



Implementer or Global Innovator:

Factors that Influence Subsidiary Innovation within a
Multi-National Corporation

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Abstract | Implementer or Global Innovator: Factors that influence subsidiary innovation within a Multi-National Corporation

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Subsidiaries of Multi-National Corporations (MNCs) exist to deliver a mandate as assigned by the parent company upon their inception. The scope of this mandate varies according to the strategic planning of the parent company and the ambition of the subsidiary unit itself. There is considerable evidence to support the idea that for a MNC to develop and grow that they must harness the innovative ability of the subsidiary network. Additionally there is significant evidence to suggest that a subsidiary that does not seek to innovate and develop their mandate will ultimately contract to the point of non-relevance and non-existence. These factors place a responsibility on both the parent company and the subsidiary to seek to innovate in order to develop the global MNC business.

What are the factors that affect a subsidiaries ability to innovate effectively? How are these innovations transferred and adopted by the global MNC. This paper seeks to identify the most important factors and to some extent categorise their relevance with regard to successful subsidiary innovation. This study looks at the six most documented elements that affect subsidiary innovation. These elements are presented in a conceptual model for the purpose of testing their relevance, whilst also looking for other factors which may affect subsidiary innovation. This research case study interviewed senior management in subsidiaries of a MNC with a view to discovering their views on the elements of the proposed conceptual model.

The research finds that there is considerable weight given to innovative practices across the multi-national corporation, in particular subsidiary management value and promote innovation within their business units. However, there is considerable gaps in the formal process of encouraging innovation and how innovative practices are transferred to the global MNC. Furthermore, it is identified that innovation is directly related to the mandate as assigned by the parent company. Thereby leading to a significant finding, that innovation at subsidiary level is largely driven by the actions of the parent company. Innovation can be mandated, and in situations where it is, it flourishes. Conversely, where a basic mandate is prescribed by the parent company, innovation at subsidiary level is sporadic, inconsistent and unreliable.

Many gaps in the current literature are exposed in the area of the study of subsidiary innovation, which led to the many recommendations for future research.

Declaration

I, Derek Malone, declare that the work being submitted for examination is wholly my own work and that all materials consulted and ideas garnered in the process of researching the dissertation have been properly and accurately acknowledged.

A handwritten signature in black ink that reads "Derek Malone". The signature is written in a cursive style with a large, looped initial "D".

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Contents

Abstract.....	2
Declaration.....	3
Acknowledgements.....	4
List of Figures	7
Chapter 1 - Introduction	8
1.1 Research Background.....	8
1.2 Research Objective	9
1.3 Research Design	9
Chapter 2 - Literature review.....	10
2.1 Introduction	10
2.2 Literature	10
2.3 Head Office Assignment.....	11
2.4 Parent Subsidiary Relations	14
2.5 Stages of evolution of the subsidiary.....	19
2.6 Subsidiary Choice	20
2.7 Local Environment Determinism.....	21
2.8 Research Question	24
2.9 Origins of the Proposed Conceptual Framework.....	25
Chapter 3 - Research Methodology	26
3.1 Introduction	26
3.2 Case Study Strategy	26
3.3 Philosophy.....	27
3.4 Trustworthiness in Qualitative research.....	28
3.5 Primary Research Questions.....	29
3.6 Sample Population.....	30
3.7 Time Horizon.....	30
3.8 Research Instrument.....	31
3.9 Procedural Method	31
3.10 Open questions and explanation	32
3.11 Data Analysis.....	34
3.11 .1 Analysis Technique.....	34
3.12 Ethical Considerations.....	35
3.13 Limitations.....	35
Chapter 4 – Findings and Results.....	37
4.1 Introduction	37

4.2 Questions and selected interview excerpts.....	38
4.2.1 Subsidiary Management Interviews	38
4.3 Content Analysis	45
4.3.1 Case 1 – Ireland – Context and Themes.....	45
4.3.2 Case 2 – Germany – Context and Themes	47
4.3.3 Case 3 –USA– Context and Themes	48
4.3.4 Case 4 –UK– Context and Themes	49
4.3.5 Case 5 –Switzerland– Context and Themes	50
4.4 Cross-Case Analysis	51
Chapter 5 – Conclusion & Recommendations	52
5.1 Introduction	52
5.2 Autonomy	52
5.3 Parent-Subsidiary Communication	53
5.4 CEO Strategy	53
5.5 Capability	54
5.6 Local Competition	54
5.7 Subsidiary Maturity.....	55
5.8 Challenges to Innovation	55
5.9 Discovery.....	55
5.10 Model Re-design	56
5.11 Practical Implications and Limitations	57
5.12 Recommendations for future research.....	58
5.13 Conclusions	59
References	61
Appendices.....	66
Interview Questions.....	66
Agreement	68

List of Figures

Figure 1 - Birkinshaw and Hood (1998) Organising Framework for Subsidiary Evolution.....	10
Figure 2 - Birkenshaw (1997) Conceptual Model of the subsidiary and three types of initiative	12
Figure 3 - Birkenshaw (1997) Levels of factors affecting innovative behaviour and the area of application	13
Figure 4 - Gupta and Govindarajan, (1981) – Variations in subsidiary contexts: A Knowledge Flows-Based Framework	17
Figure 5 - Stages of development of subsidiary (Delany and Molloy, 1998)	19
Figure 6- Ghosal and Nohria (1989) Classification of subsidiary context and nature of interdependency and dependency in each context	22
Figure 7- Proposed Conceptual Framework for Study.....	25
Figure 8 - Revised Conceptual Model	56

Chapter 1 - Introduction

1.1 Research Background

Subsidiaries must evolve through entrepreneurship and innovation to maintain relevance and evolve within the Multi-National Corporations (MNC); otherwise, they could contract or die (Delany and Molloy, 1998).

Simple subsidiary development is no longer sufficient due to globalisation, international divestment, rationalisation, mergers and acquisitions (Birkinshaw and Hood, 1998). The effect of these factors lead to changes in the make-up of the MNC subsidiaries. However, subsidiaries can carry out different tasks and implement processes in different manners through which innovations can be created and institutionalised in MNCs (Ghoshal and Bartlett, 1988).

Traditionally subsidiaries of MNCs have been viewed as units, which only deliver upon existing corporate goals, prescribed mandates and strategies as designed by headquarters. There is evidence to suggest that the success of the MNC is dependent on its ability to leverage the dispersed knowledge and innovative potential of its subsidiaries (Reilly and Sharkey Scott, 2014).

Birkinshaw (1999) identifies that subsidiaries, are usually started with the goal of servicing their local market, by selling the products or services of the parent company. As the subsidiary develops their own resources and capabilities, they can adapt to take on additional responsibilities creating new opportunities and capabilities with which the whole of the MNC organisation can draw on (Birkinshaw, Hood and Jonsson, 1998).

Key to success is the enablement by headquarters (HQ) of subsidiaries to innovate. Subsidiaries can be uniquely positioned geographically or have unique skills which could add value to the whole organisation through innovation and development of new initiatives which may have global application or potential (Birkinshaw, Hood and Young, 2005).

Rugman and Verbeke, (1992) research identified that the majority of firm-specific advantages of the MNC originate in the parent company. However, there is a large body of literature that supports the idea that subsidiaries, through their exposure to an idiosyncratic network of relationships and local opportunities can add considerable value to the MNC. Through strategic initiatives, knowledge creation and/or problem solving activities (Ghoshal and Bartlett, 1990; Birkinshaw and Hood, 1998; Ambos, Andersson and Birkinshaw, 2010).

There is also evidence that subsidiaries have the ability to evolve their role within the MNC and not just be passive acceptors of their fate (Birkinshaw, Hood and Jonsson, 1998; Birkinshaw, 1999;

Delany, 2000). Subsidiary management have the ability to drive innovation through their capacity to allocate resources or through increased investment from the parent company (Young and Tavares, 2004).

The evolution of subsidiaries and how they evolve and deal with this increased mandate has been the subject of studies by Birkinshaw and Hood, (1997) and Delany and Molloy, (1998). Central to the evolution of subsidiaries is the idea that it can be driven from within (Birkinshaw and Pedersen, 2001).

A Hakala, Sirén and Wincent, (2016) study provided empirical evidence that subsidiaries with an entrepreneurial orientation can indeed be a source of competitive capability for the complete MNC.

In nearly all cases headquarters controls the overall MNC strategy and coordinates organisational operations of the company. However, subsidiaries will develop local strategies to respond to local opportunities (Birkinshaw, Hood and Young, 2005). The subsidiary management's willingness to drive strategic initiatives has been identified as key to subsidiary development. By championing new ideas and sponsoring initiatives subsidiary senior management have the opportunity to increase the subsidiaries mandate (Birkinshaw and Hood, 1998).

The growth of scope of a subsidiary is the increase in the variety of activities undertaken at a subsidiary site on behalf of the parent organisation, this is key to the strategic development of the subsidiary (Delany and Molloy, 1998).

1.2 Research Objective

This study seeks to examine the main factors that can influence the ability of multinational subsidiaries to evolve their original mandate from being simply implementers of corporate strategy to become global innovators. If innovation development at subsidiary level is key to the success of the MNC, then it must be tangible and measurable. This study focuses on identifying factors that influence a subsidiaries ability to innovate, and thereby add value to the MNC network.

1.3 Research Design

The approach to research is through the generation of a conceptual model, based on the current MNC subsidiary innovation literature. The current available relevant literature is reviewed within the literature review chapter. The conceptual model is tested in semi-formal interviews of multiple subsidiary management to validate the elements and give weight to each of them. Any other influencers that are observed are also recorded and presented. The results are presented in the results and findings chapter. The results are then discussed in the discussion chapter. Finally, conclusions and recommendations for future research are presented.

Chapter 2 - Literature review

2.1 Introduction

A central researcher in the area of subsidiary innovation and entrepreneurship is Julian Birkinshaw a professor of strategy and entrepreneurship in the London Business School. His findings are central to understanding subsidiary-parent relationships and innovation. The models he has developed form the origin of the conceptual model developed. Other important models are detailed such as the Delany and Molloy, (1998) stages of evolution of a subsidiary, and the Gupta and Govindarajan, (1981) model of the network of knowledge transactions between headquarters and subsidiary. These are used to assess the current status of the subsidiary with a view to correlating their stage of evolution and their propensity for innovation.

2.2 Literature

Birkinshaw and Hood (1998) suggested a framework for subsidiary evolution, which encompasses three distinct factors which influence the subsidiaries role over time. These are “head office assignment”, “subsidiary choice” and “environmental determinism”. The importance of these factors has also been emphasised by Paterson and Brock, (2002). The purpose of the review is to examine each of these factors and their evolution to discover the variables which contribute to the success or failure of each element. The main factors can then be used to create a conceptual framework, which can be tested with industry actors.

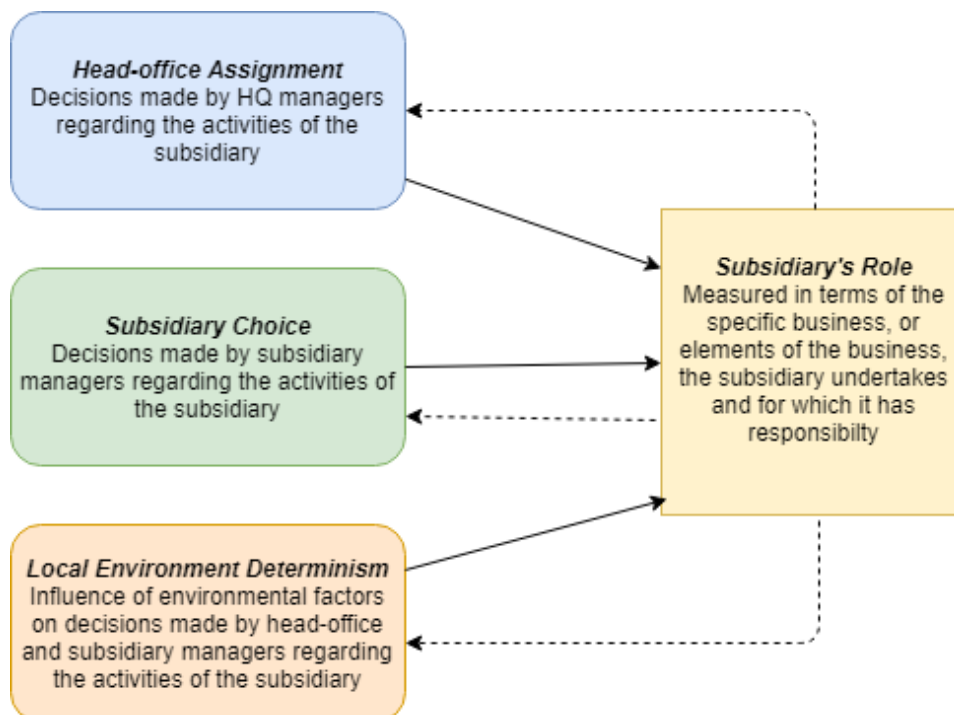


Figure 1 - Birkinshaw and Hood (1998) Organising Framework for Subsidiary Evolution

2.3 Head Office Assignment

The first factor “Head office assignment” has been an important focus of the literature. It is concerned with the level of autonomy a subsidiary is granted to activate initiatives independently of headquarters. It is determined that subsidiary activities are largely dictated and controlled by the parent company (Bartlett and Ghosal, 1990). Strategic decision-making as well as co-ordination of activities across the MNC are part of the headquarters responsibilities. Head office has full oversight of the complete organisation and is often best placed for defining strategic imperatives for the whole company, and therefore has unique perspective on how best subsidiary resources should be applied to achieve those strategic goals (Bower, 1970).

Due to the importance of head office assignment, the characteristics of the parent subsidiary relationship have profound implications for the ability of the subsidiaries ability to innovate (Birkinshaw and Hood, 1998).

2.3.1 Subsidiary Autonomy

Studies have shown that subsidiaries with high levels of decision-making autonomy show a strong correlation with increased level of initiative (Hakala et al., 2016). The Ghoshal and Nohria, (1988) study also demonstrated a significant correlation between subsidiary innovation and local autonomy and local resources. The results of these studies demonstrate that autonomy is a key theme applied to innovating subsidiaries. Even earlier empirical research also indicated that autonomy is positively associated with greater innovations in the MNCs’ subsidiaries (Ghoshal and Bartlett, 1988).

It is necessary for a MNC to be open to flexibility and strategic autonomy at the subsidiary level in order to be innovative and be responsive at the global level. Subsidiaries with low levels of local autonomy are unlikely to create or diffuse initiatives. Companies with high levels of centralisation to HQ will impede the organisations abilities to create innovations (Ghosal and Bartlett, 1988).

It is considered advantageous for MNC’s to try to leverage the talent within subsidiaries for innovation and entrepreneurship to advance the whole organisation. A MNC that does not attempt to utilise subsidiaries in this way are missing a significant potential resource. If an MNC is to effectively utilise its worldwide resources, it must first identify what the resources are and where they are located (Ghoshal, Sumantra and Nohria, 1986).

Prahalad and Doz (1987) observed, “Innovation and entrepreneurship tend to flourish when organizational arrangements allow for “freedom to act”. Direction of people through command and control leadership is the least effective way to direct the efforts of an organisation (Lesley, K., Loch, M. & Schaninger, 2006). In the emerging global markets, the harnessing of the intellectual firepower,

creativity and drive of subsidiaries will be an essential competitive weapon (Delany and Molloy, 1998).

For a parent company to facilitate subsidiary evolution there must be allocation of resources, acceptance of change to the subsidiaries mandate and a willingness to accept increased subsidiaries autonomy. Indeed subsidiary entrepreneurship can be severely impeded in situations of high central control (Bartlett and Ghoshal, 1986). Therefore it can be seen from the literature that there is a clear link between the level of subsidiary autonomy and their ability to innovate.

Birkinshaw (1997) conceptualised the model of markets in which a subsidiary could develop initiatives and apply them to three different markets in which the subsidiaries operate. The local market where subsidiaries satisfy the needs of customers deal with local competitors and regulations. The global market where initiatives could be applied to the entire MNC operations, and finally the internal market dealing with peer subsidiaries and the parent company.

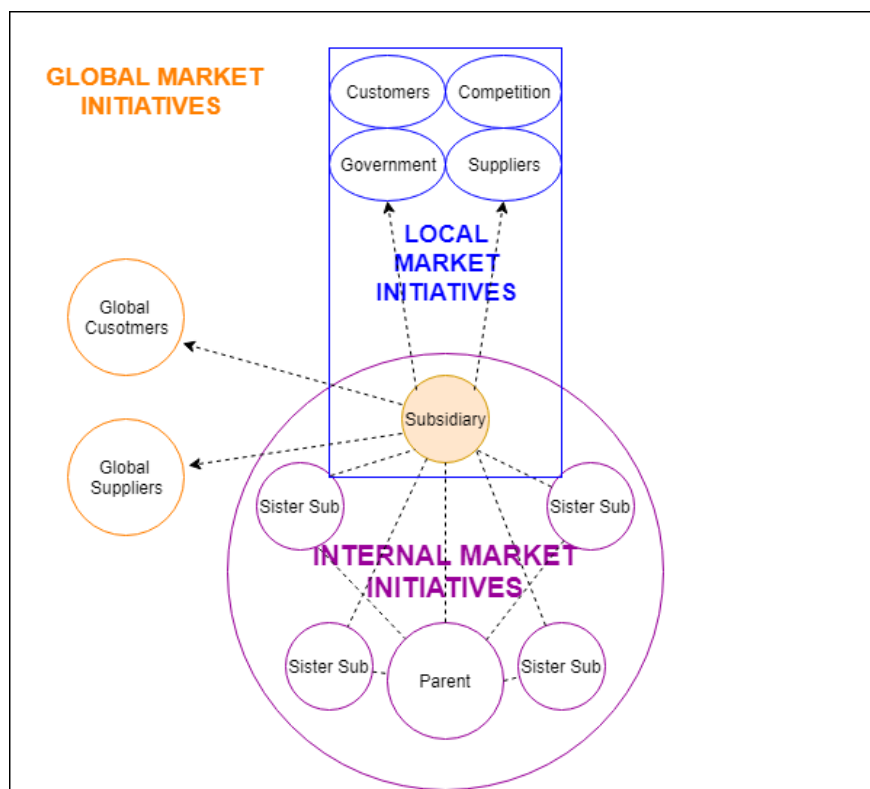
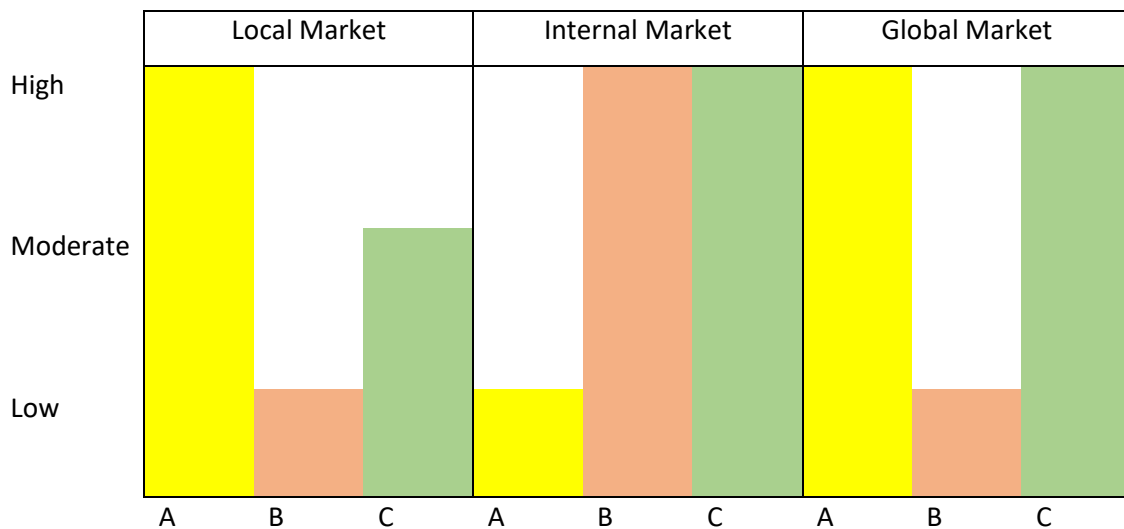


Figure 2 - Birkenshaw (1997) Conceptual Model of the subsidiary and three types of initiative

The findings from the Birkenshaw (1997) study show that a subsidiary can engage in innovative practices within any of the markets it exists. The study also observes that in order to create market initiatives, certain facilitating conditions must be met. The level of each will determine if innovative behaviour is likely to occur. These facilitating conditions and the likely outcomes are summarised in Figure 3.



- A = Autonomy from parent company
- B = Parent subsidiary communication
- C = Level of proven resources (strong, medium, poor)

Figure 3 - Birkenshaw (1997) Levels of factors affecting innovative behaviour and the area of application

For example to facilitate local market initiatives, the subsidiary should have high autonomy, low quantitative parent – subsidiary communication and moderate level of proven resources. To facilitate internal market innovation the subsidiary must have low autonomy with respect to headquarters, high levels of quantitative communication, and strong proven resources thereby providing good credibility for the subsidiary initiatives.

The promotion of subsidiary initiative has been identified to be at odds with the increasing demands of financial markets. Corporate headquarters are being required to give clear messages about financials, future business plans and profitability forecasts with exact information from every business division. Granular detail on product changes, market segment and subsidiary performance are being requested by financial analysts from headquarters (Birkinshaw *et al.*, 2000; Rugman and Verbeke, 2003). This is the greatest paradox for a global business in the 21st century. On one hand the governance of MNCs is increasingly complex. Knowledge is dispersed amongst all business units, subsidiaries which require some level of autonomy to produce initiatives and the capability to resource these initiatives. Constrained by the increased demands of financial markets for central accounting, simplified and transparent operations, cost minimisation and short term financial success (Rugman and Verbeke, 2003). Therefore, the literature suggests that capability of resources is a determinant factor in the subsidiaries ability to innovate.

The role of headquarters in MNCs is multifaceted and the literature discusses varying role classifications. Being described as value creator and loss preventer (Chandler, 1991), being the developer and coordinator of the organisations innovative activities (Dhanaraj and Parkhe, 2006), managing resources (Dellestrand and Kappen, 2012), and as organising transfer of knowledge across the organisation to obtain maximum benefit for all business units (Parmigiani and Holloway, 2011).

A subsidiary's ability to innovate is negatively affected where there are poor communication lines with headquarters and perceived low level of credibility within the MNC (Bartlett and Ghoshal, 1986) It can be concluded from the literature that the level and quality off parent-subsidary communication can affect the subsidiaries ability to innovate.

2.4 Parent Subsidiary Relations

Collis and Montgomery (1999) argue that a MNC headquarters should be primarily concerned with the creation and maintenance of the corporate strategy of the business. The production of corporate strategy is borne from the analysis of resources, tangible and intangible, which can distinguish the organisation from its competitors. Although a headquarters tends to possess hierarchical power, for successful operational purposes it is necessary for it to share its knowledge with its subsidiaries for basic operation of the subsidiary (Ghoshal and Bartlett, 1990). The degree to which knowledge is communicated to the subsidiary is dependent on the parent-subsidary relationship.

2.4.1 Dyadic Parent – Subsidiary Relationship

The relationship between the headquarters and the subsidiaries has repeatedly been described in research as a mixed motive dyad, (Birkinshaw *et al.*, 2000) where the interests and perceptions of each party are frequently not aligned; this is where subsidiaries often request more autonomy than headquarters concede.

Headquarters desires control of the subsidiaries activities in order to maintain strategic alignment of the subsidiaries activities within the MNC. The subsidiary seeks to maintain control and autonomy over its local market and to proactively influence the local operation (Homburg and Prigge, 2014). In this way, the subsidiary can be seen to be acting primarily in the interests of the local business, where the headquarters is more concerned with the worldwide profitability of the MNC (Birkinshaw *et al.*, 2000)).

Research by Birkinshaw, Hood and Jonsson (1998) showed that initiatives in subsidiaries could be seen as subversive by parent company management, implying that subsidiary managers will act in their own countries interests and not of that of the MNC. Bounded reality on the part of the parent management suggests that the parent company is aware of what knowledge it has, and what it lacks. Therefore, it can effectively allocate resources, implement corporate strategy and control subsidiary at different levels as required (Forsgren and Holm, 2010). The sheer ignorance perspective suggests the parent company lacks knowledge and has insufficient awareness of the knowledge it lacks.

This produces a challenge for the parent company management as they are constrained optimistically by bounded rationality on their part and the increased autonomy of the subsidiary. In order to facilitate subsidiary initiative the parent company is required to accept the activities of the subsidiary management in good faith (Birkinshaw, Hood and Jonsson, 1998; Birkinshaw *et al.*, 2000). The result of the mixed motive dyads and bounded reality on the parent company results in differing views on the role of the subsidiary by both headquarter and subsidiary management. This phenomenon as “perception gaps”, where one party views the situation from a completely different perspective. Fortunately, the research offers recommendations to close these gaps (Birkinshaw, Hood and Jonsson, 1998; Birkinshaw *et al.*, 2000).

Poor co-operation between the parties can lead to perception gaps, which in turn lead to increased control from HQ, leading to more co-operation problems, which in turn leads to ever-greater perception gaps. The antecedent of this is that good co-operation and decreased HQ control will lead to a reduction in the perception gaps. Through in depth discussions of the subsidiaries role with subsidiary managers, who themselves have characteristics and ambitions that match those of headquarters, the co-operation levels will increase and perception gaps reduce. It is also recommended, to reduce control and give subsidiary managers more autonomy. Increased freedom would increase co-operation and allow HQ and subsidiary managers to reduce the perception gaps proactively. Rugman and Verbeke (2003) observed that self-interest seeking behaviour from subsidiary management rarely works in the long term in the modern MNC. Therefore, a more co-operative approach and alignment of goals is necessary for MNC success.

As autonomy is regarded as being positively associated with subsidiary innovation, and headquarters have a certain responsibility for the strategic operations of the business. The research proposes strategic controls, which involve qualitative assessments of the subsidiaries performance based on its objectives and its competitive environment. These controls, have a long-term orientation, which should promote subsidiary initiatives, which add to long-term value creation for the MNC (Hitt *et al.*,

1996). Barringer and Bluedorn (1999) propose that strategic controls “are capable of rewarding creativity and the pursuit of opportunity through innovation”.

An empirical study by Zahra, Dharwadkar and George (2000) also found a positive relationship between strategic controls and subsidiary innovation. The results show that controls usually involve informal communication systems, subjective appraisal criteria and long-time horizons.

As the literature suggests MNC headquarters that employ strategic controls can promote subsidiary innovation.

2.4.2 Models of Subsidiary – Parent relationship

2.4.2.1 Network based Theory

The idea of the subsidiaries as a semi-autonomous node in a geographically dispersed global network has been found to be supported in research by (Hedlund, 1986; Ghosal and Bartlett, 1990; Andersson and Forsgren, 1996; Andersson, Forsgren and Holm, 2002). Network theory is important as it identifies the subsidiaries as autonomous elements of a network as opposed to subordinate to parent company entities.

The MNC can be conceptualised as an inter-organisational network with a large external network of suppliers, customers, regulators to whom each of the organisation units must interact. This concept has been used to support the importance of lateral relationships, shared values and good communication as the basis for effective management of the MNC (Ghosal and Bartlett, 1990). As conceptualised in the earlier study by Birkenshaw, (1997) MNCs involve three interconnected networks the local internal, external and global. Ghosal and Bartlett (1989) and Calvet (1983) repeat the idea of a MNC being considered as a network of knowledge, product and capital transactions spread across many business units and countries.

2.4.2.2 Transaction based theory

(Williamson, 1985) describes the control mechanism MNC headquarters has over subsidiaries as the governance mechanism which the corporation employs to regulate transactions between the subsidiary and the headquarters. Transactions can occur in three areas, capital, product and knowledge. In this sense, the MNC can be thought of as a network of capital, product and knowledge transactions (Gupta and Govindarajan, 1981).

In the parent-subsidary relationship it should be recognised that each party faces a “common destiny”, with the presumption that the relationship is intended to be a long one and differences should be worked out. Notwithstanding this aura of goodwill, transaction cost reasoning will always apply and annual contracts will be subject to the discipline of competitive bidding (Williamson, 1985). If this reasoning is applied, the existence of the subsidiary depends on its ability to reduce capital, product and knowledge transaction costs, or to have increased value add to some or all of these networks.

2.4.2.3 Knowledge transactions

Extending on the transactional theory of relationship between subsidiary and headquarters, Gupta and Govindarajan (1981) looked to model the network of knowledge transactions in relation to two axis. The magnitude of transactions, where subsidiaries can greatly differ depending on relative size of the subsidiary with respect to the parent company and other subsidiaries. For example, capital flow would be large between headquarters and large or growing subsidiaries compared with small and mature markets. Additionally knowledge flow into a subsidiary in a lesser developed market would be much greater than for an established entity.

The second axis is concerned with direction flow of transactions, as previously mentioned for a new market knowledge would flow in rather than out. The differentiation here is between provider and receiver of what is being transacted. The results defined four area in which a subsidiary could identify itself. The purpose of identification being to recognise current position and define the aspiration of the business unit.

The four categories identified are Global Innovator, Integrated Player, Local Innovator and implementer (Gupta and Govindarajan, 1981).

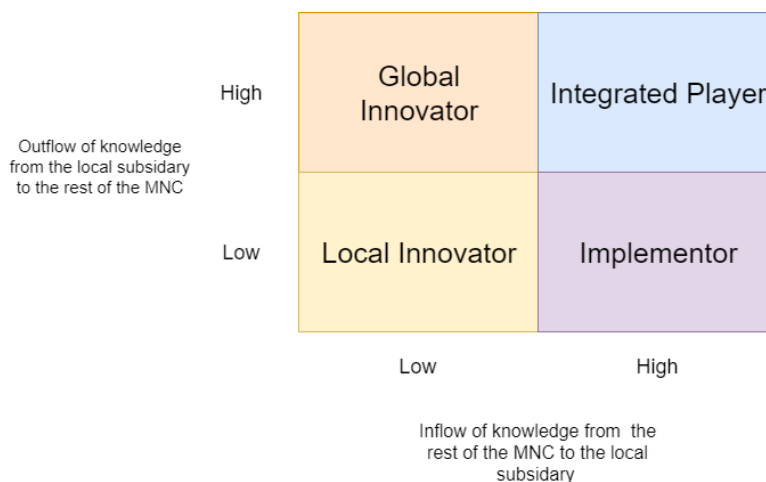


Figure 4 - Gupta and Govindarajan, (1981) – Variations in subsidiary contexts: A Knowledge Flows-Based Framework

In the global innovator role, the subsidiary acts a central repository of expertise for other business units. This role historically is taken by the parent company headquarters. However, with the emergence of high skill lower cost economies, this has changed and technological strength is being dispersed to centres of excellence globally (Frost, Birkinshaw and Ensign, 2002).

The integrated player role whilst similar to the global innovator, has a high outflow of knowledge to other business units, but crucially requires a high inflow to support its own knowledge requirements. In this way, it is not a self-sufficient entity.

The implementer role, as the name suggests, takes high knowledge input but the outflow is low. This subsidiary type does not create organisational knowledge and depends largely on the knowledge inflow from headquarters or other subsidiaries. Traditionally subsidiaries were setup with the goal of being an implementer and parent company would retain all global innovation functions. In this model, the implementer is the inverse of the global innovator.

A local innovator has complete control over its local market and for the creation of knowledge relating to its domestic market. However, this knowledge is determined to be too idiosyncratic to be applied to the global MNC and therefore remains contained with the local subsidiary.

Transaction based theory of the MNC has been observed by Buckley and Casson (2010) and endorsed subsequently in research by (Hennart, 1982) and (Pitelis and Sugden, 1991). It can be then considered as a key element in the understanding of the functioning of MNC's. International management academics Bartlett and Ghoshal (1990) and Birkinshaw (2000) argue that it is necessary to take more in-depth analysis of the mechanics of operation of the MNC organisation rather than apply the holistic transactional theory. This research seeks to add to the in-depth analysis of subsidiary – parent relationship. For the purpose of this review it can be concluded that the level and direction of knowledge, product and capital flow between headquarters and subsidiaries could affect the subsidiaries ability to innovate.

2.5 Stages of evolution of the subsidiary

The concept introduced by Gupta and Govindarajan (1981) of evaluating a subsidiaries current position, in order for it to target its potential ambition is extended in the work of Delany and Molloy (1998). They developed an eight-stage model (Figure 5) for subsidiaries to analyse their current mandate, the strategic importance of that mandate, and the stages which a subsidiary would have to transition through to become the “strategic apex for the MNC”.

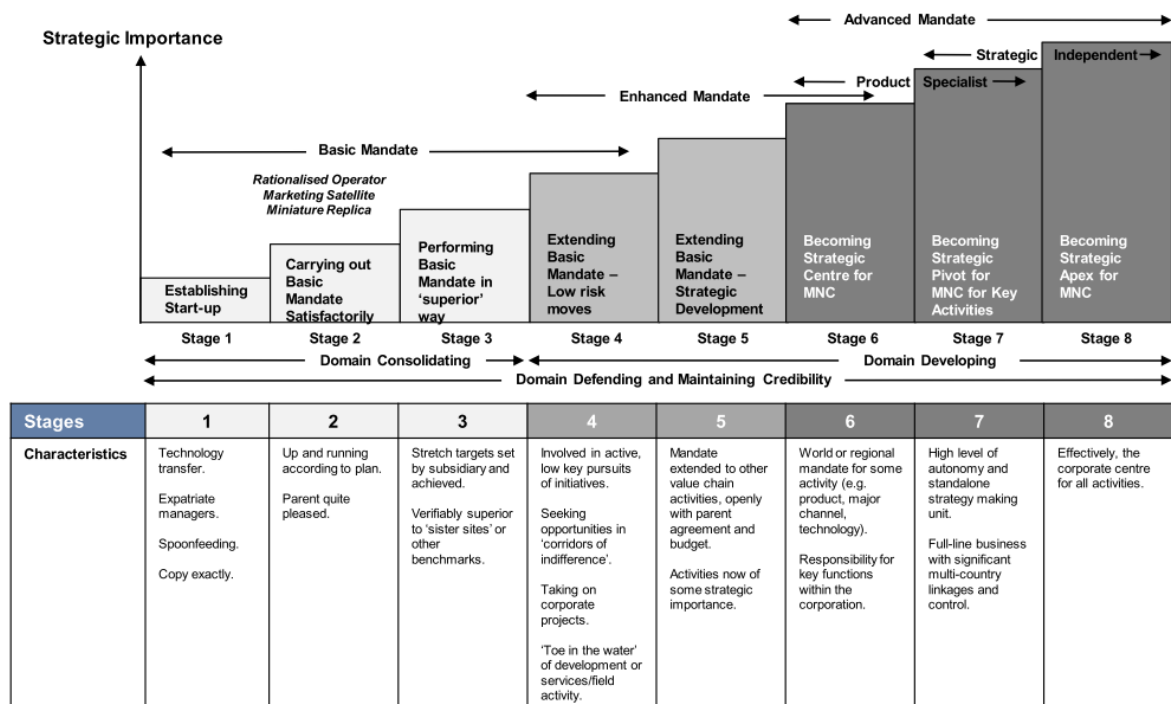


Figure 5 - Stages of development of subsidiary (Delany and Molloy, 1998)

The research suggested that the evolution through stages was sequential and that credibility was required to be established at each stage to progress to the next. Inherent is a natural caution, which the parent company will have to any entrepreneurial activity undertaken by the subsidiary on top of its original mandate. The antecedent to the model is that the maturity of the subsidiary is proportional to the level of increased strategic and innovative activity within the subsidiary. Informed analysis of a subsidiaries current position (maturity and level of credibility) will dictate the nature and type of innovation activities that will be widely accepted by the MNC network.

2.6 Subsidiary Choice

2.6.1 CEO Strategy

Birkinshaw and Hood (1998) identified subsidiary choice as the second factor of their model for subsidiary evolution. If it is accepted as previously identified that subsidiaries are a semi-autonomous node in a geographically dispersed global network endorsed in research by Hedlund (1986), Ghosal and Bartlett (1990) and Forsgren and Johanson (1991), then the activities undertaken by the subsidiary are ultimately governed by decisions taken at local level by the subsidiary managers.

Rugman and Verbeke (1992) found that the subsidiary viewed as a node in the MNC network could be a potential source of specific advantage to the MNC and in this way could act as an equal partner with headquarters, with interdependencies amongst the units. The network model is an important perspective on subsidiary evolution as it recognises that subsidiaries can have specialised capabilities with which the MNC is dependent (Birkinshaw and Hood, 1998). If such specialised capabilities exist, it is the job of subsidiary management to promote and obtain recognition for these capabilities. The success of subsidiary managers in their knowledge transfer roles is dependent on their ability to source, recognise, integrate and transmit knowledge that contributes to the MNC's competitive advantage (Choi and Johanson, 2012). A core capability of the subsidiary management are their ability to generate, maintain and transmit key knowledge amongst the business units (Augier and Teece, 2007).

Whilst there is little research specifically identifying subsidiary management as the reason for the decline of subsidiaries, it is suggested that inaction on the part of the subsidiary management can lead to the gradual decline in effectiveness and eventual demise of the subsidiary and its resources (Birkinshaw and Hood, 1998). Entrepreneurship involves innovation, risk taking and pro-activeness of subsidiary managers (Zahra and Covin, 1995; Lumpkin and Dess, 1996). Therefore, it can be observed from the literature that innovation at subsidiary level is governed to some degree by the activities of subsidiary management.

Burgelman (1983) found that strategic growth often occurred below the levels of top management, and at times without the knowledge of senior management. This concept of autonomous growth within subsidiaries where headquarters have limited control and subsidiaries undertake increased mandates was found to be consistent with Burgelmans theory (Birkinshaw, 1995).

2.6.2 Capabilities

If subsidiaries are to be considered autonomous, they need to have the ability to grow and develop resources and capabilities in order to survive (Young, Hood and Peters, 1994). As subsidiaries evolve and take on new and more advanced roles they will accumulate knowledge and resources, which can be used to enhance the subsidiaries position within the MNC network (Birkinshaw and Hood, 1998).

We can define resources as the stock of available factors controlled by the company, and capabilities as the firm's ability to deploy these resources (Carmeli and Tishler, 2004). Most tangible resources are primarily held at subsidiary level (buildings, equipment, and people) whereas typically the intangible resources are held at parent company level (organisational, reputational and financial).

Capabilities are harder to define and are often split between headquarters and the subsidiaries. Capabilities can be viewed as the subsidiaries power or ability to perform tasks (Grant, 1996). Factors, which can affect capability, are scope of knowledge, the cognitive ability of individuals, the efficiency of knowledge integration and the span of the knowledge to be integrated (Haynes and Almond, 2015). The literature implies development of resources and capabilities are fundamental to subsidiary innovation.

2.7 Local Environment Determinism

A topic which has been given attention in research is that the environment in which the subsidiaries operate can influence their ability to undertake entrepreneurial initiatives (Birkinshaw, 1999). Therefore, the third element of subsidiary evolution, which needs to be considered, is the environment in which the subsidiary operates. Organisational activities are restrained or facilitated by the environment in which they operate (Birkinshaw and Hood, 1998). Subsidiaries have opportunities or threats based on their own unique task environment (Ghosal and Bartlett, 1991, Ghosal and Nohria, 1989). The subsidiaries environment can therefore, positively or negatively contribute to the ability of the subsidiary to undertake entrepreneurial activities or pursue innovative initiatives. In essence, each subsidiary has to adapt to a unique set of conditions in order to be effective. The unique factors can include different customers, competitors, suppliers and local government (Birkinshaw and Hood, 1998). The same environmental factors can affect the parent company and therefore can influence the parent's ability to add value to the subsidiary, either through affecting previous factors "headquarter assignment" and "subsidiary choice".

Subsidiaries are influenced heavily by the context of the local environment to develop different approaches to innovative initiatives. To obtain a global subsidiary mandate a subsidiary must interact with other subsidiaries with their own unique local environments context ((Porter, 1998). This interaction of subsidiaries with other subsidiaries allows cross-transfer of knowledge, which can lead to increased entrepreneurial behaviour (Hitt, Hoskisson and Kim, 1997).

2.7.1 Contextual Theory

Ghosal and Nohria (1989) show that different contextual conditions faced by different subsidiaries can be classified in to four generic situations based on local resource levels and environmental complexity relative to other subsidiaries (Figure 5). For each of these four situations the relationship with the headquarters of the MNC can be characterised by a custom managerial structure, which comprises of different combinations of power distribution and autonomy, formal rules and systems and normative integration of members. These structures are labelled as “hierarchical” (C1), “federative” (C2), and “clan” (C3) and “integrative” (C4).

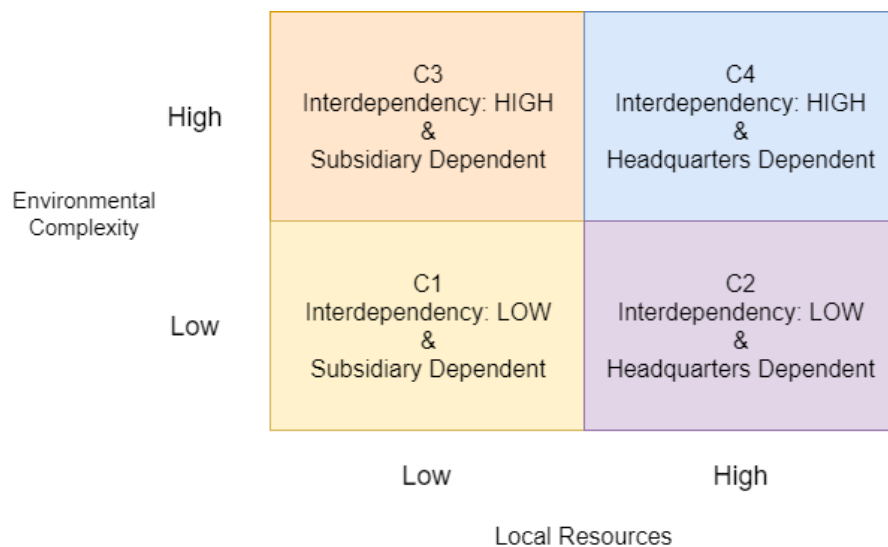


Figure 6- Ghosal and Nohria (1989) Classification of subsidiary context and nature of interdependency and dependency in each context

The hierarchal or C1 subsidiaries with low levels of local resources and having environments of low complexity have a situation where administrative expenses will yield the least return. In this situation, it is beneficial to centralise administration at headquarters. The level of local capability at this level is extremely low and therefore headquarters continuous support and monitoring is required in any event so it makes sense to formally centralise administration of this unit. The loss of interdependencies or knowledge flow out of this subsidiary is considered acceptable, as the facilitation of such inter-dependencies would require more resources than the benefits achieved.

The federative or C2 subsidiaries have a surplus of local resources with low environmental complexity. Typically, these are older subsidiaries who have amassed a resource concentration over many years. Often the resources are so embedded, within the structures of the subsidiary that they are crucial to its operation. The centralisation of resources from a C2 organisation is not recommended. In this situation as it, risk potential conflicts between headquarters and the subsidiary. Formalisation of rules and processes is recommended here, as it will facilitate exchange and accountability.

The subsidiaries in sector C3 “the clan” operate in complex environments with scarce resources. These can be new subsidiaries or represents a situation where local resources have not kept pace with changing environmental conditions. These subsidiaries require significant support from headquarters in the areas of administration and decision-making. Subsidiaries of this kind are suitable for centralisation as they are dependant from the outset on headquarters.

The optimal situation for a subsidiary is C4 or Integrative. Where they operate in a highly complex environment with sufficient levels of local resources. In this situation the subsidiary is resourceful and should be integrated into all level of decision making, Centralisation is inappropriate but formalisation through well-developed rules and systems will be the least expensive and the most efficient organisation arrangement (Ghosal and Nahria, 1988). It is therefore necessary to analyse a subsidiaries current position and dependencies to evaluate if centralisation is appropriate and necessary. Subsidiary initiative will be suppressed by high levels of decision-making centralisation to the headquarters (Bartlett and Ghosal, 1986).

Subsidiaries that exist in competitive environments are more likely to engage in entrepreneurial behaviour, innovate and take calculated risks as the nature of the competitive environment provides incentives for innovation and venturing (Zahra, Dharwadkar and George, 2000). The location and diverse nature of a MNC business make it difficult for a headquarters to have complete control of its subsidiaries. A subsidiary with its own resources and ability to manage directly local stakeholders can decrease the ability of the headquarters to control and influence its operation (Ghosal and Bartlett, 1990).

The literature suggests the local environment in which the subsidiaries operate influences their ability to undertake entrepreneurial initiatives. Increased Environmental Complexity in the local market promotes subsidiary initiative and high levels of local resources are necessary for subsidiary innovation.

2.8 Research Question

There is significant research identifying that subsidiaries can develop innovation projects (Bartlett and Ghosal, 1986) and that they can provide significant outflows of knowledge to the other network elements of the MNC by pursuing these projects (Gupta and Govindarajan, 1994). Terms such as global innovator, centres of excellence and strategic leader are used to describe subsidiaries that have innovative capabilities and the ability to transfer them to the MNC network. Whereas terms such as implementer, passive acceptors, are used to describe subsidiaries that do not contribute to innovation within the MNC. There is a number of studies suggesting key elements affect the ability of a subsidiary to innovate within the MNC environment. There is no single research looking at all the elements in aggregate in order to evaluate the subsidiaries propensity to innovate. Indeed the weighting of each element in relation to desired outcome of subsidiary innovation and the antecedent to this subsidiary evolution requires further research.

The purpose of this study is to identify the key constructs and thematically review their significance based on an operational MNC. The objective is to identify the theoretical factors, which most influence the subsidiaries innovative practices in the view of subsidiary management. The results will be subjective based on the individual manager's experiences and motivations but it is envisaged that common threads could be extracted and conclusions proposed based on respondent's experiences.

The research question proposes to validate the elements of the conceptual model developed from the literature review, and to some degree validate or remove them from the model based on respondent's experiences.

2.9 Origins of the Proposed Conceptual Framework

The proposed conceptual framework has been developed from primary and secondary literature reviewed. Under the headings defined by the Birkinshaw and Hood (1998) study, there have been identified the main sub-headings which have been re-emphasised and studied in detail. It is clear that the subject of subsidiary innovation is multi-faceted and can be achieved at many different levels from low to high and the outcomes can be applied to either local, internal or global environments.

Proposed Conceptual Framework

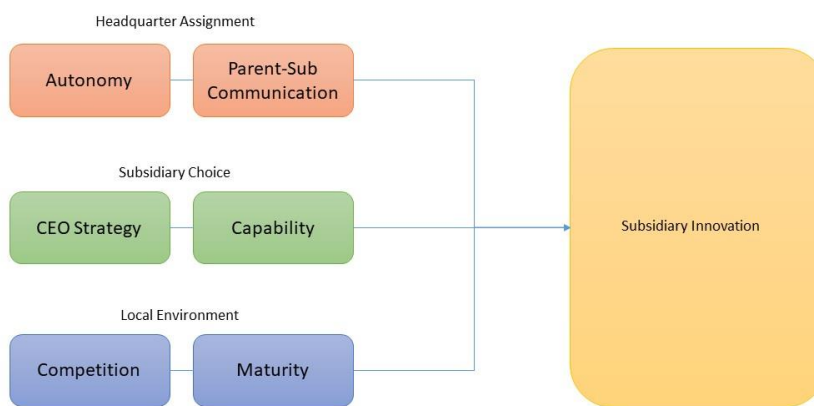


Figure 7- Proposed Conceptual Framework for Study

Innovation is valid at all levels and the purpose of this study is to explore the areas where subsidiary management identify as the most important and which facilitate innovation for their operations. There are similarities to the Birkinshaw and Hood (1998) model for subsidiary evolution; however, the discrete modelling of each element and the acknowledgement of levels of these elements is an expansion on previous models. The literature has helped define the elements shown in Figure 7, which at greater levels it is proposed that increased subsidiary innovation will occur.

Chapter 3 - Research Methodology

3.1 Introduction

The purpose of this chapter is to explain the methodological approach used in the study to investigate the theme of subsidiary innovation and entrepreneurship. The overall goal guiding the methodology of this paper is the attempt to link the factors that are described in the literature with real world subsidiary experience. The study will focus on the elements, which are contained within the conceptual framework, to understand the degree to which these constructs affect the ability of MNC subsidiaries to innovate. The nature of the constructs has informed and influenced the strategy applied to the research process. The methods used are qualitative and form a thematic approach to analysis.

3.2 Case Study Strategy

The analysis method adopted is a case study methodology. Case study research is an increasingly popular approach among qualitative researchers (Thomas, 2011). A case study is a specific instance that is frequently designed to illustrate a more general principle (Gerring, 2004). Case study research can be used as an investigation and analysis of a single or collective case, intended to capture the complexity of the object of study (Stake, 1995).

“Case study research is to observe the characteristics of the individual unit. The purpose of which is to probe deeply and to analyse intensely the multifarious phenomena that constitute the life cycle of the unit.” (Manion, Cohen and Morrison, 2013).

Denzin and Lincoln (2011) whom are experienced qualitative researchers have identified case study research as a valid standalone qualitative research methodology, which offers a high level of flexibility that is not available by other qualitative methods such as phenomenology or grounded theory. There is considerable diversity applied to case study design in research, as case studies are designed to suit the specific research question being posed. This afforded flexibility allows this research to pose questions, which relate to the proposed conceptual model of factors that influence subsidiary innovation and not those prescribed by past research. This is critical as the model encompasses a large range of factors, which have not been dealt with in such an aggregated fashion in past research.

3.3 Philosophy

There are two most popular approaches to case study application in qualitative research social constructivism and post-positivism. This research will use elements of both approaches.

Social constructivism is proposed by Merriam (2009) and Stake (1995) where the case study is situated in a social constructivist paradigm. Social constructionism attempts to come to terms with the nature of reality, which is the goal of this case study research. It places great emphasis on the everyday interactions between people and the language they use to construct their reality. The elements of CEO strategy and Parent-subsidiary communication are well suited to this type of analysis.

Yin (2009) and Flyvbjerg (2006) describe a post-positivist viewpoint to case studies. Positivism refers to an evidence-based reality that can be mathematically interpreted. However, scientists have come to the realisation that all observation, including objective reality, is fallible which led to the post-positivist paradigm. It is concerned with the subjectivity of reality and moves away from the purely objective stance adopted by the logical positivists. The post-positivist perspective is that not everything is completely knowable (Krauss, 2005).

Whilst this research will endeavour to provide insight to the area of subsidiary innovation. It is recognised that all observation has error and that all theory is revisable. The research will attempt to mitigate these fallacies with pattern matching, where multiple sources of data will be used to help provide the most accurate view of reality (Olsen, 2004).

This research aims in the social construct sense to investigate the reality of the factors that influence subsidiary innovation, whilst accepting the post-positivist viewpoint that the results of the case study are subjective. The overall aim is give a better understanding of the factors, which influence subsidiary innovation from a particular viewpoint. In this way we can also describe the philosophy as an interpretive philosophy, which starts from the position that our knowledge of reality is a social construct (Walsham, 1995). The researcher interacts with the subject and draws subjective conclusions based on their own perceptions. Through semi-structured interviews and case study development some commonalities and insight is sought to be drawn from the subjects. This insight is to either support or question the elements of the theoretical framework.

3.4 Trustworthiness in Qualitative research

Guba (1981) proposed and Shenton (2004) advanced the idea that four characteristics of qualitative research are important to help ensure the trustworthiness of the research. These are credibility, transferability, dependability and confirmability.

To ensure this qualitative research is credible and relates to the conceptual model proposed, the following steps are taken. Firstly, adoption of well-recognised research method – case study. Pattern matching through use of different respondents in different locations. The use of previous research to frame the findings and detailed description of the phenomenon under scrutiny.

Another goal is to show transferability of research findings to other settings, this is achieved through analysis of diverse subsidiary environments from five different countries. And through the recognition of the background literature to establish the context of the study. The six main elements of the conceptual framework are proposed by the literature review. These are examined through the case study process. This allows comparison to be made between previous research and this research.

Dependability is ensured with overlapping methods of research. All the phenomenon tested are well researched as topics in their own right and the conceptual model design inherently shows dependability by accounting for the changing context of individual subsidiaries, their maturity and environmental considerations.

Reflexivity is the process where research bias is challenged to provide more effective and impartial analysis. Reflexivity is addressed in this research by the objective review of the case study findings and the use of non-leading questions within the case study. Confirmability is addressed through recognition of the research shortcomings and limitations.

The issue of objective versus perceptual measures is a constant topic of debate (Downey and Ireland, 1979) when respondents will be senior management giving their perceived positions of their subsidiaries it is acknowledged that information received could suffer some deficiencies. This will be mitigated to some degree by looking for general themes deriving from the questionnaires.

This research is informed by opportunism, where the researcher has access to a particular business or enterprise for which the phenomenon under investigation exists (Otley and Berry, 1994). This is the situation for this study. Access to senior executives in a large MNC, with many varied subsidiary units.

3.5 Primary Research Questions

Seven questions were primarily examined with sub-questions used to give insight in to relative levels of each of the primary elements of the proposed conceptual model.

Q.1 To what degree has the level of subsidiary autonomy afforded to the subsidiary, helped or hindered the ability of the subsidiary to contribute innovation initiatives to the MNC?

As described by Bartlett and Ghosal (1986) autonomy is a key factor in the ability for a subsidiary to innovate. Different levels of autonomy can encourage or discourage innovative or entrepreneurial activities

Q.2 What effect does the level and quality of subsidiary communication have on subsidiary innovation and entrepreneurship?

The research from Birkinshaw and Hood, (1998) suggests that level and quality of parent subsidiary communication is key in defining a subsidiary if a subsidiary has innovative capabilities.

Q.3 To what extent are innovative practices encouraged at management level with the subsidiary and to what extent is innovation regarded as fundamental to the subsidiary by management?

The research by Choi & Johanson (2012) observes that subsidiary senior management's desire and willingness to drive entrepreneurial or innovative efforts will be a key factor in the success and longevity of such initiatives.

Q.4 What level of capability is required within the subsidiary to effectively encourage and foster innovation.

Research by Birkinshaw and Hood (1998) suggests that subsidiaries with differing levels of capability will have inherently different ability to innovate and to add value to MNC network.

Q.5 What is the level of competition with the local environment in which the subsidiary operates? What is the relative complexity of the subsidiary environment? How does this affect the ability to innovate and likelihood of innovative practices with the subsidiary?

Local environment determinants are discussed by Ghosal and Bartlett (1991) and Ghosal and Nohria (1989) as having profound effect on the entrepreneurial spirit within a subsidiary unit and therefore innovative practices within the unit. The complexity of the local environment was found to impact where a subsidiary with high complexity and adequate resources could contribute significantly to the MNC network (Ghosal and Nohria, 1989).

Q.6 How does the maturity of the subsidiary give credibility to, and increase the propensity for subsidiary innovation?

Research by Gupta and Govindarajan (1981) and (Delany and Molloy, 1998) observes that different levels of subsidiary maturity predispose the subsidiary to differing conditions and stages of life cycle, which affect the potential for innovation and entrepreneurship with the subsidiary unit.

Q.7 Based on factors discussed, where does the subsidiary investigated apply most innovative practices? This could be internally within the local environment of the subsidiary or internally within the MNC network or globally to entire MNC and its customer base.

The research by Birkenshaw (1997) observed that subsidiaries innovation could be applied to differing markets within the MNC creating a hierarchy of innovation where at the highest level innovations from subsidiaries can be adopted as global initiatives.

3.6 Sample Population

The company being analysed is a German headquartered multi-national organisation which supplies critical infrastructure to rail companies. It is industrial hardware, with a highly customised software platform for each market. The service component of the business is high. For the subsidiaries analysed there is a theme of deploying significant hardware installations in the early stages of existence, and then maintaining a service support role, with the additional supply of updates and upgrades. The subsidiaries analysed are German, Irish, Swiss, American and British.

3.7 Time Horizon

The phenomenon were examined, with the respondents at a snapshot in time. The responses are affected by the person's length of service, the duration of existence of the subsidiary and the mandate to which the subsidiary is assigned. The snapshot was preserved through semi-structured interviews, which were conducted over a 2-week period with the various subsidiary management. The interviews looked to uncover the manager's experience and viewpoints, which they have formed since joining the particular subsidiary. As described this study was opportunistic (Otley and Berry, 1994) as access to various managers was available during a particular business window.

3.8 Research Instrument

Qualitative case studies allows researchers to study complex phenomenon within their contexts using a variety of data sources (Baxter and Jack, 2008). Case studies allow researchers to obtain the descriptive observations of others of a particular phenomenon (Stake, 1995). Yin (2009) proposes that a case study is a suitable methodology when the focus of the study is to answer “how” and “why” questions and you want to take into account the contextual conditions of the subject. With respect to this research, it is clear that each subsidiary operates in different conditions, which are either enablers or detractors from innovative behaviour. This way a case study allows exploration of the how and why for each subsidiary within their own context.

This type of case study is an exploratory case study, where the situation under investigation has no clear, single set of outcomes (Yin,2013), but can be useful to show trends or patterns of behaviour. This study can also be classified as exploratory as it builds on work by (Gupta and Govindarajan, 1981; Ghoshal, Sumantra and Nohria, 1986; Birkinshaw and Hood, 1998; Delany and Molloy, 1998; Rugman and Verbeke, 2003)

As a case is embedded in a broader context, investigation of that case will inevitably lead you into that broader context (Bazeley, 2013) .

3.9 Procedural Method

The research was carried out by interviewing high-ranking executives, mainly heads of subsidiary units from a diverse group of subsidiary units. All subsidiaries have the same parent company and therefore have consistency of applied social factors pertaining to their relationship with the HQ. The subsidiary units have varied size, capacity, maturity, local competition and mandates, which such reflect different levels of autonomy and subsidiary – parent communication. Of particular interest is the operation of a German subsidiary within the German HQ, the legally separate entity has the same status as geographically separated subsidiaries but operates from the same location as headquarters.

The subsidiaries analysed are:

Location	No. of Employees	Established	Respondent
Ireland	16	2008	Managing Director
Germany	41	1990	Service Director
USA	183	1996	Executive Vice President
UK	125	1999	Managing Director
Switzerland	13	2006	Managing Director

Table 1 - Subsidiaries analysed

The case study subjects will be examined through semi-structured interviews; there are few approaches better to gain descriptive insight (Creswell, 2014). The interviews structure will be a guided conversation rather than a question and answer session (Yin, 2009).

The purpose of the interviews is to obtain the participants reflections on the proposed conceptual framework and comment on its validity and any important omissions it may contain. Miles and Huberman (1994) propose that a conceptual framework serves several purposes: (1) identify participants of study (2) describes the relationships that may exist based on theory, logic or experience (3) allows the researcher to gather general constructs and intellectual “bins”.

For the interviews, the semi-structured approach was applied with a number of pre-prepared questions, with sufficient leeway for individual interpretation and scope for detailed answers. Also, allowance for follow-up or more probing questions depending on the direction of conversation (Hardy and Bryman, 2009).

The six main sub elements (Autonomy, Parent-subsidary communication, CEO Strategy, Capability, Competition, and Maturity) of the proposed conceptual framework had to be addressed under the three main elements (Headquarter assignment, Subsidiary choice and local assignment). The interviewee was directed to address these topics through specific questions.

3.10 Open questions and explanation

The more open-ended question and there explanations are detailed here:

Q (Open). “Please describe the evolution of your subsidiaries relationship with headquarters?”

This question gets the subsidiary manager to think of their current relationship status with parent, but also seeks to have the manager think of a historic relationship that has led to the current situation. The question is multi-faceted as it deals with parent-sub communication over time, whilst also looking at the perceived level of autonomy received by the sub and ways in which this has grown or been stagnant. Follow-up questions would relate to the specific areas of communication and autonomy.

Q (Open). “How do you view your subsidiaries role within the MNC network?”

This question is designed to probe the ambitions of the subsidiary, CEO management and the level of autonomy that may be afforded to the subsidiary in question. It should also give insight into the maturity of the subsidiary as to where the management perceive themselves with respect to the stages of evolution model (Delany and Molloy, 1998).

Q. (Open). What does innovation mean to your subsidiary? Where does innovation typically occur in your organisation?

This question looks to explore the perceptions of innovation from subsidiary management point of view. The answer will give insight into management's outlook for their own subsidiary innovative practices, their capability and vision. It will also give information about the ambitions of the subsidiary and potentially the level of parent-sub communication and autonomy.

Q. (Open). Is there local skills or best practices your subsidiary currently has that could benefit the global MNC?

This question is to make the manager think of innovation within their own subsidiary. What is the capability of the subsidiary? What is the status of innovation within the subsidiary? Do they already promote local innovations to parent? Do they have autonomy to develop smart practices? If they innovate effectively and apply globally then this should be explored as to how practices are translated from subsidiary to other MNC nodes.

Q. (Open). Describe the flow of knowledge between subsidiary and parent? What are the types of knowledge being exchanged between subsidiary and parent?

This questions attempts to lead the interviewee to consider if knowledge flow is unidirectional or bidirectional. Follow up questions: What type of information is being transferred? What is the frequency / level of knowledge flow?

If knowledge flow is solely from parent to sub this implies a controlling headquarters, and little autonomy in the subsidiary. If the information flow is even then the subsidiary could potentially contribute innovatively to the MNC. If the subsidiary is relatively immature, the expectation is that strong direction from headquarters is applied.

The type of knowledge being transferred could be transactional or more nuanced such as product enhancements, what works well in the market etc. The level will help determine the subsidiaries current status with respect the stages of evolution (Delany and Molloy, 1998).

3.11 Data Analysis

The analysis of qualitative data, is considered the most difficult aspect of conducting case study research for multiple reasons (Kohn, 1997). The intensity of data collection and the large amount of information obtained can lead to an overload of information obtained. Data analysis begins in the field during data collection, as notes are being taken, initial findings from one interview can lead to the next interview being posed a newly formed idea or hypotheses from the first. Data analysis occurs concurrently during the data collection process.

Researchers note that the analytic focus of the case study is on the overall pattern of the variables under consideration (Kohn, 1997) . The primary focus of this analysis is on the overall pattern of results and the extent to which the observed pattern of variables matches the predicted one from the conceptual model. The research examined the literature for the pattern and, then looks to test the theories against real cases.

An inherent issue with case study research is that each case can be treated individually; this is not the purpose of the case study. The data must converge to form an overall understanding of the phenomenon under investigation (Baxter and Jack, 2008).

3.11 .1 Analysis Technique

Yin (2003) proposes five techniques for data analysis: pattern matching, linking data to propositions, explanation building, time-series analysis, logic models, and cross-case synthesis.

Stake (1995) describes direct interpretation as analysis of individual instances and then through aggregation of instances, something can be revealed about them in a class. This form of analysis is also referred to as categorical aggregation.

The pursuit of meaning is often the pursuit of patterns, for consistency within certain conditions, which Stake (1995) describes as “correspondence”. It is possible to immediately discover patterns when reviewing a document, conducting interviews, coding records or aggregating frequencies (Stake, 1995).

This research takes a combined direct interpretation approach in parallel with the systematic coding of transcript to look for patterns emerging from the subsidiaries being analysed.

The coding method employed using advanced analysis software from MaxQData. The software enables coding of large text files, in this case transcripts of interviews. The coding technique enables segregation of data into relevant data sets, which can then be analysed for patterns of recurrent

themes. Each transcript is imported into MaxQData and coded with the same headers; the headers can then be easily grouped and exported for thematic analysis. The analysis continues with a filtering process of the richest thematic information, which is then to be presented in results section.

For further interpretation, the observations deemed most important which help to reveal, “Patterns” or “correspondence” to the proposed conceptual model are included in the report.

3.12 Ethical Considerations

It was agreed with all subsidiary management that all data would be anonymised and the company names would not be published. Each interviewee was briefed on the purpose of the study and that all observations and responses to questions were solely for the purpose of this academic research. Thoughts and opinions expressed were not disclosed or shared between subsidiary management as part of the research.

Informed consent was received from all participants on this basis.

All interviews were recorded on mobile phone, the files then transferred to local PC. The audio files once transcribed were permanently deleted. The transcript files have been anonymised.

Privacy and confidentiality standards have been maintained at a high level throughout this research.

3.13 Limitations

In all research, studies there are inherent limitations, which can affect the quality of the outputted data. The primary limitation with this study was that it looked at only a single MNC with multiple subsidiaries. Whilst access to multiple subsidiaries is significant, the fact is the study examines a single entity parent company. The relationships therefore could be argued are non-typical when applied to other parent organisations or parent companies from a different geographical location or culture. However, it is possible to make generalisations from even a single case study, as long as the characteristics, features and interplay of the actors involved have been accurately captured with respect to the phenomena being observed (Normann, 1970).

The inherent time constraints of completing such a research paper have limited the study to a single MNC. Further preparation time from the point of the interviewees, could have been beneficial. As would follow-up interviews when participants had much longer time to consider the areas of innovation as pertaining to their organisations.

The potential for “one investigator bias” (Eisenhardt, 1989) could not be avoided given the prescribed nature of the study. Awareness to maintain a neutral focus and attempts to record the evidence without prompting or leading interviewees responses were used to mitigate this.

This study looked to find the themes, in which the studied subsidiaries, find influence their ability to innovate and to validate or discredit the proposed conceptual model. As the model was borne out the literature review, it is possible that there are other significant factors, which influence subsidiary innovation, which the model does not acknowledge. Open questioning and specifically asking for other factors was the attempt to explore this potential.

The responses obtained were subjective and could easily have been presented as to position a particular subsidiary or management team in a positive light. The only mitigation for this was the anonymity of subjects and the confidentiality relating to responses.

Chapter 4 – Findings and Results

4.1 Introduction

This chapter sets out the finding and results as obtained through the research methodology detailed in chapter 3. The overall objective of the research was to validate the factors presented in the conceptual model as the key influencers of the subsidiaries ability to innovate and to carry out innovative practices.

From the conceptual model, seven key research questions sought to be analysed. These key research questions form the sub-objectives of the research, as each element is sought to be validated in its own right.

The sub-objectives are:

1. To determine the significance of headquarter assignment, with sub-headings of autonomy and parent subsidiary communication on a subsidiaries propensity for innovation.
2. To determine the significance of subsidiary choice, with sub-headings of CEO Strategy and Capability on a subsidiaries propensity for innovation.
3. To determine the significance of Local Environment, with sub-headings of Maturity and Local Competition on a subsidiaries propensity for innovation.

The term significance should be elaborated to mean the basic importance of the element in affecting the outcome. It is accepted that each element is non-binary and differing levels of each can be inferred for each subsidiary. However, quantifying the exact level is beyond the scope of this paper and for this research's purpose the approach is simply to deem a subsidiary as having either high or low levels for each element, and to investigate the elements which occur in commonality across the subsidiary units.

In the following section the research question is specified along with selected excerpts from the interviews pertaining to the question posed. It is worth noting again that the interviewee was not posed with the specific research question but rather a number of questions in the area being examined.

4.2 Questions and selected interview excerpts

The seven primary research questions have been expanded to a twenty-one question interview in order to allow interviewees scope to interpret the subject from different angles. The rationale of this approach is give a more holistic overview of the subject and engage the interviewees in conversation as opposed to direct questioning on a research element. Each interviewee was given a table of subsidiary evolution (Delany and Molloy, 1998) to identify their subsidiaries stage of evolution. The purpose of this identification is the attempt to link subsidiary stage with levels of innovation.

The interview questions have been designed to test the proposed conceptual model, whilst not prompting or guiding the interviewee to arrive at a particular conclusion.

4.2.1 Subsidiary Management Interviews

Q.1 To what degree, has the level of subsidiary autonomy afforded to the subsidiary, helped or hindered the ability of the subsidiary to contribute innovation initiatives to the MNC?

“If you're not given the freedom to see and react to your operations in the way that you see fit, then you can't deliver the level of customer experience that your clients expect. You need to be able to make decisions right away without getting approval to make a change to a product or develop bit of software that your client wants or add additional terms to the contract to make them better for the for the customer. Of course, we need to be able to have that flexibility to deliver custom solutions to our clients, without that our competition are going to offer the same solution and be more responsive. Therefore, I do not think it works, where central control will take over and decide every move that you are going to make any more. You need to be able to react to your client's local requirement as soon as possible”

“We have limited scope for innovation ourselves because we have service technicians and not so much the skilled software development team that Germany has. So whilst we have autonomy to deliver our service contracts we cannot change the product or add new functions or create new offerings without support from headquarters.”

“We look after the local operation only we generally do not contribute staff to the rest of the world projects because our staff level is so small and we are fully used servicing the operations here”

“Larger strategic decisions will be made in contact with the parent company and the more local operational stuff is done locally.”

“I think that is the culture of the company that we work in that way, we are empowered to deliver our own solutions.”

“I think the role of the subsidiary is to only call upon the parent for critical functions and for support when absolutely necessary.”

“There's considerable more competition in the US. So we need to factor that in when we make decisions and we need to be able to be empowered to make those decisions on our own, without requesting approval for every little decision that needs to be made about how we operate the business.”

“It's important because we're in a different time zone. So we need the autonomy to run our own operations.”

“I think if we didn't have full autonomy to deliver our solutions, it would be very difficult. If we needed to ask for approval to implement a solution for a critical issue at midnight on a Sunday, then we would have a big problem.”

“Autonomy is key to the operation of this subsidiary, and delivering service to our organization worldwide. Without it, we simply could not operate.”

Q.2 What effect does the level and quality of subsidiary communication have on subsidiary innovation and entrepreneurship?

“We have a limited input into the subsidiary network. It's very much driven by headquarters, where we can feed back some initiatives that could help the other subsidiaries on in the global company.”

“Key is having open channels of communication and many channels so that you can operate a global company whilst seeming like you're in the next room, having instant access channels to all different levels of the parent company is essential to the success of the operation of the subsidiary.”

“So the key is the communication between all the business units that have similar challenges, similar technologies to us, so that can we find the right person to talk to and get the solution that they've successfully deployed in their organization.”

“There could be a lot of critical issues, but some of them are more critical than others. In addition, that's where we tend to focus our resources on that is when we look for guidance from the managing director or the heads of departments within the company. So high communication levels are essential, and are completely open for us.”

“If we want to deliver a new process or a new product to service, then, of course, we will need budget approval from our Managing Director, we have the ability to talk to him directly and get approval for such initiatives, we are all the time we are looking to innovate all of our procedures, how we deal with our customers and how we deal with other subsidiaries. So that being able to do that and have the freedom to do that by our Managing Director. So I would say communication and autonomy are key to our innovation within the service area.”

“We have the freedom to indulge in innovative practices every day because we solve problems every day. When we see that we need some new product or new software or we need a new resource. Of course, we need to go and get financial approval from the (HQ) management. We have freedom to operate until we find that we cannot move without getting more resources. So in that way we are encouraged to find solutions.”

“If we can't communicate effectively with our colleagues in Germany and around the world, we can't deliver on our promise to our clients so communication is key to maintaining service levels where our clients will keep coming back.”

“We rely on them heavily to deliver all our updates or upgrades and all software enhancements, HQ also provide all of our financial systems, we don't have a local HR department, ultimately the decision rests with headquarters about allocation of staff resources. So, we work very closely with our headquarters to deliver the business here in the UK. Communication level and quality affects the complete business not just our ability to innovate.”

Q.3 To what extent are innovative practices encouraged at management level with the subsidiary and to what extent is innovation regarded as fundamental to the subsidiary by management?

“Innovation is encouraged to everyone. If you give staff a task to do, you have to let them perform the task in the best way that they think possible. So, if there's a quicker solution or as we say here, work smarter not harder, then everybody should be given the freedom to look for innovative solutions to make the jobs easier and ultimately improve our service to our customers.”

“Innovative practices are encouraged by management through giving the autonomy to staff to complete a task in the most efficient way possible.”

“We have initiatives such as idea generation initiatives, where we ask everybody to contribute to a task of finding techniques or products that would help the company. It could be as simple as something to help staff do their job better improve the culture or improve the way we work and

management are very open to listening to any of those ideas that might come along generated out of that forum.”

“It is very much encouraged by the management level here, and by HQ senior management, that we always try and work smarter amongst the teams to deliver the best possible solution at the lowest cost to our customers, so we can make the maximum profit.”

“You need to give people the freedom to undertake problem solving themselves and when you give people responsibility and autonomy to do this then generally they will try and come up with a solution. It all comes from the culture within the organization. Ensuring that the culture will promote people to look at problems and provide solutions. Sometimes the solutions will not work, but we must encourage people to try and maybe fail but ultimately we might find some way to work out better or to work smarter and this is key.”

“It's a culture of innovation that needs to be generated to make people think about their work and how they can do it better. So once you have that culture and you give people the freedom to act, then I think they will innovate intuitively.”

“You have to facilitate innovation through the management, where people can get together and find the right solutions quickly.”

“Everybody should be involved in innovative processes within the organization, it's up to the management to create a culture that encourages people to try different things and then everybody should be able to do Innovation, irrespective of their own work practices and their own work functions.”

“At the current point, what we are trying to do is achieve a basic acceptable level of customer service that our customers are happy with. In terms of continuing innovation, we try to work the best way that we can and if people have good ideas to improve a process, then we will be open to listen them. We do not have formal process for describing or designing innovation within the subsidiary, it is something that we talk about on a senior management level, maybe with headquarters from time to time or our global service management meetings where certain issues or improvements could be discussed.”

“I will be looking at processes that can be improved. And then I will try and get some approval from management in Germany to implement some ideas and maybe I need a budget to implement some solution.”

Q.4 What level of capability is required within the subsidiary to effectively encourage and foster innovation?

“Innovation occurs on many levels. You could have an innovative solution to doing an installation. You could have an innovative approach to tackling a service problem, we have innovative service techniques that we use to measure staff performance for example.”

“Everybody who encounters our systems can view them from a different viewpoint and therefore can have their own perspective on how something could work better.”

“The capability of staff would affect their ability to add deep innovation, but innovation can happen across all levels. As we are quite a mature company, we have many product experts within our company. We can look at the very high end innovations where small changes can make a big difference to our products.”

“We can encourage and foster innovation at all levels of capability of staff and I think that's important within our organization.”

“Sometimes the new guy can see something that the guy who's been here for 25 years cannot see. This is very useful and giving you a fresh perspective on problems. So, I think, of course, the guy with more experience can know the product better and can deliver a bigger solution, or find a solution quicker, but you can get great information and insight from all levels of staff if you encourage them to try and innovate and use their brain to solve problems, that's ultimately what we do in service.”

“There is some local skills related to installations of new products that we might have had before other markets and we can help them with the issues that we had.”

“The more experience that you have, you would probably be able to apply more innovation than someone who had just joined the organization.”

“The staff are very busy with the day to day operations and the primary concern is to keep the availability of the equipment very high. If we have service technicians that have some ideas, then of course we will listen to them and see if it is something that we can carry through.”

“I think as we become bigger our client base becomes bigger, then our people will become more experienced and we can provide more value adding activities to our operations.”

Q.5 What is the level of competition with the local environment in which the subsidiary operates? What is the relative complexity of the subsidiary environment? How does this affect the ability to innovate and likelihood of innovative practices with the subsidiary?

“We don't have much competition in their local environment. There is some of course and you can never be complacent. So we have a relatively non-complex environment which gives us freedom to deliver solutions in the best way possible.”

“I would say that the low level of competition is a benefit to our ability to innovate, for sure.”

“We're all the time we are looking at our competitors and their product and seeing what they're offering, feeding that back into the product management team in Germany to try and match their products or improve upon their products. Therefore, I think the competition is high and that keeps us on our game. We constantly need to be improving and changing to match the competitor's offerings or very quickly we will become irrelevant.”

“There's considerable competition, so we need to constantly review our product portfolio on our offerings and tailor that to meet the requirements of the clients. Our product offering and the tendering process it is much more refined and custom to individual clients, on this basis the competition is strong and that requires us to provide very innovative solutions for our clients.”

“The competition is not so much for this service contract because it is our equipment and we must maintain it and deliver it. So we do not have so much competition and the environment is only slightly complex because it is a custom solution within the overall company.”

Q.6 How does the maturity of the subsidiary give credibility to, and increase the propensity for subsidiary innovation?

“We were very heavily dependent upon headquarters in the initial start-up phase as we gained more experience we became more autonomous enabling us to deliver custom solutions to the clients.”

“We've been established for nine years now. We have many experienced people, we are well known within the organization. So the more mature the subsidiary is, then the more access, you will have to the key people within the multinational corporation and this will enhance then your ability to suggest ideas and to gain insight from these key people.”

“So it's very important the maturity level of the company. It also gives credibility to the ideas that you suggest to senior management.”

“We are the most mature subsidiary because we are here since the start, so we have we have a lot of credibility and tons of experience and I think it is key when you are the final solution provider for

every problem, that you must have credibility within your organization. So we maintain the level of experts that are required to deliver this service to all of our clients and all of the subsidiaries around the world. I think if you cannot find solutions, then ultimately the company will not exist. So we have a lot of credibility and we are a very mature subsidiary of the global company.”

“We have a lot of operators using our products so that naturally gives credibility to our offering. In terms of our propensity for innovation, the more experienced that we get, the more value added activities that we can deliver based on our experience.”

“Well, of course, we are very relatively new subsidiary, so I don't think that everybody is looking to us to try and provide solutions for the company. In general we innovate where we can, and if we can supply some ideas to the headquarters in Germany, then we will try to do this, but it is not our primary focus. Our primary focus is to deliver service to the local clients and deliver the contract for which we have signed to the best of our ability.”

Q.7 Based on factors discussed, where does the subsidiary investigated apply most innovative practices? This could be internally within the local environment of the subsidiary or internally within the MNC network or globally to entire MNC and its customer base.

“Our first port of call would be to innovate locally and then with the successful deployment, we can suggest those innovations to the internal multinational corporation network and other subsidiaries can use our innovations.”

“(We have) the power to spread that solution to all of the clients around the world. This is great for us. So, we have a unique perspective to be able to help everybody in the service environment to do this.”

“Most innovative practices, we apply our to our own market. Of course, we need to have custom solutions for every client. So we work every day to try and deliver the custom solutions to those clients and then if that can benefit some of the other subsidiaries, then great.”

“I would say our innovative practices are related to our local subsidiary, and then maybe to the rest of the multinational corporation.”

“Most of the innovations that we see being generated apply to the UK market. We do feed back to our colleagues around the world issues what we have found, product flaws or product upgrades that we have found have worked, are then fed out to all of the corporation's markets.”

“I would say we are a focussed locally in our market.”

4.3 Content Analysis

As described in the methodology chapter 3, this research analysed the retrieved content using direct analysis for the purpose of a pattern matching logic. The logic compares the research finding patterns against the predicted conceptual model. The discovery of patterns is aided by the use of a coding software system (MaxQData).

This analysis is presented in the form of the Creswell (2007) template for analysis of multiple case studies. For each case, the case context is described and within case themes are then analysed. Finally cross-case analysis where similarities or differences are identified. At this point assertions or generalisations can be made.

4.3.1 Case 1 – Ireland – Context and Themes

The Irish subsidiary is a wholly owned by parent company, it is a small business unit with 16 employees, self-identified as stage 3 on the Delany and Molloy, (1998) model of subsidiary evolution. This equates to performing a basic mandate in a superior way, they have stretch targets set which they consistently achieve . The subsidiary is in operations since 2009.

4.3.1.1 *Autonomy*

Autonomy is important to Irish subsidiary in respect of dealing with local operational issues including delivery of service and project deployments. The subsidiary is empowered to make any decisions relating to service delivery improvements to meet service KPIS's, project optimisation initiatives to deliver projects on time or other initiatives that could improve the overall performance of the subsidiary without significant investment. The subsidiary has little scope for increasing resources, large budgetary expenditure, product pricing and strategic decisions without approval from headquarters.

The Irish subsidiary is full reliant on parent company for advanced technical support, finance, HR, product development, software development and bid management. The subsidiary has high levels of local operational autonomy, but low within the MNC. The Irish subsidiary can be considered a local innovator with respect to the Gupta and Govindarajan (1981) model of subsidiary contexts through knowledge flow. As the subsidiary has good control over its local market , with innovations that apply well to the local market, but are not translated well to the global MNC. There is low knowledge outflow, but also medium dependent knowledge inflow.

4.3.1.2 Parent-Subsidiary Communication

The communication level between subsidiary and parent is high. The amount of core services that the parent supplies necessitates constant communication between parties.

4.3.1.3 CEO Strategy

The management team actively encourage innovation through empowering staff to make process changes that could benefit them individually or the whole company. Initiatives such as “idea generation” meetings are regularly conducted. Initiatives suggested once validated can lead to a piloting phase before full adoption within the subsidiary and then presented to HQ.

In general, the innovative practices, which occur, are at a local level, with only some being fed through various formal and informal channels to potentially affect the rest of the MNC.

High emphasis put on innovation at the managerial level.

4.3.1.4 Capability

There is a mix of skills and experience within the organisation, but everyone is regarded as having potential for innovation. The depth of innovation regarded as to be related to a person’s capability.

4.3.1.5 Competition

The subsidiary has low competition, which allows time for engagement with clients on the most innovative and best solutions as opposed to always offering the cheapest solution.

4.3.1.6 Maturity

With 9 years in business and a solid record of accomplishment of delivering and retaining contracts, the subsidiary has good credibility within the MNC. The level of credibility attained increases the subsidiary’s ability to influence parent company on strategic decisions such as new ways of working or product enhancements.

4.3.2 Case 2 – Germany – Context and Themes

The German subsidiary is a wholly owned subsidiary, with 41 employees, self-identified as stage 7 on the Delany and Molloy, (1998) model of subsidiary evolution. They are a strategic pivot for MNC operations for specific activities. It is a full line business with multi-country linkages and control. The subsidiary supplies service support to the MNCs global operations. The subsidiary is based within the same building as the parent company. The subsidiary is in operations since 1990.

4.3.2.1 *Autonomy*

The subsidiary has full autonomy to deliver service as is required. Operational effectiveness necessitates full autonomy for this subsidiary.

The subsidiary is full reliant on parent company for large budgetary approvals such as infrastructure and headcount. The parent also provides departmental finance and HR. The German subsidiary can be considered a global innovator with respect to the Gupta and Govindarajan (1981) model of subsidiary contexts through knowledge flow. As the subsidiary has high outflow of knowledge to the global MNC, and low inflow. Innovations apply well to the global MNC.

4.3.2.2 *Parent-Subsidiary Communication*

The communication level between subsidiary and parent is at the highest level possible – fully integrated, located in same offices.

4.3.2.3 *CEO Strategy*

Innovation is regarded as an essential job function. As the final solution provider for all service issues for the company worldwide, the subsidiary is the pinnacle of innovation within the MNC. The subsidiary operates as a hub for all subsidiaries, this way can provide resolutions found in one market to all the other markets. Being tasked with providing hotfixes and workarounds to the global company, innovation is so fundamental to the subsidiary that it could not exist without it.

4.3.2.4 *Capability*

High levels of capability are essential given the nature of the subsidiaries mandate.

4.3.2.5 *Competition*

No competition locally currently. Potential competition from large Slovakian subsidiary seeking to increase service mandate. The effect of the potential competition has no effect on the operations of the subsidiary currently.

4.3.2.6 Maturity

28 years in business. Regarded as the most technically proficient unit of the business, dealing with critical levels of issues daily. The subsidiary has achieved the highest possible level of credibility within the organisation.

4.3.3 Case 3 –USA– Context and Themes

The US subsidiary is a wholly owned subsidiary, with 183 employees, self-identified as stage 5 on the Delany and Molloy, (1998) model of subsidiary evolution. Having an extended basic mandate with significant strategic importance for the MNC. The subsidiary supplies hardware and support to 47 clients across the US. The subsidiary is in operation since 1996.

4.3.3.1 Autonomy

The subsidiary has high autonomy to deliver service as is required. Time zone differences and scale of operations necessitate a high degree of decision-making ability for the US subsidiary.

The subsidiary is full reliant on parent company only for significant strategic decisions, product development and core software development.

The US subsidiary can be considered an integrated player with respect to the Gupta and Govindarajan (1981) model of subsidiary contexts through knowledge flow. As the subsidiary has high outflow of knowledge to the global MNC, and high inflow from HQ. Innovations apply well to both the local operations and the global MNC.

4.3.3.2 Parent-Subsidiary Communication

Excellent communication channels and frequency exist. However, the communication level between subsidiary and parent is low with respect to other subsidiaries.

4.3.3.3 CEO Strategy

As the US operates as an almost autonomous unit at scale, innovation is necessary for daily delivery of service to clients. Management encourage all staff to “work smarter, not harder” and to suggest process improvements that could benefit the organisation. Recognition is given for enhancements that are implemented.

4.3.3.4 Capability

High levels of capability exist, but innovation is not restricted to any department.

4.3.3.5 Competition

High levels of competition exist. Competition drives innovative practices in order to win and retain business.

4.3.3.6 Maturity

22 years in business. Steadily growing since inception. The US subsidiary is closest to standalone within the group. It has strong credibility and influence within the MNC and can therefore affect and implement initiatives relatively easily. High maturity and high credibility.

4.3.4 Case 4 –UK– Context and Themes

The UK subsidiary is a wholly owned subsidiary, with 125 employees. It is self-identified as stage 3 on the Delany and Molloy, (1998) model of subsidiary evolution. They perform basic mandate in a superior way. The subsidiary is in operation since 1999.

4.3.4.1 Autonomy

Subsidiary has generally low level of autonomy. Significant support and direction given to subsidiary from parent company on all major operational issues. Departmental support from parent HR, service, marketing, sales, finance, product development, software development and quality assurance. Low level of autonomy can be attributed to significant expansion and growth in the past 6 years, from 50 to 125 staff.

The UK subsidiary can be considered an implementer with respect to the Gupta and Govindarajan (1981) model of subsidiary contexts through knowledge flow. As the subsidiary has low outflow of knowledge to the global MNC, and high inflow from HQ. Innovations usually apply to the local market. The subsidiary depends largely on HQ and is not generally a creator of organisational knowledge.

4.3.4.2 Parent-Subsidiary Communication

High levels of communication required to deliver support to subsidiaries clients and operate the UK business.

4.3.4.3 CEO Strategy

Promotes a culture within the organisation of problem solving, innovation and entrepreneurship. Allot of geographical dispersion of staff means there is significant challenge to fostering the culture of innovation.

4.3.4.4 Capability

All levels of capability exist within the organisation. Mostly service technicians in the UK. As the subsidiary is supported significantly from the parent, the subsidiary gains capability from the parent company staff. Most local innovations relate to hardware improvements.

4.3.4.5 Competition

High levels of competition exist. To compete in this market, the subsidiary relies heavily on the parent company for innovative solutions and proposals to win and maintain business.

4.3.4.6 Maturity

19 years in business. Mature subsidiary with solid hardware service team. The growth of the business has meant the business is heavily supported in delivering its product and service offerings from parent company. Given the rapid growth of the business, it is in a transition period of disruption. During this period, it must focus on achieving stability for the local market. However, the subsidiary has strong experience in certain areas of the business, that are been shared and have benefitted other markets.

4.3.5 Case 5 –Switzerland– Context and Themes

The Swiss subsidiary is a wholly owned subsidiary by parent company, with 13 employees. It is self-identified as stage 2 on the Delany and Molloy, (1998) model of subsidiary evolution. It performs its basic mandate satisfactorily and would like to perform the basic mandate in a superior way. Established in 2006.

4.3.5.1 Autonomy

Subsidiary has generally low level of autonomy. Significant support and direction given to subsidiary from parent company on all operational issues. Departmental support from parent HR, service, marketing, sales, finance, product development, software development and quality assurance. Low level of autonomy can be attributed to strategic decision to retain all functions except hardware maintenance with parent company. Close proximity to parent company helps with this approach.

The Swiss subsidiary can also be considered an implementer with respect to the Gupta and Govindarajan (1981) model of subsidiary contexts through knowledge flow. As the subsidiary has low outflow of knowledge to the global MNC, and high inflow from HQ. Innovation is not regarded as key to the subsidiaries operation as standard. The subsidiary depends largely on HQ and is not a creator of organisational knowledge.

4.3.5.2 Parent-Subsidiary Communication

Highest levels of communication required to deliver services to subsidiary. Subsidiary unit is effectively a single department of the full service parent company.

4.3.5.3 CEO Strategy

Focus is on achieving a basic level of service that provides business to parent company. Innovations that are generated from the local team are welcomed but not systematically sought. Innovation for this subsidiary occurs mainly with the parent organisation.

4.3.5.4 Capability

Currently low levels of capability, given the basic mandate that the subsidiary has, and its short period of existence. If the mandate increases then it is expected that the capabilities will increase.

4.3.5.5 Competition

Low levels of competition. Small market with number of actors.

4.3.5.6 Maturity

12 years in business. Subsidiary has expanded from 3 to 13 people in the past three years. As a larger subsidiary, it is immature. It is acknowledged that innovations are not generally sought from the subsidiary; however, practices developed within the subsidiary have been adopted worldwide.

4.4 Cross-Case Analysis

A summary of results table is shown here:

	Headquarter Assignment		Subsidiary Choice		Local Environment	
Subsidiary	Autonomy	Parent-Sub Communication	CEO Strategy	Capability	Competition	Maturity
IRELAND	Medium	High	High	Average	Low	High
GERMANY	High	High	High	High	Low	High
USA	High	Low	High	High	High	High
UK	Low	High	Low	Low	High	High
SWITZERLAND	Low	High	Low	Low	Low	Low

Table 2- Summary results as observed

The effect of the factors tabled above resulted in the following for the subsidiaries propensity for innovative activities and there area of application.

Subsidiary	Innovation	Area of Innovation Application	Stage of evolution
IRELAND	High	Local / Internal	3
GERMANY	High	Local/ Internal /Global	6
USA	High	Local/ Internal /Global	5
UK	Low	Local	3
SWITZERLAND	Low	Local	2

Table 3- Area of innovation applied

All subsidiaries innovations apply to local markets. With only highly evolved subsidiaries(Germany and US) contributing innovations which apply to the global market.

Chapter 5 – Conclusion & Recommendations

5.1 Introduction

This chapter will discuss the results from the research findings detailed in chapter 4. The results will be reviewed under the headings of the six elements of the conceptual model that was proposed to assess the relevance and impact of each element of subsidiary innovation.

Discoveries made during the research process will be presented. Of particular interest are the areas of knowledge transfer between subsidiaries and the MNC. In addition, the subject of the necessity for innovation and how it relates to company culture were a recurring theme, as were the challenges faced by subsidiaries in employing innovation programs or practices.

5.2 Autonomy

Consistent with the Ghoshal and Bartlett (1988) study. There was found to be a positive correlation between increased autonomy and innovative practices within the subsidiaries. The assertion by Ghoshal and Bartlett (1988) that subsidiary activities are largely dictated by the parent company was found to be true.

Consistency was also found with the idea that each subsidiary seeks to maintain control and autonomy over its local market and to proactively influence the local operation (Homburg and Prigge, 2014). It was found all subsidiaries desired to maintain operational autonomy as relates to decisions on the day-to-day delivery of services and projects. However, the markets with high autonomy (US and Germany) are considered the most innovative business units. The markets with low autonomy (UK, Ireland and Switzerland) have the least amount of innovative activity. The reasons for high autonomy are based on the mandate of the business units, where to effectively operate high autonomy is required. The German subsidiary has a worldwide and critical mandate. Where the highest skilled workers in the company are dealing with the most complex and critical issues. Innovation is a core skill required to operate in the German subsidiary and by virtue of the nature of this role, they require significant autonomy to deploy solutions readily. This result correlates with the idea that high levels of decision making autonomy results in higher levels of innovation (Ghoshal and Bartlett, 1988; Birkinshaw, 1997; Hakala, Sirén and Wincent, 2016)

The US subsidiary operates as the most standalone subsidiary in the MNC. Due to geographical and time differences, they require significant autonomy to deliver services. In this position as a standalone unit, they are free to innovate solutions as required to respond to their clients' needs in a timely manner.

The lower autonomous subsidiaries of UK, Ireland and Switzerland have a decreased scope for innovation at an MNC level, as their mandate is of a basic level (stage 3 and 2 respectively). The headquarter assignment is to deliver basic mandate locally with considerable support from the HQ. This is a strategic decision at this point in time, potentially each will evolve to increase mandate with experience.

It results that increased levels of autonomy not only allow for increased innovation, but increased levels of autonomy necessitate innovation in the more autonomous subsidiary units. The results validate the previous study which saw an increase in innovative behaviour where strategic controls are employed (Zahra, Dharwadkar and George, 2000), this was evident in the case of the German and US subsidiary. Where the use of informal communication lines and subjective appraisal criteria exists.

5.3 Parent-Subsidiary Communication

The significance of parent-subsidiary communication concerning innovation at subsidiary level relates to the nature of communication as opposed to the level of communication, which was presented by Birkinshaw (1997). In all subsidiaries, the level of communication is high and through multi-channels. It was universally agreed that without good communication between parent and subsidiary the ability to innovate would indeed be negatively affected, as proposed by (Bartlett and Ghosal, 1986).

The high innovators are communicating with headquarters on issues of key strategic importance for the MNC. The low innovators are receiving significant support from headquarters to deliver day-to-day operations.

Innovation at subsidiary level is affected by the type of communication being engaged in, in high innovation subsidiaries the communication pertains to mainly high-level discussions on strategy and vision, whereas with low-level innovators the discussions relate to strategy and vision, as well as significant administrative and technical support.

5.4 CEO Strategy

All subsidiaries senior management had positive dispositions relating to promotion of innovations within their own subsidiaries. All managers reported innovation as being promoted as a culture within the organisation. Differing levels of innovative strategy related to the mandate of the particular subsidiary. With high levels of innovation being associated with a strategic necessity for innovation.

It was universally acknowledged that promotion of innovative practices is essential to stimulate and maintain a modern workforce. In this way, all innovation attempts should be encouraged and viewed positively.

In only one case did the manager, where the subsidiary had the most basic mandate and was solely focussed on delivering a basic level of service, did not actively pursue innovation. However, the unit was not opposed to innovative practices and had in the past delivered innovations that ultimately were adopted and beneficial to the MNC.

The relative success of the subsidiary management as discussed by Choi and Johanson (2012) or the capability as discussed by Augier and Teece (2007) of management in their ability to source, recognise and integrative innovative practices was not readily discernable.

5.5 Capability

It is recognised that certain departments innovate as required as part of their daily business, such as software development, product development and service support. Whilst these highly skilled areas are inherently innovators, the practice of innovation can be found at all levels of capability within the organisation.

Innovations can come from any part of the business. For example junior members of staff, administration or warehouse can positively improve the business. In this way, promotion of innovation should not be restricted to individuals but rather a deep-rooted cultural mind-set within the organisation for the betterment of the organisation.

As was recognised by Young, Hood and Peters (1994) in order to be autonomous and therefore foster innovation, the capabilities of the subsidiary must evolve.

5.6 Local Competition

It was found that organisational activities can indeed be facilitated or restrained by the local environment within the subsidiary operates (Birkinshaw and Hood, 1998). And that subsidiaries have unique opportunities or threats based on the local environment (Ghoshal and Nohria, 1988).

In areas of high competition, innovative practices were found to be commonplace. Innovation is required to maintain competitiveness and relevance in an in highly competitive market. Innovation from bid stage to final deployment stage is essential to the ability to deliver these competitive projects to the market.

Interestingly, some subsidiaries operating with low competition cited increased freedom to pursue innovative solutions in conjunction with clients, to provide the best solution for a particular project without the pressure of high competition.

5.7 Subsidiary Maturity

The maturity of the subsidiary is not definitive as its ability to become a de facto innovation centre. There was evidence that in order to have an increased mandate that the subsidiary required some level of maturity to gain credibility within the MNC, as presented by Delany and Molloy (1998). This increased mandate phenomenon is planned by the parent company as opposed to being defaulted after a certain period in business.

It is observed that a new subsidiary with a basic mandate is not expected to produce significant global innovations; however, there is some risk that this approach may overlook the potential for innovation even within an immature subsidiary.

5.8 Challenges to Innovation

The most significant challenges to innovation have been identified as time and resources. As identified by Young, Hood and Peters (1994) subsidiaries need the ability to develop resources and capabilities in order to innovate. Promotion of innovative practices when formally addressed require allocation of these time and resources. Programs for innovation generation are limited despite universal approval and acceptance that innovation is fundamental to business operations. Where innovation is not a fundamental function of the subsidiary role, it usually exists in a non-formal voluntary capacity. The antecedent to this, is that there is potentially significant innovative and entrepreneurial behaviour that is unevaluated within the MNC.

5.9 Discovery

During the course of the interviews, a number of factors arose which added to understanding of factors that influence innovation generation at the subsidiary level.

Firstly, that innovation is a cultural imperative for the modern MNC. It is not an optional activity and is required within the all roles within the subsidiaries. All management expected some level of innovation from their teams. Whilst the global innovators routinely demanded innovation as standard.

The culture espoused of being innovative at all levels, was not found to be evident at a tangible level. Innovation by assignment was carried out where subsidiaries had a strategic imperative to solve problems, where the strategic imperative did not exist the likelihood of deep innovation is low.

Secondly, whilst all subsidiaries are positively disposed to and expect innovation, the formal process of presenting to the parent company for global adoption does not exist.

Thirdly, all management recognised the value of each member of their teams in the creation of innovative ideas to improve work process, products or procedures. However, the formalisation of processes to retrieve this innovative information was not evident.

5.10 Model Re-design

The study showed that each element of the conceptual model had validity as relates to potential for innovation in the subsidiaries. The level of each element combined affected the relative level of output of subsidiary innovation. The stage of evolution of the subsidiary is critical as to the likelihood or imperative for innovation. The application area of innovations created, varied depending on the stage of evolution. Where subsidiaries with a global mandate routinely applied innovation to the MNC network. Subsidiaries within the stage two or three (basic mandate), generally applied innovations to the local market, with some feeding through the parent organisation or informally to the MNC network.

Therefore, the model needs to take into account the Delany and Molloy (2008) model of evolution to accurately capture the factors, which affect the subsidiaries to create innovations that will affect the global MNC.

The proposed redesign is represented here:

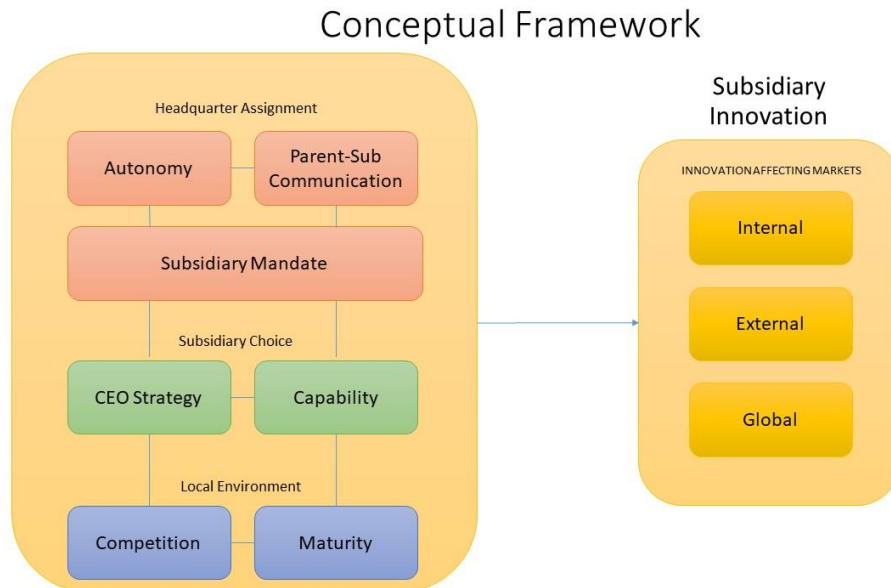


Figure 8 - Revised Conceptual Model

The revision shows that all elements have interplay and the possibility to affect the level of subsidiary innovation. The element of subsidiary mandate is added due to its significance. The model also adds that innovation can be applied to any of the three markets of the global MNC (internal, external or global).

5.11 Practical Implications and Limitations

The most striking aspect of the findings are that subsidiary innovation is largely dictated by the mandate from the parent company. The ability to increase the mandate is a task for HQ in conjunction with subsidiary management. It can be inferred that by increasing mandate, a subsequent increase in innovative activities will be observed.

It was recognised that a culture of innovation is essential. However, the lack of formal processes for retrieving and disseminating such ideas requires time and resources. The benefit of such resource allocation would require to be tested and validated. In this regard local subsidiary management hold strong influence on the success of such programs, as they would be required to seek approval for resources, drive the programs and implement pilots.

As all subsidiaries identified potential innovation at all levels of their organisation, the opportunity for exploiting this potential exists within the MNC. The decision to pursue non-essential innovation generation can be regarded as an additional task, but it was recognised that through informal channels significant benefit for the MNC has been seen from mining this potential.

The findings of this research must be viewed through the lens of its many limitations. The company analysed was an individual parent with its own unique subsidiary relationships. The research captured a moment in history of these subsidiaries. The profile of the management subjects varied with length of service, with each likely having some natural bias. The research looked at a particular engineering company, which provides hardware and services. The results may vary if a pure manufacturing or services industry was examined. For these reasons, wide industry generalisations cannot be made.

5.12 Recommendations for future research

With respect of the limitations mentioned, further research needs to be carried out in other industries and many more subsidiaries to validate the findings.

The theme of having a culture of innovation occurs frequently with scant definition of what this is in a practical and tangible way. Future research regarding the mechanics of an innovation culture would be useful. Are there tertiary company cultural benefits from promoting innovation?

This research looked from the side of the subsidiary only. Analysis from the parent perspective, and the reasons why a particular mandate is so important and the effects on innovation it has could add to the work. The parent companies views on innovation discovery in the subsidiaries and techniques used to foster and uncover innovation would be of interest.

The area of time and resources required to effectively promote, discover and implement innovative practices, could act as a justification or reason not to engage in innovation forums.

Further investigation into the idea of a single subsidiary acting as a hub of knowledge for the MNC network, where they act as an idea exchange with accessible knowledgebase, and systems for recording, filtering and piloting innovations.

If we be useful to look at the employees too. A study that looked at the area of innovation generation and the factors that encourage or discourage it amongst the employees. Do reward systems or recognition increase innovative practices amongst employees? A study of this nature would be intriguing.

5.13 Conclusions

This study looked at the key elements from the literature that influence a subsidiaries likelihood for innovation. It validated each element as having some degree of relation to successful innovation. The revised conceptual model appears robust in capturing the main element leading to subsidiary innovation.

As with simplified models there can be significant nuances, which can affect the outcome, these are detailed below.

Under the heading of headquarter assignment lies autonomy and parent-subsidary communication. Autonomy is essential to the operation of each of the subsidiaries examined. High quality and frequent parent-subsidary communication is also common amongst all subsidiaries. A key point is that the level of autonomy is assigned. It is assigned by virtue of the role the subsidiary is expected to carry out, and the mandate it is expected to be executed as dictated by the parent company. The nature of the communication is also prescribed by the mandate assigned. The effect is that innovation as an organic activity occurs where the mandate is low, and will be usually applied to the local market. With a higher mandate, there comes an expectation of innovation or automatic innovation. These type of innovations will typically apply to the internal MNC or the global market.

With respect to the heading of subsidiary choice. The role of the subsidiary CEO is important to innovative activities. Whilst all recognised the importance of innovation, few had formal processes or allocated resources specifically to this activity. With regards to capability, it was universally accepted that innovation could occur across every job function and employee length of service. The reality of the importance can be reflected in the activities or lack of, that look for innovation generation. Primarily management focus is on delivering the assigned mandate to the parent corporation. This encourages the idea that innovation programs must be formalised at parent company level to become standard work practice within the subsidiaries.

The effect of the local environment appears to be of lesser importance than the preceding factors, although high competition necessitates innovation. In low completion environments innovation can also flourish. The maturity of the subsidiary has significance as pertained to its mandate. The evidence could be misleading as it is more likely a new subsidiary would have a reduced mandate and therefore less of a propensity for innovation. Equally likely is that a new subsidiary with a substantial enhanced mandate could innovate from inception.

Whilst innovation is widely observed as being a component of the modern subsidiary. The formalisation of innovation discovery and application requires much work by management of the

subsidiary and parent company. The idea is attractive but the realisation, which requires time, resources and strategic drive is less attractive as delivering the basic mandate takes precedence. For subsidiary management with a strong desire to innovate they can do so by working towards the goal of an increased mandate from the parent company. This effort in itself will stimulate innovation and encourage innovative practices.

This study has revealed there is considerable potential ability within the subsidiary network. Additionally as was identified by Hakala, Sirén and Wincent, (2016) subsidiaries with an entrepreneurial orientation can be a source of competitive capability for the complete MNC, and the very success of the MNC is dependent on its ability to leverage the dispersed knowledge and innovative potential of its subsidiaries (Reilly and Sharkey Scott, 2014).

It is therefore reasonable to conclude that an MNC could benefit significantly from at least some formal efforts applied to exploring the innovative potential that exists within its subsidiary network.

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Appendices

Interview Questions

Part A: Warm-up questions

Q.1 What are your responsibilities in your organisation? Could you briefly discuss the history of your subsidiary?

Part B: Focusing the discussion on subsidiary innovation as applied to the subsidiary under investigation

Autonomy and Parent Sub-Communication

Q.2 (Open). "Please describe the evolution of your subsidiaries relationship with headquarters?"

Q.3 (Open). "How do you view your subsidiaries role within the MNC network?"

Q.4 In your opinion does the level of subsidiary autonomy afforded to the subsidiary affect your ability to innovate?

Q.5 What effect does the level and quality of parent-subsidary communication have on your subsidiaries innovation and entrepreneurship?

Q.6 (Open). Describe the flow of knowledge between the subsidiary and parent? What are the types of knowledge being exchanged between your subsidiary and parent?

Capability and Management

Q.7 (Open). What does innovation mean to your subsidiary? Where does innovation typically occur in your organisation?

Q.8 To what extent are innovative practices encouraged at management level within your subsidiary, and to what extent is innovation regarded as fundamental to the subsidiary by management?

Q.9 Who is typically involved in innovative practices within your organisation?

Q.10 In general how do innovative activities occur within your subsidiary or the MNC?

Q.11 What factors contribute / obstruct the ability of your subsidiary to undertake innovative practices?

Q.12 (Open). Is there local skills or best practices your subsidiary currently has that could benefit the global MNC?

Q.13 Does the capability of your staff affect your ability to effectively encourage and foster innovation? Is it a consideration when undertaking innovative initiatives?

Local Environment & Maturity

Q.14 What is the level of competition with the local environment in which your subsidiary operates? What is the relative complexity of the subsidiary environment? How does this affect the ability to innovate and likelihood of innovative practices to occur with the subsidiary?

Q.15 How does the maturity of the subsidiary give credibility to, and increase the propensity for subsidiary innovation?

Q.16 Based on factors discussed, where does your subsidiary apply most innovative practices? This could be internally within the local environment of the subsidiary or internally within the MNC network or globally to entire MNC and its customer base.

General

Q.18 If innovation occurs at subsidiary level. How is it transferred to the MNC network? Formally, informally. Does a process / forum exist for such knowledge transfer?

Q.19 Is your subsidiary actively encouraged to participate in innovative practices. How?

Q.20 What are the most important factors that could improve your subsidiaries ability to innovate?

Q.21 Where would you identify your subsidiary on the (Delany and Molloy, 1998) stages of evolution table? Does your subsidiary aspire to move up the stages?

Agreement

Submission of Thesis to Norma Smurfit Library, National College of Ireland

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Signature of Candidate:

A handwritten signature in black ink that reads "Derek Malone". The signature is written in a cursive style with a large initial 'D' and a long, sweeping underline.

29/08/18

For completion by the School:

The aforementioned thesis was received by

Date: