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Exploring the Growing Fluidity of Organizational Boundaries with a Value-Creating Perspective

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Abstract: In the era of sharing economy, to get great economic and business value from cloud services, including cost avoidance, cost savings, rapid deployment, scalability, management simplicity, better security and resiliency, the organization transformational flexibility is becoming the core business strategies. As an organization responds to the emergence of digitalization, this study presents four sharing economy models by comparing the sharing economy platforms, then examined a few notable papers that have helped set the stage for current conceptualization, especially concerning the impact of innovative sharing technologies on the organizational boundaries and business value chain system. Finally, the results reconstructed traditional value chains with three stages, including redeploying slack resources, inter collaboration, and value-creating acquisitions. And the finding is that structures digitalization processes through the lens of organizational with cloud service and edge computing. The objective of this article is to advance our understanding of the impact of innovative sharing technologies on the organizational boundaries and business value chain system.

Keywords: sharing economy, organization flexibility, cloud, enterprise architecture

1. INTRODUCTION

The sharing economy and digitization are attracting extensive attention worldwide. In this regard, understanding the sharing economy in these terms enables businesses to identify, and respond to, the threats and opportunities provided by sharing economy platforms, which is of great research significance. With online sharing platforms connecting and facilitating transactions between owners of underused assets and users who pay to use those assets for a limited duration, it poses a threat to traditional value chains, delivers a range of benefits as well, such as driving benefits in service delivery, IT efficiency and effectiveness, and overall value to the organization. Developments like crowdsourcing, open innovation, and open-source software, and social media and big data as well, are predicated on the fluidity of organizational boundaries. In other words, “boundary fluidity” is the coming trend, which describes the loosening of formerly strict distinctions in all organizational fields, contexts, and domains, including boundaries between producer and consumer, insourcing and outsourcing, or product and service.^[1]

The paper gave the four sharing economy models with good examples and a literature review on the organizational and market mechanisms, then clarified the research question that how sharing technologies affect the organizational boundaries and business value chain system, finally, the fluidity of organizational boundaries as the coming trend was explored further in response to the innovative sharing economy.

2. METHODOLOGY

2.1 Mapping sharing economy platforms

Table 1 presents four sharing economy models combining on two key dimensions^[1]. One is the high or low rivalry between participants. High means pricing scheme based on real-time changes in supply and demand; low stands for pricing scheme based on the compensation of the suppliers’ costs. The other is loose or tight control over participants. Loose denotes that minimum standards or guiding principles for platform participation are set

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by the platform owner; tight refers that platform participation is specified, standardized and monitored by the platform owner. Each model focuses on a different value proposition and strategic intent.

Table 1. Four sharing economy models combining organizational and market mechanisms

Rivalry between participants	High	Chaperones		Franchisers		
		Value proposition	Service differentiation	Low costs and efficiency gains		
		Example	Airbnb, HomeAway, Rentomo, Apprentus	Uber, Lyft, Postmates, Caviar		
Rivalry between participants	Low	Gardeners		Principals		
		Value proposition	Self-organization and community building	Low costs and risk mitigation		
		Example	Couchsurfing, BeWelcome, BlaBlaCar, Peerby	Handy, Taskrabbit, Zeel, Deliveroo		
		Loose		Tight		
Control over participants						

Notes: (1) Airbnb: <https://www.airbnb.cn/>; (2) HomeAway: <https://www.homeaway.com/>; (3) Apprentus: <https://www.apprentus.com/>; (4) Uber: <https://www.uber.com/>; (5) Lyft: <https://www.lyft.com/>; (6) Caviar: <https://caviar.global/>; (7) Couchsurfing: <https://www.couchsurfing.com/>; (8) BeWelcome: <https://www.bewelcome.org/>; (9) BlaBlaCar: <https://www.blablacar.com/>; (10) Peerby: <https://www.peerby.com/one>; (11) Handy: <https://www.handy.com/>; (12) Taskrabbit: <https://support.taskrabbit.com/hc/en-us>; (13) Zeel: <https://www.zeel.com/in-home-massage>; (14) Deliveroo: [deliveroo.co.uk](https://www.deliveroo.co.uk)

The above analysis is from the perspective of enterprises, how to obtain economic benefits by sharing social resources with IT. In the new crown epidemic, China implemented large-scale home isolation measures in the early stage and is getting back to work in an orderly way. To ensure the production and operation of basic living materials and key medical materials, fully exploit IT to develop the deep and extensive social cooperation and interconnection, such as health code application based on communication big data trip card. In essence, sharing economy is deep social production cooperation. For examples, (1)accurate and efficient epidemic monitoring and analysis, virus tracing, patient tracking, community management; (2)carry out the precise connection between the supply and demand of medical and epidemic prevention materials relying on the Internet platform; (3)in industrial production, collaborative R&D, unmanned production, remote operation and maintenance, online service, production collaboration and risk warning, and organizes flexible production transfer and capacity sharing in advance for key links that may be shut down or cut off.

2.2 Analyzing path and hypothesis testing

Enterprise Architecture (EA) helps an organization to develop and articulate a vision for its usage of IT to support its strategic business priorities and facilitates the journey to realize this vision. A literature-based framework of MIS Quarterly Executive within five years, let us first examine a few notable papers that have helped set the stage for our current conceptualization, especially concerning the impact of shared technologies (Table 2).

Table 2. Combine organizational and market mechanisms

Paper	Cases	IT	Organization	Benefits
[2]	Buckman	Value stream initiative (VSI)	Assessed by customers	IT efficiency and effectiveness
[3]	Zimride	Organization-sponsored sharing platforms	Prosumer	
[4]	Schlumberger	A collaborative open software architecture	Product-platform	Providing information solutions
[5]	Goget carshare	Product-service systems	Collaborative consumption system	Shared access to products and services
[6]	A U.S. local government	Inter-organizational system	Public-cross-agency	Shared service
[7]	XCMG	A four-phase process model	IT-enabled slack redeployment	To redeploy slack resources into productive use

Paper	Cases	IT	Organization	Benefits
[8]	Trelleborg AB	Assessing IT integration risk in acquisitions	Acquisitions	
[9]	PartnerCo		A cloud service partner	Acquire and deploy(adopt) cloud services(challenges, lessons)
[10]	SMEs		Cloud service	
[11]	Cisco, Wal-Mart and the Arkansas Department of Information Systems	A four-wave model	Bring-your-own-device (BYOD) policies	

3. Results: reconstruct the organization in response to the sharing economy

To keep up with a fast-moving business environment, organizations' platforms are changing from closed to open with more interoperability and "value" as the focal point. As Figure 1, firms need to devise strategic responses to the threats, which combine organizational and market mechanisms in innovative ways to do business and to gain competitive advantages over incumbents.

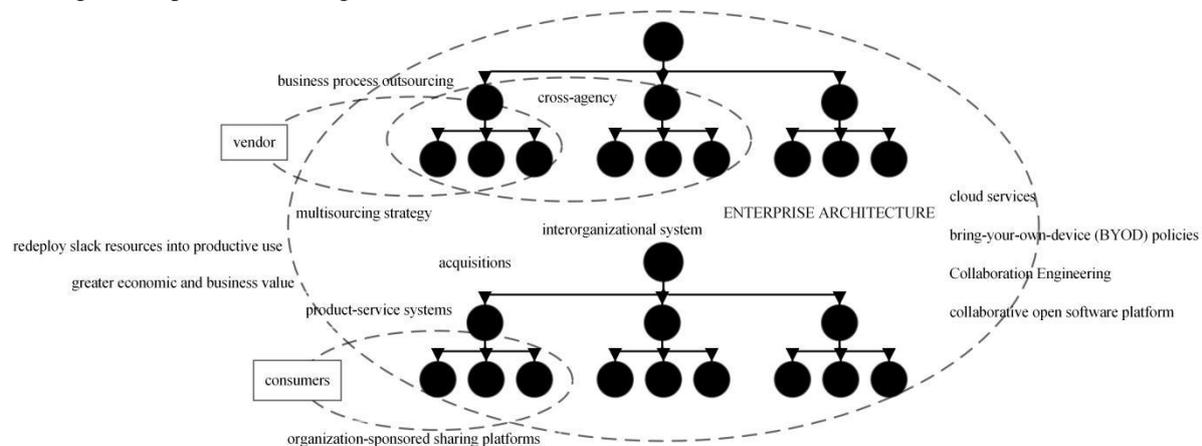


Figure 1. Exploit the growing fluidity of organizational boundaries with online sharing economy platforms

To getting great economic and business value-creating and achieve a competitive position as the leader, as eco-friendly strategies, group the digitalize organizations with an online sharing platform into the three stages as Section 3.1.

3.1 Stage of the fluidity of organizational boundaries

3.1.1 Stage I: to redeploy slack resources into productive and provide mobility services

To discover the business value derived from IT activities (customers' data) and make necessary changes, a four-phase process model of IT-enabled slack redeployment is derived and six recommendations based on the digital transformation completed by incumbent XCMG, the largest construction machinery manufacturer in China, are provided^[7]. AUDI AG(<https://www.audi.com/en.html>) has begun to experiment with providing mobility services, built around car sharing, rather than the less segmented services provided by competitors such as BMW and Zipcar(<https://www.zipcar.com/>)^[12]. Buckman's (<https://www.buckman.com/>), a U.S.-based chemical manufacturer, Value Stream Initiative used a micro-level, individual view of value as assessed by customers for analysis to redefine itself and its IT organization^[2].

3.1.2 Stage II: inter collaboration and shared service

Collaboration Engineering helps organizations achieve significant business improvement by releasing untapped potential through streamlining their collaborative work practices, which more productive and effective than traditional approaches^[13]. The approach enables organizations to design and deploy collaboration engineering processes using professional collaboration techniques and technology for recurring high-value collaborative tasks. For example, manage the complexities of inter-organizational system projects by the public-cross-agency case

from a U.S. local government, which successfully embraced the complexities of aligning the regulated processes of multiple independent departments as it developed a criminal justice court and case management system for a new shared service center to support them.^[6]

To sustain its competitive position as the leader in providing information solutions to the oil and gas industry, Schlumberger(<https://www.slb.com/>) transitioned to a collaborative open product-platform software architecture by embedding a geological modeling software product-Petrel-within Ocean^[4]. Another example, GoGet CarShare(<https://www.goget.com.au/>), an Australian car-sharing service, incorporates shared access to products and services via Product-service systems (PSSs), a type of collaborative consumption system that combines products with (often digital) services^[5]. Furthermore, the Zimride ridesharing platform (<https://www.zimride.com/>) build prosumer engagement in which organization-sponsored sharing platforms^[3]. A new class of IT that facilitates collaborative consumption within a private social network restricted to organizational members. They leverage and integrate employees' roles as consumers and providers ("prosumers") in working environments and therefore offer a new way to build employee engagement. Coworkers and students connect through a private network to carpool to the same destination, relieving parking and traffic congestion, reducing the carbon footprint and improving sustainability - not to mention sharing the savings on gas.

3.1.3 Stage III: value-creating acquisitions

To rapidly capture value from acquisitions and to sustain its acquisition-based growth strategy over time, by the case of Cisco Systems an advanced EA capability can assist in the four phases of the acquisition process: pre-acquisition preparation, acquisition selection, acquisition integration, and post-integration management.^[14]

With the experience of Trelleborg AB (<https://www.trelleborg.com/en>), a serial acquirer, IT integration risk in acquisitions assesses, high-risk acquisitions management and low-risk acquisitions identify^[8].

3.2 Cloud service and edge computing

As early as SMEs adopt cloud services^[10]. Based on the case of "PartnerCo" (<https://www.launchpartner.co/>), a multinational cloud service partner can play four roles in helping organizations to acquire and deploy cloud services^[9]. With edge computing, organizations are increasingly adopting bring-your-own-device (BYOD) policies. For example, cloud work and online education relied on various personal smart devices (smart phones, iPads) and home smart TVs, which greatly reduces the office cost of enterprise access (fixed capital investment in office space and office computers). Based on case studies of Cisco, Wal-Mart and the Arkansas Department of Information Systems, a four-wave model for the evolution of BYOD developed^[11].

4. CONCLUSIONS

This paper showed the great economic and business value derived from online sharing platforms, and the organization's transformational flexibility is becoming the core business strategy in the era of sharing economy. Understanding the sharing economy in these terms enables businesses to identify, and respond to, the threats and opportunities provided by sharing economy platforms. It is never too late to improve performance, transform its organizational structure, process, and architecture to balance autonomy for innovation and integration for competitiveness.

The literature on the influences of digitalization on organizations indicates that it implies a period of exploration of potential implications and opportunities for organizations, the so-called "fuzzy front-end of innovation", which can be chaotic, ill-defined, and difficult. While there are different strategies to manage the fuzzy front-end of digitalization it seems to require a high level of flexibility from an organization. This requires organizations to keep up with and integrate digital technologies into their organization while continuing to use current methods and knowledge, thus having to adapt their practices, skills, and roles to remain relevant and avoid potential redundancy of expertise and services. With 5G, the offline application scene will be further integrated

with the cloud, such as 5G+telemedicine, 5G+telecommuting, 5G+teleconference. 5G+VR panoramic virtual shopping guide cloud platform, users can instantly browse the cloud shelf and cloud window with their mobile phones at any time, realizing 360 degrees panoramic and 720 degrees dead angle free shopping experience. 5G+VR, AR and edge computing realize live broadcasting in venues such as cultural performances, sports events, scenic spots and outdoors, aggregate 5G high-definition film and television, cloud games and other content, and promote VR glasses and game handles.

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