

The Integrated Propulsion Strategy Theory: A Resources, Capability and Industrial Organization

Cedric Wilson
University of the West Indies, Jamaica

Strategic management is dominated by three views, the Industrial Organization Theory, the Resource Based View and the Dynamic Capabilities Approach. While the Resource Based View and the Dynamic Capability Approach are often portrayed as sister theories, the Industrial Organization Theory is sometimes cited as a competing theory with respect to the others. Nevertheless, all three views are complimentary. This paper argues that positioning, picking and propulsion are all essential to a robust strategy and presents the Integrated Propulsion Strategy Theory that rigorously integrates these three pillars of strategy theory. The framework also introduces a coefficient to measure dynamic capabilities.

INTRODUCTION

The Resource Based View (RVB) is a decidedly inward looking approach to strategy. This is not surprising as it emerged as a reaction to the outward looking Industrial Organization (IO) approach epitomized in Porter's (1997) 'five forces model'. In contrast to the IO approach that is predicated on the analysis of the opportunities and threats the firm faces, the RBV focuses on the how the firm may harness its strengths and mitigate its weaknesses to achieve competitive advantage (Barney 1991).

The Dynamic Capabilities Approach (DCA) which emphasizes the mobilization of the firm's capabilities to achieve superior performance came as an extension to the RBV. While it recognizes the importance of developing unique, hard-to-copy resources and capabilities, the DCA contends that in and by themselves those characteristics do not provide the basis for sustainable competitive advantage in an environment of high velocity change (Teece, Pisano et al. 1997; Teece 2007). The key to sustainable competitive advantage from the DCA perspective resides in a kind of flexible tenacity, a perennial alertness and an evolutionary fitness that enable the firm to perpetually renew itself in order to establish and maintain extraordinary performance in an ever changing business environment.

Although there is clear complementarity between the IO Theory on the one hand, and the RBV and DCA on the other, IO Theory is sometimes presented as set of ideas competing with the other two theories (Teece 2007). Notwithstanding, a couple of theorists have tried to link these three pillars of strategy. Mahoney and Pandian (1992) highlighted scope for dialogue between the IO approach and RBV. Peng, Sun, Pinkham, and Chen (2009), note the emergence of institutionalism as a growing intellectual force in the field of management and contend that the 'institution-based view' along with the IO approach and RBV represent the theoretical tripod upon which strategy should be constructed. However, currently there is no overarching theoretical framework that rigorously integrates the RBV, the DCA and IO Theory.

It was Wernerfelt who pointed out that “[f]or the firm, resources and products are two sides of the same coin” (Wernerfelt, 1984, p.171) Indeed, this succinctly captures the duality which exists between the outward looking IO theory and the inward looking RBV approach. It also highlights the conceptual futility of trying to isolate the product from the resources that makes the product possible. Another way to think about strategy is to see it as a painting of the landscape. A painting based on perspective has three elements – a foreground, a background and a set of invisible lines that link the background to the foreground. In this respect, IO theory might be considered the foreground, RBV the background and the DCA the unseen force that connects the background to the foreground. A picture of the landscape with any one of these elements missing will lack reality and appeal. In the realms of strategy all three approaches, whether ‘intended’ or ‘emergent’, are critical in the fashioning of superior firm performance in an environment of turbulence and shifting equilibria. It might be further argued that the defining feature of IO theory is ‘positioning’(Porter 1981; Porter 1996; Porter 1997); for RBV it is resource ‘picking’ (Barney 2001; Makadok 2001); and for DCA it is ‘propulsion’. This paper presents the Integrated Propulsion Strategy Theory that attempts to bring these three strands of strategy together in a consistent and harmonious analytical framework based on these three ‘Ps’ – positioning, picking and propulsion.

The Integrated Propulsion Strategy Theory is constructed on principles used in economics, notably indifference curve analysis. This paper begins with a literature review. It is followed by the presentation of the theoretical framework for the proposed integration of the three dominant approaches to strategy. This framework also introduces a coefficient designed to measure the manifested dynamic capability of a firm.

LITERATURE REVIEW

The Anatomy of the Integrated Propulsion Strategy

Strategy, within the domain of business, is everywhere and at all times a calculated set of actions or a deliberate orientation on the part of a firm to seek out and to appropriate rent (Mintzberg 1987; Mahoney and Pandian 1992) . The IO approach to strategy emerged out of neoclassical economic theory of the firm. E. S. Mason, one of the early IO theorists, emphasized the influence that various structural factors within the industry have on the performance of the firm. Later Joe Bain provided impetus to the approach by narrowing down the drivers of performance to a few key structural factors (Porter 1981). Schumpeterian repudiation of a static view of the firm and its perspective that the industry is unrelentingly shaped by the evolutionary process of ‘creative destruction’ has also had an influence on the development of IO theory (Conner 1991). However, much of the contemporary discussion on IO theory swirls around Michael Porter’s ‘five basic forces’ paradigm, arguably because of its deft abstraction of the untidy and complex reality of industry dynamics. Needless to say, Porter’s contribution to IO theory was built on the work of his predecessors, particularly Bain’s ‘structure-conduct-performance’ model and the Learned, Christensen, Andrews and Guth framework (Porter 1981; Conner 1991; Teece 2007).

According to Porter the ‘five forces’ paradigm competition arises from the bargaining power of customers, the negotiating strength of suppliers, the allure of substitute products, the threat of potential new entrants to the market and the rivalry among existing competitors in the industry (Porter 1997). Competitive advantage is therefore dependent on the firm’s ability to locate itself in a unique position in the industry that allows it to dilute the competition and amplify its market power. Consequently, IO theory is rooted in the capacity of the firm to sense the opportunities and threats in its external environment and position itself to transcend the ordinary in order to register sustained and superior returns on investment over time. However, the IO approach, particularly as expressed in the Five Forces framework, implicitly conceptualizes the market structure as a reality that is exogenously determined. In this respect, it ignores several essential dimensions of market dynamics that are determined or shaped by endogenous factors such as the role of complementarities, path dependencies and supporting institutions (Teece 2007).

In contrast to the IO approach that emphasizes the threats and opportunities in the industry, the RBV stresses that competitive advantage comes from how the firm handles its strengths and weaknesses to achieve resources heterogeneity (Barney 1991; Peteraf 1993; Hoopes, Madsen et al. 2003; Lee 2008).

The RBV is derived from Ricardian Economics which highlighted the importance of 'superior resources' to the attainment of high economic rent (Barney and Arkan 2001). This occurs when the firm is able to acquire resources below the value of their marginal productivity and combine them with the other resources it possesses to earn a superior rate of return (Makadok 2001; Denrell, Fang et al. 2003). Edith Penrose, in the late 1950's, out of a disenchantment with the neo-classical economic approach to the growth of the firm, embarked on a different analytical path which laid the foundation for the emergence of the RBV. While neoclassical economics with its smooth continuous production functions, its well-behaved demand and supply curves and its marginal mechanism for adjusting output to optimize profit, still remains a useful analytical tool, it cannot adequately explain the nature of how the firm develops. Penrose therefore provided an alternative explanation which stressed the potential that resides in the productive resource bundles controlled by the firm and the critical function that the administrative framework plays in coordinating the firm's productive resources to its benefit (Barney and Arkan 2001).

The RBV essentially channels strategic energy into resources as opposed to the product, gives pre-eminence to the attributes of value, rareness, inimitability and non-substitutability in the management of resources, and emphasizes the adept manipulation of resources and capabilities within the firm over opportunistic positioning within the industry (Wernerfelt 1984; Barney 1991). It is therefore evident that the central thesis of the RBV is the picking of resources that confers heterogeneity to the firm.

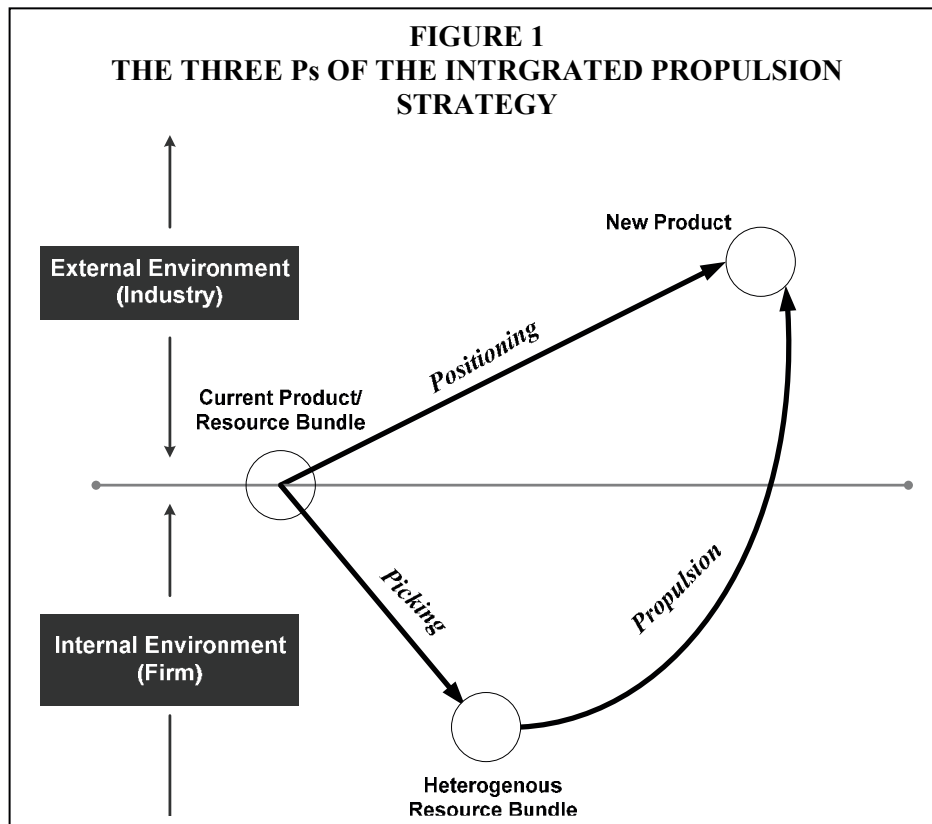
While there has been general agreement among academics and practitioners in the field that the RBV is essential to competitive advantage, questions have been raised as to its capacity to sustain and support competitive pre-eminence in the context of globalization, rapid technological change and sporadic market upheavals (Teece, et.al, 1997; Lee, 2008). In fact, there is compelling evidence that suggests that the process of 'creative destruction' is accelerating and the lifespan of even the most successful firms is progressively becoming shorter (Beinhocker 2007). It is against this backdrop that the DCA was proposed.

The DCA is rooted in the Schumpeterian perspective of the business environment and is constructed on the premise that it is the adroit deployment the firm's resources and capabilities that provides the source of sustained success. It highlights the critical importance of competencies that transcend technical capabilities and infuse the firm with nimbleness, innovativeness and evolutionary fitness for it to thrive. In this respect, the DCA is often viewed as an extension of the RBV (Teece 2007).

Indeed, all three strategic outlooks are valid. Furthermore, in the context of a turbulent, ever changing business environment it is unlikely to achieve resilience and robustness through the myopic engagement of single approach. A classic example of the ephemeral nature of business success and the perpetual need for firms remain on the very frontier strategy is the crisis Nokia faced at the end of the first decade of the twenty-first century.

Early in 2011, the CEO of the Nokia, Stephen Elop, announced that the Finnish mobile phone manufacturing company was faced with a serious crisis. Nokia's profits had plummeted to an unthinkable level. But what could have caused such a dramatic change in fortune for an organization that only recently was the world's most profitable mobile phone company? One person might say it no longer occupies a unique position in the market. Another person might say it lacks heterogeneous resources. Still another person might suggest that it is bereft of the dynamic capability to address the upheavals taking place in the industry.

Prior to becoming a global mobile manufacturing company, Nokia produced paper, rubber products and electrical cables. With the advent of mobile phones based on first generation technology, Nokia had the dynamic capability to propel itself to a position of competitive advantage. First generation phones were based simply on talk and text which did not require technological sophistication. Nokia's competitive advantage came from its ability to make cheap and robust handsets by virtue of its manufacturing roots.



A number of things have brought about turbulence and intense competition in the market. First, the Taiwanese company, MediaTek, has been able to produce mobile phones cheaply based on inexpensive chips. These phones have been eating into Nokia's market share in developing countries. In addition, Huawei, a Chinese company, has been expanding into the telecom market in Asia. Nokia therefore faces unprecedented rivalry at the low end of the market.

Second, with the advent of smartphones, driven by powerful microprocessors, the whole telecommunication landscape is changing at the top end of the market. Customers are not merely interested in mobile phones they want handheld computers. The 'Android' based on Google's operating system, and more importantly, the iPhone manufactured by Apple sent shockwaves through the market. Apple with a global market share of only 4% accounted for more than 50% of the profit in the industry in mid 2011.

The challenge that Nokia and Stephen Elop faced in 2011, was how to build the operating capabilities to develop the software and provide the data service required at the top end of the market where most of the industry value exists. The integrated approach contends that to regain competitive advantage Nokia would have to confront the imperative of the 3P's; (1) *Positioning* – relocating itself in new space in the industry; (2) *Picking* – putting together a bundle of heterogeneous resources and operational capabilities that supports its external positioning; and (3) *Propulsion* – developing and launching the dynamic capabilities required to unite heterogeneous resources with unique position to achieve a competitive advantage (see FIGURE 1).

The Body and Soul of Strategy

The distinction between resources and capabilities in Strategic Management literature is sometimes hazy. Barney for instance, following R. Daft's cue makes no clear distinction between the two:

“firm resources include all assets, capabilities, organizational processes, firm attributes, knowledge, etc. controlled by the firm that enable the firm to conceive of, and implement strategies to improve its efficiency and effectiveness” (Barney,1991, p.101).

Teece et al (1997) took the definition of resources to the other extreme by narrowing it down to firm-specific assets that are hard to copy or replicate. The description offered by Amit and Schoemaker (1993) posits that resources are inputs owned by, or are under the control of, the firm which transforms them through the production process into products. Resources are ‘observable’ and can be ‘valued and traded’. Although observable they include, but are not confined to tangible factors. Consequently, resources may also include intangible assets (Makadok 2001; Helfat and Peteraf 2003; Hoopes, Madsen et al. 2003). This definition is more consistent with the neoclassical economic notion of resources and is less restrictive than the one presented by Teece and his colleagues. It is therefore considered, for the purpose of this paper, to have more analytical value.

In contrast to resources, capabilities are intangible and non-observable; they are resistant to monetary valuation and cannot be traded except in their entirety (Hoopes, Madsen et al. 2003). This is to say that if a firm wants to get the exact capabilities that resides in a unit of a competing company they cannot be replicated simply by hiring a couple of the workers. It would require the acquisition of the entire unit. Organizational capability is the ability to coordinate the tasks performed by the firm and exploitation of the available resources to achieve a well defined output or outcome (Helfat and Peteraf, 2003). In this regard, organizational capabilities are ‘firm specific’, ‘socially complex’ attributes which ‘reside within corporate culture and network of employees’(Amit and Schoemaker 1993; Collis 1994) . As such, organizational capabilities are built rather than bought (Makadok 2001).

The firm does not exist except for resources, and even if resources are present it cannot produce without organizational capabilities. Resources are observable and substantial inputs. Capabilities tend to be nebulous and harder to pin down. Metaphorically speaking resources are the body and capabilities are the soul of strategy.

Restrict Flights, Propulsion and Better Engines

The unfolding discussion on organizational capabilities points to the existence of three types of organizational capability; (1) operational (or zero level) capabilities, (2) first level dynamic capabilities and (3) higher level dynamic capabilities (Collis 1994; Winter 2003; Teece 2007; Helfat and Winter 2011).

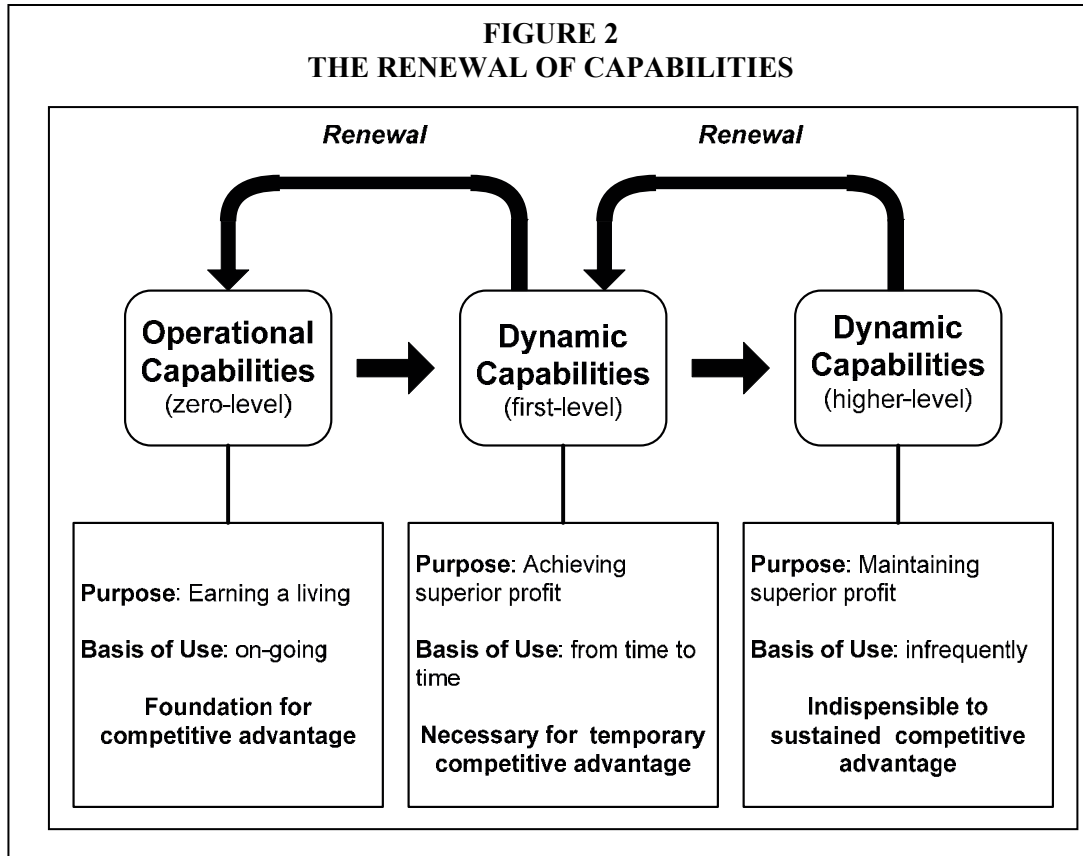
Operational capabilities are those competences that allow the firm to reliable and satisfactorily produce its products. These are really ordinary capabilities that enable the firm to make a living in the present (Winter, 2003).

First level dynamic capabilities refer to the set of competences that allows the firm to shift from one set of operational capabilities to another in order to achieve or maintain superior performance (Collis 1994). This requires the capacity to innovate, integrate and transform resources in order to address changes in the external environment. These competences are required for propulsion. Teece (2007) also suggests that dynamic capabilities are not only shaped by the external environment, but they also to shape the business ecosystem and are required for achieving superior performance.

Higher level dynamic capabilities are the set of metaphysical competencies which are more sophisticated than first level capabilities. These are complex competencies that provide the basis for continual renewal. To use the analogy of an airplane; operational capabilities could be considered similar to the internal systems that permit an aircraft that to fly within a restricted zone, like other aircraft in its classification. First level dynamic capabilities, on the other hand, allow propulsion beyond the restricted zone of the initial operational capabilities into a zone beyond the range of comparable aircraft. However, given the dynamics of the market over time the competition tends to catch up and the operational capabilities achieved through propulsion eventually becomes congested and restricted.

Higher level capabilities are the competences that allow for the creation of newer more sophisticated engines which will lead to greater propulsion. This is the only set of competences that will continually

provide the mechanisms for repeated propulsion and sustained competitive advantage. Leonard-Barton (1992) points to the danger of core competencies becoming core rigidities which present an obstacle to innovation. By dint of the fact that first level dynamic capabilities involve some degree of patterned behavior and advanced routines they are vulnerable to fossilization (Barkema, Baum et al. 2002). The hardening of first-level capabilities robs the firm of the competences necessary to adapt, innovate and channel the resources it possesses in a way that ensures advantageous industry alignment and superior performance. Higher level dynamic capabilities are the competences that replace fossilized components within first-level capabilities mechanism with newer, more flexible, more powerful parts allowing the firm to transcend the gravitational pull of failure and mediocrity. As shown in FIGURE 2, higher level capabilities renew first-level capabilities, which in turn renew operational capabilities.



THEORETICAL FRAMEWORK

Resource-Capability Bundle

Neoclassical economics posits that the firm's output is constrained by cost and there is a trade-off between capital and labour in the production process (Arrow et al 1961). However, from the point of view of strategy the neoclassical analysis defines the firm's resources much too narrowly and is predicated on a mechanistic approach to the determination of output that reduces its explanatory power in relation to growth. It may be argued that growth in the firm tends to be organic and the trade-off between resources is better conceived in broader terms. Consequently, the trade-off in the framework presented below is considered to exist between capital resources and operational resources.

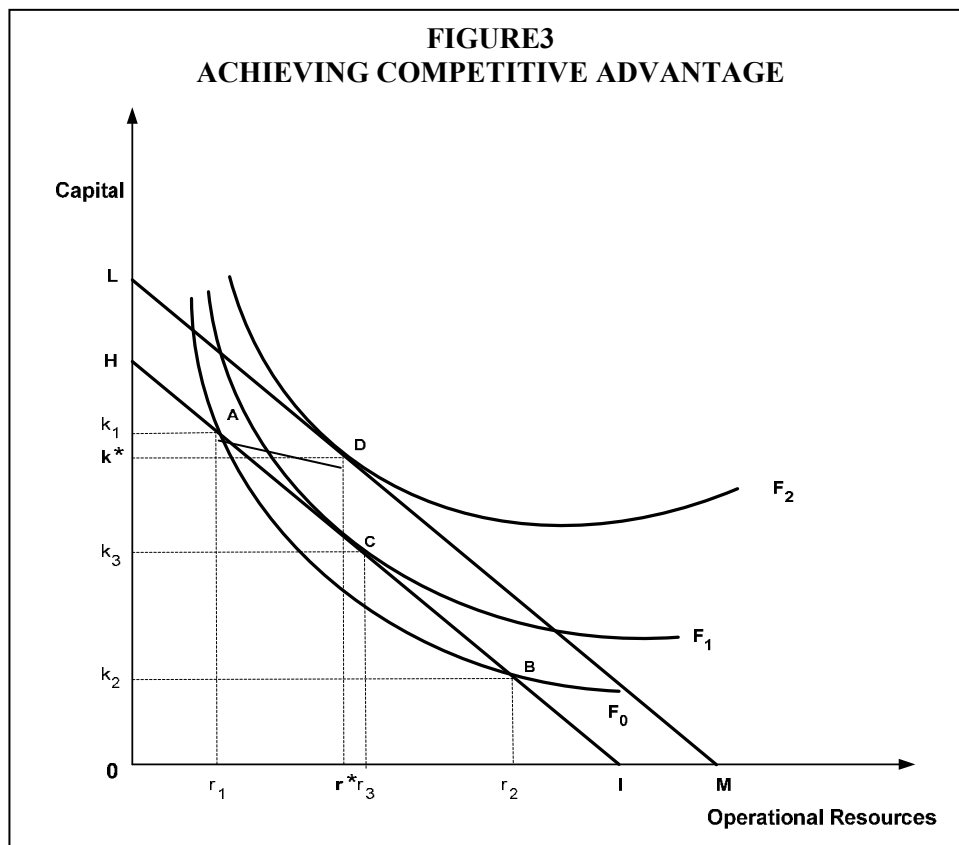
Capital refers to long term investments in are firm that is used up in the production process over a number of years. As such it includes items such as plant, tools, and machinery, which are often referred to

as physical capital. In addition, it includes organizational capital, which consists of the long term structures and systems in the firm that facilitate planning, controlling and coordination.

Operational resources are short term inputs that allow the firm to execute its day to day functions. These resources are not difficult to replace. Operation resources include inputs such labor, raw material, maintenance services and outsourced services.

Capability arises from the need to combine the firm's capital and operational resources. Depending on the firm's expenditure any given combination of these two types of resources yields a resource-capability bundle that produces the firm's output.

The analytical approach used in this framework is similar to the one employed in neoclassical economics in relation to indifference curve analysis and production theory analysis. As shown in FIGURE 3, a firm with cost **HI** could chose to produce a set of products based on resource-capability bundle **A** (with resource r_1 and k_1) or another set of products derived from resource-capability bundle **B** (with resource r_2 and k_2). As such, capital resources and operational resources are substitutable. However, some minimum threshold of capital and operational resources would be required to make production possible.



Profitability Functions

The firm's profitability is a function of its operational and capital resources embodied in the product it produces. The profit the firm makes comes from the juxtaposition of the revenues earned from the product it sells against the cost of its resource-capability bundle. It is therefore the interaction between the firm's resource capability bundle and the forces within the industry that determines its profitability. The firm's profitability (F), shown in FIGURE 3, is a function of variables described in Porter's 'five-force model': customer preferences, suppliers' decisions, substitute products, potential new entrants and existing competitors. In addition, it includes complementary products, the action of cooperators, and

institutional factors. While the market responds to learning and innovation (Teece 2007) the influence of these elements is captured in the variables identified above that determine profitability. For example innovation might expand customer preference for a product, or learning on the part of a competitor could increase competition.

The firm occupies a resource–capability space in which there is an infinite series of profit curves ($F_0, F_1, F_2 \dots$) with higher curves showing greater profit (see FIGURE 3). Like indifference curves, profit curves are convex to the origin and cannot intersect. Despite the name, a profit curve might be negative (show a loss) or positive (show a profit). The shape of the profit curves and their positions are determined by the forces at work in the industry. The profitability attained by the firm depends on the interaction between the firm’s resource-capability bundle and the market, as depicted by the point at which its resource bundle touches the profitability curve. A firm can achieve the same profit level (as is the case for **A** and **B**) with different resource-capability bundles although its overall cost is same.

Competitive Advantage

In FIGURE 3 it is assumed that initially the firm is producing its products using resource-capability bundle **A**. The position of resource-capability bundle **A** in relation to the profit curve, F_0 , indicates the level of profit the firm enjoys. It should be pointed out that unless a firm commands superior levels of profitability it does not have a competitive advantage. Therefore, assuming F_0 does not give the firm a competitive advantage but F_1 and all higher profit curves do, then the firm would have to transition its resource-capability bundle from **A** (or **B** for that matter) to a higher profit curve to achieve a competitive advantage. To achieve competitive advantage the firm could do one out of two things. First, it could maintain the same level of cost (**HI**) by trading off some of its capital resources (i.e. moving from k_1 to k_3) for more operational resources (i.e. moving from r_1 to r_3), thus transitioning resource-capability bundle **C**. Consequently, the firm would move to a higher level of profitability, F_1 . In trading off capital resources for operational resources the firm could get rid of a factory that produces a component of its product and outsource that particular service. This kind of improvement in profitability which allows firm remained on the same cost line **HI** in moving from **A** to **C** may be the result of strategic tinkering, which Winter (2003) refers to ‘ad hoc problem solving’.

Alternatively, the firm could achieve a higher level of competitive advantage by increasing its overall investment by moving to a new cost line **LM**. This allows the firm to move from operational-capability bundle **A** to **D**. The process of propelling the firm from one level of investment to another to profit curve, F_2 , would require greater dynamic capabilities. In moving from resource-capability bundle **A** to **D**, the firm would reduce its investment in capital from k_1 to k^* and simultaneously increase its use of operational resources from r_1 to r^* . The new product or processes resulting from the firm’s action would yields superior profit and is likely to be higher than the outcome from ‘ad hoc problem solving’.

Measuring Dynamic Capability

Inherent in the concept of dynamic capabilities are two essential dimensions. First, it has a vector dimension that is manifested in the movement from one operational capability to another (i.e. the line **AD** in FIGURE 3). This dimension which reflects the firm’s transition from operational-capability bundle **A** to **D** is measured by what will be referred to as the *Dynamic Propulsion Coefficient (DPC)*. Second, dynamic capabilities should reflect how the action of the firm impacts relative profit. This dimension is critical since ultimately dynamic capability is not an end in itself, but it is harnessed to acquire, maintain or improve profitability. As such, this dimension is simply called the *Relative Profitability Factor (RPF)*. Therefore, of necessity, a proper measure of dynamic capability must consider both propulsion and relative profitability.

In FIGURE 3 the movement from operational capability **A** to **D** is the resultant effect of a change in operational (horizontal) resources and capital (vertical) resources. As shown in FIGURE 4 the **DPC** is the hypotenuse which is defined here as the square root of the sum of the percentage change squared of operational and capital resources (expressed as costs).

FIGURE 4
THE DYNAMIC PROPULSION COEFFICIENT

$$\mathbf{DPC} = \left[\sqrt{\left(\frac{\Delta r}{r_1}\right)^2 + \left(\frac{\Delta k}{k_1}\right)^2} \right]$$

Where, $\Delta r = r_1^* - r_1$ and $\Delta k = k^* - k_1$

The *Relative Profitability Factor* may be expressed as; $\mathbf{RPF} = \Delta\pi$

where, $\Delta\pi$ is the change in profit expressed as the rate of return on investment (i.e. $\Delta\pi = F_2 - F_0$)

It is therefore proposed that the *Dynamic Capability Coefficient* (**DCC**) is the product of the **DPC** and the **RPF** (see FIGURE 5).

FIGURE 5
THE DYNAMIC CAPABILITY COEFFICIENT

$$\mathbf{DCC} = \Delta\pi \left[\sqrt{\left(\frac{\Delta r}{r_1}\right)^2 + \left(\frac{\Delta k}{k_1}\right)^2} \right]$$

By virtue of this construct, if **DCC** is zero, provided that the firm has changed its level of investment, then the firm is only able to maintain its competitive position. In other words, the firm has propelled itself from one resource-capability bundle to a next only to remain in the same place. This is sometimes referred to as the ‘red queen effect’ (Barkema, Baum et al. 2002; Beinhocker 2007; Teece 2007). If the **DCC** is positive then the firm has improved its competitive position. However, if the **DCC** is negative then the firm has failed in its effort to maintain or improve on its competitive position in the industry.

There is a time component to the **DCC**, however, because depending on the capital intensive nature of the firm and the nature of its operation the measure of long run may vary. To apply the **DCC** empirically it therefore will require an industry specific time definition by the researcher.

The dynamic capability demonstrated by a firm indicates what it has achieved in the past and might not necessarily be a good indication of what is capable of doing in the future. The **DCC** is a useful strategic tool in assessing a firm. However, it is limited in the sense that it only measures first level dynamic capabilities. It cannot capture higher level capabilities which are indispensable to sustained competitive advantage. Nevertheless, there is room for research aimed at determining whether firms exhibit different propulsion coefficients at various stages of the growth cycle. There is also scope for research into the association between propulsion and the firm’s longevity based on the measure proposed in this paper.

DISCUSSION

Excessive Cost and Resource Irrelevance

Implicit in the Integrated Propulsion Strategy framework are a short run and a long run assumption. First, there is the short run assumption that a resource-capability bundle may be valuable, rare, inimitable and non-substitutable but it only gives the firm a temporary competitive advantage. Barney (1991 and

1999) points out that heterogeneous resources and capabilities may be difficult or even impossible to replicate perfectly because of the factors of historical uniqueness, path dependency, causal ambiguity and social complexity. However, Barney and others concede that, if not substituted, idiosyncratic resources might be overcome through the acquisition of the firm by a competitor (Markides 1990; Collis and Montgomery 1995; Barney 1999).

Second, there is the long run assumption that all resources and capabilities can be imitated, substituted or acquired but a firm may opt not to do so because of excessive cost or resource irrelevance. A particular set of resources and capabilities becomes excessively costly when the investment expenditure involved in their acquisition is so high that it is not consistent with the goal of competitive advantage. Acquisition cost often involves not only the actual price tag on the firm but there may be indirect cost associated with factors such as 'excess baggage' or the purchasing resources not directly relevant to the firm, 'difficulties in leveraging acquired capabilities' and moral hazards that results in the lowering of the value of the resource after the acquisition.

In thinking about excessive costs consider the attempt by Microsoft, the world largest software company, to takeover of Yahoo in 2009. This acquisition thrust was born out of a recognition of the weaknesses in its internet search services. The takeover of Yahoo's superior search operations and enormously profitable internet advertising business would enable it to compete more effectively with Google, the world leading online search company. While Yahoo entertained the possibility of a takeover, and saw its share price soar during the negotiations, it rejected Microsoft's final offer of US\$47.5 billion. Yahoo's decision was made on the grounds that the offer was below the value they assigned to the company, only to see their share price tumble after this revelation. It is likely that that the deal would have gone through if Microsoft's offer was higher, say 10% more. However, paying more than US\$47.5 billion would evidently have militated against Microsoft's goal of competitive advantage in search services because of the excessive cost involved. In the end Microsoft opted for a strategic alliance with Yahoo which left the resources and capabilities Microsoft wanted to develop outside of its boundary.

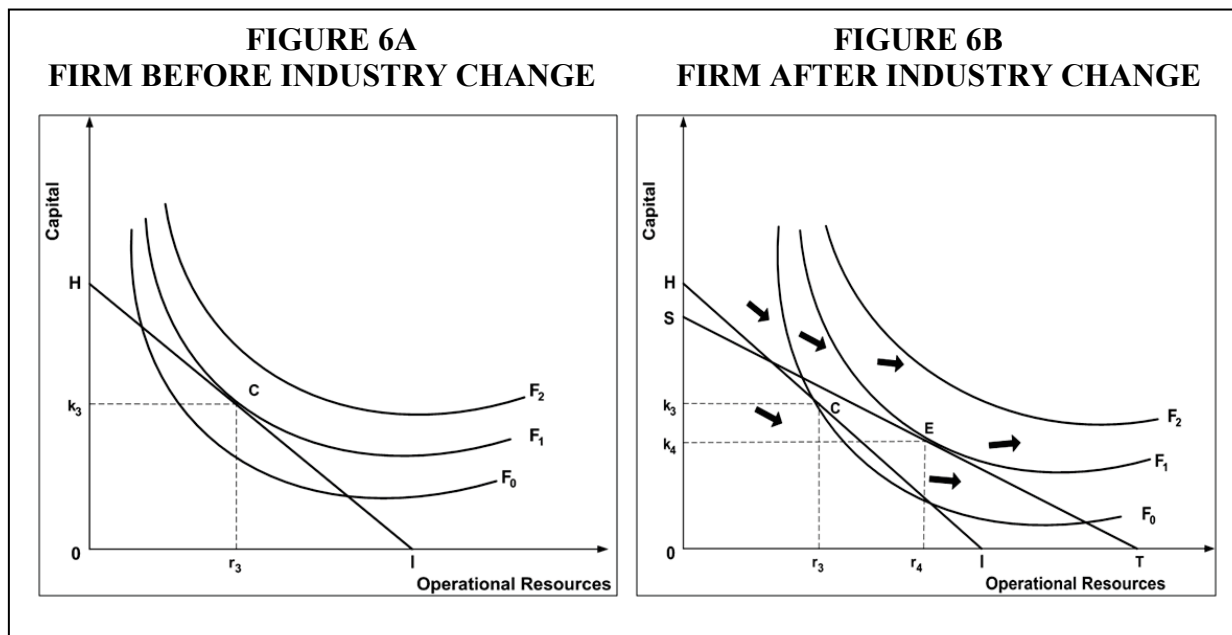
Another factor that might prevent one firm from imitating or acquiring an idiosyncratic resource-capability bundle is the notion of resource irrelevance. This refers to the fact that time might render a particular resource of little or no value after it is acquired in a turbulent, high velocity environment.

To illustrate the concept of resource irrelevance let us imagine the case of Book-A-Million, Inc. (BAM) the third largest book store chain in the USA, deciding in the early 1990s to imitate the scope of Barnes and Noble (the No.1 book retail chain) by acquiring Walden Bookstores a smaller chain owned by the Borders Group. Let us say the acquisition was achieved and BAM considered the deal a success, then the victory would be transient. With the explosion of dotcom companies and the advent of Amazon, high volume book sales shifted from block and mortar stores to internet firms. As such, the competitive advantage BAM intended to achieve through a block and mortar network would not have been realized because of the phenomenon of resource irrelevance.

Static and Dynamic Capabilities

A firm must have static capability to exist in the short run. However, it takes dynamic capability to achieve long run competitive advantage. Static capability or organizational capability is simply the ability of the firm to reliably put together a resource bundle that will generate revenues. If the business environment is stable, assuming that the firm has already attained a competitive advantage, static capability is all that is necessary to maintain the same position in the market (see FIGURE 6A). However, if the industry is shaken by industry change arising from Porter's five forces as well as other factors such as modifications to the institutional framework or changes in complementary products, then the profitability curves will shift (see FIGURE 6B) causing the firm to lose its competitive advantage. It is in this context, that the integrated approach involving industry positioning, resource picking and strategic propulsion is advantageous. The integrated approach provides the firm with the perspective and balance needed to maintain a competitive advantage through the adept reconfiguration of its resources and capabilities in a way that enables move to a superior resource-capability bundle (i.e. from C to E). When this is achieved the firm is so positioned that resources are in harmony with the company's product, and

fleeting though it may be, the firm will enjoy extraordinary profits until again the industry is shaken by change. It is in this regard strategy at its best requires vigilance, perspicacity and agility.



CONCLUSION

All successful strategies whether knowingly or unknowingly involve the IO approach, RBV and DCA. When there is a shift in the industry it requires the IO approach to analyze the situation and determine where the firm is and where it should be (industry positioning). It takes RBV to decide on the resources and operational capabilities required to take it to the new position (resource picking), and in the end, it takes the DCA to move the firm's resource bundle to the new position (strategic propulsion). It therefore may be argued that it is only when all of these elements are consciously taken into account in the fashioning of strategy that the firm can be made robust and dynamic enough to properly address a perpetually shifting business landscape.

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