Understanding and Measuring Firm Competitiveness: An Eclectic Approach

*Krishna Chandra Balodi**

ABSTRACT

This paper compares and synthesizes extant strategic management theories on firm competitiveness and its measures, and offers a comprehensive definition and assessment framework. The paper traces evolution of notion of firm competitiveness, and identifies its key determinants and their theoretical origins. Then, adopting eclectic approach, an integrative framework comprising of key empirical indicators for each of the identified determinants is presented. The illustrative bird's eye figure on the firm competitiveness aims to capture multitude of theoretical and cross functional underpinnings, and serves as a blueprint. The tabular framework explains the causal relationships of individual indicator to overall firm competitiveness. Competitiveness of a firm is defined as its dual ability to provide superior value to its stakeholders, and to outperform competitors in factor and product market, and market for institutional favours in present and anticipated firm-market situations. The blueprint and the tabular framework highlight the multidimensional and dynamic nature of firm competitiveness, and incorporate measures from both internal and external factors as well as resource stocks and processes perspectives. This captures a wider and in-depth characterization and measurement attempt of firm competitiveness. As the paper attempts to link the academic theories and indicators, and bridges it with practitioners' approach and assessment practices, it offers a novel framework for competitive benchmarking.

Keywords: Competitiveness of firms, theories of competition, measures of competitiveness, competitive intelligence, competitor benchmarking.

1. Introduction

Today's firms face stiffer competition as a result of globalization and technological advancement. Success in such turbulent times depends on strategies aimed at enhancing firms' competitiveness (Rugman and Oh, 2008). This makes deciphering firm-level competitiveness an imperative among practitioners and researchers alike. Firms in strategy theory are hierarchies organized as contracts among individuals who collectively utilize resources through specific mechanisms (processes/routines) under various contextual constraints to produce, deliver, and appropriate value (Williamson, 1975). Accordingly, each of these constituents and interaction among them has implications over firms' competitiveness, especially those factors that improve its performance in face of competition. Literature review points to division in defining and assessing this key construct. There is, thus, a need to establish meaningful connotation of competitiveness before it can be properly assessed. Accordingly, this paper explores definitions, theoretical groundings, and measurements of competitiveness at the firm level.

2. Definition(s)

Porter (1992: 40) considers competitiveness as "a function of dynamic progressiveness, innovation, and an ability to change and improve". Review of definitions of firm competitiveness reveals two important aspects. First set of definitions highlight the importance of firms' value addition activities for stakeholders. Ambastha and Momaya (2004) specify that firm's competitiveness depends on its ability to provide goods and services more efficiently than others in the market place. Report by Select Committee of the House of Lords on Overseas Trade (The Aldington Report, 1985) states: "a firm is competitive if it can produce products and services of superior quality and at lower costs than its domestic and international competitors and competitiveness is synonymous with a firm's long-run profit performance and its ability to compensate its employees and provide superior returns to its owners" (c.f. Buckley et al., 1988: 176). UK government's Department of Trade and Industry (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...meeting customers' needs more efficiently and more effectively than other firms' (c.f. Budd and Hirmis, 2004: 1016). Thus, firm

* Assistant Professor, Indian Institute of Management, Lucknow

competitiveness depends upon two factors: first, the extent to which a company can identify value dimensions that are important to its customers, and then meet those better than competitors. Secondly, the resources and capabilities that make a firm capable of creating, delivering, and appropriating from the value added while simultaneously safeguarding stakeholders' interest.

Second set of definitions highlights the importance of firms' ability to manage for potential exogenous shocks. According to Chikán et al., (2002), competitiveness is "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" (c.f Demeter et al., 2008: 538). According to Asian Development Bank (2003) firm's competitiveness is a function of its resources, market power, its behaviour toward rivals and other economic agents, its capability to adapt and to create new markets, and the institutional environment. This highlights the joint relevance of firms' internal attributes and external influences in determining its present and future competitiveness. Feurer and Chaharbaghi (1994) also state that: "Competitiveness is relative and not absolute… [and]… can only be sustained if an appropriate balance is maintained between these factors which can be of a conflicting nature". The definitions above highlight the relevance of firms' readiness for future to its competitiveness.

Combining the above two perspectives, competitiveness of a firm can be thought of as its dual ability to provide superior value to stakeholders including employees and shareholders, and to outperform competitors in factor market, product market and market for institutional favours in the present and future firm-market situations. While the first part of definition relates more to value chain management; the second part relates to entrepreneurial decision making: scanning the environment, and skimming upcoming opportunities better than others. While the former aspect of the definition ensures the survival and immediate growth, it is the later part that ensures the long term sustainability of the firms.

3. Competition and Competitiveness: Business Strategy Perspective

Competition, competitiveness and competitive advantage are important concepts in the economics and business strategy disciplines (Ghemawat, 1986; Porter, 1992). When firms exploit their existing and potential competitiveness in a given context better than its competitors, it leads to positions of competitive advantage (Sigalas and Economou, 2013). Competitive advantage may be understood as favourable "asymmetry or differential among firms along any comparable dimension that allows one firm to compete better than its rivals" (Ma, 2000). A competitive advantage is said to exist if firm occupies a superior position in an industry vis-a-vis competitors. If firms can utilize its competitiveness to enhance its market position, it leads to competitive advantage which in turn, if sustained, leads to long term growth and superior performance.

Barney (1986) notes three approaches to comprehend competition: industrial organization, Chamberlinian, and Schumpeterian - especially relevant to strategy research. Industrial organization competition is determined by the structure of the industry, Chamberlinian competition attributes the performance of a firm to its unique assets and capabilities, and Schumpeterian competition involves process of creative destruction based on radical technological advancements to create disequilibrium and destroy existing industry pattern (Barney, 1986). However, considered alone each of these views has a limited utility in specifying modern firms' competitiveness. Apart from Barney (1986), Conner (1991), Hunt (2000), and Thomas and Pollock (1999) also compared and summarized various theoretical perspectives for studying firms and competition. This paper reviews only the business strategy literature, viz., industrial organization (IO), transaction cost economics (TCE), resource based view (RBV), dynamic capability view (DCV), and strategic network theory (SNT) to keep the discussion focussed. The key points of this literature are summarized below.

According to first perspective, Bain type IO, purpose of firm is to restrain output through monopoly power or collusion (Bain, 1956). In this view, deterrence of competition is the central economic force instead of making cheaper goods (Conner, 1991). Rents are determined by the structural forces of the industry and the size of the firm is limited by government intervention (Barney, 1986; Thomas and Pollock, 1999). Some of the structural forces are - size, number of firms, barriers to entry and exit, bargaining power of buyers and suppliers, and rivalry among existing and potential competitors (Porter, 1992). So, for a firm to be competitive it needs to enter an industry with high entry and low exit barrier, and where buyer and supplier bargaining powers are either low or can be suitably managed. As firms are not in control, they can be competitive only if they enter a favourable industry whose structure they can use as a shield to prevent others from entering. This view neglects the crucial role played by firm-level resources in its competitiveness.

According to TCE (Williamson, 1975; Conner 1991), firms and markets are alternate methods for coordinating production, and firms arise to avoid the costly market exchange. Firm is a mechanism for reducing transaction costs. Size and scope of a firm depends on savings from make or buy. A firm is more competitive if it minimizes contractual costs along with long and short term contractual hazards (Williamson, 1975). This view on managing competitiveness serves well if market is too standardized or cost conscious for example commodity market. However, if the market is more value conscious than cost conscious, this view has limited utility.

When firms compete, differences in resource endowment and utilization make the difference between being able to implement strategies or not, and creating value or not (Othman and Sheehan, 2011). Thus, heterogeneity in firm's resources and capabilities lead to competitive advantage and economic rents. According to RBV, firms strive to earn super-normal rent by seeking and deploying costly- to- copy, valuable inputs (Barney, 1991). Asset idiosyncrasy is central to have differential advantage (Barney, 1991; Conner, 1991; Hunt, 2000; Thomas and Pollock, 1999). So, a firm derives its competitiveness from its resources. This view has further been expanded to encompass the notions of capabilities, dynamic capabilities and core competencies. However, internal resources, processes, capabilities and competencies are all interrelated, idiosyncratic, and difficult to quantify, thereby limiting their applicability in measuring competitiveness (Bogner et al, 1999).

Dynamic capabilities view emerged as an extension of RBV in late 1990s. Zollo and Winter (2002) argue that dynamic capability is a learned and stable pattern of collective activity through which the organization systemically generates and modifies its routines to improve their effectiveness. According to this view, dynamic capabilities are 'second-order' capabilities relating to firms' ability to integrate, build and reconfigure internal and external competencies (Teece et al, 1997; Bogner et al, 1999) and give competitive advantage to firms (Thomas and Pollock, 1999). DCV presents a more dynamic view of competition, by focusing on firm's processes rather than on assets or resources alone as in the static RBV (Bogner et al, 1999; Degravel, 2011). So inclusion of indicators related to this perspective provide element of dynamism to our framework and complement the external determinants of competitiveness. The discussion so far reiterates that within strategic management (SM) literature there are two prevalent views on firm's competitiveness, viz., outside-in and inside-out view. While former is epitomised by IO view, the later is represented by RBV or competence based view (Thomas and Pollock, 1999). Next I present a complimentary strategic network perspective that is gaining increased attention in strategy research.

Porter (1992) views firms as a constellation of closely related value chain activities. Depending upon the complexity of the product, production process, factor market conditions, and contextual constraints, value chain activities may be dispersed between firms in many countries. As firms become more specialized, they become increasingly interdependent. Given this intricate dependence, supply chains have emerged as new unit of analysis in competition and competitiveness research. This has given rise to a new perspective to value configurations (Stabell and Fjeldstad, 1998) implying that competition exists at the level of complex value-chains and networks of firms. (Cravens et al, 1996; Thomas and Pollock, 1999).

According to Strategic Network theory, a firm's performance depends on how efficiently it cooperates with its partners and with its partners' partners. Continuous interactions among firms result in the development of a new and unique “network resource” (Gulati et al, 2000) capturing the proximity and integration of process and systems across value-chain partners. This is an inimitable and non-substitutable resource by itself apart from a means to access other critical and valuable resources and capabilities. The power of a firm in a network depends on three major factors: the domain of the company, the position of the company in other networks, and the power of the company relative to other participants in the focal network (Gulati et al, 2000). According to Gulati et al. (2000) firms' competitiveness is influenced by three types of relational characteristics: network structure, network membership, and 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.

Studies cited above point that competitiveness is a multi-faceted construct with indicators and drivers located inside, outside, and within inter-firm networks originating from diverse theoretical perspectives. Taking pragmatic approach, combining these theoretical perspectives offers a chance to improve understanding of firm competitiveness. Thus, combining the inside-out, outside-in and strategic network views, and the conceptual links between various drivers and their indicators along with their theoretical origins is presented in figure 1. .

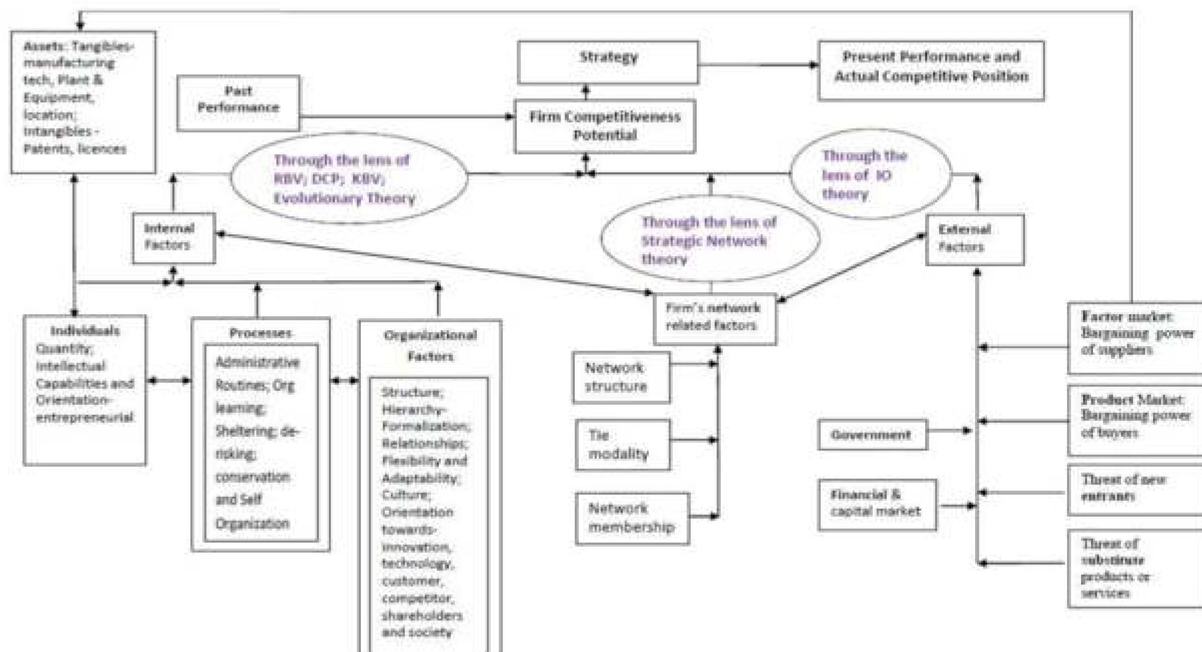

Figure 1. The Complex Web of Firm Competitiveness Construct

4. Review of Indicators of Competitiveness

There are numerous measures of competitiveness. The above discussion indicates that the main classification of the sources of firm's competitiveness distinguish between internal and external factors. External sources encompass industry, firms' network, and macro-economic factors. Internal sources can be looked at from both static and a dynamic approach: former focuses on the resources and assets stocks, and later one refers to management processes and capabilities that transform and deploy those stocks. As per the definition used in this paper, competitiveness assessment should capture its twin aspects: first, that captures its value chain management, and the other indicating ability for long term growth.

Buckley et al, (1988) proposed a framework for the analysis of competitiveness based on three groups of variables: competitiveness performance, competitiveness potential and management processes. Indicators of performance and thus ex-post competitiveness include financial and non-financial parameters. Financial performance indicators include return on investment, return on assets, ROS, Value added per employee etc. Non-financial performance indicators include customer satisfaction; employee satisfaction, market share; market share growth; sales volume; sales growth; plant productivity, innovativeness, quality, and social ones like corporate social responsibility, and working conditions of employees, etc. Use of both financial and non-financial performance indicators creates a more accurate performance measurement system. Present performance is the outcome of past and present competitiveness, and past performance. However, sole focus on performance indicators provides an idea of past competitiveness only and excludes future competitiveness.

Buckley et al, (1988), also highlighted measuring competitive potential which indicates firm's futuristic capabilities. However, an underutilized competitive potential will not necessarily lead to higher performance so a comprehensive measure should take into account a third group of variables concerning the processes - management practices and organizational mechanisms and systems. The link between competitive potential (prospective competitive position) and actual competitive position is competitive strategy, which encompasses choices, behaviours and processes that facilitate transition from competitive potential to competitive position. Building on Buckely et al's, (1988) classification, Man et al, (2002) proposed that the analysis of firm's competitiveness should include three aspects: (i) nature and sources of competitive advantages representing competitiveness ex ante (or competitive potential); (ii) degree of internationalization (or present competitiveness); and (iii) firms' market and economic performance (or competitiveness ex post).

In another attempt, Slevin and Covin (1995) clubbed critical determinants of competitiveness in 12 dimensions, viz., strategy/direction, human resource policies, intra-business unit communications, total quality management,

product/service development and improvement, marketing and sales, vendor relationships, process improvements, participative management, organization structure, business unit culture, and international competition. Lu et al, (2008) found eight sets of variables to be critical in firms' competitiveness, viz., management skills, organization structure, resources, competitive strategy, relationships, bidding, marketing, and technology. Focusing on internal factors alone, Szerb and Terjesen (2010), identified five types of competencies, viz., physical human resources and capabilities, networking, innovation, and administrative routine processes. Kumar and Chadee (2002) argued that firms can enhance their competitiveness by being: flexible and cooperating with outsiders, innovative, and human resource-oriented. Following section tries to capture the theme highlighted from above reviews.

5. Organizing Framework and Composite Index: Case of Young Firms

Multiplicity of determinants - past performance and process, asset and capabilities etc - in the definition of competitiveness requires construction of a composite index. Composite index represents aggregated measures for capturing some complex phenomena objectively thus helping in benchmarking or monitoring performance (Booysen 2002; Saisana and Tarantola 2002). Following the discussion so far, a firm can be represented as an entity that represents a specific vector of three broad categories of variables and their interaction:

Firm = f (Individual, organizational context, external context, interaction) (1)

Where, f represents the algebraic notation for function.

In the above representation, individual and organizational factors represent internal factors and external context represents external factors. Drawing from the Holism principle of systems theory and complexity which posts that the whole is greater than the sum of its parts, the competitiveness of firms shall depend upon these individual constellations of variables and their mutual interaction. So, the competitiveness of firms, Comp_firms is:

Comp_Firms = f_comp (internal factors, external factors, interaction) (2)

Where, f_comp() represents 'function of competitiveness of' ; and

Comp_Internal factors = f_comp (Present and past advantages attributable to individuals and organizational factors) (3)

Comp_External factors = f_comp (Present and past advantages attributable to context- buyer and factor market, industry, spatial, temporal, institutional) (4)

Comp_Interaction = f_comp (Present and past advantages attributable to interaction terms) (5)

So, using expressions 3, 4, and 5 to modify 2, yields:

Comp_Firms = f_comp (Present and past advantages and potential attributable to individual, organizational factors, external factors, interaction) (6)

The advantages and potential of individual attributes relate to their quantity, skill level and variety, leadership, and personality traits etc. The advantages and potential of organizational components relate to administrative processes - formalization and centralization; organization learning; assets - tangible including plant/equipment, manufacturing technology and location; and intangible including patents, licenses; strategy; organizational design: customer and supplier integration; entrepreneurial and marketing orientations; and reputation etc. Inserting this into expression 6 to see a holistic picture produces an untidy, long, complex, and abstract expression.

To provide more specific example, a brief literature review focussing on young firms was done in order to identify most relevant indicators of each of the factors - individual, organizational and contextual (Bruton and Rubanik, 2002; Hakala, 2010; Kumar and Chadee, 2002; Liou and Gao, 2011; Man, Lau, and Chan, 2002; Pehrsson, 2011; Slevin and Covin, 2005; Song et al., 2008; and Szerb and Terjesen, 2010). The literature review focussed only on empirical research on young firms to identify relevant factors for three reasons: (i) covering all type of firms - small and large, young and mature firms would require scanning virtually all empirical strategy articles requiring perhaps a separate study, (ii) even if step 1 is performed, the criteria to choose some indicators over others as obtained from step 1 will limit the applicability of resultant set of indicators for all type of firms, (iii) some indicators chosen for this study have been used in empirical research for large and mature firms also. Based on all these three reasons combined, the indicators set chosen to represent the three factors - internal, organizational and contextual factors, would be relevant for most firms. Table 1 categorizes key determinants of young firms' competitiveness and their expected contribution as identified from literature review into internal and external factors. Dependent variable, firm competitiveness, can be measured by either growth in firm market share or by growth in profits and or earnings, all indicating competitiveness ex post.

Table 1: Assessment Framework for Young Firm's Competitiveness

Dimension	Factor	Indicators	Implication for competitiveness
		Internal determinants - Human and organizational	
Human Resource	Managerial talent	Quantity	no unanimity in literature, depends upon industry and product type
		Skill level and variety	higher and diverse skill sets favourably affect young firms in emerging industries
		Social network	rich network helps in accessing resource and markets
Processes	Administrative routines	Amount and type of bureaucracy	hindrance for growing young firms, but a requirement for efficiency in large firms
	Organizational learning	Availability of infrastructure, opportunities, and scope of applying	facilitates preparedness for future competition
Assets	Machines, Plant and Equipments	Age, quantity, location and facilities	modern and state of the art equipments improve efficiency and quality
	Manufacturing Technology	Efficiency of operations	higher efficiency and quality means more competitiveness
	Intangibles	Patents/ licences	provide competitive edge and block competition
Other Attributes	Organizational Design	Design (general)	peer to peer and cross functional interactions and a team work based culture that allow greater flexibility and scope of learning are beneficial
		Structural factors	less centralized and formal structure works better form small and entrepreneurial firms while more centralization and formalization is required for mass manufacturers
		Customer and Supplier integration	helps deal with demand and technological uncertainties with minimum resource and opportunity loss
	Technology orientation	-	in face of demanding customers and fierce competition, higher rate of technological innovation and adoption improves firm competitiveness
	Human Resources policies	Education, Training, and Development	pro human resource policies based on equity and fairness that aim at human capital development enhance competitiveness.
	Market orientation	Customer & competitor orientations and interfunctional coordination	pursuit of superior value for buyers, checking competitive moves, and adoption of customer-centric process enhance competitiveness
	Production orientation	Operational Excellence	pursuing speedy & quality production and delivery processes coupled with efficiency enhancing tools improves competitiveness
	Entrepreneurial orientation	-	the combined tendencies for risk taking, proactiveness, innovativeness, and driving markets enhances firm competitiveness
	Strategy choices	-	pursuing well defined strategic choices concerning positioning in industry value chain, and business model that fit contextual imperatives improves firm competitiveness.

Table 1 (Contd.)

External determinants			
General	Government	Industrial Policy	provision of government grants and tax incentives to stimulate the development of specific industries, has industry wide impact and not firm specific.
		Social welfare provisions	pro-social instances of government leads to stringent employment regulations and may require firms to operate at suboptimal cost structures arising from social-welfare benefit and employees strength .
		Foreign trade policy	pro-globalization policies including assistance for marketing and technological and tax breaks improve firm competitiveness.
	Financial system	Level of development and stability	increased access to a well-developed and stable financial sector improves firm competitiveness
Value Chain	Factor market	Supplier's bargaining power	having large number of small supplier supplying identical input improves competitiveness
	Product Market	Buyers' bargaining power	having large number of buyer requiring firms' unique offering, and a large and growing market is better for firm
	Related Products	Threats of Substitutes	having smaller or no close substitutes increases firms' bargaining power & competitiveness
	New Entrants	Threats of new entrants	high industry entry barriers and low scope of potential entrants affects firm bargaining power positively
Network determinants			
	Type of network	Network structure	central and dominant position allowing control over flow of key resources leads to higher competitiveness
	Constituents	Network membership	focal firm that maintains aspirational position which others want to look like or be affiliated to, is strong
	Type of relationships	Tie modality	focal firm that dictates or heavily influence the explicit and the implicit codes of conduct in its favour is more competitive
Determinant -Past Performance			
	Financial Indicators	-	higher levels and growth in sales and margins; returns on investment, assets, and sales makes a firm competitive
	Non financial Indicators	-	higher levels and growth in customer satisfaction; market share; brand equity; corporate governance, and social responsibility indicators makes a firm competitive.

6. Conclusion

The study attempts to unearth the complex web of firm competitiveness, and defines it as a dual ability to survive and excel present and future - market situations. This ability depends on a number of internal and external factors; and tangible and intangible factors, as firms are those complex systems that involve interaction of men, resources, processes and context. However, the construction of a comprehensive index of a firm's competitiveness, which can serve as a basis of comparison, would involve identifying relevant variables within each category, finding a way to operationalize them in such a way that it captures relevant and comparative information across firms. The review of various theories echoes the arguments put forth by Man et al, (2002) that competitiveness is long-term oriented, relative, and dynamic concept. These characteristics together with the multidimensional measurement approach involving process, potential and performance are two important

guiding for schemas conceptualization and measurement of competitiveness. So, the quest for theoretical underpinnings and measure of firms' competitiveness appears to be a journey across vast literature on competition spanning IO, TCE, RBV, DCV, and SN theories. As the paper attempts to link the academic theories and indicators, and bridges it with practitioners' approach and assessment practices, it offers a heuristic into competitive benchmarking.

References

- Asian Development Bank (2003), "Competitiveness in Developing Asia: Taking Advantage of Globalization, Technology, and Competition" Asian Development Outlook, Manila.

  From: www.adb.org/documents/books/ado/2003/ADO2003_PART3.p
- Ambastha, A., and Momaya, K. (2004), "Competitiveness of firms: review of theory, frameworks, and models", Singapore Management Review Vol. 26, Issue 1, pp. 45-61.
- Bain, J.S. (1956), "Barriers to New Competition: Their Character and Consequences in Manufacturing Industries", Cambridge: Harvard University Press.
- Barney, J. B. (1986), "Types of competition and the theory of strategy: Toward an integrative framework", Academy of Management Review, Vol. 11, Issue 4, pp. 791-800.
- Barney, J.B. (1991), "Firm resources and sustained competitive advantage", Journal of Management, Vol. 17 Issue 1, pp. 99-120.
- Bogner, W.C., Thomas, H. and McGee J. (1999), "Competence and competitive advantage: towards a dynamic model", British Journal of Management Vol. 10, pp. 275–290.
- Booysen, F. (2002), "An overview and evaluation of composite indices of development", Social Indicators Research Vol. 59, pp. 115–151.
- Bruton, G. D., & Rubanik, Y. (2002), "Resources of the firm, Russian high-technology startups, and firm growth", Journal of Business Venturing, Vol. 17, pp. 553–576.
- Buckley, P. J., Pass, C. L. and Prescott, K. (1988), "Measures of international competitiveness: A critical survey", Journal of Marketing Management Vol. 4, Issue 2, pp. 175-200.
- Budd, L. and Hirmis, A. K. (2004), "Conceptual framework for regional competitiveness", Regional Studies Vol. 38, Issue 9, pp. 15–28.
- Chikán, A., Czakó, E. & Zoltayné Paprika, Z. (editors) (2002), "National Competitiveness in Global Economy", Akadémiai Kiadó, Budapest
- Conner, K. R. (1991), "A historical comparison of resource-based theory and five schools of thought within industrial organization economics: Do we have a new theory of the firm?", Journal of Management Vol. 17, Issue 1,pp. 121–154.
- Cravens, D. W., Piercy, N.F., and Shipp S. H. (1996), "New organizational forms for competing in highly dynamic environments: the network paradigm", British Journal of Management Vol. 7, pp. 203-218
- Degravel, D. (2011), "Managing organizational capabilities: the Keystone step", Journal of Strategy and Management, Vol. 4 Issue 3, pp. 251 - 274
- Demeter, K., Gelei, A. and Jenei, I. (2008), "Competence Based Taxonomy of Supplier Firms in the Automotive Industry", Supply Chain, Vedran Kordic (Ed.), ISBN: 978-3-902613-22-6, InTech, Available from: http://cdn.intechopen.com/pdfs/756/InTech Competence_based_taxonomy_of_supplier_firms_in_the_automotive_industry.pdf
- DTI (Department of Trade and Industry, UK) (1998), "Regional Competitiveness Indicators", HMSO, London.
- Feurer, R. and Chaharbaghi, K. (1994), "Defining competitiveness: a holistic approach", Management Decision Vol. 32, Issue 2, pp. 49–58.
- Ghemawat, P. (1986), "Sustainable advantage", Harvard Business Review Vol. 64, pp. 53-58.
- Gulati, R., Nohria, N. and Zaheer, A. (2000), "Strategic networks", Strategic Management Journal Vol. 21, Issue 3, pp. 203-217.
- Hakala, H. 2010, "Strategic orientations in management literature: three approaches to understanding the interaction between market, technology, entrepreneurial and learning orientations", International Journal of Management Reviews, DOI: 10.1111/j.1468-2370.2020.00292.x
- Hunt, S.D. (2000), "A General Theory of Competition: Resources, Competences, Productivity, Economic Growth", Thousand Oaks, CA : Sage.

- Kumar, R. and Chadee, D. (2002), "International competitiveness of asian firms: an analytical framework", Economics and Research Department, Asian Development Bank. Working Paper No. 4
- Liou, F. M., & Gao, Y. C. (2011), "Competitive advantage in the online game industry in Taiwan", Journal of Strategy and Management, Vol. 4, Issue 2, pp. 136-154.
- Lu, W.S., Shen, L.Y., and Yam, M.C.H. (2008), "Critical Success Factors for Competitiveness of Contractors: China Study", ASCE Journal of Construction Engineering and Management Vol. 34, Issue 12, pp. 972-982.
- Ma, H. (2000), "Of competitive advantage: kinetic and positional", Business Horizons Vol. 43, Issue 1, pp. 53-64.
- Man, T. W. Y., Lau, T. and Chan K.F. (2002), "The competitiveness of small and medium enterprises A conceptualization with focus on entrepreneurial competencies", Journal of Business Venturing Vol. 17, pp. 123-142.
- Othman, R., & Sheehan, N. T. (2011), "Value creation logics and resource management: a review", Journal of Strategy and Management, Vol.4, Issue 1, pp. 5-24.
- Pehrsson, A. (2011), "Firms' customer responsiveness: relationships with competition, market growth, and performance", Journal of Strategy and Management, Vol. 4, Issue 4, pp. 347-364.
- Porter M. E. (1992), "Competitive Advantage: Creating and Sustaining Superior Performance", 10th ed. London: PA Consulting Group.
- Rugman, A. M., & Oh, C. H. (2008). The international competitiveness of Asian firms. Journal of Strategy and Management, Vol.1, Issue 1, pp. 57-71.
- Saisana, M. and Tarantola, S. (2002), "State-of-the-art Report on Current Methodologies and Practices for Composite Indicator Development", EUR 20408 EN, Institute for the Protection and Security of the Citizen, JRC Ispra, Italy.
- Sigalas, C., & Economou, V. P. (2013). Revisiting the concept of competitive advantage: Problems and fallacies arising from its conceptualization. Journal of Strategy and Management, Vol. 6, Issue 1, pp. 61-80.
- Slevin, D. P and Covin, J. G. (2005), "New ventures and total competitiveness: A conceptual model, empirical results, and case study examples", Frontiers of entrepreneurship research p. 574-588
- Song, M., Podoynitsyna, K., Van Der Bij, H. and Halman, J. I. M. (2008), "Success factors in new ventures: a meta-analysis", Journal of Product Innovation Management, Vol. 25, pp. 7–27.
- Stabell, C. B., and Fjeldstad, Ø. D. (1998), "Configuring value for competitive advantage: on chains, shops, and networks", Strategic Management Journal, Vol. 19, Issue 5, pp. 413-437.
- Szerb, L. and Terjesen, S. (2010), "Measuring the competitiveness of small businesses", accessed at www.kmu.unisg.ch/rencontres/Renc2010/Topics_2010/C/ Rencontres_ 2010_ Topic_C_Szerb_Terjesen_f.pdf
- Teece, D.J., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", Strategic Management Journal Vol. 18, Issue 7, pp. 509-533.
- Thomas H. and Pollock T. (1999), "From I-O economics' S-C-P paradigm through strategic groups to competence-based competition: reflections on the puzzle of competitive strategy", British Journal of Management Vol. 10, pp. 127–140.
- Williamson, O.E. (1975), "Markets and Hierarchies: Analysis and Anti-trust Implications", New York: Free Press.
- Zollo, M. and Winter, S.G. (2002), "Deliberate learning and the evolution of dynamic capabilities", Organization Science Vol. 13, Issue 3 pp. 339–351.