Evolving Nature of Firm Level Competitiveness - A Technical Note[1]

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Introduction

Firms, world over, are facing the heat of competition from the twin effects of global integration and advancements in technology[i]. Sustainability, success and indeed survival of the firms increasingly depend on the strategies adopted by them to increase their competitiveness. Competitiveness has become the buzzword that pervades not only the firms but also their operating industries and even the national economies. Understanding competitiveness therefore assumes centrality both for the academicians, practising managers and policy makers. Competitiveness is a multi-dimensional concept that is composite in nature, and attempts to capture the process of fit between the firm and its dynamically evolving environment. Competitiveness operates at different levels. At the macro level, country specific competitiveness deals with the ability of a country to increase the aggregate wealth of its citizens. At the intermediate level, regional competitiveness deals with the presence of unique factor conditions that enable the region in question, to out-perform others. It may be noted that regional competitiveness is neither a scaled down version of national competitiveness, nor a scaled up version of an aggregate of firms. At the micro level, competitiveness of a firm connotes lowering of cost of production, providing customers with superior value and shareholders with superior returns on investment. Competitiveness is often defined as a function of dynamic progressiveness, innovation, and an ability to change and improve[ii] with efficiency as its core[iii].

In this technical note, I present some of the issues concerned with the definition of competitiveness, the current understanding and the evolutionary nature of the concept and implications thereof.

1 This is a technical note and only a few of the seminal academic contributors in the research stream on competitiveness, are cited in the End Note.

Defining Competitiveness

Competitiveness can be viewed from multiple perspectives by academicians and managers depending upon conveniences. For example, the Oxford Dictionary of Economics defines the term competitiveness at the macro level as *the ability to compete in markets for goods or services.* The Free Dictionary explains it as *an aggressive willingness to compete.* The Organisation for Economic Co-operation and Development (OECD) defines competitiveness as the *ability of companies, industries, regions, nations or supranational regions to generate, while being and remaining exposed to international competition, relatively high factor income and factor employment levels on a sustainable basis*[iv].

As opposed to the macro level treatment of competitiveness, at the firm level, competitiveness is defined in terms of the ability of a firm to produce products and services of superior quality and at lower costs than its domestic and international competitors. Competitiveness is synonymous to a firm's sustainable performance and its ability to compensate its employees while generating superior returns to its shareholders[v]. Likewise, the Government of United Kingdom's Department of Trade and Industry (DTI - 1998) defines competitiveness as the ability to produce the right goods and services of the right quality, at the right price, at the right time. It means meeting customers' needs more efficiently and more effectively than other firms[vi].

The aforesaid definitions of competitiveness focus on a set of activities of the firm to add value to the customer and the shareholders vis-a-vis competition. These definitions of competitiveness depend on two factors. First, they highlight the value dimensions identified by the firm for its consumers. This is a reflection of the market centric approach by the firm. Second, they highlight the ability of the firm to identify and manage resources and capabilities required to create and deliver the aforementioned value dimensions to its customers. This is a reflection of the idiosyncratic resource centric approach of the firm. At a higher level of abstraction, these two factors convey a static sense to competitiveness. As if, the firm knows its deliverables in perpetuity and is able to fulfil the same better than competitors.

In contrast to the static sense (i.e. both the customer centric and the resource centric approaches), firm competitiveness can also be viewed as the basic capability of perceiving changes in both the external and internal environment and the capability of adapting to these changes in a way that the profit flow generated guarantees the long term operation of the firm[vii]. This definition highlights the relevance of firm's readiness for the future. On similar lines, Asian Development Bank (2003) defined firm competitiveness as its ability to survive under competition. Being competitive, on the other hand implies environmental success vis-a-vis competitors, through reduced prices, enhanced quality and novel products. Accordingly, competitiveness depends on six factors. They are (i) resources, (ii) market power, (iii) behaviour towards rivals and economic agents (iv) adaptability to changes, (v) capability to create new markets and (vi) institutional environment including physical infrastructure and quality of regulatory policies.

This definition highlights the relevance of firm's internal and external attributes in influencing its present and future competitiveness. It further echoes the notion of competitiveness, being a relative concept that requires balancing exogenous and endogenous factors that are often conflicting with one another[viii].

Building of these complementary perspectives, I define competitiveness as the relative ability to earn superior returns and the relative ability to spot and exploit emerging opportunities better than others. Returns are obtained by producing and selling goods and services at the right quality and quantity at the right price, place and time. Therefore right conditions (ref. DTI - 1998) shall enable the firm to meet the stakeholder - investor - customer's expectations more efficiently and effectively than others. That will ensure survival and sustainability in the long run.

Competitiveness and Business Strategy - The Current Understanding

From the perspective of business strategy, competitiveness can be viewed from at least six (6) competing views[ix]. They are:

1. Neo Classical Economics Theory
2. Industrial Organization Economics Perspectives
3. Schumpeterian Perspective
4. Chicago School or Productive Efficiency Perspective
5. Transaction Cost Economics Theory
6. Resources and Dynamic Capabilities Perspective

These salient features of the above 6 perspectives along with their treatment of competitiveness are presented in the table (see Appendix).

A close observation into the above schools of thoughts on firm's competitiveness reveals one striking similarity. All of the above theories assume that that the firm is self sufficient. To explicate, the Neo-classical theory very clearly considers the firm as a technology based production function. Hence inherently the focus of the firm, and therefore the prime determinant of firm's success (source of competitiveness), is dependent on its ability to develop, harness and leverage in-house/ acquired technology. Technology thus being the differentiator, *any firm*, self sufficient in use of technology, is competitive with respect to others.

Similarly, the Industrial Organization (IO) perspective and the Chicago School perspective, looks into efficiencies - that of the industry or the firm respectively. Efficiencies are brought in by the aggregate efforts of individual firms or, by their individual efforts in satiating some demand by appropriate supply. Again it is the individual effort that gets highlighted. For the IO perspective, once the firm has succeeded in managing the bargaining relationships (therefore stressing a market based exchange) - it becomes self sufficient in its product-market positioning. For the Chicago school, once the firm has ensured good quality inputs and a stable distribution, competitiveness is a given. In other words, it becomes self sufficient. The Transaction Cost perspective moves a step backward and explores into the importance of bargaining or into its alternative form - which is the hierarchy. The hierarchical form and therefore the large vertically integrated firms are out and out self sufficient organizations. In fact, Transaction Cost Theory, in its present form, logically concludes at a super massive, all encompassing, ultimate self sufficient firm.

Likewise the Schumpeterian and the Resource and Capabilities Perspectives, hails the firm as the harbinger of change or alter of sustainability. Schumpeterian and resource rich firms are inward looking - although they may initiate changes both within (adaptation) and outside (disruptive innovation). Such firms are the movers and shakers and are clearly self sufficient. Their self sufficient resources drive their competitiveness with respect to others.

But a fundamental question remains. If firms are a reflection of the need to organize economically within a society, then can self sufficiency be actually achieved? In other words, what is the right limit of organization - so that the firm may remain competitive? A society that is strife prone and filled with self serving individuals, what mechanisms needs to be employed to connect the right components for the need at hand. Even if the right components were collated and organized into a legal commercial enterprise (the firm), would the nature of the components remain same? By the laws of nature, all of creation (whether natural or man-made) are prone to degeneration. By the same logic, the self sufficient firm of today - will degenerate tomorrow! Today's competitiveness will not sustain tomorrow. Had there been any efforts to explain this phenomenon of waning competitiveness? Fortunately, the strategic network perspective does provide some hope.

Emerging Trends in Competitiveness - The Strategic Network Perspective

Recent studies have extended the notion of competitiveness into the closely related and well knit set of activities within the firm's value chain. A firm typically uses its value chain to create value for its customers as well as for its other internal and external stakeholders. Value is created in the form of the final products and or services and by leveraging the components within the value chain. The concept of value chain delimits the boundaries of the firm and broadens its operating domain. For example, complexities of a production process, novelty of a product, difficulties in the availability of factor inputs and the constraints imposed by the operating context, provides a firm the opportunity to extend and disperse its activities among different firms and across different countries. Consequently, the firm's value chain gets extended. This gives rise to a new perspective that the competition exist at the level of complex value-chains and networks comprising of various firms (and nations). In other words, firms operate and hence compete, not only on the strength of their existing, firm bound resources, but also on the strength of their strategic networks. Such networks as the firm may have fostered with other collaborators or co-operators across its legal boundaries with the purpose of mutually sharing and profiting thereof. Some important and emerging aspects of network centric competition are simultaneous cooperation and competition amongst firm, chains and networks of a set of firms competing with another chain or network[x].

Extending this line of argument, on value chains and their embedded networks, Christopher (1998)[xi] states that firms seek to make their supply chain (can be conceptualized as a component of their value chain), as a whole, more competitive. Increasingly, corporations have realized that the real competition is not between firms as a whole, but between one supply chain and another[xii]. A firm's network of supply chain provides it access to information, infrastructural access and locational advantages, capital, goods and services and so on. As firms become more specialized, they become increasingly interdependent on the specialization of their networks. This is in stark contrast to the conventional wisdom that the need for specialization leads to the need for internalization - one of the primary thinking within transaction cost theory. Further, given the intricate linkages that exist across firms, supply chains have emerged as the new unit of analysis in competition and competitiveness research[(xi)]. A firm's network resources, including the level and type of integration of process and systems, can be thought of as an inimitable and non-substitutable resource by itself, apart from the means to access other critical and valuable resources and capabilities. According to Strategic Network Theory, performance of a firm depends on how efficiently it cooperates with its direct partners and with their partners' partners. Continuous interactions amongst firms result in creation of opportunities and the development of new and unique resources[xiii] that are uniquely available to the two interacting firms. The strength of a firm in a network depends on three major factors. They are (i) the domain of the firm, (ii) position of the firm in other networks, and (iii) power of the firm relative to other participants in the focal network[(xii)].

According to this school of thought, industry structure is affected by three types of relational characteristics: (a) network structure, (b) network membership, and (c) tie modality. Network structure refers to the overall pattern of relationships within which the industry is embedded. Network membership means the composition of the network-the identities, status, resources, access, and other characteristics of the focal industry and other nodes. Tie modality is the set of institutionalized rules and norms that govern appropriate behaviour in the network. Further this school emphasizes that the various factors, such as network density, structural holes, structural equivalence, and whether a firms is a core or peripheral firm in the network, influences the competitive position and profitability of firms.

Strategic network highlights the importance of the collaborators in the overall competitiveness of the firm. It echoes but modifies the *resource dependency* sentiments that the firm is not a self sufficient entity and depends upon the resources of its environment to survive and prosper. It has the unique ability to pick, choose, nurture and often butcher its networks often with intended and unintended consequences. Firm level competitiveness therefore entails heterogeneity not only at the internal resource level, but also at the linkages it fosters, to exchange factor inputs and outputs with its environment. The idiosyncrasy and robustness of these linkages hold promise for the long term sustainability of the firm's competitiveness.

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Table - The Six Perspectives on Strategy and Firm Level Competitiveness

Sl. No.	Perspective	Key Concepts	Treatment of Competitiveness	Application/ Limitations
	Neo Classical Theory of the Firm	1. Firm as a technology driven production function transforming factor inputs into outputs 2. Quantity is determined by cost to price and demand and supply conditions 3. Existence of perfect information, resource mobility and marginal contribution	1. Firms are more or less homogenous 2. Competition has restricted connotation 3. Scale of operation dependent on average cost considerations	1. Applicable in the era of mass production - or during war economies. 2. Focus on quantity rather than quality.
	Industrial Organization Economics Perspectives	1. Economic Rent is a function of Industry Structure 2. Firm size is limited by government intervention 3. Structural forces are - size of the firm, total number of firms in the industry, barriers to entry and exit, bargaining power, intra-industry rivalry	1. Competitiveness is a function of firm's ability to enter an industry with high entry and low exit barrier 2. Firm is competitive if its buyers and sellers have low bargaining power	1. Applicable in stable environment 2. Mostly concerned with traditional industry players with defined input-output 3. Differential firm performance is due to exogenous munificence 4. Firms are more or less homogenous
	Schumpeterian Perspective	1. Seize opportunity by creating and adopting radical innovation 2. Redefine industry and make rival's position obsolete 3. Stress on asymmetries in technological innovation	1. Firms are competitive due to their ability to make competition redundant 2. Firms manage competition by redefining new product - market combinations	1. Applicable in technology intensive industries 2. Applicable to firms practising creative destruction
	Chicago School or Productive Efficiency Perspective	1. Firms as efficient production and distribution mechanisms 2. Differentiated outputs are due to differentiated inputs, impeding forces and processes and costly information 3. Vertical integration is an efficiency outcome	1. Firm competitiveness is a function of advertising intensity as a barrier or facilitator	1. Applicable to firms offering commodities 2. Less emphasis on product innovation
	Transaction Cost Economics Theory	1. Firms and markets are alternate mechanism for coordinating production 2. Firms are hierarchies that internalize production and thereby reduce cost of exchange 3. Scale and scope economies depends on savings from make or buy decision 4. Firms minimize long term hazards by internalizing production (make decision) but outsource (buy decision) to minimize short term hazards.	1. Firm competitiveness is a function of its ability to reduce transaction cost 2. Competitiveness depends on the transaction costs associated with human factors, environmental factors and other internal/ capital assets	1. Applicable to all firms that have established an exchange relationship with their environment 2. Underplays product level innovation 3. Focuses on the boundary between the firm and the environment
	Resources and Dynamic Capabilities Perspective	1. Firms are heterogeneous entities and are distinct from one another 2. Distinctiveness in firm deliverables are due to heterogeneity of inputs and resources 3. Asset idiosyncrasy is key to competitive advantages	1. Firm competitiveness is due to internal resources that are valuable, rare, inimitable and non-substitutable 2. Resources are dynamic and adaptive in nature and helps in delivering Chamberlinian or Schumpeterian Rents	1. Looks at the firm as a unique entity 2. Each firm produces its distinct product/ service 3. Product distinctiveness is a given

End Note

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