



Value creation logics and resource management: a review

Value creation
logics

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Abstract

Purpose – The purpose of this paper is to locate different value creation logic contingencies within the resource management framework. While Sirmon *et al.* discuss how external environmental contingencies, such as environmental munificence, impact resource management, this paper aims to discuss a second key contingency; that is how the firm's choice of value creation logics impacts its resource management choices. This paper seeks to argue that management of the firm's resources and capabilities is contingent on the value creation logic employed by the firm.

Design/methodology/approach – This paper reviews three value creation logics: value shop, value network, and value chain and then integrates them within the resource management framework.

Findings – A review of extant literature indicates that value shop firms, value network firms, and value chain firms enact very different environments and thus require very different resources and capabilities to support their value creation approaches. It is argued that Sirmon *et al.*'s resource management framework should reflect these differences.

Research limitations/implications – This paper points to new directions for research in value creation logic theory and provides a basis for future empirical work.

Practical implications – This paper argues that a mismatch between a firm's value creation logic and its resource management practices will have an adverse impact on the firm's performance.

Originality/value – This study is one of the first to integrate Stabell and Fjeldstad's value creation logic theory with Sirmon *et al.*'s resource management framework.

Keywords Value chain, Resources, Resource management

Paper type Research paper

1. Introduction

The choices that managers make with respect to resources and value creation activities influence the firm's strategy and ultimately its financial performance. Following Michael Porter's (1998) lead, Bowman and Ambrosini (2000) argue that one source of competitive advantage for a firm is its value creation activities. The manner in which a firm's value creation activities are configured to create value for the firm's customers determines its value creation logic. The most subscribed to and researched value creation logic is Porter's value chain.

The value chain provides practitioners and researchers with a template to deconstruct firms into the activities they undertake to create value for their firms' end users (Porter, 1998). Once the firm is broken down into its key activities, managers can



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examine each activity's impact on firm cost and buyer willingness to pay in order to generate insights as to which activities are important for developing and maintaining competitive advantage. While value chain analysis is ubiquitous in terms of its use by consultants and practitioners, as well as being taught by professors of strategic management (Sheehan and Foss, 2009), Stabell and Fjeldstad (1998) point out that value chain analysis is best suited for firms that create value using an assembly line approach.

Based on Thompson's (1967) technology typology, Stabell and Fjeldstad (1998) propose that there are three value creation logics that firms can use to create value for its end users: The first value creation logic, which is used by value chain firms, uses Thompson's long-linked technology. This value creation logic creates value by transforming inputs into goods/services in a sequential and linear manner and then selling these goods and services.

Value chain firms have a process bias, which is reflected in their primary strategic positioning choice: low cost or differentiation (Fjeldstad and Haanes, 2001). Value chain firms following a low cost strategy typically look to lowering input costs or increasing the flow of goods through its production facilities. Value chain firms following differentiation strategies look for opportunities in their production processes to increase the perceived value of their offerings. Examples of firms applying a pure value chain logic are petrochemical manufacturers, fast-food restaurants, and producers of most items found in price-point retail chains such as Dollar Stores in North America, Poundland in the UK and Todo a 100 in Spain (price-point retail chains are retail outlets that sell inexpensive household and seasonal items such as plates, toys, batteries, and non-perishable food for \$1 or €1 or £1. The majority of the items sold in price-point retail chains are non-branded items produced in countries with lower manufacturing costs).

The second value creation logic, which is used by what is labeled as value shop firms, uses Thompson's intensive technology (Stabell and Fjeldstad, 1998). This value creation logic applies expert knowledge in an iterative and circular manner to solve problems specified by the users. While knowledge plays a role in all firm types, it plays a special role in value shop firm as it is applied by experts, who are often professionals (von Nordenflycht, 2010). The knowledge is applied in real time based on feedback from users, rather than being incorporated into the firm's production processes or the goods/services themselves (Sheehan *et al.*, 2005). Often the object worked on, in some cases the user, is incorporated into the problem solving process, such as a doctor operating on a patient or a lawyer defending a client in court (Stabell and Fjeldstad, 1998). Instead of producing standardized products that are marketed and then delivered to customers, managers of value shop firms rely on their ability to customize the selection and combination of expertise in order to provide (unique) solutions for their customers. Given that the basis for value creation in value shop firms is expertise, they are not capital intensive (von Nordenflycht, 2010), as opposed to value chain firms which invest heavily in production facilities and distribution chains, or value network firms, which invest heavily in customer acquisition activities and network infrastructure. Examples of pure value shop firms include architecture firms, law firms, and consulting firms.

The third value creation logic, which is used by what is labeled as value network firms, applies Thompson's mediating technology. This value creation logic creates

value for its users by connecting them to others in the network in a synchronous manner (Stabell and Fjeldstad, 1998). While most value network firms facilitate the transfer of money, goods, information, or risk to other members in their network, some network firms, such as airlines, physically move customers through their network (Fjeldstad and Haanes, 2001). As opposed to value shops that have little, or no, economies of scale, and value chain firms that exhibit significant supply side economies of scale, value network firms exhibit significant supply and demand side economies of scale (Stabell and Fjeldstad, 1998). The second difference between value network firms and value chain firms is that there is zero transformation of inputs in value network firms. For example, consider sending an overnight package via UPS, or a message via Gmail: You would be unhappy if the package or message came in a different form than the one sent. When you sell an item on eBay, eBay never touches the item sold; it only facilitates its sale. Other examples of pure network firms include overnight delivery services, online dating sites, banking and telecommunication firms.

To execute the mediating process effectively, value network firms often depend on partner organizations that also operate as networks. These partner networks add value by collaborating with and coordinating among network members (Woolfall, 2006). For example, banks rely on other banks to facilitate fund transfer and interbank loans. Insurance firms rely on reinsurance firms to help distribute risks, and telephone companies rely on other telephone companies and content providers to ensure connectability and offer non-call services. This dependence on network partners has important implications on how value network firms compete and manage their resources.

This paper focuses on firms which only use one value creation logic to create value for their users, what we label pure value logic firms. Given that all firms create value using one or more of Stabell and Fjeldstad's value creation logics, value creation logics are at a different level of analysis than industries. Value creation logics are a fundamental building block of competitive advantage; a key strategic choice for firms is what proportion of each value creation logic to use to create value for its users. Given this, it is not uncommon to see firms in the same industry applying different proportions of one or more of each logic. For example, some engineering firms focus on selling superior design capabilities, while others focus on construction of the design. Derrick Services (UK) Limited is an engineering firm that builds oil platforms. However, it competes on the basis of providing specialized design services for the construction of highly customized oil platforms. To that end, its engineers work closely with its clients' engineers to develop platform designs that meet their specifications, and then build the oil platform according to these designs. This is in contrast to some other companies in this industry that compete on the basis of having the most efficient and low cost production processes. This capability means they compete by offering standardized platforms at lower prices than Derrick.

Even though value chain firms are commonly found in the manufacturing sector, some non-manufacturing firms also operate as value chains. For example, Wal-Mart's success is often attributed to its ability to effectively its supply chain system across the industry value chain (Chandran and Gupta, 2003). Likewise, not all manufacturing firms operate as pure value chains. Some engineering shops, like Derrick Services, rely on their superior design capabilities to construct highly customized equipments and facilities.

Stabell and Fjeldstad's (1998) typology of value creation logics provide researchers with deeper insights into the building blocks of a firm's competitive advantage; production, knowledge, or network economies (Fjeldstad and Andersen, 2003). A second building block of competitive advantage is the firms' ability to identify and exploit their resources and capabilities in a distinctive manner (Penrose, 1959; Barney, 1991).

This paper begins with a review of Sirmon *et al.*'s (2007) resource management framework. While Sirmon *et al.* (2007) discuss how external environmental contingencies, such as environmental munificence, may impact a firm's resource management choices, this paper discusses a second key contingency, that is how the firm's choice of value creation logics impacts its resource management choices. We expect that there will be significant differences between pure value chain firms, value shop firms, and value network firms in terms of their resource structuring, bundling, and leveraging choices. The paper will develop arguments and propositions on the types of resources and capabilities these value logics require.

2. Value creation and resource management

Organizations can be viewed as bundles of resources which managers combine and deploy to create value and generate profit (Bowman and Ambrosini, 2000; Penrose, 1959). To provide a firm with competitive advantage, its resources and capabilities must be valuable, rare, inimitable and non-substitutable (Barney, 1991). Amit and Schoemaker (1993) define resources as productive factors owned or controlled by a firm, such as physical assets, human capital and financial capital, while capabilities are the ability to combine resources to create value. Sirmon *et al.* (2007) argue that firms need to synchronize resources and capabilities within their value creation activities if they are to succeed.

After reviewing the extant literature, Sirmon *et al.* (2007) conclude that merely having valuable, rare, inimitable and non-substitutable resources is not enough to create a competitive advantage. Resources possessing these strategic characteristics only create value when managers evaluate, manipulate and appropriately deploy them. They argue that the heterogeneity in the performance of firms with similar resources is the result of differences in how the resources were managed. In spite of the recognition that possession of resources alone is not sufficient to create competitive advantage, they argue there is minimal theory on how these resources are transformed in the value creation process (Sirmon *et al.*, 2007). Past research assumed that the steps needed to exploit resources were obvious even though they were not (Barney and Arkan, 2001).

To fill this gap in the literature, Sirmon *et al.* (2007) develop a comprehensive resource management framework. They propose that resource management involves three distinct stages; resource structuring, resource bundling, and resource leveraging. Resource structuring is the process of obtaining the resources to be bundled and leveraged. Firms structure their resource stocks through acquiring, accumulating, and divesting of resources. Acquiring involves purchasing resources from the market. These resources can be in the form of individual, or combinations of, tangible and intangible resources, as well as real options that provide preferential access to future opportunities. Accumulating resources refers to developing resources internally. Sirmon *et al.* (2008) explain that this may be necessary because the resources needed to improve performance may not be available for purchase in the market. Accumulation

may involve training employees, learning through alliances, or investing in real options. Divesting resources involves culling the resources that are not contributing to the firm's competitive advantage.

Sirmon *et al.* (2007) describe the bundling of resources as the process whereby capabilities are formed. It is only through integrating a firm's resources in unique combinations of capabilities that firms are able to create value. It is these unique bundles of resources and capabilities that provide firms with inimitable asymmetries (Sirmon and Hitt, 2003). Resource bundling involves resource stabilizing, enriching, or pioneering. Resource stabilizing involves making incremental improvements to resources in order to maintain their value in light of environmental or strategic changes. Sirmon *et al.* (2007) point out that stabilizing processes can only be sustained for long periods under conditions with low environmental change. Relying on only resource stabilization processes in highly uncertain environments will decrease the firm's competitiveness over time. We also expect more reliance on stabilization when there is a great deal of interdependence in the resources used by firms as is the situation in value networks.

Resource enriching is the process of extending and enhancing one or more of the firm's current capabilities. This can involve learning new skills to enhance the role of existing capabilities or adding a complementary resource from the firm's stock of resources. Resource enrichment is necessary because the value of a firm's resource stock may erode over time (Sirmon and Hitt, 2003). Sirmon *et al.* (2007) argue that enriching capabilities enables a firm to create greater value than its competitors. Resource pioneering involves creating new capabilities by integrating recently acquired resources into existing capability configurations.

Sirmon *et al.* (2007) define the third stage, resource leveraging, as the application of a firm's capabilities to create value for its customers and wealth for its owners. The resource leveraging decision involves using resources and capabilities to create and/or enhance a firm's competitive advantage (Sirmon and Hitt, 2003). Leveraging resources involves mobilizing, coordinating, and deploying the firm's resources. Mobilizing focuses on identifying the capabilities needed to exploit opportunities in the firm's market space. It is the evaluation process that precedes the decision on how to deploy and manipulate resources. Sirmon *et al.* (2007) propose that firms can mobilize resources through three approaches: the resource advantage strategy involves utilizing existing capabilities to exploit opportunities in the current market space. Sirmon *et al.*'s (2007) exploiting market opportunities strategy follows a Penrosian (Penrose, 1959) logic as it involves using the firm's current capabilities to exploit new opportunities in the firm's competitive environment. And lastly, creating entrepreneurial opportunities involves developing new capabilities which enable the firm to produce new products/services for new markets. The ultimate entrepreneurial strategy is a Blue Ocean Strategy, which involves identifying and entering an untapped market (Kim and Mauborgne, 2005). This involves capturing a market where there are currently no, or few, rival offerings to compete with.

Sirmon *et al.* (2007) argue that the ability to mobilize resources is a necessary, but insufficient condition for value creation. The capabilities identified in the resource mobilization step must be effectively applied if they are to create value. This requires coordination and deployment of these resources and capabilities. The next step, coordinating resources, mirrors the "O" in Barney's (1995) VRIO framework,

organization, as it involves organizing each of the mobilized capabilities within the firm's value creating activities. Firms need to implement organizing and control processes to ensure the efficient and effective deployment of its capabilities. This requires formulating plans and initiatives which lead to strategy execution, communicating these to employees, and then holding employees accountable for achieving the initiatives (Merchant, 1985).

Finally, deploying resources involves placing the firm's resources and capabilities in its value creating activities to execute its planned strategy. Sirmon *et al.* (2007) argue that deployment is a complex process that relies on explicit and tacit knowledge. Firms reduce this complexity by codifying the knowledge into routines.

We argue that a firm's dominant value creation logic should impact its choice of resources and how it manages them. The specific approach chosen in structuring, bundling and leveraging of resources will be shaped by managements' perception of the value creation logic applied to create competitive advantage. In the next section, we discuss how each step of Sirmon *et al.*'s (2007) resource management framework will differ across these value creation logics.

3. Value creation logics and resource management

Sirmon *et al.* (2008) argue that competitive advantage is the product of managerial action. A firm's resources only become a source of competitive advantage when managers organize them in activities to create an offering which is unique and compelling in the eyes of customers. Effective structuring, bundling, and leveraging of resources is particularly important in situations where there is resource parity among competitors (Sirmon *et al.*, 2008).

3.1 Resource structuring and value configurations

A key concern for value chain firms is maintaining its competitive advantage over its competitors. Given this, value chain firms focus on acquiring resources, such as new technologies or production processes, which will help them decrease cost or increase buyers' willingness to pay. Value chain firms typically acquire the requisite resources in factor markets, or barring that by merging or buying firms. Resource acquisition in value chain firms is shaped by the linear fashion it creates value and its links to the other players in the industry value chain, such as its suppliers, distributors, and buyers. Resources acquired have to fit with the technical characteristics of its production system and the industry value chain. Developing acquired resources in a value chain firm must occur within this enduring architecture. Value chain firms focus on developing the technologies and processes which have the greatest potential to increase the value created and provide customer with consumer surplus. Customers prefer products that they perceive as providing a use value that exceeds the price they pay. This is the difference between price paid and perceived value is termed as consumer surplus (Bowman and Ambrosini, 2000). A customer's purchasing decision is often made by assessing the consumer surplus, i.e. the perceived difference between the exchange value and use value of the product, with those offered by other firms. When a firm offers a product, customers will assess the product to ascertain whether it provides a novel benefit, or provides something perceived to be better, or offers an already available benefit at a lower exchange value or some combination of these three options (Priem, 2007). Often, this will involve monitoring and comparing a firm's offerings with that of its competitors. Since customers' assessment of

consumer surplus is affected by comparison with competitors' offerings, value chain firms must ensure that its value chain architecture delivers superior consumer surplus relative to its competitors.

For value shop firms, customer perception of consumer surplus gained from the solution provided is largely determined by their perception of the extent the solution solved their (unique) problem. Thus, value shop firms focus on acquiring expert knowledge that has the potential to solve customers' (unique) problems. This can be in the form of either hiring promising new recruits from universities or by poaching experts from other value shop firms, either as individuals or as groups of experts (which is known as a liftout in the legal industry) (Stabell and Fjeldstad, 1998). Unlike value chain firms where their technologies are employed within stable production systems, value shop firms do not rely on a stable architecture as their main production technology is embedded in their people. In fact, the high level of responsiveness required by a value shop means that it has to develop considerable flexibility in the use of its experts. This is achieved by focusing on the continual development of competencies among its experts as well as developing routines that allow a high degree of flexibility in their use. This is made possible through the reliance on a flexible system that enables frequent changes to the combination of experts with different competencies to solve customers' problems.

For value network firms, resource acquisition, accumulation and divestment are largely shaped by the decisions made by network partners, industry standards, or regulations. Competing as a network limits the decision making autonomy of a value network firm (Moeller, 2010). As such, resource management among value network firms requires that they be cognizant of the developments in the network and that network partners work closely with one another.

Value network firms' resource acquisition activities are aimed at enabling them to acquire new customers to their network and extending their network infrastructure. The former is concerned with generating more volume to the network. For example, telecommunication firms often give away, or heavily subsidize, cell phones in order to entice users to switch from a rivals' network. Value network firms also extend their network infrastructure in order to provide more services to their customers. Among other things, value network firms do this by selecting new partners for the network. The literature on network formation considers partner selection as critical to the success of networks (Moeller, 2010; Sarkis *et al.*, 2007; Solesvik and Encheva, 2010) as it affects the performance of the whole network. A value network firm's attempt to deliver value to its customer can be undermined by a non-performing partner. To be effective, network partners must have complementarity, goal compatibility, and be highly committed to network success. In addition, network partners must also be able to trust one another.

Another method to increase customers is to merge or acquire compatible networks, such as when Sprint and Nextel merged in the US. Prior to their merger, they were a distant number three and four in the American cell phone market, whereas after the merger they were a similar size to AT&T and Verizon. Alliances are another way to increase the scope of the network as they increase value to members of both networks. However, alliances may also decrease the focal network's competitive advantage as reasons to join its network are reduced as members may now gain access to its network through its alliance partners (Fjeldstad and Haanes, 2001). We therefore posit:

- P1a.* Resource acquisition in value chain firms is primarily concerned with obtaining resources needed for operating the production system.
- P1b.* Resource acquisition in value shops firms is primarily concerned with acquiring expert knowledge for generating solutions for customers.
- P1c.* Resource acquisition in value network firms focuses on increasing the customer base and network partner selection to ensure complementarity and reliability between network partners.

Given these differences, it is also expected that the accumulation process varies across value creation logics. Sirmon *et al.* (2007) explain that the internal development of capabilities in the accumulation process increases causal ambiguity, and hence the inimitability of the firm's advantage. Since the resource accumulation process in value chain firms takes place within the context of relatively stable and linear production activities, the internal development focuses on enhancing the architecture of its production system. For instance, employee training may focus on improving worker skills in order to reduce cost in the production system. Likewise, firms can also reduce cost by introducing just-in-time production. Alternatively, resource accumulation can take place through efforts to improve product quality by introducing quality programs such as TQM.

Resource accumulation in value shop firms is concerned with improving the problem solving capabilities of its experts. Indeed, after payroll costs, a major expense item for value shop firms is typically its training budget. Training often involves improving its experts' ability to effectively apply problem solving methodologies and developing their ability to integrate multiple areas of expertise. Some value shop firms may invest in developing corporate memory that provide access to databases of explicit knowledge, while other value shop firms prefer to invest in experts as the tacit knowledge they possess is more difficult to imitate (Fjeldstad and Andersen, 2003).

Once value network firms acquire its customers and network infrastructure, the resource accumulation process focuses on attracting more customers to their network either by adding new nodes for members to connect to, or increasing the quality of the transaction across the network. Value network firms have to focus on improvements on two fronts: On the one hand, they have to develop new products and services at the front end to attract more customers to the network. At the same time, they must invest in ensuring that the network is able to deliver these services efficiently and reliably. This often requires that value network firms collaborate with each other to improve efficiency and network performance. Resource accumulation amongst value network firms requires co-development of their resources and processes to improve on their collective efficiency, reliability and extend their market reach. This collaboration requires developing synergies between network partners. Achieving these synergies requires the selection of partners who have complementary technologies and processes (Moeller, 2010). Changes to the resources of a value network firm sometimes require changes in the resources of the whole network. As such, these changes tend to happen slowly and infrequently. These changes are sometimes required and facilitated by government regulations and industry standards. Thus, we argue that:

- P2a.* Resource accumulation in value chain firms focuses on the internal development of resources to improve its production system.

- P2b.* Resource accumulation in value shop firms is primarily focused on internal development of its experts, typically through training, to improve their problem solving skills.
- P2c.* Resource accumulation in value network firms is primarily focused on driving customers to the firm through innovation of front end (customer facing) services and to improve efficiency and reliability of transactions across the network.

Divesting resources in value chain firms usually occurs by culling divisions or business areas, or by shutting down production facilities and laying off employees (as was recently seen in the American auto industry). The purpose of these actions is to reduce capacity. Resource divestment can also involve replacing old resources with new ones at certain points in the production process. Resources that no longer provide the firm with an advantage over its competitors are upgraded or divested. Resource divestment options may include closing down certain activities and then outsourcing them from contract manufacturers or independent service providers.

Divesting resources in value shops firms, among other things, typically involves laying off experts or selling specialized equipment/technologies that no longer has a value creation potential. A unique feature of many value shop firms is its partnership structure which often includes an “up or out” promotion policy (von Nordenflycht, 2010). Using this promotion policy allows senior partners in value shop firms to routinely cull their professional staff by encouraging the weaker ones to leave the firm. Typically, this involves getting rid of low performers and sometime those who no longer show the ability to learn and upgrade their expertise. Divesting resources can also include getting rid of obsolete resources. For example, value shops, such as hospitals, may replace older and slower diagnostic equipment with newer and faster equipment to enable faster diagnosis of patients.

Divesting resources in value network firms typically involves closing unprofitable network nodes or reducing the level of services in order to reduce cost. For example, airlines routinely close routes (nodes) in their network and reduce the level of services in order to increase profitability. Divesting resources can also include excluding under-performing or unreliable partners from the network. Network performance is dependent on network partners making good faith effort to uphold standards and behave in a mutually beneficial manner (Moeller, 2010). Regulatory and technology changes can also prompt the divestment of resource. Telcos began closing down their analog cellular service with the introduction of digital cellular technology. Likewise, the introduction of 3G technology requires that Telcos and service providers adapt to this new technology. We therefore propose:

- P3a.* Resource divestment in value chain firms is focused on culling underutilized capacity or resources that no longer contribute towards creating an advantage over its competitors.
- P3b.* Resource divestment in value shop firms involves getting rid of resources, including laying off underperformers, that are no longer able to effectively contribute to the firms’ problem solving capabilities.
- P3c.* Resource divestment in value network firms involves divesting resources, including partners, that no longer contribute to network performance.

3.2 Resource bundling and value configurations

Once the resources are in place they need to be integrated to form capabilities. This is the resource bundling step, which involves resource stabilizing, enriching and pioneering. As mentioned earlier, the purpose of stabilizing resources is to make minor incremental changes to existing capabilities (Sirmon *et al.*, 2007). The purpose of enriching resources is to extend current capabilities. Sirmon *et al.* (2007) explain that this can be achieved through learning new skills or by adding complementary resources from existing resource portfolio. Pioneering resources involves exploratory learning and may include integrating newly acquired resources. It is done with the aim of creating new forms of competitive advantage. Resource pioneering is less frequent than resource stabilizing and resource enriching.

Value chain firms stabilize their resources by improving their ability to execute existing processes. An example of a resource stabilizing process in value chain firms is implementing continuous improvement processes (kaizen) or benchmarking with peers to maintain the value of their processes and offerings. Resource stabilizing in value shop firms involves encouraging its experts to undertake professional development in order to remain current in their areas of expertise and improve their problem solving capabilities. It can also include developing technologies to aid problem solving.

Value network firms' resource stabilizing efforts focus on maintaining the value of their network. This is done through investments in network equipment and technologies as well as developing standards to govern and improve transactions among network members. We therefore argue that:

- P4a. Resource stabilizing in value chain firms is focused on incremental improvements to components in the architecture of its production system.
- P4b. Resource stabilizing in value shop firms is concerned with enhancing the efficacy of its experts and improved use of technologies to aid problem solving.
- P4c. Resource stabilizing in value network firms is focused on developing and refining network standards to ensure the reliable and efficient execution of transactions in the network.

Resource enriching should lead to enhanced efficiency, product quality, or the ability to produce more variants of a product. For value chain firms, resources enriching should provide the firm an advantage relative to its competitors. This can be achieved by automating certain activities in the existing production processes, adopting an integrated information system, such as ERP software, or redeploying workers to ensure better performance of the process.

For value shop firms, resource enriching is done to develop more problem solving capabilities for the existing domains. A key enriching and pioneering choice in value shop firms is which customer projects to accept as it is the problem solving process that drives the firm's knowledge and capability development (Lowendahl *et al.*, 2001). The projects a firm chooses depends on its knowledge re-use strategy (Hansen *et al.*, 1999). Firms that focus on repeatedly re-using their expertise to solve the same problems will avoid projects/problems that they have not solved previously. On the other hand, there are value shop firms that are only interested in solving unique,

one-of-a-kind projects/problems, such as the architectural firm that designed the opera house in Oslo.

In addition to adding resources, enriching resources in value shops involves building its reputation. Since value shop firms do not offer tangible products, customers are not able to assess the value offered by value shop firms a priori. The quality of the solution offered by a value shop firm is affected by the quality of the experts it has. However, the quality of these experts may be opaque to customers (Eisenhardt, 1999). Customer can only infer about their expertise from their past achievements. Thus, for value shop firms the competitive advantage depends on the reputation they have developed in solving past customers' problems. Reputation is a key resource that is managed by value shop firms (Sheehan and Stabell, 2006). Instead, customers evaluate value shop firms on the basis of their reputation. Strengthening the firm's reputation is an important element of resource enrichment for value shops.

Resource enriching in value network firms is concerned with extending current resources and thus, offer additional services to current customers. Since network resources are shared with partner firms, in some cases they are competitors, there is little incentive for value network firms to invest in enriching these resources. Instead, it would be wiser for value network firms to enrich those front end resources that deliver value to customers. For example, the introduction of digital technology is a form of resource enriching that enables the incorporation of texting and multimedia messaging along with voice only telephony. Telcos were able to make use of these technologies by adding new services such as the sale of ring tones, stock market information, or even the purchase of cinema tickets. This will enable the firm to generate more revenue and improve its return on its portion of the network resources. We therefore propose:

- P5a.* Resource enriching in value chain firms is concerned with enhancing efficiency, quality, or enable the firms to offer more types of its current products.
- P5b.* Resource enriching in value shop firms is concerned with extending the use of current expertise of its expert to enable the firms to develop more problem solving capabilities to current domains. Value shops also enrich their resources by managing and building the firms' reputation.
- P5c.* Resource enriching in value network firms is concerned with improving front-end resources in order to extend the range of services offered to its existing customers.

Resource pioneering sometimes involves discontinuous change as it is typically done with the intention of introducing new and novel products or to enter untapped markets. This can involve reconstructing the current production system or adding a new one to enable the firm to produce new products. The ultimate goal for some value chain firms using resource pioneering is to capture opportunities in a Blue Ocean, markets with as yet untapped opportunities (Kim and Mauborgne, 2005). Value chain firms that are successful in pioneering resources will be able to capture Blue Oceans and enjoy a number of first-mover effects (Lieberman and Montgomery, 1988), which typically leads to superior performance.

Resource pioneering in value shop firms involves cross-training of experts to become proficient at solving problems in new domains. This can also include the

adoption of new technologies to enable problem solving in new domains. For instance, the pediatric department of a hospital can conduct new surgical procedures with the adoption of new techniques such as keyhole surgery. While value shop firms may enjoy first mover effects when using pioneering processes, these benefits are can be short-lived due to the relative ease that rivals can reverse engineer the solution (Sheehan, 2005).

Resource pioneering in value networks is concerned with offering new services and connections to new customers. Among Telcos, ensuring stable signal strength and extending coverage are forms of resource stabilizing. However, with 3G technology, Telcos are able to extend beyond telephony services and also provide mobile broadband services. This is a form of resource pioneering that enables the firm to offer a totally new range of services.

First mover advantages are difficult to obtain in existing networks as the networks are interconnected and need to maintain compatibility across networks. This makes bringing new services to market either difficult due to lack of cross-network connectivity, or if they are easy for one competitor to introduce, then it is easy for rival networks to copy and introduce as their network architectures and capabilities are highly compatible. While first mover advantages can be significant for new networks due to network effects which create a “winner-take-all” dynamic (McIntyre and Subramaniam, 2009), it is difficult to establish a new network due to difficulties in attracting members to join. It is tough to sell a new network when the reason for joining is other members of the network; typically new networks need a “killer application” in order to capture a significant share of the market (Fjeldstad and Andersen, 2003). We therefore argue that:

- P6a.* Resource pioneering in value chain firms is concerned with reconstructing the existing production system or adding a new one to enable the firms to produce new products for new and possibly untapped markets.
- P6b.* Resource pioneering in value shop firms is concerned with broadening the range of expertise of their experts to enable them to serve new domains.
- P6c.* Resource pioneering in value network firms is concerned with adopting new technologies to open new markets beyond existing customers and beyond existing product offerings.

3.3 Resource leveraging and value configurations

The resource leveraging process starts with deciding what the firm will sell, who it will sell to, and how it will effectively and efficiently produce the offering (Magretta, 2002). This involves understanding the opportunities available in the external environment and how to leverage on a firm’s asymmetries, such as its knowledge or processes, to take advantage of the opportunities (Miller *et al.*, 2002). Each value configuration relies on different forms of asymmetries and will therefore require different resources and capabilities configuration.

Value chain firms earn revenue from the sale of goods/services. Its asymmetries are typically based on its process architecture that enables it to produce efficiently or consistently sustain high product quality. The total value created by a firm depends on the size of the target market relative to the firm’s scale and scope, which determines its costs (Stigler, 1951), and its ability to produce the quality desired for the market

targeted. Woiceshyn and Falkenberg (2008) argue that value chain firms focus on efficiency through minimizing the cost of supplies and streamlining their production processes. Those that focus on effectiveness emphasize the application of resources to improve product features and services given to their customers. Given this, a key resource mobilization issue for value chain firms is the identification of the capabilities needed to consistently produce reasonable quality goods/services at low prices.

It can be argued that for customers of value chain firms, the tangible nature of the choices before them makes it possible for them to assess alternative offerings. The product that is most likely to meet their approval is the one that, *ceterus paribus*, confers a relatively higher perceived consumer surplus. Seen from the point of the view of value chain firms, competitive advantage requires more than just understanding customer expectations. Understanding customer expectations is a necessary but insufficient condition.

Competing as a value chain firm also requires an understanding of how competitors are delivering value to their customers. This understanding will enable value chain firms to identify and build what is termed by Anderson *et al.* (2006) as “favourable points of differences.” Pleshko and Heiens (2000) argue that businesses have limited resources to invest in gathering intelligence. As such, businesses have to decide whether to focus more on customer intelligence or competitor intelligence. For value chain firms, seeking intelligence on competitors’ offerings and performance is crucial and serves as an important starting point in resource mobilization. This information enables the firm to evaluate and decide how to compete and what forms of relative advantage it has to develop to outperform its competitors. This subsequently determines the capabilities configuration needed by the firm.

Value shop firms earn revenue from selling expert capacity, typically by the hour or by project. Its asymmetries stems from the expert knowledge they possess and their capability to combine it in various ways to solve users’ problems. The consumer surplus created by value shops depends on the level of information asymmetries between users and the firms’ experts. The larger the information asymmetry between the firm’s expert and the user, the greater the value to the user, and the greater the fee the firm can charge for the experts’ services. Value shop firms that rely on efficiency will seek to minimize the cost associated with their problem solving process. This can be attained in two ways. Firstly, the firm can control cost by relying on proven technologies (Woiceshyn and Falkenberg, 2008). Second, value shop firms can also minimize cost by re-using expert knowledge by developing solutions that can be sold repeatedly to similar customers (Hansen *et al.*, 1999; Sheehan and Stabell, 2006). On the other hand, some value shop firms focus on solving unique problems that require complex knowledge, extensive networking, and technical and managerial systems. These firms are likely to adopt new technologies when approaching complex problems (Woiceshyn and Falkenberg, 2008).

Since value shop firms compete by selecting customers whose problems can be solved through the unique combination of skills, knowledge and technologies they possess, resource mobilization in these firms depends on the ability to anticipate problems faced by customers in the firm’s target market and offering the expertise to solve their problems. This involves acquiring intelligence on the problems faced by potential customers. Whereas a value chain firm has to develop competitors’

intelligence to map out its resource requirements, value shop firms need to develop customer intelligence to determine the capabilities configuration it needs to develop.

Value network firms earn revenue by charging for access to and use of its network. Its asymmetries stem from the composition and quality of its network (the members of the network and nodes) and the network infrastructure (equipment and facilities). The total amount of value created by value network firms for its users depends of the amount of connections that can be made (how many network nodes are accessible to users?) and the type of connections that can be made (what is the richness of the connections?) (Evans and Wurster, 2000). Resource leveraging in value network firms focuses both on efficiency to lower the cost of connecting its users and effectiveness in terms of increasing the richness of the connections.

The value that can be created by a value network firm is to an extent determined by its partners. Firms in a network need to complement one another and the capabilities configuration they have to develop is dependent on the capabilities of potential partners. As such, network partner selection is critical when competing as a value network (Moeller, 2010). Understanding the customer is a necessary to identify opportunities in the environment but is insufficient for competitive success for value network firms. Ultimately, the value creation possibilities that can be exploited by value network firms are dependent on their network partners. Likewise, the resources and capabilities configuration that value network firms need to develop is dependent on the resources possessed by their partners. Therefore, intelligence on partner performance and capabilities is an important element in resource mobilization for a value network firm. Consistent with Sirmon *et al.*'s (2007) description of resource mobilization as involving the identification of the capabilities configuration needed by a firm, we therefore propose:

- P7a. Resource mobilization in value chain firms requires that the firms develop effective competitor intelligence to determine the system architecture configuration needed.
- P7b. Resource mobilization in value shop firms requires that the firms develop effective customer intelligence to determine the capabilities configuration needed.
- P7c. Resource mobilization in value network firms requires that the firms develop effective partner intelligence to determine the network infrastructure configuration needed.

Once the configuration needed by a firm has been identified, these capabilities have to be integrated to leverage the resources effectively (Sirmon *et al.*, 2007). This involves resource coordination of the firm's knowledge, development of its technology infrastructure and managerial skills.

The coordination of resource for each of the value configuration logic takes on their own distinct pattern. For value chain firms, coordinating resources involves developing coordination within a long-linked series of activities involves intra- and inter-organizational integration that entails the use of process management techniques (Benner and Tushman, 2003). The processes developed serve as a relatively stable architecture that ensures a degree of consistency in the value creation chain. Once this long-linked architecture is in place, adaptation is constrained by the irreversible

commitments made in the architecture. Thus, value chain firms only make occasional adjustments to its processes.

The guiding choice for value chain firms is stability. For this class of firms, it involves maintaining a stable organizational architecture and developing a tightly coupled system. Orton and Weick (1990) describe a tightly coupled system as one where the elements are continuously interacting with each other in a highly interdependent manner. This interdependence is so high that the elements are not seen as distinctive. This is different from loosely coupled systems where the elements are responsive and retain their separateness and identity. These elements affect each other occasionally and in a limited manner. In such a system, the elements are interdependent, but are not tightly linked. As such the elements are distinct. A tightly coupled system uses complicated and detailed analytic processes that rely on existing knowledge and the sequential execution of activities to produce consistent outcomes (Eisenhardt and Martin, 2000).

Value network firms are similar to value chains in that they must maintain a tight couplings and a stable architecture not only in their networks, but also with their rivals' complementary networks, in order to complete transactions in a seamless fashion within their networks and across rival networks. Innovation in network firms is constrained by the tight coupling between network partners. Given that value network firms need to coordinate activities across networks, their network infrastructures are even more tightly coupled and stable than value chain firms. Innovations in network resources tend to be incremental and infrequent. Instead, value network firms focus more on front end innovation to draw in more customers.

For value shops firms, the uniqueness of each customer encounter presents the value shop with more variability and uncertainty than would be faced by a value chains or value networks. Thus, we expect to see differences in the way these value creation logics coordinate their resources into capabilities configurations. Lepak *et al.* (2007) argue that firms facing more uncertainty are more likely to innovate. For value shop firms, each time the customers' problems change, the value creation cycle must also change. The capabilities configuration that ensures the flexibility needed by a value shop firm requires that its internal arrangements are coupled differently from value chain and network firms. This concern for flexibility guides a value shop's behavior.

Thus, value shop firms rely on loose coupling to enable frequent changes and recombination of their resources. The loose coupling provides the flexibility in responding to frequent and unique requirements of its customers. Such a system is simple, experiential and leverages on quickly created new knowledge. The execution process involves iterative processes to produce customer specific solutions (Eisenhardt and Martin, 2000). We therefore argue that:

- P8a.* The different value configurations coordinate their resources by relying on different levels of coupling of their internal system.
- P8b.* Value chain and value network firms coordinate their resources by developing more tightly coupled internal systems compared to value shops.
- P8c.* Value shop firms coordinate their resources by developing more loosely coupled internal systems compared to value chains.

Sirmon *et al.* (2007) describes resource deployment as involving codifying of the firms' knowledge into organizational routines. Firms develop routines to reduce complexity and enable the effective execution of activities (Barney, 2001). Routines are defined as processes that repeatedly use resources to complete value creating activities (Dosi *et al.*, 2000). Over time, some of these routines prove to be more efficient and effective, and as a result the routines that are thought to contribute to a firm's competitive advantage are refined and thus over time become capabilities (Schreyogg and Kliesch-Eberl, 2007). The role of managers is to identify the capabilities needed to support the firm's value creation approach (Sirmon and Hitt, 2003).

Barney and Zajac (1994) point out that the capabilities developed by a firm are determined by its strategy and these capabilities also influence the strategy the firm adopts. At the same time, these capabilities also act to constrain future strategy options. This creates path dependence that forces firms to focus more on using existing capabilities. Kogut and Zander (1992) argue that when firms stray from their core capabilities, the probability of success in new business areas is likely to decline to a level that is similar to start-up firms. Thus, over time, the firm's capabilities configuration tends to become relatively stable and enduring. Given, the differences in value chains, shops and networks, it is expected that the institutionalized capabilities are distinctly different in each and thus require different approaches to resource deployment.

Given the relatively stable internal environment that value chains and value network seek to enact and the tightly coupled nature of its processes, value chain and value network firms rely more on static routines to deploy its resources (Pisano, 2000). Static routines are used to regulate on-going operational activities. Such routines ensure that the stability of the organization's architecture is maintained and operates efficiently. For value shop firms, each customer engagement is unique and requires an understanding of the contingencies of the customer's requirements. Competitive advantage is attained by combining the resources appropriate for the specific users' problems (Sirmon *et al.*, 2008). Thus value shop firms need resources that can be easily combined and recombined. This capability is developed by relying on routines that ensure flexibility and are consistent with a loosely coupled system. Thus, besides developing loosely coupled processes, value shop firms rely on dynamic routines to deploy its resources. Pisano (2000, p. 151) defines dynamic routines as routines that regulate search for improved routines and methods. The distinctly different environments that value chains, value shops, and value networks compete in and the different forms of couplings each emphasizes require different forms of organizational routines. Thus:

- P9a.* The reliance on tight coupling requires that value chain firms rely on static routines to deploy its resources.
- P9b.* The reliance on loose coupling requires that value shop firms rely on dynamic routines to deploy its resources.
- P9c.* The reliance on tight coupling to attain complementarity between network partners requires that value network firms rely on static routines to deploy its resources.

4. Conclusion

While Stabell and Fjeldstad's (1998) work on value creation logics provides researchers and practitioners with a deeper understanding of how firms create value, value creation theory remains underdeveloped. This paper seeks to contribute to the development of the theory on value creation logics by extending the discussion to encompass the resource management requirements of these logics.

Each value creation logic uses knowledge in a distinctly different manner and selects environments that have different levels of dynamism. These value creation logics also require different levels of dependence on other entities. The actions of value chain firms are linked to their supply chain partners. Likewise, the course of action that can be taken by value network firms are constrained by the capabilities of their network partners. Value shops firms are more autonomous and rely mainly of the effective combination of their internal resources. The relatively greater autonomy enjoyed by value shops enable them to face a more dynamic environment. Consequently, the way each value creation logic manage their resources differs considerably.

The position taken by this paper is that a mismatch between the value creation logics and its resource management practices will have an adverse impact on these firms. Value shop firms that invest in capabilities that mimic the capabilities of value chain or value network firms will find themselves unable to respond the unique solution requirements of their customers. Likewise, value network or value chain firms that develop capabilities similar to value shops will find themselves incapable of attaining the close coordination needed to support their competitive approach. When these firms behave like value shops, they will create considerable confusion among their vendors and network partners. It will also undermine the economies scale that can be attained through standardization in their process and network architecture.

In presenting these arguments, this paper also hopes to contribute to the resource based view by highlighting a second critical contingency of resource management; value creation logics. By bringing this contingency to the forefront, this paper has the potential to open new directions in the research on resource management within the resource-based view.

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