2011; Palmatier *et al.*2018). This approach allowed us to capture a broad and diverse body of research on value co-creation while ensuring transparency and replicability in identifying how the concept has been used across contexts. Importantly, we went beyond identifying whether value co-creation was mentioned or cited. Instead, our interest lay in evaluating how rigorously and coherently it was used, specifically, whether the scholarly discourse surrounding value co-creation retained or drifted from its foundational analytical dimensions:

- collaboration on value propositions; and
- the determination of value-in-use.

To capture this, we developed the concept of AC that provided a structured measure and a coding scheme to evaluate how much individual studies engage with one, both, or neither of these dimensions. AC offers a way to move from anecdotal or impressionistic assessments of concept usage toward a more transparent and comparative measure. We regard articles that integrate value proposition and value determination dimensions as exhibiting a higher level of AC, closely aligning with the integrative intent of the value co-creation concept as originally conceived. In contrast, articles that address only one dimension or invoke the term descriptively without specifying either exhibit lower levels of AC, indicating a more fragmented conceptual application. Figure 1 describes the AC measure in more detail.

Using AC as a metric allows us to move beyond surface-level citation counts or keyword tracking and instead assess the depth and structure of conceptual fragmentation as it appears in an article's actual content. It also enables comparisons over time and across publication contexts, revealing patterns in how fragmentation emerges and what might influence it. To extend this analysis, we used regression models following the logic of Mizruchi and Fein's (1999) study on isomorphism theory in organizational research. Their approach demonstrated how core theoretical distinctions, even when widely cited, can erode through selective or inconsistent usage. Applying this logic, we examined how AC scores vary in relation to structural factors such as theoretical positioning, journal ranking, thematic specialization and institutional affiliation. By doing so, we could identify not only whether conceptual fragmentation occurs in the value co-creation literature but how and under what

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conditions it tends to emerge or be mitigated. As a result, AC provides a means of quantifying a problem often discussed only qualitatively: the erosion of conceptual coherence in the diffusion of complex constructs. It offers a scalable method for mapping conceptual fragmentation as a field-level phenomenon and reveals how structural forces shape conceptual use over time.

Our literature review was conducted iteratively, considering the numerous variations and interpretations of the terminology of value co-creation and co-production. Initially contemplating the use of more automated text mining or analysis software such as Leximancer (Wilden *et al.*, 2017), we opted for a human-centric, multicoder approach (Lu and Shulman, 2008) due to the iterative and evolutionary nature of the review and the integrative purpose of our study (MacInnis, 2011). The timeframe of the integrative review had its natural starting point in the publication of the original work by Vargo and Lusch (2004). To observe the evolution cycle of the value co-creation concept, from its emergence through fragmentation to integration, ending the review in 2019 provided us with a comprehensive view of a cycle in the concept's development offering a sufficient account for studying conceptual fragmentation. Table 2 presents the review protocol, outlining the steps and decisions in selecting and analyzing literature for this study, and the division of work between the authors and the student coders (Kitchenham *et al.*, 2011; Post *et al.*, 2020). All student coders were either graduates or close to graduation in marketing and had taken a course on value co-creation during their studies or written their theses on SDL-related topics. Prior to commencing the coding, they also received extensive training. Following O'Connor and Joffe's (2020, p. 6) guidelines that "if the analysis involves coding more 'latent' features of the data, which require greater degrees of interpretation, the coder may need training in relevant theoretical concepts," this training included strengthening their theoretical understanding of value co-creation discourses, key study concepts and context-specific interpretations. In addition, the authors provided detailed practical instructions on the coding protocol (e.g. which Excel templates to use and how to complete them). Throughout the coding process, the student coders were able to consult the authors as needed, for example, when they encountered conceptual uncertainties or procedural questions. Such consultations did occur, especially early in the process, and typically involved short discussions with the lead author to clarify coding procedures or resolve interpretive ambiguities. As the coders gained experience, the need for consultations declined, consistent with observations on coder learning curves in qualitative analysis (cf. Halpin, 2024).

As Table 2 outlines, our article search followed a multistep process. Initially, in Step 1, the lead author used the ISI Web of Science to identify articles citing key SDL references by Vargo and Lusch (2004, 2008, 2016). This search strategy rests on the assumption that articles engaging substantively with value co-creation, particularly within the SDL tradition, but also across marketing science more broadly, are likely to reference at least one of these foundational texts. In Step 2, the lead author conducted a database search to identify articles containing the words Vargo/Lusch anywhere in the article to supplement this. This database search aimed to extend the ISI Web of Science search. Due to the relatively uncommon surnames of Vargo and Lusch, the results from the database search were manageable. Although this search retrieved some articles outside the study focus (e.g. early work by Robert Lusch on channel research; research by scholars other than Stephen L. Vargo and Robert Lusch named Vargo and/or Lusch) also brought to light eligible articles that the initial ISI Web of Science search did not capture.

Next, articles were included or excluded from the data based on the criteria in Steps 3–4 by the lead author, as Table 2 outlined, and a student coder who the lead author had thoroughly trained for the task retrieved the articles in Step 5. To maintain the manageability

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Table 2. Overview of the review process

Step	Description	Activity	Actor	Additional information
1 Summer 2020	Search in ISI Web of Science	Search for articles citing Vargo and Lusch (2004) OR (2008) OR (2016)	Lead author	3,927 unique hits
2	Complementary search in the five main academic databases	Search for articles that contain the WORD "Vargo" OR "Lusch" ANYWHERE in the article from ABI/INFORM Complete (ProQuest), Business Source Complete (EBSCO), Emerald, SAGE Journals, and ScienceDirect (Elsevier) using the delimiters described in Step 3 where possible	Lead author	Additional literature searches to ensure the review's comprehensiveness 7,755 hits altogether
3	Data inclusion/exclusion 1	Exclusion of duplicates Exclusion of conference articles Exclusion of editorials Exclusion of book chapters Exclusion of articles in languages other than English	Lead author	4,481 articles remain (exclusion of 3,274 articles in Step 3)
4	Data inclusion/exclusion 2	Exclusion of non-SDL articles exclusion of articles by Vargo and/or Lusch	Lead author	Articles referring to, e.g. Lusch's previous, non-SDL-oriented research and articles in which Lusch or Vargo refer to other Lusch and/or Vargo than the SDL originators 4,371 articles remain (exclusion of 110 articles in Step 4)
5 Year 2021	Document retrieval	Retrieval of PDFs of the articles for screening	One student coder	
6	Data screening	Screening the articles to exclude those that do not contain instances of text referring to value co-creation	Authors and one student coder	Semantic expressions of the terms that manifest value co-creation, e.g. value, creation, co-production, value-in-use in their different forms 2,960 articles for analysis (exclusion of 1,411 articles in Step 6)
7	Constructing the review dataset	Creation of a Microsoft Excel document containing the article information: author(s), year of publication, article title, journal, journal AJG ranking, corresponding author affiliation, article citations (total/yearly)	Authors and one student coder	Academic Journal Guide (AJG) used to indicate the development of dominant discourses
8 Year 2022	Creation of the coding scheme for the AC of value co-creation use (AC)	Argumentation of the rules according to which the article falls into any of the AC categories defined in Figure 1	Authors	AC of value co-creation use: unclear collaboration on value propositions Determination of value-in-use Synthesis of collaboration on value propositions and Determination of value-in-use

(*continued*)

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Table 2. Continued

Step	Description	Activity	Actor	Additional information
9	Test round of data coding	Coding of a random sample of 200 articles by two coders and comparison of their results (including articles from different journals, years, authors and topics)	Lead author and one student coder	Validation of the AC coding reliability and identification of a need to code the role of value co-creation in the articles
10	Creation of the coding scheme for the role of value co-creation in the articles	Argumentation of the rules according to which the article falls into any of the role categories defined based on Step 9	Authors	Role of value co-creation in the article: Central focus Builds perspective Only mentioned
11 Year 2023	First round of data coding for the AC and role of value co-creation	Manual search for instances of text in the articles that feature elements of value co-creation in its broad sense as comprising "service"; "co-production"; "interaction"; "value proposition"; "value"; "emergence"; "determination"; and "value-in-use" in their different variations	Six student coders and lead author	Manually one-by-one for each article by two independent coders, engaging six coders Lead author control checks of student coder work
12	Development of second round coding scheme for additional coding	Coding for the appearance of value co-creation in different sections of the article, definitions given, number of paragraphs devoted to value co-creation in the article, type of article (qualitative/quantitative/conceptual)	Six student coders and lead author	Obtain elements to evaluate the conducted coding of AC and role of value co-creation Lead author control checks of student coder work
13	Mismatch and inter-coder reliability analysis	Mismatch analysis to compare the coding results of the coders and calculation of inter-coder reliability	Authors	Identification of high inter-coder reliability Assessment of the nature of the mismatches
14	Third coder intervention for resolving conflicting codes between the coders	The third coder compares the coding by a pair of coders, identifies inconsistencies, resolves inconsistencies and then makes the final coding decision	Lead author and six student coders	Assurance of reliability of the coding process and conclusion of the final coding dataset for analysis 2,960 articles analyzed
15 Year 2024	Reporting the results		Authors	

Source(s): Authors' own work

of the review regarding scope and size, the focus was solely on peer-reviewed journal articles, as these are considered to reflect validated knowledge (Podsakoff *et al.*, 2005). To emphasize the diffusion and application of the value co-creation concept beyond the work of its seminal authors and trace the formal and informal social construction of the concept within the broader discourse, the lead author excluded articles authored or coauthored by Stephen L. Vargo and/or Robert Lusch. At this stage, all duplicate articles were eliminated.

In Step 6, the rest of the author team stepped in with the student coder to manually screen each article to determine whether it actually discussed value co-creation and was eligible for inclusion in the final review data set formulated in Step 7. At this stage, Mizruchi and Fein's (1999) approach was also adopted to assess the authors' impact in the field based on the ranking of the corresponding author's university. To focus the analysis on the most central person in the article authorship team, the corresponding author was selected for this parameter. In addition, the rank of the journal in which the article was published was evaluated, relying on rankings by the Academic Journal Guide (AJG) of the British Chartered Association of Business School (CABS). At this stage, the number of citations the article had obtained was included.

The framework in Figure 1, outlining the AC of the value co-creation discussion in a given article, was the foundation for the coding scheme used by the author team in Step 8 (see Holton, 2007). The codes used to assess the AC of value co-creation were Unclear (the dimensions of value co-creation concepts were not considered or discussed in the article); Collaboration on value propositions (focus on value co-production); Determination of value-in-use (focus on value determination); and Synthesis of Collaboration on value propositions and Determination of value-in-use (focus on value co-production and value determination) [1]. In our coding framework, studies referencing only value propositions are scored lower on AC (AC = 1) because they capture only the promissory dimension of value co-creation, omitting the evaluative aspect that defines co-created value in use. Conversely, studies addressing value-in-use, either alone (AC = 2) or in combination with value propositions, demonstrate greater conceptual integration and when both dimensions are explicitly integrated, the study reflects the highest level of AC (AC = 3) and the lowest degree of conceptual fragmentation. A focus on the value proposition remains largely at the level of a supplier-initiated promise (Eggert *et al.*, 2018), a projection of potential benefits rather than an engagement with realized outcomes (Ballantyne *et al.*, 2011). See Figure 1 and the respective discussion for further details of the AC measure.

To validate the coding scheme, it underwent testing in Step 9, where the lead author and one student independently conducted the coding. Following the independent coding of an initial set of randomly selected 200 articles representing the entire 2,960 articles, the author team compared these coded sets. Given the absence of significant discrepancies in the coding (discrepancies addressing e.g. minor differences in emphasis and terms used for the same matter), the reliability of the coding approach was deemed satisfactory, allowing all coders to continue using the same coding process.

In Step 10, the author team thoroughly read each article in the sample encompassing the content's entirety (not solely sections referring to value co-creation) to evaluate the role played by the value co-creation concept within the article's overall structure. We coded the articles using three mutually exclusive codes, depending on the relative centrality of the role of value co-creation in the articles ("Central focus," "Builds perspective" or "Only mentioned"). Table 3 outlines the codes assigned to the roles identified in Step 10.

A potential concern at this stage, was whether to retain articles categorized as "Only mentioned," given that they do not engage with the construct in depth. We deliberately included this category because its prevalence is itself a crucial indicator of fragmentation.

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Table 3. Measurement of theoretical role assigned to "value co-creation" in the articles

Verbal label for the variable value	Quantified variable value	Code in qualitative content analysis	Operationalization
Central theoretical role (/dominant)	2	Central focus	Various sections of the article extensively discuss the value co-creation concept. A detailed discussion and/or elaboration on value co-creation is presented. Value co-creation plays a focal role in the article's theoretical perspective and the study's contributions to the literature
…	1	Builds perspective	Value co-creation plays a relevant role among other concepts in the article's theoretical perspective. The main difference vis-à-vis "central focus" is that value co-creation here is a theoretical concept among others (i.e. not a dominant/central/key concept) in the article's theoretical perspective and/or positioning
Noncentral theoretical role (/marginal)	0	Only mentioned	The article mentions value co-creation as a term, but the concept as such is not discussed or elaborated any further, and its role in building the argument remains peripheral

Source(s): Authors' own work

Articles falling into the lowest AC category reflect superficial or illustrative uses of the concept, often described as theory-lite, or peripheral citation practices (Gilbert, 1977; Teplitskiy *et al.*, 2022). Retaining this category therefore enables us to capture the full spectrum of conceptual use and to observe how fragmentation manifests in practice.

Subsequently, in the coding phase (Steps 11 and 12), the articles in the corpus were randomly assigned to one of five groups, and six trained student coders conducted the coding [2]. Each article group had two dedicated coders, with both coders coding all the articles in that group. Altogether, six coders worked on the coding. No coder belonged to more than one coding pair or group. In the article coding the focus was on paragraphs instead of word counts, because using paragraphs could offer more contextualized depth and explanatory information about the nature of the discussion and the concept use, and also steer away from the potential (distorting) impacts of relative article and paragraph lengths and unmeaningful terminological repetition within articles. During the coding process, student coders worked independently, with the option to consult the lead author as needed. To ensure consistency and coding quality, the lead author conducted regular control checks by meeting individually with each coder, typically once per week depending on their progress. These meetings involved comparing coded segments, discussing differences in interpretation and verifying adherence to the coding protocol. This cross-checking procedure enabled the early identification and correction of discrepancies, which were very few thanks to the structured coder training provided in advance, and contributed to maintaining consistent coding precision across coders. Such practices align with recommended approaches for structured coder training and reliability assurance in qualitative coding (O'Connor and Joffe, 2020). Following the coding by pairs, the author team, who were not involved in the coding process, conducted a mismatch analysis (Step 13). This analysis demonstrated high intercoder reliability (percentage agreement, Miles and Huberman, 1994) across the article groups and

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pairs of coders (Group/Pair 1: 84.9%; Group/Pair 2: 90.0%; Group/Pair 3: 88.4%; Group/Pair 4: 87.7%; Group/Pair 5: 87.2%), with an average intercoder reliability of 87.0% (percentage agreement). In Step 14, the lead author recoded the mismatched articles to determine the final code. The trends in the mismatches were monitored, and the main cause of disagreement arose from situations where an article could plausibly be categorized into two different, neighboring codes. In particular, coders sometimes hesitated when deciding whether the "Role of value co-creation in the article" was best classified as Central focus or Builds perspective. Importantly, mismatches never occurred at opposite ends of the framework (e.g. Central focus vs Only mentioned). In these cases of hesitation, the lead author reassessed the article and made the final coding decision. At the same time, the codes themselves were checked for potential overlap whenever disagreements occurred, but no systematic patterns were detected that would have required redefining the codes. The final review data set, comprising 2,960 articles, forms the basis for our analysis and reporting (Step 15 by the author team).

3.2 Measures for statistical analysis

3.2.1 Main dependent variable. The primary dependent or outcome variable addressed in the research questions (*RQ1–RQ4*) is the AC of using "value co-creation" within an article. The measurement and coding of this dependent variable followed the scheme in Figure 1, referring to various degrees of AC as a proxy.

3.2.2 Main predictor variables. The predictor variable addressed in *RQ2* was *the theoretical* role assigned to "value co-creation" in each article. We measured the theoretical role using the coding scheme in Table 3. Table 4 provides a check of the face validity of the coding and measurement scheme, indicating the role of value co-creation devoted in articles coded as "0 = Only mentioned" vs "1 = Builds perspective" vs "2 = Central focus." The table reports the average number of paragraphs devoted to value co-creation, the proportion of articles providing a definition, and the proportion of articles mentioning value co-creation in different sections of the article. In this regard, articles coded as "2 = Central focus" discussed value co-creation with greater extensiveness than those coded as "1 = Builds perspective," while the latter discussed value co-creation more comprehensively than articles coded as "0 = Only mentions." All differences were statistically significant through chi-square tests (or *t*-tests for mean values).

Table 4. Validity check of the measurement of the theoretical role assigned to value co-creation

Value co-creation presence in article	0 = Only mentioned	1 = Builds perspective	2 = Central focus
No. of paragraphs discussing value co-creation (mean)	2.5	9.8	29.3
Defines value co-creation	7.4%	40.6%	77.5%
No. of appearances of value co-creation within article (mean)	1.6	3.5	6.7
Refers to value co-creation in Title	0.3%	5.0%	72.9%
Refers to value co-creation in Keywords	1.8%	20.2%	73.6%
Refers to value co-creation in Abstract	4.7%	35.2%	89.1%
Refers to value co-creation in Introduction	31.5%	65.0%	98.2%
Refers to value co-creation in Theory	67.4%	92.4%	98.5%
Refers to value co-creation in Methods	3.4%	17.3%	63.5%
Refers to value co-creation in Results	13.0%	36.2%	75.3%
Refers to value co-creation in Discussion and Conclusions	42.1%	80.3%	98.2%

Source(s): Authors' own work

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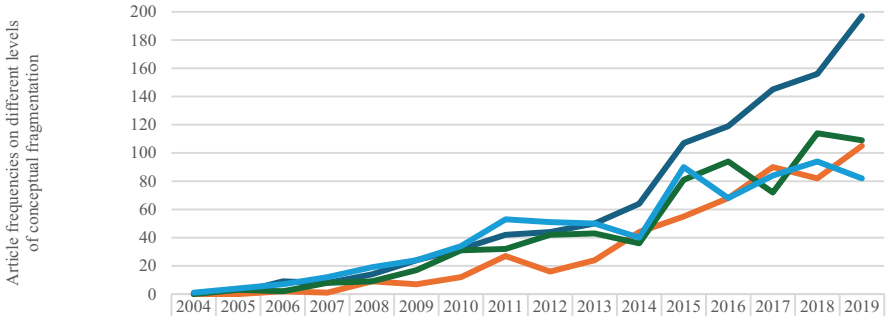
For *RQ3*, we measured the (a) *journal's ranking* and the (b) *the content focus on the co-creation of the journal*. Regarding (a), we used the AJG from the Chartered Association for Business Schools (CABS), 2021. AJG ranks 1,703 journals that researchers commonly use in business schools worldwide. The ranking categorizes each journal into one of five levels based on its reputation: AJG1, AJG2, AJG3, AJG4 or AJG4*. For our (a) journal ranking variable, we coded journals not appearing in AJG with the value "0," while journals ranked as AJG1/2/3/4 were assigned values "1"/"2"/"3"/"4," and AJG4* was given the value "5." Regarding (b), the value co-creation content focus of the journal, we created a categorical, median-split variable. We ranked all journals in the data by the number of articles in our sample; half the articles were published in 36 journals. Thus, we designated the variable *value co-creation content-focused journal* as "1" for articles in these 36 journals and "0" for articles in the remaining 598 journals. Appendix contains further details.

In *RQ4*, we explored how the authors' university affiliations predict the AC. For this investigation, we created the variable *corresponding to the author's reputable institution* using the Top 100 Business School Research Rankings by the University of Dallas (UTDallas, 2021). We assigned a value of "1" to this variable when the article's corresponding author was affiliated with one of the Top 100-ranked schools in the year of the article's publication. In all other instances, the article was assigned a value of "0." In addition to the primary predictor variables mentioned above, we included covariates in our analysis. These covariates comprised the publication year of the article and whether the article's journal fell within the marketing and/or service domain.

4. Results

4.1 Descriptive statistics and correlations

4.1.1 Analytical comprehensiveness over time. Figure 2 illustrates the frequencies of articles corresponding to different levels of AC of value co-creation over time, while Figure 3 presents the relative proportions of articles across various levels of AC. The data in Figure 2 indicates a substantial growth in the overall number of articles, particularly following the publication of Vargo and Lusch's original article in 2004. The annual count of articles escalated to 109 by 2010 and surged to 493 by 2019. Examining Figure 3, it becomes evident



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
3: Synthesis	0	1	9	8	14	24	32	42	44	50	64	107	119	145	156	197
2: Value-in-use	0	0	2	1	9	7	12	27	16	24	44	55	68	90	82	105
1: Value prop.	0	3	2	8	9	17	31	32	42	43	36	81	94	72	114	109
0: Unclear	1	4	7	12	19	24	34	53	51	50	40	90	68	84	94	82

Figure 2. Frequencies of articles on different levels of analytical comprehensiveness
Source: Authors' own work

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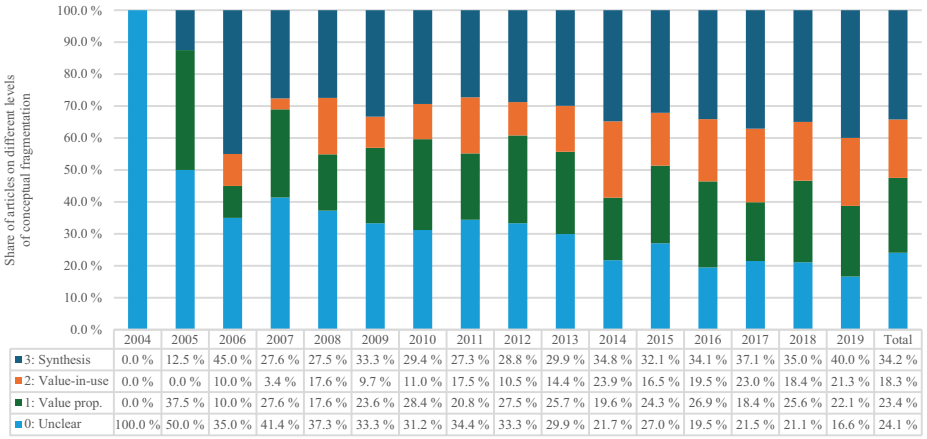

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
3: Synthesis	0.0 %	12.5 %	45.0 %	27.6 %	27.5 %	33.3 %	29.4 %	27.3 %	28.8 %	29.9 %	34.8 %	32.1 %	34.1 %	37.1 %	35.0 %	40.0 %	34.2 %
2: Value-in-use	0.0 %	0.0 %	10.0 %	3.4 %	17.6 %	9.7 %	11.0 %	17.5 %	10.5 %	14.4 %	23.9 %	16.5 %	19.5 %	23.0 %	18.4 %	21.3 %	18.3 %
1: Value prop.	0.0 %	37.5 %	10.0 %	27.6 %	17.6 %	23.6 %	28.4 %	20.8 %	27.5 %	25.7 %	19.6 %	24.3 %	26.9 %	18.4 %	25.6 %	22.1 %	23.4 %
0: Unclear	100.0 %	50.0 %	35.0 %	41.4 %	37.3 %	33.3 %	31.2 %	34.4 %	33.3 %	29.9 %	21.7 %	27.0 %	19.5 %	21.5 %	21.1 %	16.6 %	24.1 %

Figure 3. Shares of articles on different levels of analytical comprehensiveness
Source: Authors' own work

that the share of articles falling into the "Synthesis," category, signifying the highest level of AC, consistently rose. This share expanded from under 30% in 2007 to 40% in 2019. Conversely, the share of articles categorized as "Unclear," representing the lowest level of AC and thus the highest level of conceptual fragmentation, witnessed a decline from approximately 40% to below 20% during the same period. The share of articles in the "Determination of value-in-use" category exhibited a modest upward trend, while the share in the "Collaboration on value propositions" category showed a slight decrease over the entire period from 2004 to 2019. These trends suggest a notable enhancement in the AC of articles over time, indicating a gradual reduction in conceptual fragmentation and a move toward more integrative theoretical usage.

4.1.2 Model-free associations between analytical comprehensiveness and the predictor variables. Table 5 cross-tabulates the dependent variable, AC, against the primary predictor variable: the theoretical role assigned to value co-creation in the articles.

As the contingency table (Table 5) indicated, a notable trend emerges, with up to 60.0% of articles focusing centrally on value co-creation exhibiting the highest level of AC (and thus the lowest level of conceptual fragmentation), denoted as 3 = Synthesis of collaboration on value

Table 5. Cross-tabulation of analytical comprehensiveness and value co-creation role in the article

Article category	Theoretical role assigned to value co-creation in the article			
Level of analytical comprehensiveness of the article	0 = Only mentioned	1 = Builds perspective	2 = Central focus	Total
0 = Unclear	644 (51.6%)	62 (6.9%)	7 (0.9%)	713 (24.1%)
1 = Collaboration on value propositions	297 (23.8%)	234 (26.1%)	162 (19.9%)	693 (23.4%)
2 = Determination of value-in-use	168 (13.5%)	218 (24.3%)	156 (19.2%)	542 (18.3%)
3 = Synthesis of collaboration and determination	140 (11.2%)	384 (42.8%)	488 (60.0%)	1,012 (34.2%)
Total	1,249 (42.2%)	898 (30.3%)	813 (27.5%)	2,960 (100%)

Source(s): Authors' own work

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propositions and determination of value-in-use (refer to the bottom right corner of Table 5). Conversely, among articles that merely mention value co-creation (top left corner of Table 5), 51.6% are associated with the lowest level of AC (0 = Unclear) and the highest level of conceptual fragmentation. Between these extremes, a linear increase seemingly exists in the proportion of articles exhibiting higher levels of AC with the deepening centrality of value co-creation in the theoretical focus of the article [3]. For a more formal modeling of this relationship, ordinal probit regression analyses are conducted below. Table 6 provides the bivariate correlation matrix for numeric ordinal predictor variables. Interestingly, a negative correlation ($\rho = -0.56$) is observed between journal ranking and the AC of articles concerning value co-creation. In addition, an insignificant correlation ($\rho = -0.001$) is noted between AC and the reputation of the corresponding author's institution.

We also observe that the correlation between an article's AC and the citations it has obtained per year is positive and significant ($\rho = 0.042$). This finding testifies to the face validity of our measurement of AC, as it is to be expected that articles with greater AC and, thus, lower levels of conceptual fragmentation will be considered more insightful by readers, thus attracting more citations.

4.2 Predictors of analytical comprehensiveness: ordered probit regression model

We present the results in Table 7 by using probit regression to analyze our ordered variable of AC representing the level of conceptual fragmentation in articles. As anticipated from bivariate correlations, the theoretical role of value co-creation in an article (central focus vs builds perspective vs only mentioned) emerges as the most influential predictor for the AC of value co-creation ($b = 0.819$, $SE = 0.045$, $Wald = 333.48$, $p < 0.001$). Put simply, articles that centrally focus on co-creation rather than merely mentioning it peripherally are more likely to discuss value co-creation in a synthesizing manner, addressing the collaboration on value propositions and determination of value-in-use. Surprisingly, journal ranking demonstrates a significant adverse effect on AC ($b = -0.060$, $SE = 0.019$, $Wald = 10.244$, $p < 0.001$), indicating that value co-creation articles published in higher-ranked journals tend to exhibit, on average, a higher level of conceptual fragmentation. Conversely, the value co-creation content focus of a journal positively influences the AC of articles published in that journal ($b = 0.099$, $SE = 0.055$, $Wald = 3.251$, $p < 0.05$). However, the effect of the corresponding author's institution's reputation proves to be insignificant ($b = 0.142$, $SE = 0.100$, $Wald = 2.017$, $p > 0.05$), suggesting the reputation of the school with which the corresponding author is affiliated does not predict the level of AC and is thus not associated with conceptual fragmentation. In summary, a higher volume of value co-creation articles within a given journal predicts a greater level of AC within individual articles in that journal, while the reputation of the author's institution does not seemingly have a predictive effect on the AC and is thus not associated with the article's conceptual fragmentation.

Considering the control variables, we find that the year of publication is a significant predictor of a higher level of AC ($b = 0.033$, $SE = 0.007$, $Wald = 23.125$, $p < 0.001$), indicating that, over time, articles tend to exhibit less conceptual fragmentation. This trend aligns with the observable pattern in Figure 3, suggesting a continuous improvement in AC over the years. However, the regression results clearly indicate that conceptual integration is not simply a function of time. Differences across article positioning, journal types and journal rankings demonstrate that distinct scholarly communities follow different trajectories of fragmentation and integration. In this sense, time serves as a proxy for the underlying mechanisms that drive integration. Conversely, the field of the journal (marketing or service) does not significantly affect AC ($b = 0.021$, SE = 0.087, Wald = 0.058, $p > 0.05$). This finding, somewhat surprisingly, suggests that articles on value co-creation published in marketing

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Table 6. Bivariate correlations

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Article: Theoretical role of co-creation	1										
2. Article: Corresponding author's reputable institution	−0.014	1									
3. Journal: Ranking	−0.007	0.135**	1								
4. Journal: Content focus on co-creation	0.058**	0.003	0.352**	1							
5. Article: Year of publication	0.102**	−0.037*	−0.113**	−0.095**	1						
6. Article: Number of co-creation paragraphs	0.801**	0.017	0.044**	0.078**	0.129**	1					
7. Article: Empirical/quantitative	−0.071**	−0.031*	0.036*	0.007	0.129**	−0.047**	1				
8. Article: Empirical/qualitative	0.059**	−0.015	−0.045**	−0.024	0.085**	0.070**	−0.452**	1			
9. Journal: Marketing or service journal	0.018	0.019	0.120**	0.568**	−0.166**	0.044**	−0.036*	−0.034*	1		
10. Analytical comprehensiveness	0.554**	0.001	−0.053**	0.044**	0.128**	0.449**	−0.069**	0.040*	0.014	1	
11. Citations per year	0.072**	0.115**	0.328**	0.162**	−0.216**	0.096**	−0.071**	−0.039*	0.099**	0.042*	1

Note(s): ***$p < 0.001$; **$p < 0.01$; *$p < 0.05$; NS = not significant
Source(s): Authors' own work

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Table 7. Results of ordinal probit regression of an article's conceptual fragmentation

Variables and model statistics	*b*	*SE*	*Wald*	*df*	*p*
Main predictor variables					
Article: Theoretical role of co-creation	0.819	0.045	333.476	1	<0.001
Article: Corresponding author's institution reputation	0.142	0.100	2.017	1	0.08
Journal: Ranking	−0.060	0.019	10.244	1	<0.001
Journal: Content focus on co-creation	0.099	0.055	3.251	1	0.04
Controls					
Article: Year of publication	0.033	0.007	23.125	1	<0.001
Article: Number of co-creation paragraphs	0.003	0.003	0.888	1	0.17
Article: Empirical/ quantitative	−0.128	0.050	6.693	1	0.005
Article: Empirical/qualitative	−0.063	0.048	1.768	1	0.09
Journal: Marketing or service journal	0.021	0.087	0.058	1	0.40
Constant thresholds					
Analytical comprehensiveness = 1	66.438	13.707	23.494	1	<0.001
Analytical comprehensiveness = 2	67.272	13.708	24.085	1	<0.001
Analytical comprehensiveness = 3	67.847	13.708	24.496	1	<0.001
N	2,951				
−2 Log Likelihood	6,520.08				
Chi-square (df)	1,095.23				
p	<0.001				
Pseudo R^2	0.332				

Source(s): Authors' own work

and/or service journals exhibit, on average, a similar level of conceptual fragmentation to those published in journals from other disciplines.

4.3 Additional analysis of the link between conceptual fragmentation and citation count

The bivariate correlations in Table 6 revealed a positive correlation between an article's conceptual integration (higher AC) and how many citations the article has garnered annually. To focus deeper into this relationship, we used partial least squares (PLS) path modeling using SmartPLS 4.0. PLS path modeling is well-suited for prediction-oriented analyses involving multiple predictors and mediators (Fornell and Cha, 1994; Leth-Steensen and Gallitto, 2016).

Figure 4 depicts the effect coefficients of the PLS model. Consistent with the ordered probit regression results (Table 7), journal ranking negatively affects AC ($b = -0.060$, $p < 0.001$) and the value co-creation content focus of the journal has a positive effect thereon ($b = 0.088$, $p < 0.05$), while the corresponding author's reputable institution does not significantly impact AC ($b = 0.08$, $p > 0.05$). Regarding the focal effect of AC on citation count, we find a significant positive effect coefficient ($b = 0.037$, $p < 0.05$), meaning the AC (lack of conceptual fragmentation) predicts a greater yearly citation count for the article following its publication. Notably, this effect is significant even if the direct effects of journal ranking, the value co-creation content focus of the journal and the corresponding author's reputable institution are controlled for. Hence, reduced conceptual fragmentation is seemingly a key factor contributing to an article's scientific impact, as measured by its annual citation frequency. Further, the relationship between the number of paragraphs mentioning value co-creation and AC was nonsignificant. This is noteworthy, as one might intuitively expect that articles devoting more space to the

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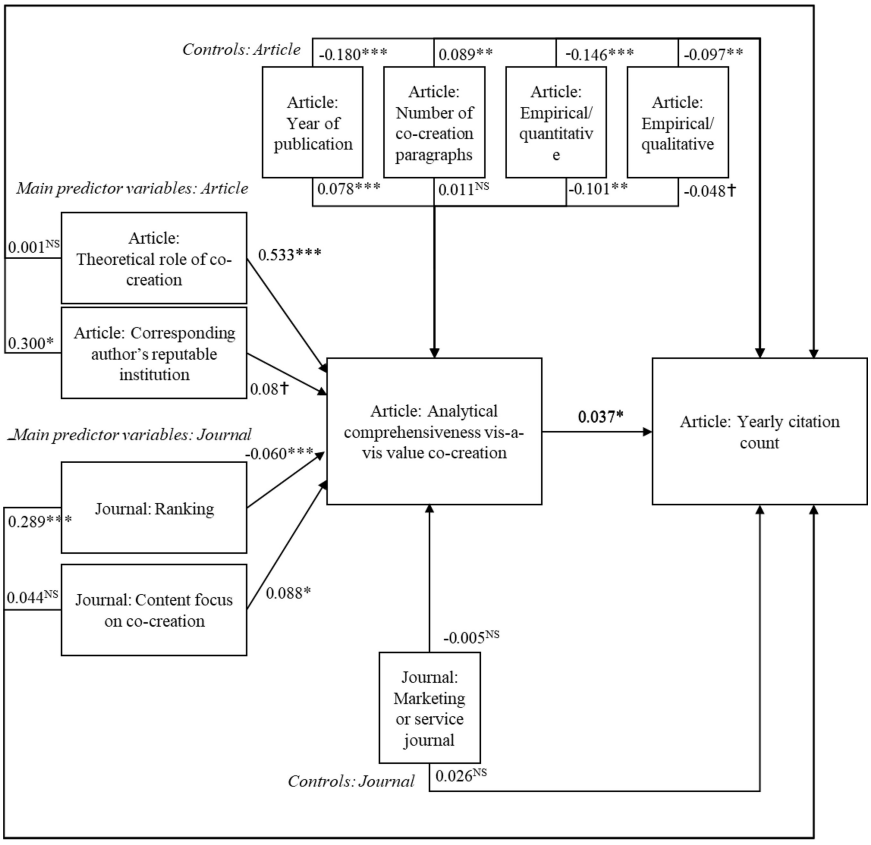

Figure 4. Results of partial least squares path modeling
Source: Authors' own work

construct would also discuss it in a more integrated way. The absence of such a relationship demonstrates that sheer textual prominence does not automatically translate into conceptual integration.

5. Discussion and conclusions

The central theoretical contribution of this study is to advance our understanding of conceptual fragmentation, a condition where core constructs are used inconsistently, partially or without sufficient integration. This persistent yet under-theorized challenge undermines coherence and cumulative progress in marketing and broader social science disciplines (Taylor and Vickers, 2017; Gough, 2022). In marketing, fragmentation manifests not only as definitional ambiguity but also as inconsistent operationalization, disconnected research streams and weakened translation into managerial insight (Mencarelli and Riviere, 2015; Biraghi and Gambetti, 2015).

In light of the study findings, our study advances the understanding of conceptual fragmentation and its implications for marketing scholarship. First, by introducing and elaborating the notion of conceptual fragmentation in marketing science, we foreground it as a phenomenon that shapes how knowledge evolves in our field. Second, we develop AC as a

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structured, replicable and scalable measure for evaluating how thoroughly a concept's foundational dimensions are engaged in scholarly work. Third, our findings reveal that fragmentation is contingent on structural contexts, such as article positioning, journal type and outlet ranking, indicating that integration is not simply a matter of time but reflects underlying processes of scholarly learning, diffusion and institutionalization. This makes conceptual fragmentation actionable and points to the importance of conceptual stewardship in guiding cumulative knowledge building. Fourth, by examining value co-creation as a substantive case, we provide the first large-scale, systematic analysis of fragmentation processes within academic discourse, particularly in marketing research. Our fine-grained analysis of its two foundational dimensions, value proposition and value-in-use, yields a more precise and empirically grounded conceptualization that complements earlier reviews which primarily mapped thematic areas without examining internal conceptual structure. Our consideration below begins with considering value co-creation research as an illustrative case of conceptual fragmentation.

5.1 Value co-creation research trajectory: from fragmentation to conceptual integration

The concept of value co-creation offers a compelling example of conceptual fragmentation and its potential resolution. Originally grounded in traditional service marketing, value co-creation, along with its parallel concepts like collaborative value creation, highlighted the dynamic process of joint value formation between providers and customers. Its integration into SDL marked a significant theoretical shift, embedding it within a broader system of service exchange and ecosystems (Vargo and Lusch, 2004, 2008, 2016). While this reframing was generative, it also introduced early tensions with the perspectives nurturing a service marketing orientation, particularly with SL (Grönroos and Voima, 2013) and CDL (Heinonen and Strandvik, 2015), each seeking to re-anchor value co-creation within its own theoretical framework. As a result, the construct was interpreted divergently, leading to theoretical instability and a fragmented understanding across traditions.

Our longitudinal analysis, however, reveals a potentially rare trajectory of conceptual integration. Rather than continuing to diverge, scholarly engagement with value co-creation has increasingly converged on its most integrated and least fragmented interpretation. The construct's diffusion has followed a collective learning curve: initial ambiguity has gradually given way to more consistent applications and greater theoretical alignment. This pattern contrasts with the typical arc of construct diffusion, which often leads to greater divergence and conceptual drift. In this case, value co-creation exemplifies how theoretical maturation and system-level integration can reverse fragmentation and foster cumulative theory-building.

With regard to value co-creation, our findings on fragmentation combine both intuitive and counterintuitive elements. On the one hand, it may seem unsurprising that articles centrally focused on value co-creation present the concept in a more synthesizing way than peripheral mentions. Yet our large-scale analysis adds value by demonstrating that this expectation holds consistently across nearly 3,000 articles, moving the field beyond anecdotal impressions. On the other hand, several results defy simple intuition. For example, the number of paragraphs mentioning value co-creation was not significantly related to AC, indicating that devoting more textual space to the construct does not necessarily produce deeper integration. Similarly, we found that higher-ranked journals were associated with greater, rather than lesser, fragmentation. Together, these patterns underscore why systematic, field-wide analysis is required: only by testing assumptions empirically can we separate what the field believes to be true from what the evidence actually reveals. Furthermore, this confirms our broader point: conceptual clarity is not determined by time alone but shaped by structural, institutional and community-level factors.

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Beyond using value co-creation literature as a mere case, our study contributes it in two interrelated ways. It offers the first large-scale, quantified review that systematically examines the concept's usage and development. While prior reviews (e.g. Tregua *et al.*, 2021; Pohlmann and Kaartemo, 2017) have provided broad overviews within SDL, few have traced the construct's conceptual trajectory with both empirical depth and interpretive clarity. We build on and extend these efforts, particularly those of Ranjan and Read (2016), by identifying the mechanisms driving both fragmentation and conceptual integration over time. Second, we advance the construct's theoretical development by refining it into two foundational analytical dimensions: value proposition and value-in-use. Our findings show that value co-creation has often been used passively or inconsistently, contributing to theoretical ambiguity (Ramaswamy and Ozcan, 2018). However, we also observe a recent trend toward more deliberate and coherent applications, evidencing the scholarly community's capacity for self-correction (Popper, 1959; Merton, 1973). By clarifying its core dimensions, we offer scholars a conceptual lens for categorizing existing studies and guiding future research in a more analytically rigorous direction.

5.2 From case insight to analytical framework: operationalizing conceptual fragmentation

Our study introduces AC as a systematic and operationalizable proxy for evaluating conceptual fragmentation. AC captures the extent to which a study engages the full range of relevant dimensions, perspectives, or mechanisms associated with a construct. It highlights not only what is included in scholarly usage but also, crucially, what is missing or underdeveloped, offering a structured lens for assessing the depth and coherence of conceptual engagement.

A critical precondition for applying AC is the disaggregation of multidimensional constructs into their key analytical dimensions. Without disaggregating their internal complexity, it is impossible to meaningfully assess comprehensiveness. Constructs like value co-creation, customer engagement and service ecosystems, for example, often circulate in the literature as unified terms but mask significant internal variation. Our analysis shows that disaggregating value co-creation into dimensions such as value proposition and value-in-use reveals its underlying logic and enables a more precise assessment of its theoretical use. This step transforms abstract concerns about fragmentation into concrete and analyzable elements (Bacharach, 1989; Whetten, 1989).

Methodologically and conceptually, the AC framework renders fragmentation visible, measurable and comparable across studies, domains and time periods. It enables scholars to detect patterns of omission, imbalance or superficial use and to evaluate constructs with greater transparency. While our empirical focus is on value co-creation, the AC framework is broadly applicable to other multidimensional constructs where conceptual fragmentation hinders theoretical progress. In this way, AC offers a replicable tool for mitigating fragmentation by promoting precise delineation and full-spectrum engagement with a construct's dimensions.

5.3 Conceptual stewardship for preventing conceptual fragmentation: toward a more cumulative marketing science

Addressing conceptual fragmentation effectively requires a shift in perspective, from viewing it as an individual shortcoming to recognizing it as a systemic condition shaped by academic structures and incentives. Our findings underscore that fragmentation is not simply the result of poor scholarship, but is embedded in institutional dynamics such as editorial norms, disciplinary pressures and expectations. However, with deliberate theoretical engagement, rigorous citation and systemic support, constructs can recover and evolve coherently. This requires a collective responsibility shared across authors, reviewers, editors and institutions, a practice we call conceptual stewardship: the intentional, community-wide

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effort to define, apply and review constructs with care. By recognizing fragmentation as a systemic issue and responding with coordinated action, marketing science can sustain the integrity and relevance of its theoretical foundations. Authors should be explicit in defining and delimiting their constructs. Reviewers should challenge superficial usage and reward theoretical precision. Editors must balance demands for novelty with the need for conceptual clarity. Only through such coordinated practices can marketing science sustain the conditions required for cumulative knowledge building.

The case of value co-creation illustrates that fragmentation is not irreversible. Although its initial integration into SDL prompted divergent interpretations and critiques from adjacent perspectives (Grönroos and Voima, 2013; Heinonen and Strandvik, 2015), its recent stabilization suggests that sustained scholarly engagement can restore coherence. Increased attention to foundational dimensions marks a reconvergence of meaning, demonstrating that recovery from conceptual fragmentation is possible. This recovery highlights the importance of reflexive citation practices. Citations are not neutral; they shape how constructs evolve by either reinforcing coherence or enabling drift further away to conceptual fragmentation (Hazelkorn, 2015; Morgan *et al.*, 2018). As our study shows, concepts like value co-creation are often cited illustratively, resulting in theory-lite or peripheral citation practices (Gilbert, 1977; Teplitskiy *et al.*, 2022). Such patterns contribute to fragmentation by replacing analytical depth with rhetorical familiarity. Reflexivity in citation is therefore essential to preserving conceptual integrity. However, such reflexivity must be enabled by the community and manifested in editorial practices. While top-tier journals often prioritize novelty and interdisciplinary reach, these same imperatives can incentivize ambiguous or flexible applications that favor visibility over coherence (Rafols *et al.*, 2012; Dougherty and Horne, 2022). In this regard, specialized journals may play a critical role in maintaining conceptual boundaries, given their proximity to ongoing theoretical debates.

5.4 Managerial implications

For managers, this study offers actionable guidance on translating the abstract concept of value co-creation into practical strategies that enhance customer engagement, value innovation and performance. By disaggregating value co-creation into the dual dimensions of value proposition (what is promised) and value-in-use (what is realized), organizations gain a clearer framework for designing, delivering and assessing value in ways that resonate with customer experience. Many firms invoke value co-creation rhetorically but struggle to operationalize it meaningfully. Our analytical framework helps bridge this gap by promoting a holistic approach that ensures managerial attention spans the full spectrum of the value creation process. This shift enables firms to move beyond vague co-creation jargon toward more targeted and effective language and practices.

In this regard, we propose three strategic practices for implementing value co-creation. First, firms should prioritize diagnosing value realization from the customer's perspective. Managers must understand how value is actually realized in customers' use contexts, not merely how it is designed or communicated. This requires a deep understanding of customer goals, situations and usage processes. Tools such as customer journey mapping, ethnographic observation and outcome-driven innovation can uncover hidden sources of value or friction in real-world application. Second, firms should integrate their value propositions with operational design. Value propositions must go beyond aspirational statements; they should guide internal resource integration, frontline processes and digital interfaces. By aligning organizational capabilities with the promises made to customers, firms can deliver more coherent and trustworthy experiences. This alignment is especially critical in service ecosystems, where multiple actors co-contribute to realizing value propositions. Third, firms

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should institutionalize the continuous auditing of both value creation capacity and realized customer value. Regular assessments are essential to ensure that value propositions translate into value-in-use within customer contexts. For instance, an overemphasis on designing value propositions without corresponding attention to value realization, can lead to a disconnect between promise and delivery. Prioritization tools such as impact-effort matrices and value scorecards can help firms identify which dimensions of value co-creation deserve the most investment or redesign.

By adopting these practices, organizations can design value realization strategies that are both customer-centric and internally executable. This parallels academic considerations of value co-creation: just as scholars must define and apply constructs with precision, managers must do the same with strategic initiatives to ensure value co-creation. The careless adoption of fashionable terms and management philosophies, without operational clarity and execution will mislead teams, diffuse focus and waste resources.

5.5 Limitations

This article conducts an in-depth analysis of an extensive and longitudinal data set comprising a large set of value co-creation articles. However, the study's approach comes with certain limitations. First, the coding of conceptual fragmentation in articles inherently involves subjectivity, as human coders determine the category to which each article belongs. To address this subjectivity, we established explicit coding criteria and ensured a shared understanding and proper application of these criteria among the coders. Moreover, we used parallel coding by two independent coders, accompanied by checks by the lead author, achieving high intercoder reliability. In cases of conflicts, the lead author intervened to make final determinations regarding the categories assigned to the articles. In addition, we introduced objective coding to identify article sections, count the number of paragraphs featuring the concept and analyze the presence of the concept's definition in the articles. All three supplementary coding processes validated and reinforced the primary coding efforts.

Second, our analysis, spanning articles from 2004 to 2019, was a comprehensive yet time-consuming endeavor, excluding the most recent articles, to cover the core cycle of the conceptual evolution temporally locating on years 2004–2019. While the 16-year scope and substantial number of analyzed articles offer a robust foundation for drawing conclusions, excluding the latest articles prevents us from capturing potential reinforcement or decline in the identified trends. Our findings, indicating an increasing trend in AC and a more central role for value co-creation in literature, suggest that future research could focus on a sample of recent articles to validate these trends. This approach would allow for testing the identified patterns without having to extensively analyze hundreds or thousands of additional articles, expediting the dissemination of findings.

Third, our analysis pursued a comprehensive, quantitative overview, limiting the opportunity for nuanced, subjective examinations based on specific journals or disciplines. While our extensive data set covered a wide array of journals, a more focused approach on marketing- and service-oriented journals, for example, might have revealed differences and nuances obscured in the broader spectrum of journals analyzed. Future research could build on our study by focusing on specific time periods, disciplines or journals, thereby examining how different scholarly communities may actively promote comprehensiveness or sustain fragmentation in their use of the value co-creation concept or other key concepts of the research domain.

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Notes

[1.] Value proposition: general and specific concepts and empirical-driven terms: Value proposition, Offering, Solution, Product, Service, Technology, Customer Proposition, value-in-use: general and specific concepts and empirical-driven terms: Value-in-use, Perception, User Experience, Service Experience, Perceived Benefits, Cost-Benefit Perception, Customer Value, Customer Perceived Value.

[2.] Five more student coders were hired to work with the first student coder. All the coders received the same training for the task, supported by the lead author.

[3.] To recheck the outlier cases appearing beyond this seemingly linear relationship between AC and the theoretical role assigned to value co-creation, we reread the seven articles that were coded as having the highest level of theoretical role (2 = Central focus) but the lowest level of AC (0 = Unclear), as well as the 140 articles that were coded as having the lowest level of theoretical role (0 = Only mentioned) but the highest level of AC (3 = Synthesis of collaboration on value propositions and determination of value-in-use). In rereading the former articles, we found that they discussed value co-creation quite extensively, in 20.7 paragraphs on average, implying that the concept constituted a central theoretical focus of the article. However, the meaning of value co-creation in these articles was unclear even upon a subsequent reading of the articles. When we reread the articles coded as having the lowest level of theoretical role but the highest level of AC, we found that they discussed value co-creation rather peripherally, in 3.2 paragraphs on average, corroborating the initial coding of the articles as "only mentioned" regarding the theoretical role assigned to value co-creation. Still, and despite the marginal role assigned to value co-creation, these articles were indeed found, even upon rereading, to feature a high level of AC (i.e. Synthesis of collaboration on value propositions and determination of value-in-use). In sum, this rereading of the outlier cases corroborates our initial coding of the two variables and provides evidence of the discriminant validity of the coding (i.e. although there seems to be a rather linear correlation between the two variables, the variables remain distinct and are not arithmetically related or perfectly correlated).

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Further reading

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Appendix

Table A1. The most voluminous value co-creation journals, and means and standard deviations of analytical comprehensiveness measure

Journal	*n*	AC mean	SD
Industrial Marketing Management	157	1,2	1,2
Journal of Business Research	113	1,6	1,2
Journal of Service Management	109	1,9	1,0
Journal of Service Theory and Practice	105	1,8	1,2
Journal of Services Marketing	94	1,7	1,2
Marketing Theory	65	2,1	1,0
Journal of Service Research	63	1,7	1,0
Service Industries Journal	62	1,6	1,1
Journal of Business & Industrial Marketing	62	1,4	1,2
European Journal of Marketing	53	1,7	1,3
Journal of Marketing Management	43	1,9	1,2
Journal of the Academy of Marketing Science	41	1,6	1,2
Tourism Management	35	1,7	1,3
International Journal of Contemporary Hospitality Management	35	2,0	1,1
International Journal of Quality and Service Sciences	33	1,7	1,2
Sustainability	29	1,9	1,1
Journal of Retailing and Consumer Services	28	1,8	1,3
Service Science	28	1,9	1,1
Journal of Strategic Marketing	24	1,8	1,0
Australasian Marketing Journal	24	1,7	1,2
Public Management Review	22	2,3	1,0
International Journal of Hospitality Management	22	2,3	1,0
Service Business	22	1,7	1,3
International Journal of Bank Marketing	22	1,1	0,9
International Journal of Operations & Production Management	21	0,9	0,9
Journal of Marketing	21	1,2	1,1
International Journal of Physical Distribution & Logistics Management	20	2,2	1,0
Management Decision	19	2,3	1,0
International Journal of Production Economics	19	1,5	1,2
Journal of Macromarketing	19	1,5	1,1
Marketing Intelligence & Planning	18	1,7	1,0
European Business Review	17	2,2	1,1
Production Planning and Control	16	1,6	1,3
Journal of Travel Research	16	2,0	1,1
Journal of Product & Brand Management	16	1,6	1,2
Journal of Business Ethics	16	1,1	1,0
Total articles	*1,509*	*1,7*	*1,2*

Note(s): *Marketing and/or service journals: shaded (21); other journals: nonshaded (15)
Source(s): Authors' own work

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