



Conceptualizing a Dynamic Model for Operation Strategy Formulation in the Third Millennium

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Abstract

Today's firms are residing in a hypercompetitive environment in which operational supremacy undisputedly is a fulcrum of competitiveness. However, under tough competitive circumstances posed by globalized business milieu achieving this end apparently requires a comprehensive and systematic approach to understand and strategize operation in a superior way. This means operation and strategy must be intertwined, co-formulated and co-implemented. Logically only in this way firms are enabled to outperform rivals and create an operational hegemony. Despite this notion, management literature is suffering from a gap in its body of operational knowledge. Specifically, prior research laments the absence of a dynamic theory for operational strategy in order to harmonize operation with the modern theory of strategy. This paper, hence, is designed to address this context by proposing a conceptual model. Thus, this paper is a conceptual research that follows a simple approach to develop a theoretical framework for understanding the dynamicity of operational strategy. Accordingly at the end implications of this approach are presented for researchers and practitioners.

Keywords: Operation, Strategy, Dynamic model

Introduction

The face of competition in the 21st century has changed drastically. Competitive forces are increasingly becoming furious and global hypercompetitive landscape is unprecedentedly challenging firms' operational maneuverability. Subsequently following the classic rules of the game not only results in a competitive disadvantage or at best disparity, but also it likely puts the firm at the verge of collapse. This is due mainly to the fact that, the dawn of the third millennium have corresponded with pervasive internationalization of firms, increasing economic uncertainty, high-velocity technological evolution dominance of information technologies and

unpredictable macro-environmental changes. These universal phenomena force firms to adopt new managerial approaches and revisit traditional models of competitive analysis and strategic management such as the static hierarchy of strategy in which performance and competitiveness have been planned and led from operation as the bottom-line to strategic decision-making as the upper echelon (Thomson et al. 2007, P.39; Hitt et al. 2006, p.). In this sense, the fever of a paradigm shift is heating up and a rising tide of new approaches to cultivate more competitive operation from management to strategy is readily seen (e.g. Adam and Swamidass 1989; Anderson et al. 1989; Porter 1996; Ward et al. 1998; Boyer and Levis 2002; Sum et al. 2004).

Despite this fact, the concept of strategy is an elusive being and linking operation to strategy is therefore a ferocious beast difficult to tame theoretically. In this regard, operation is now seen as a strategic priority and strategic operation management has emerged as a new growing discipline (ward et al. 1995;Lowson 2002; Brown et al. 2004).Furthermore, environmental unpredictability and high-velocity technological evolution have given rise to a dynamic theory of strategy (e.g. Porter 1991; Markides 1999; Warren 2002,2007) in which strategic planning as a systematic set of patterns to orientate, formulate and implement strategies is carried out dynamically in order to catch fast-moving changes and preempt further movements. Strategic management as an attractive multidisciplinary field of research in the modern organizational science has adapted congruently to this change by devoting a bundle of new constructs that show the evolution of the concept of strategy in theory and practice. Conceptually, operation is embedded at the heart of performance, and strategy is to navigate performance towards a competitive advantage; Hence, the relationship between operation and strategy has been a critical subject of ongoing debate in academic as well as industrial communities. To settle this debate, this study aims to develop a dynamic theory of operation strategy in adherence to recent developments in the theory of strategy. To do so, first and foremost, strategy, operation and operation strategy as the three constructs of the research must be comprehensively defined. Then, fundamentals of a dynamic theory must be elucidated and eventually a dynamic model encapsulating these constructs must be contrived. Next sections of this article engineer this process consecutively and streamline the flow of conceptual findings to enhance the comprehension of the research for managers, commentators and practitioners.

Methodology

Based on the objective of this study and its research design, this research is explanatory researches that form the research philosophy perspective falls under the class of interpretivism. The research uses secondary data. The research strategy is literature survey and qualitative analysis. International journals, textbooks as well as proceedings were accessed and searched through international well-recognized databases (Emerald, Ebsco, Proquest). Papers from leading journals in strategy and operation disciplines including Harvard business review, academy of management, strategic management journal, California management review, SLOAN business review, operation management journal, management science and many other well-known sources were collected systematically over a three-month period. Textbooks were also accessed from libraries and reviewed over a three-month period. A Couple of discussions around the design, the process and the objective of the study were carried out by senior strategic management and operation management lecturers in three business schools as well as some PhD students in order to improve the flow of data and the progress of the study. The arrangement of the literature survey was planned to start by reviewing the concepts of strategy, operation and exploring the meaning of strategy through taxonomies and classifications. In the second step, the scientific development of a dynamic theory in the form of a cyclic model was pursued and consequently its theoretical fundamentals were elicited and investigated in existing literature to date. It must be noted that literature in these fields is developing exponentially and also that this study is limited to a conceptual field. The findings are hence based on a roadmap which represents the underlying analytical arguments of this manuscript as follows:

(1) what operation is ;(2) what overlaps between strategy and operation; (3) how operation strategy is shaped; and finally (4) how today's dynamic landscape can be captured by this view. So the boundaries of such studies may change over time and further researchers are recommended to pay attention to these issues carefully. In the last step, some discussions about the model are made and main implications of the study are proposed to managers, researchers and all other who are involved, interested or engaged in such fields of inquiry.

Contextualizing Strategy and Operation

The mass body of management literature has been divided into many interrelated disciplines, amongst them operation management and strategic management have coevolved over past decades (Wilson 1995; Pilkington, and Meredith, 2009) and a new view into strategic operation management is academically being popularized through which operation and strategy are incorporated into more effective competitive weapons (Chase et al. 2001). In the light of this evolution, the theoretical relationship between two broad concepts of operation and strategy has long been an enduring issue of debate amongst scholars and commentators in academic as well as industrial communities (e.g. Skinner 1969; Banks, and Wheelwright, 1979; Porter 1980; 1985; 1996; Hyes and Upton 1998; Barnes 2001; Pilkington, and Meredith, 2009). Notwithstanding this notion, the general context of strategy encompasses the purpose, process and content of the strategy regardless of its scope as operational or competitive (De wit and Meyer 2007, p 5).

Therefore, to subsume this notion within the boundaries of strategic operation management, first and foremost a clear and comprehensive definition of operation and strategy must be given in order to constitute an inclusive framework for operation strategy. According to Cook (2000), "there are three popular interpretations of strategy; corporate-management, institutional-

administrative and futuristic. However, there is cross-breeding and cross-pollination but distinctions are identifiable" (p12), Hence, in adherence to the purpose of this study, the corporate-management approach is arguably undertaken because it deals with the context of strategy in organizational management and overall performance which backs to the seminal work of Drucker (1954). In respect to this dogma, the concepts of strategy or traditionally business policy and operational performance have retrospectively coalesced into a concrete unit of interest which is known as industrial strategic management for long-range planning. This discipline became attractive for academicians and practitioners in 1950s (Ewing 1956; Payne 1957; Wrap 1957; Platt and Maines 1959); but strategy as an independent managerial concept emerged in corporate world in 1960s (Chandler 1962; Ansoff 1965; Learned et al. 1965, Cannon 1968). A gap in the body of management literature arose between the context of business strategy and business operation. Perhaps the first one who targeted this gap was Skinner (1969) whose study was aimed to bridge the gap of manufacturing aspect in corporate strategy. Although, that study heralded the operational content of strategy, it lacked integrity in contextualizing operational dimension of strategy. Later, Porter's studies (1980, 1985) threw more light on the criticality of operation in strategic planning, industrial performance and competitiveness of the firms. In respect to this theoretical inclusion, the value chain framework and other strategic tools incorporated operation in strategy formulation, implementation and evaluation (Grant 2005, p. 145; Thomson et al. 2007, p.110; Hitt et al. 2006, p.85). However, perhaps the most famous analytical model that embeds operation in the heart of strategy is porter's value chain as illustrated in figure2. In this regard, Grant (2005) attests this notion by arguing that strategy is in a quest for value and value can be created through production, commerce or in an integrated approach (p.39). So, strategy and operation are, in this sense, seamlessly intertwined. Furthermore, in pursuit of

strategic operation management, authors in late 1980s and early 1990s began to pay more strategic attention to operation particularly from the manufacturing angle mainly due to technological changes and developments in an international scale (Fine et al. 1985; Porter 1987; Adam and Swamidass, 1989; Anderson et al. 1989; Anderson et al. 1991). However, globalization and intentional fierce competition confirmed and underlined the inseparability of operation from strategy. This school attracted more attention in the mid and late 1990s (Porter 1996; Flynn et al. 1997; Ganesi 1998; Mills et al. 1995 and 1998, a,b). The dawn of the 21st century and the emergence of a hypercompetitive environment re-signified the role of operation in strategy (Barnes 2001; Beckman and Rosenfield 2007). Having taken these points into a careful consideration, it is strongly argued that operation and strategy have co-evolved harmoniously, and deploying an integrative view of operation-strategy correlation in modern management makes a real sense.

On the other side, comprehending the co-evolution of operation and strategy first and foremost requires an in-depth understanding of strategy and operation. This approach is then utilized in defining the perplexing concept of operation strategy and streamlines the process of contriving a theory for operation strategy. It illuminates how dynamic this theory is. With respect to this issue, Barnes (2001) clarified the conceptual distinction between operation and strategy and stated that operation deals with how but strategy determines why for the firm. Therefore, operational strategies are normal strategies (why) in essence while pursuing operational objectives (how). This conceptualization reveals that the firm must firstly identify its objectives and then formulate proper strategies to attain these objectives based on the operational activities the firm undertakes through implementation of strategies.

Next chapter of this study fleshes this paradigm out and expounds two concepts of strategy and operation in an epitomized theoretical structure in order to clarify the concept of operation strategy precisely.

Operation Strategy: A Strategic Dichotomy

Operations strategy is the total pattern of decisions which shape the long-term capabilities of any type of operation and their contribution to the overall strategy through the reconciliation of market requirements with operations resources (Slack and Lewis 2002). Therefore, technically operational resources are the main input of operation strategy and these resources are being deployed to create operational capabilities and competencies to create value leading to a competitive advantage for the firm to outperform and outcompete rivals. This simple dogma is based on the principles of resource-based theory or resource-based view (Barney 2001; Barney et al. 2001; Crook et al. 2008) of the firm (RBV) which is interchangeably used as resources based view of strategy. This theory claims that the rationale behind the formulation of any strategy is to create a heterogeneous set of strategic resources that are valuable, rare, inimitable and non-substitutable (VRIN criteria). Subsequently develop capabilities and result in cultivation of core competencies as the cornerstones of competitiveness (Hitt et al. 2006, p.72, Hamel and Prahalad 1990; Collis and Montgomery 1995). Integrating this paradigm with value chain denotes the position of operation into this strategic model.

In spite of this archetype in the body of modern management and organizational science, the operation management has always been in quest for operational effectiveness and efficiency (e.g. Kelly 1995, Porter 1996; Hyes and Upton 1998; Jeong and Phillips 2001).

These two concepts directly influence the competitive position, survival and growth of the firms that are planned, executed and assessed across three classical levels of strategy in a hierarchical paradigm (Thomson et al. 2008, p.39; Dewit and Meyer 2005, p.9). This view of strategic planning puts operating strategies at the bottom of planning process and underlines the role of operating strategies as functional activities which are designed and executed to support upper level strategies.

Given this archetype, it is arguably illustrated that operation has been subsumed in foundation of strategies activities, behavior and movement of the organizations and ongoing technological evolutions, developments and competitive disruptive and destructive challenges are all strategized and cultivated from operational level. This level deals with operational effectiveness and efficiency which result in superior implementation of upper level strategies. Therefore, at the bottom-line or technically functional level, strategic planning is twofold: strategy for operational effectiveness and strategy for operational efficiency. In this sense, Kumar and Harms (2004) nicely argue that effectiveness is doing right things through process optimization, whereas operational efficiency is, on the other hand, doing things right by improving procedures and functions (process improvement).

In this regard, scholars have consensually agreed that operation and its strategic planning towards effectiveness and efficiency must take five strategic strands into account (Chase *et al.* 2003; Kumar and Harms 2004 and Russell and Bernard 2006; Sum *et al.* 2004) including:

1. Cost (minimizing operational costs);
2. Quality (maximizing quality of products and services while reducing costs);
3. Flexibility (adaptability to environmental changes);

4. Speed (maximizing the speed of competitive response, production and delivery);
5. Learning and intellectual capital development (developing human capital, expertise and innovativeness).

This notion has been supported by authors in strategic management discipline (Porter 1996; Hitt *et al.* 1998), but, radically addressing the above concerns covers a broad range of areas in organizational strategic decision-making from product and service mass customization, total quality improvement, process and technology management, human resource development to cultivating capacities and facilities (Russell and Bernard 2006). Moreover, Jeong and Phillips (2001) believed that operational effectiveness comes from three improvements in operational efficiency known as: availability or superior resources and capabilities, performance and quality. Therefore, operational strategy field must be in line with optimizing these three efficiencies. Therefore, operational effectiveness covers operational efficiency and strategy deals with effectiveness in which efficiency is spontaneously being altered and improved. In spite of this point, Porter (1996) theorized strategy from an outside-in view based on industrial drives (Porter 1978) and opines that strategy is not operation. Operational effectiveness is doing things better but strategy is doing things differently or doing different things. So, the Porterian view of operation strategy sees operation from a different angle through which operation and strategy must be harmoniously orchestrated to enable the firm to create a sustainable competitive advantage. This school separates operation from strategy and puts strategy over the operation by formulating and executing strategy in a superior systematic way of navigating operational activities towards innovation (doing things differently or doing different things).

From another perspective, later, Hyes and Upton (1998) opposed this view and criticized the argumentations of Porter. They otherwise state that strategy is formulated and executed based on operation and the operation-based strategy is a competitive weapon for the organization. Hence, operational effectiveness erects the

pillars of strategy. This thesis shows that generic business level strategies and upper echelon strategic movements are in pursuit of five aforementioned criteria of operation management (cost, quality, flexibility, learning and speed). To comprehend this doctrine, figure 1 can be sketched.

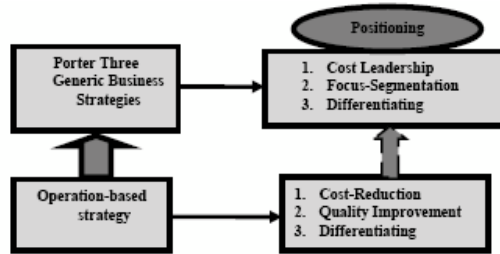


Figure1: Operation-based Strategy and Operational Objectives

This inside-out approach explains that a firm's operational resources and capabilities are managed and deployed to create effectiveness and then this effectiveness enables the firm to craft competitive strategies. This effectiveness-based orientation of strategic planning necessitates unique amalgamation of operational resources that are potential to meet requirements of today's hypercompetitive landscape. This creed constitutes the building blocks of operation strategy as a strategy to acquire, develop and utilize resources, capabilities and competencies towards operational effectiveness. In this respect more recently, Lopez (2005) retrieved the study of Teece, Pisano and Shuen (1997) who emphasize the key role of managers in appropriately adapting, integrating and reshaping organizational skills and resources as well as internal and external functional competences to render an operational advantage. Thus, operational strategies in today's erratic environment demands dynamic capabilities to adapt to environment effectively. Accordingly, the

term 'dynamic capabilities' refers to the firm's ability to integrate, build upon and reconfigure internal and external resources and functional competences to deal with environments which are constantly evolving (Teece et al., 1997, p.515). Moreover, Eisenhardt and Martin (2000) talked similar lines when they defined dynamic capabilities as organizational routines of strategic nature through which firms obtain new configurations of operational resources to achieve operational effectiveness. So, operational strategy undisputedly deals with operational effectiveness and this process can be formulated and executed apart from business strategies, as Porter (1996) asserted, or contrarily is in line with upper strategies (Hyes and Upton 1998) and the firm's strategic orientations. In line with this fact as previously elaborated, today's dynamic business milieu ties operation to strategy and this bond voids the school of Porter and signifies the operation-based view of strategy that is consistent with resource-based theory of the firm (figure 2).

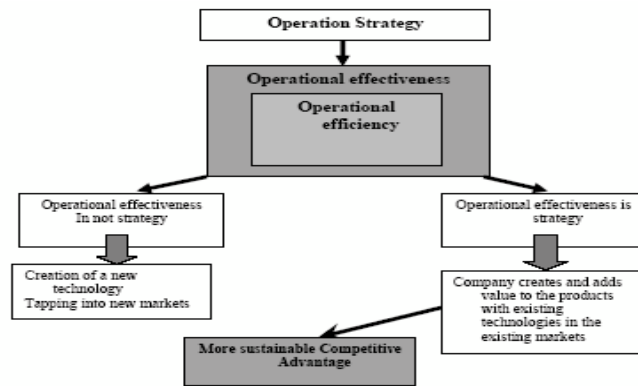


Figure2: Operation Strategy a Dichotomous Theory

Furthermore, as earlier discussed, the third millennium is universally characterized with high-velocity changes, technological evolutions and chaos. These factors underline the centrality of operation in strategy formulation and implementation. Operational effectiveness here unquestionably demands a dynamic theoretical archetype to explicate its mechanism. In adherence to this need, the next section of this study tries to develop this theory.

Towards a Dynamic View for Operation Strategy

According to the Merriam-Webster dictionary, the term “theory” is etymologically defined as the analysis of a set of facts in their relation to one another or a set of beliefs, policies or procedures proposed or followed as the basis of action to explain a phenomenon. Theory can be also considered as an ideal or hypothetical set of facts, principles or circumstances in the form of a plausible or scientifically acceptable offered to explain phenomena for the sake of argument or investigation. In the business research context, scholars (Zikmund 2000; Yahna *et al.* 2000; Sekaran 2003; Aaker *et al.* 2007; Cooper and Schindler, 2008 and Churchill and Brawn 2007) argue that theory comes with propositions and concepts. More radically, Zikmund (2000) explains these factors as a ladder of

abstraction in which theory is shaped from propositions and constructs. In this procedure, construct is defined as a generalized idea about a class of objects, attributes, occurrences or processes that has been given a name (p.37). Proposition is a statement concerned with the relationships among concepts (p.38-39) and eventually, a theory is a coherent set of general propositions, and the goals of theory are to predict, explain and understand the phenomena (p.38). Therefore, for the purpose of this study, a dynamic theory is a coherent set of propositions which are dynamically related, and hence, to render such theory, first of all, concepts must be described subsequently, propositions are shaped and then their dynamicity are explicated.

Since this study is carried out to develop a dynamic theory of operation strategy, the building of blocks of this body in modern view of strategic management must be clearly determined and illustrated. Accordingly, literature review and conceptual analysis unveil the main constructs of this theory as operation and strategy; these constructs encompass sub-concepts which can be stated in three propositions for this study as follows:

1. Operation is the process of creating value by converting input into output and this

value itself comes from superior quality, cost minimization, flexibility and learning

2. Strategy is the stretchable link between the firm's resources (capabilities and competencies) and its environmental opportunities in order to render a competitive advantage and this link is built on operational foundation of the organization. Constructing this link requires a dynamic simultaneous process of identifying environmental opportunities, evaluating them and committing resources through strategic operation to exploit them (proposed by Feurer *et al.* 1995 and Porter 1991).
3. Operation management seeks operational effectiveness and efficiency which are attained by optimization and improvement in operational processes of the organization through careful intelligent deployment of operational resources and dynamic capabilities.

These propositions shape the theoretical body of a model for conceptualizing a dynamic theory of operation strategy. Such dynamic theories have been a subject of an attractive discussion if strategic management over the past years (e.g. Porter 1991, Markides 1999). Hence, a systematic model of operation strategy is a dynamic interaction of operational resources that are allocated to four areas of quality improvement, cost minimization, flexibility and learning. These four areas are collaboratively aimed to boost operational effectiveness of the firm. This operational effectiveness (efficiency is embedded in effectiveness) provides a safe ground for formulating effective strategies and implementing them competitively based on recognized and valued opportunities in business environment through a dynamic paradigm. Therefore, a schematic model shall

be proposed to exhibit this archetype as in figure 3.

Discussion and Implications

Organizational resources, capabilities and competencies are building blocks of competitiveness and operation as the cornerstone of competitive positioning of the firm is planned and executed based on the organizational strategic resources and operational capabilities and competencies. In this sense, strategy has long been a way to link these resources to environmental opportunities in order to create and sustain a competitive advantage and thus operation is subsumed in strategy from formulation and execution. But current turbulent environment and its volatility requires a constant scanning for strategic opportunities, formulation and implementation of resources in a preemptive aggressive manner. This strategic behavior is based on a dynamic continuous intelligent development, refinement and utilization of resources, capabilities and competencies in four interrelated areas of value as learning, flexibility, cost minimization and quality improvement. Superior operation in these four domains equips the firm with a competitive comprehensive operational effectiveness to outperform and outflank rivals and outstrip them in exploring and exploiting opportunities. This mechanism is a continuous dynamic process which requires a full alignment of operation and strategic management at a top management level. The proposed model demonstrates this dynamic model is a multifaceted complex open system. Comprehending this dynamic theory and its conceptual model offers a handful of beneficial insights for the managers of today's enterprises. These points are synoptically stated in the form of managerial implications as follows:

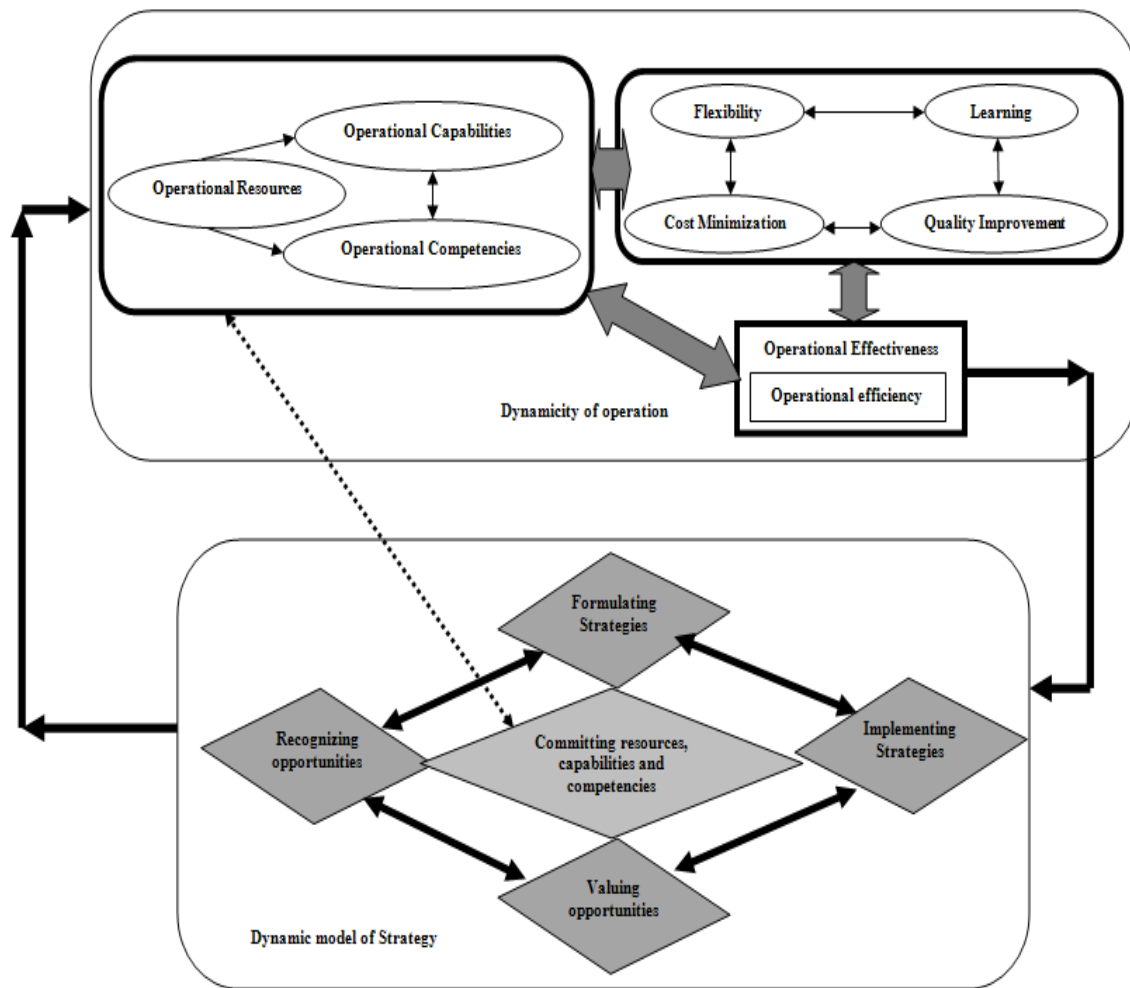


Figure3: A Dynamic Model for Theory of Operation Strategy

1. Technological innovations, disruptions and accelerating evolution have intertwined operation with strategy and thus operational effectiveness is a strategic priority in today's competitive landscape. So, operational effectiveness must be strategized in sync with business strategies.
2. Operational strategies are in pursuit of optimization and improvement equal importantly in the four interrelated domains of cost minimization, quality improvement, flexibility and learning. Therefore, these four fields must be simultaneously strategized and organizational resources must be harmoniously allocated to them in a balanced way in order to achieve the most effective competitive position based on operational supremacy.
3. An in-depth and also broad understanding of environmental happenings is a strategic objective for planning operational activities and formulating competitive operational strategies.
4. Developing a value-driven vision and consequently setting value-oriented mission and objectives incorporate operation into strategy smoothly and

enhance the further realignments and execution of operation-based dynamic strategies.

5. In the third millennium competition is becoming tough unprecedentedly and the only way to prevail and neutralize competitive boisterous changes is to develop intensive dynamic plans. Principles of the model developed by this study can be holistically used in developing such plans and assessing the current planning of the enterprises.
6. The conceptual model of this study confirm the notion of deliberate (intentional) and emergent strategies in the context of operation strategies which are based on operational capabilities and are formulated according to environmental changes and trends; so, managers and practitioners must pay enough attention to this issue and become cognizant of their strategic thinking.

Conclusion

This study as a conceptual research reviews the existing mass body of literature in the field of operation and strategic management in order to render a dynamic theory for formulating operation-driven strategies for organizations that are competing in the 21st century. To do so, the concepts of strategy, operation and also the structure of a dynamic theory were explored and defined comprehensively to clarify the building blocks of the research. It is found that, the relationship between operation and strategy has been conceptualized across two dimensions of operational strategy and operation-based strategy and operational effectiveness and efficiency have been long subsumed in both schools but contrarily. It is also excavated that operation must strategize four interrelated strands of organizational performance which are: cost minimization, quality improvement, learning and flexibility. A dichotomous perspective of operation-strategy relationship was explained and then the pillars of operation strategy were explicated. Finally, a dynamicity of these

factors in the form of a dynamic theory of strategy was discussed and a conceptual framework was sketched to illustrate this dynamic theory. Eventually, some noteworthy implications of this theory were explained and discussions around the main findings were made and proposed in order to enhance the understanding of the study and facilitate the conceptualization of the constructs for managers and practitioners.

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