2009-9

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2009-09-01

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COMPETITIVE PAPER

(Strategic Management)

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SUBSIDIARIES, COMPETENCIES AND THE IMPLEMENTATION OF DYNAMIC CAPABILITIES

1.0 Introduction

Practitioners are increasingly urged by popular press and academia to add value and develop their business units by building dynamic capabilities; but both the academic theory and press fail to give a comprehensive definition as to what constitutes a dynamic capability and how they can be developed. The purpose of this paper is to explore and ultimately build upon the current literature in addressing this need, thereby contributing to managerial and academic thinking on dynamic capabilities and then to discuss the potential managerial implications in a subsidiary context. This is in response to identifying the gap both theoretically and empirically in ascertaining the factors which impact upon the development of dynamic capabilities in a restrictive subsidiary context amidst turbulent global environments. How subsidiaries can develop dynamic capabilities and establishing the relationship between dynamic capabilities and contribution is thus a pivotal area of analysis and inquiry. It is therefore imperative that it be investigated how subsidiaries can, within the confines of their organisational structure, protect and enhance their position within the MNC through building dynamic capabilities.

The intent of this paper is to explore the literature at this juncture in identifying and construing the most prevalent debates within the theoretical grounding to date. These avenues of inquiry include defining the dynamic capability (DC) concept with clarity, illustrating its distinction from organisational capabilities, and a discussion of the hierarchies of capabilities identified. This is in addition to discussing issues of sustainability and competitive advantage as a central area of debate. The discussion of the DC framework is set in the context of MNC

subsidiaries, in exploring the managerial implications of developing DC's and how this can influence upon subsidiary performance.

1.1 Defining, Refining and Tackling Current Debates

Strategic management theorists and practitioners have long acknowledged the role of scarce and difficult to replicate assets in creating competitive advantage (Ansoff, 1979; Barney, 1991; 1995; Hofer and Schendel, 1978). However, it is now emerging that to meet the exacerbating challenges of fast moving, globally competitive markets, MNC's need unique and difficult to replicate DC's.The need for a move to higher value added services is imperative for Irish subsidiaries in an open and exposed environment amid concerns over the continued movement of labour intensive operations eastwards towards lower cost economies, (IDA Ireland, 2008). It is argued that in this turbulent context DC's can be harnessed to 'continuously create, extend, upgrade, protect and keep relevant the enterprise's unique asset base' (Teece, 2007: 1319). Essentially comprising of the technological, organisational and managerial processes that firms leverage to achieve sustainable competitive advantage, DC's continuously integrate knowledge in developing new organisational capabilities (Bitar, 2004; Jacobides and Winter; 2005).

1.2 Evolution of Dynamic Capability Theory

To date research has incorporated Dynamic Capabilities (DC's) as either complementary or evolutionary to various other domains; notably the Resource Based View of the firm (Eisenhardt and Martin, 2000; Helfat and Peteraf, 2003; Makadok, 2001; Newbert, 2007; Wernerfelt, 1984; Zott, 2003) and evolutionary economics, (Nelson and Winter, 1982; Dosi

and Nelson, 1994). This symbiosis of a firmly rooted theoretical framework with a relatively new concept has prompted much debate and discussion as to the future uses and viability of the DC framework.

The Resource Based View (RBV) defines the firm as a combination of resources; a heterogeneous grouping of physical and intangible assets that can constitute the organisations source of competitive advantage. Idiosyncratic in nature, Barney (1991) contends that it is the rare, valuable, imperfectly imitable and non-substitutable resources within a firm that constitute the viable means of attaining a sustained competitive advantage. The utilisation of this idiosyncratic resource base through processes and capabilities is the means by which the firm can create rents; typically achieved where resource position barriers impede competitors (Wernerfelt, 1984).

The DC framework essentially builds on the RBV in recognising the need for continual modification and adaption of capabilities in accordance with exogenous forces. The relationship between theories can thus be seen in the emphasis on building resource bases which can serve as a viable platform for competitive advantage. The progression and advancement of the DC framework from the RBV is observable in recognising how the DC framework incorporates the capacity to identify the need for change in the resource base, and ultimately in formulating a response to that need (Helfat et al, 2007).

Subsequent to the seminal work of Teece at al. (1997) the DC perspective has seen increased acknowledgment within academia and popular press. The development of the DC framework continues to evolve from its traditional roots in the Resource Based View (RBV) towards its own more distinct domain.

2.0 Clarifying the Framework

Zahra et al. (2006: 918) bemoan the 'inconsistencies, overlapping definitions, and outright contradictions' present in the emergent literature to date on the DC framework. This viewpoint is echoed by Winter (2003) holding that it is due to this lack of clarity that both scholars and practitioners remain sceptical regarding the value of the framework. As with the nascent of any theory; this has been reflected in a call for a clearer definition and structural framework to be established that is both viable and non–tautological, (Eisenhardt and Martin, 2000). It is in accordance with this that a clearer understanding of the framework needs be presented; in clarifying the construct and presenting it as fungible in a practitioner context.

Teece (2007: 1319) illustrates the microfoundations of the dynamic capability framework as a multi-faceted approach in sensing opportunities and threats, seizing opportunities, and maintaining a competitive edge through; 'enhancing, combining, protecting, and when necessary reconfiguring the business enterprise's intangible and tangible assets'. A more succinct definition is offered by Helfat et al. (2007: 03) where; 'a dynamic capability is the capacity of an organisation to purposefully create, extend, or modify its resource base'. It is noted that *capability* in this sense is to taken in its absolute literal sense; in that it merely indicates adequate performance thus avoiding any charge of tautology with regard to superior performance. This tautology is avoided in conceding that whilst firms may achieve improved or greater effectiveness of their operating routines they may fail to achieve superiority in the competitive environment. Further to this in using the term *capacity* it denotes that the function of the capability should be patterned and repeatable. In this sense it should be capable of being reliably executed at an appropriate time in accordance with the need for change and exogenous forces.

2.1 Capability, Dynamic or Not?

A distinction must be made in defining what exactly constitutes a dynamic capability and how this differs from operational, organisational or higher level capabilities, (Winter, 2003). This particular aspect of dynamic capability theory has seen considerable debate within the literature (Helfat and Peteraf, 2003; Winter, 2003; Newey and Zahra; 2009; Pandza and Thorpe, 2009). Helfat and Peteraf (2003) make the distinction between operational and dynamic capabilities in contending that operational capabilities are high level routines used in a repetitive fashion in the production or performing of an activity. Similarly Winter (2003) discusses organisational capabilities as a collection of routines, highly patterned and repetitious or at least quasi-repetitious. This mirrors Helfat et al. (2007) who comment on how operational capabilities as a pattered behaviour differ from mere ad-hoc problem solving, which merely equates to a once off idiosyncratic change to the resource base. It is in the sense that a capability must be repeatable which can cause some ambiguity.

Newey and Zahra (2009) somewhat clarify the distinction in contending that whilst exogenous shocks can turn such patterned routinisation into a rigidity and a source of inertia, it is the ability of the firm to reconfigure its operating capabilities that constitutes a DC. It is this distinction between routines and capabilities that forms a focal part of the DC framework. In recognising the dangers of core competencies turning into core rigidities, (Leonard-Barton, 1992), it is arguably the DC framework that can reduce such concerns through the firms ability to adapt and reconfigure its capabilities. With the scope of producing potentially value creating strategies, it is argued the DC framework must utilise current resources whilst simultaneously adapting, integrating and developing new areas of competencies. This is outlined as combining the 'antecedent organisational and strategic routines by which managers alter their resource base- acquire and shed resources, integrate them together, and recombine them' Eisenhardt and Martin, (2000: 1107). The integration

and reconfiguration of resources is thus an imperative response in recognising the need for change brought about through exogenous threats or opportunities in the external environment and for adaptive learning within the firm. Zollo and Winter (2002) discuss the creation of dynamic capabilities in similar terms in contending that it is the learning processes behind the operational functioning of the firm, which they refer to as operating routines; whilst the adaption of such routines constitutes the dynamic capability.

An emerging consensus therefore is that DC's are significantly distinct from ordinary or operational capabilities. In concise terms it can be stated that ordinary capabilities allow the firm to earn rents, whereas DC's operate to modify, extend or create ordinary capabilities, (Winter, 2003). The renewing nature of DC's is thus a significant factor in demonstrating the value of the concept. In allowing the firm to actively respond and engage with change the potential for competitive advantage is arguably more attainable.

Pandza and Thorpe (2009) suggest that although the differences between routines, capabilities and dynamic capabilities have become clearer, there remains a certain conceptual ambiguity. In attempting to elucidate this; the concept of capabilities will now be discussed in terms of higher and lower levels of capabilities, and the space they occupy within this hierarchy.

2.2 Are there Levels in the Dynamic Capability Hierarchy?

If capabilities differ, then there is an implicit need to evaluate how they differ in considering managerial practice and the impact this has upon adaptive firm performance. An expressed need within the current body of literature recognises this need to distinguish between the varying hierarchical levels of capabilities, (Eisenhardt and Martin, 2000; Winter, 2003; Zollo

and Winter; 2002). In adopting such distinctions the onus is on understanding how the capability can integrate, reconfigure or acquire the resource base; and to what extent this presents a path change from the current status quo. Clarifying these distinctions are essential if we are to develop the theoretical perspective and in interpreting its viability for practitioners.

It is in agreement with the general consensus that incremental changes in routines through gradual learning curves cannot be deemed a dynamic capability, (Pandza and Thorpe, 2009). However, where there is a deliberate learning process through experience accumulation, knowledge articulation and knowledge codification, (Zollo and Winter, 2002); a provident effort has been made towards the creation of building new dynamic capabilities. These efforts of explicit knowledge articulation and codification it is argued work in unison with tacit experience accumulation processes; and may go some way in explaining the *regenerative capabilities* delineated recently by Ambrosini et al. (2009), or *continuous morphing*, (Rindova and Kotha, 2001). An example of the latter is illustrated in the high technology sector where *Yahoo!* sought to continually revive their transient competitive advantage through regenerative capabilities on the internet, (Rindova and Kotha, 2001). The need for change in such a sector is arguably more prevalent, as evidenced by rapid changes in technology. It is thus felt necessary to differentiate between moderately dynamic and high velocity markets, (Eisenhardt and Martin, 2000). It is held that in high velocity markets there is an expressed need to develop higher order capabilities, capable of continual value creation. This is in contrast to moderately dynamic environments where it is argued that a firm too adaptive and responsive to the market may fail to offset the costs of developing DC's if their costs exceed the benefits gained, (Eisenhardt and Martin, 2000).

In considering Irish Subsidiaries as peripherally located, in an open and exposed market, this arguably prompts a need for a 'continuous stream of innovation consistent with customer

needs and technological opportunities' (Teece, 2007: 1343). It is thus claimed that these higher order capabilities present the most viable means for Irish Subsidiaries to attain competitive advantage, increase contribution and enhance their position within the MNC.

2.3 Higher Order Capabilities

Collis (1994) has referred to higher order or meta-capabilities in a three tier typology, with dynamic routines at the centre superseded by the *creative capabilities* that allow the firm to recognise the value of its resources and thus develop novel strategies. Whilst recognising that it may be difficult to make solid and mutually exclusive distinctions between these two upper echelons, he has clarified that the lower order capabilities comprise of merely; 'the ability to perform the basic functional activities of the firm, such as plant layout, distribution logistics, and marketing campaigns, more efficiently than competitors' Collis (1994: 145).

In response to Collis (1994) however, it is disputed that marketing merely constitutes a functional activity. In adhering to such a categorisation it clearly diminishes the role of support activities, customer responsiveness and customised adaption to consumer needs. This view is essentially upheld by Malik and Kotabe (2009) in claiming that marketing prowess in its implementation can indeed constitute a dynamic capability where marketing support services can serve as a viable means of attuning the dynamic capabilities of the firm. Danneels (2002: 1097) also stresses the role of marketing and incorporating customer competencies which he classifies as a second order capability, claiming such competencies; 'may help firms to mitigate path dependencies in their development, escaping from the trap laid by their current competencies'.

It determining what constitutes a higher order capability it can be conceived of in terms of the differentials that distinguish a firm from its competitors on the basis of executing a superior capability.

2.3.1 Higher Order Capability Differentials

Winter (2003) utilises such differential metrics in his typology of DC's in adopting a hierarchy of rates of change. At the lower end of the spectrum is the *zero level* capability, this is merely the implementation of static and stationary routines utilised in a constant fashion to achieve normal profits. Conversely, it is illustrated that a firm capable of new product development or production processes can serve as an example of a first order dynamic capability.

In adapting an approach outlined by Collis (1994); Winter (2003) maintains a differential calculus used to distinguish the levels of capabilities. This is used in an incremental basis where; a second order capability precedes a first order capability, and so on *ad infinitum.* The rationale behind its infinite progression is explained as; 'there is always a higher level, and in this view superiority at the higher level always trumps superiority at a lower level' Winter (2003: 994). It is in this sense that the terminology of *higher order capability* is utilised in illustrating inter-firm performance differentials.

Ambrosini et al (2009) takes a divergent stance on the various types of DC's, holding that there are three levels; with this typology comprising of incremental, renewing and regenerative capabilities. The rates of adaption are the distinguishing factors among these capabilities where incremental capabilities are subject to continuous change, renewing

capabilities on a periodic basis and regenerative capabilities subject to change only in infrequent circumstances, (Ambrosini et al. 2009).

In a manner similar however to Collis (1994) however, Ambrosini et al. (2009) remain somewhat ambiguous as to the differences between the upper echelons, namely the renewing and regenerative DC's. This is reflected where it is argued; 'regenerative capabilities are likely to be applied where managers perceive substantial dynamism in their environment' Ambrosini et al. (2009: 21), yet the authors simultaneously claim that such regenerative capabilities can be sourced externally, through consultancy or through managerial past experiences outside the firm. Using this supposition it implies a far more generic and equifinal process compared to the more commonly utilised path dependent and firm specific idiosyncratic frameworks adopted elsewhere, (Teece, Pisano and Shuen, 1997). This raises concerns as to how dynamism can be applied when managers are merely replicating previous routines. It is upon considering this dilemma that a discussion of whether dynamic capabilities are path dependent or in fact equifinal will follow in the subsequent section.

Amidst the disparity in the literature regarding higher level capabilities it is proposed that for practitioner terms the DC framework is best conceptualised in terms of operational, or functional capabilities superseded by the higher order capabilities that indicate enhanced performance. In utilising the continuum outlined by Winter, (2003) a higher order capability should not be conceptualised as being indicative of superior performance as such capabilities are continually subject to advancement and competitor efforts. It is in accordance with this that a higher order capability indicates a potentially value creating entity; albeit one that is always subject to improvement, advancement and responsiveness to the exogenous environment. In distinguishing between levels of capabilities an emphasis on the creation of higher order capabilities that deliver significant value, it is argued, will provide the most viable route to competitive advantage.

2.4 Path Dependent or Equifinal?

Determining if DC's are obtainable through replication, reverse engineering and adoption of quasi-generic practices or if they are heavily dependent on historic project trajectories remains an ardently debated area within academic discussion. The reasoning that dynamic capabilities are path dependent and/or reliant upon a firm's historic performance and learning is shared by numerous scholars (Teece, 1997; Zollo and Winter, 2002; Kor and Mahoney, 2005 and Newey and Zahra, 2009). Such theory builds upon Mintzberg and Waters (1985) in identifying emergent strategies and the scope of learning to date within the firm. It is noted however that to qualify as a dynamic capability there must also be deliberate intentions in place, (Zollo and Winter, 2002); it is in accordance with such that; 'we would expect to find tendencies in the directions of deliberate and emergent strategies rather than perfect forms of either. In effect, these two form the poles of a continuum along which we would expect real-world strategies to fall' Mintzberg and Waters (1985: 258).

In pertaining to the path dependency school of thought and in emphasising how firm evolution is non-stochastic; Helfat et al (2007: 100) are quite unyielding in claiming; 'as in evolutionary economics, which underpins much of the logic of dynamic capabilities, firm evolution and change is non-random and depends on prior history'. This view is shared by Teece et al (1997: 522) in noting; 'where a firm can go is a function of its current position and the paths ahead. Its current position is often shaped by the path it has travelled'.

The importance of existing project trajectories as a determinant in leveraging capabilities for future competitive advantage is also addressed by Dierickx and Cool (1989) in observing the 'time paths of flow variables', which are ultimately responsible for asset stock accumulation and sustainability. It is in regard to the appropriate timing of building asset stocks that path dependency is critical. An example of this is outlined where although investment on research

and development can be increased instantaneously; the stock of acquired knowledge cannot; thus placing experienced firms at the fore in the competitive environment, (Dierickx and Cool, 1989). Dosi, Nelson, and Winter (2000) concede that spending on R&D or making analogous investments in isolation cannot be accredited with creating new dynamic capabilities. Instead it is such actions implemented in unison with identifying the strengths and weaknesses of existing resources that demonstrate 'the firm's ability to carry off the balancing act between continuity and change in its capabilities' (Dosi, Nelson and Winter, 2000: 6). It thus becomes apparent that existing process trajectories are likely a pivotal facet in the creation of dynamic capabilities through learning and knowledge accumulation, (Zollo and Winter, 2002). In interpreting the seminal works of Penrose (1959) as favourable to the path dependent perspective, Kor and Mahoney (2005: 188) insist; 'the growth theory of the firm concerns dynamic and path dependent organizational learning'.

2.4.1 Equifinality and Bounded Rationality

As a counter to the above, Miller (2003) appears somewhat disparaging in accepting the path dependency approach. In drawing upon the recognised criterions of an optimal capability trajectory, Miller (2003) reiterates that this requires a highly strict path dependency to sustain first mover advantage, and that it be non-substitutable with another equally efficient trajectory. It is argued such criterions may falter where; 'bounded rationality might obstruct the first aim, conditions of equifinality the second' Miller (2003: 962). In acknowledging that a strictly path dependent approach is unlikely to be achievable within the bounds of limited knowledge and in in considering the impact of exogenous changes, a middle ground consensus is beginning to emerge.

2.5 Emerging Consensus

In occupying an almost middle ground to the dilemma Eisenhardt and Martin (2000: 1106) claim that whilst dynamic capabilities are path dependent in their emergence, there are significant commonalities, holding that; 'dynamic capabilities have greater equifinality, homogeneity, and substitutability across firms than traditional RBV thinking implies'. It is proposed that whilst the development of a capability may take a unique path it none the less culminates in a quasi collective learning path that although idiosyncratic in nature, exhibits some commonalities implying equifinality, (Eisenhardt and Martin, 2000). In accepting an approach of equifinality it suggests that DC's cannot be the source of sustained competitive advantage if the capability trajectories are liable to be imitated by rival firms. In conceding that dynamic capabilities are equifinal it implies that long term competitive advantage cannot be sustained in an open market; it is upon this assertion that Eisenhardt and Martin (2000: 1118) claim; 'long-term competitive advantage lies in resource configurations, not in dynamic capabilities'.

Zahra et al. (2006) contest Eisenhardt and Martin (2000) in their view of equifinality, but hold that firms are perhaps less idiosyncratic in their nature than outlined elsewhere, see; Barney (1991). Whilst acknowledging that two firms can have very similar resource configurations it has been proposed; 'where they go to next and how quickly they get there will differ if their dynamic capabilities are different' Zahra et al (2006: 951). Zott (2003) has discussed this in terms of the differential timing in which the capabilities are deployed and draws upon Amit and Schoemaker (1993) in recognising the significance of managerial cognitive biases which may impact upon the timing of decisions. The emphasis here is not merely on what capabilities the firm possesses but how they can leverage these capabilities in the future with implications upon competitive advantage. Narayanan (2009: 26) in utilising the path dependent perspective has also addressed the role of managerial abilities and biases

in contending; ‘the firm’s path to developing new capabilities may also be highly dependent on the human and social capital of key personnel, as well as their cognitive endowments and the environmental context in which they operate’. It is contended that it is on the basis of such differentials as managerial cognition that asymmetries are likely to arise in regard to firm performance and competitive advantage. The issue of competitive advantage and specifically sustainability is at the crux of RBV and dynamic capability theory and will be addressed in greater detail in the subsequent section.

It is proposed that DC’s are heavily path dependent yet also reliant upon managerial ability and the cognitive aspects of recognising change, the scope of opportunities and in responding to those changes through the leveraging of current capabilities and the creation of new ones.

Whether DC’s are strictly path dependent or more equifinal than is described is a moot point. What is imperative in practitioner terms is that management assess their current position and identify the potential to develop DC’s in leveraging current capabilities. The concept of *competitive repertoires*, Miller and Chen (1996) provides a useful example of how this can be achieved. In discussing how firms concentrated in a particular sector continue in vying against one another, the ability of a firm to focus on particular markets and develop complex competitive repertoires, on a continual basis, (Miller and Chen, 1996), is arguably a means of developing higher level DC’s. Further to this it is suggestive of the viability of value adding marketing practices as a higher capability in explaining differential firm performance.

3.0 Competitive Advantage and Sustainability

The notion of whether dynamic capabilities offer long term competitive advantage and sustainability has prompted considerable debate within the literature (Collis, 1994; Makadok,

2001; Teece 2007). In particular within RBV theory, Barney (1991) has attests to the rare, imitatable, valuable and non-substitutable resources of the firm as decisive components in attaining competitive advantage. Peteraf (1993) further contends that as an additionary measure; imperfect mobility and ex ante limits to competition contribute to a sustained competitive advantage. In addition and perhaps more prominently Teece (2007: 1346) illustrates the potential of attaining competitive advantage by adopting a dynamic capabilities framework and in sustaining this advantage through activities that; 'semi-continuously morph so as to maintain it'. The importance of building and processing such capabilities is emphasised by Zollo and Winter (2002: 341) in contending; 'both superiority and viability will prove transient for an organisation that has no dynamic capabilities'. This is perhaps most evident in recognising the role of DC's in fast moving high technology sectors, as evidenced by recent studies in the semi-conductor sector, (Macher and Mowery, 2009), and the pharmaceutical sector, (Bruni and Verona, 2009; Narayanan et al. 2009)

In discussing the overlap in the literature between resources and dynamic capabilities; Barney and Clark (2007: 249) express the scope for a broader literature base holding that; 'resource-based theory is not really about resources, per se, but about the attributes that resources must possess if they are to be a source of sustained competitive advantage'. In addition to this, Easterby-Smith et al, (2009) comment on how the dynamic capabilities framework essentially allows itself to be disassociated from the criticisms directed at the resource based perspective due to an emphasis on dynamism that it lacking in the static and equilibrium based models of resource based theory.

The underlying point at this juncture however, is that the aforementioned theorists fundamentally purpose that sustainable competitive advantage is both feasible and procurable in the long term. Before progressing with acceptance of this stance and thus avoiding any charge of acquiescence it is felt necessary to compare and contrast competing views on

sustainability. In illustrating these contrasting views many theorists argue that competitive advantage is idealistic and cannot be sustained in the long term (Eisenhardt 2000; Zott 2003), albeit often with the exception of first mover advantages.

In critiquing sustainability issues within the emerging dynamic capabilities perspective this school of thought contends; 'effective dynamic capabilities are necessary, but not sufficient, conditions for competitive advantage' Eisenhardt and Martin (2000: 1117). Instead it is suggested that; 'the goal is a series of temporary competitive advantages' Eisenhardt and Martin (2000: 1118). Such contemplation is arguably reflective of the emergent system as outlined by Mintzberg and Waters (1985). This approach recognises the need for continual small changes in the constant evolution of the firm and its capabilities, in contrast to revolutionary change; the goal is for a series of incremental changes that assist in the firm's progression.

3.1 Competitive Advantage through Growth Persistence

Helfat et al (2007: 113) conceptualise these series of ad interim advantages in a more positive light, coining the term *growth persistence* in their empirical study of firm growth and DC's, holding that; 'these patterns of growth persistence tell us that firm growth is nonrandom and consistent with dynamic capabilities and associated evolutionary economic theory'. In an earlier paper Helfat and Peteraf (2003) discuss the scope for a framework on based on *capability lifecycles*. The concept recognises the need for continual adaption and renewing of capabilities and processes in accordance industry development and evolution, and is perhaps again most relevant to high technology sectors.

Taking a practitioner viewpoint an archetypical example outlines; ‘the reality is that competitive advantage is often short term’ Eisenhardt and Martin (2000: 1117). Mahoney (2001) in discussing sustainable rents goes further in claiming that resource based theory is predominately based in the intermediate rather than the long term. It thus becomes apparent that the above adverse views may likely be reflective of the contrasts between short and more longitudinal perspectives between theorists. The implications of this arguably revolve around strategic planning horizons and the duration of such plans. In recognising how diverse sectors are subject to different planning horizons, (Barringer and Bluedorn: 1999), it is hardly surprising that the scope for planning will vary significantly between moderately dynamic environments and those that are categorised as high velocity markets. In recognising this, it is proposed that the planning horizon is clearly context dependent and can vary significantly between firms in diverse sectors. It is however evident that in fast moving environments a shorter planning horizon is more likely to be responsive to change and conducive to the creation of DC’s.

Zott (2003: 100) in drawing upon Eisenhardt and Martin (2000) contend that resources be they rare and valuable are none the less equifinal, and hence cannot be termed as inimitable or immobile contending that; ‘this quality implies that dynamic capabilities cannot be a source of sustainable advantage’. In critiquing Barney’s (1991) proposed sources of competitive advantage as valuable, rare and inimitable; it is suggested that these conditions only have a limited validity when applied to dynamic capabilities. In illustrating this contention Zott (2003) discusses how two firms may have identical dynamic capabilities but are able to build different resource positions. Where one firm has superior transfer capabilities they may be in a position to better leverage those skills in entering a more profitable market faster than its rival holding that; ‘even if the conditions of inimitability and nonsubstitutability of dynamic capabilities are violated, firms may build differential resource

positions, and these may account for differential performance' Zott (2003: 101). This is arguably suggestive of the role of managerial ability and cognition in identifying potential opportunities and the importance of transfer capabilities as a means of leveraging current abilities in conjunction with appropriate modification.

3.2 Preserving Heterogeneity

In pertaining to the proposition that sustainable competitive advantage is unachievable through DC's, (Eisenhardt and Martin, 2000) it is indicative that with the exception of monopoly positions there remains a testing onus on the organisation to continue to achieve a competitive advantage in the long term. Barney (1991) delineates that competitive advantage can only be termed as sustained after efforts at duplication by rivals has failed. This postulation somewhat mirrors Lippman and Rumelt (1982) where in an open market 'uncertain imitability' is the bulwark by which a firm can sustain a long term competitive advantage. To elaborate; this uncertainty is the ambiguity or lack of transparency on performance differentials that prompts the tentative nature of rival firms curbing attempts at imitation where; 'the factors responsible for performance differentials will resist precise identification' Lippman and Rumelt (1982: 418). The state of heterogeneity within the industry is thus preserved through these 'isolating mechanisms' allowing for organisations to excel upon the utilisation of their unique performance differentials. These limiting factors are discussed in similar terms by Peteraf (1993: 183) holding that; 'such uncertainty may limit imitative activity, thus preserving the condition of heterogeneity'. This heterogeneity arguably allows for differentiation among firms and as legitimate means of attaining competitive advantage assuming that the differential resources are valuable, rare and demanded in the market in accordance with the criterions drafted by Barney (1991).

It is argued that through the successful leveraging of such rare or valuable resources that the firm can curb the mobility of their competitors thwarting efforts of replication. Further to this it is proposed that higher level capabilities, particularly in the services sectors may provide additional protection from replication by rivals. These capabilities are discussed as dynamic marketing capabilities and addressed later in a subsidiary context.

These risks of replication as a considerable threat from the exogenous environment have been deliberated upon extensively in the literature (Nelson and Winter, 1982; Winter, 2003; March, 1991). This caveat facing the organisation concerns the considerable financial resources allocated to innovative R & D which may fail to payoff in the presence of rivals who merely engage in imitative practices. It is in accordance with this that Teece et al. (1997) outline how competencies will provide competitive advantage and generate rents where they are based upon a collection of routines, skills and assets that are difficult to imitate. This again arguably provides support for services capabilities, which can combine a series of competencies in delivering a differentiated and superior customer offering.

Akin to this it has been suggested by Nelson and Winter (1982) that where competencies are not imitatable they may not be overtly clear to the organisation that actually practices such competencies. This ambiguity is discussed by Dierickz and Cool (1989: 1509) where they observe the sometimes stochastic nature of resource accumulation, suggesting that; 'for some asset stocks it may be impossible to fully specify which factors play a role in the accumulation process, even for firms who already own these stocks'. This lack of clarity in the process of resource accumulation may be conceptualised in terms of *emergent* strategies as opposed to *deliberate* where; 'we relax the condition of precise, articulated intentions' Mintzberg and Waters (1985: 260). This open system moves away from the rational model holding that; 'the informal organisation is a spontaneous and functional development, indeed

a necessity, in complex organisations, permitting the system to adapt and survive' Thomson (1967: 7).

Miller (2003) discusses the 'sustainability-attainability' dilemma where in acknowledging conditions of equifinality it is contended that capabilities cannot remain a source of sustained advantage as competitors will merely replicate thus reducing market share for all firms. Miller (2003) instead puts forward his own hypothesis on sustainability, incorporating an internal search for what he terms *asymmetries*. The term refers to the skills, processes or assets that a firm is in possession of and cannot be replicated by rivals at a cost that allows for economic rents. In contrast to Porter's framework (1980); where external opportunities are assessed; it is suggested that the firm should examine itself internally in gauging what products or services it is in a unique position to provide. It is illustrated that such a process involves asymmetry discovery, development, and market matching in claiming; 'by weakening a standard RBV assumption it is possible to develop a more robust and practical view of competitive heterogeneity' Miller (2003: 962). A question arises however when we consider the flexibility needed in determining what divergent strategies the firm can feasibly pursue in light of current production and capabilities, assets owned and limitations. Such uncertainties arguably create concerns that need to be rectified within Millers (2003) framework. It is argued in response that by disregarding the importance of path dependencies a DC approach is essentially impractical and in practitioner terms unattainable.

3.3 Impact of the External Environment on Sustainability

A more cautious stance on the sustainability of DC's is taken by Winter (2003). Whilst ascertaining that the implementation of DC's can at times yield relatively sustainable advantage, he proposes it is the external environment that plays the decisive role,

emphasising how; ‘the idiosyncratic attributes of the individual firm affect its prospects in a particular competitive context’ Winter (2003: 995). In considering market prospects over a certain duration it has thus been suggested that DC’s can serve as a; ‘partial hedge against the obsolescence of existing capability’ Winter (2003: 994). Such partiality again reflects limitations on the feasibility of a long term sustainable advantage.

Mahoney (2001: 656) expresses further caveats on the sustainability debate in contending; “often the firm achieves sustainable competitive advantage (ie. sustainable rents) because it reduces opportunistic behaviour and allows for firm-specific investments”. This concept of opportunistic behaviour; akin to transaction cost theory has implications on profitability and sustainability, (Grossman and Hart, 1986). By internally producing materials through firm-specific investments the bilateral relationships needed for procurement from the market are vanquished thus creating greater potential for sustained profitability. Williamson (1981, 1999), discusses this in terms of independence from market determined pricing, allowing the firm greater flexibility in its operations. It is also noted that firm specific investments are likely conducive to preserving the state of heterogeneity of the firm.

3.4 Sustainability, Institutional Factors and Inertia

Oliver (1997) discusses the limitations of the resource based framework as a means of obtaining a sustainable competitive advantage. In claiming that in isolation such a framework is impractical, she instead proposes to include aspects of the institutional view in creating a model ‘of sustainable advantage that combines resource-based and institutional factors at the individual, firm, and interfirm levels of analysis’ Oliver (1997: 698). Such a proposition gives more consideration to social aspects in the firm, such as values, norms and accepted levels of behaviour. In a somewhat idealistic fashion; ‘the institutional view suggests that the motives

of human behaviour extend beyond economic optimization to social justification and social obligation' (Zuikin and DiMaggio 1990, cited in Oliver 1997). In adopting such a stance and considering organisations as 'compliant, habitual, unreflective and socially defined' Oliver (1997: 699); it clearly raises questions around such aspects as the responsiveness and flexibility of firms.

A pivotal concern is how a habitual and unreflective firm can be complementary to the resource based firm that recognises the need for a continually emergent system capable of thwarting rivals efforts of replication. This unresponsive firm arguably cannot accurately match itself to the market when issues such as 'institutional inertia' Carroll and Teece (1999) are considered.

In addressing these concerns of institutional inertia, Carroll and Teece (1999: 137) illustrate how; 'in the face of changing external circumstances, organisations adapt poorly or not at all; the economy and/or market evolves as much or more through changes'. It is further contended in the context of such organisation inertia and the subsequent lack of adaption to a changing environment firms are likely to become more homogeneous in the long term, (Carroll and Teece, 1999). By relaxing this criterion of heterogeneity of the firm as a factor in achieving a sustainable competitive advantage such as proposition essentially contradicts and discredits pivotal aspects of the RBV as opposed to acting as a complementary theory.

3.5 Reaching a Consensus on Sustainability

This paper illustrates that contrasting views on the sustainability issue continue to be debated within the literature. A central aspect of this debate is whether competitive advantage can be attained and implemented over significant time durations, and if this process is path

dependent. By acknowledging Helfat and Peteraf (2003) in their analysis of *capability lifecycles* perhaps an amicable synthesis may be presented. Contending that heterogeneity of capabilities is among the cornerstones of competitive advantage (Peteraf, 1993); it is the lack of a clear conceptual model explaining how this heterogeneity arises which causes debate. Helfat and Peteraf (2003) have addressed the stages in the capability lifecycle as; *founding*, *development* and *maturity*. This lifecycle depicts the possible paths available to the firm in relation to exogenous forces. These external factors may prompt branching into reconfigurations when; 'factors external to the capability have a strong enough impact to alter the current trajectory of the capability' Helfat and Peteraf (2003: 1004).

In addition to the primary stages of founding and development, further stages may consist of *retirement*, *retrenchment*, *renewal*, *replication*, *redeployment* and *recombination*. In upholding that such a framework is patterned and the capability can be implemented again, in accordance with the criterions set forth by Teece (1997), it retains its heterogeneity and path dependency through recognising; 'in each branch of the capability lifecycle, historical antecedents in the form of capability evolution prior to branching influence the subsequent evolution of the capability' Helfat and Peteraf (2003: 1000).

It is thus concluded that for firms in turbulent environments competitive advantage is best conceptualised in transitory terms as the firm is susceptible to external exogenous changes. The scope of the DC framework is proposed as a means of elongating this competitive advantage through continual renewing of capabilities in recognising the duration of capability lifecycles and the need for market responsiveness.

4.0 The Subsidiary Context

The scope and contribution of DC's are illustrated as an ability to modify, extend and reconfigure resource bases in accordance with exogenous change. (Teece, 1997; Eisenhardt and Martin, 2000; Helfat and Peteraf, 2003).

When conceptualised in a subsidiary context and acknowledging how vulnerable Irish subsidiaries are to relocation; there remains a testing onus on the subsidiary to modify its capabilities in retaining its foothold within the MNC. A need for local responsiveness and adaption is arguably a pivotal concern for the subsidiary, yet levels of autonomy are likely to be diminished amid turbulent economic conditions. Such restrictions may present difficulties in conceding that the subsidiary's adoption and implementation of a DC framework is particularly pertinent in the context of rapidly changing environments, where continual adaption and responsiveness is a requisite. It is therefore imperative that it be investigated how subsidiaries can, within the confines of their organisational structure, protect and enhance their position through building DC's. How subsidiaries can develop DC's and establishing the relationship between DC's and contribution is thus a pivotal area of analysis.

Hong Chung, Gibbons and Schoch (2006) discuss this dilemma in terms of creating firm specific advantages whilst simultaneously maintaining a global coherence. This dilemma is further confounded by the preferred financial metrics, rather than strategic objectives used to evaluate subsidiary performance, (Hong Chung, Gibbons and Schoch, 2006) and the consequential curbing of flexibility as a result.

The impact of structural inertia on organisational change is also a concern. In acknowledging how cognitive biases can create the tendency for precedents to become normative standards, such actions may considerably curb the ambition and creativity of subsidiaries in attaining their own idiosyncratic DC's, (Hannan and Freeman, 1984). It is argued that in relaxing the

criterions of bounded rationality a more flexible system, conducive to the creation of DC's is possible and favourable. Further to this, in recognising that structure is the fundamental means of achieving bounded rationality, (Thomson, 1967), it thus becomes apparent that the position the subsidiary holds within the MNC structure warrants critical consideration.

In addition to issues regarding autonomy aspects of managerial cognition are also an area deserving of discussion. The notion that DC's are contingent upon managerial cognition and ability has seen considerable attention within the literature. (Levitt and March, 1988; Tripsas and Gavetti, 2000; and Adner and Helfat, 2009).The importance of managerial ability has been emphasised where; 'capabilities, unlike resources, are based on developing, carrying, and exchanging information through the firm's human capital' (Cavusgil et al, 2007: 160). This stance essentially dictates that managerial cognition and evaluation through communication channels essentially forms the foundations on which DC's can be created. Ardner and Helfat, (2003) coin the term 'dynamic managerial capabilities' to describe the heterogeneous nature of managerial cognition, and suggest it may go some way in explaining differential firm performance. In acknowledging how non-technological assets, such as managerial aptitudes can essentially influence the direction of technology trajectories, (Dosi, 1982), it can be claimed that managerial cognition can equally be contributed to organisational inertia, (Tripas and Gavetti, 2000). It thus becomes apparent that managerial cognition can not only be accredited with positive differential firm performance; but also with a reluctance to change that can curb prospects for competitive advantage culminating in core rigidities, (Leonard-Barton, 1992). In recognising this, the importance of managerial capabilities and aptitudes are paramount to adequate and effective market responsiveness. It is in building upon this that viable higher order capabilities open to the subsidiary are discussed.

4.1 Finding the Niche

In considering how sister subsidiaries within the MNC are eager to move up the value chain, whilst enjoying more competitive labour rates, traditional recipes for success such as R&D building, innovation and quality delivery are no longer sufficient paths for sustainability, (Evans, Hagiu and Schmalensee, 2006). It is upon this dilemma that new and adaptive measures must be investigated, capable not only of putting Irish subsidiaries at the fore within the MNC structure but in cementing that position for future prosperity.

Edwards, Ahmad and Moss (2002) in their study of subsidiary autonomy; contend that despite many MNC's classifying their international operations as de-centralised a limited degree of autonomy was actually bestowed upon the subsidiary. This is reflected where; 'autonomy was limited, relating only to marketing and product strategy' (Edwards, Ahmad and Moss, 2002: 190). This is further recognised by Rugman and Douglas, (Cited in Edwards, Ahmad and Moss, 2002: 190), in holding; 'subsidiaries possessing regional marketing mandates offer host countries the most in terms of local management autonomy'.

It is upon this postulation that the scope for developing dynamic marketing capabilities is perhaps the most viable means for subsidiaries to develop the critical capabilities necessary to preserve their position within the MNC structure. This is in the context of an Irish environment, peripherally located, plagued by high labour costs and susceptible to turbulent conditions.

It is argued that the ability of the subsidiary to excel in valuable higher order capabilities will bolster their position within the MNC structure. In accounting for increasing levels of differentiation between subsidiaries, it is claimed that the relative importance of knowledge flows are becoming increasingly important, (Harzing and Noorderhaven, 2006). It is therefore essential that adequate knowledge transfer systems are in place if the subsidiary is to leverage

these higher order capabilities not only in gaining recognition, but in enhancing their position within the MNC. In evaluating how knowledge transfer can manifest itself in the performance of the recipient units, (Argote and Ingram, 2006) the scope for contribution to the MNC is not only feasible but explicitly visible within the structure. An example of this is outlined by Birkenshaw et al. (2002: 997) in their discussion of the role of *centers of excellence* within the MNC structure as; 'an organizational unit that embodies a set of capabilities that has been explicitly recognized by the firm as an important source of value creation, with the intention that these capabilities be leveraged'.

5.0 Building Dynamic Marketing Capabilities in Subsidiaries

In utilising marketing theory in a subsidiary context it is proposed that the firm capable of creating and utilising dynamic marketing capabilities are in a strong position to embed themselves within the local economy. Bruni and Verona (2009) hold that market knowledge, creation and diffusion may benefit the firm through support activities fostering new product creation and development processes. This is akin to Malik and Kotabe (2009) who discuss the efforts of government marketing support groups as conducive to the creation of DC's in emerging market economies.

The liabilities however, of excessively satisfying certain customer segments are addressed by Christensen, (2006) amid concerns of myopia. It is claimed that where considerable attention is paid to current customer segments it can curb the firm's responsiveness to new and emerging technologies. This concern is further accentuated if we consider the *hostage* scenario discussed within the transaction cost economics literature, (Williamson, 1983). In curbing such myopia Danneels (2002) contends that the adaptive firm should not merely focus on its current customer base but also invest in exploring new market segments which

offer potential. The very scope of this environmental scanning and adaptive behaviour is in line with the dynamic capability framework discussed earlier, (Teece and Pisano, 1994; Teece et al, 1997). In addition, and in recognising the overlap with entrepreneurship theory; Barringer and Bluedorn (1999: 423) comment on environmental scanning and intensity as congruent with the entrepreneurial process, this is manifested where a; 'focus on detecting shifts in environmental trends provide opportunities for new products and services'.

Vargo and Lusch (2004) argue the application of specialised knowledge and marketing skills as an intangible resource may constitute a viable route towards competitive advantage. This is discussed in terms of maximised customer involvement and customised product offerings. It is suggested however that such capabilities are more tangible than Vargo and Lusch (2004) suggest. Through adequate knowledge transfer and superior managerial capabilities the prospect of leveraging these skills becomes a possibility. In reflecting how organisations in emerging markets are often lacking in specialised skills, (Malik and Kotabe, 2009) the possibility of creating, building and leveraging dynamic marketing capabilities through knowledge transfer may constitute the viable means of protecting and ensuring the future prosperity of the archetypical Irish subsidiary.

Vorhies and Morgan (2005) discuss the process of benchmarking marketing capabilities as a key learning mechanism within the MNC. It is argued that identifying, building and enhancing marketing capabilities have the potential of delivering sustainable competitive advantage. Argote an Ingram (2000) discuss the use of *knowledge reservoirs* in the transfer of knowledge. The use of such collective knowledge resources within the MNC it is argued may go some way in achieving viable synergistic returns on the MNC's collective resources.

With regard to the diffusion of such dynamic marketing capabilities within the MNC the concept of *idiosyncratic bilateral synergy*, (Mahoney and Pandian, 1992), is suggested as a

viable means of delivering value through contributing to the MNC. The concept derived from theory on sustainable rents and the resource based view is suggested as a potential means of leveraging current combined resources whilst simultaneously contributing to the collective resource and capability bases of the broad MNC. It is further delineated that this is most likely to be achievable when knowledge is accumulated, articulated and codified in accordance with the criterions set forth by Zollo and Winter, (2002).

The contribution of this paper it is contended is that the creation and implementation of dynamic marketing capabilities is perhaps the most fungible option to subsidiaries operating in an Irish context. It is proposed that an emphasis based less on labour intensive service production, but moving more towards marketing proficiencies may hedge the subsidiary to some extent against current exogenous forces. As evidenced by recent partial closures of Irish plants, whilst opting to maintain their R&D and marketing functions; it is likely that the leveraging of such capabilities provides a critical platform for continued contribution to the MNC. This is conceptualised in terms of the collective contribution across various domains, with dynamic marketing support activities working in conjunction with the more traditional R&D processes providing the basis for bilateral synergy within the MNC. It is this argued that the emerging DC framework presents a potential value-creating option for the firm. Through the utilisation of existing collective resources combined with adaption and modification of new capabilities; notably dynamic marketing capabilities, a path dependent route to sustainability may be envisaged.

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