ASSESSING THE KEY DETERMINANT OF PARTNER

SELECTION IN HEALTHCARE SERVICE

SUPPLY CHAIN NETWORK

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Abstract

The purpose of this study is to examine the key determinants of partner-selection in a service supply chain network. The phenomenon understudy is examining in healthcare service sector. The study employed the use of both qualitative and quantitative methods to collect and analyze data to arrive at our empirical findings. Field survey is adopted to collect data from key informants within this sector. The respondents were selected using a purposive sampling method. Inferences from our empirical findings suggest that all the variables examine played a critical factor in partner selection process. Despite all the various variables supported the stated hypothesis, the technological innovation intensity, information richness and access to new complementary resources to boost service supply chain network competitive advantage are considered were deem much significant.

Keywords: Service Supply Chain, Partner-Selection, Information Richness, Innovation Intensity

INTRODUCTION

The application of supply chain principles and strategies in organizations over the years has enhanced the performance of manufacturing firms. Experts from both academia and industry have conducted series of research into how firms can integrate supply chain management concepts, principles and strategies into it business design and operations. Evidently, firms that are able to implement its supply chain management strategies well gains competitive advantage and vice versa (e.g. Christopher-Juttner, 2000; Min et al., 2004; Das & Teng, 2002; Tyndall, 1998). The value preposition of firms with competitive advantage turns to increase resulting into a positive influence on the performance on the entire organization. For instance when a manufacturing firm has a reliable supply chain management system encompassing all activities such as purchasing and procurement of raw material, logistics and inventory management in place it enable the particular firm to meet its customer's demand. Furthermore in brief a reliable supply chain management system has a positive impact on organization value creation and performance (Dubois et al, 2004; Lambert-Cooper, 2000; Lamming et al, 2000; Jagdev & Browne, 1998; Mikhai Lov, 2002).

Due to interaction between supplier and firm, supply chain system has evolved into supply chain networks in recent times. The supply chain network is characterized by diverse actors that are inter-dependent or interconnected to one another. This includes both inter-intra organizational alliances and customers (Booz-Allen & Hamilton, 1999; Goranson, 1999; Camarinha-matos et al, 2005). Actors in this supply chain networks gains relatively higher competitive advantage then others. Furthermore actors enjoys certain advantages such as relatively lower transaction cost, access to information and knowledge, access to new improved technology, access to new market and customers. The management of such as network is an essential activity if success is to be achieved. The success of this network depends on all actors involved in this network (Stock et al, 2000; Wu et al, 1999; Kumara et al, 2003; Lee et al, 2001). Despite the merit actors derives from this supply chain network, the managing of such a complex social network turns to affects its performance negatively. Therefore there should be effective mechanism in place to facilitate coordination and cooperation activities among actors. When these activities are not performed well it results in information and knowledge sharing redundancies. Further creating a structural hole among actors within the network (Granovotter, 1992; Burt, 1992). Therefore firm needs to build efficient communication mechanism to share information and knowledge among actors; and further contributing to the sustainability of the entire network (Hanf, 2000; Gulatti et al, 2000; Ackah et al, 2015).

In order to address information and knowledge sharing redundancies in supply chain network, the partner selection process is an essential activity that can not be underestimated.

The partner selection process from the initial stage of the network creation should be considered by all actors involved. The ability to select the suitable partner for supply chain alliance or network contributes to the propensity of success or failure of network (Dyer & Nobeoka, 2000; Chen & Huang, 2007; England & Leenders, 1975; Lewis, 1943; Gulati, 1995). In addition the partner selection process should be approached methodically if the merits associated with it such as access to complementary resources, innovation, value creation enriches and reduction in transaction cost is to be attain (Martinez-Martinez, 2007; Krause & Ellram, 1997; Petroni & Bragalia, 2000; Williamson, 1985).

Although the partner section process is discuss extensively in relevant literature in this field most turns out to focus on manufacturing firms and its supplier network (e.g Kauser & Shaw, 2004; Sarkis et al, 2007; Mikhailov, 2002; Kirytopolos et al, 2008) rather than service supply chain with the exception of few studies (e.g. Vilko & Ritala, 2014; Demirkan & Cheng, 2008). Furthermore comparatively traditional model of supply chain management and partner-selection strategies achieves proper result in manufacturing supply chain networks than service supply chain network (Cook, 2002). Therefore presenting researcher with the need to develop need frameworks to examine this study area. In addition it presents a gap in relation to the factors that forms the core of partner-selection in service supply chain networks. Therefore the central theme of this study is to fill that gap in the body of knowledge available in this domain. The purpose of this study is to examine the key determinants of partner-selection in a service supply chain network. The objective of this study is achieved by adopting the healthcare service sector as a case study.

The remainder of the study is categorized as follows, section 2 discusses the theoretical background and hypothesis for the study, section 3 focus on the research method and data, collection process section 4 presents the empirical findings of this study and discussions and lastly section 5 discusses the conclusion and further research area or direction.

THEORETICAL BACKGROUND

Actors Knowledge Intensity and Partner-Selection

The body of knowledge on service and service management provides clear distinction between service and products. The characteristics of service differ from a product in various dimensions in connection to IHIP (i.e. intangibility, heterogeneity, inseparability of production and consumption and perishability). Based on this it is evident that services differs from products in various ways (Zeithaml et al, 1985; Nijssen at al, 2006). Due to these distinctions it is relatively difficult to implement traditional strategies and model meant for manufacturing firms. In addition

traditional supply chain management model and strategies does not function well in service industry because services are more knowledge oriented.

In addition partner selection in traditional supply chain is based mostly on delivery/lead time, manufacturers' production capacity and standard certification among other. Due to this fact the knowledge capabilities of firm such as its research and development, richness of information is not critically assessed (Mikhailov, 2002; Kirytopolos et al, 2008). Presenting a gap relating to the application of traditional supply chain models in service supply chain networks; therefore the need for new selection criteria in other identify and select the appropriate partner for this new supply network. The issue of partner selection is essential from the initial stage due to the fact that the survival of such a network is based on the competence of its members (Burt, 1992).

The information richness and knowledge intensity of network partner is critical factor that can not be underestimated in service networks. Furthermore, service networks thrive on the intangible resources of other actors to co-create value for its consuming market. It further boosts the social capital available with the network whiles improving ties among actors. The network ties enables the facilitation and sharing of knowledge and information. Clear communication mechanism is critical to the flow of information among actors and developing of mutual trust and understanding (Granvotter, 1972; Ackah et al, 2015). The richness of information improves when there is a mutual trust among actors. From this perspective this study argues that in order to ensure the survival of a service network from the onset each actor should posses a pool of rich information and knowledge to complements other member of the network. it facilitate continuous innovation and learning that has a positive impact on network performance in relation to service delivery and value preposition (Dyer & Nobeoka, 2000; Chen & Huang, 2007).

H1: The knowledge richness of actor is an essential factor partner-selection process.

H2: The value and quality of information of potential actor is an essential factor in partner-selection process.

In an era of globalization and growing competition between local and global supply chain networks innovation is the key for survival. Technological innovation happens to be the key ingredient in the survival of any service supply chain network. To achieve this actors need to share complementary resources. The ability for actors to tap into each actors resources serves as a motivating factor as advocated by resource base view theory (Pensore, 1956). The availability of these resources enables actors to develop both individual and collective competitive advantage. To ward off negative effects of competition in order to grown and improve it performance (Quinn, 2000; Gottfredson et al, 2005).

Selecting a partner for cooperative alliance in service supply chain is an approach that needs to be approached methodically. To survival this fierce competitive both locally and globally technologically innovative oriented actors should be identified and selected to join the network. The innovation capabilities of an actor have a cascade effect on other actors; therefore having a positive influence on the performance of network (Webster, 1992; Mentzer et al, 2000; Lajara & Lillo, 2004). Furthermore it contributes to the transformation of such network to a value added one. When actors gain competitive advantage it contributes to the technological innovation and value development process since this is one key factor for alliance formation (Fawcett & Magnan, 2001, Lee & Whang, 2001).

H3: The technological innovation capabilities of actor are an essential factor in partner selection process.

H4: Assess to new resources outside of an actor is an essential factor in partner selection process.

The market competitiveness and share of partner is key determinant for partner-selection in service supply chain network. Since every network priority is to enroll competent member the market share value of new members is critical. Before selecting process there is the need to observe the market share value of the potential member, this enables other members of the alliances to tap into the pool of knowledge available in order to meet market needs and expectations. Leveraging partner information has huge significances on the evaluation of customers' needs and expectation in a more proactive manner. In addition this enhances the quality and value of products and services (Quinn, 1993; Ackah et al, 2013; Heper, 1991).

Aside leveraging of partner information for continuous growth and development whiles gain access to new markets either local or global it enables firm sustain its innovation process. Actors within this service supply chain network are able to suit its innovation process and development around its customers. User-oriented innovation is critical since it enables firms to gain insights from potential customers in relationship to expected quality and value; therefore contributing to sustainable market competitiveness of network (Lee & Billington, 1992; Spekman et al, 1998; Zhen-Guo et al; 2009).

H5: The market capabilities of actor are key determinant in the partner-selection process.

H6: the ability to obtain customer information through a particular actor is an essential factor in partner-selection process.

RESEARCH METHOD

In this study a mixed method approach is adopted i.e. both qualitative and quantitative methods. The adaptation of this approach is essential because it enables the researcher to identify

relevant variables to be examined. It further facilitates smooth data collection from key actors. A purposive sampling method is used to identify key informants within the health sector for the field survey conducted. This method of sampling is appropriate due to the fact that it enables the researcher to gain insight from respondents that has deep understanding about partner-selection process in the organization. That further enhances the richness of the data collected. In order to collect data field survey was conducting through the administrating of structured questionnaires.

The variables examined on this study are measured on a 7-liket scale (Royce & Bruce, 1999; Yin, 2000). To ascertain the empirical significances of the hypothesis stated for this study Pearson correlation and linear regression analysis is conducted using SPSS statistical software version 22.

As advocated by Campbell (1995), identifying and approaching key informants during data collection aids in eliminating waste and distortion of information. Key informants contribute to the richness and quality of data collected especially during field survey. The richness of information collected is essential if meaningful inferences can be made. In this study the key informants included procurement officer/managers, pharmaceutical department heads, health administrator and others. These actors contribute significantly in decision making process in relation to which firm to select as partner within its supply chain network.

Initial contacts were made with these key actors or informants through electronic mail. The electronic mail contains information relating to the objectives and significance of this study to both theory and practice. After the initial contact questionnaire were sent out to be answered. The responds rate after a one month period was 72 percent out of one hundred and fifty questionnaire sent out (150).

The reliability of data acquired through field survey needs to be tested if empirical inference can be made. The reliability test provides a ground to either accept or reject the outcome of statistical analyses. In this study the cronbach alpha value is adopted as the measure unit for statistical reliability test. An alpha value of 0.5 is considered significant and support the fact that there exist structural consistency among variables measured. The cronbach alpha value for variables test is 0.86 which is greater than the acceptable threshold.

In addition collinearly test is conducted to further examine the data structure. The variance inflation factor is use as a measure unit for this test. The collinearly test result for the data used for this study is 4.87 less than the accepted threshold.

The table 1 presents a summary definition of the variables used to test the states hypothesis of this study.

Table 1: Variable Definitions

Variables	
1.PSP	Performance of partner-selection process
2.KNR	The richness of knowledge of potential partner
3. VQI	The level of quality and valuable information actor posses
4. TIC	Technological innovation capabilities of actor
5. ANR	Access to new complementary resources
6.MC	Market capacity
7. CIF	Access to customer information

EMPIRICAL FINDINGS AND DISCUSSION

This section of the study presents the empirical findings of this study. The Table 2 presents a descriptive statistics of the both dependent and independent variables. In addition the result of Pearson correlation analysis of independent variables is analyzed. Furthermore, table 3 presents the regression output of the study.

Table 2: Descriptive Statistics and Pearson Correlation Result

Variables	N	S.D	Mean	2	3	4	5	6	7
1.PSP	108		5.87	.543**	.453*	.765	.603*	.361*	.436
2.KNR	108		4.56		.554*	.653	.354	-.355*	.823*
3. VQI	108		4.83			.321	.576*	.226	.600
4. TIC	108		5.43				-.264*	.422*	.036
5. ANR	108		5.09					.488**	.505*
6.MC	108		4.10						.345*
7. CIF	108		4.13						

*$p \leq 0.05$ (2-tailed), ** $p \leq 0.01$ (2-tailed)

Inferences from the Pearson correlation analysis suggests that all the independent variables examined has a significant relationship with the dependent variable. The independent variables had relatively high correlation coefficients. According to the statistical result the variable used to measure the ability of firm to gain access to new resources from potential actor had the higher correlation value at 0.605 at *$p \leq 0.05$ (2-tailed) . Indicating that in search for a new partner for a service supply chain network, actors place much emphasizes on the market reach of potential actor. And is attributed to the fact that service in their nature are peculiar and mostly offered to a niche market. Therefore having a partner with a relatively large reach would enable firms have access to this market that impacts the activities of firm. The social capital of this network is enhanced through the addition of a partner that has significant influence in macro environment. In addition the technological innovation capabilities of potential partner are critical if a particular actor would be selected to join a service supply chain network.

The dynamic nature of service delivery and design in recent times is challenged by globalization and rapid development of information, communication and technology. Therefore in order for firms to survive there is critical need to keep a constant innovation pace. Despite firms acknowledge the need for constant innovation; a single firm mostly does not possess all the need expertise and resources to facilitate this process. In view of this firms cooperate or form alliance with other actors that is perceived to posses much resources and expertise to survive the innovation environment. In addition to the technological innovation capability of potential actor/partner, the information and knowledge richness of actor is of essential determinant. Services in its nature is knowledge-oriented there in selecting a partner there is the need to identify and select a partner that has in it possession worth of information that impacts significantly on the service design and delivery process. The statistical correlation coefficient for the variables TIC and KNR at 0.765 and 0.543 ** $p \leq 0.01$ (2-tailed) respectively.

Regression analysis is further conducted to examine the statistical influence that the independent variables have on the dependent variables thus partner-selection process. The linear regression was carried out in a step by step approach with one additional variable to each distinct regression model.

Table 3: Regression Result

Model	R-square	Unstandardized Coefficient		Standardized Coefficient	t-value
		Beta (β)	Std Error	Beta (β)	
1. KNR, VQI	.138	.156	.056	.187	-5.089
2. KNR, VQI, TIC	.285	-.306	.063	-.213	-6.823
3. KNR, VQI, TIC, ANR	.377	.453	.058	-.338	2.456
4. KNR, VQI, TIC, ANR, MC	.578	.482	.069	.487	3.654
5. KNR, VQI, TIC, ANR, MC, CIF	.668	-.543	.068	-.601	-9.521

In total of five (5) models was examined. The model with the highest r-square value indicates that the particular set of independent variables had a significant influence on the partner-selection process. Suggesting that these set of independent variables are key determinants in the partner selection process. According to the regression output the model 5 had the highest r-square value of 0.668. Inferences from this suggest that all the examined factors plays an essential role in the partner selection process. The outcome of the empirical analysis supports the hypothesis stated for this study.

CONCLUSION

The central theme of this study is to examine the factor that firm consider during partner selection process in service supply chain network. The study is motivated by the growing trends in service provision and service supply chain networks. Despite the growth in this sector there is limited body of knowledge or research. Therefore this study contributes to this body of knowledge by investigating the key factors that is considered during identification and selection of partner or potential actor in service supply network.

The study is conducted in health service supply network. In order to gather data for this study field surveys was conducted among key informants with the health service supply network. Furthermore, to obtain empirical inferences from the data acquired both Pearson correlation and linear regression analysis is conducted to test the stated hypothesis. According to the outcome of the empirical analysis it indicates that all variables tested are key determinants of partner-selection process in service supply network.

Despite this study contributes to the growing body of literature in service supply chain network, there still exist some limitations. The sample size for this study is relatively small therefore generalization of findings might be limited; in addition the service design and delivery in peculiar to each particular service. Therefore further studies is needed using a broader sample size from diverse service industries to ascertain the findings of this study.

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