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Title Page Information

Title: Empirical evidence for the Sport Value Framework

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How is value co-created in a sport business-to-business context?

Purpose: There are different streams of research in the service marketing literature concerning value co-creation. Most of the research focuses on value co-creation for the benefit of the customer. However, value is also co-created for the benefit of the provider, especially in a business-to-business context. The purpose of this research is to understand 1) how value is co-created in a sport business-to-business context (i.e., sailing) and 2) how the prevailing value co-creation approaches explain value co-creation processes differently in a sport business-to-business context.

Methods: The research was contextualised within the Auckland sailing cluster. Primary data was collected via 27 interviews, as well as observations at events. Secondary data include 13 documents of organisational information and archival data. Data were analysed deductively and interpreted using two different theoretical lenses: service dominant logic (SDL) and service logic (SL).

Findings: The value co-creation analysis of the sailing cluster permitted theorising about relationships in sport management at different levels of aggregation and abstraction. Every actor is embedded in a wider sport eco-system triggered by sport activities and always has a dual role as provider and beneficiary. Actors that are in control of specific sport activities are pivotal actors and provide a value network for others.

Implications: This research suggests that SDL and SL approaches to value co-creation are complementary and that further research is necessary to integrate and operationalise these approaches. It helps practitioners to better understand how value is co-created in sport business-to-business contexts.

Originality/value: This research shows the complementarity of two differing theoretical approaches to explain value co-creation in sport business-to-business settings.

Keywords: sport cluster, sport value framework, value co-creation, service-dominant logic,
service logic

How is value co-created in a sport business-to-business context?

How can we explain value co-creation?

There are several research streams in the service marketing literature explaining value co-creation (Cova *et al.*, 2011; Grönroos, 2011, 2012; Grönroos & Voima, 2013; Prahalad and Ramaswamy, 2004; Vargo and Lusch, 2004, 2008, 2016). Service marketing research considers service as a perspective on value creation rather than a category of market offerings (Edvardsson *et al.*, 2005; Vargo and Lusch, 2017). Value co-creation means that value is created by at least two parties through multiple resource integration or interactive value creation (Makkonen and Olkkonen, 2017; Vargo and Lusch, 2004). The central theoretical approaches to service marketing and value co-creation are the service-dominant logic (SDL) (Vargo and Lusch, 2004, 2008) and the service logic (SL) (Grönroos 2011; Grönroos, 2012; Grönroos and Voima, 2013).

Both SDL and SL share a service-centric approach to marketing and a belief that value for the customer is created by both the firm and the customer. SDL postulates that the customer is *always* a co-creator of value (Vargo and Lusch, 2008), while SL argues that value co-creation *can* occur between directly interacting parties (Grönroos, 2012). SDL emphasises the role of customers in co-creating value, the use of operant resources, and that value is conceptualised subjectively and realised when the customer uses firm offerings (Skålen and Edvardsson, 2016). SDL understands value as co-created and assessed in use by customers in their social contexts (Lusch and Vargo, 2014). SL emphasises that 1) value co-creation can be beneficial for both customer and provider, and 2) there is a difference between value formation (i.e., value simply emerges without intention) and value creation (i.e., instrumentally creating value) (Grönroos and Voima, 2013).

Applying SDL to sport management, Woratschek *et al.* (2014) provided a new logic for value creation in sport. The Sport Value Framework (SVF) proposes that sport should be

analysed by considering the entire value co-creation system instead of focusing on the perspective of individuals and organisations. Consequently, sport providers are platforms for value co-creation. For example, sport events are platforms “that actors can use to co-create value in their business and leisure activities” (Woratschek *et al.*, 2014, p. 21). Actors here can include fans, spectators, players, hospitality providers, media and sponsors.

An important debate in the SDL and SL literature concerns the actors involved in value co-creation. The traditional notions of ‘producer’ as creator of value and ‘consumer’ as destroyer of value are not appropriate in the SDL. Therefore, Vargo and Lusch (2011; 2017) proclaim an inclusive definition of actor-to-actor (A2A) exchanges replacing the traditional business-to-business (B2B) and business-to-consumer (B2C) perspectives. Because this conception of economic and social actors is novel, more research needs to investigate to what extent the A2A perspective makes sense in existing markets including the traditional B2B market and the B2C market. Before transitioning to a purely actor-to-actor service dominant logic on a meta-theoretical level, we need to understand how value co-creation occurs in existing markets on a midrange and micro-theoretical level (Vargo and Lusch, 2017).

Critics of SDL argue that the roles of actors and the processes of value co-creation are too abstract (i.e., metaphorical) and not sufficiently explained in the SDL (Grönroos, 2012), and hence, in the SVF. Therefore, practical implications are difficult to draw from the SDL. Grönroos and Voima (2013) develop further the service provider and customer approach by defining the provider sphere, the customer sphere, and the joint sphere.

The purpose of this research is to investigate value co-creation processes in a traditional B2B context but taking into account the final user when appropriate. We aim to discover how the two major theoretical approaches – SDL versus SL – explain value co-creation and the roles of various actors differently. Our goal is to contribute to the consolidation of emerging theory on value co-creation, developing midrange and micro theory

based on evidence from meso- and micro-level empirical data (Vargo and Lusch, 2017). We aim at exploring the A2A perspective (Vargo and Lusch, 2017) compared to a more traditional service provider to consumer perspective (Grönroos and Voima, 2013). This is why we contribute to the theoretical debate around actor-to-actor systems versus business-to-business and business-to-consumer markets, and to gain a better understanding of value co-creation in sport management.

The empirical context of this study is a sport B2B network, more specifically the Auckland sailing cluster. Sport clusters are geographical concentrations of interconnected organisations that provide different products or services related to a sport, professional and amateur sport entities, sport-related education/research institutes, and governing bodies that exert control or influence over these organisations (Gerke *et al.*, 2015). Sport clusters are characterised by interorganisational relationships (i.e., dyads) and networks (i.e., triads or more actors) with varying degrees of formality. The variety of actors, their relationships and interactions in sport clusters make them an interesting case to study concerning value co-creation (Gerke *et al.*, 2018).

The remainder of the paper has the following structure. The next section reviews the literature on theoretical approaches to value co-creation, notably SDL and SL. We then review the existing literature on value co-creation in B2B contexts and in the sport context. The third section describes the data collection and analysis processes. The findings are presented in the fourth section. Finally, the main findings are discussed, implications for researchers are highlighted, and future research directions and limitations are indicated.

Theoretical approaches to value co-creation

Service-dominant logic (SDL). SDL focuses on intangible resources, co-creation of value, and relationships instead of exchange of tangible goods (Vargo and Lusch, 2004). A key feature of the SDL is the distinction between operand resources – those on which an act is

performed – and operant sources (i.e., skills and knowledge) – those which are applied to operand resources (Vargo and Lusch, 2004). Customers play an important role because they contribute their operant resources to the value that is created from the operand resources. For example, the skills to play tennis (i.e., operant resource) are crucial in the use of a tennis racket (operand resource) (Vargo and Lusch, 2004). Furthermore, SDL argues that value is always co-created. Hence, firms can make value propositions and the concerned beneficiary (Vargo and Lusch, 2008) always determines the value of each proposition. Recent publications emphasise actor-generated institutions and institutional arrangements as coordinating mechanisms in economic and social exchange (Vargo and Lusch, 2016, 2017). Institutions are systems of established and embedded “social rules that structure social interactions” (Hodgson, 2006, p 18). SDL considers institutions as “rules, norms, meanings, symbols, practices, and similar aides to collaboration” and institutional arrangements as “the foundational facilitators of value co-creation in markets and elsewhere” (Vargo and Lusch, 2016, p. 6). More generally, institutions determine constraints and coordination in economic (and other social) networks, i.e., they determine governance mechanisms in markets that are networks (Vargo and Lusch, 2016). The inclusion of institutions in the SDL appeared in a recent update of the SDL. In this revision, four of the foundational premises (FP) (i.e., FP1, FP6, FP9, FP10) were renamed as axioms with the intention to consolidate the key characteristics of SDL. The inclusion of institutions as key factor in value co-creation represent the fifth axiom (see Table 3).

Service logic (SL). SL asserts that value co-creation is only possible from direct interactions between at least two parties with the same goal (Grönroos, 2011; 2012). Interaction integrates and coordinates distinct activities and processes, thus enabling co-creation. Grönroos and Voima (2013) distinguish value creation in the supplier’s sphere of value creation when designing, manufacturing and distributing the service or product (or

combination of both) from the customer's sphere when using the service or product offered by a provider. In addition, there is the joint sphere, which represents interaction between provider and customer (Grönroos, 2011; Grönroos 2012; Grönroos and Voima, 2013). According to SL, independent value creation occurs when (1) providers produce value propositions independently - respectively potential value for the customer (e.g., design, manufacturing, and distribution of tennis rackets); and (2) the customer creates independently value from the value proposition of the provider through the usage of the proposed product or service (i.e., using the tennis racket when playing tennis). Value co-creation across provider and customer sphere can happen under particular circumstances (Grönroos, 2011).

In SL, value co-creation for another party occurs only if there is direct, personal interaction (Grönroos and Voima, 2013). There are two cases. First, the provider co-creates value by engaging in the customer's value creation sphere (e.g., providing advice or guidance how to use the racket when playing tennis via videos or free lessons). For this to happen the provider is constantly or partly present in the customer's sphere and participates in the process of value proposition creation during the usage of the proposed product or service (value-in-use) (e.g., through lead users identified and used by the providers to be in touch with their customers). Second, the customer co-creates value by engaging in the service provider's value production sphere (e.g., by providing feedback on product quality or by making suggestions for improvement concerning the design of the tennis racket). For this to happen the customer is constantly or partly present in the provider's sphere and participates in the process of value proposition creation (e.g., through customer communities that are involved in the providers' value production process) (Grönroos and Voima, 2013). In addition to the differing roles of the principal actors, Grönroos (2012) argues that other customers also influence value creation and co-creation. A consideration of other customers in the value creation process adds additional dimensions of co-creation.

Comparing SDL and SL. Using Vargo and Lusch's (2016) aggregation argument, we argue that SDL operates at the macro and meso-level whereas SL operates at the micro-level with an emphasis on the different spheres of actors (i.e., firms and customers) in the value creation process. There are three key differences between SDL and SL. First, there is a different understanding of value co-creation and consequently a difference in terminology. Second, SDL is more abstract as it claims to be a general theory of the market transcending disciplines (Vargo and Lusch, 2017). Third, SDL research looks at issues up to the meso-level and develops axioms of economic exchange in service eco-systems at the macro-level, whereas SL focuses on value creation at the micro-level (Vargo and Lusch, 2016, 2017).

Value co-creation research in B2B contexts. There is a growing body of research on value co-creation in B2B contexts. While there is research using directly the SDL perspective as the theoretical lens to analyse diverse aspects of value co-creation in B2B contexts (e.g., Brown *et al.*, 2011; Chowdhury *et al.*, 2016; Standing and Standing, 2015), there is also research looking at value co-creation in B2B contexts from an indirect perspective through networks (Brass *et al.*, 2004). For example, Chowdhury *et al.* (2016) investigate the potential negative side of value co-creation in business networks that may arise through role conflicts, role ambiguity, opportunistic behaviour and power plays. Brown *et al.* (2011) look at brand extension success of product-centric firms integrating services in their portfolio using the SDL perspective. Standing and Standing (2015) explore value realised from e-marketplaces employing a service exchange perspective. Network research focuses on interconnected social and economic relationships between actors at different levels (e.g., individual, organisational, interorganisational). The level of analysis in network research are relations (Brass *et al.*, 2004), which are the locus of value co-creation according to SDL (Vargo and Lusch, 2004; 2008) and SL (Grönroos, 2011, 2012). Value co-creation occurs as consequences of networks at intergroup, interunit or interorganisational level concerning innovation, survival and

performance of organisations involved in networks (Brass *et al.*, 2004). An extensive review of this literature is beyond this article's scope.

Literature on value co-creation in the sport context. Traditional approaches to value creation in sport management refer to the goods-dominant logic of economic exchange in which firms produce products or services and consumers destroy them by using them (Chelladurai, 2013; Vargo and Lusch, 2004). Woratschek *et al.* (2014) adapted the SDL to create the Sport Value Framework (SVF), the first service-centric approach to value creation in the field of sport management.

Following Vargo and Lusch's (2016) aggregation argument, the SVF distinguishes between three levels of analysis in sport management (Woratschek *et al.*, 2014). If organisations (e.g., firms, teams, associations) or individuals (e.g., fans, spectators, athletes) are the focus, the analysis is intra-level. If bilateral relationships – dyads - between firms and customers (e.g., sport equipment provider and athlete) or multilateral links between at least three actors – triads – (e.g. sport team, sponsor and spectator) are in the focus, the analysis is at micro-level. At the meso-level, the sports industry is the focus of analysis which can be traced back to a certain sporting activity. The macro-level covers broader societal structures and links to actors outside of this industry. Therefore, SVF refers to all levels of aggregation. An analysis of all levels provides a comprehensive understanding of value creation processes in sport industries (Woratschek *et al.*, 2014).

The first foundational premise in the SVF is that “sporting activities are the core of sport management” (Woratschek *et al.*, 2014, p. 14). Sport management is inseparably linked with sporting activities. Consequently, networks in sport industries emerge because sport activities exist. Sport associations, companies, leagues, teams, athletes, sponsors, spectators, fans, and other actors in sport industries are interrelated and interact because of sport activities. If sport activities originate networks of social and economic actors, there is a need

for coordination. Coordination mechanisms exist through institutions and institutional arrangements that are rules and norms for social and economic exchange and interaction (Hodgson, 2006; Vargo and Lusch, 2016, 2017). Foundational premise 6 clarifies value creation means resource integration: “Sport customers co-create value primarily by integrating resources from their social groups’ (Woratschek *et al.*, 2014, p.17). SVF adopts the broader definition of value co-creation according to the SDL because sport consumption occurs usually in the presence of a number of other actors as summarised in foundational premise 10 “The role of firms, customers and other stakeholders is to integrate the resources of their specific networks to co-create value” (Woratschek *et al.*, 2014, p.19).

Recent SDL and SL literature with the focus on value co-creation in the sport B2B context is rare. Similar to the literature on SDL within B2B contexts, there is some research analysing value co-creation in sport applying directly the SDL or SL perspective, while other research indirectly looks at value co-creation in the sport B2B context through a network approach (compare Brass *et al.*, 2004). Wäsche *et al.* (2017) undertook a review of literature in sport using social network analysis and identified relevant works that adopt a network-related approach relating indirectly to value co-creation. For example, Babiak (2007) and Babiak and Thibault (2009) investigated bilateral and multilateral cross-sectoral partnerships identifying challenges in creating value from those. Wäsche (2015) and Wäsche and Woll (2010) investigated value co-creation through cooperation in regional sport tourism networks as interorganisational settings.

There is some research on value co-creation in the sport context using the SDL or SL logic directly as theoretical framework. In their conceptual paper, Woratschek *et al.* (2014) provided many practical examples of value co-creation (e.g., fans singing songs to support their team in a football stadium). Yngfalk (2013) investigated the role of various stakeholders in the co-creation of value around the football experience in the Swedish elite football league.

They found that value co-creation in a complex network of multiple different actors distort the value co-creation process. Different interests and logics of stakeholder groups lead to fragmented and disharmonised value co-creation processes but also to opportunities for new forms of value co-creation (Yngfalk, 2013). Woratschek *et al.* (2019) studied a similar context, the professional German soccer league, but with a different research design and purpose. They develop a conceptual framework that integrates relevant actors' contributions to value co-creation to determine antecedents of customer satisfaction and loyalty. The aforementioned studies take a SDL perspective in a B2C (football club to fans perspective) but include some B2B relationships (football club to media, sponsors, local authorities relations). Two other studies in the sport context explore value co-creation indirectly through a B2B network study. Morgan *et al.* (2014) studied factors of value co-creation in the B2B context of a sport event property holder and the four corporate sponsors. They found that partner satisfaction and alliance stability depends on relational constructs and formal governance mechanisms. Wagner *et al.* (2017) investigated ways of value co-creation in a similar research context, the sponsorship networks of two Danish professional team sport clubs. They find that even though the main motivation for joining sponsor networks are business-related, many of them benefit through new relationships to organisations outside of the network but linked to and mediated by network members (compare: weak ties (Granovetter, 1974)). Not all sponsors are able to benefit in the same manner from the sponsorship engagement. The active role of the clubs and club managers is crucial here to co-create value for sponsor in the sponsorship network (Wagner *et al.*, 2017).

There is research on sport clusters applying the SDL perspective to the B2B context of localised networks of firms including sport equipment manufacturers and service suppliers, sport organisations, and public organisation (Gerke *et al.*, 2019). The sport cluster concept builds on the cluster theory established in the field of strategy (Porter, 1998, 2008) and

economic geography literature (Marshall, 2000[1890]). Gerke *et al.* (2015) conducted a detailed case study of the French sailing cluster in Brittany to advance the concept of sport clusters. The authors identified ten different types of cluster organisations as stakeholders and classified them as private, sport, and public organisations. Bilateral relationships (i.e., dyads) and multilateral networks (i.e., triads or more complex relationships) characterise the sport cluster and are potential locus of value co-creation through dynamics ranging from competition to citizenship behaviour (Gerke *et al.*, 2019). All levels of aggregation from the SVF are applicable to sport clusters. The intra-level of the SVF are the cluster organisations. The micro-level refers to relationships within a dyad or triad of cluster organisations, and the meso-level refers to the entire network of cluster organisations and their relationships which are originated by sport activities. Relationships to organisations outside of the cluster represent the macro-level.

In this study, sport clusters provide the context to analyse value co-creation processes. The aim of this research is to understand 1) how value is co-created in a sport business-to-business context and 2) how the prevailing value co-creation approaches explain value co-creation differently in a sport business-to-business context. Our research contributes to the debate on the merits of a single actor perspective with actor-to-actor relationships.

Methods

This article provides a complimentary theoretical perspective on the article “The sport cluster concept as middle-range theory for the sport value framework” (Gerke *et al.*, 2020). Consequently, this study uses the same data as utilised by Gerke *et al.* (2020). While Gerke *et al.* (2019) demonstrate how the sport cluster concept can serve as a middle-range theory to bridge empirical findings and general theory such as the sport value framework. In this article, we show how the SDL on a meso-level and SL on a micro-level help to explain value co-creation in a sport B2B context.

The key features of our methods are that the research was conducted on organisations in the Auckland sailing cluster. The cluster specialises in the provision of ocean racing and leisure sailing products and services. We conducted 27 interviews across 25 different organisations (Table 1). We selected interviewees based on the cluster organisation typology for sailing clusters developed by Gerke *et al.* (2015). We gathered documents from participants and relevant sport and industry events. The 25 different organisations were distributed across the full range of cluster organisations.

-----Insert Table 1 here. -----

The interview guide covered the following themes: introduction of the interviewee and the organisation, location-specific factors of the cluster, formal and informal interorganisational relationships and networks, and various dimensions of interorganisational behaviours (i.e., competition, cooperation, collaboration and citizenship).

Data analysis. Interview data was recorded, transcribed and summarised in one report per interview. Reports were also written for observations. Data were organised according to actors. Therefore, we analysed value creation actor-by-actor. On the one hand the different spheres of SL – the customer’s sphere and the provider’s sphere - build the guideline of this analysis (see Table 2). On the other hand, the five axioms of SDL (Vargo and Lusch, 2016) also guided our analysis (see Table 3). Based on this analysis of value co-creation we identified themes related to the value co-creation activities. Yin (2009) explains that there is no single data analysis method for qualitative research but that the researchers has to define the appropriate analysis strategy in line with the research question and collected data. One data analysis strategy is to follow theoretical propositions. In our case, we utilised theoretical propositions from established service-centric marketing theories, notably the spheres from SL

(see Table 2) and the axioms from SDL (see Table 3). While our methods incorporate seminal ideas on case study research by Yin (2009) and Eisenhardt (1989), we also utilise interpretive sensemaking and contextualised explanation as alternative forms of interpreting case study data (Welch *et al.*, 2011). This means, the context of our studied case provides numerous clues to illustrate SDL on a meso-level and SL on a micro-level. The basis of our analysis are interview summaries, interpreted in terms of the SDL and SL because these are the underlying approaches of value co-creation. The analysis follows a deductive logic to investigate SDL and SL propositions and to reify or revise these theories as required (Flyvbjerg, 2006; Welch *et al.*, 2011). The second author verified, questioned and challenged data coded by the first author. The first and second author discussed divergent opinions on the coded data. This procedure took place in an iterative process. In case of continuous incoherence or disagreement, the first and second authors consulted the third author to create agreement.

Results and findings

The results discuss the role and practices of different actors of the sailing cluster in value co-creation through SL and SDL lenses. Table 2 and Table 3 provide the empirical evidence. The following paragraphs present first value co-creation in the sailing cluster through a SL perspective and then through a SDL perspective presenting examples in a narrative manner. We identify general themes related to value co-creation in B2B contexts to address our research question (i.e., how value is co-created in a sport business-to-business context) that we summarise at the end of this section.

Value co-creation through the SL perspective. Shipyards are at the core of the sailing cluster. The shipyards' provider sphere comprises sourcing of parts and material, manufacturing, testing, and often distribution of sail or power boats. The shipyards' customers are private customers, sport event organisers, sport teams, navy, and others whose sphere consists in using the sail or power boats for recreational boating (e.g., pleasure boating,

fishing, wakeboarding), racing (i.e., amateur and professional), as work boats (e.g., navy, transport) or during sport events for different purposes (e.g., judging, security, taking visitors out). Shipyards take the role of the customer regarding numerous local suppliers of boat-building material and parts. Provider and customer sphere overlap at several instances (refer Table 2).

The value co-creation in the joint sphere (customer joins provider sphere) relies on information loops from the supplier to the customer concerning product specifications and requirements. This applies for the situation where the shipyard is in the customer role requesting information from their suppliers. See statement below.

With some of the suppliers we help them to develop their products, too, but it is also for our gain, we both gain. So obviously we want the best materials in the world, so a good example is [name of company] who build a lot of resins and it's an innovative New Zealand company. We work closely with them and we have developed our own products with them. (SY3)

Information sharing and feedback loops are also crucial when the shipyards are in the role of provider requesting information from their customers to develop better products. The statement below testifies this.

A lot of our innovation comes from customer feedback. All these new products are evolutions of customer feedback basically. So, for example people who come in and have an old model boat and who say "Hey look, I love my boat but I don't want this or I'd like to add this, this, and this. Would you build it?" (SY1)

The value co-creation in the joint sphere (provider joins customer sphere) relies on suppliers' activities to make the customer's experience as pleasant as possible by providing additional services (e.g., after-sales service, continuous stock provision) with the supplied

product. The benefit for the provider is retaining customers while the customer gets the best possible service. The citation below testifies this.

Customer attention is the biggest thing for us and retaining our customers. Once you have sold them the product, keep them in our service department and keep the papers. The guy that I was on the phone to when you came in here, he is in the South Island, he has bought seven boats of me and just ordered another one. So that is his eighth boat that he ordered of me. (SY1)

Naval architects provide designs for sail and power boats to shipyards and boat project managers. The provider sphere consists in drafting and producing a boat design and respective calculations and documentation to construct the boat based on the design provided. The customer is usually the shipyard who integrates the naval architect's provider sphere from the very beginning of the project. The interviewed NAs work mostly on customised boat designs and, therefore, they need to know the preferences and requirements of the customer in order to design a boat that corresponds to the customer's needs. Similarly, naval architects are closely integrated in the customer sphere, e.g., when the customer takes the boat out for the first time, the respective naval architect accompanies the shipyard or boat owner. Value co-creation in the joint sphere happens through tight integration of the provider in the customer sphere when testing the boat or variations of the boat design.

The naval architect knew he wanted this long fin and bulb keel to lift and lower over this range. He had no idea how to make that work. We spent months designing and developing and testing and putting it into place on that boat. A lot of it is driven by ideas that come from what owners want. (SY2)

Value co-creation happens also with NA in the role of the customer with regards to numerous sub-contractors that provide service and product propositions for the boat design. The naval architect engages in its suppliers' sphere by sharing details about tenders and

drafting a joint proposal to respond to the tender. This generates business not only for the naval architect but also for the suppliers. The suppliers and subcontractors on the other hand provide some upfront-unpaid work to provide input for the bid.

Marine equipment firms engage to varying extent in the conception, manufacturing, distribution, and installation of diverse marine equipment including simple products such as blocks and winches, but also electronics, navigation systems and integrated control panels (provider sphere). One interviewee's provider sphere includes designing electrical automation systems, producing them and installing control centers of automation systems. Customers are mainly super yacht builders (shipyards) or private yacht owners. Sometimes it is difficult for marine equipment firms to both include the customer in its own provider sphere and to enter the customer's sphere. The reason is that rigging firms and other marine equipment firms are intermediaries between them and the final customer (i.e., shipyard or boat owner).

Intermediaries but also boat project managers or naval architects act as safeguards or gatekeepers in this case to prevent unwanted suppliers approach their client. To overcome this the automation systems supplier collaborates with other marine equipment firms that provide moving elements that need to be integrated in the automation and control system.

Sailmakers and rigging firms design, manufacture, and/or distribute sails and/or rigging material for all kinds of boats including high performance race boats, pleasure cruising yachts, super yachts, sport boats, and dinghies. The customer sphere for these firms relates to shipyards and professional sailing teams, but also individual boat owners.

Involvement of customers in sailmaker and rigging firms' value creation sphere and inversely depends on the type of customer. Professional teams are often early involved in the value creation process in the provider sphere because the professional athletes provide ideas for sail design and testing of prototypes.

It's just a continuous cycle of building of knowledge. It's quite a unique sort of environment. So that was a major change and they realised, the client, and when we say the client we mean [name of professional team], realised that it is very, very important to actually engage the suppliers and make them part of the whole process and not just say "you sell sails and you built sails and you design sails, do it. No, we want you to do all that, but we want you to also contribute to the design of our boat and therefore you might be able to design a better sail because of that." So that has been going on for 20 years now, that whole process through various campaigns. (SR1)

This early involvement occurs less frequently for other customers like individual boat owners. In the latter case, the shipyards as intermediary between sailmaker/ rigging firms and final customers are involved in the development process of sails and rigging according to the desired boat concept and design. We found no evidence about sailmakers and rigging firms as customer within the sailing cluster.

Marine service firms provide different kinds of services related to sailing or boating. We interviewed a boat broker, two boat project managers, and one rigging installation and maintenance firm. The boat broker makes a value proposition of connecting and coordination by being intermediary for boat buyers and sellers. The boat project managers provide value propositions of coordination and boat-building expertise for future boat owners. The rigging services firms provide a value proposition of security and maintenance through installing, commissioning, and maintaining masts, rigging, and sail handling systems on sailing boats. MS's customers are shipyards or boat owners. Provider spheres vary due to the varying nature of the services provided. An example of the joint sphere is the shipyard engages in the value creation process of the rigging installation and maintenance firm by providing the necessary information about to the boat and boat use so that MS can perform install equipment correctly. On the other hand, MS might accompany the boat owner at the first use of the boat

after commissioning or maintenance to assure the owner and to make sure that everything is working well. We found no evidence for MS as customer in the sailing cluster.

The interviewed media/ communications firms' value creation sphere consists in producing and distributing content for a specialised boating journal. The customer's sphere comprises reading the journal, and customers include all kinds of sailors and people interested in sailing. Customers integrate themselves in the provider's value creation process by participating in interviews or facilitating MC's visits to sailing clubs or companies. The same value co-creation processes take place when reversing the relationships (i.e., MC as customer).

Professional sport organisations are profit or non-profit organisations that compete in professional sailing events. We interviewed two representatives in the national body for elite sport development in sailing and one member of an ocean racing team. The latter provides value creation through the design and production of high-performance race boats; the training and participation in races of a professional sailing team; and the funding, management and marketing of a professional racing team. The customer sphere (e.g., spectator or sponsor) comprises admiration of sailing performance and following the race results via various means, i.e., at the race event, via live media streaming or replay, through other media such as TV, radio or smart phone applications. Additional aspects of the customer sphere can be the purchase of merchandising articles of the race team and engaging in fan activities such as fan clubs or initiatives as well as playing virtual regattas on smart phones. The customers engage little in the provider's sphere, however, professional sport teams engage with the customer's value creation process in various ways, for example, during ocean racing regattas the boat skippers send videos to the spectators. There might be other interactive elements, for example, a spectator can win a competition to sail with their preferred team. Regarding the sponsor as customer, the activation of sponsorship is at the core of the customer's sphere. The sponsor

can be involved in the provider sphere of the PS to fund the boat-building project at an early stage but the PS can also be involved in the sponsor as customer sphere to support sponsorship activation activities. The PS as customer has a number of boat parts and services suppliers and engages heavily in its suppliers sphere to provide relevant information and guidance in the design and production of suppliers' parts and services. These providers engage in the PS as customer sphere through maintenance services after-sales.

Amateur sport organisations are concerned with organising sailing/ boating at amateur level usually as non-profit organisation. We interviewed two local sailing clubs with similar results. The amateur sport organisations' sphere comprises the planning, organisation, and delivery of sailing regattas and sailing youth programmes. The customers are club members, family, and friends who participate in the sailing regattas and youth programmes. Customers engage directly in the provider's sphere and vice versa. Prior to the sailing events customers are less involved in the provider's value creation process. The amateur sport organisations create an annual event calendar and there is no or little integration of the customer within this task, but once the calendar is out, club members register for the events. However, the main value creation phase occurs when both the customer engages in the provider co-creation process and the provider engages in the customer's value co-creation process simultaneously. This is the case when the actual race takes place. Race organisers have determined a racecourse and called upon judges and course markers to assure the race can take place. Amateur sport organisations are customers when buying boats, for example for youth training programmes. One of the amateur sport organisations participated in defining specifications sheets and testing new training boats in collaboration with the supplier.

Education and research institutes are secondary education organisation or research organisations with education programmes and/ or research related to sailing/ boating. We interviewed one university with a yachting research unit. This research unit produces

knowledge relevant for sailing performance for example through the construction and running of a wind tunnel to measure sail performance. The customers are professional or amateur sailors that use the knowledge generated by the university directly in practice or through products that have benefited from university's research (e.g., sails). Members of the university accompany or watch sailors when using or testing the research-based material. Little information of the university as customer is evident in our data set.

Governing bodies are governmental or non-profit organisations that control, influence or regulate other actors in the cluster. We interviewed one industry association and two members of the state trade and export agency. The marine industry association federates marine industry members, coordinates industry training, and provides advice for export in the marine industry. The customers' sphere of this governing body comprises members that utilise or participate in the different activities (committees) organised and animated by the industry association. Customers engage directly in the value creation process of the industry association. In fact, customers are association members and part of various committees that work on the different topics in the association. Members are inherent part of the value creation process as they co-create content as members of the different committees. In this case the customer value creation process is closely interwoven with the providers' value creation process. Little information of GB as customer is evident in our data set.

Value co-creation through the SDL perspective. Power boats and sail boats can be used for different purposes (e.g., safety during on-water sport events but also as pleasure craft or work boat for power boats; cruising or racing for sail boats) (Axiom 1). Event organisers are beneficiaries of shipyards' service provision of on water security through power boats during sailing regattas, but also the athletes and spectators are beneficiaries. Moreover, the local authorities are both co-creator of the event and beneficiary of the safety provided by shipyards' power boats. The athletes and spectators of the sailing regatta are co-creator of

value either due to their perception (e.g., of performance or safety) or participation (e.g., cheering during the race, or safety feelings in case of rescue) (Axiom 2 and 3). The integration of personal experience and perception determines the realised value of the value proposition of performance or safety (Axiom 4). Furthermore, both performance and safety is not in the hands of one single actor but an organising committee and its network including various maritime authorities and respective regulations (Axiom 5).

Naval architects apply their knowledge of boat-building to make a B2B value proposition (i.e., offering the boat design for purchase (Axiom 1)). For the shipyard, the boat design is necessary to construct a boat. The capabilities of the shipyard to realise the boat concept and design determine the realised value from the naval architect's value proposition (Axiom 4). Resources from the sub-contractor network of both the naval architect and the shipyard influence the overall value creation (Axiom 2). It is usually a combination of economic actors (e.g., marine equipment suppliers, sail makers), social actors (e.g. elite sailors) that test the boat by integrating their operant resources, mainly their expertise (Axiom 3). An example from the super yacht shipyard testifies that value is co-create by multiple actors (Axiom 2):

Normally we are contracted to the owner or his representative or his company. Within a contract there are obviously a lot of partnerships going on, for example [name] was the exterior designer of this boat, so we are working with [him] on the exterior styling and naval architecture. The interior designer might have been [name] so we are working closely with the interior designer to make sure that we are getting their design drawings right because we do all the construction drawings and manufacturing. We are working very closely with those companies. We are obviously dealing with a flag society so if the yacht is representing the Cayman Islands we are dealing with the Cayman Islands flag authority. The boat might be built to class. It

might be built to the Lloyd's register survey. We are dealing with the classification society very closely. And then of course rig manufacturers, sail manufacturers, paint suppliers, ... There are hundreds of different relationships going on at any one time but to different levels, different degrees of involvement. (SY2)

Larger contracts for example for regattas with one design policy are usually tendered and, therefore, naval architects build consortia with other actors to bid (Axiom 5).

Marine equipment firms make value propositions to easier navigate the power or sail boat thanks to various electronic and navigations devices or just advanced handling gear such as blocks and winches. The value proposition is easy handling of devices of boats as means for comfortable and secure boat navigation. Marine equipment firms apply their knowledge and skills about automation services and systems combined with the information from other complementary marine equipment and rigging firms concerning the devices to be installed on the boat (Axiom 1 and 2). Without the information input (i.e., resources) of the other marine equipment suppliers and the rigging firms, it is difficult for the marine equipment firms to deliver its value proposition as a boat is a complex and intertwined system combining many parts provided by different specialists (Axiom 3). The following quotation illustrates this dilemma.

In the cluster environment the thinking is that companies of a similar sector can share information for mutual benefit. So why does not a rig or a sail manufacturer share that information with us at an early stage, at a point where it is of some use to us to also offer additional services? (ME1)

The determination of the final value is up to the shipyard or boat owner (Axiom 4). This can be affected by norms and regulations of boat classifications agencies (Axiom 5).

The value proposition of sailmaker/ rigging firms varies depending on the type of customer (beneficiary). All beneficiaries are interested in sails/rigging material for propulsion

of a boat. The ultimate goal via this means can be speed and sport performance for a professional or amateur racing team. It can be safety and comfort for a super yacht or cruising yacht owner. Finally, sails have been recently re-discovered to make cost savings and to be more environmentally friendly in water transport. Knowledge about aerology permit sail maker and rigging firms to develop the optimal propulsion of a boat (Axiom 1). Multiple actors co-create value as indicated in this citation:

At our level the innovation comes more at design level and having good designers who interact a lot with both other members of the industry but also with top clients, that are top racing people and the likes and having very good contacts there and very good relationships. That is an area where we are particular in New Zealand because not only has our marine industry grown but our professional sailing industry and the number of professional sailors has also grown. Formulating good relationships with those people has been very important. (SRI)

External factors such as weather conditions, team performance, and competitors' performance influence value creation through resource integration of different actors involved in the value creation process (Axiom 3 and 4). Value can be determined on a team level and on an individual level of the boat owner (Axiom 4). Finally, boat classification agencies can have a coordinating function in one-design race boat classes (Axiom 5).

One example of a marine service firm's value proposition is a secure sailing experience through commissioning, installing, and maintaining sail masts and rigging systems. This includes knowledge about the security standards and the correct application of those in the boat commissioning and maintenance procedures (Axiom 1). One of the marine service firms works with mast and rig makers and shipyards as intermediary to the client to access the relevant information and equipment to undertake their services (Axiom 2 and 3). The boat owner, using the serviced boat and the perceived security, determines the final value

within the marine service firm's service provision (Axiom 4). Institutions that define norms and regulation for boat commissioning and maintenance indirectly partake in this value creation process as well (Axiom 5).

Media and communications firms' value proposition to sailors and people interested in sailing is being informed about boating and sailing news. The service provision by one of the media communication firms is based on access to a well-connected network in the sailing milieu and journalistic skills to transform content acquired in the network into journalistic content (Axiom 1). The sailing journal that we interviewed depends on the myriad of actors in the sailing industry to access information, events, sites, and people (Axiom 2 and 3). The readers determine the perceived value of the journal and its service provision (Axiom 4). Individual actors' willingness to engage with MC is a social form of institution directly affecting MC's success.

Professional sport organisations are customer of shipyards, naval architects, sail and rig makers, marine service firms and other suppliers for the design and construction of race boats. Professional sport organisations as customers engage heavily in the providers' value creation process through providing design ideas, relevant information concerning the navigation, testing of prototypes and promotion of suppliers' products and services.

That is one of the great things about ETNZ that everybody is based in the same building. You have got the whole team there and the designers are all sitting in the same room as the sailors and are talking to each other. Then, you can walk downstairs and talk to the boat builders that are actually putting stuff together and they have a totally different opinion on everything. That is one important thing, it's just having everybody in one space so that you can communicate. The same thing with the all the small boat yard we are working with. (PS3)

Professional sport organisations also include national sport organisations in sailing. Their value proposition concerns any person interested in professional sailing and consists in provocation of excitement, emotions, and passion through sport spectacle and performance. The value proposition is based on the application of design, sailing, and management knowledge and skills in the context of professional sailing such as regattas (Axiom 1). Numerous actor categories and actors participate in the value creation process of professional sport organisations. Competitors influence the perceived performance of professional teams and the attractiveness of the regatta is determined by the balance of competitiveness amongst competitors in the race. Spectators and their behaviour might influence the experience of the sport event. The media coverage can influence the perceived value of spectators (Axiom 2). The knowledge and skills (i.e., resources) of these different actors all determine value creation. The latter is determined individually by every single spectator (Axiom 3 and 4). Sport governing bodies (e.g., national and international federations) and sport event organisers influence professional teams' value creation process through the definition of race rules and regulations, race calendar, and boat classifications (Axiom 5).

The value proposition of amateur organisations is the enjoyment and excitement through the participation in sailing regattas or courses. The applied service to facilitate these value propositions is the knowledge about race organisation applied to sailing regattas (Axiom 1). Numerous actors co-create the value by integrating their respective resources. For example, judges apply their knowledge about race rules and experience from previous races to judge new races (Axiom 2 and 3). Personal and environmental factors of each beneficiary determine the perceived value (Axiom 4). Sport governance bodies might influence amateur organisations' value creation process through the definition of race rules and calendars (Axiom 5).

Professional or amateur sailors are beneficiaries of education and research institutes' research results either directly or indirectly via shipyards, sail and rig makers, and other industry actors that integrate the research results in their value creation process (Axiom 2 and 3). In this process, each involved actors integrates its own respective resources (e.g., previous experience with sail performance). The ultimate value of education and research institutes' value proposition is evaluated by the final user of a boat product that has benefitted from the research results (Axiom 4). Agreements between actors from different sectors including the education and research institute might influence the value co-creation process from an institutional point of view.

Governing bodies provides a federating platform for the marine industry actors. Governing bodies apply knowledge on how to federate and create networks (Axiom 1). Value is only co-created through the participation of multiple members. The more members, the stronger the network (Axiom 2). All network members integrate their respective resources in the association via participation in different committees (Axiom 3). Each association member has its own perception of the value provided by the industry federation and its activities (Axiom 4). A governing body itself is coordinator for certain activities of the actors of the cluster (Axiom 5).

--- Insert Table 2 ---

--- Insert Table 3 ---

The analysis of our data allowed us to identify common themes related to value co-creation. We noticed that recurring themes in terms of practices that underlie value co-creation are information loops, feedback and knowledge sharing. More specifically, we noticed that early involvement and tight integration are crucial for B2B value co-creation. The result of the latter are amongst others specific input for product development, co-development

and supply collaboration. An aspect that prevented value co-creation is safeguarding and gatekeeping in some relationships or network configurations. Overall, our findings indicate that resource integration usually concerns operant resources.

Discussion

In this paper, we analysed data from the Auckland sailing cluster to explore how value is co-created in a sport B2B context and how the prevailing theoretical approaches explain value co-creation processes differently in a sport B2B context. The two prevailing theoretical approaches on value co-creation in service marketing literature are the SDL (Vargo and Lusch, 2004, 2008) and the SL (Grönroos, 2011; Grönroos and Voima, 2013). The results show that both theories are useful for illustrating value co-creation processes in a sport sailing cluster. Each theory allows the reader to uncover different aspects of value co-creation.

The SL perspective highlights the different kinds of relationships and interactions that permit co-creation in a B2B context. Using the overlapping spheres of the provider and the customer stimulates the researchers to think beyond classical buyer-supplier relationships. Our data show that in most cases the respective organisation can take not only the role of the provider but also the role of the customer (or beneficiary) in a different actor configuration and value creation process. Moreover, the joint spheres provide a basis to think about possibilities for co-creation between providers and customers. The actors' spheres provide a basic understanding of integrating own resources in the value creation process whilst independent from other actors. If at least two actors interact, a dyad with two actors' spheres and a joint sphere can be modelled. This is why the application of the joint sphere of the SL leads to a deeper understanding of value co-creation in a specific context at a micro-level, here sport clusters (Grönroos, 2011, 2012; Grönroos and Voima, 2013).

The case of sport clusters in sailing shows that the B2B links between actors are multifaceted and interactional. The most common forms of interactions are information loops,

feedback and knowledge sharing. These interactions clearly refer to operant resources as key for value co-creation (Vargo and Lusch, 2004, 2008, 2016). Early involvement and tight integration are crucial for value co-creation through co-development and supply collaborations. This confirms previous findings on B2B value co-creation benefits (Chowdhury *et al.*, 2016). Resources from other actors are always integrated in an actors' sphere. SL is adequate to analyse value co-creation at a micro-level and intra-level. At a meso-level SDL comes into play.

The analysis of our data using the SDL lens provides a rich analysis of service exchange and value co-creation in a sport eco-system at the meso-level. We investigate business-to-business relationships in a sailing cluster. Each SDL axiom stimulated the search of detailed information about the role of different actors, what resources are integrated, and what institutions influence the value co-creation process. We found that actors integrate mainly operant resources in the value creation process. Our analysis also shows that the provider and customer dichotomy is not meaningful as in the sailing cluster final users can be individuals or organisations and they can take the role of provider as well as beneficiary. Therefore, our research supports recent advances towards an actor-to-actor perspective (Vargo and Lusch, 2011, 2016, 2017).

In Table 2, we added the dimensions "value proposition" to make the transition between the SL and the SDL perspective. SDL provides a holistic perspective on value co-creation, but is less specific than SL when it comes to explaining value co-creation. However, SDL promotes thinking about complex reciprocal relationships and avoids isolated consideration of single spheres. This is why SDL provides a more comprehensive understanding of value co-creation. SL provides a better understanding about whose resources are integrated and how actors control the value creation process. This is because the different spheres make clear who is the "owner" of specific resources. The SL can determine the locus

and beneficiary of value co-creation while the SDL model allows the precise analysis of how value is co-created (i.e., which multifaceted actors are involved and what institutions play a role in the exchange process) (Grönroos and Voima, 2013; Vargo and Lusch, 2016).

These insights respond to some of the criticism about SDL logic (Grönroos, 2012). Future research should consider SDL and SL as complementary models in service marketing literature. We argue that SL addresses questions of value creation with less reliance on abstraction, and at a lower level of aggregation. This allows a deeper analysis of value co-creation. SDL is oriented towards higher levels of aggregation with corresponding high levels of abstraction (Vargo and Lusch, 2017). We understand aggregation as the type and number of actors concerned (i.e., macro-, meso-, micro- and intra-level), while abstraction refers to the specificity of theory concerning the context. Furthermore, we follow Chandler and Vargo (2011) that using “oscillating foci” lead to a better understanding of structures and activities. It is important to understand both, bilateral resource integration in more detail as well as overarching interdependencies between actors.

The sport cluster concept based on ten typical actors and their relationships and networks (Gerke *et al.*, 2015) has demonstrated its theoretical utility for a meso-level analysis of a very concrete context (Gerke *et al.*, 2019). In terms of the SVF, this study shows that the SDL logic holds true in a sport B2B context. The underlying concepts of value co-creation (i.e., SDL, SL, SVF) make clear that in sport clusters, actors cannot be meaningfully and dichotomously described as suppliers and customers. All actors (i.e., firms, sport organisations, and others) in a sport cluster are embedded in a wider sport eco-system. Every actor plays a dual role as provider and beneficiary during exchange. This is also true if a simple transaction is analysed, for example, when a firm provides a product for money, the firm benefits from the money provided by the customer and the customer benefits from the product. Both actors need specific knowledge about the provided resources to create value

(i.e., value-in-use). However, in a sailing cluster, the sailing activities are the key to bringing together all of the actors and all of their roles as suggested by the first foundational premise of the SVF “Sport is in the core of sport management” (Woratschek *et al.*, 2014). A sailing cluster (sport cluster) would not exist without sailing (sport) activities. Therefore, the sport activity organiser is a pivotal actor in the sport eco-system. Pivotal actors possess “collaborative competence” including the ability to absorb new information (absorbitive competence) as well as to adjust to changing circumstances (adaptive competence) in complex and turbulent environments (Lusch *et al.* 2007, p. 11). This pivotal actor is coordinating other actors in a way that multiple actors can co-create value on that so-called value network. To put it in a nutshell: The case of a sport cluster in the sailing industry shows that the different approaches of value co-creation (i.e., SDL, SL, SVF) are complementary and allow a deeper understanding about how value is created in a sport B2B context by using oscillating foci. Hence, there is no best approach to explain value creation in sport B2B contexts, but there are useful complementary approaches taking different perspectives and leading to a better understanding about value co-creation in sport eco-systems.

Conclusions

This research addressed the question of how the two major theoretical approaches – SDL versus SL – explain value co-creation and the roles of various actors differently. Our comparison between SDL and SD shows that the supposed differences between these approaches can ultimately be traced back to different levels of analysis. The SL lens allows an in-depth analysis of value co-creation at a micro-level and intra-level. SDL provides a rich analysis of service exchange and value co-creation in an eco-system at the meso-level.

This research contributes to a more coherent body of research in the area of value co-creation. On the one hand, we contribute to the theoretical debate around actor-to-actor

systems versus business-to-business and business-to-consumer markets. On the other hand, we contribute to a better understanding of value co-creation in sport management.

While value-co-creation is a striving area of research, knowledge building has suffered from controversies around terminology and levels of abstraction and aggregation (Grönroos, 2011, Vargo and Lusch, 2016). These discussions prevent at times the advancement of the field, which accounts for the socio-economics changes our world currently goes through. The transition of our economy and society towards a service-based model heavily reliant on operant resources (refer “knowledge economy”) is evident in many everyday examples but the transition is only in its early stages as is the research on it (Vargo and Lusch, 2017). We are far from a purely service-based economy and society, but management and marketing research needs to accompany social and economic actors in this transition process. This research helps to understand future markets. More practically speaking this research should illuminate managers in clustered and networked industries, particularly in the sailing and general sport setting, how many opportunities for value co-creation are at their feet every day. This should help them to generate more value in their daily operations.

The main limitation of this research is that we do not take into account other approaches to value co-creation than SDL and SL (e.g., interactive value formation) (Makkonen and Olkkonen, 2017). Furthermore, we do not account for negative outcomes of value-co-creation such as co-destruction and no-creation (Chowdhury *et al.*, 2015; Makkonen and Olkkonen, 2017). These are important perspectives to develop further, especially in the B2B context. Another limitation are the idiosyncrasies (e.g., high interdependence of B2B actors) of the sailing industry, which limits generalisation to other sectors.

Even though we argue that the B2B setting is not meaningful according to our data, we need more research that addresses mixed B2C and B2B contexts to enhance our understanding of A2A value co-creation. Rather than having a binary approach of

investigating B2C or B2B value co-creation, future research should have a holistic approach to investigate value co-creation at micro-level through the SL and at the meso and macro-level through the SDL. This would allow the development of a holistic model of value co-creation at all levels combining SL and SDL lenses to analyse actions and interactions underlying value co-creation.

The customer-supplier distinction is not dead, but a neutral consideration of actor-to-actor relationships makes sense when analysing specific value creation processes and actor configurations in mixed B2C and B2B contexts.

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Table 1. List of interviews

N°	Type of cluster organisation	Code	Interviewees' position	Duration (minutes)
1	shipyard	SY1	General Director	37
2	shipyard	SY2	Project Coordinator	52
3	shipyard	SY3	General Manager	41
4	shipyard	SY4	Associate Director	56
5	naval architect	NA1	Designer	39
6	naval architect	NA2	Naval Architect	36
7	marine equipment	ME1	Director	46
8	marine equipment	ME2	Sales Manager	31
9	marine equipment	ME3	Director	60
10	sail maker/ rigging	SR1	Designer	37
11	sail maker/ rigging	SR2	General Manager	28
12	sail maker/ rigging	SR3	Director	52
13	sail maker/ rigging	SR4	Managing Director	60
14	marine services	MS1	Director	24
15	marine services	MS2	Director	45
16	marine services	MS3	Director	42
17	marine services	MS4	General Manager	30
18	media/ communications	MC1	Editor	73
19	professional sport	PS1	Athlete Life Advisor	33
20	professional sport	PS2	Performance Analyst Team Leader	45
21	professional sport	PS3	Design Performance Analyst	57
22	education/ research	ER2	Professor/ Director Research Unit	51
23	governing body	GB1	Director	52
24	governing body	GB2	Customer Manager	56
25	governing body	GB3	Programme Leader	54
26	amateur organisation	AO1	Vice Commodore	36
27	amateur organisation	AO2	Marketing Manager	35

Table 2. Analysis of data with SL

		Provider sphere	Joint sphere - customer engages in provider value creation process	Customer Sphere	Joint sphere - provider engages in customer value creation process
Shipyard	SY as provider	SY build boat hulls or manages entire boat-building projects.	SY develops boat hulls based on customer feedback and requirements.	SY's customers use boats for different purposes.	After boat purchase, SY provides clients with after-sales services.
	SY as customer	SY purchase boat-building material/ parts.	SY specifies requirements for supplied material/ parts and helps with development.	SY is a customer of numerous suppliers of key parts and material	Local suppliers ensure stock is available. Value for SY is that the company never runs out of stock needed for production.
Naval architect	NA as provider	NA sells designs to shipyards and boat owners.	NA customise products based on customer requests.	NA's customers use the design to build boats.	After construction, NA ensures boat performing to expectations.
	NA as customer	NA purchases various products, services, and specialist expertise.	NA participates in the design and testing of sub-contractors' service and product propositions.	NA employs/contracts structural engineers, systems designers, fuel mechanics, spar maker, sail maker, marine service firms, etc.	The sub-contractors of NAs conduct unpaid, initial work so that NA can bid to tenders.
Marine equipment firm	ME as provider	ME design, manufacture and install various marine equipment.	ME cooperate with boat project managers, shipyards or rarely directly with boat owners.	SY, boat project manager or boat owner purchase marine equipment to facilitate boat navigation for customers.	Differently specialised MEs exchange information/ ideas with other each other to better serve their shared customers (SY) but also directly with their customers (SY) to understand their needs.

	ME as customer	ME purchase parts and services from subcontractors and other ME.	ME provide specification sheets to other ME or other suggestions for product development	ME purchase services or parts.	Supplier provides suggestion to ME about the design of control systems to ensure a smooth installation.
Sail maker/ rigging firm	SR as provider	SR design, manufacture, and distributes sails and rigging material.	Customers of SR are involved in SR's sphere through providing idea, and feedback on products after testing.	SR's B2B customers utilise sails and rigging equipment for boat-building. SR's final customers use sails and rigging equipment during navigation to achieve performance (racing) and comfort (pleasure boating).	SR firms accompany customers in the initial use of the products and provide modifications if necessary.
Marine service firm	MS as provider	MS' value proposition depends on service provided, e.g., brokerage, coordination, installation	MS' customers engage in MS' value creation process by providing the necessary information to perform the services.	MS's customers are SY or boat owners that subcontract their services.	After boat sale/ construction, MS ensures boat is performing to expectations.
Media/ communications firm	MC as provider	MC produces and distributes specialised boating content to anyone interested in sailing.	MC seeks input from its readership including firms, professional teams and individuals involved in sailing (e.g., through interviews and company visits).	MC's customers are people and, organisations interested in sailing who read the magazine or advertise in it.	Little engagement of the provider in the customer's sphere can be observed.
	MC as customer	Readers and firms from the sailing cluster provide content to MC.	MC engages with readers and firms to obtain content.	MC is the beneficiary of readers and firms providing content for the magazine.	Readers and firms might take initiative to provide ideas for content.

Professional sport organisation	PS as provider	One PS sphere includes the development of a high performance race boat and crew; (financial) resourcing of a professional team.	Customer engage little in the provider's value creation process.	The customer of PS is anyone interested in professional sailing races as a spectator or sponsor.	PS engages with the customer's value creation process in various ways, for example, during ocean racing regattas the boat skippers send videos to the spectators or a spectator can interact with the preferred team.
	PS as customer	Shipyards, naval architects, sail and rig makers, marine service firms, and others are suppliers for PS for the boat design, construction, and maintenance.	PS as customer engages heavily in the providers' value creation process through providing design ideas, relevant information concerning the navigation, testing of prototypes and promotion of suppliers' products and services.	PS is customer of shipyards, naval architects, sail and rig makers, marine service firms and other suppliers for the design and construction of the race boat	The provider engages only indirectly and discretely in PS' value creation process through accompanying and servicing the boat during use in the race or regatta.
Amateur sport organisation	AO as provider	AOs are yacht clubs that organise sailing regattas and runs sailing programmes for youth.	Customers engage directly in the value creation process of AOs. In fact customers are inherent part of the value creation process as races need participants to take place.	AOs' customers are usually club members or friends of club members that take part in the regattas and sailing programmes organised by AOs.	Similarly the AO as provider is directly engaged with the customer in its value creation process since racing organisation take largely place together with the race participants.
	AO as customer	AOs buy boats for the youth sailing programme.	Youth coaches of AOs engage in designing and testing the youth boat.	AOs use boats for youth training.	Provider ensures that boats are performing to expectations.
Education/ research institutes	ER as provider	ER produces knowledge through research that is relevant for increasing sailing performance.	Professional sailors as customers engage with ER providing feedback on research results from a practical perspective and through testing new solutions based on ER's research results.	The customers (amateur or professional sailors) use the knowledge generated by ER directly or use products (e.g., sails) that have benefited from ER-generated knowledge.	Members of ER might accompany or watch sailors when using or testing the research-based material.

Governing body	GB as provider	GB federates marine industry members in an association, coordinates industry training, and provides advice for export in the marine industry.	Customers engage directly in the value creation process of GB. In fact, customers are association members and part of various committees that work on the different topics in the association.	The customers sphere of GB comprises members that utilise or participate in the different activities (committees) organised and animated by GB.	GB's contribution to the customer value creation process is closely interwoven with the providers' value creation process.
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Table 3. Analysis of data with SDL

			Axiom 1/ FP1	Axiom 2/ FP6	Axiom 3/ FP9	Axiom 4/ FP10	Axiom 5/ FP11
	Value proposition		Service is the fundamental basis of exchange.	Value is co-created by multiple actors, always including the beneficiary.	All social and economic actors are resource integrators.	Value is always uniquely and phenomenologically determined by the beneficiary.	Value co-creation is coordinated through actor-generated institutions and institutional arrangements.
Shipyard	SY	For various customers (e.g., race teams, event organisers) on-water transport through sail or power boats	Transportation on water for different purposes: pleasure, racing, security, judging, visits on water.	Beneficiaries are co-creators of value because it is their perception (e.g., of safety), ability (e.g., of sailing) or participation (e.g., in case of rescue) that determines the provided value proposition.	Resource integrators can be sponsors of a race event or race team, friends and family of recreational sailors, but also spectators and other boats users. These actors all integrate their personal experience, abilities and perception (i.e., resources) in the value creation process.	The value provided by SYs' boats depends on the individual perception of each beneficiary and its specific resources integrating network.	Service provided through SYs' boats (e.g. safety) is not responsibility of a single actor but of a network of resources integrators (e.g., for an event organiser it includes teams, sponsors, spectators, maritime authorities, etc.)

Naval architect	NA	For shipyard as beneficiary (B2B): Knowledge and ownership of boat design	The applied knowledge of NA is the basis of exchange.	NA's network of subcontractors contribute to the value proposition. Ideas or requests from the customer contribute to the value creation.	Knowledge and resources of NA's subcontractor network are integrated in the value joint value proposition.	The customer (SY) determines the value when realising the boat design.	The network of suppliers and contractors and the respective norms and rules (institutions) determine the value creation from NA's work.
Marine equipment firm	ME	For boat user or intermediary (e.g., shipyard): comfort and security through simple handling of boats through boat equipment such as electrical devices and systems	The applied knowledge of ME on boat equipment, devices, and control systems is the basis of exchange.	ME work with rigging firms and other ME to get information important for integration in the boat system. ME works also with boat classification agencies for approval of control systems.	Knowledge of rigging firms and other marine equipment firms and approval of boat classification agencies is integrated in the value proposition.	Shipyard or boat owner determine value when using the automation services and control center in the boat.	Boat classification agencies participate in the coordination of value creation in this segment.
Sail maker/ rigging firm	SR	For various types of sail boat users: propulsion of boat using the wind as means for speed, sport performance, comfort, safety, cost savings, environmental protection	Knowledge about aerology allows SR to develop and offer a product that permits optimal propulsion with the help of a sail and a boat on water.	The perceived value of the sail in use depends on the performance of components delivered by other suppliers, and on the performance of sail crew and weather conditions. In the case of professional sailors the competitors' performance plays also a role.	Skills and knowledge of sail crew influences the perceived value of the main beneficiary of the sail.	The beneficiary can be the shipyard or boat project manager (B2B) or the end user: on team level for a sailing team and on individual level of the boat owner (B2C).	Boat classification agencies can participate in the coordination of value creation in this segment.

Marine service firm	MS	For boat owners with shipyard often as intermediary: secure sailing experience through various installation and maintenance services; connecting buyer and supplier through brokerage; coordination of boat-building projects	Knowledge about security norms combined with knowledge and skills on boat architecture is applied to provide various installation, commissioning, and maintenance services.	MS works with mast and rigging suppliers as well as with the shipyards as intermediary.	Mast/ rigging suppliers and shipyards integrate their knowledge via supplied products or provision of information.	The perceived security and facility during navigation by the boat owner determine the ultimate value for the beneficiary (boat owner).	Norms and regulations concerning boat security determine the revision and maintenance cycles for boats of different classes and sizes.
Media/ communications firm	MC	For sailors and people interested in sailing: being informed about boating and sailing news	Connections in the sailing milieu and journalistic skills are applied to provide the information service by means of a journal.	MC depend on the collaboration of other actors that will provide information and access to events/ sites to report on.	The opinion provided by interviews and the extent to which MC gains access to information and events/ sites to report on determine the overall attractiveness of the journal and hence of MC's value proposition.	The reader of the journal determines the personally perceived value depending on the level of interest and attractiveness of the presented content and the way the content is presented.	Individual actors' willingness to cooperate with MC directly impact their success. This can be seen as a social form of institution regulating information flows.
Professional sport organisation	PS	For people and organisations interested in professional sailing: excitement, emotions, and passion through sport spectacle and performance	PS value proposition is based on the application of sailing knowledge and skills in the context of sailing events such as regattas.	Multiple actors participate in the value creation process of PS: competitors, spectators, journalists and broadcasters, etc.	The different actors that participate in the value creation integrate their different resources, e.g. competitors integrate their navigation skills	Each spectator might perceive the presented spectacle differently depending on personal and environmental characteristics (e.g., mood or quality of streaming)	Sport governance bodies co-ordinate and influence PS's value creation process through the definition of race rules and calendars.

Amateur sport organisation	AO	For club members and family and friends: joy and excitement facilitated through participation in a sailing regatta	Knowledge about race organisation provides the service.	Numerous actors are involved in the value co-creation: judges, mark setters, security, competitors, etc.	The different actors involved integrate their resources, e.g., judges apply their knowledge and experience from previous races.	Depending on personal and environmental factors, each participant determines own level of satisfaction/ value.	Sport governance bodies might influence AOs' value creation process through the definition of race rules and calendars.
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Education/ research institutes	ER	For professional or amateur sailors: safe, high quality sailing equipment	ER provide their knowledge and skills to improve boat design and construction.	Value created by ER is often not directly applied by professional or amateur sailors but filtered through shipyards, sail and rig makers, and other industry actors.	Different actors integrate their respective resources, e.g., sail maker combine own knowledge on sail performance with ER's research results.	The value of ER's research results is determined at several stages.	Institutional arrangements between actors from different sector (private, public, non-profit) might come into play.
Governing body	GB	GB provides a federating platform for marine industry actors.	GB applies knowledge on how to federate and create networks.	Value is only co-created through the participation of multiple members. The more members, the stronger the network.	All network members integrate their respective resources in the association via participation in different committees.	Each association member has its own perception of the value provided by the industry federation and its activities.	GB itself is coordinator for certain activities of the actors of the cluster.

FP = Foundational Premise

GERKE, A., WORATSCHEK, H. & DICKSON, G. 2019. The sport cluster concept as middle-range theory for the sport value framework. *Sport Management Review*, forthcoming.

