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Towards the Ambidexterity of Service Processes: Implications for the Managing of IT Usage and Organization Learning

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Abstract: In this study, we develop a conceptual model to illuminate how firms can better compete through service basing on a process view. In accordance with the thought of organizational ambidexterity, we firstly suggest that the efficiency and flexibility in the operation of service process are equally important for organizations desiring to achieve a superior service performance. Additionally, considering that the ambidextrous behavior of organization members is an effective mechanism to attain ambidexterity, we identify two kinds of service behaviors as the crux to promote the ambidextrous state of service processes, concerning IT usage of service personnel and learning behavior of service leaders respectively.

Keywords: service process, IT usage, organization learning, ambidexterity

1. INTRODUCTION

Nowadays, we are witnessing the world economic progress depends more and more on service. Since the rapid changing of business environments, service is increasingly recognized by business practitioners and scholars as a more effective approach to achieve competitive advantage than manufacturing [14] [19]. Consequently, promoting the development of service sector in the whole economy has become a worldwide issue. For example, although China has been regarded as the primary manufacturer to produce most of world's goods, recently Chinese government also emphasizes service economy as a major force contributing to its economic growth in the future.

However, when seeking to compete through service, firms are surely in need of an appropriate managerial view about the essence of “service” which can guide them to better practice service operations [18]. In the service literatures, an influential strand of researches has defined services as processes [30] [33]. By identifying customer inputs as a kind of significant element into service production process, this perspective clearly delineates service from manufacturing and contributes to our understanding about service in an adequate, consistent and unified way [30]. Along with this process-based definition of services, the primary purpose of this study is to further investigate how to better implement service management activities under modern dynamic competition environments, particularly in the context of a transitional economy like China.

Given that attaining high level in service efficiency and service quality are two equally important objectives for companies considering the design of service systems, there actually exists some trade-offs [21]. Since the idea of business process management (BPM) has been widely accepted as an effective approach to improve efficiency in manufacturing [3], whether it can do the same in service deserves further attention because customers have been treated as endogenous actors for service system and this will inevitably increase the variability of service operation and cause service delays [4]. In other words, if firms embrace a “seek efficiency” view to reap the value of standardization in their service managements, it seems that buffering customer inputs from service processes as possible as they can is a more plausible way [16]. Yet, the real role customers have played in services is two-sided. A fundamental reason why firms can gain sustainable competitive advantage by

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adopting a service-dominant logic lies in these firms all appreciate customers as active participants in their value-creation processes, and by engaging customers and other stakeholders in a kind of value co-creation paradigm they can constantly enhance customers experience about their services, increase customer satisfaction, as well as are more likely to detect and seize new market opportunities incurring by the changes of their customer preference [5] [27] [33]. From this point of view, customer involvement is an indispensable prerequisite for service, and a long-term profitability through service depends a lot on a firm's capability to handle high variations of customer demands [28]. That is, this call for a flexibility-oriented perspective in the management of service process. As such, how service enterprises should handle the conflicts between service process efficiency and service process flexibility? This is a critical question for firms wishing to compete through the operation of service processes.

Inspiring by an influential organizational view of organization ambidexterity theory, this paper develops a conceptual model intending to enhance our understanding of the linkage between the practices of service process management and competitive advantage. We firstly argued that service firms wishing to achieve success should build capabilities to simultaneously pursue the efficiency of flexibility of their service processes. Then, by incorporating insights from organizational ambidexterity, we further identify the ambidextrous capability of service personnel's behavior as a significant factor to shape service-performance relationships. Specifically, since researches on service, information technology (IT) and knowledge management have been frequently intertwined in the literatures – on one hand, IT not only is a very helpful tool to increase process efficiency [34] but also provide many opportunities for service firms to innovatively collaborate with their customers [19]; on another hand, the philosophy of service has stressed a firm's ability of applying and exchanging specialized knowledge as the essential source of its economic growth [33] – the current work seeks to enrich our understanding on how to better practice IT and knowledge management to improve the performance of service processes.

2. THEORETICAL UNDERPINNINGS

2.1 The Process View on Service

For decades of years, process-based best practices, such as total quality management (TQM), business process reengineering (BPR), Six Sigma, have been broadly adopted throughout the manufacturing sector of economy for their contribution to improve manufacturing efficiency [9] [10]. Nevertheless, permeating the process approach in the traditional service sectors used to meet with great resistances because of the diseconomies induced by small scale of service and high variability of customer demands [21]. In recent years, this situation has changed significantly due to the widespread use of communication and computation technologies [33]. To ameliorate the diversity of service definition, Sampson and Froehle [30] put forward a Unified Service Theory (UST) to distinguish service from non-service basing on the process perspective. They formally state UST as follows [30, p.334]:

“ With service processes, the customer provides significant inputs into the production process. With manufacturing processes, groups of customers may contribute ideas to the design of the product, but individual customers' only participation is to select and consume the output. All managerial themes unique to services are founded in this distinction. ”

In other words, UST identify customer inputs as the most essential difference between manufacturing and service. And this brings the following two advantages: for one thing, both service researchers and practitioners can benefit from the existing knowledge and skills on process management achieved in the context of manufacturing; for another thing, the extra issues and the primary challenge left to the study of service processes management is making efforts to comprehend the implications of customer inputs thoroughly [30]. Consequently,

given that the high variability of customer inputs has increased unpredictability in service processes, it also leads to an important research opportunity for the management of service process operation. From another viewpoint, scholars recently point out that it is important to adopt a flexibility-orientation for the studying and practicing of process management in the context characterized of highly complex and uncertainties [31]. Thus, we anticipate that service enterprises can address uncertainty more effectively by developing better flexibility capabilities in their service processes.

2.2 Organizational Ambidexterity Theory

The term “organizational ambidexterity” was firstly proposed by Duncan [6], but it is not until March’s [20] landmark article that has spurred many researcher’s interests in this concept. Since most traditional organization researches have argued that the trade-off between process efficiency and flexibility is insurmountable within the context of industrial economy [7], as time changes and firms have to survive in a globe hypercompetitive environment, this trade-off paradigm is no longer sufficient (although their replacements are not yet clear) and the demand for adaptation capability arises significantly. The contribution of March’s landmark paper exactly lies in that it shifts organizational research on management paradox from trade-off thinking to paradoxical thinking [17]. Since then, more and more researchers perceived the importance of balancing seemingly contradictory tensions and accepted organizational ambidexterity view [1].

In the literatures, scholars point out that the biggest challenge for an enterprise to pursue ambidexterity depends on its ability to strike a balance between exploitation and exploration [25]. And the former is associated with activities such as “refinement, efficiency, selection, and implementation”; the latter refers to notions such as “search, variation, experimentation, and discovery”. In essence, they are two kinds of activities require fundamentally different organizational strategies and structures, and will contest for organization’s attention and resources [20]. As to how firms can achieve their ambidexterity, researchers have investigated a variety of antecedents of organizational ambidexterity. For example, structural ambidexterity solutions suggested that firms can simultaneously perform exploratory and exploitative activities in discrete subunits [32]; contextual ambidexterity camp claimed that the locus of exploitation and exploration is throughout the organization and can be achieved by properly motivating employee’s ambidextrous behavior [8]; those who agreed leadership ambidexterity highlighted the important role of senior managers’ ambidextrous thinking pattern and relevant behaviors [15].

Overall, organizational ambidexterity theory provides a theoretical foundation for understanding how different organization entities, i.e., organization unit, organization individuals, or senior managers, can contribute to address exploitation and exploration activities simultaneously and internally [26]. Whereas the main stream of ambidexterity researches focus on organization design facet and structural elements as the antecedents of enterprises ambidexterity, recently, promoting ambidexterity from the angle of organizational behavior also proved to be highly effective.

3. THE CONCEPTUAL MODEL AND HYPOTHESES

The conceptual model of this study is shown in Figure 1.

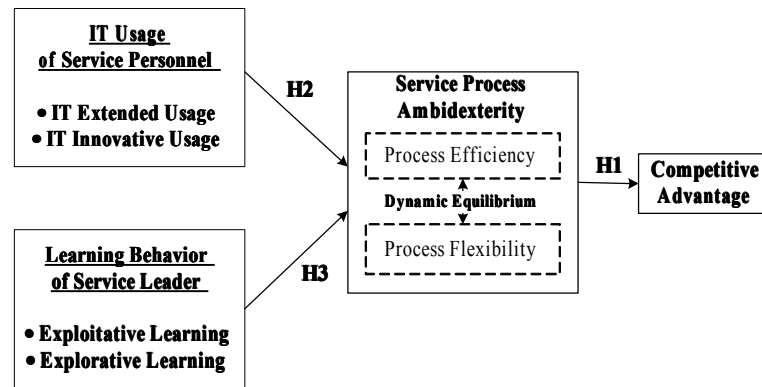


Figure 1. Conceptual Model

3.1 Service Process Ambidexterity and Competitive Advantage

Accompanying with the fast changing pace of modern business environment, many business scholars and enterprises people have admitted that the competition rule of winning through comparative advantage is more workable for them to achieve sustained competitive advantage [11] [35]. In line with this, more and more firms prefer to strengthen their capabilities of service because they regard it as a very helpful value-creation paradigm to gain competitive advantage [14] [33]. In the literatures, researchers have pointed out that competitive advantage depends on not only the efficient use existing resources; but also requiring flexibility and innovation [11] [12]. Accordingly, we argued that both process efficiency and process flexibility are crucial for a company seeking to compete through the operation of service processes. Specifically, we conceptualize service process ambidexterity as the dynamic equilibrium state between the efficiency and flexibility of service process basing on the idea of organizational ambidexterity. While the former can reflect organizations' capabilities in applying scientific management principles in service to reap the benefits of large scale and low cost; the latter can indicate to what extent they have responded to the less predictable customer demands and is a crux for these firms to attain superior service quality and adapt the hypercompetitive environment in the long run. We expect a company can achieve competitive advantage when reaching a balance between efficiency and flexibility in their service process management practices. Therefore, we have the following hypothesis:

Hypothesis 1 (H1): Service process ambidexterity is positively related to organization competitive advantage.

3.2 The Impacts of Service Personnel's IT Usage Behavior on Service Process Ambidexterity

As shown in ambidexterity literatures, some researchers suggest that organization individuals can be very influential to the performance of organization ambidexterity if they actively make their own decisions about how to allocate their resources between contradictory task demands for alignment and adaptability [8]. Consequently, in the context of our research, we validate the behavior aspect of service personnel as a key management element for service process ambidexterity.

Given that the "service revolution" and "information revolution" are actually two sides of the same coin, IT is appreciated as the major force to spur the expansion of service economy all along [19] [24]. In particular, when understanding service from the process view, on the one hand, although early scholars asserted that it is uneasy for service organizations to benefit from standardization of service process because of their small scales [21], modern advanced information and communication technologies have remarkably increased the possibility of large-scale expansion for service companies and even a small process efficiency improvement can lead to a high profit growth [5]; on the other hand, recently, some researchers also suggested that customer variability is no

longer uncontrollable and service firms can improve both efficiency and quality by appropriately manage their application of IT [36]. Thus, we believe that by building up an ambidexterity-orientation IT usage pattern within service members, firms are more likely to gain service process ambidexterity.

More specifically, it has been pointed out that ambidextrous employees usually present some peculiar characters in their activities. For example, they are more initiative and are vigilant to the opportunities outside their working areas; they value the importance of collaboration and are always willing to undertake more tasks [8]. When concerning on the IT-related behavior, some IS researchers have use extended use to define users have apply more or different IT features to accomplish their work tasks more efficiently or to perform more comprehensive tasks [29]; another scholars stressed “users’ intention to innovative with IT” and describe a kind of innovative use which refers to a user’s willingness to discover novel ways to apply IT that are not recognized by the system designers [2] [23]. Therefore, we expect a company whose members possessing the ability to perform a high level of IT extended and innovative usage in the operation of service processes will advance the achievement of service process ambidexterity. The second hypothesis is formulated as follows:

Hypothesis 2 (H2): The IT usage level of service personnel is positively related to service process ambidexterity.

3.3 The Impacts of Service Leader’s Learning Behavior on Service Process Ambidexterity

When examining how to evolve from goods-based organizations into service-oriented enterprises, many scholars mentioned the issue of developing a learning service organization highlighting knowledge as the fundamental source of competitive advantage [24] [33]. Since service firms only offer an initial service proposition as a starting point to create value for their customers, they de facto constantly promote service provisions to adapt to dynamic and complex environments by continually absorbing information and knowledge from their collaborative value networks [19]. Besides, following March’s [20] landmark article, many ambidexterity researchers point out that organizational ambidexterity is a distinct capability embedded in the learning activities of organization members, particularly in top managers [15] [22].

Thus, we argue that another important mission for service enterprises in the operation of their service processes is to improve their leaders’ capabilities to process knowledge. This is a kind of organization learning capability which means that on the purpose of improving performance, organization members acquire, renew, integrate and create knowledge to modify their behaviors that will reflect their new cognitive situations [13]. According to March, service enterprises can build up their knowledge capabilities on the basis of two types of learning activities, i.e., exploitative learning of selecting, implementing, improving and refining existing certainties; and explorative learning of searching, discovering, creating, and experimenting with new opportunities [20]. And by examining the proportion of top-down or horizontal/bottom-up knowledge inflows within service process, we can know very well about the extent service managers have engaged in exploitative and/or explorative learning activities [22]. That is, we can infer that the more a service manager has obtained knowledge from the direction of top-down and horizontal or bottom-up, the higher the level of exploration and exploitation he/she is engaging in. Therefore, we have the following hypothesis:

Hypothesis 3 (H3): The level of service leaders’ exploitative and explorative learning activities is positively related to service process ambidexterity.

4. CONCLUSIONS

For the decades, service has gradually grown up into an overwhelming economic portion for many countries. Since business competitive has become increasingly dynamic and complex, the thought of service – which highlights the importance of engaging customers into the co-creation of value – is broadly preferred as a

more valid approach for service organizations to cope with this rapid environment changes than traditional manufacturing. Whatever, the underlying mechanism on how to better implement and manage service deserves further investigation.

Our research deepens the understanding about how service organizations can outperform their rivals through process-based management in their service systems. Enlightened by organizational ambidexterity theory, we formulate a model maintaining that service organizations should reach a high level of efficiency and flexibility within their service processes simultaneously, and further rationalize why the managing of individual activities relating IT and knowledge should be on the central of realizing the ambidexterity of service processes. As a result, we develop three hypotheses which can be empirically tested or modified in future researches. In the end, this paper can also provide some implications for service companies that they can significantly increase their profitability by developing better IT and knowledge management capabilities within their service process activities.

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