Value Propositions as Market-Shaping Devices: A Qualitative Comparative Analysis

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Highlights

- Firms can offer market-shaping VPs to trigger changes in their markets.
- Market-shaping VPs are created and communicated through a collaborative process.
- Market-shaping VPs promise verified benefits to multiple actors.
- These benefits stem from enhanced resource integration opportunities.
- New representations are often used in the communication of market-shaping VPs.

Abstract

Forward-looking firms are increasingly viewing markets as malleable and plastic systems that can be influenced. Hence, they are engaging in market-shaping to proactively augment existing business opportunities or to create new ones. One of the recurring themes in the emerging market-shaping literature is the importance of value propositions. Consequently, the purpose of this paper is to identify configurations of value proposition characteristics that are effective for focal firms engaging in market-shaping strategies. In our empirical study, we analyse market-shaping actions carried out by 21 case firms using fuzzy-set qualitative comparative analysis. We identify four characteristics of market-shaping value propositions: (1) enhanced resource integration and related support as the core content of market-shaping value propositions, and (2) collaborative value proposing process, (3) systemic and verified value promise, and (4) new representations used in communication as the design characteristics of market-shaping value propositions. Further, we show that even though value propositions can shape markets without displaying all four of these characteristics, none of these characteristics alone can create all the expected outcomes. Hence, we identify distinct configurations of value proposition characteristics that are successful in either changing the elements comprising the market system or inducing an overall system-level market change.

Key words: market-shaping; value propositions; fsQCA

1. Introduction

In an increasingly dynamic business environment firms are seeking new ways to innovate. Forward-looking firms are increasingly viewing markets as malleable and plastic systems (Nenonen et al., 2014) that can be influenced. Hence, they are engaging in market-shaping (Gavetti et al., 2017; Kindström et al., 2018) to proactively augment existing business opportunities (Nenonen et al., 2019b) or to create completely new ones (Alvarez & Barney, 2007).

Marketing literature has explored this market-shaping phenomenon under various labels such as market-driving strategies (Jaworski et al., 2000), proactive market orientation (Narver et al., 2004), market scripting (Storbacka & Nenonen, 2011b), market innovation (Kjellberg et al., 2015; Storbacka & Nenonen, 2015), and market-shaping (Harrison & Kjellberg, 2016; Kindström et al., 2018; Nenonen et al., 2019b). However, empirical work on market-shaping is limited, leading Jaworski and Kohli (2017, p. 11) to conclude that "the idea of shaping, molding, and managing the evolution of markets has been around for some time, but has not taken off in terms of systematic inquiry".

One of the recurring themes in the emerging market-shaping literature is the role of the value proposition (VP). Kumar et al. (2000) propose that successful market-driving strategies come from a discontinuous leap in the VP. Storbacka and Nenonen (2011b), on the other hand, propose that focal actors can offer 'market propositions' (i.e., market-shaping VPs) that engage other actors in creating a shared market view – which, in turn, can translate to corresponding changes in the mental and business models of all actors in the market system. Further, Kindström et al. (2018) highlight VPs as crucial market-shaping devices that emerge through interactions between market actors and create the necessary confidence to initiate market-level change.

It is possible to find corresponding examples of market-shaping VPs from business practice. Rolls-Royce's innovative VP of leasing jet engines – instead of selling them – to provide "Power by the Hour" has driven a considerable change and expansion in aviation. In a similar vein, most digital platform businesses disrupting associated markets – such as Uber, Airbnb and Amazon – rely on compelling VPs to both providers ("get extra revenue from renting underutilized space") and consumers ("more affordable and authentic short-term accommodation").

The few studies that explicitly investigate what focal firms can do to shape their markets concur on the importance of VPs (e.g., Nenonen et al., 2019b). However, these studies do not elaborate on what characteristics make VPs effective in a market-shaping context. As the VP literature has been recently and comprehensively reviewed from its origins to current work, including exploring antecedents and consequences (Payne et al., 2017), we do not rehearse this literature here. Rather, we consider how the VP literature relates to focal firms engaging in market-shaping strategies.

Both value propositions (Skålen et al., 2015) and markets (cf., Andersson et al., 2008; Storbacka & Nenonen, 2011a) have been conceptualized as configurations of interdependent elements. The complexity of the studied phenomenon is best captured by the configurational perspective, which is increasingly employed across business disciplines (cf., Misangyi et al., 2017). Hence, *the purpose of this paper is to identify the configurations of value proposition characteristics that are effective for focal firms engaging in market-shaping strategies*.

A configurational perspective focuses on causal complexity, suggesting that constellations of interconnected elements are characterized by conjunctural causation (outcomes rarely have a single cause), equifinality (there is more than one pathway to an outcome) and asymmetry (both the presence and the absence of attributes may be connected to an outcome) (Schneider & Wagemann, 2012). Methodologically, fuzzy-set qualitative

comparative analysis (commonly abbreviated as “fsQCA”; Ragin, 2008; Tóth et al., 2017; Duşa, 2019) was “deliberately designed to both conceptualize and analyze the causal complexity” inherent to business research (Misangyi et al., 2017, p. 257), and is employed to address our research aim by analyzing a purposive sample of 21 case firms.

Our principal contribution is to distinguish the VP’s role as a key device for market-shaping; more specifically, we identify four characteristics of market-shaping VPs. We also show that even though VPs can shape markets without displaying all four of these characteristics, no single characteristic alone can create all the expected outcomes. Further, our study extends our understanding of the nature of the VP concept. Specifically, we identify that market-shaping VPs are complex configurations rather than unidimensional constructs aimed at differentiating the firm in the market. Practically, we distinguish distinct configurations of VP characteristics that are successful in either: (1) changing the elements comprising the market system, or (2) inducing an overall market change at the system-level.

2. Value proposition and market-shaping: A conceptual framework

Research is progressively recognizing markets as systems or ecosystems (Vargo & Lusch, 2016; Adner, 2017), suggesting a need to look beyond the seller–buyer dyad and to see the dyad as part of a larger system of actors (Hult et al., 2011; Hillebrand et al., 2015). This transition from dyadic relational thinking to complex systems thinking (Hillebrand et al., 2015) reveals that nobody can fully predict or control the development of a market system. Market systems do not obey simple laws of cause and effect. Furthermore, they have no center and no central control mechanism. Rather, they evolve from a mix of deliberately designed influence and random emergence (Mars et al., 2012).

Consequently, market change happens in a constantly shifting balance between deliberate design efforts by various organizations (i.e., market-shaping), and spontaneous emergent developments. The argument is that firms shape markets as much as markets shape

firms (Teece, 2011). However, as our research aims to support managerial action, we choose the focal firm as our unit of analysis and focus on how firms aim to exert influence over such systemic markets (cf., Nenonen et al., 2019b).

The aim of market-shaping is to enhance the value creation and value realization for actors within a market system (Nenonen et al., 2019b). New value is created when resources are combined in novel ways (Penrose, 1959), indicating that the key is the ability to create, access, deploy, combine, and exchange them (Moran & Ghoshal, 1999). In our work we draw on Nenonen et al. (2019b, p. 619) who define market-shaping as "a purposive process by a focal firm to (1) discover the value potential of linking intra- and inter-[actor] resources in novel ways, (2) trigger changes in various market characteristics to enable the formation of new resource linkages, and (3) mobilize relevant [actors] to free up extant resources for new uses". Hence, the role of a market-shaping VP is to explain how a focal firm can provide value by mobilizing actors to enhance their resource integration.

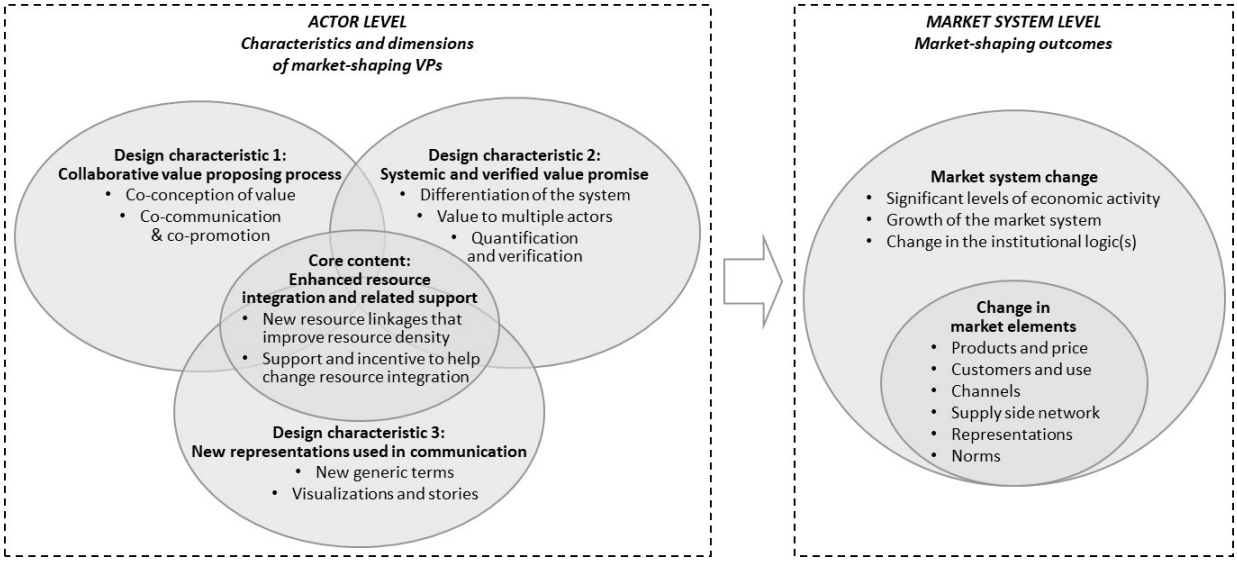
In their comprehensive conceptualization of the VP concept, Payne et al. (2017, p. 472) point out that resource sharing is not unidirectional but involves "deeper reciprocal engagement" that is likely to result in meaningfully cocreated VPs. Drawing on a resource-based perspective (e.g., Barney et al., 2011), Payne et al. (2017) conceptualize VPs as manifestations of market-based and firm-based resources. Hence, we argue that the core content of market-shaping VPs is to convey what kind of enhanced resource integration market actors can expect after the market has been shaped. Building on the above, we *define a market-shaping VP as a strategic device that enables new resource integration opportunities by (1) orchestrating resource linkages between multiple actors within a market system and/or (2) mobilizing actors to engage in new resource integration activities.*

Payne et al. (2017) further suggest that all VPs have specific design characteristics that encompass three dimensions: the perspective adopted, granularity, and focus. The perspective

adopted in market-shaping VPs is likely to be mutually determined rather than determined by the market-shaping firm alone. In terms of the level of granularity, market-shaping VPs are expected to concentrate on market level rather than on the level of individual customers or customer segments. The focus of VPs refers to the number and breadth of value dimensions communicated (Payne et al., 2017). Market-shaping VPs are likely to cover several value dimensions instead of only one or two. This broader focus of market-shaping VPs may, in turn, require that these VPs are conveyed through representations that are able to synthesize substantial amounts of information effectively.

Consistent with recent studies using fsQCA (e.g., Thornton et al., 2019) our conceptual framework in Figure 1 adopts a Venn diagram approach and uses a configurational perspective to represent the four characteristics of market-shaping VPs. Our framework builds on recent integrative theoretical insights on VPs (e.g., Payne et al., 2017), and on the emerging literature on market-shaping (e.g., Nenonen et al., 2019b). This framework comprises two main components: (a) VP core content and design characteristics identified as potentially relevant to market-shaping and (b) market-shaping outcomes. The left-hand component of the framework identifies the role of the core content and design characteristics of market-shaping VPs: (1) enhanced resource integration and related support, (2) a collaborative value-proposing process, (3) a systemic and verified value promise, and (4) new representations that are used in communication. The right-hand component identifies two sets of outcomes of market-shaping: (1) change in the market system elements and (2) change within overall market system. Each of these comprise subsidiary dimensions.

Figure 1. Conceptual framework of the role of value propositions in market-shaping



2.1. Core content and design characteristics of market-shaping value propositions

Drawing on extant research, we first explore the core content and three design characteristics of VPs pertinent to market-shaping, and their constituent dimensions.

Core content: Enhanced resource integration and related support

As discussed above, the purpose of market-shaping is to proactively create opportunities at a market system level. This may entail proposing new linkages between resources that are based on individual needs and assessing the availability of other resources in the market system (Vargo & Akaka, 2012). There are two dimensions that are particularly relevant to assessing market-shaping VPs as resource integration proposals.

New resource linkages that improve resource density. Normann (2001) suggests an insightful model to interpret value creation. He argues that actors engage in resource integration activities to increase resource density (cf., Lusch & Nambisan, 2015), which expresses the degree to which resources are accessible for a specific actor, time, situation, and space combination. Greater density of resources corresponds to more value. Density relates not only to physical resources but also to the density of various forms of socio-cultural resources such as meanings, designs and/or symbols (Storbacka et al., 2012). The purpose of

a VP then is to mobilize chosen actors, linking them together in resource integration. Market-shaping occurs when a VP motivates those specific new linkages that seek resource density and supports the orchestration of new resource bundles (Sirmon et al., 2011).

Support and incentives to help change resource integration. Innovative VPs seek to set out how actors can improve their resource integration through new linkages and how they can integrate new resources that may prove valuable to them (Storbacka et al., 2012). A market-shaping VP can incentivize resource integration by proposing reduction of risk or increase in benefits (Rintamäki et al., 2007). This process may involve learning together (Ballantyne & Varey, 2006) with 'double-loop learning' (Argyris & Schön, 1978) that involves reflection on how to use resources in new ways. Thus, the role of the VP is to assist actors in selecting those resource integration opportunities that are the most beneficial, expanding the scope of resource orchestration and resource linkages (Kozlenkova et al., 2014).

Design characteristic 1: Collaborative value proposing process

The first design characteristic of VPs proposed by Payne et al. (2017) relates to the perspective adopted. VPs traditionally represent a persuasive method for depicting the combined value of products to customers (Johnson et al., 2008) and they are often determined by the supplier (Payne et al., 2017). Payne and Frow (2005), however, suggest that the process of crafting VPs does not necessarily reside in the suppliers' domain alone; instead there are opportunities for co-creation. We identify two dimensions relevant to collaborative value proposing process aimed at shaping markets.

Co-conception of value. Diverse actor involvement can assist in the process of value proposing, co-conceiving novel insights and unique resource linkages (Frow et al., 2015). Innovative VPs can create new demand in a market space, by revealing new opportunities for innovative resource linkages. Unlike a value-in-exchange representation that positions the VP

as a unidirectional promise of value, a contemporary view of value-in-use positions the VP as a proposal of value (Payne et al., 2017) with potential involvement of many actors. According to Vargo et al. (2015), market innovation is driven by configuring VPs that offer new solutions, which over time are institutionalized.

Co-communication and co-promotion. Multiple actors may contribute to the value proposing process through their shared communication of the VP (Frow et al., 2015). Their unique perspective of the VP can include user experience or indirect perceptions that influence other actors and shape markets. Lead customers, reference cases, membership of industry associations, brand communities, credible media exposure and acclaimed industry awards are examples of groups and initiatives that can enhance VP communication. As markets are highly relational, actor involvement in communicating the VP includes engaging in ongoing negotiations, experimentation, competition, and learning (Zietsma & McKnight, 2009).

Design characteristic 2: Systemic and verified value promise

The second design characteristic of VPs proposed by Payne et al. (2017) relates to the granularity of the VP: whether it concentrates on making value promises to individual customers, customer segments, or for the overall market. The primary purpose of the VP is to set out a value promise that attracts desirable resource integrators. There are three dimensions to consider in addressing how the value promise in a specific VP can help shape markets.

Differentiation of the system. A systemic view of markets highlights the complexity of VPs that are inherently interrelated (e.g., Vargo & Lusch, 2011; Frow et al., 2014; Jaakkola & Alexander, 2014). O'Cass and Ngo (2011) suggest four sets of generic value that can differentiate an offering, including performance value, pricing-based value, relationship value and co-creation value. However, the objective of the market-shaping firm is not merely to

differentiate its products or services from the competition in the current market system. Instead, the market-shaping firm seeks to induce a system-level change in the market. Hence, successful market-shapers must consider the broader system of interconnected actors, and to develop VPs that articulate why the proposed new market system would be more beneficial than the current one (Storbacka & Nenonen, 2011b). Thus, market-shaping VPs aim to differentiate the market systems (current vs. the future one) rather than offerings (focal firm's vs. competitors').

Value to multiple actors. VPs as market-shapers forge new links, creating opportunities for interaction with diverse actors. Market-shaping VPs are likely to involve a broader network of market actors and their many resource integration opportunities, either directly or indirectly (Frow et al., 2014). Reciprocity of VPs forge stronger relationships than unidirectional VPs (Ballantyne & Varey, 2006). Mars et al. (2012) refer to key actors that are essential within a network or system, as without their resources other actors would be less successful or fail. Further, the importance of multiple actors, or stakeholders, in framing value propositions is increasingly recognized (e.g., Van Grinsven, 2010; Ballantyne et al., 2011; Frow & Payne, 2011; Storbacka & Nenonen, 2011b). This means that successful VPs offer appropriate value to all market actors within the market system.

Quantification and verification. Value quantification and verification are important attributes of a VP (Hinterhuber, 2017). Furthermore, there is emerging empirical evidence that market-shaping firms "not only articulated to potential collaborators the benefits of the market-shaping strategy but quantified them in financial terms or demonstrated them by other tangible means" (Nenonen et al., 2019b, p. 629). Traditional methods of value quantification adopt a dyadic perspective of value propositions: the supplier firm quantifying the value to its prospective customers (cf., Van Grinsven, 2010; Terho et al., 2012). Value verification follows value quantification and includes value documentation (Storbacka, 2011).

Verification of this evidence of value provides legitimacy to all actors, and it can include genuinely objective appraisal from existing customers as well as testing authorities, standards authorities, universities and other independent bodies. However, market-shaping VPs require a more holistic approach to evaluating outcomes: considering, quantifying and verifying the potential outcomes of the VP for the market-shaping firm, for all relevant actors in the market system, and perhaps even for the system itself.

Design characteristic 3: New representations used in communication

The third and final design characteristic of VPs proposed by Payne et al. (2017) involves the focus of the VP: does it focus on a single value dimension or address several broad-ranging value dimensions. As discussed previously, market-shaping VPs are likely to cover several value dimensions simultaneously, and hence their effective communication may depend on the use of representations that can convey large amounts of information. There are two dimensions for considering how the VP, as a strategic communication tool, may act as a market-shaper.

New generic terms. VPs that support market-shaping are focused on new value creation opportunities, often requiring new terms to convey their meanings. Value outcomes may be difficult for actors to articulate or comprehend, requiring new ways of expressing the proposed value. Recent research on signaling theory (e.g., Connelly et al., 2011) and labelling strategies (e.g., Granqvist et al., 2013) is relevant to VPs and market-shaping. Signaling theory considers how certain types of information influence actors' perceptions of an organization and its practices (Wallace, 2014). Developing new terms is likely to be important to market-shaping, as such aspects can be highly credible in signaling and confirming the position of a new VP (e.g., Erdem & Swait, 1998). As Granqvist et al. (2013, p. 395) note "Names are, therefore, one type of symbolic resource that executives can use to associate their firms with a market label". Thus, developing new terms related to VPs could

play an important role in market-shaping. Examples of new generic terms developed by one company, which now describe a whole product category, include Jet Ski, Biro, Kleenex, Velcro, Bubble Wrap and Band-Aids.

Visualization and stories. VPs are communicated in many ways – through words, actions and symbols. For a market-shaping firm, these visualizations may provide powerful communication tools, especially when their emotional appeal is explicit. Emotional symbols and images are used frequently in advertising where a VP is dramatized to create new meanings and emotions through images, symbols and brands (Sandström et al., 2008). Rintamäki et al. (2007) suggest that symbolic VPs are especially important in providing meaning to customer experiences, as here meaning is attached to self and can be communicated to others. Visual representations intend to convey meaning, which through use can provide a narrative for shared sensemaking (Flint, 2006). Purposely influencing a market can include developing stories that form market representations, which benefits the value proposing firm (Rinallo & Golfetto, 2006). Recent work by Nenonen et al. (2019b) propose general categories of market representations including terminology used in a given market, media's portrayals of the market, market research and statistics regarding the market, key events and awards portraying the market, and industry associations mirroring particular markets.

2.2. Outcomes of market-shaping

As shown in Figure 1, we identify two interrelated overarching resulting effects of market-shaping on a market system level: *change in the elements of the market system*, and overall *change of the market system* itself. Drawing on relevant literature on market-shaping and systemic markets, we identify six market elements that may change as a result of market-shaping and three important forms of outcome at the overall market system level.

Outcome 1: Change in the elements comprising the market system

The systemic turn in researching markets means that scholars are increasingly conceptualizing markets as systems comprising multiple elements and the linkages between these elements instead of stand-alone industries or customer groups. Based on a comprehensive literature review, Nenonen et al. (2019a) proposed and empirically verified the six elements of market systems: (1) products and price, (2) customers and use, (3) channels, (4) supply side network, (5) representations, and (6) norms. In the present study we adopt these elements as those comprising market systems. It is, however, important to note that the relationship between individual market elements and the entire market system is not simple and linear. A systemic view of markets automatically means that market systems are not reducible to, nor determined by their constituent elements (Wieland et al., 2012). For example, observing changes in all six above-mentioned market elements may not result in a shaped market system – and conversely, market-level change may occur as a result of changes in only one or two elements. This is due to the emergent character of complex adaptive systems: the focal actor is not alone in influencing the system and the combinatorial, and sometimes synergistic effects of all actors' efforts may create inflection points, resulting in the emergence of a new market system. It is also important to note that all new configurations of market elements do not result in viable market systems (Wieland et al., 2012), which can adapt to a changing environment yet retain their overall structure (von Bertalanffy, 1968; Barile & Polese, 2010). Thus, change in market elements needs to be complemented by other, more systemic indicators, to get a comprehensive picture of the outcomes of market-shaping strategies.

Outcome 2: Overall market systems change

The emerging literature on market-shaping argues that successful market-shaping strategies will have system-level outcomes. Nenonen et al. (2019a) empirically explore the nomological validity of their model using three market-level measures: size, profitability and value creation of the market. Nenonen et al. (2019b) elaborate on this and suggest three forms of outcomes that occur at the market system level: presence of significant economic activity, growth of the market system, and change in the prevailing institutional logics.

Significant levels of economic activity. Market-shaping strategies can sometimes create a completely new market system, as exemplified by the creation of legal casino gambling markets (Humphreys, 2010) or legal cannabis markets (Kjellberg & Olson, 2016). However, more often market-shaping results in the creation of a modified market system that continues to co-exist with the old ones, as illustrated by the studies of category creation in soft drinks (Azimont & Araujo, 2007) and for minivans (Rosa et al., 1999). Regardless of the exact market-shaping path – creating a new market system or modifying an existing one – the socially constructed nature of markets requires that the resulting new or shaped market is recognized by actors other than the market-shaping firm (Garud et al., 2013; Vargo et al., 2015). This recognition can take various forms, but the most tangible type is engaging with the market as a seller or a buyer. Thus, successful market-shaping strategies result in significant – or at least non-trivial – levels of economic activity in the new market system (Keyhani et al., 2015).

Growth of the market system. Most market-shaping studies suggest that proactive market-shaping strategies have positive performance outcomes for the shaping firm, evidenced as sales growth, improved financial performance, and increased market share (e.g., Kumar et al., 2000; Alvarez, 2007; Van Vuuren & Wörgötter, 2013; Keyhani et al., 2015; Gavetti et al., 2017). However, in this study we are more interested in the market-level (i.e.,

market system) outcomes of market-shaping strategies. Recent research in strategic management proposes that firms can deliberately "increase the size of the pie", i.e., grow the size and profitability of the markets in which they operate (Gulati & Wang, 2003; Tantalo & Priem, 2016). Recent empirical work (Nenonen et al., 2019b) also indicates that market-shaping strategies lead to increased market size as well as improvements in market-level profitability and other forms of value creation.

Change in the institutional logic(s). In addition to the above-discussed enablers and outcomes of economic exchange, functioning markets are also characterized by a shared understanding or shared institutional logics among market actors (Lusch & Vargo, 2014; Lusch & Watts, 2018). Thornton and Ocasio (1999, p. 804) define institutional logics as "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality." The use of the institutional lens in market-shaping strategies is only nascent, but management scholars studying government-led health reforms have concluded that a radical change in a mature organizational field necessitates change in both the field's structure and dominant institutional logic (Reay & Hinings, 2005). Thus, we expect that successful market-shaping strategies will induce a noticeable change in the shared understanding(s) or institutional logic(s) prevalent in the market system.

3. Method

We now turn to the empirical section of our research where we draw on a sample of diverse firms in order to identify which configurations of VPs are associated with successful market-shaping strategies.

3.1. Sample selection and data collection

To investigate which configurations of characteristics and dimensions comprising specific VPs are associated with successful market-shaping strategies, we employed theoretical sampling due to its particular suitability for the subsequent QCA analysis (Tóth et al., 2017). With the unit of analysis at a firm level, the following criteria were employed for case selection: (1) purposeful market-shaping activities have been carried out by each firm; (2) the outcomes of these market-shaping activities could be verified from secondary and objective sources; and (3) the market-shaping activities of each firm have spanned three or more years.

We consulted with 14 practitioner and academic experts to identify cases based on these three criteria, which yielded an initial sample of 41 firms. Desk research was carried out during the next step to learn more about the case firms and to facilitate access to these firms and to acquire relevant data. This resulted in the final sample of 21 cases from four countries drawn from the following industries: construction and manufacturing; wholesale and retail trade; services; agriculture, forestry, and fishing; and transportation, communication and utilities. To preserve confidentiality, the cases are anonymized.

Data from the selected firms was collected primarily through interviews with 82 individuals. We conducted three to six interviews per case firm over a 15-month period, with the duration of each interview ranging between 25 and 110 minutes (some 77 hours of interviews in total). We selected the informants who held senior positions (e.g., CEO, Chairman of the Board, Managing Director, Chief Technology Officer) within their firm, had been involved in the market-shaping activities, and were also willing to discuss their experiences and challenges with respect to their market-shaping activities. In each interview, the informants were asked to discuss their market-shaping activities in detail, with follow-up questions and clarifications employed as necessary. In addition to these in-depth interviews, we also collected supplementary data from both primary and secondary sources (e.g., various

firm documents and materials, annual reports, national statistics, data provided by market research agencies and industry associations, internal magazines, as well as articles in academic journals and in industry media). Secondary data predominantly guided our analysis of the market-shaping outcomes, and in particular the assessment of overall 'market system change' was completely reliant on secondary sources.

3.2. Coding of set membership scores for fsQCA, and analysis design

Fuzzy-set qualitative comparative analysis (fsQCA) was employed to analyze the collected data. The method has been increasingly applied in both marketing research (Woodside & Baxter, 2013; Frösén et al., 2016; Forkmann et al., 2017; Tóth et al., 2017) and management research (Seny Kan et al., 2016; Misangyi et al., 2017). As a method for set-theoretic analysis, fsQCA with its configurational approach provides alternative (equifinal) solutions and allows both theory building and testing (Tóth et al., 2017). FsQCA is particularly suitable in studying complex causality – such as the interplay between different VP characteristics and market-shaping outcomes – as it (1) acknowledges possible nonlinear or asymmetric relationships, and (2) enables identifying multiple causal pathways that would not be noticeable through the use of more traditional statistical methods such as structural equation models (Mahoney & Goertz, 2006; Ragin, 2008; Woodside, 2013).

In the present study, we draw upon the recent methodological developments in fsQCA and their practical application to the analysis of qualitative data (e.g., Forkmann et al., 2017; Tóth et al., 2017). A coding scheme was developed based on the conceptual framework from Figure 1. Building on common practice in QCA, the above identified characteristics are subsequently referred to as "conditions". The definitions and coding schemes for each condition and outcome are presented in Appendix A.

In line with Tóth et al. (2017), template coding was employed to perform the analysis in a more structured manner. Appendix B provides six membership evaluation template

examples, one for each condition and outcome. Two researchers carried out coding in parallel, allowing comparison of interpretations. During coding, we employed a 6-value fuzzy set (i.e., 0, 0.2, 0.4, 0.6., 0.8, 1) for the by-case assignment of set membership scores to each condition and outcome. To ensure quality in the process, all transcripts and additional documents were examined independently based on the templates for coding. The remaining research team members further assessed the interpretations, followed by unification of the coding assessments and subsequent assignment of set membership values. NVivo software was employed to facilitate the coding process.

As recommended by Ragin (2008) and prior to sufficiency analysis, we conducted analysis of necessity to determine which conditions exceed consistency values of 0.9 and thus might be considered necessary. In addition, we assessed whether coverage scores of such conditions exceed 0.75 (Thornton et al., 2019) to determine whether the "potential necessary condition is empirically relevant" (Greckhamer et al., 2018, p. 489). The results of the analysis suggest that no conditions exceeded the threshold values to be considered necessary.

Sufficiency analysis allows the determination of which (configurations of) conditions are sufficient for each outcome. A condition is sufficient "whenever the condition is present, and the outcome is present too", i.e., if set membership in the condition "is lower than or equal to each case's membership in the outcome" (Tóth et al., 2017, p. 201). Resulting from this form of analysis, configurations of sufficient conditions represent an overall solution for the outcome and are described in terms of: (1) *consistency*, which represents the degree to which the cases sharing (configurations of) conditions "agree in displaying the outcome" (Forkmann et al., 2017, p. 281); (2) *raw coverage*, which describes how much of the outcome is covered by each of the configurations (including the overlap between the latter); (3) *unique coverage*—how much of the outcome is covered only by a specific configuration; and, (4)

solution coverage—how much of the outcome is covered by the overall solution (Schneider & Wagemann, 2012).

As recommended by Ragin (2008), the conditions with consistency levels above 0.9 were eliminated prior to sufficiency analysis. At the initial step of the analysis, four truth tables were constructed for both presence and absence of each outcome. We then applied the suggested frequency cut-off value of 1 (due to medium N = 21), the consistency cut-off value of 0.8, and the proportional reduction inconsistency (PRI) cut-off value of 0.75 or a clear jump in the PRIs—the latter following Forkmann et al. (2017, p. 282). The resulting truth tables (see Appendix C) were analyzed with the QCA package in R (Duşa, 2019) based on the guidelines from Duşa (2019) and Thomann et al. (2018). Four fsQCA analyses were carried out since presence and absence needed to be calculated separately for each of the two outcomes.

As part of the Enhanced Standard Analysis, we derived complex, parsimonious and intermediate solutions. The solutions differ by the extent to which logical remainders have been considered, thus taking into account the data's limited diversity (i.e., presence of logical remainders) — although "limited diversity is the rule rather than the exception in comparative social science research" (Schneider & Wagemann, 2012, p. 160). Whereas the complex solution does not include any logical remainders, the parsimonious solution includes all remainders, and the intermediate solution represents a compromise between the two alternatives. Following methodological guidelines (e.g., Duşa, 2019), the parsimonious and intermediate solutions were used to interpret the results for each of the four fsQCA analyses, in particular to distinguish between the core and peripheral conditions (i.e., more and less essential as part of each configuration, respectively).

4. Results

Next, we explain the results of our analysis discussing the two outcomes, change in market elements and market systems change, separately.

4.1. Configurations for change, and absence of change in market elements

Analysis of sufficient conditions for 'change in market elements' resulted in four configurations (reported as 1a-1d in Table 1) within a single solution. Both overall solution coverage and consistency are high with values of 0.72 and 0.98, respectively.

Table 1. Change in market elements: overview of solutions

	Change in market elements					
	Presence				**Absence**	
Conditions	**1a**	**1b**	**1c**	**1d**	**2a**	**2b**
Enhanced resource integration and related support	⊗	●	⊗	●		⊗
Collaborative value proposing process	●	●	●	•	⊗	⊗
Systemic and verified value promise	⊗	●	●	⊗	●	⊗
New representations used in communication	⊗	⊗	●	●	⊗	●
Consistency	1.00	1.00	1.00	0.97	1.00	0.97
Raw coverage	0.48	0.59	0.61	0.52	0.69	0.55
Unique coverage	0.04	0.04	0.02	0.04	0.22	0.08
Solution coverage	0.72				0.77	
Solution consistency	0.98				0.98	

Note: ● = the presence of condition; large indicate core condition; small indicate peripheral condition
⊗ = absence of condition

Exhibiting unique coverage of 0.04 each, Configurations 1a, 1b, and 1d have equal empirical relevance for the solution, while Configuration 1c is less empirically relevant (unique coverage = 0.02). In Configuration 1a, presence of 'collaborative value proposing

process' is a sufficient condition for 'change in market elements', whereas 'enhanced resource integration and related support', 'systemic and verified value promise' and 'new representations used in communication' are absent. Similarly, Configuration 1b has 'collaborative value proposing process' present and 'new representations used in communication' absent, although 'enhanced resource integration and related support' and 'systemic and verified value promise' are also present in contrast to Configuration 1a. In turn, 'collaborative value proposing process', 'systemic and verified value promise' and 'new representations used in communication' are present and 'enhanced resource integration and related support' is absent in Configuration 1c. Finally, present 'enhanced resource integration and related support' and 'new representations used in communication' and absent 'systemic and verified value promise' are core sufficient conditions for 'change in market elements' in Configuration 1d, whereas present 'collaborative value proposing process' is a peripheral condition. For the solution overall, presence of 'collaborative value proposing process' is the only condition (either core or peripheral) found across all configurations.

The solution for absence of 'change in market elements' has two configurations (reported as 2a-2b in Table 1) with high values for overall solution coverage and consistency (0.77 and 0.98, respectively). Exhibiting unique coverage value of 0.22, Configuration 2a is more empirically relevant than Configuration 2b, and demonstrates that absent 'collaborative value proposing process' and 'new representations used in communication' and present 'systemic and verified value promise' are sufficient conditions regardless of 'enhanced resource integration and related support' characteristic. In turn, Configuration 2b contains 'new representations used in communication' as present and the remaining three conditions as absent. For the solution overall, absence of 'collaborative value proposing process' is the only condition exhibited by both configurations. Finally, the analysis of core and peripheral conditions indicates that all conditions are core in the solution.

4.2. Configurations for change, and absence of market system change

Analysis of sufficient conditions for overall ‘market system change’ resulted in three configurations (reported as 1a-1c in Table 2) within a single solution. The overall solution coverage is high and accounts for 85% of membership in the group achieving ‘market system change’. The solution consistency is 0.96, which also represents a high value. Empirical relevance of the configurations is achieved since the unique coverage of each is above zero.

Table 2. Market system change: overview of solutions

	Market system change				
	Presence			Absence	
Conditions	**1a**	**1b**	**1c**	**2a**	**2b**
Enhanced resource integration and related support	●		●	⊗	⊗
Collaborative value proposing process	●	●		⊗	
Systemic and verified value promise	●	●	●		⊗
New representations used in communication		⊗	⊗	⊗	⊗
Consistency	0.95	1.00	1.00	0.97	1.00
Raw coverage	0.74	0.61	0.69	0.67	0.57
Unique coverage	0.15	0.02	0.09	0.16	0.06
Solution coverage		0.85		0.73	
Solution consistency		0.96		0.97	

Note: ● = the presence of condition; all conditions are core
⊗ = absence of condition

With the value of 0.15, Configuration 1a is the most empirically relevant for the solution and demonstrates that presence of ‘enhanced resource integration and related support’, ‘collaborative value proposing process’ and ‘systemic and verified value promise’ is sufficient for ‘overall market system change’ regardless of ‘new representations used in communication’ characteristic. Interestingly, in the other two configurations, ‘systemic and verified value promise’ is always present and ‘new representations used in communication’ is

always absent, whereas ‘collaborative value proposing process’ is present in Configuration 1b regardless of ‘enhanced resource integration and related support’ characteristic, and ‘enhanced resource integration and related support’ is present in Configuration 1c regardless of ‘collaborative value proposing process’ characteristic. For the solution overall, presence of ‘systemic and verified value promise’ is the only condition found in all three configurations.

Absence of overall ‘market system change’ has two corresponding configurations (reported as 2a-2b in Table 2) with overall solution coverage of 0.73 and consistency of 0.97. Exhibiting higher unique coverage value of 0.16, Configuration 2a is more empirically relevant and demonstrates that absent ‘collaborative value proposing process’, ‘enhanced resource integration and related support’ and ‘new representations used in communication’ are sufficient conditions regardless of ‘systemic and verified value promise’ characteristic. Similarly, absent ‘enhanced resource integration and related support’ and ‘new representations used in communication’ are sufficient conditions in Configuration 2b, whereas, in contrast to Configuration 2a, ‘systemic and verified value promise’ is absent and ‘collaborative value proposing process’ does not matter. For the solution overall, absence of ‘enhanced resource integration and related support’ and ‘new representations used in communication’ are the only conditions exhibited by both configurations. Finally, both for presence and absence of ‘market system change’, the analysis of core and peripheral conditions indicates that all conditions are core.

5. Conclusions

The analysis of the *core content of market-shaping VPs* indicates that it is possible for market-shaping VPs to stimulate changes in the elements comprising the market system and/or in the overall market system without offering enhanced resource integration – defined as new resource linkages that improve resource density – and support and incentives to help change resource integration. This can be interpreted in three different ways. First, assuming

that rational actors accept a market-shaping VP only if it provides improved value creation opportunities, this finding suggests that it is possible to augment resource density – and hence value creation – without introducing new resource linkages; for example, by providing "more of the same" or "the same faster, more conveniently, or more sustainably". This, in turn, affords more nuanced insights to the contemporary resource-based theory accentuating the importance of resource linkages (Bingham & Eisenhardt, 2008).

Second, the ability of market-shaping VPs to stimulate changes in the market system elements without enhanced resource integration can be interpreted as questioning the assumption of rational market actors: it may be possible to induce change in others by leveraging non-rational aspects of human and organizational behavior, such as consumer herding (Huang & Chen, 2006), social influence or contagion (Van den Bulte & Lilien, 2001), or organizational path dependency (Sydow et al., 2009). This possible explanation would offer another contingency to market-shaping VPs: if actors in a particular market system typically exhibit rational decision-making behavior, then the market-shaping VP should be based on offering improved resource integration and related support – whereas in market systems characterized by less rational decision-making behaviors, offering enhanced resource integration and related support is less important.

Third, this finding could also be interpreted as highlighting the possible – but currently undertheorized – role of power in market-shaping: a particularly powerful actor may be able to coerce others and the entire market system to change, even if the change in question would be detrimental to other actors and the whole system (cf., Mele et al., 2018).

In terms of the *design characteristics of market-shaping VPs,* 'collaborative value proposing process' is present across all four identified configurations leading to change in market elements and in two of the three identified configurations leading to overall market system change. Considering that all market elements included in our analysis require

acceptance by at least two actors in the market system (for example, for a price level to change, both the provider and customer have to agree on the new price) and often by multiple actors (for example, social norms are only altered if numerous actors change their perceptions and subsequently their actions), it appears logical that approaching these changes in a collaborative manner is present across all configurations for a successful change of market system elements.

The explicit nature of market-shaping VP, i.e., communicating a ‘systemic and verified value promise’, is identified as being present in all three configurations inducing market system change. We hypothesize that explicitly promising (positive) value for all affected actors makes the proposed market-level change easier to accept, as suggested by distributive justice theory (cf., Jasso, 1980; McFarlin & Sweeney, 1992). Furthermore, we suspect that having the value promise quantified and/or verified by third parties reduces the uncertainty experienced by other market actors, thus making them more inclined to go along with the proposed changes.

Furthermore, communicating market-shaping VP with new representations – such as new generic terms, visualization or stories – appears to have no impact on the VP’s ability to drive market system change. However, the use of such new representations in communicating the VP can determine the ability of the VP to affect changes in the elements comprising the market system. Our interpretation of this finding is that if the (inherently multi-faceted and potentially complex) message of the market-shaping VP is crystallized into a story, term or visualization, these single representations may not resonate with all actors in the market system. For example, a story that captures the proposed change for the consumer effectively and compellingly may appear unimportant for a policymaker. Nevertheless, this surprising and counter-intuitive finding warrants more research.

5.1. Theoretical contributions

In their recent detailed research agenda for future scholarly investigation of VPs, Payne et al. (2017) highlight the need to investigate how VPs can assist in shaping market. In responding to this call, our research makes three theoretical contributions, two to the emerging literature on market-shaping and one to the more established literature on VPs.

First, our research provides empirical validation to the proposition put forward by Kumar et al. (2000 and Storbacka and Nenonen (2011b) that VPs have an important role in market-driving strategies. Thus, we provide further support to the findings of Kindström et al. (2018) who identified VPs as one market-shaping tool within their in-depth case study. However, our findings suggest that it is not enough to have a market-shaping VP or that a single market-shaping VP would be effective in all contexts. Instead, different configurations of the core content of market-shaping VP and its design characteristics may be effective in stimulating a change in the market. Furthermore, the identified four characteristics of market-shaping VPs relate differently to the change in individual elements comprising the market system than they do to the overall market change at the system level. Thus, our findings suggest that the systemic nature of markets – i.e., market systems are not reducible to, nor determined by their constituent elements (Wieland et al., 2012) – must be considered when crafting market-shaping VPs.

Second, our findings suggest that the emerging market-shaping literature may require a more nuanced view when it comes to the link between market-shaping strategies and resource integration. For example, Nenonen et al. (2019b) relate market-shaping to resource-based perspective and in their definition of market-shaping highlight the need to discover and enable the formation of new resource linkages. Contrary to this view, our results indicate that it is possible to shape markets with VPs that do not promise new resource linkages, but which promise increased value creation by, for example, providing “more of the same resources” or

"the same resources faster, more conveniently, or more sustainably". This, in turn, would suggest that the underlying mechanism for market-shaping is increased value creation for all relevant market actors, and not always novel resource linkages per se.

Third, our research contributes to the VP literature by extending prior work that explores the nature of this important concept. The VP is one of the most widely used terms in business (Anderson et al., 2006). It is critical to the process of value creation (Payne & Frow, 2005) and it has significant implications for improved firm performance. As such, it is argued to be the firm's "single most important organizing principle" (Webster, 2002, p. 61). It is therefore surprising that so little empirical VP research has been undertaken. Therefore, our study augments the currently limited empirical knowledge of VPs (e.g., Payne & Frow, 2014; Skålén et al., 2015), and highlights the suitability of fsQCA as a method of researching the impacts of VPs. According to our understanding, few VP studies have adopted qualitative comparative analysis and such studies employ traditional crisp set QCA rather than more nuanced fsQCA (cf., Aitken & Paton, 2016). Further, our results extend the domain of VPs to cover genuinely systemic phenomena such as market-shaping. Even though the existing research has discussed VP in the context of innovation (e.g., Lindic & Marques da Silva, 2011; Skålén et al., 2015), the focus of innovation has mainly been the product, or the service provided by the focal firm. Market-shaping VPs, instead, are aimed at innovating the broader market system.

5.2. Managerial implications

Our work provides practical guidance to managers and organizations that aspire to shape markets. First, our results suggest a need to move from a competitive stance towards a collaborative stance, or from a 'firm-based and value-capture-centric approach' toward a 'system-based and value-creation-centric approach' (Amit & Han, 2017). For market-shaping VPs to be effective, they should focus on depicting the future market system in as compelling

way as possible – which means that they do not tend to emphasize the relative competitiveness of the focal market-shaping firm and/or its market offering but rather point to the value potential of linking resources of multiple actors in a new way. For many firms, this may require a dramatic departure from their current marketing communication strategies.

Second, market-shaping VPs are complex collaborative configurations rather than unidimensional linear concepts aimed at differentiating the firm in the market. Our results clearly emphasize the importance of the collaborative process of value proposing. Successful market-shaping often requires the mobilization of many actors to change their behaviors, so that resources can be freed up for new uses. This engagement extends beyond the immediate customers, and it should also encompass tangible support for other actors to change their established practices.

Third, a key for mobilization is value quantification and, hence, effective market-shaping VPs provide quantified and verified value promises. Qualitative description of a vision for an improved market system may not alone be as compelling as a vision that is accompanied with a detailed quantification of the benefits for each of the other market actors. Particularly, in a B2B context, value quantification seems to focus on monetary benefits, and market-shaping VPs should, in all contexts, be endorsed or verified with other actors in addition to the market-shaping firm.

Finally, as noted in our research, focal firms applying market-shaping strategies typically aim to “grow the pie” and, after a period of change, aim to stabilize the market and focus on “sharing the pie” (Tantalo & Priem, 2016). Although our research did not explicitly investigate the differences between market-shaping VPs and those VPs designed to compete in stable market systems, the above described conclusions suggest that aspiring market-shapers may consider developing two sets of VPs: market-shaping VPs and market-sharing VPs. Although the characteristics of these two categories are likely to be overlapping, it is

evident that there are at least two key managerial challenges associated with this: (1) a need to ensure enough alignment between the two categories of VPs, enabling firms to move between the categories, and, (2) a need to determine the correct timing for shifting from a market-shaping VP approach to a market-sharing VP approach.

5.3. Limitations and future research

As with any research, this work has limitations that provide opportunities for further investigation. First, as discussed above, the terms 'value proposition' and 'market-shaping' do not have fully accepted definitions, which has resulted in research on both topics lacking coherence. Although we endeavored to make parsimonious choices in terms of which conditions to include in our rubric, selecting dimensions that are derived from extant literature, we acknowledge that others may be possible. Further research may confirm and extend our results, providing further depth to exploring market-shaping. Second, our choice of firms to include in this study include a broad mix across industries, size and geographies. However, our sample of 21 case firms across four countries may have limitations and larger scale studies could further deepen and validate our findings.

Many topics that relate to our work remain unexplored. First, our study highlights the complexity of designing market-shaping VPs. In-depth case studies could provide further insight on how firms go about this process; who is involved and how choices are made about which configurations are appropriate for specific market-shaping contexts. Such analysis would offer theoretical and managerial insight, including determining the merit of different configuration options within a specific context. Of particular interest would be to compare the characteristics of effective market-shaping VPs, and effective market-sharing VPs: how do they differ and how do they complement each other?

Second, although we acknowledge the systemic nature of markets, in which firms shape markets as much as markets shape firms, our research adopted the perspective of a focal firm.

More research is, however, needed that addresses the role of other actors in the market system. Possible questions to guide future research efforts are, for example: How do customers perceive market-shaping VPs and are they distinct from traditional market-sharing VPs also in their eyes? To what extent and how should market-shaping VPs build customer trust and confidence, motivating them to test new market offerings and change their behaviors? How can market-shaping VPs best motivate market actors to move from being passive recipients in old market to active co-creators shaping the new market?

Third, our research illustrated that the VP configurations driving change in market elements are different from those driving system-level change. As fsQCA cannot be used to show causal relationships between conditions and outcomes, we were not able to examine the possible causal relations between the two outcome levels. Inferences about causal relationships need to be based on literature or other empirical research (Tóth et al., 2017; Schneider & Wagemann 2012; Greckhamer et al., 2008). A key question for further research would be to further examine whether changes in market elements precede the creation of a new or changed market system or vice versa. Further, additional research is needed to explain the surprising and counter-intuitive finding of the non-presence of ‘new representations used in communication’ for market system change.

Finally, longitudinal work is required to examine the success of market-shaping VPs over time. For example, are market-shaping VPs robust only during the time that the shaping of the market occurs – or do they remain relevant also after the market system has reached its new shape? Should market-shaping firms reconfigure their VPs over time, emphasizing different aspects as a market system stabilizes?

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APPENDIX A. Definitions and coding scheme of conditions and outcomes

		Definition	Coding scheme	Key references
Conditions (characteristics of market-shaping VPs)	**Enhanced resource integration and related support**	The degree to which value proposition promises new resource linkages that increase resource density as well as support/incentives for actors to change their resource integration practices.	*Fully in (1)* if the value proposition promises several new resource linkages that increase resource density considerably as well as wide-ranging support for other actors to change their resource integration practices. *Fully out (0)* if the value proposition does not promise any new resource linkages, increase in resource density, or support for other actors to change their resource integration practices.	Normann, 2001; Storbacka et al., 2012; Rintamäki, Kuusela & Mitronen, 2007
	Collaborative value proposing process	The degree to which value proposition has been conceived and communicated in a way that actively engages several other actors in the process.	*Fully in (1)* if the market-shaping actor engages several types of other actors proactively, deliberately and without monetary payment. *Fully out (0)* if the market-shaping actor engages no other actors in conceiving and communicating the value proposition.	Frow et al., 2015; Payne, Frow & Eggert, 2017; Vargo, Wieland & Akaka, 2015
	Systemic and verified value promise	The degree to which value proposition promises systemic value (value of the new market system, value to multiple actors) that is verified.	*Fully in (1)* if the value proposition focuses on the benefits at a systems level, promises value to multiple types of actors, and the value promise is quantified and verified by an independent actor. *Fully out (0)* if the value proposition focuses on the product of the market-shaping actor, promises one type of actors alone, and the value promise is not quantified or verified by any actor.	Frow et al., 2014; Ballantyne et al., 2011; Hinterhuber, 2017a, 2017b
	New representations used in communication	The degree to which the communication of the value proposition is supported by new representations.	*Fully in (1)* if the communication of the value proposition includes new generic terms or concepts, visualizations, and stories or narratives. *Fully out (0)* if the communication of the value proposition does not include new generic terms or concepts, visualizations, or stories or narratives.	Connelly et al., 2011; Granqvist, Grodal & Woolley, 2013; Rintamäki, Kuusela & Mitronen, 2007; Nenonen, Storbacka & Windahl, 2019
Outcomes (of market shaping)	**Change in Market Elements**	The degree to which various elements comprising the market system have changed.	*Fully in (1)* if there have been changes in all of the six elements comprising the market system: (a) products and price, (b) customers and use, (c) channels, (d) supply side network, (e) representations, and (f) norms. *Fully out (0)* if there have been no changes in any of the six elements comprising the market system: (a) products and price, (b) customers and use, (c) channels, (d) supply side network, (e) representations, and (f) norms.	Nenonen, Storbacka & Frethey-Bentham 2019; Mele et al., 2015
	Market System Change	The degree to which market-shaping has induced changes at the overall market system level.	*Fully in (1)* if the new/changed market fosters significant levels of economic activity, the market has been growing, and the institutional logics prevalent in the market have changed noticeably. *Fully out (0)* if the new/changed market fosters only insignificant levels of economic activity, the market is either stable or shrinking, and the institutional logics prevalent in the market remain unchanged.	Nenonen, Storbacka & Windahl, 2019; Vargo, Wieland & Akaka, 2015; Kumar, Scheer & Kotler, 2000; Lusch & Watts, 2018

APPENDIX B. Examples of membership evaluation templates

Membership in the set of 'Enhanced resource integration and related support'				
Case number: Firm C				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
New resource linkages that improve resource density (see, e.g., Normann, 2001; Sirmon et al., 2011; Lusch & Nambisan, 2015)	Yes	Moderate-to-high	Introducing the concept of 'food bag' (pre-decided recipes and needed ingredients) that are delivered to consumers' homes.	"It is one-size-fits-all solution, and it is based on the realization that we can decide what people will eat and when they will get the delivery – and customers will accept it. And that is what has set us apart from everyone else." (ID 64)
Support and incentive to help change resource integration (see, e.g., Rintamäki et al., 2007; Storbacka et al., 2012; Nenonen et al., 2019b)	Yes	Moderate	Offering a satisfaction guarantee to make the service less risky for consumers.	"If you are dissatisfied with our service as a whole after receiving four consecutive deliveries, perhaps due to delivery problems or having had to complain on several occasions, you can use our Service Guarantee." (company website)
Overall case description from the perspective of 'Enhanced resource integration and related support'	Developing a market system for 'food bag' services: subscription service through which consumers get recipes and related ingredients delivered to their homes. Started in Country Y, Firm C appears to be internationally the first one to launch such a service. The new resource linkages that improve resource density come in the form of eliminating the need to come up with meal ideas, look for suitable recipes and to shop for groceries. Firm C offers a satisfaction guarantee to lower the threshold of trying out the service.			
Supporting quantitative data	n.a.			
Set membership score	0.6 (more or less in)			
Reason for fuzzy-set attribution score	There is a strong presence of positive dimension 'new resource linkages that improve resource density'. However, the presence of 'support and incentive to help change resource integration' is relatively weak: Firm C provides satisfaction guarantee to its customers, but it hasn't made other attempts to help its customers and other stakeholders to change their resource integration practices – even though in some instances (e.g., for the consumers) the changes to resource integration practices are considerable.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

Membership in the set of 'Collaborative value proposing process'				
Case number: Firm B				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
Co-conception of value (see, e.g., Frow et al., 2015; Vargo et al., 2015; Payne et al., 2017)	Yes	Low-to-moderate	The value proposition was inspired by the actions of other actors in other geographies, but it was translated to Country Z largely by the founder of Firm B alone.	"He (the founder) also travelled quite extensively through different markets, especially Japan, where the market for bakeries are a lot more developed […] So in comparison then there was a big opportunity for us to go into the baking industry and to see how we could actually make bread become a part of Country Z lifestyle." (ID 46)
Co-communication and co-promotion (see, e.g., Prahalad & Ramaswamy, 2004; Saarijärvi 2012; Frow et al., 2015;)	Yes	Moderate	Very actively encouraging word of mouth among consumer by having bakery outlets in busy shopping malls and having open kitchens; engaging media very actively so that they would write about the introduction of bread products to Country Z.	"The open kitchen also allowed customers to be able to see for themselves how the whole process of bread making takes place. So that process of watching and understanding the different steps along the way, it creates a lot of interest and created a lot of excitement among customers who previously may not have been interested in breads at all." (ID 47)
Overall case description from the perspective of 'Collaborative value proposing process'	Introducing bread and bakeries to Country Z, the traditional cuisine of which does not contain any bread products. The value proposition was inspired by other actors, but these other actors did not partake in the crafting of the value proposition. The value proposition was co-communicated and co-promoted particularly by the (influencer) consumers and the media.			
Supporting quantitative data	n.a.			
Set membership score	0.4 (more or less out)			
Reason for fuzzy-set attribution score	Both of the dimensions of the condition are present, but weakly. Particularly the presence of 'co-conception of value' is particularly weak, leading to the overall fuzzy-set attribution score of 'mostly but not fully out'.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

Membership in the set of 'Systemic and verified value promise'				
Case number: Firm U				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
Differentiation of the system (see, e.g., O'Cass & Ngo 2011; Storbacka & Nenonen, 2011b; Frow et al., 2014)	Yes	High	The core of the value promise is about making energy generation more environmentally and socially sustainable; very little emphasis on the core product of Firm U or Firm U itself.	"We are not competing against other engines or turbines, but […] we educate our customers […] that it is possible to create a better market." (ID 25)
Value to multiple actors (see, e.g., Ballantyne & Varey, 2006; Ballantyne et al., 2011; Mars et al., 2012)	Yes	High	Communicating the value of the new energy system to energy sector, governments, consumers and the wider society.	"And we did a modelling of that state. And one of the suggestions there was to introduce flexible gas-based generation. And once we did the modelling of that state, we showed that for a very, very marginal increase in total cost and in price you are ensuring much higher reliability on par with western standards." (ID 24)
Quantification and verification (see, e.g., Van Grinsven, 2010; Storbacka 2011; Terho et al., 2012; Hinterhuber, 2017; Nenonen et al., 2019b)	Yes	High	Quantifying the value of new energy systems for all relevant actors; using multiple external parties (such as universities and research companies) to provide objective verification of these.	"[…] the generation mix would offer the following significant benefits that can be readily monetized by the nation: a) Higher efficiency, resulting in reduced fuel consumption to the extent of 265,191 bn Kcal per year […], b) The carbon emission would […] be close to 10% reduction […], c) The water consumption could be lower by 470 million cubic meters per annum […], e) The land requirement would be lower by 24483 acres […], f) The investment on transmission network would be reduced by Rs 12800 cores in the XII Plan period." (Firm U white paper)
Overall case description from the perspective of 'systemic and verified value promise'	Advocating to shift from carbon-based energy generation to more sustainable energy generation based on, for example, wind and other renewable sources. The core of the value promise is making the entire energy generation system more sustainable – with few mentions of Firm U and its products – and the value is considered and quantified for energy companies, governments, consumers and the wider society; using objective third parties such as universities in verifying the results.			
Supporting quantitative data	n.a.			
Set membership score	1.0 (fully in)			
Reason for fuzzy-set attribution score	All three dimensions of the condition are intensely and positively present in this present case, leading to fuzzy-set attribution score 'fully in'.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

Membership in the set of 'New representations used in communication'				
Case number: Firm M				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
New generic terms (see, e.g., Connelly et al., 2011; Granqvist et al., 2013; Wallace, 2014; Altuna et al., 2017)	Yes	Moderate	Introducing and promoting new concepts such as 'Duty of care' and 'Lost time to injury' that are central to the new market space.	"Lost time to injury. What is the cost? You know, what's the return on your cost? So for every one dollar how much do you save when you have a malaria abatement programme or when you have a pre-employment physical?") (ID 58)
Visualizations and stories (see, e.g., Flint, 2006; Rinallo & Golfetto, 2006; Rintamäki et al., 2007; Sandström et al., 2008)	Yes	Moderate	Communicating medical and travel security case studies and customer stories; highlighting the role and background the original founders.	Several case studies (e.g., Mali terrorist attack in 2015) on the company website, told using 'overview – problem – solution – impact' narrative structure.
Overall case description from the perspective of 'New representations used in communication'	Developing a market system for medical and travel security services. As a part of this effort, Firm M has introduced and actively promoted new concepts highlighting the importance and (moral and economical) value of preventative care. The complex service offering is often communicated through case studies and customer stories.			
Supporting quantitative data	n.a.			
Set membership score	0.6 (more or less in)			
Reason for fuzzy-set attribution score	Both dimensions of the condition can be identified in this case. However, even though a positive dimension related to 'new generic terms' is present, also other actors than merely Firm M have been promoting these terms. Furthermore, there are no evidence of Firm M regularly and deliberately using visualizations to communicate their market-shaping value proposition. Hence the fuzzy-set attribution score is 'more or less in' in this specific case.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

Membership in the set of 'Change in market elements'				
Case number: Firm S				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
Products and price (see, e.g., Finch & Geiger 2010; Hinterhuber & Liozu 2012; Nenonen et al. 2019a)	Yes	Moderate-to-high	Introducing the idea of offering box units made from cross-laminated timber (CLT) instead of offering CLT panels.	"We made a big decision here in [country X]. We don't provide products, but box units. […] Our offering covers more than 90% of the building when it is ready." (ID 21)
Customers and use (see, e.g., Kumar et al. 2000; Burr 2014; Nenonen et al. 2019a)	Yes	Moderate	Educating customers about how to build using CLT-based box units.	"In 2011-2013 we organized a roadshow for timber construction, every winter." (ID 20)
Channels (see, e.g., Roth & Sotomayor 1992, Kumar et al. 2000; Nenonen et al. 2019a)	No	n.a.	Not observed in this case.	n.a.
Supply side network (see, e.g., Jaworski et al. 2000; Agarwal & Bayrus 2002; Lee et al. 2018; Nenonen et al. 2019a)	Yes	Moderate-to-high	Developing, with competitors, and open timber building system so that units and products from different providers would be compatible with each other.	"We started to develop an open timber building system to [country X]. There must be open competition. Otherwise customers won't follow, if they know that there is only one provider." (ID 20)
Representations (see, e.g., Diaz Ruiz 2013; Kennedy 2008; Rinallo & Golfetto 2006; Nenonen et al. 2019a)	Yes	High	Joined (with direct competitors) the construction industry association and forced it to take a material-neutral stance. Active use of popular and industry-specific media to promote timber-based high-rise buildings. Hosting an architecture competition.	"Federation of the [country X] Woodworking Industries (part of Confederation of [Country X] Construction Industries) used to represent mainly carpentry industry, but it changed in 2011 when the companies representing industrial timber construction solutions joined the Federation." (Confederation press release April 16, 2015)
Norms (see, e.g., Gawer & Phillips 2013; Kjellberg & Helgesson 2006; Nenonen et al. 2019a)	Yes	High	Lobbying, with the help of relevant industry associations, favorable changes in building code and fire regulations.	"Thanks to this enormous effort [...] we were able to get favorable regulations for timber buildings up to eight stories high." (ID 21)
Overall case description from the perspective of 'Change in market elements'	Developing a market system for multistory timber-framed buildings in Country X. This involved developing a new integrated offering, educating customers and other stakeholders such as architects, collaborating with competitors to create an open product standard, joining a hostile industry association so that they would adopt a material neutral stance, as well as active engagement with media and lobbying for regulatory changes.			
Supporting quantitative data	"After a long period of stagnation at less than 1% market share - by the first half of 2014, there were 753 apartments and 39 buildings with a wooden frame in [country X]. However, in 2014, 700 more apartments were built with wood, corresponding to a 4% market share, and there are 1500 apartments in the pipeline for 2015, corresponding to a 10% market share." (Hurmekoski et al., 2015)			
Set membership score	0.8 (mostly but not fully in)			
Reason for fuzzy-set attribution score	Most of the dimensions of the condition can be identified in this case, all having a positive effect on the membership. However, the absence of 'Channels' dimension of the condition resulted to 'mostly but not fully in' attribution score.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

Membership in the set of 'Market system change'				
Case number: Firm R				
Dimension	**Evaluation**		**Context-specific description**	**Illustrative quote(s)/ secondary data**
	Presence	**Intensity/ relative importance**		
Significant levels of economic activity (see, e.g., Keyhani et al., 2015; Nenonen et al., 2019b)	Yes	High	Almost every other wine bottle globally is closed with a metal screwcap in 2019.	12,565 million units of wine with metal screwcaps to be sold globally in 2019 (in on and off trade channels) compared to the total of 25,222 million units of wine with all closure types; giving screwcap closure a global market share of 49.8% (Euromonitor, 2019)
Growth of the market system (see, e.g., Gulati & Wang, 2003; Tantalo & Priem, 2016)	Yes	Moderate	The annual growth rate of wine closed with screwcaps is modest, albeit screwcap is still gaining share from cork and other closures.	Compound annual growth rate of wines with metal screwcaps from 2009 to 2019 estimate is 3.5% (Euromonitor, 2019)
Change in the institutional logic(s) (see, e.g., Lusch & Vargo, 2014; Lusch & Watts, 2018; Reay & Hinings, 2005)	Yes	Moderate-to-high	Consumers, winemakers, retailers and wine experts accept screwcaps as an acceptable – or even preferable – closure in all major wine-making regions except the US. However, consumers in the US and China remain largely skeptical.	"The current surge in screw cap use is nothing short of a revolution in wine packaging. It is the most significant technical evolution that the wine industry has faced since the glass bottle was introduced 250 years ago." (Paul Tudor, Wine Business Monthly, July 2005)
Overall case description from the perspective of 'Market system change'	Actively fostering the international shift from cork to metal screwcap closures by winemakers since 2001, followed by moderate to high consumer acceptance in all major geographical regions (except the US and China).			
Supporting quantitative data	See above: secondary data for 'significant levels of economic activity' and 'growth of the market system'.			
Set membership score	0.6 (more or less in)			
Reason for fuzzy-set attribution score	Even though the shaped market system fosters significant levels of economic activity, the growth of the market system is modest and the change in institutional logics have not been complete in all geographical areas (particularly consumer acceptance in the US and China). Hence the fuzzy-set attribution score is 'more or less in' in this specific case.			

Notes: Qualitative anchors (meanings attached to fuzzy values): 1 = fully in, i.e., presence of all dimensions with high intensity/importance; 0.8 = mostly but not fully in, i.e., presence of various dimensions with high intensity/ importance, with very few dimensions missing or with low intensity/importance; 0.6 = more or less in, i.e. mostly high intensity/importance dimensions with some dimensions missing or with low intensity/importance; 0.4 = more or less out, i.e. mostly missing or low intensity/importance dimensions with some high intensity/importance dimensions present; 0.2 = mostly but not fully out, i.e., various dimensions missing or with low intensity/importance, with very few high intensity/importance dimensions present; 0 = fully out, i.e., all dimensions missing or with low intensity/importance.

APPENDIX C. Reduced truth tables

Table C.1. Presence of market system change

Enhanced resource integration and related support	Collaborative value proposing process	Systemic and verified value promise	New represent-tations used in communication	Number of cases	Raw consistency	PRI consistency	Case as part of outcome
1	0	1	0	1	1.00	1.00	1
0	1	1	0	1	1.00	1.00	1
1	1	1	0	1	1.00	1.00	1
1	1	1	1	5	0.98	0.83	1
1	0	1	1	4	0.95	0.60	0
1	1	0	1	2	0.97	0.50	0
0	1	1	1	1	0.97	0.50	0
0	0	0	1	2	0.97	0.50	0
0	0	1	0	2	0.94	0.33	0
0	0	0	0	1	0.96	0.00	0
0	1	0	0	1	0.96	0.00	0

Table C.2. Absence of market system change

Enhanced resource integration and related support	Collaborative value proposing process	Systemic and verified value promise	New represent-tations used in communication	Number of cases	Raw consistency	PRI consistency	Case as part of outcome
0	0	0	0	1	1.00	1.00	1
0	1	0	0	1	1.00	1.00	1
0	0	1	0	2	0.97	0.67	1
0	0	0	1	2	0.97	0.50	0
1	1	0	1	2	0.97	0.50	0
0	1	1	1	1	0.97	0.50	0
1	0	1	1	4	0.93	0.40	0
1	1	1	1	5	0.88	0.17	0
1	0	1	0	1	0.94	0.00	0
0	1	1	0	1	0.94	0.00	0
1	1	1	0	1	0.94	0.00	0

Table C.3. Presence of change in market elements

Enhanced resource integration and related support	Collaborative value proposing process	Systemic and verified value promise	New represent-tations used in communication	Number of cases	Raw consistency	PRI consistency	Case as part of outcome
0	1	0	0	1	1.00	1.00	1
0	1	1	1	1	1.00	1.00	1
1	1	1	0	1	1.00	1.00	1
1	1	0	1	2	0.97	0.75	1
0	0	0	0	1	0.96	0.67	0
1	1	1	1	5	0.93	0.67	0
1	0	1	1	4	0.93	0.57	0
0	1	1	0	1	0.97	0.50	0
0	0	0	1	2	0.90	0.25	0
0	0	1	0	2	0.91	0.00	0
1	0	1	0	1	0.97	0.00	0

Table C.4. Absence of change in market elements

Enhanced resource integration and related support	Collaborative value proposing process	Systemic and verified value promise	New represent-tations used in communication	Number of cases	Raw consistency	PRI consistency	Case as part of outcome
0	0	1	0	2	1.00	1.00	1
1	0	1	0	1	1.00	1.00	1
0	0	0	1	2	0.97	0.75	1
0	1	1	0	1	0.97	0.50	0
1	0	1	1	4	0.90	0.43	0
0	0	0	0	1	0.92	0.33	0
1	1	1	1	5	0.85	0.33	0
1	1	0	1	2	0.90	0.25	0
0	1	0	0	1	0.92	0.00	0
0	1	1	1	1	0.91	0.00	0
1	1	1	0	1	0.94	0.00	0