

Innovation In Service Sector: The Role Of Technology, Network Of Relations, And Knowledge

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Abstract

In the current era, the firms are not competing on the basis of products but today's competition is on the basis of services. In today's technological era, the increasing growth of service sector posed a global challenge and at the same time an opportunity for the organizations. This paper gives a clear understanding about the constituents of "resource" for service firms, because with the technological revolution the conceptual definition of a nation's or firm's resource has dramatically changed. For this purpose, the knowledge, networks and technology are scrutinized as interdependent elements. The maintenance of network with outside and inside partners and customers of the organization is facilitated only by technology. Technology cuts cost and specifically its radical impact is on the way of thinking about "resources" of a country or firm. This study contends that in service firms, technology, network of relations, and knowledge is the ultimate "resource" that provide potential for innovation. Operationally, novelty can be understanding as an organization's anticipation to "feel for the consumer" by providing superior value to the customers. Furthermore, it is also arguing in this study that, when a company is capable enough to focus its all energies to think on customer's behalf, innovation in service then starts.

Key Words: Technology, Network of Relations, Knowledge, Innovation.

1. Introduction:

Service industry has becoming the major interest for practitioners and academicians due to its increasing growth and importance as a major worldwide industry (Boksberger & Melsen, 2011; Shugan, 1994). The increasing growth of the service sector is mainly due to the high disposable income, economic growth and advancement in technology (Miah & Omar, 20¹²). In the current era, the firms are not competing on the basis of products but today's competition is on the basis of services (Kaleka, 2011). For example, there is no seeming dissimilarity between the televisions of Panasonic and Sony; the true value for a customer is the services provided by the firm. Information technology has decreasing the benefits from product differentiation by spreading knowledge globally. The product life cycles have reduced due to advances in IT and

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it further revolutionized the conduct of business in the current era. Globally, millions of people are linked with the internet and due to the exceptional growth of this network millions of people are added annually. Customers are engaging in self-service at a higher degree due to the internet (Hallowell, 2001). Further, today's business requires that organizations interact with their business partners and customers by utilizing advance technology to deliver services across the globe promptly.

Services have become a strategic function from the perspective of management and also become a core component of business that can never be compromised (Miah & Omar, 2012). Service function of the firm interacts and concerns with almost all components and activities of the firm including physical evidence, people and process; external and internal clients; partners, networks and several alliances. To obtain the requisite knowledge and capabilities to fulfill the entire wants of customers, the external relationship network is very essential (Given, Sherwood, & Given, 2008). With the help of innovation and creativity, today's service organizations are trying to amuse its customers for increasing their market share. Operationally, novelty can be understanding as an organization's anticipation to "feel for the consumer" by providing superior value to the customers (Kandampully, 2002). In the developing and develop countries of the globe the ongoing dominance of service has become a puzzling question for service organizations as to what constitute resource. This is the main problem that will probably disturb management activities and strategic decisions of the service firms (Kandampully, 2002).

1.1. Value of Resources in the current era

For many years the proper understanding of resources has been a great concern for the economists and practitioners. A nation's or firm's resources have continuously been considered as important, and for making them more effective many studies have been conducted (Edokpor & Egbri, 2017). However, with the technological revolution the conceptual definition of a nation's or firm's resource has dramatically changed. Recently, it includes a lot of components that were not considered in management and economic theories (Becerra, 2009). (Sen, 2019) gave a comprehensive definition of a resource to include "all assets, organizational processes, capabilities, knowledge, information, and attributes, etc, and further explained that how such resources lead a firm to implement strategies for the improvement of its effectiveness and efficiency.

It is considered that a resource's value is dependent on current knowledge and information. It is also implying that if fresh knowledge gives a better substitute then the today's valuable resource may have limited value tomorrow (Wade & Hulland, 2004). For example, due to the production of synthetic rubber from crude oil the value of natural rubber diminishes in international market. In this technological era, organization is basically a combination of technologies, and by the efficient and effective involvement of this combination into product and services a firm can attain sustainable competitive advantage (Wade & Hulland, 2004). However, it is basically the knowledge that enhance worth of a firm's product or service, due to this the main emphasis has thus converted from physical assets (natural) to mental assets (knowledge). This paradigm shift is due to the numerous factors and one of these major factors is IT (Chou & He, 2004). In the early 1950s, the usage of computers in work place started. However, due to the utilization of computers in hasten paper based processing, there was no major changes in business process until 1990s (Shim et al., 2002). After that, with the advent of low cost computers together with the universally accessible form of IT (internet), computers had transform the business processes (Shim et al., 2002).

In the early twentieth century, technological revolution in industry has given rise to economic prosperity of west due to advance of technology through mass production and

mechanization. In other words, technology cuts cost and specifically its radical impact is on the way of thinking about “resources” of a country or firm. People start thinking that land did not mark itself as an asset until the technology (know how) and methods are not developed by human mind (Goldstone, 2002). In service industry, the most important economic force through the impact of technology is the efficient and effective utilization of time and distance (death of distance). Today, people are reliant on service to uphold their lives e.g. electricity, telephone, radio, television, bus, taxi, restaurant, gym, library, post, grocer, hairdressing, bank, health care and so on. Technology is the main factor of human advancement by affecting every aspect of life (Goldstone, 2002). However, it is suggested that the modern services organizations have three interrelated resources on a macro level, namely: knowledge, network and technology. The individual discussion on these three resources will be given in the following section and also explanation will be given to understand how these resources contribute to service innovation (Goldstone, 2002).

2. Impact of Technology

The importance and growth of service, as component of products, and as independent service offerings is directly influenced by advancement in technology. In manufacturing, service has become an essential part (Tao et al., 2015). For example, when something is going wrong, then the intention of the seller is going towards the various support services. In most manufactured products the service components have not only provide the source of competitive advantage but also has become an integral part (Tao et al., 2015). In this competitive era, it is essential for the firms to completely recognize the values of service package for the consumers-collective offering of product and service (Cusumano, Kahl, & Suarez, 2015).

In industry, almost every type of knowledge required by employees is augmented by technology (Porter & Heppelmann, 2017). For example, employees who were previously used to type and give answer on the telephone are nowadays required to be equally proficient in numerous functions of the computer, and to have the capability to acquire and understand different computer programs (Porter & Heppelmann, 2017). Knowledge component is added to almost every manual job by the increasing use of technology and it also require companies to have workers who are able and willing to improve their skills consistently. Due to this new paradigm of technology, new knowledge is necessary to increase productivity and thus experience is of limited value (Porter & Heppelmann, 2017). Therefore, the growing component of service and knowledge have substantial inferences for both the industry (through continuous up skilling) and labor market (through ongoing learning).

During manufacturing of goods and services, labor was considered to be the unavoidable cost incurred by management in the past (Gebauer, Fleisch, & Friedli, 2005). However, labor is considered as a mental contribution rather than physical assistance under the current comprehensive description of “resources”. The labor is a valuable resource of an organization or country rather than a designated cost. The creative skills and knowledge of a person is the representation of his true economic value (Gebauer et al., 2005).

In order to attain competitive advantage for the firm, managers should develop and nurture competitive intelligence in every activity of organization (Lee, Foo, Leong, & Ooi, 2016). It is the contribution of the employees mind not the manual labor that enables a firm to dominate the global market (Bell & Orzen, 2016). It has also been recognized recently that human knowledge (mind) will perform a significant role in service industry (Bell & Orzen, 2016). In this inventive world of business talent based enterprise have become common place. Success of a business will rest on a firm’s capability to create or imagine a need (Bell & Orzen, 2016). The creativity of human mind is reflected by the innovation in services. Organization’s service offer is created and innovated by the people within a service organization. Service

differentiation initiates from people and their contribution towards knowledge (Cusumano et al., 2015).

3. Impact of Knowledge

For continuous economic progress, developing and leveraging knowledge is necessary for all countries and/or organizations. In today's companies, knowledge is unquestionably the prime basis for value addition (Rastogi, 2000). In the new millennium, it has been accepted that we will come across progress in knowledge-technology-information services. Due to the shift of paradigm from natural assets to knowledge assets, managers are forced to manage knowledge for the success and competitive advantage of their organizations (Rastogi, 2000). Furthermore, international boundaries pose no serious limitation if the business operates within alliances and networks.

In the past emigration of skilled workers were prohibited in many industries and countries (for example, pottery and paper craftsmen in China, carpet weavers in Persia, and skill weavers in India). An employee's skill in a specific craft or trade considered a specialist knowledge, competence and capability, in those days. Today however, technology, capability and competence each is a demonstration of the organization's knowledge assets functioning at various organizational levels (Tippins & Sohi, 2003). Knowledge is now considered as the major economic resource while the traditional factors of production (land, labor and capital) become secondary (Tippins & Sohi, 2003). Drucker also argued that today's significant resource is knowledge only, and a knowledgeable employee commands a prominent status and role, furthermore, his knowledge is the greatest single asset for the organization (Sher & Lee, 2004). For sustaining the value of the organization's knowledge resource, the talent of the employee and organization's ability to capture new and up to date knowledge is essential. Managers have to reconsider the major practices of management due to this new primacy of knowledge (Aghamirian, Dorri, & Aghamirian, 2015). The competitive strategy of a firm should be reflected by its knowledge management strategy (Aghamirian et al., 2015). Knowledge is considered as the core driver of competitiveness in this competitive environment, and most significantly it spreads beyond individuals, corporations and groups to mutually supportive groups (Dayasindhu, 2002).

Today, organizations are offering increasingly complex products and services in the market place, most organizations are offering a combination of products and services instead of one product or service. Hence, these organizations are a "chain of services" (Hafeez, YanBing, & Malak, 2002). The worth of both product and service offerings is augmented by the firm's service package. Different constituents in the organization's service package and their specific configuration communicates an added value to the customers. According to the literature of management, an organization's core competencies and capabilities are a source of competitive advantage (Bieberstein, Bose, Walker, & Lynch, 2005). Thus, "what matters is the effective management of the organization's core competency" and, therefore it is a strong need to focus the features that give value to the customers (Bieberstein et al., 2005).

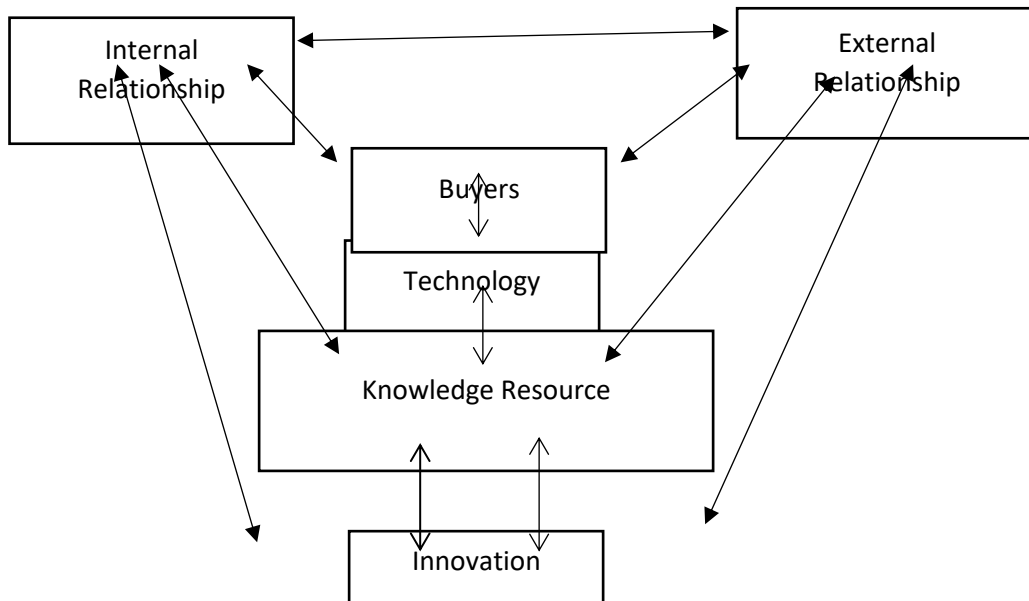
4. Impact of relationship networks

In this global and competitive market, a firm requires to have a complete understanding of the entire value chain (holistic needs) of the customer, not only today's but also the need that will change over time (Jayaraman & Luo, 2007). In most cases a single company's product or service is not capable of fulfilling the holistic needs of the customers (Jayaraman & Luo, 2007). So, the firms will be capable to mix and match numerous products and services according to the holistic needs of the customers. If the required products or services of the customer are not within the domain of the organization's core competency, then the organization should find

possible means to acquire those competencies. This may be possible by establishing strategic coalitions both vertically and horizontally (external and internal relations) with firms and individuals ((Jayaraman & Luo, 2007).

A firm can create associations amongst divergent but interrelated businesses by utilizing horizontal strategy as it is the heart of business strategy for attaining competitive advantage (Mahdi & Nassar, 2021). The network of stakeholders of the organization should be managed effectively for deriving the collective competency of the organization and these stakeholders include: employee, customer, supplier, retailer and shareholder. However, many other stakeholders may be the part of the network but the above five partners (stakeholders) are essential for the basic operation of the service firm. The firm can effectively enhance the value of its offering with the help of network partners for the benefit of firm, customers and stakeholders simultaneously (Mahdi & Nassar, 2021).

For many leading edge firms, network development constitutes the life source by nurturing and maintaining various relationships (Street & Cameron, 2007). Actually, most small and large projects consistently involve many partners and alliances. This is specifically applicable to service organizations, because networks are prevalent to most service organizations (Street & Cameron, 2007). It is the advanced technology networks that give the competitive advantage to Federal Express on its competitors by offering the consumers the facility of tracking their package while traveling. Organizations that enter into alliances and seek assistance with various stakeholders do so, not for the cost saving purpose but to extend their core competency by getting specialist know how. In today's modern business out-partnering has become the new substitute for the term out sourcing (Harris & Wheeler, 2005). The specialists outside and inside the organization frequently carry out ventures that necessitate them to work in a close relationship. This is possible only due to technology that these different networks of expertise are able to work in close relationships together in cyberspace, although physically they might be thousands of miles apart. The service firms spread their core capacity (capability or competency) and forge relationship network globally only due to unparalleled tool of technology (Figure 1). Thus, knowledge base represents the organization's core competency, realized through the efficient use of partnership networks using technology. For nurturing the organization's image as a service leader depends on the consequent ability of the firm to stay at the front position that will differentiate the company from its competitors. By expanding their resource base to firms and people round the world organizations are becoming amorphous (Street & Cameron, 2007). For example, in India call centers are a flourishing business, organizations like British Airways and General Electric shifted their call center in India for handling Europe and North American base customer enquiries on daily basis (Aghamirian et al., 2015). Thus, in the global market resourcing services has become a common feature through networks outside national boundaries. Furthermore, the effective management of network relationships, and the ongoing dependence on these networks will dictate the service firms' tomorrow's survival strategy.

Figure 1 The core competency: innovation of service

Knowledge-Technology-Relationships Networks

Moreover, the ability of the service organization to retain an enduring relation with its customer and to interact with that customer have also become a vital strategy. In marketing literature this relation with the customers referred to as “relationship marketing” and has received extensive acknowledgment by academics and practitioners alike. Information on timely basis about the varying needs, patterns of spending and expectations of the customers can be gained with the help of relationship marketing (Aghamirian et al., 2015). Information about the customer plays a substantial role for increasing the organization’s knowledge resource. This in-depth information about the customer proves a valuable asset that enable a firm to create products and services according to the customers’ expectations and demands for gaining crucial advantage in the marketplace (Shim et al., 2002). The exchange of knowledge and accessibility is enhanced by the combined effect of many elements including computers availability at a very low cost, advancement in digital communications, acceptance of internet as a globally recognized phenomenon, and the applications of web browsers and easy to use graphical interface. The competitive advantage is dependent on the firm’s ability to access the knowledge, transform it creatively and market it efficiently. The global market place is accessible with the usage of internet, and for the extension of the competency of a firm, time and border pose no limitations---human imagination is the only limitation (Edokpolor & Egbri, 2017).

5. The core competency: innovation of service

In books and business magazines success stories of individuals and firms around the world are frequently highlighted. The reason of their success in most cases have not been due to the hard work, but due to their capability to exploit effectively the benefits of advancement in technology, networks of relationships and new knowledge (Tao et al., 2015). Thus the emphasis of the organization will be on knowledge---the resource that, offers the organization its core competency by its creative potential. In this technological era managers are anxious about the challenges posed by the possibility of the disappearance of the whole industry rather than the small life cycle of the products and services. For example, with the invention of CDs the shift

of the multimillion dollar music records industry stands as evidence to this phenomenon. Furthermore, the demand of the old products or services disappeared indirectly by the innovative products and services as the old become less valuable to the customers. When a company is capable enough to focus its all energies to think on customer's behalf then innovation in service starts. The cumulative power of innovation is proficient of distorting the old and creating the new. Innovation, thus, creates a culture in which there is a synergy of actions and thoughts on the customer's behalf. For creating new thoughts and subsequent new actions, it is necessary to destroy the old (Hallowell, 2001). Furthermore, every firm should scientifically undertake the tasks of destruction, protection and creation of their philosophy, processes and systems. For offering high value to customers by extending its knowledge base (competency) the organization might be choosing numerous technologies and network of relationships. For achieving competencies outside the firm by forgoing its intrinsic ego, the emphasis on consumer perceived value is essential. For the achievement of this competency the firm might seek the partnership with other organizations comprising those that previously viewed as competitors. For example, in the airline industry "Star Alliance Network" the 13-partner, demonstrates the various benefits to be received by operating within a network from competing airlines and from their customers. The partners in Star Alliances Network have the facility to provide the service to their customers from almost 815 terminals in 130 countries, in a customer base environment. This is only a nightmare for any single airline working alone to provide this unmatched world class service (Hallowell, 2001).

6. Methodology

This research uses content analysis to identify specific themes, concepts, and words in previously published literature. This method is useful for identifying and quantifying the relationships between specific concepts. This methodology's data sources could include open-ended questions, interviews, field notes, and any communicative language, such as essays, novels, newspapers, and historical documents. There are two types of content analysis: relational analysis and conceptual analysis. Conceptual analysis describes where and how frequently concepts appear in a text. In contrast, relational analysis promotes conceptual analysis by investigating the relationships between concepts in a text. In this study, relational analysis was used to determine how different concepts in a text related to one another. Prior to condensing the text into patterns and categories, relational analysis was used to determine the type of analysis. Finally, the relationship between concepts was explored (Lindgren, Lundman, & Graneheim, 2020).

7. Conclusion and Discussion

In service organization, knowledge, technology and networks are the combination of such factors that can inject innovation. Knowledge, technology and networks jointly give a company the aptitude to concentrate its amorphous resources on the upcoming desires of consumers---the true feature of innovation. A firm can achieve the competitive advantage by delighting the customers with creativity according to their expectations. The service innovation can generate a self-created challenge by increasing the expectations of the customers. This self-generated challenge, in fact has made Michael Jorden, Microsoft, Disney, Steven Spielberg and CNN unconquerable leaders in their marketplace. They received unrestricted heights of recognition by their passion of delighting customers and fans far beyond their expectations. Successful factors of the past may have limited value in the future in this global and competitive market place. Today's firms are able to surpass the challenges previously posed by time and distance with the advancement of digital science, communication and technology and also convert these challenges into potential opportunities. To provide continuous service to internal and external customers, time differences can be utilized creatively. For the purpose of providing support

services around the clock many firms of the United States deliberately place their offices across international borders. For example, India is being renowned as the “back office” of the world. Businesses such as Xerox, Reebok, Visa, Motorola, AT&T, Thomas Cook and Cisco provide the support services to their firms (e.g. call centers, accountants, computer help desks, transcribers etc.) from India. In diagnosing the knowledge and value of people as a resource, this conceptual shift, thus extends the worldwide opportunity for countries, companies and individuals and become a source of success and competitive advantage in the marketplace.

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