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The influence of subsidiary strategic role on manager's mindset

Daniel Evans, Murray Rees and Ron Edwards
ron.edwards@apu.edu.my
Asia Pacific University of Technology and Innovation

Abstract

This paper considers the influence of an MNC subsidiary's strategic role on its interpretation of change in its competitive environment. Gupta and Govindarajan's model of subsidiary strategic context is used to classify subsidiaries according to their strategic roles. Porter's five forces framework is used to classify change in the subsidiary's competitive environment. The particular environmental change that provides the context for the study is the expansion of the European Union. The analysis revealed that a subsidiary's strategic context affects its perception of the competitive environment. Specifically, subsidiaries that were responsible for substantial knowledge outflows were likely to view the effects of an expanded EU as being more significant than those with low knowledge outflows. The paper concludes that a strategic role as a knowledge creator influences a subsidiary's mindset or perception of its competitive environment.

Keywords: MNC, competitive advantage, EU, knowledge, mindset

1. Introduction

Past research has revealed that firms, including subsidiaries of multinational corporations, have varied in the importance they have attached to the deepening or broadening of regional integration (Almor & Hirsch, 1995; Daems, 1990; Dunning, 1993; Porter, 1980; Yannopoulos, 1992; Young, McDermott & Dunlop, 1991). In the case of the deeper integration of the European Union, some researchers and commentators were critical of firms that did not recognise the importance of the development (Catoline & Chopoorian, 1990; Edwards & Buckley, 1997). The current paper seeks to explain some of the diversity in how subsidiaries perceive competitive threats and opportunities from environmental change by examining the association between their strategic roles and their perception of the impact of the environmental change.

The paper uses Gupta and Govindarajan's (1991) model of subsidiary strategic roles (global innovator, integrated player, local innovator, implementor) and their associated role in knowledge creation and importation to classify a subsidiary's strategic role. A link is drawn to Perlmutter's (1969) model which highlights how a subsidiary's strategic role or orientation influences its perception of the competitive environment. Porter's (1980) five forces framework is used to classify the different ways that a change in the environment may affect a firm's competitive position (changes to the power of buyers, suppliers, competitors and others).

Knowledge transfer or sharing within MNCs has been the focus of a number of empirical studies (Ambos, Ambos & Schlegelmilch, 2006; Gupta & Govindarajan, 1994; Harzing & Noorderhaven, 2006; Minbaeva, 2008) but few take the perspective of an MNC subsidiary. Ghoshal and Nohria (1993) argued that subsidiary-parent relationships vary depending on their external environment and their resource levels. They posit that "managers need to be sensitive to such changes in environmental demands – indeed, they should drive such changes when appropriate – and must develop the ability to differentiate and integrate their organisations to lead or respond to such evolving business conditions" (Ghoshal & Nohria, 1993:33). In this circumstance, subsidiaries are at the forefront of environmental changes and how they respond potentially has ramifications for the MNC. However, the extent of their alertness to environmental changes may vary with the strategic role of the subsidiary.

As pointed by Ellis (2000), in an effort by some researchers to better understand global networks and find further sources of competitive advantage, MNC strategic management literature has evolved to recognise the MNC subsidiary as a unit of analysis e.g., Gupta & Govindarajan (1991; 1994) or Ghoshal & Nohria (1989). Subsidiaries have been used as units of analysis to explain MNC: autonomy (Ambos & Reitsperger, 2004), control (Andersson, Björkman & Forsgren, 2005), embeddedness (Yamin & Andersson, 2011), human resource management (Collings, Morley & Gunnigle, 2008; Wang, Jaw & Huang, 2008), performance (Andersson, Forsgren & Holm, 2001; Yu Ping Wang, Jaw & Chen, 2006), strategy (Grewal, Chandrashekaran & Dwyer, 2008) and knowledge transfer (Andersson, 2003; Foss & Pedersen, 2002; Hallin & Holmström Lind, 2012; Harzing & Noorderhaven, 2006; Monteiro, Arvidsson & Birkinshaw, 2008; Qin, Mudambi & Meyer, 2008; Yi, 2006). According to Benito et al., (2003) an oversight in this literature has been the scant attention paid to the impact of environmental (external) factors, such as regional integration or disintegration, on issues such as MNC subsidiary location and role (see also Birkinshaw & Hood, 1998). According to Benito et al., (2003), although internal factors play a part in determining the activities undertaken by a subsidiary in any particular location, regional integration schemes, such as the deeper integration and expansion of the EU, influence both the initial entry decision and the competence and scope of the subsidiary.

EU expansion is chosen as the context for the study for two reasons. First, there was considerable attention given to expansion in the media where it was portrayed as a significant event for firms based in the UK. Second, research and anecdotal evidence at the time concluded that British firms and foreign subsidiaries in the UK were underestimating the threats and opportunities that would result (Catoline & Chopoorian, 1990; Edwards & Buckley, 1997).

The next section reviews the literature on subsidiary role, highlighting how the subsidiary connects with its local competitive environment. Porter's competitive framework is explained. Finally the relationship between the subsidiary's strategic role and its perception of the competitive impact of European expansion on them is hypothesized.

2. Literature review

A firm's external environment has been defined as the aggregate of those external factors that influence or have the potential to influence its functioning (Emery & Trist, 1965; Thompson, 1967). The business environment is also the source of constraints, contingencies, problems and opportunities that affect the terms on which a firm transacts business (Khandwalla, 1977). According to Perlmutter (1969), a manager's perception of the external environment will depend on the firm's strategic orientation. Ethnocentric MNC managers will identify with strategic issues relevant to the parent and will disregard issues important to subsidiaries. Conversely a polycentric MNC subsidiary will mainly consider issues relevant to the host market. A geocentric MNC could lean towards a 'glocal' approach. A global mindset has been recognized in the literature as an essential ingredient in identifying foreign opportunities (Arora, Jaju, Kefalas & Perenich, 2004; Gupta & Govindarajan, 2002; Levy, Beechler, Taylor & Boyacigiller, 2007).

The regiocentric mindset described by Wind et al. (1973:20) noted that in terms of marketing, "once sufficient information and understanding of national market conditions was obtained, target segments could be identified on a regional or worldwide basis cutting across national boundaries". As such, regiocentric subsidiaries would consider issues relevant to the region. Differences between the environments of MNC subsidiaries and their parent are reflected in the fact that generally some degree of local management freedoms exist, which allow a subsidiary "to develop a partial or complete strategic response that meets local pressures, needs, and requirements" (Taggart, 1998:663). However, the extent of freedom varies according to the strategy adopted by the parent. Gupta and Govindarajan (1991) typology suggests that MNC subsidiaries will vary to the extent to which they engage in knowledge inflows from the rest of the corporation and the extent to which they engage in knowledge outflows to the rest of the corporation. A summary of Gupta and Govindarajan's (1991) description of the resultant four subsidiary roles is provided in Table 1 below.

Table 1: Subsidiary Strategic Context Descriptions

Strategic Context	**Description**
Global Innovator (*High outflow / Low inflow*)	The subsidiary serves as the fountainhead of knowledge for the other units. For example, a parent company is located in one country, and yet a subsidiary in another country is charged with leading an element of the business.
Integrated Player (*High outflow / High inflow*)	Similar to Global Innovator role in that it implies a responsibility for creating knowledge that can be utilised by other subsidiaries, however, unlike the Global Innovator, an Integrated Player subsidiary is not self-sufficient in the fulfilment of its own knowledge needs. It requires knowledge from the rest of the network.
Implementor (*Low outflow / High inflow*)	The subsidiary engages in little knowledge creation of its own, and relies heavily on knowledge inflows from either the parent or peer subsidiaries. The theoretical obverse of the Global Innovator.

Local Innovator (*Low outflow / Low inflow*)	The subsidiary has almost complete local responsibility for the creation of relevant know-how in all key functional areas, however, this knowledge is seen as too idiosyncratic to be of much use to subsidiaries in other countries.

Source: Gupta & Govindarajan (1991).

In short, Gupta and Govindarajan (1991) consider the MNC as a network of transactions in knowledge, goods and capital among subsidiaries in different countries, with the strategic role of those subsidiaries varying in terms of the magnitude and direction of those transactions. Focusing on knowledge flow transactions, Gupta and Govindarajan (1991) define four generic subsidiary roles and place them in the classification matrix shown in Figure 1 below. Having argued that “differences in knowledge flow patterns among focal and peer subsidiaries represent a core dimension along which subsidiary strategic contexts can differ” (Gupta & Govindarajan, 1991:769), Gupta and Govindarajan (1991) advance a conceptual typology based on how those differences “are likely to be reflected in the mix of formal and informal administrative mechanisms that corporate headquarters might utilise to shape the decisions and actions of various subsidiaries” (Gupta & Govindarajan, 1991:769). The typology has clear implications for the current research, because the assessments by subsidiaries of environmental change in the EU may reflect their particular strategic role.

Figure 1: Variations in Subsidiary Strategic Contexts: A Knowledge Flow based Typology

Outflow of knowledge from the focal subsidiary to the rest of the corporation

High	Global Innovator	Integrated Player
Low	Local Innovator	Implementor
	Low	**High**

Inflow of knowledge from the rest of the corporation to the focal subsidiary

Source: Gupta & Govindarajan (1991).

Gupta and Govindarajan’s studies (1984; 1991; 1994) and in particular their typology of strategic contexts, are useful in understanding the various roles of subsidiaries within a MNC network. The current paper examines the way in which MNC subsidiaries interpret a changing business environment is influenced by their strategic role.

The global innovator subsidiary has been described as a fountainhead of knowledge for other subsidiaries (Gupta & Govindarajan, 1991). Its perception is therefore global. 'Client' subsidiaries may be scattered around the world. Hence it will need to be aware of the environment in which its fellow subsidiaries are operating. Other authors (Birkinshaw & Morrison, 1995) have described these subsidiaries as having a 'world mandate' in that they have unique knowledge that is a resource for others. The integrated player subsidiary is similar to the global subsidiary in that it is responsible for creating knowledge for use by other subsidiaries. It is different to the extent that it is not self-sufficient in knowledge creation (Gupta & Govindarajan, 1991). Knowledge flows in and out of these subsidiaries. They are therefore highly integrated with other subsidiaries in other countries. Threats to these subsidiaries will soon be felt by the integrated player itself. Being well connected to subsidiaries in other countries, they will have a 'mentality' or 'mindset' to match. The pooled interdependence tends to make subsidiary managers responsive to global rather than local interests (Bartlett & Ghoshal, 1989). The subsidiary will be alert to the goals of the parent company (Rosenzweig & Nohria, 1994) and will relate the knowledge obtained in their host market to these corporate goals.

Implementor subsidiaries are entirely dependent on other subsidiaries for knowledge. Given the lack of creative capacity, they 'do what they are told'. They are dependent on their parents for knowledge and resources (Gupta & Govindarajan, 1991). These MNCs are similar to what Bartlett and Ghoshal (1989) call 'global companies'. Subsidiaries are effectively pipelines for products and strategies. Managers in these subsidiaries have little strategic role. Threats and opportunities are likely to be matters for headquarters to worry about. Local innovators are also described as multidomestic subsidiaries. These subsidiaries have objectives that are primarily local (Gupta & Govindarajan, 1991). Their aim is to grow in the local market. They have knowledge creation capability but the focus in entirely on the local market. It does not have a mandate to export to foreign markets and hence may give the external market environment little attention.

In summary, the Gupta and Govindarajan subsidiary strategic context typology "level and direction of flows is an important factor in differentiating subsidiary roles" (Harzing & Noorderhaven, 2006:211). Therefore, a research question that explores the influence of subsidiary strategic context on the effect of an expanded EU was developed:

Research question 1: *Did the perceptions of the competitive impact of an expanded EU vary according to a subsidiary's strategic context?*

2.1 Porter's Five Forces Framework and Economic Integration

Porter (1980) proposes that the essence of formulating competitive strategy is relating a company to its environment, and that the state of competition in an industry depends on five basic competitive forces. Porter's five forces paradigm is a widely accepted approach to interpreting the impact of environmental changes on a firm's competitive position. It provides the framework for the current study. Porter (1980) asserts that the state of competition in an industry depends on the five basic competitive forces. Wheelen and Hunger (2012) adapted the Porter five forces by adding a sixth force specifically noting stakeholders such as governments. Porter (1980:4) states "the goal of competitive strategy for a business unit in an industry is to find a position in the industry where the company can best defend itself against these competitive forces or can influence them in its favor". The business unit can be a subsidiary of an MNC as the Porter five forces framework has been previously used with subsidiaries as a unit of analysis (Birkinshaw, Hood & Young, 2005).

New entrants to an industry may threaten the market share of existing firms and reduce their profitability. The threat of entry depends upon both the barriers to entry and the reaction from existing firms to newcomers. The higher the barriers to entry and/or the likelihood of retaliation from entrenched competitors, the lower the threat from new entrants. For example, economies of scale - the decline in unit costs as absolute volume increases - can deter entry in some industries because potential entrants are forced to incur the expense of entering at large scale or accept cost disadvantages. Broadly, the threat of new entrants could be expected to increase following EU enlargement as barriers to exports from new member countries were reduced. Yannopoulos (1992:334) considers the threat of new entrants following economic integration, saying "a multinational firm neither trading with nor producing inside the single market may decide to build a market share, given the inducement from the growth effects of the internal market programme". Similarly, Daems (1990) predicted an increase in the threat of new entrants based on lower border-crossing costs.

Research question 1a: *How does a subsidiary's strategic context influence its perception of the threat of new entrants arising from an enlarged EU?*

2.1.1 Economic Integration and Rivalry among Current Competitors

The intensity of rivalry among existing firms in an industry is a further competitive force. Rivalry occurs because one or more competitors either feels under pressure or sees an opportunity to improve their position within the industry, and takes the form of jockeying for position. Common tactics used by firms include price competition, advertising battles, product introductions and increased customer service or warranties (Porter, 1980). Daems (1990) regards the economic integration of nation-states as likely to foster an intensification of rivalry between firms, particularly in the short term. This prediction is based on his view that companies will be eager to take advantage of enlarging markets and will expand production at facilities where economies of scale exist. The increasing industry output will lead to falling prices and increased competition. Daems (1990) also identifies the erosion of collusive market sharing arrangements following economic integration and the use of intra-industry mergers and strategic alliances by MNCs as mechanisms to guard industry profitability.

Research question 1b: *How does a subsidiary's strategic context influence its perception of the intensity of competitive rivalry arising from an enlarged EU?*

2.1.2 Economic Integration and the Threat of Substitute Products

Porter (1980) asserts that all firms in an industry are competing, in a broad sense, with industries producing substitute products. For example, a subsidiary supplying air transport for business people may confront new competition from new entrant firms supplying video conferencing services. According to Porter, an analysis of the availability and nature of substitute products is an important element in strategy formulation. The impact of economic integration on the threat of substitute products from different industries is a complex subject. In theory, at the individual company level, the threat to a business from a rival industry's product is no less significant than the threat from immediate rivals. However psychologically, the threat is further removed.

Research question 1c: *How does a subsidiary's strategic context influence its perception of the competitive threat from substitute products arising an enlarged EU?*

2.1.3 Economic Integration and the Bargaining Power of Buyers

The bargaining power of buyers, or customers, is another competitive force identified by Porter (1980). In short, buyers compete with the industry by forcing down prices, bargaining for higher quality or more services and playing rival sellers against each other. "Buyers will have more options than ever before of obtaining goods and services from suppliers" (Daems, 1990:43). According to Daems (1990), buyers or arbitrageurs would be able to compare prices in different European markets and will purchase products where they are lowest. This assessment is typical of the widely held view that economic integration increases competition and lowers costs

Research question 1d: *How does a subsidiary's strategic context influence its perception of the bargaining power of buyers arising from an enlarged EU?*

2.1.4 Economic Integration and the Bargaining Power of Suppliers

Suppliers constitute the final competitive force. Suppliers can exert influence over firms by threatening to raise prices or reduce the quality of the goods they supply to the firm (Porter, 1980), with the conditions that make suppliers powerful tending to mirror those that make buyers powerful.

Research question 1e: *How does a subsidiary's strategic context influence its perception of the bargaining power of suppliers arising from an enlarged EU?*

2.1.5 Economic Integration and Governments

A final, major influence on entry barriers is home and host government policy. Government trade promotion policy can stimulate market entry through export policies by home governments or foreign direct investment incentives by host governments (Seringhaus, 1986). Overt government regulations and requirements, as well as more subtle restrictions, can create or reduce entry barriers. For example, licensing requirements and direct tariffs can disadvantage some firms, as can air and water pollution standards and product safety and efficacy regulations if they apply more heavily to newcomers (Porter, 1980). Porter's (1990) diamond model makes special mention of the ability of government policy to impact on competitiveness. The addition of other stakeholders such as governments, unions and special interest groups has been separated out as a sixth force in the Wheelen and Hunger (2008) adapted model of Porter's (1980) five forces.

Research question 1f: *How does a subsidiary's strategic context influence its perception of the competitive effect of government arising from an expanded EU?*

3. Method

A questionnaire was designed to classify firms according to the four subsidiary strategic contexts defined by Gupta and Govindarajan (1991) and measure the perceived influence on competition of an enlarged EU. It included a question, comprising of 40 individual items, which examined the specific effects on competitiveness of an expanded EU on subsidiaries, and also reflected Porter's five forces.

This question required informants to indicate the extent to which they *agreed* or *disagreed* with a statement about particular effects of a changed EU on their business.

A pre-test of the questionnaire was conducted using an expert panel of nine participants to finalise the study instrument. The questionnaire was subsequently revised to cater for the recommendations of those experts. The population of the study was the UK subsidiaries of Australian MNCs, 940 organisations according to the Australian Bureau of Statistics (ABS, 2004). However the only way to identify these subsidiaries was through the membership of a networking group.

In October 2004, a four-page questionnaire was distributed to the 524 members of a networking organisation. Following the return of three questionnaires due to incorrect addresses, the final sample size was reduced to 521. Two weeks later, a follow-up mailing was conducted. This approach followed the recommendations for follow-up mailings prescribed by Babbie (2004) and resulted in the networking organisation members returning 166, or 32% of the sample. The response rate is comparable with similar research projects examining MNC subsidiary development (Holm & Pedersen, 2000) and the effect of economic integration on Nordic countries (Benito et al., 2003).

A principal components analysis was undertaken to group the responses to the 40 questions on the expected competitive impacts of the expanded EU. ANOVA and MANOVA were used to analyse the possible associations between these groups and perceived competitive effects and the strategic roles of subsidiaries. Respondents were asked to self-select the most appropriate strategic role of their subsidiaries.

4. Findings

4.1 Strategic Issues of a changed EU

As is typical in PCA procedure, the data on the 40 perceived effects of EU enlargement on the competitive environment were manipulated based on an initial solution with the computation of several additional solutions (Hair, Anderson, Tatham & Black, 1998; Page & Meyer, 2000). The KMO result of 0.677 exceeded the 0.6 minimum of Tabachnick and Fidell (2007) and Bartlett's test of sphericity was significant (<.05). Therefore, it was judged appropriate to continue with the PCA. An examination of the eigenvalues generated by the initial solution showed that six factors explained in excess of fifty percent of total variance. These factors aligned with Porter’s five forces plus an additional factor that was titled ‘government’. Following Catell’s (1966) scree test, keeping all the factors above the elbow or break in the plot, a six-factor solution was employed. For ease of identification, each factor was labelled with the appropriate competitive force, see Table 2.

Table 2: Total Variance Explained

Component	Initial Eigenvalues Total	% of Variance	Cumulative %	Extraction Sums of Squared Loadings Total	% of Variance	Cumulative %
New entrants	9.295	23.833	23.833	9.295	23.833	23.833
Suppliers	3.311	8.491	32.324	3.311	8.491	32.324
Govt.	2.623	6.724	39.049	2.623	6.724	39.049
Competitor rivalry	2.344	6.011	45.060	2.344	6.011	45.060
Substitute products	1.900	4.871	49.931	1.900	4.871	49.931
Buyers power	1.809	4.639	54.570	1.809	4.639	54.570

Extraction Method: Principal Component Analysis.

Cronbach's alpha coefficient statistics were computed for the six factors in the solution to determine their reliability, along with the means and standard deviations with the addition of all the items within each factor. The results of these tests are shown below in Table 3.

Table 3: Reliability Statistics (Competitive Forces)

Factor	Mean	Standard Deviation	Cronbach's Alpha
1. New entrants	3.01	0.66	0.86
2. Suppliers	3.24	0.66	0.82
3. Government	2.77	0.79	0.84
4. Competitor rivalry	3.77	0.60	0.62
5. Substitute products	3.30	0.42	0.50
6. Buyers power	3.43	0.72	0.76

According to Nunnally (1978) a Cronbach alpha below 0.70 should be dropped from analysis. Hence, with a Cronbach's alpha of 0.50, the substitute products factor was dropped from further analysis. Competitor rivalry factor also fell below 0.70 alpha however a small number of items, for example 3 or 4 can have a lower alpha and still be a sound measure (Cortina, 1993). More recently others note that a lower limit for an alpha score of 0.6 would be acceptable (Cooksey, 2007; Malhotra, Hall, Shaw & Crisp, 1996). As such, all of the other factors were found to be reliable.

4.2 The Effect of Subsidiary Strategic Role

A question was asked of respondents; which of the following categories of subsidiary 'type' best describes your firm? The most frequently reported type was integrated player. The least frequent was implementor (17.8%), see Table 4.

Table 4: MNC Subsidiary Strategic Role

	Frequency	**Valid Percent**
Integrated Player	66	42.0
Local Innovator	34	21.7
Global Innovator	29	18.5
Implementor	28	17.8

Next, the forces of competition were cross tabulated with subsidiary strategic role to explore for relationships. Three of the forces had significant findings.

4.2.1 Subsidiary Strategic Role and the Threat of New Entrants

A significant relationship was revealed between subsidiary strategic role and respondents' view of the influence of an enlarged EU on the threat of new entrants (x^2=13.762; df=6; p-value=0.032), on the intensity of competition (x^2=26.934; df=6; p-value<0.001, and on the bargaining power of buyers (x^2=15.305; df=6; p-value=0.018).

4.4 MANOVA analysis

Next a multivariate analysis of variance (MANOVA) was performed to examine if a subsidiary's strategic context affected respondents' views of the competitive factors identified by the PCA. Multicollinearity and singularity of the data were assessed using correlations between the dependent variables. The results are shown in Table 5.

Table 5: Pearson's Correlation Matrix

		New entrants	Bargaining power of suppliers	Home Government support	Rivalry among existing competitors	Buyer power
New entrants	Correlation	1				
	Sig.	.				
Bargaining power of suppliers	Correlation	.49(**)	1			
	Sig.	.000	.			
Government support	Correlation	.27(**)	.33(**)	1		
	Sig.	.001	.000	.		
Rivalry among existing competitors	Correlation	.23(**)	.04	.16	1	
	Sig.	.003	.636	.050	.	
Buyer power	Correlation	.35(**)	.43(**)	.23(**)	.16(*)	1
	Sig.	.000	.000	.003	.042	.

*** Correlation is significant at the 0.01 level (2-tailed).*
** Correlation is significant at the 0.05 level (2-tailed).*

The highest correlation between any two variables was 0.49. Hence, multicollinearity and singularity were not evident and MANOVA was therefore appropriate (Pallant, 2005).The descriptive statistics for each of the five factors, according to subsidiary context, are shown in Tables.

Table 6: Descriptive statistics for subsidiary strategic context within the forces of competition

	Subsidiary Context	Mean	S.D.	N
New Entrants	Global Innovator	2.93	0.31	29
	Integrated Player	2.99	0.89	64
	Implementor	3.14	0.43	27
	Local Innovator	3.03	0.56	33
Bargaining power of suppliers	Global Innovator	3.47	0.49	29
	Integrated Player	3.09	0.81	64
	Implementor	3.40	0.37	27
	Local Innovator	3.24	0.59	33
Government support	Global Innovator	2.54	0.71	29
	Integrated Player	2.73	0.80	64
	Implementor	3.04	0.92	27
	Local Innovator	2.83	0.65	33
Rivalry among existing competitors	Global Innovator	3.72	0.48	29
	Integrated Player	4.01	0.55	64
	Implementor	3.60	0.50	27
	Local Innovator	3.60	0.65	33
Buyer power	Global Innovator	3.46	0.52	29

	Integrated Player	3.38	0.86	64
	Implementor	3.42	0.72	27
	Local Innovator	3.52	0.53	33

** Results rounded to two decimal places*

The one-way MANOVA was statistically significant [F(15, 400.68)=2.62, p=0.001; Wilks' Lambda=0.77; partial eta squared=0.08], with two factors presenting a significant difference in terms of strategic context. Both rivalry among existing competitors and bargaining power of suppliers had alpha scores lower than 0.05 (Table 7). The partial eta squared measure for rivalry among existing competitors (p=0.001) showed that 10.6% of the variance in rivalry among existing competitors scores could be explained by subsidiary strategic context. The partial eta squared measure for bargaining power of suppliers (p=0.032) showed that 5.7% of the variance in bargaining power of suppliers scores could be explained by subsidiary strategic context.

In summary, subsidiary strategic role was found to have a significant influence on respondents' views of the rivalry among existing competitors and bargaining power of suppliers' factors.

4.5 ANOVA analysis

Further analysis to determine which strategic roles were contributing to that influence was undertaken using ANOVA. A one-way between groups ANOVA was conducted to explore the differences between subsidiary strategic roles and the two factors identified as significant by MANOVA - rivalry among existing competitors and bargaining power of suppliers.

Within the rivalry among existing competitors factor there was a statistically significant difference at the $p<0.05$ level between subsidiaries in the implementor and the local innovator contexts and subsidiaries in the integrated player context [F(3,149)=5.92, p=0.001]. In addition to reaching statistical significance, the actual difference in mean scores between the groups was classified as medium, approaching large, with the effect size calculated using eta squared being 0.11. Post-hoc comparisons using the Tukey HSD indicated the mean score for subsidiaries in the integrated player context (M=4.01, SD=0.07) was significantly different from subsidiaries in the implementor context (M=3.60, SD=0.50) and those in the local innovator context (M=3.60, SD=0.65) for the rivalry among existing competitors factor.

In regard to the bargaining power of suppliers factor there was a statistically significant difference at the $p<0.05$ level between mean scores of global innovator subsidiaries and integrated players [F(3,151)=3.10, p=0.03]. In addition to reaching statistical significance, the actual difference in mean scores between the groups was classified as medium, with the effect size calculated using eta squared being 0.06. Post-hoc comparisons using the Tukey HSD indicated the mean score for global innovators (M=3.47, SD=0.42) was significantly different from integrated players (M=3.08, SD=0.81) for the bargaining power of suppliers factor. Consequently, it can be concluded that the strategic role of the subsidiary strategic was influential in determining their manager's perception of the change in the competitive environment arising from a changed EU.

5. Discussion

5.1 Subsidiary strategic context

The findings indicate that perceptions of the consequences of an enlarged EU were influenced by the subsidiary's strategic role. In particular, statistically significant differences were identified in the views of managers towards 'rivalry among existing competitors' and 'bargaining power of suppliers'.

From the bivariate analysis, subsidiaries in the implementor and the local innovator contexts, take a different view from global innovators and integrated players, to assessing the intensity of rivalry among existing competitors stemming from the changed environment. There appears to be a conceptual distinction between the global innovator and integrated player contexts and the implementor and local innovator contexts, which may account for that finding. Both the 'global innovator' and 'integrated player' contexts have high knowledge outflows. In contrast, implementor and local innovator' subsidiaries are low on knowledge outflows. This distinction may influence the way in which managers view changes in the competitive environment. The ANOVA results suggest that 'integrated player' subsidiaries, having high knowledge outflows, were likely to view the effects of an enlarged EU on increased rivalry as less important to those with low knowledge outflows (implementor or local innovator). Therefore the main research question of this study is affirmed that, a subsidiary's strategic context does influence its perception of the threat of new entrants arising from an enlarged EU.

5.2 Strategic Consequences of an Enlarged EU

Porter's (1980) framework was tested for its applicability to this study. The PCA found that five of six forces of competition were broadly reflected in the respondents' views of the strategic consequences of an enlarged EU. Perceived increased rivalry as a result of an enlarged EU with more member countries is not a surprise. This changed business environment resulting from regionalisation has been previously regarded by researchers as having necessitated a strategic response from both member-state MNCs and MNCs from countries outside the region (Almor & Hirsch, 1995; Daems, 1990; Dunning, 1993; Proff, 2002; Yannopoulos, 1992).

Porter's model, despite some criticism, remains widely accepted. In addition to being a 'staple' among practitioners, Sack and Nadim (2002:37) argue that "Porter's five forces model continues to influence scholarly writing and research in the area of strategy". Mintzberg (1990) describes the model as 'a watershed' in the development of strategic management. Other authors to incorporate the model in their research include Birkinshaw et al. (2005) and Bodily and Venkataraman (2004). Some authors, such as Parnell, Wright and Tu (1996) and Bodily and Venkataraman (2004) identify the work of Porter (1980) as providing the basis for early studies of the strategy-performance relationship. The current research supports the positive view of the usefulness of the framework.

6. Conclusion

This paper is concerned with the strategic mindset of managers of MNC subsidiaries. In particular, it examines the influence of the strategic role of a subsidiary on its mangers' perceptions of a seemingly significant change in the competitive environment of subsidiaries targeted for research: the 2004-7 expansion of the European Union from 15 to 27 countries. Gupta and Govindarajan's model was used to classify subsidiary types. Their model focuses on knowledge flow transactions to define four generic subsidiary roles: the global innovator, integrated player, implementor and the local innovator. The research has revealed that the subsidiary's strategic role influences perceptions of the competitive impact of environmental changes. Specifically, subsidiary strategic context was found to have a significant influence on respondents' views of the rivalry among existing competitors and the bargaining power of suppliers factors. The results of the ANOVA indicated that 'integrated player' subsidiaries viewed the effects of an enlarged EU on the intensity of rivalry among existing firms and the competitive strength of suppliers, differently to their low knowledge outflow counterparts. In other words, there is a relationship between the role of the subsidiary and the way that managers perceived how the enlarged EU would affect them. This is important because it indicates that research into the response of firms to its external environment should consider subsidiary strategic role. Managers should be aware of their own strategic context and that of competitors, when shaping strategic responses to changes in the competitive environment.

Porter's five forces of competition framework has considerable support as an analytical tool (Gold, Godsey & Cernusca, 2005; Kumar, Massie & Dumonceaux, 2006; Wonglimpiyarat, 2004) however empirical support for the framework is scant. The current research makes a significant contribution by providing increased confidence in Porter's model as an appropriate framework for studies considering the competitive consequences of environmental change.

Similarly, there has been little empirical research done on Gupta and Govindarajan's (1991) subsidiary strategic context typology with self-selection by respondents the norm in the past (Gupta & Govindarajan, 1994; Harzing & Noorderhaven, 2006) and in this study. The important understanding to emerge from these results is that subsidiary strategic role influences manager perceptions of the competitive environment. That is, the subsidiary's strategic role influences the manager's mindset. This was partly explained by the way subsidiary strategic role alters subsidiary management views in relation to rivalry of existing competitors and suppliers in their market.

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