

Entrepreneurship in Multinational Subsidiaries: Perspectives from a Developing Nation

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ABSTRACT

This paper examines the entrepreneurial civilities of multinational subsidiaries in Malaysia, a country chosen for the study due to the presence of a large number of multinational subsidiaries in the region. Empirical research is used to determine subsidiaries entrepreneurship, extent of autonomy and the use of financial controls. In general, results indicate that the length of operation of the subsidiary as well as the origin of parent organization impact on the extent of subsidiary entrepreneurship. Some conclusions are drawn from the study findings, the implications are discussed, limitations of the study are highlighted and further research directions are suggested.

INTRODUCTION

The issues relating to entrepreneurship in multinational companies (MNC) subsidiaries has been a subject of interest to researchers since the 1990s. The 1990s were characterized by a further elaboration of sophisticated subsidiary role classifications with a strong focus on subsidiary entrepreneurship (for example, Birkinshaw and Hood (1998); Taggart (1998)). Given the rapid changes in environmental factors, it is imperative for MNCs to be innovative to sustain their market position and competitive advantage. Further, in order to achieve global efficiency, MNCs have been facing considerable pressure to quickly and effectively respond to local market. (Pralhad, 1999). Consequently, some MNCs have expanded the definition of their subsidiaries' missions while giving them greater freedom to pursue their goals (Zahra, Dharwadkar and George, 2000).

Most research in the area of entrepreneurship research has focused on explaining variations in entrepreneurship at the country (Shan and Hamilton, 1991) and firm levels of analysis (e.g., Barringer & Bluedorn, 1999). Entrepreneurship research that can explain differences in subsidiaries' entrepreneurship has been rather scanty. Additionally, the limited research that has been done has focused on Western economies and subsidiaries. In response to these gaps in current research, this paper attempts to contribute to the international business and entrepreneurship literature by determining some pertinent issues relating to subsidiary entrepreneurship in the Asia Pacific region. Malaysia was chosen for the study, as it has a presence of a large number of subsidiaries from MNCs across the globe. With the economic development mainly being driven by FDI investment coupled with a fast pace of trade liberalization, the country is ideally

The first author is grateful for the facilities support provided by King Fahd University of Petroleum & Minerals, Saudi Arabia

chosen for examination of subsidiary entrepreneurship.

THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES

Various attempts have been made to conceptualize the roles of foreign subsidiaries. Various writers (e.g. Ghoshal and Bartlett, 1994; Martinez and Jarillo, 1991; Ghoshal and Nohria, 1989; Nohria and Ghoshal, 1994; Gupta and Govindarajan 1991) acknowledge that MNCs assign different missions, roles, extent of autonomy and financial controls to their subsidiaries abroad. The theoretical fundamentals, which are the bases of their arguments, vary as much as the derived implications. This is partly a result of the different criteria used by the authors to build their respective typologies, which are developed to capture and define a variety of different subsidiary roles.

MNCs face considerable pressure to quickly and effectively respond to local market needs, (Prahalad, 1999). Some subsidiaries have seized the opportunity created by ongoing changes in the global marketplace by pursuing innovative ventures and engaging in radical innovation (Dunning, 1994; Poynter & White, 1989; Roth & Morrison, 1992). These subsidiaries have also become more proactive in their operations, reaching the market with innovations well ahead of their rivals (Birkinshaw, 1998, 1999; Birkinshaw, Hood & Jonsson, 1998). For example, Philips' subsidiary in Canada created the company's first color TV; Philips of Australia created the first stereo TV; and Philips of the UK created the first TV with teletext capabilities. Philips' headquarters encouraged innovation in their subsidiaries and later leveraged them for the global network (Lightfoot, 1992). Yet, other subsidiaries have been less able to engage in entrepreneurial activities or have been constrained in their efforts by corporate headquarters' (HQs') controls. For instance, Beckton Dickinson's Japanese subsidiary required approval to develop a specific type of medical equipment to satisfy local market needs but their HQ was unwilling to support such local innovative activities. This has resulted in a loss of market share and profitability in the Japanese market (Scharf, 1993). Despite these potential differences in entrepreneurial intensity among MNC subsidiaries, little research has examined the sources of these differences from the international management perspective.

Subsidiary Entrepreneurship

Yamin (2002), opines that the 'organizational isolation' of multinational subsidiaries enhances the potential for entrepreneurial action by subsidiaries and increases the likelihood of a differentiated set of competencies within the multinational, the existence of which can counteract strategies inertia at the HQ and improve adaptive capabilities in the multinational Birkinshaw (1997) define 'entrepreneurial orientation' as 'a predisposition to proactive or risk-taking behavior', 'use of resources beyond the individual's direct control' and 'departure from existing practices'.

Yamin (2002) believes that multinational subsidiaries are more likely to develop an entrepreneurial orientation and summarizes the development of a multinational subsidiary by stating that a multinational subsidiary has the following:

- 1) a higher degree of organizational freedom to undertake initiatives
- 2) further by virtue of its foreignness, it faces greater pressure to develop capabilities appropriate to its local market and the various networks in which it needs to operate effectively, and

- 3) by virtue of its membership of an internationally dispersed organization it has a more diverse perspective (in terms of markets, technologies and networks) that may enhance its ability to define and develop initiatives.

A study by Zahra, Dharwadkar and George (2000) suggests that both corporate and local environmental contexts are positively associated with subsidiary entrepreneurship. The researchers found that corporate context as in strategic directives of the HQ and the control mechanisms used by HQ to evaluate managerial performance, is likely to influence entrepreneurship within subsidiaries. They also found that the local environmental context as in market characteristics the subsidiary faces in its local domain, can spur entrepreneurship within subsidiaries. This is supported by Porter (1986, 1992) who suggests that subsidiaries facing sophisticated demand conditions and competitive national environments engage in more entrepreneurial activities such as initiating strategic renewal, developing new products or processes, or spawning new ventures in order to compete in the dynamic local markets.

Zahra et al. (2000) found that when a subsidiary's managers had more autonomy from their parent MNC, they were better empowered to support entrepreneurship. Subsidiary managers, therefore, are more likely to be proactive and innovative as they are not dependent on the parent organization. Thus, those subsidiaries that enjoy a higher level of autonomy are expected to report higher levels of entrepreneurship. The study by Zahra et al. (2000) however focused on US-based foreign manufacturing subsidiaries headquartered in Australia, France, Germany, Japan, Korea, Netherlands and the U.K.

Zahra et al. (2000) also found that the use of financial controls is negatively associated with a subsidiary's entrepreneurship. This is supported by Hitt et al. (1996) and Rappaport (1978) who suggests a negative relationship between the use of financial controls and support for long-term value generating activities such as research and development. Subsidiary managers are likely to become risk averse and withhold political and financial support for entrepreneurial projects.

RESEARCH HYPOTHESES

Based on the preceding literature review, the following hypotheses are postulated to examine the attributes of subsidiary entrepreneurship.

- H1-Subsidiary entrepreneurship will differ based on the number of years in operation
- H2- Subsidiary entrepreneurship will differ based on the country of the parent organization
- H3-Subsidiary autonomy will differ based on the number of years in operation
- H4-Subsidiary autonomy will differ based on the country of the parent organization
- H5-Financial controls on subsidiary will differ based on the number of years in operation
- H6-Financial controls on subsidiary will differ based on the country of the parent organization

METHODOLOGY

Survey Instrument

A survey instrument was developed to capture the information relating to subsidiary entrepreneurship, autonomy and financial controls. The questionnaire originally prepared by Zahra, Dharwadkar and George (2000) served as a guideline in designing the survey instrument for this study. The resulting questionnaire comprised of two sections. The section contained a total of 19 structured questions measured on a five point Likert type scale. The 19 questions comprised of

- 9 construct to measure the extent of subsidiary's entrepreneurship
- 6 construct to measure the extent of autonomy given to subsidiary
- 4 construct to determine the use of financial controls on the subsidiary.

The next section consisted of questions designed to collect classification information on respondent organizations. These details include duration of operation, industry that the respondents operate in, the total number of employees, the length of operation, the location of the parent organization and the annual revenue of the subsidiary.

Data Collection

Sample firms were based on the criteria that they were multinational subsidiaries operating in Malaysia. The states of Selangor and Pulau Pinang were chosen because they were the most industrialized states in Peninsular Malaysia. Various industries were chosen to obtain responses from a cross-section of the multinational corporations to determine the prevalence of the practice of entrepreneurship.

A total of 250 subsidiaries were randomly selected for distributing the questionnaire. A key person in each of these organization were then contacted, and upon their preference 160 questionnaires were mailed to 160 multinational subsidiaries and the remaining 90 questionnaires were sent electronically in accordance with their preference. A follow up letter was sent after 7 days to all of the respondents. Overall, 45 responses were received of which, 20 responses were received from the direct mail (12.5%) and 25 responses were received from the electronic mail (27.7%).

Profile of the respondent subsidiaries

The profile of the respondent subsidiaries is presented in Table I. The largest group of respondents (22.2%) was in the industrial sector. The next largest group was from insurance, banking and finance sector (17.7%), followed by subsidiaries in the consumer product and information technology arena (7 subsidiaries each). Other service organizations mainly form accounting and consulting firms.

Table 1- Profile of respondent subsidiaries

Industry	Frequency	Percent
Industrial	10	22.2
Insurance, Banking and finance	8	17.8
Consumer products	7	15.5
Information technology and Communication	7	15.5
Others (accounting, consultancy, etc)	13	28.88
<i>Total number of employees</i>		
Less than 50	6	13.33
50-100	6	13.33
101-500	13	28.88
501 – 1000	11	24.44
More than 1001	6	13.33
<i>Annual revenue</i>		
Less than RM5mil	4	8.88
RM5-10mil	5	11.11
RM10-25mil	6	13.33
RM25-50mil	6	13.33
RM50-100mil	6	13.33
More than RM100mil	18	40
<i>Country of operations</i>		
USA	18	40
European Union	16	35.55
Asia	11	24.44
<i>No. of Years</i>		
Less than 10 years	13	28.88
10 - 25 years	15	33.33
25 and above	17	37.77

As for the number of employees, 13 subsidiaries had employed between 100 to 150; about one fourth of the subsidiaries surveyed had employees between 500 to 1000. (See Table 2 for details). In terms of revenue of subsidiaries, forty percent of them surveyed reported revenues of over 100 million, 13 percent of firms reported earnings of between 5-10 million, 25-50 million and between 50-100 million each.

As for the location of the parent organization, 18 subsidiaries originated from the USA, 16 were from different countries within the European Union and 11 of them were from the Asian region. Finally, a classification on the number of years of operation revealed that 13 of the subsidiaries operated for less than 10 years, 15 of them were between 10-25 years and the majority of firms, that is 17 in number, were in existence for more than 25 years.

Cronbach's Coefficient of Reliability

The items in the three groups were tested for reliability and validity. A reliability test was undertaken to ensure that the research findings had the ability to provide consistent results in repeated incidences. To check the reliability aspect of the items and their factorial groups, internal consistency analysis using SPAS was performed. The items were grouped into their respective factorial groups and coefficient alpha (Cronbach's) was calculated. The coefficients were 0.7331 for factor group *Subsidiary Entrepreneurship*, 0.8135 for *Autonomy* and 0.9264 for *Financial Controls*. All of these values were above the value of 0.6 which as suggested by Nunally (1967) is sufficient value in an exploratory research. Thus, this indicates that all items and factorial groups of this research are sufficiently a reliable measure.

Hypotheses Tests

H1- Subsidiary entrepreneurship will differ based on the number of years in operation

The means and standard deviations for the 9 constructs for subsidiaries based on the number of years in operation are shown in Table 2. Mean score of subsidiaries that have been in operation for less than 10 years are higher in eight of the nine measures examined. This indicates that subsidiaries that are in operation for a comparatively lesser period of time are more entrepreneurial. Subsidiaries in operation for between 10 to 25 years have spent more on research and developmental activities, while subsidiary entrepreneurial activities have been the least in the instance of organization in existence for more than 25 years.

The mean scores accorded to each of the measures were subsequently compared using ANOVA procedures where the length of operation served as the single independent variable of interest. The results show that the length of operation made a significant effect on eight of the nine dimensions examined. This provides support to the hypothesis.

Table 2 - Evaluation of subsidiary entrepreneurship based on length of operation

	less than 10years		10 to 25years		more than 25		F-Value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	S.D	
has become more innovative	3.84	0.8006	3.53	0.83	3.82	0.88	3.63*
has shown tolerance for high risk projects	3.69	1.03	3	0.755	3.35	0.99	1.91**
has used procedures, systems or methods	3.69	0.751	3.46	0.74	3.35	0.86	3.68*
has challenged its major competitors for market leadership	4.23	0.599	3.73	0.96	4	0.93	1.16**
has taken strategic actions	3.84	1.14	3.6	0.82	3.76	0.9	3.24*
has pursued long term goals and strategies	3.76	1.36	3.66	0.97	4.17	0.72	1.11***
has spent more on research & development than its competitors	3.07	1.18	3.4	1.35	3.23	0.66	3.3*
has introduced new products to the market	3.69	1.25	3.53	1.30	3.52	0.87	0.09
has been among the first to introduce new products to the market	3.76	0.92	3.13	1.24	3.47	1.0	1.23**

Notes: mean scores based on a five-point scale ranging from 1= strongly disagree to 5= strongly agree; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

H2- Subsidiary entrepreneurship will differ based on the country of the parent organization

The means and standard deviations for the 9 constructs for subsidiaries based on the country of the parent organization reveals interesting results (See Table 3). Mean scores of subsidiaries from parent organizations in the USA score high in two dimensions, that is, great deal of tolerance for high risk projects, and taking strategic decisions by the subsidiaries. European subsidiaries strongly agree on the dimensions of being more innovative, using procedures and systems, challenging competitors for market leadership and introducing new products to the market. Asian subsidiaries score highly in pursuing long term goals and strategies, spending on research and development and on being first in introducing new products.

Following the overall evaluation of product categories, one-way ANOVA tests were conducted between each dimension and respondent subsidiaries grouped under origin of parent organization. One way ANOVA results revealed statistically significant differences across the different groups for seven of the nine dimensions examined. This provides support to the hypothesis that subsidiary entrepreneurship differs based on the country of the parent organization.

Table 3 - Evaluation of subsidiary entrepreneurship based on origin of parent organization

	USA		European		Asia		F-Value
	Mean	Std. Deviation	Mean	S.D	Mean	S.D	
has become more innovative	3.72	0.89	3.75	0.85	3.72	0.78	3.04*
has shown tolerance for high risk projects	3.44	0.98	3.25	0.93	3.27	1	2.19**
has used procedures, systems or methods	3.33	0.84	3.68	0.79	3.45	0.68	3.86*
has challenged its major competitors for market leadership	3.77	1	4.18	0.75	4	0.77	1.95***
has taken strategic actions	3.83	0.85	3.68	1.13	3.63	0.8	0.17
has pursued long term goals and strategies	3.72	1.17	3.93	0.92	4.09	0.94	1.45**
has spent more on research & development than its competitors	2.94	1.05	3.31	1.01	3.63	1.12	1.51**
has introduced new products to the market	3.27	1.22	3.87	1.08	3.63	0.92	1.24***
has been among the first to introduce new products to the market	3.5	1.15	3.18	1.10	3.72	0.90	0.85

Notes: mean scores based on a five-point scale ranging from 1= strongly disagree to 5= strongly agree; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

H3- Subsidiary autonomy will differ based on the number of years in operation

The means and standard deviations for the six constructs for subsidiaries based on the number of years in operation are shown in Table 4. Mean score of subsidiaries that have been in operation for less than 10 years are the highest in four of the six measures examined. This indicates that subsidiaries that are in operation for a comparatively lesser period of time have more discretion in decision making than the two other groups. Subsidiaries in operation for between 10 to 25 years have more discretion in making decisions relating to upgrading existing products, while more autonomy is given to subsidiaries in existence for over 25 years in decisions relating to modifying production processes. The mean scores accorded to each of the measures were subsequently compared using ANOVA procedures. The results show that the length of operation made a significant effect on five of the six dimensions examined. This again provides support to the hypothesis, although not fully.

Table 4 - Evaluation of subsidiary autonomy based on length of operations

	less than 10 years		0 - 25 years		25 and above		F-Value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	
introduction of new products	3.15	1.4	3.13	1.06	2.47	1.12	1.502***
hiring key subsidiary executives	3.76	0.83	3.53	1.06	3.29	1.04	1.845**
identifying new customer groups	3.76	0.82	3.4	1.24	3.64	1.05	2.394*
Upgrading existing products	3.46	1.09	3.66	0.97	3.23	1.14	1.716**
initiating experimental products	2.76	0.87	2.6	1.18	3	1.11	0.468
modifying production processes	3	1.23	3.53	0.91	3.64	0.78	1.782***

Notes: mean scores based on a five-point scale ranging from 1= no discretion to 5= absolute discretion; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

H4- Subsidiary autonomy will differ based on the country of the parent organization

The means and standard deviations for the six constructs for subsidiaries based on the country of the parent organization again reveals interesting results as shown in Table 5. Greater degree of discretion is given to subsidiaries originating from the Asian region, particularly in the areas of hiring key subsidiary executives, upgrading existing products and modifying production processes. European subsidiaries score in the dimensions of identifying new customer groups and introduction of new products. Mean scores of subsidiaries from parent organization in the USA score have the highest discretion in only one of the dimensions, that of initiating experimental products. One-way ANOVA tests between each dimension and respondent subsidiaries grouped under origin of parent organization revealed statistically significant differences across the different groups for only two of the six dimensions. This provides only a partial support to the hypothesis that subsidiary autonomy differs based on the country of the parent organization.

H5- Financial controls on subsidiary will differ based on the number of years in operation

Table 6 provides an overview of the extent of financial controls used on the subsidiaries based on the age of the subsidiary. Objective criteria such as return on assets and return on investment have been more widely used on subsidiaries in operation between 10-25 years. Formal performance appraisal has been used on subsidiaries who are less than 10 years old, while controls on cash flow have been more widely used on older subsidiaries.

One-way ANOVA tests between each dimension and respondent subsidiaries revealed statistically significant differences across three of the four controls examined, providing a greater degree of support to the hypothesis that subsidiary controls differs based on the age of the subsidiary.

Table 5 - Evaluation of subsidiary autonomy based on origin of parent organization

	USA		European		Asia		F-Value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	
introduction of new products	2.66	1.02	3.06	1.38	3	1.26	1.687***
hiring key subsidiary executives	3.55	0.92	3.31	1.19	3.72	0.78	0.8457
identifying new customer groups	3.5	1.15	3.87	0.806	3.36	1.43	0.3943
upgrading existing products	3.27	1.07	3.5	1.15	3.63	0.67	0.7164
initiating experimental products	2.77	1.06	3	1.21	2.54	1.29	0.4687
modifying production processes	3.27	0.82	3.5	1.09	3.54	1.12	1.7822**

Notes: mean scores based on a five-point scale ranging from 1= no discretion to 5= absolute discretion; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

Table 6 - Evaluation of financial controls on subsidiary based on the number of years in operation

	less than 10 years		10 - 25 years		25 and above		F-Value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	
cash flow	3.84	1.14	3.93	1.33	4.41	1.06	1.037***
return on investment	3.38	1.12	4.13	1.24	4.05	1.14	1.706***
objective criteria, such as return on assets	3.46	1.12	4	1.19	4	1.11	1.019***
formal performance appraisal	4.46	0.51	4.26	1.09	4.29	0.77	0.216

Notes: mean scores based on a five-point scale ranging from 1= not used at all to 5= widely used discretion; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

H6- Financial controls on subsidiary will differ based on the country of the parent organization

The means and standard deviations for the six constructs on the extent of financial controls used on the subsidiaries based on the country of the parent organization again reveal that the highest degree of controls has been used on subsidiaries originating from Asian regions. The mean scores obtained on all four dimensions have been the greatest for subsidiaries from the Asian region. One-way ANOVA tests between each dimension and respondent subsidiaries grouped revealed statistically significant differences across the different groups for three of the six dimensions examined providing a greater degree of support to the hypothesis that subsidiary controls differs based on the age of the subsidiary.

Table 7 - Evaluation of financial controls on subsidiary based on origin of parent organization

	USA		European Union		Asia		F-Value
	Mean	Std. Deviation	Mean	Std. Deviation	Mean	Std. Deviation	
cash flow	3.94	1.21	3.81	1.37	4.72	0.46	2.298**
return on investment	3.83	1.15	3.75	1.29	4.18	1.16	0.449
objective criteria, such as return on assets	3.72	1.17	3.65	1.2	4.45	0.82	2.263**
formal performance appraisal	4.44	0.61	4	1.09	4.63	0.5	2.342**

Notes: mean scores based on a five-point scale ranging from 1= not used at all to 5= widely used discretion; F-values are as a result of one-way ANOVA test where *, **, and *** represent statistical significance at 0.01, 0.05 and 0.10 respectively

CONCLUSION AND LIMITATIONS

Analysis of variance relating to subsidiary entrepreneurship, autonomy and financial controls generally provides support to the proposition of the study that the length of operation of the subsidiary and the origin of the parent organization will impact on the extent of subsidiary entrepreneurship.

As for the evaluation of subsidiary entrepreneurship, the important dimensions that were found to impact subsidiaries based on length of operation were spending on research and development and on becoming innovative. The extent of subsidiary entrepreneurship was also impacted by the origin of the parent organization. Considering that differences have been found in work related values and consequently work related behavior, this study suggests an idea for future research. It will be interesting to study the impact of work related values in the operations of subsidiaries.

In generalizing the findings of this study, some caution has to be exercised due to some limitations. The limited sample size, although comparable with several studies (example Rahman 2001, Galvin 1991; Powell; 1995) is considered small. The results of the study must therefore be treated with caution. An attempt could be made to increase the sample size. Secondly, this study reports from the perspective of subsidiaries, rather than looking from the parent organization of the subsidiary, which can provide a better reflection.

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