
A theoretical perspective on the impact of actor and relational embeddedness on the performance of service supply chain network

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Abstract:

In this era of globalization and fierce competitive in the macro environment the supply chain network happens to be a critical component of any organization. Supply chain network ensures the smooth sourcing, design, production and delivery of value added products and services to potential customers in a cost effective manner. Despite the role of supply chain networks there happens to be two distinct network identified by current studies categorized as traditional supply chain network that exist mostly in production and manufacturing sector and service supply chain networks. Most studies turns to focus on traditional supply chain network as compared with service supply chain network. Presenting a gap in literature therefore limiting researcher inside into which models and concepts enhance the performance of service supply chain network. Based on this, the central theme of this study is to theoretically examine the role that actor and relational embeddedness in the performance of service supply chain networks.

Key words: relational embeddedness, performance of service supply chain network

INTRODUCTION

Supply chain network is an integral aspect of business activities and strategies. Diverse actor characterizes the supply chain network with the responsibility of optimizing resources to serve its customers in a satisfactory manner. Members of supply chain network include both upstream and downstream suppliers and customers. A well designed and functioning supply chain network enhances coordination and interaction between actors. The exchange of information and technology is done in a more proactive manner when the supply chain is well integrated. Therefore providing avenues to reduce risk while improving the performance of such a network. When the propensity of risk is limited it affects the sustainability of a supply chain network. In view of this, the survival of supply chain network is a collective effort of all actors within such as network (USAID, 2009; Crowards, 1998; Pagell & Shevchenko, 2014).

One essential aspect of a supply chain network is the coordination of actors to provide raw materials, finished products or services to its customers in a more proactive and cost effective manner. The healthcare system is a critical component of a national economy if national competitive advantage and revenue mobilization would stir towards a positive direction. The healthcare supply chain network is a complex one dominated by complex coordination and interaction processes. The complexity of this network presents actors with a managing challenge. These challenges affect the performances and sustainability of the healthcare supply chain system. One significant challenge affecting this system or network is a logistics nightmare to enhance coordination

activities between actors especially in developing economies. In addition the socio-demography of developing countries such as Ethiopia affects the proper coordination activities since actors are sparsely dispersed. When coordination activities are not performed effectively is result in drastic measures such as the loss of lives, delay in the delivery of essential drugs and consumables (DiAquoi, 2011; Herron & Smith, 2011; McClintock, 2009).

Although there are several studies examining how to improve supply chain network, much emphasis has been placed on the design and optimization of logistics routs in order to delivery products and services on time at a relatively cheaper cost. For instance the earthquake in Haiti 2010 required a well-coordinated supply chain network to source and deliver products to affected victims. In addition how to improve exchanges such as information and knowledge to enable providers ascertain the critical needs and wants of its relief item recipients. Despite this robust logistics system n place there happen to be circumstances where essential products and services can be delivered on time. Leading to casualties and damage of a provider's reputation in the eyes of its customers. This mostly rises from the fact that these systems are based on economic or market transaction placing less emphasis on the social and human interaction involved. Actors associated with a particular supply chain network are critical to its success or failure therefore the social relation underpinning such networks needs to be emphasized. The social context within which these actors operate is an essential enabler of network success (Plattner, 1989; Granovetter, 1985; Naor & Bernards, 2016; Wassenhove, 2006).

The social relation should be considering as essential aspect of a complex supply chain network to ensure success and high performance. In this study we argue that to ensure a high performing healthcare supply chain network it is essential for

actors to be embedded in the system. Enabling actors to utilize the social capital that arises from such a complex network. The embeddedness of actors within the supply chain system has the propensity to improve mutual trust and understanding between actors. Further enhancing coordination and interaction activities (Burt, 1992, Lin, 2001; Bourdieu, 1986). Despite the role social ties plays in the attaining of healthcare supply chain network there happens to be limited literature on the subject matter and this study seeks to fill that gap by theoretically examine the role that actor and relational embeddedness in the performance of service supply chain networks. The role social ties and interaction plays in the utilization of social capital, knowledge and collective resources of the network to attain its goals.

The section 2 of this study focus on literature review on health care supply chain network, section 3 presents the theoretical background and preposition. Lastly Section 4 presents the conclusion of the study.

HEALTHCARE SERVICE SUPPLY CHAIN NETWORK

The dynamic nature of performing business activities has in recent times prompted businesses to adopt new innovative business models and manner of conducting business. This is essential if the firm or organization is to gain competitive edge and also improve performance and revenue stream. The smooth transition of business activities is based on the performance of an organization's supply chain network. The supply chain network of an organization plays a critical role in the achievement of organization goals and objective. As evident in the manufacturing sector supply chain management and network has been responsible for the sourcing, production and distribution of products and services to end users and customers. The supply chain network comprises of both

downstream and upstream customers, competitors, providers and other essential actors. The manufacturing sector supply chain thrives on optimum logistics system that aids the delivery of products at appropriate time and at a cost-effective manner. The performance of these networks has a ripple effect on the entire organization performance (Handfield & Nicholas, 2002; Campbell, 2002; Bakker et al, 2012; Vilasini et al, 2012).

Despite these significant merits supply chain system offers firms in the manufacturing sector, the implementation of same model and concept in the service sector does not always yields the same result. Unlike the traditional manufacturing supply chain network, the healthcare service supply chain system or network is unique and possess unique characteristics. These unique features prevent the implementation of traditional supply chain management principles. The characteristics of service such as its intangibility makes it necessary to adopt new improved methods of implementing a sustainable service supply chain network. According to Ellram et al (2012) describes service supply chain management as coordination and interaction between service providers, customers and other agencies to deliver a particular services. These actors of this network play both independent and inter-dependent roles in order to achieve set targets. (Micah et al, 2004).

Furthermore the healthcare service supply chain network is made up of diverse actors therefore presenting its actors with a management challenge. Since the survival of this network is based on the performance of each actor involved it is critical to manage these actors so as to eliminate challenges such as lack of trust. Further providing trust among actors within this network. When actors within a service supply chain network gains mutual trust it facilitates the smooth exchange of information and knowledge among actors. Service supply chain network thrives on the exchanges of information,

knowledge and technology to achieve its set target. In addition the formation of service supply chain network creates a social capital that actor can utilize to enhance its service design and delivery processes. Service that are perceived to be of high value enables firms to gain access to new markets, retain customers and finally improve its revenue stream and reputation. Therefore it is critical to have in place a proactive service supply chain network if healthcare services can be improved in relation to the delivery of both essential and non-essential services (Burt, 1992; Granovetter, 1972; Borgatti, 2012; Cook et al, 2002).

THEORETICAL BACKGROUND AND PREPOSITION

Although service supply chain network is characterized by diverse actors making it a complex system, it can be seen that the actors are not very integrated as compared with its logistics system. Therefore it hinders the smooth transition of information and knowledge across network. Considering these networks as one big machine with a lot of movable parts it is essential to examine if all parts are well oiled and moving well. The efficiency in movable parts ensures the overall performance of the entire system. As a service supply chain network it is critical to ensure all actors interact and coordinate in a proactive manner. Therefore the embeddedness of actors within this network is essential since several individuals perform the activities of this network. The activities of these interconnected individuals enhance the competitive advantage of actors collectively and individually (Burt, 1992; Coleman, 1992; Feldman, 2000; Nelson & Winter, 1982).

When actors are embedded within a particular network it facilitates the sharing and management of knowledge and information. Knowledge and information flow is a critical determinant of service supply chain failure or success. Due to

the intangible nature of services coupled with organization's need to utilize external resources it is prudent to ensure actor within this network cooperate in a harmonious environment. The smooth interactions between actors ensure timely flow of rich information and knowledge therefore aiding in the elimination of waste. In addition to building organizational knowledge capabilities it fosters collective innovation among actors. Leading to the creation of value added services that satisfy customer's demands. The managing of knowledge is critical to network survive and key component in developing competitive advantage (Grant, 1996; Anand et al, 2007; Gardner et al 2012; Turner et al, 2013).

Aside knowledge management, actor embeddedness enables firms to enjoy the social capital that is collectively produced by the service supply chain network. The frequent interaction between actors builds up mutual trust that is critical for social capital development and utilization. One major rationale for the formation of service supply chain network is to present a collective front in dealing with supply chain issues such as logistics system and others. In addition networks are forms to enable each the opportunity to provide complementary resources to the developing of a particular sector. To ensure these complementary resources are utilized to the benefit of all network member trust is a critical ingredient. Communication between actors is enhanced when mutual trust exists (Berney, 1991; Putman, 1993; Morris, 2001). Based on the role actor embeddedness plays in the enhancement of service supply chain network the theoretical prepositions 1 and 2 is formulated;

P1: the interaction between actors in a service supplies chain network breed fertile grounds for attaining mutual trust and understanding and this have the propensity to affect the performance of such a network.

P2: Actor embeddedness ensures prudent knowledge acquisition and management mechanism within a network and further impacts on its performance.

The social capital and knowledge that service supply chain network generates cannot be enjoyed without the social relationship underpinning such as network. The social relationship between actors is critical for the growth and sustainability of a particular network. Studies have shown that the relational interactions between actors in a complex network plays a key role in communication, knowledge sharing and risk management. It further enriches the human capital of such a network (Greenwood et al, 20005; Delong & Nanda, 2003; Levitt & Winter, 1982).

The relational interaction between actors promotes proper coordination and cooperation activities within the network. Since the daily activities of a network is made up of organizational routines and practices. Since each actor that joins the network possess unique organizational settings and culture this presents serious management challenges. To enable members of a particular network overcome this situation is it prudent to formulate mechanism and strategies that fosters the integration into entire network culture. Overcoming this situation provide stability of network since most complex networks turns to be fragile in nature (Feldman, 2000; Nelson & Winter, 1982; Bourdiex, 1986; Borgatti, 2012).

Furthermore relational embeddedness between actors would enrich the network leadership since actors can contribute towards the sustainability of a network. To ensure the service supply chain network attain its set objectives it needs an enabling leader that would stir it towards the achievement of its objectives. Network leadership is a collective effort can only be achieved when there exists cohesive social relations between actors. Relational interactions enable firms to explore each actor's organizational structure, culture and routines therefore

enabling a member design and implement collective mechanism to govern its activities. The role relational embeddedness plays in the shaping of network culture and leadership cannot be underestimated (Gittell, 2001; 2006; Morris, 2011; Hoppe & Reinelt, 2010; Borgatti & Foster, 2003; Plastrik & Taylor, 2006). The proposition 3 & 4 is formulated based on the theoretical background in earlier section.

P3: social relation enables the integration of member organization culture; structure and setting into network culture and routines further enhancing the performance of service supply chain network.

P4: relational embeddedness mediates network leadership that affects the performance of service supply chain network.

CONCLUSION

The central theme of this study is to theoretically examine the role that actor and relational embeddedness in the performance of service supply chain networks. In recent times supply chain network plays a critical role in the sourcing, production and delivery of products and services to its clients. The availability of such networks enables organizations to tap into external resources and social capital. Further enriching the knowledge and human capital of individual firms and network as a whole. Although supply chain network plays an essential role in today business environment most study empathizes on traditional manufacturing and production networks. With limited studies examining service supply chain network from both theoretical and empirically perspective. To fill this gap the study adopted a theoretical approach to examine the role of actor and relationship embeddeness in the shaping of network culture and network leadership. In addition it examines the promotion of network knowledge and information sharing through the integration of individuals in the routine and activities.

Although this study make some contribution in relation to how actor and relational embeddedness affect the performance of service supply chain network there happens to be some shortcomings. Therefore the need for further studies to address this shortcoming. The study is limited to the provision of theoretical preposition therefore the need for further studies to examine these prepositions in an empirical context. This will enable researchers to ascertain the extent at which these phenomenons affect the performance of service supply chain network.

REFERENCE

1. Anand N, Gardner HK and Morris T (2007) Knowledge-based innovation: Emergence and embed- ding of new practice areas in management consulting firms. *The Academy of Management Journal* 50(2): 406–428.
2. Barney J (1991) Firm resources and sustained competitive advantage. *Journal of Management* 17(1): 99–120.
3. Bourdieu P (1986) The forms of capital. In: Richardson JG (ed.) *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood, 241–258.
4. Bruce Hoppe & Claire Reinelt, 2010, Social network analysis and the evaluation of leadership networks. *The Leadership Quarterly* 21: 600 – 619.
5. Burt RS (1992) *Structural Holes*. Cambridge: Cambridge University Press.
6. Coleman JS (1988) Social capital in the creation of human capital. *American Journal of Sociology* 94(S1): 95–120.
7. Crowards, T. M. (1998). Safe minimum standards: Costs and opportunities. *Ecological Economics*, 25, 303–314.

8. DeLong T and Nanda A (2003) *Professional Services: Text and Cases*. New York: McGraw-Hill/ Irwin.
9. DiAquot, R. (2011). There is a lot that I want to do: Reactions on the relief efforts in Haiti. *Harvard Educational Review*, 81(2), 331.
10. Feldman MS (2000) Organizational routines as a source of continuous change. *Organization Science* 11(6): 611–629.
11. Gardner HK (2012) Coming through when it matters most. *Harvard Business Review* 90(4): 83–91.
12. Gittell JH (2001) Supervisory span, relational coordination, and flight departure performance: A reassessment of post bureaucracy theory. *Organization Science* 12(4): 468–483.
13. Gittell JH (2006) Relational coordination: Coordinating work through relationships of shared goals, shared knowledge and mutual respect. In: *Relational Perspectives in Organizational Studies: A Research Companion*. London: Edward Elgar, 74–94.
14. Grant RM (1996) Toward a knowledge-based theory of the firm. *Strategic Management Journal* 17: 109–122.
15. Greenwood R, Li SX, Prakash R and Deephouse DL (2005) Reputation, diversification, and organizational explanations of performance in professional service firms. *Organization Science* 16(6): 661–673.
16. Herron, J., & Smith, M. W. (2011). The disaster of Hurricane Katrina: Malfeasance, official deviance and the failure to serve and protect a community. *International Journal of Interdisciplinary Social Sciences*, 6(5), 127-140.
17. Levitt B and March JG (1988) Organizational learning. *Annual Review of Sociology* 14(1): 319– 338.
18. Lin N (2001) Building a network theory of social capital. In: Lin N, Cook K and Burt RS (eds) *Social Capital:*

- Theory and Research. New Brunswick, NJ: Aldine Transaction, 3–29.
19. McClintock, A. (2009). The logistics of humanitarian emergencies: Notes from the field. *Journal of Contingencies and Crisis Management*, 17(4), 295-302.
 20. Morris T (2001) Asserting property rights: Knowledge codification in the professional service firm. *Human Relations* 54(7): 819–838.
 21. Nelson RR and Winter SG (1982) *An Evolutionary Theory of Economic Change*. Cambridge, MA: Belknap Press.
 22. Pagell, M., & Shevchenko, A. (2014). Why research in sustainable supply chain management should have no future. *Journal of Supply Chain Management*, 50(1), 44–55.
 23. Putnam R (1993) The prosperous community: Social capital and public life. *The American Prospect* 13: 35–42.
 24. Wassenhove, L. N. Van. (2006). Blacke Memorial Lecture Humanitarian aid logistics: Supply chain management in high gear. *Journal of the Operational Research Society*, 57(5), 475-489.