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Navigating in the Modern MNC: the Emergence of a Pilot Subsidiary Role

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ABSTRACT

Subsidiaries are increasingly urged to adopt narrower more composite parts of global value chains. The disaggregation of value chain activities into disjointed parts, as a growing trend may however have significantly negative implications for subsidiaries if a narrow focus curbs their capacity to develop independent initiatives -initiative being a highly contributory factor to subsidiary sustainability. In this paper we suggest that extending upon our understanding of the changes inherent in the modern MNC requires greater depth in the exploration of how narrower roles and the fine slicing of activities impact upon subsidiary strategy.

Using a multiple case study of ICT subsidiaries we uncover how these subsidiaries navigate and negotiate internal MNC environments in positioning for growth. Our findings illustrate an emerging *Pilot* or lead user subsidiary role; one that is largely mis-aligned from general strategy yet a continuously shifting source of value for the organization. Pilot subsidiaries avoided direct cost competition with sister subsidiaries, opting instead to continuously develop capabilities which could then be diffused to low cost counterparts within the collective organization. The disposal or surrendering of capabilities and activities served a dual purpose; firstly it allowed the subsidiary the physical space to adopt new value add activities, to keep abreast of technological change and to renew its position as *Pilot*. Secondly, by offloading activities to more commoditized players within the network the subsidiary was able to maintain their network position relative to internal competitors.

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INTRODUCTION

As global value chains become increasingly disaggregated the role of the traditional *national subsidiary* has been in steady decline (Buckey 2009; Ghauri and Buckley 2004). A trend toward the fine slicing of activities and greater integration of these activities across the MNC means it is often no longer viable for national subsidiaries to engage in a broad array of activities due to duplication of efforts and resources across countries and regions. In addition, more sophisticated ICT has enabled both greater monitoring and controlling of subsidiaries actuating the emergence of more narrowly defined implementer subsidiary roles (Ambos, Andersson and Birkinshaw 2010).

As subsidiary units move away from the 'mini replica' model (White and Poynter 1984) and engage in more specialized and narrow activities the manner in which we conceptualise subsidiary roles must also evolve. Recent conceptual work by Rugman, Verbeke and Yuan (2011) suggests that the existing overarching subsidiary roles offered by Bartlett and Ghoshal (1989) including strategic leaders, contributors, implementers and black holes have become redundant as subsidiary units cannot accurately be defined at an aggregate level. Instead it is argued, academics and practitioners need to recognise that subsidiaries, for the main part, engage in only fragmented parts of global value chains and that existing typologies directed at holistic value chains are of limited use in a modern context.

We argue that to build upon our understanding of the changes inherent in the modern MNC we need a greater depth in our understanding of how narrower roles impact upon subsidiary strategy and how location based advantages can exist in the *global factory* (Buckley and Ghauri 2004). In this paper we extend beyond the conceptual and adopt a cross case analysis in exploring these research imperatives. The subsidiaries examined share similar characteristics in that they have experienced a recent curtailment in the scope of their operations, have largely adopted more specialized roles yet not all of their roles could be classified as being *narrowly defined*. In fact some roles are largely undefined and experimental; sitting along the peripheries of global strategies.

We contribute to subsidiary research by integrating lead user theory (Von Hippel 1986; 1988; 2005), analogous to the findings that emerged, with insight from the capability lifecycles literature (Helaft and Peteraf 2003) towards conceptualising a lead user subsidiary perspective. Characteristic of this role, subsidiaries are essentially dis-aligned from general strategy and position themselves to be exploited by headquarters and used primarily as a test bed for capability development within the wider MNC. We refer to these subsidiaries as *Pilot* subsidiaries. Pilot subsidiaries scan for opportunities to develop new capabilities and engage in constant and creative process improvements before adopting and testing processes locally to validate their tangibility. Where significant initiatives or capabilities were created they could then be 'sold' to the parent thus demonstrating the value of the subsidiary. We believe this contributes to our understanding of why some western subsidiaries are able to survive and grow despite their lack of competitiveness with more low cost locations. In addition, as capability development is more accessible to a broader range of subsidiaries than R&D led innovation this provides a broader perspective of innovative subsidiaries than the literature suggests (Birkinshaw 1997; Bouquet and Birkinshaw 2008; Rugman and Verbeke 2001).

Our second major contribution is identifying how the strategic diffusion and disposal of activities by Pilot subsidiaries across the organizational network can serve a multitude of purposes. Firstly it allows the subsidiary the physical space to adopt new value add activities, to keep abreast of technological change and to renew its position as *Pilot*. Secondly, by offloading activities to less sophisticated and low cost based internal competitors the subsidiary is then able to reposition itself and develop the new capabilities it needs to stay constantly ahead of the mainstream MNC. This has significant implications for subsidiary management crucially aware of the necessity to adapt and renew their units' capabilities.

The paper is structured as follows. First we introduce the theoretical background of evolving MNC structures in conjunction with a discussion of capability development and lifecycles via a subsidiary lens. We then describe our methodology, before outlining the findings and advancing an emerging model of the Pilot subsidiary role. The paper closes with a discussion of our findings, applicability to management practice and suggested future avenues of research.

THEORETICAL BACKGROUND

The past three decades have seen considerable changes in how the MNC is conceptualised. Ghoshal and Bartlett (1990) identify the modern MNC as a federative structure characterised by autonomous units and dispersed assets whilst the emergence and recognition of the subsidiary as a site for innovation and initiative captures the changing roles *within* the modern MNC (Birkinshaw 1997; Frost, Birkinshaw and Ensign 2002; Rugman and Verbeke 2001). What the literature fails to address is how subsidiaries which cannot be classified as centres of excellence (Andersson and Forsgren 2000) or providers of global initiatives survive in modern dynamic environments.

A significant proportion of the international business literature and research has instead concentrated on the idiosyncratic features of the subsidiary as a contributor to the collective MNC. To date research has positioned the subsidiary as a source of firm specific advantage (Rugman and Verbeke 2001), as a source of initiative or entrepreneurial output (Birkinshaw 1997; Birkinshaw, Hood and Jonsson 1998), as a centre of excellence (Andersson and Forsgren 2000) or as a source of learning for the collective organization (Ambos, Ambos and Schlegelmilch 2006; Tsai 2001). A central facet in this growing body of literature is the idea that the subsidiary, through its initiatives and idiosyncratic capabilities, can influence strategy 'from below' (Andersson, Forsgren and Holm 2007). As subsidiary roles have evolved, it may be argued that so too have the rules of the game, where subsidiaries capable of leveraging their distinct capabilities have 'loosened the traditional hierarchical structure of MNC governance' (Mudambi and Navarra 2004, p.386).

A competing argument however holds that increased globalization and more sophisticated ICT enable headquarters to better monitor and control the operations of subsidiary units; creating significant challenges for the subsidiary to exert any bargaining power (Scott and Gibbons 2011). As subsidiary operations have become more visible and transparent not only has the need for the fully functional national subsidiary declined but their activities have been cut, reorganised and reconfigured. Thus far it is largely undetermined which of these two competing structural forms best captures the complexities of the modern MNC, much less how subsidiaries can provide value within marginal remits. Do subsidiaries operate within interorganizational and federative networks where subsidiary initiative and embeddedness dictates their role within the organization? Or does the global factory, characterized by a more transactional perspective capture a more accurate picture of a narrow and confined subsidiary role within the Modern MNC? In this paper we argue that an alternative explanation may shed light on how subsidiary units negotiate internal environments and elude the threat of closure. The scope for subsidiary units to develop initiatives may well be in decline but a specialized or narrow role does not necessarily dictate a narrowly defined focus, nor does it signal an unsustainable subsidiary position. The literature has long warned of the dangers of a narrow focus and of core competencies turning into rigidities (Leonard-Barton 1992). But if these narrow competencies are continuously shifting and being diffused as other new and valuable competencies are being adopted then there may be greater scope for the longevity of subsidiary operations. In addressing this point we now illustrate the linkages between the lifecycles of capabilities and evolving subsidiary roles.

Subsidiary Role Lifecycles

Helfat and Peteraf (2003, p.998) advance a framework of capability lifecycles as a means of understanding the evolution of capabilities over time; 'just as products have development paths that follow recognizable patterns, known as product lifecycles, so do capabilities'. Capturing the transitory nature of capabilities the framework recognises the need for continual adaption and renewing of capabilities and processes in accordance with industry development and evolution; making it particularly germane to high technology sectors. In acknowledging the shift towards more composite subsidiary roles as outlined above we argue that conceptualising the subsidiary as a *capability provider* is not only relevant but may better reflect the changes apparent in the modern MNC. As such, the subsidiary acts as a conduit in the founding, development and testing of capabilities throughout the organization. Conceptualizing the subsidiary in this manner also facilitates extending our understanding beyond the aggregate firm level in accordance with a recent call within the subsidiary literature (Rugman et al. 2011). In a sharp contrast to the *product lifecycle* advanced by Kotler (2002) we also suggest there may be considerably attractive opportunities concurrent with the maturity stage of the cycle; notably through the diffusion of existing capabilities and the adoption of new more higher valued activities. The merits of developing 'higher order' capabilities are firmly grounded within the emerging dynamic capabilities literature (Teece 1994; Winter 2003; Zollo and Winter 2002), which although constructive has largely been focused at an aggregate organizational level and has yet to be applied empirically to subsidiary research.

In summary, the literature demonstrates the evolving MNC structure and the changing subsidiary roles within that structure. What is fails to address is how more narrowly and specialized roles impact upon subsidiary role evolution and how, if at all, subsidiaries can negate these challenges. To address these issues our research questions were; How are western subsidiaries surviving; and how do they negotiate their network position?

METHODS

Research Design

We used an inductive multiple case study research design, allowing for more robust findings and the opportunity to develop more elaborate theory as; ‘corroboration helps researchers to perceive patterns more easily and to eliminate chance associations’ (Eisenhardt 1991, p.620). Using multiple cases also allows us to treat cases as experiments with each individual case either confirming or disconfirming the inferences drawn from the other cases (Santos and Eisenhardt 2009; Yin 2009). This process of comparing and contrasting data, revisiting the data in an iterative manner and through cross-case analyses provides a sounder basis for creating generalizable theory when compared with single case designs (Eisenhardt 1989; 1991; Eisenhardt and Graebner 2007; Yin 2009). In comparison with a single case study research design the emerging insights of multiple cases are better grounded, more accurate and theoretically transferable, increasing external validity (Eisenhardt 1989, 1991, Yin 2009).

Sampling

Sampling was not random nor it is claimed to be or representative; rather it is employed as illustration and therefore serves as a valuable starting point in the emergence of new theory. As indicated by Eisenhardt and Graebner (2007) if we were to test theory then random or stratified sampling would be appropriate, if however we wish to develop theory then theoretical sampling is expedient to the purpose. In accordance, organizations were purposely selected on the logic of replication (Siggelkow 2007). The research context which concentrates on subsidiaries and in particular on subsidiary strategy required in-depth discourses with the respondents in order to theorise from the data. Cases were selected if they were particularly useful in illuminating our understanding of subsidiary units within a carefully defined sector. More details on the ICT sector and its applicability to our study follow under 'Research Setting' below.

Our sampling incorporated three criterions for inclusion in the study – motivation, inspiration and illustration (Siggelknow 2007). The scope to provide a real and valid theoretical contribution motivated our study. It also offered the inspiration for further research if we are to contend that inductive research when done with rigor can serve as a foundation for subsequent theory testing and validation via quantitative methods. Finally the illustrative capacity of each of the organizations met our criteria for providing novel insights in extending our understanding of what happens internal to the MNC via a lens that extends beyond the conceptual. Our research design embeds three units of analysis: subsidiary strategy, capability creation and network positioning.

Our focal organizations were given pseudonyms to safeguard the anonymity and confidentiality of respondents (see table 1). Cases were first treated separately, conducting a single case analysis in accordance with guidelines by Yin (2009) and Eisenhardt (1989). This approach was useful in reducing the vast volume and richness of the data whilst also remaining familiar with each individual case (Eisenhardt 1989). Within this initial stage we identified idiosyncrasies within each case before comparing and contrasting patterns of data in utilising a cross case analysis. Each of the case organizations is now presented in isolation in providing the contextual backgrounds conducive to theorising from the data.

Epsilon was setup in Ireland in the early 1990's as a national subsidiary which included a sizeable manufacturing plant. As local labour costs rose, they gradually saw a large proportion of their operations move eastwards towards lower cost economies. What makes Epsilon an interesting case is how they managed to retain two broad yet unrelated activities;

sales and supply chain management. As an 'overlay organization' Epsilon coordinates and orchestrates both sales and supply chain management for the entire EMEA region whilst also offering training solutions for the collective organization. A lead subsidiary in supply and reverse supply chain management Epsilon develops and implements multiple supply chains across the EMEA region and continues to act as a command centre for these activities within EMEA and beyond.

Gamma was setup in Ireland in the 1950's as a national subsidiary also with an emphasis on manufacturing. Similarly to Epsilon they found their mandate significantly reduced over the 2000's and became conscious of the necessity to move to higher value activities. Whilst they maintain local sales responsibilities and a small R&D site their focus has undoubtedly been pushed towards positioning the site as a solution provider. By providing solutions to mounting escalations across the collective MNC Gamma have arguably managed to carve out a unique role for themselves. Conscious that their advantage is not location based however they also provide considerable training programmes and set high targets for the diffusion of knowledge objects across the collective organization.

Omega was setup in Ireland in the early 1990's to exploit low manufacturing costs and a favourable corporate tax regime. Omega has since established their role as a leader for process and capability development via a dedicated sub-division of manufacturing which focuses on technical engineering. A substantial differential between Omega and the other organizations sampled is reflected in their ability to retain significant manufacturing operations on site despite increased cost competition. This was largely attributed to a constantly shifting focus and prowess as lead manufacturers.

Sigma was acquired by their US based parent in the late 1990's as a means of extending operations into the European market via a 'follow the sun' staffing model. As a client facing service provider for the EMEA region they have since increased headcount almost ten fold and demonstrated considerable initiatives which have since been implemented at a global level. In broadening the scope of their operations they also implement sales and I.T. functions.

Research Setting

As a research site, Ireland's history of attracting high levels of foreign direct investment from MNCs, combined with its vulnerable location on the periphery of Europe, renders it particularly suitable for identifying shifts in organizational behaviour (Scott and Gibbons 2011). The ICT sector as a research setting was chosen as it accounts for approximately one third of Irish exports by value with a total of nine out of the top ten global ICT companies maintaining a presence on the island (ICT Ireland, 2011). As an industry in a constant state of flux the ICT sector also encapsulates the modern dynamic environments that subsidiaries must engage and compete in.

Data Collection

A structured discussion guide was developed in the months prior to conducting the research which was then tested and piloted using eight respondents across two separate organizations. Discussions with two industry experts also helped inform the structure of the discussion guide with informants feedback incorporated to refine the interview. This piloting phase as a crucial step in research design (Yin 2009) ensured we would gain insight into the specific areas of interest to our research inquiry. These areas encompassed subsidiary strategy, subsidiary adaption and initiative, capability development, internal competition and subsidiary performance. Our data collection then encompassed two primary data sources: archives and interviews. As an initial step archival data was gathered via internal and external sources. External sources included media published articles and papers about each organization identified using ABI Inform. Internal sources were gathered both prior to, and during the interview program. An example being the many visual aids used to describe local, regional and global hierarchies, cross functional teams and reporting structures. All of these sources were then analyzed and integrated in providing a contextual background to the study. In doing so, we initially integrate contextual factors into our explanation adhering to causal mechanisms employed and the contextual conditions under which they operate (Welch, Piekkari, Plakoyiannaki, and Paavilainen-Mantymaki 2010).

The data collection stage comprised of four phases: (1) study of archival data, (2) interviews with subsidiary middle managers, (3) interviews with senior directors/executives and (4) the study of further archival materials. Semi-structured interviews, a total of 23, were carried out over a six month period. The respondents ranged from 11 at a middle management level encompassing local and regional responsibilities to 12 at the senior/executive level whose responsibilities extended beyond regional. Respondent and archival sources are illustrated quantitatively in table 1 within the appendices. Interviews typically lasted between forty five minutes to two hours, all were recorded and transcribed verbatim using NVivo 9 software. Where issues arose regarding clarity or certainty of responses the interviewees were contacted again via email and phone to avoid any misinterpretation of the data.

Diversity in respondent hierarchical levels;

The ability and scope of middle managers to liase with top management arguably warrants greater attention within subsidiary research. This unique role of middle managers as mediators between strategy and operations (Nonaka 1994) is a crucial one, and one that has been largely overlooked within the subsidiary literature (Balogun 2003). Guiding our rationale for choosing middle management was the objective of examining capability development at the operational levels and to explore how change and adaption is adopted and incorporated into strategy. The potential for middle management to utilise their unique position, and to implement change is supported in the findings of Balogun and Johnson

(2004, p.523) where they found middle managers were; ‘recipients of change, as much as its implementers’. In acknowledging how respondents at the senior level, given their experience, are most knowledgeable informants in terms of organizational strategy, structure and performance (Hambrick 1981) interviews with senior management were also conducted. This was useful in triangulating the findings and verifying or refuting the responses of middle management whilst also in providing a broader contextual background to the study.

Analyzing the data

The data analysis stage was an iterative one, and was conducted concurrent with the data collection. As interviews were transcribed the emergence of new insights and themes helped inform subsequent interviews and allowed for the inclusion of emergent themes as well as those already existing in the literature (Miles and Huberman 1994). An initial open coding approach involved broad thematic codes which were then reorganised, merged and clustered. Second order coding then allowed the consolidation of linked themes so as to better understand the meanings embedded within. In addition to clustering themes together we dropped other themes which were deemed either irrelevant to the focus of inquiry or too idiosyncratic to the case mindful that ‘theory is only helpful if it can rise above the idiosyncratic case’ (Siggelkow 2007, p.21). Nvivo9 software was used to create a database of transcripts and all internal and external archival data assisting in the management of analysis in a consistent and systematic manner.

FINDINGS

Our findings are split into three distinct sections. The first of these sections presents findings pertaining to the environmental context in which the research was carried out. The second section looks at capability development and lifecycles via a micro analysis of subsidiary led processes. As a third and final section we advance a proposed framework for understanding the Pilot subsidiary role that emerged as a result of the inductive analysis undertaken in the study.

<u>Environmental Context & Current Challenges Facing Subsidiary Units</u>

We first report on the challenges facing subsidiaries within their current environments. In providing this contextual insight we believe these challenges are also applicable and extend to many western subsidiaries facing similar threats of relocation. High local costs were among the more significant disadvantages which the organizations faced. Gamma, Epsilon and Omega were well aware of how a high cost base relative to internal competitors impacted upon their competitiveness, as noted; *"you can see the strategy in Gamma is to move anything out to the East that can be moved out"* (Gamma, middle manager 2). The segregation of value chain activities and the consequent relocation of activities posed a very real threat to subsidiary sustainability; *"you have to constantly prove yourself, constantly being better than the others purely because it's viewed as that high cost area and you know everything's going towards India, China even within this region towards Croatia and Hungary"* (Gamma, middle manager 4).

In addition to high local costs which were ultimately attributed to the loss or curtailment of manufacturing activities in both Gamma and Epsilon, advances in ICT also weakened locational advantages as noted by one manager; *"technology means today that people can be based anywhere, once they've got the technology, laptop, desktop, phone - you can be based anywhere"* (Epsilon, middle manager 1). A realization that they must concentrate on higher value add activities was evident among managers. But heightened internal competition also meant that engaging in direct competition with sister subsidiaries was a risky strategy. Internal competition manifested in sister subsidiaries undercutting each other to influence where a product or service could be relocated. This ultimately prompted subsidiary management to operate along the peripheries, seeking their own potential window of opportunity and to avoid internal conflicts which could ultimately be resolved by a cost rationalized decision by the parent;

"anywhere where there is direct competition we try to move away from that really, because we can't compete. We can't compete in terms of costs… if we didn't push ahead and if we were competing for the same business in the same technology then we'd be struggling to compete" (Gamma, middle manager 3).

Capability Development & Lifecycles

Subsidiary managers spoke in very candid terms of the transient nature of capabilities and remits. This was particularly evident in Gamma and Epsilon, both of whom had recently experienced curtailments in the scope of their manufacturing activities. Uncertainty prompted management to adopt proactive rather than reactive approaches to chasing a sustainable future; citing examples of adaption, initiatives and innovations stemming from their respective sites. Conscious that not only did the subsidiary have to chase the higher value activities but that they also had to pursue new and innovative project trajectories meant that the window for planning ahead often posed significant challenges. Prior to the model that follows (Figure 1) we now address the distinct stages of capability development that emerged in the study. These stages within the cyclical framework comprise of; *proving capabilities*, *capability acquisition*, *capability development*, *capability sensing and seizing* and *capability disposal*.

Proving your capabilities -An initial step;

Fulfilment of historical roles was found to have a significant impact in extending upon current roles. The onus on the subsidiary to first prove their value was crucial, as noted in very pragmatic terms; "*the willingness to invest is delayed, so now we need results and then comes investment*" (Epsilon, senior manager 3). As resources are ultimately tied to activities, proving and extending upon current capabilities suggested a cyclical process whereby subsidiaries gained the resources required to fuel further capability development. As one manger in Omega reflected on a recent engineering feat; "*it has opened other areas to go after, opened new opportunities. It hasn't increased resources but it has spread resources*" (senior manager 2).

Capability acquisition – expanding the horizon

In exploring how management gained and acquired new capabilities we identified a shared common strategy of leveraging existing competencies and capabilities in aiming for the higher value activities and ultimately positioning the subsidiary as a contender for those activities. Leveraging proven capabilities and using "*the fact that you got grace or credit*" (Omega, senior manager 2) the subsidiary would then typically chase activities deemed as high value; "*we grow by using the projects that we've already worked on, we tend to focus more on the technologies we're good at, the technologies we've used and try to gain more expertise in them*" (Omega, middle manager 3). In both Gamma and Omega managers also showed considerable effort in identifying 'influencers' or advocates within the organization which would help in the gaining of new responsibilities.

Capability Development – demonstrating value

All of the organizations cited varying degrees of capability adaption, modification and development. In examining the scope and extent of capability development we asked managers how they engaged in process improvements. The responses ranged from using the local customer base as a 'test-bed' and R&D-ing within customer premises to engaging in cost-sharing research projects via collaborative efforts with sister sites. The latter process of coalescent knowledge creation (Reilly, Scott and Mangematin, forthcoming) would then serve as a foundation for the development of capabilities facilitated through the integration of new knowledge. Within Epsilon capability and process development was focused within areas that would provide the greatest exposure; notably in areas where capabilities could be diffused within the collective organization; "*we try to create a process that will work globally we do it once and we can deploy it in multiple locations*" (senior manager 2).

Slack resources, where available, were also utilized in the adaption of existing competencies; a strategy which could be perceived as particularly risky if the parent considered such use of resources misaligned with general strategy. This risk was largely considered a necessity although more pronounced within Gamma whose anecdotal responses to risk ranged from; "*it's better to ask forgiveness than seek permission*" (middle manager 4) to "*we have a different interpretation of the law*" (senior manager, 2). Cognizant of the risks of concentrating on too narrow an area another manager in Gamma discussed how they hedged their risks by typically focusing on a number of capability development strategies simultaneously; "*we could have five strategies running in a single year… with a view to constantly refreshing what we do and also with a view that practically speaking, never anticipating that all five would come to fruition*" (senior manager 3). Whilst risk was apparent across all of the organizations the extent to which the subsidiaries embraced it varied substantially.

Capability sensing and seizing –embracing change

In indentifying how subsidiary roles evolved over time we asked subsidiary management how change was adopted and opportunities undertaken and implemented. With the exception of Sigma where opportunity recognition was largely sporadic, all of the organizations demonstrated systematic approaches to scoping new opportunities. The systematic approach was particularly evident in the upper echelons of Omega where management regularly questioned; what are our strengths?, what can we do to build on these strengths?, and where can we grow? before driving the change towards meeting these objectives. Within Gamma managers referred to 'pyramids of competence' and within these pyramids establishing "*where we want to play*" (senior manager 2). Building upon the development of existing capabilities and leveraging internal 'influencers' the subsidiary would position itself so that;

"*when the decisions are being made as to where to put those people [activities] we can say look we already have a competence in it, we've been working on it*" (Gamma, middle manager 4). In Epsilon management adopted broad plans rolled out on an annual basis with a view to adjusting these plans on a quarterly basis; "*based on performance and based on opportunity*" (middle manager 1). A constantly shifting focus meant that they were always sensing new and novel applications of existing capabilities and the potential to extend upon them in new ways.

Capability Disposal – the diffusion and surrendering of capabilities

In exploring how capability loss, a largely under researched phenomenon (Birkinshaw 1996), sat within capability lifecycles we asked subsidiary mangers to describe the typical lifecycle of a capability or activity. As indicated by one senior manager in Gamma the lifecycle of a capability consisted of three distinct stages; the acquisition of that capability, utilization and finally the strategic disposal of that activity to more commoditized players within the collective organization;

"you should have a five year perspective on what is possible but the longest for what you can really plan for and for lining things up is two years. It will potentially take me two years to get the organization or the group here to secure that [activity] we'll probably stay in it for two years, so two years to get there, two years to do what you want to do and by the end of the forth year because of the rate of change it's probably time that you're moving on to the next thing at that stage and you start to hand over for another year to someone else in another part of Gamma - that you want to give what was completely new and innovative when you started and has now become mainstay and mainstream, give that to somebody who's more of a commoditized kind of player and you move on to the next new thing at that stage" (Gamma, senior manager 3).

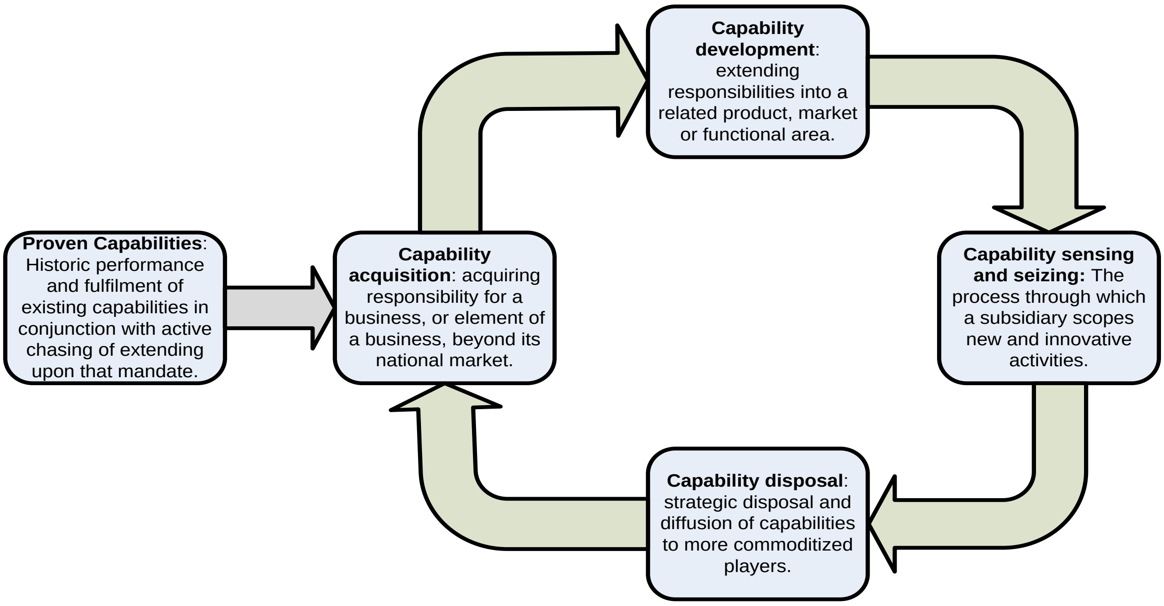
Whilst the timeframe varied the underlying strategy remained essentially the same with Epsilon also cognizant of the dangers inherent in holding on to an activity for too long. Akin to Gamma's disposal of activities, Epsilon adopted a similar underlying strategy with one manager stressing in very pragmatic terms; *"the way it works is that you prove your ability and then you pass that skill on to somebody else [another subsidiary] and you make yourself* *available"* (Epsilon, senior manager 2). The dangers inherent in concentrating on a narrow remit for too long were made quite apparent. Failing to recognise this, as contended by one manager in Omega, was where other organizations had failed; "*concentrating on one area has condensed their ability to move their capabilities from one area to the next, use them, be it exploit them… to go on and move and prove yourself in the next area*" (senior manager 2). Conscious that not only did the subsidiary have to chase higher value activities but that they also had to pursue new and innovative project trajectories meant that the scope for planning ahead often posed significant challenges; new and novel opportunities had to be adopted whilst simultaneously diffusing existing remits within to other sites within the organization. Capabilities were developed and sequentially diffused or 'spun'; *"I suppose now it's more focused on developing something, spinning it, developing something else, spinning it… and that is borne out of a necessity factor because if we become commoditized here we're gone"* (Gamma, senior manager 3). A focus on shifting technologies and continuously positioning the subsidiary as being ahead of the mainstream MNC was particularly evident in Gamma;

> *"in Ireland we will continiously aim every year to shift technologies slightly… there's a whole pile of different, separate sub-competencies within that and every year there will be a couple of those that will be taken off - they're not strategically important for us, they will be going off to some centre in China perhaps and we'll be aming for the latest and greatest, whatever it might be, you know some emerging technology as an example"* (Gamma, middle manager 1).

<u>Evolving towards the Pilot Subsidiary Role -</u>

The Pilot Subsidiary framework which follows advances the cyclical process by which a subsidiary builds upon initial responsibilities in its core mandate before extending and developing that mandate. Partially overlapping with the development and utilization of current mandates the subsidiary must sense and seize new opportunities for development before diffusing and disposing of current activities which positions them with a favourable scope to adopt and implement new activities.

Figure 1. The Pilot Subsidiary Role



(Adapted from Birkinshaw (1996), model of mandate lifecycles. Original model: *mandate gain*, *mandate development* and *mandate loss*)

Capability acquisition; is the process by which the subsidiary takes responsibility in a business, or element of business, beyond its national market. In building upon historical performance the winning of new activities is an initial step in a cyclical process allowing the subsidiary the scope to further demonstrate their value. As resources are ultimately tied to activities this also means the subsidiary can retain headcount and access the required resources conducive to capability development.

Capability development; is the process through which a subsidiary extends its mandate responsibility into a related product, market or functional area. It also provides a platform by which the subsidiary can develop and extend upon existing capabilities in providing value to the organization. This process through which the subsidiary adapts, improves and implements the development of its capabilities mirrors the *higher order* capabilities within the dynamic capabilities literature (Teece 1994; Winter 2003; Zollo and Winter 2002).

Capability sensing and seizing; is the process through which a subsidiary scopes new opportunities in novel areas or emerging technologies. Sensing and seizing opportunities in nascent fields is a crucial step in gauging how subsidiary units can adapt and develop new capabilities to add value. Overlapping with the capability development stage it is crucial that new and novel activities are identified and positioned for before the disposal of existing activities. This is a multifaceted process whereby new activities are sensed and seized concurrent with the disposal of others.

Capability disposal; is the process through which a subsidiary strategically disposes and diffuses capabilities to more commoditized players within the organization. This serves a multitude of purposes. Firstly it allows the subsidiary the physical space to adopt new value add activities, to keep abreast of technological change and to renew its position as *Pilot*. Secondly, by offloading activities to more commoditized players within the network the subsidiary can maintain the status quo and their position relative to internal competitors.

DISCUSSION

In recognising the changes apparent in the modern MNC we contribute to the study of how narrower and more fragmented sets of activities impact upon subsidiary strategy. With a reduced scope to develop initiatives or innovations the manner in which subsidiaries can provide value to the MNC becomes increasingly uncertain. A growing onus upon subsidiary units to deliver above and beyond their immediate remit further accentuates the challenges facing subsidiary management. Our research question asks 'How are western subsidiaries surviving; and how do they negotiate their network position?'. By incorporating and integrating theory on both capability lifecycles (Helfat and Peteraf 2003) and lead users (von Hippel 1986, 1988, 2005) we believe we can begin to make sense of how some western subsidiaries have managed to consistently and continuously adapt upon their core remits and enjoy longevity of operations.

Conceptualising the subsidiary via a lead user lens

In our inductive approach, and in trying to make sense of emerging insights through the recursive cycling of data and revisiting the literature germane to the phenomenon (Eisenhardt and Graebner 2007) we found our conceptualisation of a Pilot subsidiary role analogous to the literature on lead users (Von Hippel 1986; 1988; 2005).

Von Hippel (1986) refers to lead users as the drivers of innovation in fields of rapid change. Within this literature we identify with the role of prominent users of technology; users that are not only close to the problem but likely to have significant input into process improvements. Lead users can be identified as having two distinct characteristics: (1) they are at the leading edge of an important market trend(s), and so are currently experiencing needs in that market. (2) They anticipate relatively high benefits from obtaining a solution to their needs, and so may innovate (von Hippel 2005, p.21). The term 'user' is often synonymous with an end user or customer, in accordance we clarify the term in the context of conceptualising the role of the lead user subsidiary with the aid of an example. Boeing is first and foremost a manufacturer of aeroplanes but it must also use a myriad of interrelated tools and capabilities within its manufacturing processes. If we were examining innovations or capabilities developed by Boeing for the planes it sells we would consider Boeing a manufacturer-innovator, if however we were considering innovations developed by Boeing for in-house use in the building of planes then we would consider Boeing as a user-innovator in those cases (von Hippel 2005, p.03). We make the analogy between components in a manufacturing process, such as that in the Boeing example and the fragmented sets of activities which the modern subsidiary engages in. In the context of fragmented value chains and subsidiary input into the collective organization it is this latter categorisation we adopt in this study, that is, the role of the subsidiary as a potential user-innovator within the wider organization. The subsidiary capable of providing innovative solutions benefits directly from innovations be it capability, knowledge or mandate based. The positive relationship between proven subsidiary based capabilities and mandate expansion and accession captures this point (Birkinshaw 1996). As Pilot subsidiaries are positioned to benefit directly, in enjoying longevity of operations, they demonstrate a greater propensity to take risks. Operating within the peripheries they may also be less visible and susceptible to scrutiny by the parent, a factor that is particularly important given that increasingly sophisticated and cheap ICT has been found to be a significant barrier to subsidiary initiative (Scott and Gibbons 2011) whilst also prompting greater monitoring and controlling of subsidiary operations by the parent (Ambos et al. 2010). The element of risk is abated as contingencies are focused at the subsidiary level and therefore not reflective of a mis-aligned headquarter strategy. In accordance, we suggest the Pilot subsidiary can consequently act as an effective channel for capability creation, development and testing.

We also advance a framework for understanding the Pilot subsidiary role, building in part upon Birkinshaw's (1996) mandate lifecycle framework. A caveat, and a counter intuitive finding advanced is that subsidiary units may in fact actively seek to surrender activities for relocation to lower cost economies. We believe this is as much at the behest of the parent, in terms of cost rationalization as it is aligned with a cyclical subsidiary strategy of the strategic disposal of commoditized activities.

Limitations and Future Research

As typical of case study research a larger number of organizations in the sample may have reinforced the study and extended the transferability of the findings. Also, in concentrating on one industry sector within a defined geographical space it is hoped that further research could build on the concepts developed in this paper and extend upon our understanding of subsidiary strategy and the emerging Pilot role in a variety of different industry settings and locations. An area that warrants further attention is examining how subsidiary units resolve the inherent tensions between aligning with headquarter goals and objectives whilst adopting a Pilot role. By adopting a Pilot role is the subsidiary risking the categorization of an unruly node in the MNC network, or is the perceived value of capability creation, development, testing and diffusion adequate in quelling headquarters concerns over subsidiary strategies which are distanced from general strategy. Research which addresses these questions may invigorate the use of the responsiveness versus integration paradigm (Prahalad and Doz 1987) within the domain of subsidiary research.

Implications for Subsidiary Management Practice

Using a Pilot subsidiary perspective our findings highlight a potential avenue by which subsidiary units can provide value to the organization whilst circumventing direct internal cost competition. Subsidiary managers are critically aware of the need for their unit to demonstrate value within their organization, to challenge for resources and to position for the future; our study identifies an effective subsidiary strategy to not only protect their operations but also to navigate and negotiate the internal MNC environment in positioning for future growth. As western subsidiaries face more acute internal competition from their lower cost peers new and novel ways of engaging and competing within the MNC need to be conceived, assumed and implemented. Focusing on higher value adding activities with a constantly shifting focus may be a risky subsidiary strategy but it is arguably one that curbs the threat of relocation of activities or closure.

CONCLUSION

In identifying current challenges and how existing subsidiary typologies have become largely redundant the purpose of this paper was to examine how western subsidiary units negate current challenges and position for growth. An integral feature of this study was to specifically explore how a narrower focus impacted upon subsidiary roles and strategic independence. In advancing a model of the Pilot subsidiary role we believe this paper provides an initial step towards a better understanding of evolving subsidiary roles and how subsidiary units can better utilize and leverage those roles.

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Table 1. Case Study Data

Case organization	**Number of middle manager interviews**	**Number of senior-level interviews**	**Archival Sources** (approximate number of pages)
Epsilon	**3**	**3**	**350**
Gamma	**3**	**4**	**400**
Omega	**3**	**2**	**350**
Sigma	**2**	**3**	**200**
Total	**11**	**12**	**1,300 (approx)**