



# Towards becoming a service-dominant enterprise: an actor engagement perspective

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## Abstract

Service-dominant logic (SDL) has become an important thinking, in which service fuels growth of the firm. However, existing evidence offers little explanation of how service emerges as dominant logic. This paper investigates how a firm evolves to become an SDL enterprise. Drawing on theoretical notions of SDL and actor engagement, a case study of Homekoo is performed. The findings show that “service mindset” is the key that drives a firm to embrace SDL, and that technology can act as a “boundary spanner” to coordinate value co-creation practices across different levels, which enhances existing knowledge of actor-to-actor (A2A) interaction.

**Keywords** Service-dominant logic (SDL) · Resource integration · Actor engagement · Non-human · Value co-creation · Case study

## 1 Introduction

Business landscapes nowadays are painted by the co-creation of value with customers (Frow et al. 2016; Li et al. 2021; Prahalad and Ramaswamy 2004), which drives the firm’s innovative initiatives and attainment of strategic advantage and sustainability (Barrett et al. 2015; Ishizuka et al. 2022; Lusch et al. 2007). Along this surging wave of value co-creation, service-dominant logic (SDL) has become an influential

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school of thinking (Karpen et al. 2012; Tregua et al. 2021; Vargo and Lusch 2017), triggering a paradigm shift in the areas of marketing and service. A central notion of SDL is that the survival and prosperity of firms and organizations hinges on their knowledge and skills being utilized to facilitate the customers' efforts to achieve their own value-in-use by providing them with adequate tools or mediums (Edvardsson et al. 2011; Vargo et al. 2008), namely the "products" in a marketing term.

The emphasis of SDL on the customer's benefits and the user experience is consistent with Dawar (2013), who advocates that firms must shift their strategies downstream by focusing on what else they can do for the customers. For business practices, the exercise of SDL enables a firm to uncover opportunities to help the customers get things done in a better manner (Christensen et al. 2016). The firm then can turn the insights of bringing the customers benefits into a value proposition (Vargo et al. 2008), which is the central component of its business model that can generate fresh impetus to corporate growth (Osterwalder et al. 2015; Wieland et al. 2017). Despite the increased understanding of SDL (Ishizuka et al. 2022; Tada-jewski and Jones 2021; Tregua et al. 2021), little is known concerning how SDL becomes a firm's dominant thinking in leading its development, especially given the fact that such development requires the operation of both service logic and goods logic.

In the seminal work by Vargo and Lusch (2004), "service" is distinguished from "goods" in the sense that the fundamental base of every exchange is service (namely, the application of knowledge and skills), which is embedded in goods. Vargo and Lusch (2016) further indicate that the sources of strategic advantage reside not in goods, rather in the service exchange process driven by actor-to-actor (A2A) interaction. That is to say, the firm needs to embrace an SDL that transcends goods-oriented thinking (Lüftenegger et al. 2017; Skålén and Edvardsson 2016; Tada-jewski and Jones 2021); otherwise, the firm may easily be swamped by marketing myopia (Levitt 2004), leading it astray to develop unnecessary or inappropriate products for customers. Practitioners need to be aware that employing SDL does not mean that goods logic has to be eliminated from the firm's organizational culture. Rather, goods logic is important to a firm's business operation because goods (products) are the central mechanism of value-in-exchange, by which value (e.g. economic or monetary value) can be captured to fuel the firm's growth (Bowman and Ambrosini 2000; Brandenburger and Stuart Jr 1996). Due to this important role of products in business development, firms may prioritize their efforts in constructing superior products to win out over the competition (Porter 1996), but could be caught in a goods-dominant trap (Dawar 2013; Levitt 2004; Vargo et al. 2008).

As a result, this research aims to address the research question of how a firm evolves to become a service-dominant logic enterprise while dealing with goods logic. We form a theoretical lens by combining the SDL literature (Vargo and Lusch 2004, 2008a, b, 2016) with a perspective of actor engagement (Brodie et al. 2019; Storbacka et al. 2016) to investigate our research question. The adoption of an actor engagement perspective enables us to look closely at how the firm develops its interaction with other actors that facilitates the customer's active participation in the co-creation of value with the firm, leading to the realization of the customer's value-in-use. Moreover, this research utilizes actor engagement as a micro-perspective

that permits a detailed examination of the involved actors' integration of resources for value co-creation (Vargo et al. 2008), and thus, this research expands the understanding of SDL, which is regarded as a macro theory (Storbacka et al. 2016; Vargo and Lusch 2017), and which its theoretical development continues (Tregua et al. 2021).

## 2 Literature review

### 2.1 Service-dominant logic (S-D logic)

Based on Smith (1950), the discipline of markets views production and exchange of goods as the central elements of economics, which treats consumers as rational and utility-maximizing decision makers, firms as profit-maximizing and manufacture-efficiency chasers, information as easily flowing public resources, and markets as equilibrium-seeking mechanisms (Goodland and Ledec 1987; Lusch and Vargo 2014b). The perspective shedding light on tangible output embedded with value is called goods-dominant logic (Vargo and Lusch 2004; Lusch and Vargo 2014a). Moreover, when it comes to the issue regarding value creation or general concepts, a G-D logic is unable to explain the complicated phenomenon because it lacks a robust foundation. This causes limitations and restrictions, and prevents it from providing an understanding of the issue of value creation and exchange.

Instead of focusing on distribution of commodities, an emerging perspective that Vargo and Lusch (2004) came to call service-dominant logic, sheds light on the concept of "service," which they defined as the application of knowledge, skills and competence for the benefit of other parties (Vargo and Lusch 2004, 2008b). The main principles of S-D logic are related to the definition of service, the role of actors, the type of resource and the process of value creation (Lusch and Vargo 2014b). Recently Vargo and Lusch (2011) and Adner (2006) have introduced a service ecosystem view based on main tenets of S-D logic in response to the dynamic and evolutionary nature of service exchanges. The research then undertook a close review of four fundamental tenets of service-dominant logic.

### 2.2 Value co-creation

Since a G-D logic characterizes value as internally produced and distributed to the market through repeated transactional exchanges taking place between producers and customers while the customers will destroy or consume value as they buy the goods (Skálén and Edvardsson 2016). Based on this traditional view, value is embedded within goods through production processes and will be reflected in the prices of products, which puts emphasis on the concept of "value-in-exchange." On the other hand, one of the central tenets of S-D logic is that value is always co-created by multiple actors and is contextually and phenomenologically determined by beneficiaries, which is tied to "value-in-use" or "value-in-context" (Vargo and Lusch 2016).

Moving the central concept of value from exchange to use, which implies that the understanding about value is transformed from units of output produced by firms to the process of resource integration manifested by multiple actors, centers the focus on the participants, processes and resources interacting in service systems for value co-creation. In this perspective, the roles of producers and consumers become blurry, because no single actor has all necessary resources to create value. Hence, businesses, households, governments, organizations or individuals are viewed as identical actors engaging in a process of acquiring, transforming, and integrating resources in exchange with other actors to co-create value (Lusch and Vargo 2014b).

Additionally, an S-D logic operates in alignment with the understanding that value is determined contextually by beneficiaries when they accept potential values offered by firms and integrate the offerings with other resources to use products. In this perspective, the process of value creation is based on the notion that value is determined by a service actor via the integration of resources in a particular context. It is important to consider value in different contexts, because any given resource is evaluated by different social actors, or the same actor in different phenomena (Akaka and Chandler 2010; Akaka and Vargo 2014).

Finally, according to Fehrer et al. (2015), to co-create value, actors should engage in service-for-service exchange and interactions, which will result in resource integration. Hence, while value co-creation is difficult to observe empirically, this study still wants to explore it via a lens of micro-perspective, i.e., actor engagement.

### 2.3 Resource integration

Previous marketing research separates resources into two broad classifications which are used to create value through the process of integration. Lusch and Vargo (2014b) indicate that operand resources are resources which will be utilized by other resources or actors to make them valuable while operant resources are resources capable of acting on other resources or actors to contribute to value creation. From a traditional perspective, firms put lots of emphasis on acquiring operand resources which are limited to tangible products and/or services through exchanges. However, S-D logic pays more attention on operant resources than operand resources, because they view value creation as a joint function which occurs with the application of operant resources, such as knowledge, skill and competences (Vargo and Lusch 2004; Akaka and Vargo 2014; Lusch and Vargo 2014b).

The nature of resources has a great impact on resource integration. De Gregori (1987) and Lusch and Vargo (2014b) illustrate that resources can be expanded by learning and by combining knowledge, skills and competences from different actors. Another nature of resourceness is availability, which means that resourceness is dependent on the accessibility of other resources and the motivation of actors. In short, the dynamic and accessible characteristic of resources illustrates that resources are created and become valuable when appraised and acted on through integration with other resources.

With the process of resource integration, actors can co-create value with other integrating actors and develop new potential resources or processes from integration.

This suggests that resource integration is not only important to value creation but also plays the central role of developing new ways or potential resources for creating value (Akaka and Vargo 2014).

## 2.4 Engagement

### 2.4.1 Type of actors (participants)

Actors engaging in resource integration could be viewed as open systems, which means that they depend on the resources of others to survive (Vargo et al. 2008). From this perspective, the specific and strict roles of producer versus consumer or seller versus buyer become blurred, and actors could have many different roles. Based on an actor-to-actor perspective which departs from a dyadic world view, this paper focuses on the general view of the properties and disposition of actor engagement in which all actors have a similar process of engagement.

Although there is no specific definition of what an actor is in S-D research from Lusch and Vargo (2014b), this study employed a general idea of “social actors” which includes humans or collections of humans, such as organizations that all involve a logic of human exchange systems (Storbacka et al. 2016). According to the explanations of the concept of resource-integrating actors from Storbacka et al. (2016) and the notion the research employed from social actors, actors could be viewed not only as humans, but also as machines/technologies, or as collections of humans and machines/technologies, including organizations. Highly advanced service technologies have stimulated the re-shaping of human-to-human interactions, which has been discussed in earlier research. For instance, some human-based interactions have been substituted by machine-to-machine interaction (Fadlullah et al. 2011; Chen and Lien 2014), or by more customized and contextual forms of human-to-machine interaction (Azuma 1997; Billingham et al. 2015; Dunleavy and Dede 2014) (e.g., augmented reality). Consequently, entities that constitute service systems are identified as actors, which are collections or arrangements of resources, including people, technology, information, and organizations, highlighting the action, interaction, and engagement required for effective resource integration and value co-creation (Storbacka et al. 2016). Therefore, the research paid much attention to the role and disposition of the non-human actor, trying to figure out what role technology plays and what position technology takes during interactions with humans and non-humans.

### 2.4.2 Engagement platform

Frow et al. (2015) shows that platform modality has an influence on the interactions between actors in different circumstances with diversified channels. Ramaswamy and Gouillart (2010a, b) define engagement platforms as purpose-built, ICT-enabled environments which contain artifacts, interfaces, processes and people; permitting organizations to co-create value with customers. Moreover, Ramaswamy and Gouillart (2010a) describe engagement platforms, rather than define them, by illustrating

the characteristics of transparency, accessibility and reflexivity. Transparency shows that an interaction between actors and a specific engagement platform is visible to a wider audience engaging in a particular co-creation process. Second, accessibility means that actors are able to integrate resources into platforms by virtue of sharing or adding content. In addition, reflexivity implies that engagement platforms are capable of adapting to changes from or within interactions. However, Frow et al. (2015) extend the range of engagement platforms from virtual to physical and identify five types of platforms: (1) digital applications extending the reach and speed of interactions with multiple actors; (2) tools or products that are used as devices to connect actors; (3) physical resources in which collaborators come together to share and enhance their knowledge for mutual benefit; (4) joint processes in which multiple actors engage; and (5) dedicated personal groups. Finally, Blasco-Arcas et al. (2020) proposed three types of actor engagement, i.e., orchestrating, facilitating, and stimulating.

An engagement platform can also be viewed as the channel to interact with customers, as the approach of on-line to off-line sales, and as the process to generate exchange and interaction (Brodie et al. 2011; Storbacka et al. 2016). This study focused on the function and modality of platforms—namely, environments facilitate actor engagement by providing access to engagement opportunities without engaging in resource integration and contain artifacts, interfaces, processes and people.

Finally, as more actors join the platform, they reap more benefits. Thomas et al. (2014) and Storbacka et al. (2016) separate these benefits into three forms, i.e., relational, informational, and motivational. Relational benefits mean that actors can have access to other actors using the same platform. Informational benefits occur when the platform has the ability to generate customized information with the use of data on the platform. Motivational benefits stimulate engagement activities on the platform.

## 2.5 Linking S-D logic to engagement

Service-dominant logic concepts are referred to as macro-foundations in strategic management and organizational theory literature. However, macro constructs are wide-ranging entities which are characterized by high levels of aggregation and theoretical abstractions (Hollebeek et al. 2016). They are more rigid, stabilizing, less subject to fluctuation, but self-adjust slowly (Lusch and Vargo 2014b).

Compared with macro constructs, micro-foundation research becomes a bridge connecting empirical investigation and theory (Storbacka et al. 2016). Moreover, micro-foundations emerge from macro theories, so they have narrower conceptual applicability but are much closer to the realm of marketing practice (Gavetti 2005). Hence, this study utilized a micro-foundation perspective to provide theoretical and empirical explanation (Storbacka et al. 2016). As Lusch and Vargo (2014b) have illustrated, the micro level helps to create the meso, e.g., patterns of resource integration (Storbacka et al. 2016); finally, the meso will induce the macro level. However, once the macro is structured, it has a downward impact on the meso and micro

levels. This study explored actor engagement as micro-foundation to investigate the practical notion from a lens of S-D logic, as illustrated in Fig. 1.

One of the important motivations for the micro-foundation is to provide theories relevant to practitioners by anchoring the abstract macro concepts. An important contribution of the micro-foundation movement, therefore, is to disclose layers of concepts to figure out how individual-level factors influence firm performance, how interactions of individuals lead to collective organization-level outcomes, and how relations between firm-level variables are mediated by individual-level actions and interactions (Felin et al. 2015). The micro-foundation approach provides a multi-level explanation in accordance with “bathtub theory.” Gamst (1991) makes a distinction between the macro-macro and micro-micro level explanations. The former explanation highlights social facts and social outcomes, while the latter focuses on the conditions for action leading to observable actions. The bathtub theory is generated by the links between the macro–micro condition where social facts create context for action, and micro–macro explanation where observable actions create social outcomes (Storbacka et al. 2016; Storbacka 2019). Hence, this research used the micro-foundational structure to investigate the process for transformation from goods-centered to service-dominant logic. Table 1 summarizes five main concepts between a G-D and an S-D logic.

### 3 Research method

#### 3.1 Case study based on an interpretive stance

Given the exploratory nature of the research, we departed from an epistemological stance of interpretivism to investigate our research question that attempted to uncover a firm’s evolutionary process towards becoming a service-dominant logic enterprise (Kelliher 2011). The adoption of an interpretive stance was appropriate

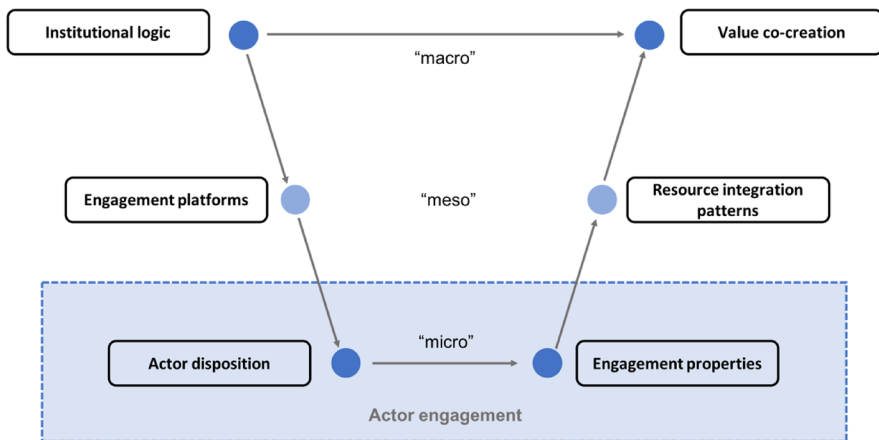


Fig. 1 Actor engagement in the bathtub theory

**Table 1** Five dimensions comparing G-D and S-D logics

	G-D logic	S-D logic	Transformation
Types of actors (participants)	Distinct division of producers and consumers	All related beneficiaries are identical actors with a similar purpose	From separating suppliers and demanders to viewing all related beneficiaries as generic actors
Engagement activity (interactions and platform)	Repeated transactional exchanges	Interaction is the basis of integration and application of resources aiming at establishing relationships	From standardized offerings through a closed production process to developing different types of relationships through multiple interactions
relationship	Dyadic and fixed relationships	Dynamic and changing networks	From focusing on dyadic and fixed relationship to focusing on dynamic network system which embeds with multiple relationships
Resource integration	Emphasis on operand resources and unidirectional production process	Emphasis on operant resources and multidirectional network-oriented process	From focusing on tangible products and aggregating similar resources to focusing on operant resources and making use of them through resource integration
Value co-creation	Value-in-exchange	Value-in-use/value-in-context	From adding value through production process to realizing value with the use of resource integration contextually and phenomenologically



due to its emphasis on dismantling the social construction process of a “becoming” process (Crotty 1998), by which the reality concerning the firm’s efforts in constructing actor engagement that facilitated its customers’ attainment of their value-in-use (or value-in-context) was accessed (Brodie et al. 2019; Edvardsson et al. 2011; Storbacka et al. 2016; Vargo et al. 2008). We then employed a qualitative single case study to tackle such a becoming process, which represented as contemporary phenomena in a real-life context (Myers 2009), and which takes place in a natural setting (Lincoln and Guba 1985).

### 3.2 Case selection

We followed a rule of theoretical sampling to select the case for empirical investigation (Glaser and Strauss 2017; Myers 2009). The case under research was Homekoo, a furniture manufacturer established in 1994 and based in Guangzhou, China. The case was chosen because it met our need to look at a process of becoming a service-dominant enterprise. An important feature of the case is that Homekoo has transformed itself, in a period of near three decades, from a software provider in the furniture industry, a furniture manufacturer running a B2C (business to customer) model, to a furniture manufacturer operating a C2B (customer to business) model that allows the customers to attain their value-in-context (Edvardsson et al. 2011), by having the customized furniture in their desired fashion. Additionally, in the latest development of the C2B model, Homekoo has utilized their expertise of software development to build smart manufacturing and digital applications (e.g. online consultancy and social media) to create engagement among different stakeholders, including Homekoo’s suppliers, designers, installers and the customers, enabling the co-creation of value (Frow et al. 2015; Storbacka et al. 2016).

After decades of development, Homekoo has been listed in China as a Top 500 Service Company from 2016. It is worth noting that with a capacity of running more than 2000 physical stores in major cities across the nation, Homekoo’s annual revenues had grown a threefold, i.e., from USD 140 million in 2012 to 420 million in 2015. Furthermore, in both 2017 and 2018, Homekoo was also listed as one of the most influential furniture manufacturers in China (Homekoo 2023a, b). In particular, it ranked 234th among the top 500 brands in China according to an Interbrand survey, and was reported in Harvard Business Review as a distinguished C2B model in China (Tseng 2017). These impressive achievements by Homekoo support the notion that “service” is a source of strategic advantage that can enhance a firm’s prosperity (Lusch et al. 2007; Vargo and Lusch 2017). Therefore, it is appropriate to choose Homekoo as the focal actor for the case study.

### 3.3 Data collection

To gain a realistic picture of Homekoo’s developmental process of transitioning towards an SDL enterprise, we relied on multiple sources of data (Patton 2002), including depth interviews, field observation (in-personal experience), and archival materials. We began the collection of data from late 2016. Initially, we gathered

relevant industry news and market reports to form a preliminary understanding of Homekoo with regard to its background, business operations and performance, and its interaction with other actors. Then, we formulated semi-structured interview questions (Myers 2009) taken from the perspective of SDL (Vargo and Lusch 2004, 2008a, b, 2016) and actor engagement (Brodie et al. 2019; Frow et al. 2015, 2016; Storbacka et al. 2016), so as to deepen the understanding of Homekoo's evolution centered around our research inquiry. The attention of our interview questions was focused on uncovering Homekoo's organizing and re-organizing of its activities that strived to create value for the customers, what actors (both human and non-human) were involved and interacted, and to what extent the customers were engaged in these activities. The interviews were carried out with Homekoo's management team, including Vice President and Director of Manufacturing Plant. While the interviews were performed, we also conducted the field observations at one of the Homekoo's physical stores and its manufacturing plant (Plant 4). These empirical observations allowed us to experience how the Homekoo's designer interacted with a customer to co-develop a tailored solution, and understand how a designed solution was fulfilled through its smart manufacturing process. This facilitated our effort to provide a rich description of the case (Dyer Jr and Wilkins 1991). Additionally, we continued to track Homekoo's development towards the end of 2020 using archival materials. A summary of our data collection is presented in Table 2.

### 3.4 Data analysis

We began the data analysis by combing through the empirical data, both primary and secondary, to identify important actors, activities, and key events that were central elements constituting Homekoo's development, meanwhile we attempted to grasp their causal and chronological associations. In this process we also triangulated between the different types of data in order to maintain the authenticity of the case description (Miles and Huberman 1994). Consequently, we were able to produce an initial account of the case story concerning the evolution of Homekoo's business development. Getting familiar with our data, we started interpreting the case story from the theoretical lens that was built on SDL and actor engagement literature, through which the coding process unfolded (Braun and Clarke 2006). Following a systematic combining approach marked by intense conversations between theoretical concepts and empirical evidence (Dubois and Gadde 2014), we further categorized the codes into interrelated themes. Finally, we organized these themes to generate our case findings which were presented in the following section.

## 4 Case description: Homekoo company

This section describes the four-period timeline during which Homekoo Company transformed from a G-D to a S-D logic. Table 3 summarizes these four periods.

**Table 2** Diagram of data collection

Sources of material	Content	Number of interviewees	Duration of interview	Purpose
Industry news and market reports	Related news reports: 32 Academic study: 1 Online information The company website			Clarify Homekoo Company's service process Understand the process of mass customization production Experience online to offline (O2O) mode of the company
Intra-firm data	Book: "How about Homekoo?" Book: "Tailor-Made: How does Homekoo Compete with Ikea?" Magazine: "Tailor-Making Fashion" Magazines: "Wave Furniture" and "Homekoo Furniture"			Understand concepts of the situation of the company, service processes, the technology of cloud computing, big data analysis, mass customization production and Industry 4.0
Field observations	The headquarters of Homekoo Company Manufacturing Plant 4 The furniture store		2 h 2 h 2 h	Explore the process of Service 4.0 Understand the operation of mass customized production Experience personalized design service
Depth interviews	Vice president Executive Assistant to VP Director of Manufacturing Plant Store Manager Interior and Furniture Designer (A) Interior and Furniture Designer (B) Homekoo's customer	1 2 1 1 1 1 1	3 h 2 h 2 h 2 h 1 h 1 h	Customized Service 4.0 process, application of platforms and data Process of producing customized furniture The condition of Industry 4.0 Interactions between the store manager, designers and customers
Total		8 people	17 h	Total hours of site visits and depth interviews

**Table 3** The evolution of Homekoo Company

Evolution	Establishment	Service items	Service features
Software company	1994	Software design company	Provide professional interior design molds, which could be used to create stereograms, stereographic panorama diagrams, hand drawings, construction drawings and animations
Furniture store	2004	Physical selling company	Provide personalized design service Connect with 20,000 designers and more than 800 franchisees
Manufacture factory	2006	Mass customization production	Conduct digital mass customization production Apply software systems to assimilate different orders to operate mass production
Company official website	2009	Online selling platform	The biggest online platform selling furniture in China Provide online selling service, online products exhibition, and online design experience

#### **4.1 Period 1: Investment in advancing software technology (1994–2004)**

In 1994, three graduates of South China University of Technology (SCUT) established a software company, whose basic business concept was to provide furniture manufactures with furniture software that was more customized and higher quality than competing software offered by other technology companies. They focused on upgrading the core technology of company, and paid no attention to service and value to their customers. In addition, Homekoo Company viewed innovation as putting all the emphasis on artifacts and technological innovation, and they started a program aiming at training more skillful students to become their software designers who had ability to develop various molds by making use of the company's software system.

During the period from 1994 to 2004, Homekoo Company concentrated their resources on developing advanced skills and technologies—which they considered their greatest competitive strength—by means of acquiring professional patents, expanding their database of molds, and establishing their professional reputation in the industry of furniture design. Initially, the product-focused, G-D logic-aligned strategy and the high-quality and specialized software system were both a success, that brought a great reputation and a nearly 90% market share to the company. However, while Homekoo had expanded their product categories from a single cabinet to various kinds of models, they still suffered from a limited market in which many furniture manufactures weren't interested in customized molds that could assist them making 3-D design sketches on computers. Hence, Homekoo decided to establish their own furniture store and utilized the software system, which they had put much emphasis on, to make customized furniture sketches for customers.

#### **4.2 Period 2: Establish a light factory mode (2004–2006)**

In order to realize the value of software systems, Homekoo decided to establish their own furniture stores providing customized design sketches with the use of software technology. Although the business concept of furniture stores was to offer a design diagram based on customers' needs by means of software systems, the real purpose of furniture stores was to educate furniture manufacturers by showing them the power and ability of software systems to increase the selling volume of the systems.

The operation mode during this period could be separated into two parts. First, the furniture stores operated by Homekoo were responsible for offering customized design diagrams of cabinets based on customer demand by utilizing software technology, on which they put all the emphasis. They utilized the slogan of “free design” to attract customers to visit their stores; and after discussing with a shopping guide, customers could choose either to place an order or just to take the design and leave. Once customers had ordered customized cabinets, furniture stores would outsource to external furniture manufacturers to handle production.

Based on a light factory mode, Homekoo started to enter the customer market, which is characterized as personalized service and products, and had direct interaction

with customers. As customers' needs for individualized furniture increased, Homekoo gradually expanded its design categories from cabinets to diversified models, which had a great impact on furniture manufacturers. But once Homekoo expanded product categories, manufacturers would receive more diversified orders. This resulted in longer waiting time to collect similar orders, and delayed delivery times.

### **4.3 Period 3: Development of a tailor-made mode (2006–2009)**

With the rapid growth of a customer market that presented potential for profit and opportunities, Homekoo gradually transitioned into a “furniture manufacturer” with an ability to design and produce individualized furniture by means of software knowledge. Since the original furniture manufacturers failed to produce diversified orders at a low cost, Homekoo decided to establish its own production lines for mass customization. After trial and error, Homekoo finally built up automated production lines which could collect orders from direct and franchise stores, distinguish and separate orders, combine similar molds from different orders, and produce abundant molds at a low cost.

At the same time, Homekoo adjusted the role of designers by pushing them to the front lines where they communicated with customers directly. The main mission of designers was to draw a personalized diagram with the use of the software system. This approach enabled designers to have interactions with customers directly, thereby strengthening the users' experience and making it correspond more closely to customers' expectations. Also, by establishing an innovative production line and implementing mass customization, Homekoo was able to provide personalized service by applying their technology and knowledge.

During this period, two service subsystems increasingly emerged. The first one was the Data to Production (D2P) service subsystem, that focused on the interactions between technicians and software systems and related applications of technology. The other was the subsystem of Customer to Business (C2B) service, which consisted of designers, customers, database and software systems and shed light on the interactions between customers, designers and technology. Due to the establishment of automated production lines, Homekoo advanced their technical skill to a higher level, and they started to utilize technology to optimize each interaction in every channel they could touch their customers. With the assistance of technology, designers easily generated a diagram in less than one minute, shortening the waiting time and enhancing customers' experience. Homekoo created a platform to integrate customers, designers and technology. By connecting ideas from customers, design style from designers, diversified drafts from database and various molds from software systems, Homekoo and customers together created a tailor-made design that not only realized the needs of customizations but also generated more data to utilize.

### **4.4 Period 4: Become a total solution provider (2009 till now)**

In 2009, Homekoo started up their company website where online customers could search for the most suitable structure within an online database and make an appointment with designers to measure the space in person for free. The online

platform attracted lots of potential online users to participate in Homekoo's service system, so Homekoo enlarged their customer base from offline to online, which was beneficial to mass customization production mode. The company website not only attracted more customers to join their tailor-made service, but also increased the contact points from physical to virtual that extended the reach and speed of interactions with multiple actors.

Meanwhile, Homekoo turned their attention from advancing technological skill to optimizing each interaction among different actors using technology. For example, designers could employ the software system to help them measure space and draw diagrams on their cell phones in a short time based on customers' needs.

Hence, Homekoo connected each interaction with the software system, which was loaded with knowledge and capability. Moreover, Homekoo even intensified the ability of assembly workers with the help of assembly procedures guided by the software system. Eventually, customers would give positive feedback and share comments on the online platform, thus promoting a positive feedback cycle. The transformation made Homekoo turn its emphasis toward the whole service system they had created and every engagement interface they developed. Unconsciously, Homekoo has moved towards S-D logic, whose main concepts are the application of competence (knowledge and skills) to assist with co-creation of value, goods are appliances that act as intermediaries in service delivery, all actors are resource integrators, and value is determined uniquely.

#### 4.5 Transforming from a G-D to an S-D company

To conclude from these four periods, we propose the case's transformation process of S-D theory empirically. Figure 2 summarizes how Homekoo Company evolved from a G-D to an S-D company.

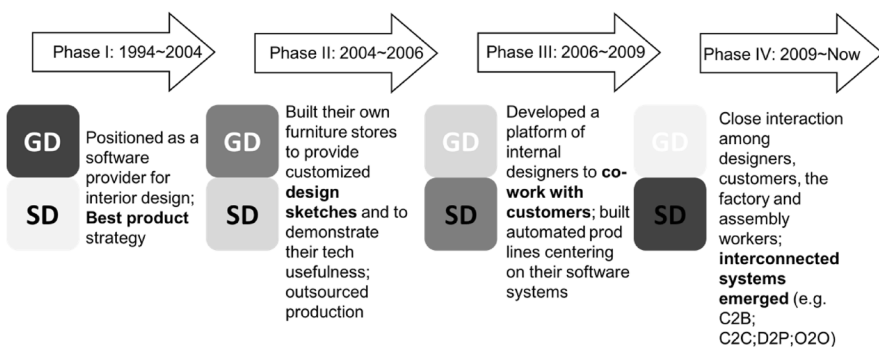


Fig. 2 Transformation processes of the case company from a G-D to an S-D company

## 5 Results, discussion and implications

### 5.1 Discussion of case findings

Drawing on an integration of SDL (e.g. Vargo and Lusch 2017) and actor engagement literature (e.g. Brodie et al. 2019), this research strives to answer the research question of how a firm evolves to become a service-dominant logic enterprise while dealing with goods logic, which is empirically investigated through a purposefully selected case of Homekoo, a furniture manufacturer in China. In our case study, Homekoo was initially established as a software developer that aimed to provide furniture manufacturers with superior software products to assist their design work. At this early stage, Homekoo operated a B2B model that focused on obtaining value-in-exchange (Bowman and Ambrosini 2000), based on a manner of unidirectionally selling its products to the furniture manufacturers. However, the later experience of growth stagnation forced Homekoo to experiment with a B2C model by selling furniture to end customers that was designed using its unique software, as a concrete proof of the software's utility which could increase the adoption of its software products by furniture manufacturers. Although Homekoo embedded "service" (the utilization of experience and knowledge) in its software products and designed furniture, its operation remained dominated by goods logic (Vargo et al. 2008).

From the operation of a B2C model to sell in-house designed furniture, Homekoo unexpectedly discovered that its software expertise could create more benefits for end customers by providing them with tailored furniture. Apart from its software capabilities that created an edge over the other furniture manufacturers (Porter 1996), more importantly, Homekoo realized that the core sustaining its development lay in whether it could serve the customers better, rather than merely touting the best products (Levitt 2004). In other words, it was Homekoo's shift of its attention to helping the customers get their individual jobs done by offering customized solutions (Christensen et al. 2016) that drove its transformation from a B2C to a C2B model. Despite the fact that both Homekoo's B2C and C2B models utilized the exchange of product value as a necessary method for value capture (Brandenburger and Stuart Jr 1996; Vargo et al. 2008), the latter was built on service-dominant logic that featured the co-creation of value with the customers (Frow et al. 2016; Ng and Vargo 2018; Tregua et al. 2021), and that emphasized the customers' integration of Homekoo's solutions into their usage contexts (Edvardsson et al. 2011; Vargo et al. 2008). The adoption of this C2B model was followed by an expansion of physical furniture stores in major cities across the country and steady increases in sales revenues, and consequently, it was listed within the top 500 brands in China. Table 4 illustrates a framework of becoming an S-D logic enterprise from the Homekoo case.

Concerning our research question, the case findings have revealed that the key of a firm's transitioning towards an SDL enterprise lies in having a mindset of focusing on the customer's benefits and welfare, around which the firm's productive activities are organized to provide the customer with suitable media (namely



**Table 4** A framework of becoming an S-D logic enterprise

Period	Investing in advancing software technology	Establishing a light factory mode	Developing a tailor-made mode	Becoming a total solution provider
Types of actors (participants)	Homekoo Company plays a distinct role of providing software products, while furniture manufacturers buy products	Apart from Homekoo Company and furniture manufacturers, end-users, designers and software systems act as tools which assist designers to create a sketch. In this manner, Homekoo started to engage in the service process	Started to engage with different types of actors, involving designers, customers, technicians, production lines and software systems	Four emerging service subsystems: (1) Customer to business (2) Data to production (3) Online to offline (4) Customer to customer
Engagement activity (interactions, platform)	Company is dedicated to upgrading their technology through improving their skill in order to make the best products	Store managers, customers and designers would create customized furniture diagrams together through discussions	The company established automated production lines using software systems to operate had direct interactions with customers and they employed technology to assist them to create sketches in a short time	Online users could connect to the company through the virtual channel Assembly workers could easily and accurately finish the final products, guided by software systems which in turn would inspire customers to give positive feedback
Relationship	Dyadic, fixed and linear relationships between Homekoo Company and furniture manufacturers	Homekoo started entering a customized market where the company needed to gradually become customer-oriented in order to realize personalized furniture	The company paid more attention to customers' needs and the power of customers increased because the company gained more ability to meet customers' needs	Totally transformed to a customer-oriented approach
Resource integration	Take software systems as operand resources which could only be acted on by technicians	The company started applying the competences of software systems to create customized furniture sketches rather than selling the systems to customers directly	Gradually viewed software systems as operand resources which could assist designers to create sketches and command production lines to produce products automatically	Learned how to use technology as operand resources to assist employees with their work

Table 4 (continued)

Period	Investing in advancing software technology	Establishing a light factory mode	Developing a tailor-made mode	Becoming a total solution provider
Value co-creation	Value is viewed as embedded with products, having been added through a process of production or delivery	Homekoo still regarded their software technology as the best products which they embedded with value	Transformed to focus on personalized service rather than products and started to take users' context into account	The company cannot create value on their own, they need to co-create it with related actors and the value would be realized using in a specific context

goods) that facilitate completing a situated job of the customer. Because of the concern for the customer's benefits, we also uncover that within the organized activities, a certain level of actor engagement needs to be adequately designed (Brodie et al. 2019; Storbacka et al. 2016), in a manner that the customer's value-in-context can be achieved or enhanced (Edvardsson et al. 2011). This is evidenced by Homekoo's revamp of its operational process to offer customized furniture solutions, within which the customers play an important and active role in co-designing their preferred sets of furniture in the desired layouts with Homekoo's designers, and in co-promoting the actual customization cases on Homekoo's website and social media with its installers, in order to get attention from the public by influencing their dispositions that could activate their participation in the co-creation of value (Brodie et al. 2019).

Our case result supports the notion that a value co-creation process is driven by A2A (actor-to-actor) interaction which results in a network-like relational structure where the integration of resources by involved actors takes place to render the exchanges of service (Gummesson and Mele 2010; Vargo and Lusch 2016); which is exemplified by the interactive relationships among the customers, and Homekoo's designers, installers, software developers, engineers and workers at the production factories, through which customized solutions are realized in the collective actions. The case result also confirms that digital technologies play a pivotal role in the co-creation efforts (Du and Chou 2020; Ramaswamy and Ozcan 2018; Storbacka et al. 2016), particularly in furtherance of forging engagement interactions, and performing resource integration. For example, Homekoo has built a design software system that enables their designers not only to demonstrate the customized design works to the customers, but also to easily perform real-time design diagrams (or sketches) while in communication with the customers; this results in a unique engagement in which the designers act as frontline sales while the customers play a role of co-designers. The case findings allow us to argue that the utilization of digital technologies has the potential to facilitate the customers' active participation in the organizational activities by applying their knowledge and skills, which can drive a firm to become or maintain an SDL enterprise.

In the case study, we further discover the role of "non-human actors" in A2A interaction that drives a firm's developmental process of value co-creation. Although interaction between human actors has been at the center of value co-creation (Frow et al. 2016; Grönroos 2011; Prahalad and Ramaswamy 2004; Vargo and Lusch 2016), existing evidence has revealed that non-human entities (e.g. digital technologies) cannot be simply treated as "operand" resources that are passively integrated by operant resources (Akaka and Vargo 2014); instead, these non-human entities are better seen as "actants" or "actors" (Storbacka et al. 2016), mainly because they have capacity of acting upon other actors in co-creation practices (Du and Chou 2020). Homekoo's design software system just illustrates the role of non-human actors, due to the fact that this system possesses knowledgeable information concerning past design works which enables a triadic engagement between the system, the designer, and the customer as co-creation practices, and by which the customer is empowered to co-create value by engaging in dialogues with the designer.

Drawing on a micro-foundational perspective to look at the case (Storbacka et al. 2016), we have found that non-human actors can perform a boundary-bridging function that facilitates the A2A interaction to span from a micro to a meso or macro level, rendering the value to be systematically co-created. This boundary-bridging function is analogous to the notion of a boundary spanner (Agnihotri et al. 2014; Dekker et al. 2019; Hsu et al. 2007; Ryan and O'Malley 2016; Schotter et al. 2017), which possesses or generates relevant information or knowledge and can disseminate it to others by forging interactive ties. The ties connected with the boundary spanner can be regarded as important accesses to diverse knowledge that enhances the collaborative cooperation among linked actors, consequently affecting the firm's performance (Agnihotri et al. 2014). In our case study, the "design software system" and the "computers" that are integrated in each of the manufacturing lines aiming for automated production can be seen as boundary spanners, in which the former is capable of transforming a design diagram into a production drawing that activate the subsequent process of automated manufacturing, while the latter will process the information from the design software system and guide the online workers (human actors) to complete a production order. Moreover, while a production drawing is generated, the design software system also produces an assembling drawing simultaneously that will indicate to the furniture installers how to get the job done at the customer's place. The case findings also exhibit that the boundary spanner facilitates a systematic linking of different sets of A2A interaction (e.g. a set of interaction between the design software system, designers, and customers, and another set of interaction between the design software system, computers, manufacturing lines, online workers), resulting in a service (eco)system (Vargo and Lusch 2016, 2017).

## 5.2 Theoretical implications

The discussion of the case findings enables us to further elicit the following theoretical implications. In the first place, a merit of this research lies in the insights gained from the empirical investigation of a firm's evolutionary process from goods-dominant (GD) to service-dominant (SD) logic. Although SDL has been developed for nearly two decades (Vargo and Lusch 2004, 2008a, b, 2016, 2017), few studies have focused on the transformation or evolution from GD to SD, except for Skålén and Edvardsson (2016) and Hartwig et al. (2021). Unlike the extant evidence that pays particular attention to the conflicts between institutional logics (Skålén and Edvardsson 2016), and that examines the external factors (e.g. investors, and competing forces) in driving a journey towards SDL (Hartwig et al. 2021), our research result expands the knowledge of how a firm transforms into an SDL enterprise by highlighting the roles of core capabilities and service mindset. We have found that an SDL enterprise emerges when it utilizes its core capabilities not to produce the best product and then push it to the customer, but rather to resolve the customer's contextual problem and then develop a solution accordingly. This change is driven by the firm's service mindset that can be seen as a culture of attempting to help the customers become better, by which the utilization of organizational capabilities and arrangement of activities are directed. The service mindset also fosters the

co-creation engagement with the customers, enabling their resource integration for the realization of value-in-context.

Looking at the emergence of SDL in an organizational setting allows us to deepen the understanding of the interrelationship between goods and service. We have to stress that goods and service are not mutually exclusive; instead, they are interdependent in a sense that when service becomes a firm's dominant logic, such as the aforementioned service mindset, it will lead the development of the goods and enhance their value capture potential. This adds an explanation that service is an important source of a firm's strategic advantage (Barrett et al. 2015; Vargo and Lusch 2008a, b). Besides, this research employs actor engagement as a micro-foundational perspective (Brodie et al. 2019; Storbacka et al. 2016) to investigate a process of transitioning towards a value co-creation system, which complements the macro theory of SDL (Vargo and Lusch 2016, 2017). In particular, our case findings empirically demonstrate how the collective action efforts are made through the A2A interaction between human and non-human actors that spans the micro and macro levels, enriching the knowledge of value co-creation (Frow et al. 2016; Storbacka et al. 2016; Tregua et al. 2021).

Through a lens of actor engagement, we have uncovered the ways in which non-human actors (e.g. technology) play active roles in A2A interaction that affect co-creation practices. The result from our case study indicates that a non-human actor, such as Homekoo's design software system, can be an important type of operant resource that can act upon other resources, allowing a service to be produced via resource integration. This finding corresponds to the idea of "technology as an operant resource" by (Akaka and Vargo 2014). Our empirical investigation also proves that non-human actors can produce "agency" (the capacity for action) in collaborative interaction (Ramaswamy and Ozcan 2018; Storbacka et al. 2016). Based on their information and knowledge, non-human actors can exercise agency to activate interaction interfaces with other actors, including both human (e.g. customers) and non-human, so that the firm's value creation and value capture can be boosted (Bowman and Ambrosini 2000; Brandenburger and Stuart Jr. 1996). Additionally, our research extends the existing understanding of non-human actors by identifying their roles as boundary spanners in facilitating value co-creation practices (Dekker et al. 2019; Frow et al. 2016). We have found that the advantages of these non-human boundary spanners lie in their capability of creating interaction linkages between different actors and coordinating their co-creation practices.

### 5.3 Managerial implications

"Service" is crucially important to the long-term survival and prosperity of firms mainly because it focuses on the creation of value for customers that underpins any innovation and business operation, through which the competitive advantage of firms is generated (Barrett et al. 2015; Lusch et al. 2007; Wieland et al. 2017). Embracing service-dominant logic thus becomes a pivotal management issue. With this in mind, an implication we suggest for practitioners is that firms need to cultivate a "service mindset" as the central guiding principle for their utilization of

resources and development of business, including products and solutions. To build a service mindset, it is necessary that organizational members gain deep understanding of their customers, particularly with regard to the situational problems facing them, so as to design and arrange organizational activities to develop suitable medium (or products) that facilitate the customers' efforts to get their jobs done in a better manner (Christensen et al. 2016).

In a service economy era (Vargo and Lusch 2004) where the customer experience is of particular concern (Becker and Jaakkola 2020), the key to realization of service hinges on how the firm is engaged with the customers in co-creation practices. We suggest that the firm assess its value-creating activities and identify which activity can be jointly or solely performed by the customers using their knowledge; as evidenced by the design activity that is jointly performed by Homekoo's designers and its customers. By having the customers engage in such interaction, the firm could develop a more suitable solution that meets the customer's need. To facilitate engagement with customers, we also suggest that the firm can deploy technological resources, such as AI or cloud computing, in linking and coordinating value-creating activities, which enables better resource integration by the involved actors.

## 6 Conclusions

This research looks at a firm's transitioning towards an SDL enterprise, which is important yet under-investigated in the domain of SDL-related research (Hartwig et al. 2021; Tregua et al. 2021; Vargo and Lusch 2016). By employing an actor engagement perspective (Brodie et al. 2019; Storbacka et al. 2016), and through a single case study, this research deepens existing knowledge of the interdependent relationship between goods and service logics, and identifies the importance of the service mindset that drives the emergence of SDL in a firm's developmental process, and the accompanying engagement between human and non-human actors. This research also expands the understanding of technology-based operand resources, also seen as non-human actors, in A2A interaction (Akaka and Vargo 2014; Storbacka et al. 2016), which embodies the co-creation practices (Frow et al. 2016). In particular, we have uncovered the non-human's role as a boundary spanner which contributes to the formation of a value co-creation system.

Despite the new findings and insights gained from our empirical investigation, this research has some limitations. One of the limitations is that this qualitative, case-based research hinders us from attaining statistical generalizations based on our results. But, the case study allows us to pursue analytical generalizations (Myers 2009; Patton 2002), that is, we can apply theoretical concepts (e.g. SDL and actor engagement) to an empirical context, so as to facilitate the intellectual conversations between theory and practice. Another limitation confronting this research is concerned with its single case study design. Although a single case study permits us to gain deep understanding of research phenomena, the findings remain confined to an individual empirical context. For future research, a beneficial avenue would be to continue the study of Homekoo's evolution, from which new properties concerning co-creation practices could be observed. Moreover, we suggest that future research

could select multiple cases and investigate the focal actors' processes of transitioning towards SDL enterprises. By contrasting and comparing the results from multiple contexts, we believe the knowledge of SDL, actor engagement, and co-creation practices will be enlarged significantly.

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## Declarations

**Conflict of interest** The authors declare they have no conflict of interests.

**Ethical approval** This article does not contain any studies with human participants or animals performed by any of the authors.

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