An Investigation into Value Co-creation in Service Supply Chains

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***Abstract*—In service supply chains, customers select a service provider with whom value would be maximized through the interaction between the service provider and the customer. This study investigates the link between value co-creation and customers' (re)purchasing intentions in the financial and professional services industry. This research was conducted via a case study of PricewaterhouseCoopers (PwC) and one of its clients, Jaguar Land Rover (JLR) and included in-depth interviews with senior managers. The findings underline that the financial and professional services industry is dominated by end of service results and that the only viable option in gaining competitive advantage is to stand out in today's dynamic marketplace. It also reveals that there is a huge demand for outsourcing services and that most clients will choose to purchase one which offers the desired value at the right time. Lastly, it proposes a value co-creation framework derived from the study.**

Keywords—professional service; supply chain; value co-creation; purchasing intention; case study

I. Introduction

Competition nowadays is based on adaptability to change, the development of core competency and technological advancements through the ability to provide innovative new products or services while keeping costs to a minimum [1]. It will mostly depend on the capability of firms within the supply chain and the products/services to dynamically add value internally or externally to adapt to customer demand and to enhance customers' perceptions and satisfaction. As such, it is believed that firms are more profitable, efficient and effective when they concentrate on their core activities and let the rest be taken care of by specialist providers, who are able to maximize value and minimize costs and disruption thereby ensuring success for clients [2, 3].

In the past 20 years, researchers have mainly focused on the supply chains for goods as service supply chains are relatively short. Research relating to service supply chains within professional service companies or service supply chain management is scarce [4]. This paper focuses on research into value and value creation from the viewpoint of service-dominant logic [5], as opposed to goods-dominant logic, since each point of view reflects a different way of considering value. In goods-dominant logic, value refers to value-in-exchange, whereas in service-dominant logic, value means value-in-use. According to Johnson et al. [6], in the case of service-dominant logic, the competitive resources are knowledge and skills.

This study attempts to demonstrate whether value co-creation in knowledge intensive services is an important factor in maximising end-results and whether it impacts directly on clients' (re)purchasing intentions. It analyses the supply chain interaction in the context of both sides. The remainder of this paper is organized as follows. Section 2 reviews previous research on knowledge intensive service supply chains and value co-creation by supply chain partners. The methodology used in the research is presented in Section 3. Section 4 analyses the research data and proposes a framework of value co-creation. The impact of value co-creation on customers' purchasing intentions are discussed in Section 5. The final section presents the conclusions derived from this research.

II. Literature Review

In this section, a comprehensive review of related research on the following three topics is given: a) Organizational knowledge and knowledge intensive supply chains; b) Value co-creation; and c) Purchasing/repurchasing intentions.

A. *Organization knowledge and knowledge intensive service supply chain*

Nowadays, it is believed that knowledge is the key to corporate survival; companies need to maintain and make use of both their internal and external employee, partner and organizational knowledge [7]. Businesses have recognised that organizational knowledge, such as worker experiences and skills, which may be stored in the minds of employees or could be recorded in physical documentation, has an essential role to play in responding to competitive pressures and, for an increasing number of companies, opportunities to establish competitive advantage lie in their ability to enhance ideas and intellectual know-how. By putting their valuable knowledge assets to more effective use, organizations can benefit from product and service breakthroughs and improved processes.

Research shows that organizational knowledge is critical to the success and competitive advantage of an organization [8]. The management of organizational knowledge is becoming increasingly important for the survival of organizations. By sharing formal organizational knowledge both internally and with partners in the supply chain, companies are now able to increase performance and ultimately be successful in global marketplaces [9]. Empirical studies [10] suggest that organizations that actively share and make use of collective knowledge with partners in the supply chain become more productive and are more likely to survive than those that withhold knowledge within their company. It is asserted that knowledge infiltration deep into the core business value chain of Professional Services Organizations (PSO) results in the creation of new capabilities, the setting of high entry barriers and improved financial gains.

In the professional services industry, organizations learn from engagement with clients and their projects, which determines both what is learnt and how much. As such, it is essential for PSO's to engage with the right clients and projects to improve their knowledge [11]. However, there are two challenging aspects which differentiate the professional services industry from other service sectors: 1) the intensity of customization required during client projects; and 2) the high level of face to face interaction necessitated by clients [12]. Service providers must, therefore, acknowledge the importance of knowledge-based activities to enhance their organizational knowledge. They must invest to learn, capture and leverage their own knowledge. As such, strategies have been suggested to effectively develop knowledge resources, including 1) expanding new product services; 2) deploying new knowledge to old products; 3) globalizing local knowledge; and 4) increasing added market value [13]. Jaakkola and Hakanen [14] defined 3 ways that service providers differentiate themselves from competitors: 1) consistency in delivering high value solutions at low costs; 2) leveraging knowledge capital in lower cost and quality efficient ways; and 3) sharing leading practices in service areas to enhance employee competencies, which becomes paramount when employees leave the firm.

B. *Value co-creation*

Gammelgard [15] introduced the theory that knowledge management and learning from others in the supply chain can introduce new innovation to all supply chain partners and stated that the collective knowledge and experience of all members may be the most significant source of value creation. Vargo and Lusch [16] identified 4 ways that value may be co-created: Value Proposition; Service Offering; Value Process and Network; and Conversation and Dialogue. Flint and Mentzer [17] argue that managing service co-creation is a critical element of high end value, while Fu et al. [18] believe that a crucial consequence of a service provider's actual performance is strongly affected by buyer perceptions, which determines their willingness to continue service.

A large body of research exists with regard to co-creation in the service sectors. Løwendahl [11] found that end value is directly affected by the co-creation process in which innovation and refinement takes place to determine the desired outcome. Additionally, Spohrer et al. [19] asserted that value-in-use drives the process of co-creating value, but value-in-exchange is an aspect to monitor the process to a desired result. In other words, it is about gaining an understanding of complex offerings and intense interaction between the parties to deliver a customised end service value, since different businesses involve different levels of knowledge and skills, as well as degrees of specialization [16].

Additional research concluded that what is particularly relevant to value co-creation is the evolution and transfer of customers from 'passive audiences' to 'active players' through their experienced journeys [20]. Historically, firms have controlled all business activities through the supply chain, which means customers are used to having little or no influence on the value creation process. Nowadays, however, many platforms exist which allow clients to raise concerns about the process at anytime and anywhere. Moreover, with the internet, consumers can now actively interact and influence the value creation process, by defining value in the way they see value as experiences; this allows them to push companies to see the 'expected value'. In other words, clients now do not simply address their issues but are conceived to co-achieve in designing expected service [21].

C. *Purchasing/repurchasing intention*

Jae-Nam Lee et al. [22] identified 3 determining factors that clients consider when choosing to outsource services, including client perspectives of: the organization, service performance, and contract and relationship, especially as professional services can be purchased by organizations or individuals. Firstly, it depends on the organization's motivation to outsource; whether it is a strategic decision for survival or not, the benefits and risks of outsourcing must be considered [23]. Customers typically start their outsourcing of services to solve non-core competence issues in a feasible way. As such, the prior outsourcing performances of service is the next considered area. Efficiency results, clients' satisfaction with delivered systems, service quality, cost reductions etc. are also considered. The impact on outsourcing decisions should be carefully approached to minimize technological and economic setbacks, as the significance of in-house issues on performance may not be known until the alternatives are explored, such as economic control, personnel, organization and data characteristics [24]. Next is the nature of the contract, in which contract management is detailed as it is considered the core factor which makes the outsourcing project successful. Lastly, defining the type of outsourcing relationship is considered; well-specified rules to which the service provider will operate are defined to achieve the best results of the outsourcing project [25]. In summary, outsourcing services allows firms to reduce price, increase cost flexibilities and benefit from economies of scale.

III. METHODOLOGY

Since this research, with a deductive approach goal, focuses on understanding people and the reasons for clients' (re)purchasing intentions in social contexts, a qualitative method is chosen, instead of adopting a quantitative method to create correlative relationship of hypothesis through statistical testing [26]. More specifically, a case study methodology is adopted, the purpose of which is to gain an in-depth understanding of a phenomenon and to explore the reasons behind it [27]. The study captures key characteristics and identifies issues in the case. Lastly, an interpretivist philosophy is adopted to ensure that the analysis of the reality of the existing case is correct [27]. A single case study is believed to be a suitable approach to this project in responding to the research aims. The supplier-client interface investigation was conducted at PwC (London) and one of its clients, Jaguar Land Rover (JLR) Ltd. The role of value co-creation in professional services, the degree to which value co-creation is employed in the professional services industry and the degree to which value co-creation affects clients' re-purchasing intentions were investigated both from the clients' perspective and the service providers' perspective, as illustrated in Figure 1. The study also captures the characteristics of managers' considerations and identifies key values, clients' purchasing intention criteria and the way to enhance the value co-creation process by closely associating data collected and observations through interviews.

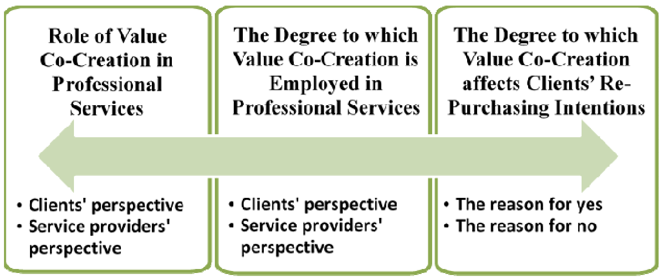

Fig. 1. The Framework of the Research

Semi-structured interviews focused on three main areas: 1) each actors capabilities, 2) the value co-creation process and 3) (re)purchasing SSC factors. Open interview questions were designed to allow participants to express themselves without having boundaries that obstruct responses and to mitigate interview bias [28]. Participants were asked if they would like to discuss any further relevant areas of interest after all issue were discussed.

Notes were taken and the content of all four Skype interviews was recorded. Then, all answers were categorized according to target issues. Nvivo was used for analysing the data from the recorded interviews to minimize the primary disadvantage of in-depth interviews – namely, complexity in free responses. To validate the data collected, the combined interview sections were sent via e-mail to the interviewees for confirmation before the research process continued.

IV. Findings

The two firms demonstrated high levels of know-how competency in the market. Specifically, PwC offers a high degree of expertise in consulting to identify organizational issues and in its ability to configure financial systems to integrate into clients' business applications; JLR's competence lies in its knowledge relating to car production and development, which includes operations and marketing expertise. In summary, JLR observed that PwC managed their business with control, confidence and agility with long term goals and were able to communicate the right metrics with clear and transparent targets that helped JLR deliver quality end results.

A. *Critical knowledge areas for value co-creation*

In the first part of the interviews with PwC and JLR, the following knowledge areas were covered to enhance the organizational knowledge of both sides. These included: training, contact networks, employee know-how/expertise, innovation environment, project management, team work and quality. As a global knowledge intensive organization, offering services across 158 countries, PwC teams, groups and communities require a strong spirit in connecting and interacting with others across various locations. It is a critical factor for PwC to provide a fast and seamless service to global clients. To meet these needs, PwC provides itself with many support tools, including:

1) Social Collaboration: using Spark-based on Jive Software, which includes blogs, communities, social networking, microblogging, mobile access and so on, to encourage more social interaction with others from different industries to exchange knowledge, ideas and expertise.

2) Customer Engagement and Digital Marketing: using Ant's Eye View, BGT Partners and Logan Tod.

3) Cloud Knowledge Storage and Analysis: Through a joint business relationship with Google. As such, PwC presents a good example for developing organizational knowledge to predict and capture clients' demands in the professional services industry and to create the value that clients desire.

B. *Value Co-Creation Process*

In relation to the value co-creation process, terms such as assess, design, construct, implement, operate and review were mainly discussed in the interview. Both sides interact intensively to identify the value propositions perceived before agreeing any definition of the end goals for implementation. During this process, it was important to clearly identify and integrate the capabilities of each side. It was noted that various factors helped them enhance the value co-creation process:

- Ability to address expectation from clients – all PwC's responses demonstrated a strong focus on JLR's needs as well as their ability to draw on their own strengths to devise a comprehensive view of how the new financial system could operate effectively within JLR's organization.

- Use of Technology – this allowed PwC to get closer to the client to shape their entire value proposition. By bridging the 'execution gap' (i.e. the gap between strategy and execution), PwC have leveraged technology and data through a series of strategic acquisitions. It not only allows PwC to build strong worldwide capabilities to address clients' business imperatives, but also a platform for JLR to interact faster with quality results.

- Number of experts in JLR who are involved in the process and the means to transfer new knowledge to all other JLR employees – in an interview with a JLR manager, it was indicated that he was impressed by PwC's knowledge in the automotive sector and the insights they were able to offer. The tasks were approached with great enthusiasm and a useful methodology was employed to help shape JLR's future strategy; it was an excellent piece of integrated due diligence.

C. Impact of Value Co-Creation Process on Clients' Re-purchasing

Value co-creation has a huge effect on end-quality and, consequently, affects the client's re-purchasing intention. The interview showed that senior managers at PwC supported this viewpoint. The interactions between both sides are valuable for identifying problems or ideas that may increase end value. This is also consistent with the literature discussed earlier. PwC managers suggested that clients are eager to participate and provide opinions particularly when they are encouraged to do so. They also emphasized that the value co-creation process would maximize end value for clients, increasing service (re)purchase levels for both companies. JLR managers stated that the quality of service implementation and the experience of the value co-creation process are key factors which impact on future purchases of professional services.

D. Value Co-Creation Configuration Framework

Knowledge management and service providers' knowledge systems are a recent hot topic and a large number of research articles have been published in this field. Based on the PwC and JLR research, a framework that integrates and shapes the co-creation process and the influence on the (re)purchasing intentions of clients is proposed in Figure 2.

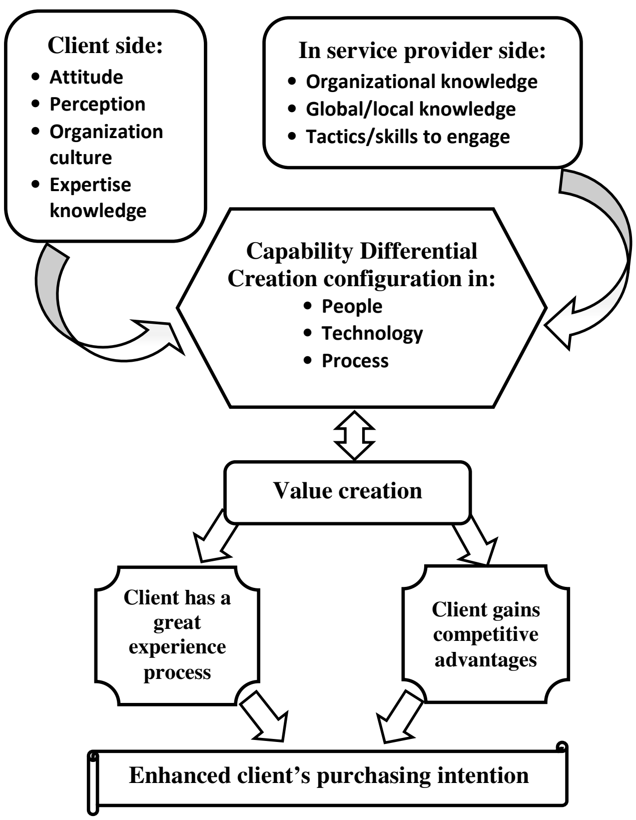

Fig. 2. Value Co-Creation and Purchasing Intention Framework

The two most effective areas detected by JLR in PwC deliberations are: 1) Ability to surpass expectations: PwC tactics effectively overcame challenges to tackle important issues; and 2) Combining technology and innovation is one of PwC's strong points in executing strategies to address client expectations. This research has identified that capability differences in the 'people – process – technology' system between PwC and JLR is a way to start the co-creation journey. Identifying core differences (e.g. good practices, working procedures, software platforms, etc.) will highlight gaps to maximize value co-creation and thereby result in the client being satisfied in his (re)purchasing intentions.

V. Discussion

Based on the questions identified in this research, the impact of value co-creation on customer (re)purchasing intentions in knowledge intensive professional service organizations are further discussed and analyzed as follows.

A. The Role of Value Co-Creation in Professional Service (re)purchasing Intention at PwC

Firstly, our findings on the service providers' organizational knowledge complement research into supplier competencies [29]. The findings highlighted that PwC has invested much effort in enhancing its organizational knowledge through attracting, training and retaining talent, as well as creating its own culture–collaboration platform to share knowledge and diagnostic tools between well-engaged stakeholders and colleagues on a daily basic. As such, PwC is able to adjust its approach and, from strategy-to-execution, deliver value to various integration processes with clients from many industry sectors.

Secondly, this study highlights that extending end-value processes cannot happen in isolation. Our findings show that a customer's progress can be summarized into a framework that service provider employees should be deployed throughout the process in which value is created. The value-creation process becomes effective when it aligns with the service provider's capabilities to fill gaps in the customer's portfolio. In order to do so effectively, it is recommended that expectations are managed and that clients are prepared for change. The findings suggest that the service provider must integrate the capabilities of the buyer as a whole and not only a few competencies.

Thirdly, the interview results showed that those who choose to use well-known services (e.g. any big 4 service providers) are already brand aware and, where possible, would always choose the best quality consultancy support. As a result, only exceptional customer experiences can set companies apart from their competitors through word of mouth etc. The important part is that organizations need to expend time and effort to see the world through the customer's eyes, to design functions that can create value. Besides, the research shows that instead of focusing only on individual interaction touchpoints (e.g. service calls, billing etc.), it is good practice to pay attention to the whole customer experience. In summary, PwC considers value co-creation in professional services to be a factor which influences service (re)purchasing intentions.

B. Significance of Impact of Value Co-Creation on Clients' Intention to (re)purchase Professional Services at PwC

The findings have clearly demonstrated that customer segmentation helps a business to maintain focus on what enhances customer satisfaction and starts the process of designing functions around customer needs. The fact that PwC develop productivity and integrated financial systems which increase client revenues, profits, referrals etc., shows that the client achieves the highest end value to remain competitive in the marketplace. As identified in the findings, the results could not have been achieved if only one side was actively involved; it was the combination of time, effort, sharing knowledge and know-how in a detailed manner and the way in which the team was supervised to understand the concept of the new integrated system. In implementing an ERP/Oracle system, JLR managers did a great job when combining external knowledge and internal practices together and figuring out what gap existed in order to match the new system with the old. JLR's statement of commercial outcomes has been translated into guidance in order to adopt new processes and exploit new systems. In this way, Process-People-Technology has been greatly integrated into the co-creation value process. There are not many new integrated software systems that are implemented successfully on the first occasion. Therefore, it may be concluded that the co-creation of value is a great way to impact significantly on end value, which will directly affect clients' (re)purchasing intentions.

One of the main findings from the in-depth interviews was that there is a noticeable and immediate need for better collaboration in service supply chains. At present, not many existing service providers have the capacity to adapt in order to enhance value co-creation in a dynamic way. Below are some suggestions from the interviews that may be useful:

- Improve the knowledge base to enhance existing skills and knowledge through practice, trend identification and familiarization with innovative business software development.
- Manage and train employees so that they acquire expertise in delivering knowledge, participating with clients and asking for client feedback.
- Collaborate to maintain good relationship with clients, even after the project. Innovation can help increase efficiency and initiate a regenerative cycle in the form of new ideas, designs or technological advances.

C. The Impact of Value Co-Creation Process on Clients' Re-purchasing

The professional services industry is changing which requires more iterative and collaborative development to result in more creative solutions and greater stakeholder adoption. PwC is able to fulfil all of its clients' needs through the strength and depth of its client portfolio ranging from start-up to long term existing corporations around the world. It is seen by clients as performing better than peers in the areas of implementing, integrating, supporting and helping clients to identify options for growth; these skills have been developed as a result of its length of time in existence, diverse industry knowledge and global footprint. In addition, PWC's knowledge of digital capabilities, such as business software systems, has helped it sustain its leadership position in the industry and to become a reliable choice for change management in client organizations. Together with skills in managing the co-creation process, PwC achieves superior value propositions. As such, when future performance management decisions are taken, JLR and other clients would reflect positively on their achievements to decide to purchase professional services from PwC.

Since every client has different business and organizational needs at different times, the selection of consultative service advisers to address business issues is not always easy. For example, many small/inexperienced clients, who have never employed third party service providers, are unlikely to recognize which services they need to purchase e.g. process, measurement etc. Accordingly, value co-creation factors can be a significant reason for selecting a particular service provider. A service project takes time to be understood and can even last throughout the client's corporate journey; co-creating value is a great means for both sides not only to maintain a relationship, but also to identify any concerns regarding the future direction of a project.

As a service project is intangible, service quality and the end value cannot be clearly defined until it finishes. Thus, service providers need to possess the skills to coax out suggestions, predictions, updates and means on ways to enhance client understanding as well as participation to ensure the project is delivered in a cost-efficient manner.

There are many ways in which the service could become apparent, but it will have the most impact when both sides support each other to reduce supply chain burdens. Hence, a well-managed value co-creation process is a win-win situation for both parties as well as an influence on the customer's intention for his next purchase. However, there are many threats identified for the service sector – even small changes, such as taxation, policy implementation etc. could materially affect the flow of projects. Moreover, in the long term, the value co-creation system is highly dependent upon the rate at which service providers have the capacity to sustain current practice. This is an area where further analysis, mainly focused on scenario building and likely outcomes, would be useful.

VI. Conclusion

This research has studied the relationship between organizational knowledge, value co-creation and service (re)purchasing intentions through the knowledge supplier-customer interface of PwC and Jaguar Land Rover Ltd. The results show that the factors that made PwC stand out among competitors in terms of its efficiencies were its diverse service offerings and its knowledge and skills across many industry sectors. The core resources have been gained from its organizational knowledge to enhance strategy, its training system and a customer-focused approach. With these aspects in mind, PwC has shaped customer expectations to cope with their challenges. This allows PwC to maintain its high reputation in the marketplace. The end value generated via co-creation with its customers was considered paramount for PwC being chosen as a preferred service provider, when compared with other factors, such as price, time base etc.

From the research findings, a framework to maximize value co-creation to enhance clients' intentions when purchasing professional services has been proposed. This framework could be used by other professional service providers to enhance customer (re)purchasing intention or their relationship. A clear limitation of this research is the fact that it is a single case study with limited participation of managers at PwC and JLR. Moreover, the results might not be representative of the whole of PwC because the PwC (London) office management style may differ from other PwC locations.

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