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DETERMINANTS OF MNCS' MODE OF ENTRY
INTO EMERGING MARKETS:
SOME EVIDENCE FROM SOUTH AFRICA AND EGYPT

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Abstract[*]**:**

The literature on the choice of entry mode of multinational corporations (MNCs) at the time of their entry into new host countries has almost entirely focussed on the choice of MNCs entering other developed economies. Our paper addresses this lacuna in the literature using unique firm-level data collected from MNC affiliates operating in two major emerging markets, namely, South Africa and Egypt. Our results indicate that two key determinants of the choice of entry mode are the resource needs of the MNC and the business/institutional environment in the host country. They also indicate that priors about the choice of entry mode that are based on developed country experience are not necessarily relevant in the emerging market context.

JEL Classifications: D21, D23, F23, L14, L21

Keywords: MNC, Greenfield, acquisition, joint venture, agency problem, transactions cost

Non-technical Summary:

With the exception of some research on China and the transition economies of Central and Eastern Europe, the literature on the choice of entry mode of multinational corporations (MNCs) at the time of their entry into new host countries has almost entirely focussed on the choice of MNCs entering other developed economies. However, the flow of FDI to emerging markets has increased rapidly since the early 1990s, and it is no longer restricted to large emerging economies like Brazil, China, India and Russia (BRIC). It is, therefore, imperative to take a closer look at the factors affecting entry mode decisions of MNCs into non-BRIC emerging markets, especially given the benevolent impact of the choice of the optimal entry mode on subsequent performance.

Our paper addresses this lacuna in the literature using unique firm-level data collected from MNC affiliates operating in two major emerging markets, namely, South Africa and Egypt. The strength of the survey instrument is that collects significant data on a MNC-specific and a country-specific characteristic that often hold the key to MNCs' decision-making in emerging market context, even though they may not be relevant in the stylized developed country contexts. The MNC-specific characteristic is the need of a MNC for a dozen tangible and intangible resources that are necessary for its success. The country-specific information includes the perception of the MNCs about eight different aspects of the business-institutional environment of the host country.

The transactions cost literature, as applied to the context of entry mode choice, was used to generate five testable hypotheses, and these hypotheses were tested using the aforementioned data and multinomial logit regression technique. The use of multinomial logit underlines a deviation of the research methodology from the stylized literature that focuses on either the choice between Greenfield entry and joint ventures, or between Greenfield entry and acquisitions. We take into consideration that choice among all three possible alternatives, namely, Greenfield, acquisition and joint ventures.

Our results find mixed support for the hypotheses. More importantly, the results indicate priors about the choice of entry mode that are based on developed country experience are not necessarily relevant in the emerging market context. This, of course, has significant implication for managerial decision making in the context of a MNC's entry into an emerging market.

1. Introduction

The choice of entry mode of multinational corporations (MNCs) at the time of their entry into new host countries has been well researched (see, e.g., Caves and Mehra, 1986; Kogut and Singh, 1988b; Hennart, 1991; Agarwal and Ramaswami, 1992; Erramilli and Rao, 1993; Hennart and Park, 1993; Gorg, 2000; Luo, 2001). The analyses are largely based on two analytical paradigms, namely, the transactions cost approach (e.g., Hennart and Park, 1993; Cho and Padmanabhan, 1995; Brouthers and Brouthers, 2000; Brouthers, 2002) and the eclectic approach of Dunning (1980, 1988). The transactions cost approach takes into account the potential or anticipated costs encountered by a MNC at the time of its operation in a host country, including the mitigating impact of country-specific, general, and decision-specific experiences of a MNC (see, e.g., Padmanabhan and Cho, 1999) and cultural closeness of the host country and the MNC's home country (e.g., Brouthers and Brouthers, 2000; Brouthers, 2002). The eclectic approach of Dunning, on the other hand, takes into account host country-specific, industry-specific and internalisation factors (e.g., Tse, Pan and Au, 1997).

A major shortcoming of the literature on entry mode choice is that, with the exception of a handful of papers that have explored the strategic decisions of MNCs entering Eastern Europe (e.g., Brouthers and Brouthers, 2000; Meyer, 2001) and China (e.g., Tse, Pan and Au, 1997; Pan, Li and Tse, 1999; Pan and Tse, 2000) the literature has almost entirely focussed on the choice of MNCs based in developed economies when entering other developed economies. Given the rising importance of many other emerging markets around the globe, from the point of view of providing MNCs with both markets and cheaper resources than in developed economies, the literature is clearly incomplete in its coverage. Our paper addresses this lacuna in the literature using unique firm-level data collected from MNC affiliates in South Africa and Egypt, two major African countries for neither of whom oil is a major resource or export product. As we shall see later, these two countries are sufficiently different in terms of their political and economic legacy, as well as in terms of their stages of development. They, therefore, provide us with a quasi-controlled experiment that highlights the differences in the determinants of choice of entry mode in different emerging market contexts.

One other contribution of this paper is that it takes into account all the three alternatives of a MNC planning to set up operations in a new country, namely, a Greenfield project, a joint venture (JV) with a local firm, and acquisition of a firm in the host country. The existing literature has largely focussed on either the choice between Greenfield entry and JV (e.g., Beamish and Banks, 1987; Gomes-Casseres, 1989; Hennart, 1991; Luo, 2001; Barbosa and Louri, 2002) or between acquisition and Greenfield entry (e.g., Brouthers and Brouthers, 2000; Gorg, 2001). Indeed, even researchers (e.g., Pan and Tse, 2000) who explored the hierarchical decision tree involving equity and non-equity modes of entry at the

first stage and alternative "equity" modes of entry in the second stage choice have taken only Greenfield entry and JV into consideration.

The paper is structured as follows: In Section 2, we briefly discuss the literature and develop testable hypotheses. The macro-institutional environments of the two countries and the data are described in Section 3. In this section, we also discuss the survey instrument and the measurement of variables. The regression results are presented in Section 4. Section 5 concludes.

2. The Literature and the Embedded Hypotheses

2.1 The Transactions Cost Approach

As mentioned earlier, a MNC entering a new country has three alternatives with respect to the mode of entry, namely, Greenfield, acquisition and JV. Both a Greenfield entry and a JV involves the setting up of a new firm, the difference being that, unlike in the case of a Greenfield project, a JV is undertaken in partnership with a local firm. Similarly, while a MNC retains complete control over both a Greenfield project and an acquired local firm, these two alternatives are different in that while a Greenfield project requires the MNC to put together different resources into a productive unit, an acquisition endows it with the required resources in a bundled form, although the ratios in which the resources are bundled together are not necessarily optimal. Each of these three alternatives has its own cost and cost-ameliorating characteristics, and the transactions cost approach argues that a rational firm chooses the alternative that minimises the cost of operation subsequent to entry (see Kogut and Singh, 1988b; Hennart, 1991; Erramilli and Rao, 1993; Hennart and Park, 1993; Cho and Padmanabhan, 1995; Padmanabhan and Cho, 1996; Brouthers and Brouthers, 2000; Brouthers, 2002; Brouthers and Brouthers, 2003).

If a MNC enters with a Greenfield project, it has complete control over the decision-making process of the host country affiliate, but it has to acquire all the necessary resources on its own and develop business relationships in both the factor and product markets, and the cost associated with developing these relationships can potentially be high. A JV with a local firm endows a MNC with established business relationships, as well as ready access to information about both the local markets and institutions, but it can lead to a transfer of the intangible asset or technology *owned* by the MNC to the local partner, whether inadvertently or by design. Indeed, it has been argued that the relationship between a MNC and its JV partner is marked by agency problems that results in dissolution of most JVs within a relatively short period of time (see, e.g., Wong and Leung, 2001; Sinha, 2001). Finally, acquisition of a firm in the host country enables a MNC to retain control of its "technology", reduces or eliminates the cost of pulling resources together to build a firm, and endows it with both business relationships and knowledge about the local markets and institutions, but it has

to then bear the cost of integrating the production structure, organisational structure and corporate culture of the acquired firm into its own.

The eventual or observed choice of mode of entry of a MNC is an optimal outcome of a decision making process that compares the costs and cost-ameliorating characteristics associated with the three different alternatives, and chooses the alternative the minimises the cost of operation subsequent to entry. As we shall see below, the determinants of the costs associated with the different entry modes, and the factors that ameliorate these costs, have been discussed extensively in the strategy and international business literature. These include firm-specific characteristics like the R&D intensity of the MNC's product and the size of the host country affiliate relative to the MNC's global operations, industry-specific factors like the extent of competition faced by the MNC in the host country, and country-specific factors like the business/institutional environment prevailing in the host country. In the next section, we explore the relationship between these firm-specific, industry-specific and country-specific factors and a MNC's choice of entry mode, and thereby generate testable hypotheses.

2.2 Determinants of Entry Mode Choice

By definition, a MNC is an organisation that owns a technology or a business practice that renders it competitive *vis a vis* other firms both within its home country and abroad (Ethier, 1986). Given the importance of this technology or business practice to its profit-making or rent-seeking ability, a MNC would want to retain exclusive ownership of this technology/business practice. If it enters into a partnership with a local firm in a host country, however, the exclusivity of this ownership will be threatened, largely because of the prohibitively high cost of writing a complete contract that can pre-empt such a possibility. The threat of loss of ownership of the technology/business practice will be higher in emerging markets where intellectual property rights may not be well defined. Therefore, a MNC will desire exclusive control over the production and related processes of its host country affiliate if the MNC's product or process is R&D intensive (Hennart, 1991; Hennart and Park, 1993; Cho and Padmanabhan, 1995; Caves, 1996; Delios and Beamish, 1999; Smarzynska, 2000), and if the MNC has made significant investment in its proprietary technology (Gleason, Lee and Mathur, 2002).

H1: *A MNC is more likely to enter a host country with a Greenfield project or by way of acquisition if its product is R&D intensive.*

Correspondingly, the MNC will be more willing to enter a host country in partnership with a local firm if its products are intensive in the resources that make a host country attractive as a location to set up operations (Teece, 1986; Asiedu and Esfahani, 2001). In such

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an event, the potential cost associated with the loss of exclusive ownership of the proprietary technology will not be high, and, at the same time, a partnership with a local firm will significantly reduce the cost of acquiring resources and developing local business relationships (Gomes-Casseres, 1989; Hennart, 1991). A MNC can be "resource seeking" (e.g., Morck and Young, 1991) or "resource exploiting" (Zahra *et al.*, 2000; Chung, 2001; Luo 2002). Resource exploiting MNCs seek to maximize the rents from the firm's embedded resources and capabilities, partly by leveraging the complimentary resources available in overseas markets. Resource seeking MNCs, on the other hand, seek to add to their capabilities by combining them with resources available in other countries. It is evident that both types of firms may require local resources; while resource seeking firms (e.g., Oracle looking for inexpensive skilled programmers in India) may require more of tangible resources like labour and raw materials, resource exploiting MNCs (e.g., Coca Cola leveraging its brand to capture the soft drinks market in China) may require more of intangible resources like distribution networks and local business relationships. The importance of either a local partnership in the form of a JV or an acquisition of a local firm with established business relationships is obvious if the requirements of a MNC involve intangible assets (see, e.g., Dawar and Chattopadhyay, 2002). However, even if the requirement involves tangible assets, local partnerships or ownership of established local firms can be important in emerging markets that may not have fully functioning markets for all resources, e.g., land. In other words, our priors are as follows:

H2:   *A MNC is more likely to enter a host country by way of a JV or acquisition if its success depends significantly on its ability to obtain local resources.*

Further, given the degree of complexity associated with obtaining resources in the host country, a MNC's decision is likely to be affected significantly by its expectations about the local institutions and business environment (Gatignon and Anderson, 1988; Agarwal and Ramaswami, 1992; Kim and Hwang, 1992; Aulakh and Kotabe, 1997; Luo, 2001). If a MNC expects the institutions and business conditions of a host country to be inadequate (e.g., absence of an appropriate dispute settlement process with regulatory authorities, and the paucity of counter-parties in product and resource markets), or if the MNC feels that the rules and regulations governing business practices are unstable on account of, e.g., frequent changes in governments, it's likelihood of entering the host country in cooperation with a local firm will increase. Further, even though acquisition of a local firm does not lead to direct or active support from a local partner in mitigating the aforementioned problems, an acquired local firm will have some embedded intangible assets that address the problems of

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missing markets and/or regulatory volatility. It is, therefore, reasonable to believe that there is an observable hierarchy with respect to the three alternatives available to a MNC: if the extent of institutional inadequacy and/or regulatory volatility is perceived to be high, a JV would be the most likely decision, followed by acquisition of a host country firm, and a Greenfield mode of entry would be least likely.

H3:   *A MNC is most likely to enter a host country in the form of a JV if the anticipated extent of institutional failure and regulatory volatility is significant, and least likely to enter that country with a Greenfield project. The probability of entry by way of acquisition is less than that of a JV and more than that of a Greenfield project.*

However, if the MNC is familiar with the local conditions in the host country, or in a similar country, its risk perception is lower for any given degree of expected institutional failure and/or volatility in the policy environment. Hence, we expect a cooperative mode of entry to be less likely if a MNC has operating experience in business environments that are the same as or similar to those in the host country (Kogut and Singh, 1988b; Erramilli, 1991; Cleeve, 1997; Barbosa, Guimaraes and Woodward, 1998). However, while experience specific to a host country is likely to raise the probability of both Greenfield entry and acquisition of a host country firm (Gomes-Casseres, 1989, 1990; Hennart, 1991), operational experience in a similar country is more likely to add to the probability of Greenfield entry, with an uncertain effect on the probability of entry by way of acquisition. This follows from the reasonable conjecture that acquisition requires the ability to identify potential acquisition targets and obtain their accurate valuation, and this is likely to be difficult in an emerging market that does not, in general, conform to international accounting standards. In other words, acquisition may be difficult in emerging markets if a MNC does not have country-specific experience. We, therefore, have the following priors:

H4:   *Given an anticipated level of institutional failure and regulatory volatility, entry is more likely by way of a Greenfield or acquisition if a MNC has prior operating experience in the host country or operating experience in a similar country.*

H4a: *In the event of a non-JV mode of entry, Greenfield entry is more likely if the MNC does not have host country-specific operating experience.*

A MNC's choice of mode of entry also depends on the extent of its risk appetite. Arguably, a MNC is more likely to shoulder the risks associated with a business venture in a host country on its own if the uncertainty regarding the profitability of the host country

affiliate are low, or if the performance of the local country affiliate has a relatively small impact on its overall performance. If the profit-related uncertainty is high, a MNC is more likely to share its business and investment risks with a local partner. A JV, therefore, is less likely if the MNC has a clear competitive edge *vis a vis* the local firms, and is more likely if the host country market is very competitive (Hennart and Park, 1993). This argument can easily be extended to argue that a JV is less likely if the host country affiliate is small relative to the worldwide operations of the MNC, and vice versa (Caves and Mehra, 1986; Gatignon and Anderson, 1988; Kogut and Singh, 1988b; Hennart and Park, 1993). The literature is silent about the relative probability of these two non-JV modes of entry under circumstances when a MNC's potential exposure to profit-risk is high. However, since, unlike a Greenfield, an acquisition does not add to the production capacity of an industry, and therefore leaves the extent of competition in the product and factor markets relatively unaffected, we hypothesise that in the presence of profit-related uncertainty, while both acquisition and Greenfield entry are less likely than a JV, entry by way of acquisition is more likely than a Greenfield entry. Our final priors about the strategic decisions of a MNC entering an emerging market, therefore, are as follows:

H5:   *A JV is the most likely outcome, followed by an acquisition, and Greenfield is the least likely mode of entry both if the competitive edge of the MNC vis a vis the host country firms is relatively weak, and if the size of the host country affiliate is large relative to the worldwide operations of the MNC.*

Thus far, we have examined the possible covariates of a MNC's mode of entry into an emerging market that are integral to the strategic decision making process of the MNC. In keeping with the literature, we also control for other factors that may affect this decision, namely, the market potential of the host country (Kogut and Singh, 1988a; Agarwal and Ramaswami, 1992; Horstman and Markusen, 1996; Barbosa and Louri, 2002) and the "cultural distance" between the host country and the country of origin of the MNC (Yip, 1982; Kim and Hwang, 1992; Brouthers and Brouther, 2000, 2001; Brouthers, 2002). The choice of entry mode is also influenced by the extent of liberalisation of the relevant industry, something that is usually not relevant in the context of entry in developed markets but one that is of particular concern in the context of emerging markets. For example, a MNC may be reluctant to enter an industry where prices are heavily regulated by the government. Also, emerging market governments often have FDI-related regulations that prevent certain modes of entry (Gomes-Casseres, 1990). During the initial stages of liberalisation of the Indian economy, for example, it was

difficult for a MNC to enter India except by way of a JV, especially in the consumer goods sector.

Further, anecdotal evidence suggests that MNCs take into account the possibility that, while material resources and semi-skilled (or even skilled) labour might be found in abundance in an emerging market, it might be difficult for it to obtain high quality executive managers who can take the lead in formulating a business strategy that is appropriate for the local environment. This is usually on account of the nature of business organisations in emerging markets, where there is often no separation of ownership and executive management. Paucity of high quality executive management in the host country may tilt the balance in favour of acquisition, a form of entry that allows the retention of the incumbent executive management with an appropriate contractual agreement, or JV.

Finally, it can be argued that the manufacturing sector is more intensive in investment in tangible resources than the services sector, such that a manufacturing MNC is likely to be more responsive to factors that affect the transactions cost of operations in a host country than a service sector MNC (Brouthers and Brouthers, 2003). In view of the possibility that a manufacturing firm may behave differently relative to a services sector firm we control for the "type" of the MNC.

The above discussion suggests that a MNC's choice of entry mode depends on a variety of factors that can be firm-specific (e.g., R&D intensity of product, and the MNC's need for host country resources), industry-specific (e.g., extent of competition in the host country industry) and host country-specific (e.g., business/institutional environment). Our specification for the empirical analysis is, therefore, as follows:

Entry mode = β_0 + β_1 *R&D expenditure* [H1]

$\qquad$ + β_2 *Other measure of technology-intensity of MNC's product* [H1]

$\qquad$ + β_3 *MNC's need for local tangible resource* [H1]

$\qquad$ + β_4 *MNC's need for local intangible resource* [H2]

$\qquad$ + β_{5i} Σ_i *Index of local business environment* [H3]

$\qquad$ + β_6 *Host country-specific experience of the MNC* [H4, H4a]

$\qquad$ + β_7 *International experience of the MNC* [H4, H4a]

$\qquad$ + β_8 *Perceived extent of local competition in host country* [H5]

$\qquad$ + β_9 *Size of local affiliate relative to MNC's global operation* [H5]

$\qquad$ + Φ' *Control variables* + *e* $\qquad$ [1]

when Φ is a vector of coefficients. As we shall see later, it is difficult to measure the quality of (or perception about) local institutions and business environment using one homogeneous index. For example, it is difficult to combine within the same index the ease of cross-border mobility of MNC management that is governed by the visa rules and immigration policies of the host country, and the extent of support that MNCs receive from local governments with respect to their business operations. Hence, we shall use more than one variable to capture a MNC's perceptions about local institutions and business environment, i.e., i will have value greater than 1.

3. Choice of Countries, Data and Research Methodology

3.1 Choice of Countries

Specification [1] has been estimated using firm level data collected from South Africa and Egypt. While both these countries belong to the same continent, they have few similarities. Egypt has enjoyed significant political stability since the 1970s, in the form of the same administration. However, the country has experienced a structural break in its economic policy paradigm, as the government initiated a move away from central planning towards market based allocation of resources. Unlike Egypt, South Africa has had a fairly long history of private enterprise and export orientation. However, during the late 1980s and early 1990s, the South African economy had to endure a period of economic flux, when major world economies imposed sanctions in protest against apartheid. Almost simultaneously, the country had to adapt with a change of the political regime. Since the early 1990s, South Africa has retraced its steps towards private enterprise and export orientation, albeit with a radically different political regime. The policy environments of these two countries, as witnessed during the 1990s, are discussed in detail in Gelb (2003) and Louis and Handoussa (2003).

In other words, during the 1990s, a MNC contemplating investment in Egypt was unlikely to have experienced major surprises with respect to its political economy and the corresponding institutions. Indeed, the relevant issue was more likely to be whether the policy and institutional changes that accompanied the move from central planning to a market-oriented economy were actually significant. In the context of South Africa, on the other hand, the changes to the political economy and the corresponding institutions were expected to be significant, and the main issue was the extent to which the new political regime would preserve the country's legacy of private enterprise, given the concentration of productive resources in the hands of a small minority, and maintain its links with the European and North American economies.

The differences in legacy are also reflected in economic facts and figures. South Africa is a quasi-industrialised country with reasonably good infrastructure in comparison with other emerging markets, which has played host to firms from advanced industrialised

nations for decades. Despite the sharp depreciation of the rand towards the end of the 1990s, its per capita GDP in terms of nominal dollars stand at USD 2,685. At the same time, the income and wealth distribution in the country remains skewed, resulting in a Gini of 0.59. Egypt, by contrast, has a moribund industrial sector, and lower average levels of infrastructure. The per capita GDP of the country has increased continually over time, but in 2000, at USD 1,425, it was still about half that of South Africa. On the other hand, the socialist legacy of Egypt's economic policy has led to a much lower level of inequality, as indicated by the Gini of 0.29.

There are, of course, points of similarity between the countries. For example, in both the countries, about a fifth of the people have had tertiary education, indicating similar proportion of high skilled labourers in both populations. Further, as of 2000, both these countries have had similar levels of net foreign direct investment (FDI) inflow, whether measured as a percent of GDP or in terms of FDI per capita. However, the political and economic legacies of the two countries are sufficiently different to provide a sharp contrast in terms of the knowledge and the expectations that MNCs may have had about the two countries. Since choice of entry mode depends significantly such knowledge and perceptions of the MNCs about the resource availability, business environment etc in host countries, we feel that it would be instructive to undertake a comparative study of the entry mode choice of MNCs entering South Africa and Egypt.

3.2 Data

3.2.1 Survey Instrument

The data were been gathered with the help of a common questionnaire that was administered to foreign investment companies in the two countries between November 2000 and April 2001. Prior to administration of the survey instrument, it was piloted and refined during the summer of 2000. The base population for the survey study was defined as all registered foreign direct investment projects that have been started between 1990 and 2000, and have a minimum employment of 10 persons, and minimum foreign equity stake of 10 percent. The time limit ensures that information concerning the establishment was part of the organization memory and therefore available at the time of the survey.

In both the countries, the questionnaire was administered by local research institutions experienced in data collection in the country, the Economic Research Forum in Egypt and the EDGE Institute in South Africa. The questionnaire was sent by mail or fax to a stratified random sample drawn from the base population. Specifically, efforts were made to make the cross-sector distribution of firms in the sample closely resemble the similar distribution for the population, and within each sector the firms were chosen randomly. In

most cases, the aforementioned institutes followed up with the potential respondents by sending specifically trained assistants to interview the CEO or an appropriate management executive in the firm. Response rates varied between 10 percent and 20 percent, and randomly selected additional firms were contacted where appropriate to achieve the target return of 150 companies per country.[1] Owing to missing value problems, eventually the maximum number of usable observations for South Africa and Egypt are 114 and 110 respectively.

3.2.2 Variable Measurement

The MNC affiliates responding to the survey instrument categorized themselves as belonging to one of four categories: Greenfield project, JV, acquisition with complete control and acquisition with less than complete control. The incidence of acquisition with less than complete control accounted for less than 5 percent of the total number of responses, net of the observations dropped on account of missing values. Arguably, there is little difference between an acquisition with less than complete control and a JV; the agency conflict in the former involves a MNC and its local partner, while the conflict in the latter case involves a MNC as a new strategic shareholder and local incumbent shareholders. Hence, for our purposes, we consider acquisitions with less than complete control as JVs. Our dependent variable, therefore, takes the value 1 if the entry mode is Greenfield, the value 2 if the entry mode is acquisition, and the value 3 if the entry mode is JV.

The explanatory variables are measured as follows:

R&D expenditure: Each MNC affiliate indicated in its response to the survey whether the parent firm's R&D expenditure as a percentage of global turnover fell in one of the following categories: 0-0.5, 0.5-1, 1-2, 2-4, 4-8, 8-15 and 15+, i.e., our measure of R&D expenditure is a categorical measure with 1 as the lowest value and 6 as the highest value. This measure is consistent with those used earlier in the literature (Caves and Mehra, 1986; Kogut and Singh, 1988b; Hennart and Park, 1993; Anderson and Svensson, 1994; Cho and Padmanabhan, 1995) We supplement this measure with an overall proxy for a MNC's R&D intensity. We make the reasonable assumption that, by and large, the R&D intensity of a MNC's product increases with the degree of development of its home country. Therefore, we use GDP per capita of the MNCs' home countries, the stylized measure of economic development, as the supplementary measure for the R&D intensity of the MNCs' products.

MNC's need for local resource: An unique aspect of the survey is that the it asked the MNCs two different questions about their resource need. First, the MNCs were asked to identify 3 resources (out of 16) that they think are most crucial for successful performance. Of

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[1] In Egypt, this process led to over-sampling of the Greater Cairo area, and an over-sampling of firms operating in the tourism industry. At the same time, the manufacturing and financial sectors were under-sampled.

these, some were tangible resouces like machinery and equipment, while others were intangible resources like distribution network. It is evident that a MNC could identify 0, 1, 2 or 3 tangible assets as being crucial for its business success, and, correspondingly, it would have identified, 3, 2, 1 or 0 intangible assets. Next, the MNCs were asked what percentage of each of these three most important resources they sourced from five different sources, namely, local firm (i.e., JV partner or acquired firm), other local sources (i.e., local market), parent MNC, other foreign sources, and "other." As expected, there were a negligible number of entries for the "other" category. The share of key resources sourced from the host country was then the sum of the shares sourced from the local partner and other local sources. Let the percentage of a resource j sourced from the host country be x_j. As explained above, j can take the value 0, 1, 2 or 3 for both tangible resources and intangible resources. For both these type of resource, therefore, the index is given by $\Sigma_i x_j/j$, when j is 1, 2 or 3, and 0 otherwise.

Local competition: We measure the extent of local competition using a categorical variable that has the minimum value of 1 the maximum value of 5. These categories are based on the responses of the MNC affiliates to a query about the number of competitors in the relevant industry in the host country at the time of entry. The value 1 through 5 of the variable correspond to 0, 1-2, 3-5, 5-10 and 10+ competitors respectively.

Relative size of affiliate: In response to our survey, the MNC affiliates indicated their turnover as a percentage of the global turnover of the MNC. Their responses were categorised as follows: 0-0.1, 0.1-0.5, 0.5-2, 2-5, 5-10 and 20+, i.e., our measure of the relative size of the affiliate is a categorical measure with 1 as the lowest value and 6 as the highest value. Once again, our measure is consistent with those used earlier in the literature (Caves and Mehra, 1986; Kogut and Singh, 1988b; Agarwal and Ramaswami, 1992; Earramilli and Rao, 1993; Hennart and Park, 1993)

MNC experience: The MNC affiliates captured in the sample responded to two different questions about their operating experience in the host countries in which they operated, as well about their operating experience in similar countries. Each affiliate provided a yes/no response to a query about whether it was the parent MNC's first affiliate in the host country. This provided us with a dummy variable that takes the value 1 for a "yes" response and the value 0 for a "no" response. We also know whether the parent MNCs have affiliates operating in other emerging markets in Africa, Eastern Europe, Asia (other than Japan) and Latin America. In other words, each MNC takes the minimum value of 0 (if a parent MNC has no affiliates in any other emerging markets) and the maximum value of 4 (if the parent MNC has affiliates in other emerging markets in all the aforementioned four regions.

Business/institutional environment: One other strength of the survey instrument is that it elicited from the MNC affiliates their perception about the state of eight different aspects of the business/institutional environment in the host country at the time of entry. Each

of these responses was measured on a 5-point Likert scale, with 1 indicating that the relevant aspect of business/institutional environment was "very conducive" to profitable business operations, and 5 indicating that the environment was "not conducive at all." Values of the Cronbach's alpha indicated that the aforementioned eight aspects can be grouped into three distinct categories, namely, official procedures,[2] general institutional environment[3] and government policy.[4] The value of the index measuring the perception of a MNC about a category is the average of the perceptions about all the aspects of business/institutional environment included in that category.

Control variables: We measure the cultural distance using the geographic distance between the host and home countries.[5] The extent of liberalization of the industry-specific FDI regulations and of the industry itself are measured by the response of the country teams – ERF in Egypt and EDGE in South Africa – to these queries. The minimum value of 1 on the 5-point Likert scales indicates no changes to the pre-1990 policies and the maximum value of 5 indicates major policy changes. The perception of the MNC affiliates about the quality of local executive management is also measured on a 5-point Likert scale, with 1 indicating that suitable executive managers are never acceptable at the acceptable level of cost, and with 5 indicating that such people are readily available. The growth rate of the relevant industry in the host country is the average growth rate of the industry in the 5 years prior to the entry of the MNC. Finally, each MNC is categorized as belonging to the manufacturing or services sectors based on the ISIC codes of the 3-digit industry categories to which they belong. We, therefore, have a dummy variable that takes the value 1 if a MNC affiliate belongs to the manufacturing sector, and 0 otherwise (Kogut and Singh, 1988b).

A brief description of the explanatory variables is reported in Table 1.

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[0]=This category includes procedures for obtaining business licenses, procedures for real estate purchase, procedures for obtaining visa and work permits (for expatriates sent from other business locations of the MNCs), and environmental regulation procedures.

[3] This category includes general legal framework and law enforcement, and predictability and stability of rules and regulations.

[4] This category includes institutions and policies of the central and local governments.

[5] The relation between distance of home and host economy and the preferred entry mode has been of special interest to international business scholars. Many studies have incorporated the Kogut-Singh (1988) index to analyse JV versus wholly owned, or acquisition versus Greenfield decision. However, the results of this empirical literature are overall inconclusive, which can be attributed to a variety of methodological problems with measuring the concept of psychic distance (Shenkar, 2001). Given the methodological concerns, and the lack of Hofstede (1989) data for all five indices for the two host countries in our empirical work, we use the conceptually simpler measure of geographic distance instead.

3.2.3 Descriptive Statistics

The South African sample includes 40 cases of Greenfield entry, 47 cases of acquisition and 27 cases of JV. The corresponding figures for Egypt are 51, 19 and 40 respectively. The relatively high proportion of acquisition in the South African context is consistent with the pattern observed in the context of FDI among developed countries. The relatively high proportion of JV in the Egyptian context, on the other hand, is consistent with the usual experiences of developing countries like India.

The descriptive statistics for the explanatory variables for the choice of entry mode for the two countries are presented in Tables 2 and 3. The descriptive statistics suggest the following:

a. South Africa attracts more sophisticated MNCs, who spend a greater share of their sales revenues on R&D, as compared to MNCs that enter Egypt. The former are also from more developed countries, as indicated by the per capita GDP of these countries. This is consistent with the fact that, as suggested by the variable capturing cultural distance between the home and host countries, MNCs operating in South Africa came largely from North America and North/West Europe, while a significant proportion of the investors in Egypt are from the Middle East-North Africa (MENA) region.

b. Neither the affiliates in South Africa nor those in Egypt constitute a significant part of the worldwide operations of the parent MNCs; an average local affiliate contributing to 2 percent or less of the parent MNC.

c. The MNCs entering both the countries source a small fraction of their required tangible resources from the host countries, but they source a significant part of their intangible assets from either country. This is consistent with the prior that a MNC's success in an emerging market depends more on its ability to develop business networks involving firms in the supply chain as well as the government machinery than on acquisition of resources like labour and raw materials.

d. The business and institutional environments of South Africa are not very different from each other. However, local FDI-specific and industry-specific regulations are deemed more investor-friendly by MNCs operating in Egypt than by those operating in South Africa.

3.3 Research Methodology

To begin with, we have to determine whether or not the explanatory variables are orthogonal to each other. The correlation matrices presented in Tables 2 and 3 indicate that in the case of South Africa there is no multicollinearity problem, under the reasonable assumption that multicollinearity is manifested by a correlation of 0.40 or higher between two explanatory

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variables. In the case of Egypt, however, there is serious multicollinearity problem involving three variables, namely, GDP per capita of the MNCs' host countries, the index of government policies, and the measure for the extent of liberalisation of the local industry. These variables, therefore, are dropped from the specification for estimation with the Egyptian sample.

Next, since we have argued that Greenfield entry, acquisition and JV are the three alternative modes of entry available to a MNC, i.e., these are mutually exclusive choices that are completely different from each other, we should be able to use a multinomial logit model to estimate specification [1]. Therefore, we have to test the so-called *iia* condition. Our test statistics for both South Africa and Egypt indicate that the null hypothesis of *iia* cannot be rejected. Hence, we proceed with the multinomial logit methodology, with Greenfield entry as the base category. The rationale for the choice of this base category is that the literature largely comprises of empirical investigations of binary choices involving either Greenfield and acquisition or Greenfield and JV, and the choice of Greenfield as the base category allows us to investigate both these choices simultaneously and directly.

4. Discussion of Regression Results

The multinomial logit estimates are presented in Tables 4 and 5. The pseudo R-square values for the regressions indicate a fairly good fit, given the cross-section nature of the data and the sample size. The implications of the coefficient estimates for the hypotheses being tested are discussed below:

Hypothesis 1: Our prior was that a MNC with a R&D intensive product would prefer not to have a JV with a local firm because of the agency problems associated with the sharing of knowledge with a local partner. Our results are partly consistent with this hypothesis. In Egypt, MNCs with R&D intensive products clearly shied away from JVs. However, in South Africa, R&D-intensive MNCs were indifferent between Greenfield entries and JVs, and these MNCs clearly favoured entry by way of acquisition. The latter result is consistent with the unique status of South Africa whose political legacy led to much closer interaction between MNCs based in Europe and North America and local firms, and resulted in more productive and export-oriented local firms than in other emerging markets like Egypt, thereby making acquisitions feasible and profitable.

Hypothesis 2: The coefficient estimates also support the hypothesis that a MNC is likely to opt for acquisition or JV if its requirement for local resources is high. In South Africa, MNCs prefer either acquisition or JV or both, over Greenfield entry, if they have high requirements of local resources. The decision to acquire a local firm in the host country is affected by the MNC's need for both tangible and intangible resources, while the decision to enter into a JV with a local firm is affected only by the need for local tangible resources.

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Resource requirement is not a determinant of mode of entry in Egypt, perhaps indicating that there is not sufficient variation among the resource needs of the MNCs with the different entry mode choices.

Hypothesis 3: This hypothesis too receives partial support from the coefficient estimates. The estimates involving the South African sample indicate that a MNC is likely to opt for acquisition if government policies are not conducive to business operations in the host country. (Note that the indices for institutional quality have the value 1 for "very conducive" and the value 5 for "not conducive at all.") This is consistent with the argument that an acquisition of an existing firm gives a MNC ready access to business relationships with both other firms in the supply chain, as also with the government machinery whose support may be critical for profitable operation of the firm. In Egypt, on the other hand, an average MNC opts not to choose a JV if the general institutional set-up is not conducive to its operations. This counterintuitive result possibly implies that a MNC is wary about aligning with a local firm in an unstable policy-regulatory environment in a country where a cooperative mode of entry significantly enhances the bargaining power of the local firm *vis a vis* the MNC, thereby exacerbating the agency costs associated with such a partnership.

Hypotheses 4 and 4a: The coefficient estimates suggest that experience does not influence the choice of the entry mode in South Africa. In Egypt, the probability of entry by way of JV increases with the extent of emerging market experience of the MNC, but country-specific experience does not play any role in the decision-making process. In other words, these hypotheses do not find support in the coefficient estimates, and, indeed, one of the results is inconsistent with the hypotheses. The explanation for the lack of impact of experience on choice of entry mode possibly lies in anecdotal evidence that suggests that MNCs often factor in significantly long gestation periods, and are willing to spend years to get acquainted with local business environments and to build local business relationships. Therefore, as suggested by Pan and Tse (2000), pre-entry country-specific experience or experience in a similar business environment may not a key determinant of the strategic decision-making process of MNCs when they enter emerging markets. It is difficult to explain the positive sign of the variable capturing non-host country specific emerging market experience in the JV regression for Egypt.

Hypothesis 5: The weak evidence with respect to this hypothesis is counterintuitive. The coefficient estimates suggest that in Egypt competition has no impact on the choice of mode of entry. In South Africa, on the other hand, the probability of a JV decreases with increase in competition in the local industry, i.e., with an increase in the number of local competitors a MNC is *more* reluctant to share the risk with a local partner. The rationale for this result possibly lies in the possibility that a MNC often operates in a high-end niche in emerging markets and that, therefore, the number of competing firms is not necessarily a

good measure of the competition it faces in these markets. Further, MNCs with production bases in emerging markets may be resource-seeking, treating the production units in these markets as bases for producing for the export market or its own production units in other countries and, therefore, may not be in competition with the incumbent firms in the host country. In such an event, the number of incumbent local firms in the relevant industry, at the time of a MNC's entry into the host country, is more likely to be an indicator of the extent of comparative advantage of the host country in the relevant line of business. The greater the extent of this comparative advantage, *ceteris paribus* the lower is the potential cost of obtaining the productive resources in the host country market, and hence the greater is the likelihood of a MNC entering the host country on its own.

5. Concluding Remarks

In this study, we use the existing theoretical and empirical literature involving the strategic decision of a MNC about the mode of entering an emerging market. The literature, which is almost entirely about the experience of developed country MNCs investing in other developed countries, is used to generate some testable hypotheses. The hypotheses are then tested using unique firm-level data collected from MNC affiliates in South Africa and Egypt.

Results: The regression estimates obtained using the data and the multinomial logit modelling technique suggest that, as hypothesised, the R&D-intensity of the MNCs' products and their need for both tangible and intangible resources available in the host country or with local firms are an important determinant of the choice of entry mode. There is also partial support for the hypothesis that the business/institutional environment impacts this strategic decision. However, in contrast to our priors, the impact of prior operating experience within the host country in similar environments, as well as the extent of competition in the host country was largely absent and, to the extent that there was any impact, it was counterproductive. The regression estimates and their implications were more consistent with our priors/hypotheses in the South African context than in the Egyptian context, the former being a closer approximation of a developed economy than the latter. This brings into focus the problem associated with using conventional wisdom, which is based on experiences of developed countries, in the context of emerging markets, and the need to have a greater number of empirical exercises involving emerging market data that would contribute to our understanding about business operations in these markets.

Implications for managerial decisions: Perhaps the most significant result, in terms of its implication for managerial decision making, is that the a MNC's choice of entry mode at the time of entry into an emerging market is affected by the extent to which the MNC is dependent on the host country for resources that are important for its success. In a developed country context, where tangible resources can be procured from the market relatively easily,

most of the required resources are likely to be intangible, e.g., business relations. Even so, the relationship may be weak because business relationships in developed countries are much less organisationally embedded, and much more standardised through explicit contracts than in emerging markets. However, in an emerging market context, a local partner might be essential not only if the need of the MNC is for intangible assets but also if its need is for tangible assets like land and skilled managerial labour for which there may be no functioning markets. Hence, a MNC planning to enter an emerging market should carefully assess its resource needs before determining its choice of entry mode.

The other significant result in the context of managerial decision making is that while, as expected, the business/institutional environment has a significant impact on the choice of entry mode, the nature of the relationship between environmental uncertainty and the choice of entry mode may not be consistent with our priors based on developed country experience. For example, in Egypt, a country where the cost associated with a partnership with a local firm in the event of policy and institutional volatility may exceed the benefits of such a relationship, on account of the greater bargaining power of the local partner in a country where explicit contracts might be difficult to enforce, greater environmental uncertainty is associated with *higher* probability of Greenfield entry and, correspondingly, a *lower* probability of a JV entry. In other words, the decision to opt for a partnership with a local partner is more complex in an emerging country context than in a developed country context, and has to be well thought out before a MNC enters the former.

Shortcomings and future research: Ironically, the data, which is one of the strengths of the paper, is also the source of its shortcomings. While it is unique in its coverage and scope, and provides an insight into the strategic decision-making process of MNCs entering emerging markets, it has a significant missing value problem that has led to a loss of nearly 25 percent of the observations. Further, in the context of Egypt, there was a sampling distortion. Also, our measures of some of the variables are imperfect. For example, our measure of cultural distance is imperfect on account of unavailability of stylised measures for Egypt and South Africa, and we were able to collect data on variables like R&D intensity only as categorical variables. The endeavour of future research should, therefore, be to collect better quality corporate data from MNCs operating in emerging markets.

Reference

Agarwal, S. and S. N. Ramaswami (1992) "Choice of Foreign Market Entry Mode: Impact of Ownership, Location, and Internalization Factors," *Journal of International Business Studies*, 23(1): 1-27.

Andersen, T. and R. Svensson (1994) "Entry Modes for Direct Investment Determined by the Composition of Firm-Specific Skills," *Scandinavian Journal of Economics*, 96(4): 551-560.

Asiedu, E. and H. S. Esfahani (2001) "Ownership Structure in Foreign Direct Investment Projects," *Review of Economics and Statistics*, 83(4): 647-662.

Aulakh, P. S. and M. Kotabe (1997) "Antecedents and Performance Implication of Channel Integration in Foreign Markets," *Journal of International Business Studies*, 28(1): 145-175.

Barbosa, N., P. Guimaraes and D. Woodward (1998) "Foreign Firm Entry in Portugal: An Application of Event Count Models," Presented at the 25th Annual EARIE Conference, Copenhagen, Denmark.

Barbosa, N. and H. Louri (2002) "On the Determinants of Multinationals' Ownership Preferences: Evidence from Greece and Portugal," *International Journal of Industrial Organization*, 20: 493-515.

Beamish, P. W. and J. C. Banks (1987) "Equity Joint Ventures and the Theory of the Multinational Enterprise," *Journal of International Business Studies*, 18: 1-16.

Brouthers, K. D. and L. E. Brouthers (2003) "Why Service and Manufacturing Entry Mode Choices Differ: The Influence of Transaction Cost Factors, Risk and Trust," *Journal of Management Studies*, 40(5): 1179-1204.

_____ (2001) "Explaining the National Cultural Distance Paradox," *Journal of International Business Studies*, 32(1): 177-189.

_____ (2000) "Acquisition or Greenfield Start-up? Institutional, Cultural and Transaction Cost Influences," *Strategic Management Journal*, 21: 89-97.

Brouthers, K. D. (2002) "Institutional, Cultural and Transaction Cost Influences on Entry Mode Choice and Performance," *Journal of International Business Studies*, 33(2): 203-221.

Caves, R. E. (1996) "Multinational Enterprise and Economic Analysis," 2nd Edition, Cambridge University Press.

Caves, R. E. and S. Mehra (1986) "Entry of Foreign Multinationals into US Manufacturing Industries," (in) M. Porter (ed.) *Competition in Global Industries*, Boston, Mass.: Harvard Business School Press.

Cho, K. R. and P. Padmanabhan (1995) "Acquisition versus New Venture: The Choice of Foreign Establishment Mode by Japanese Firms," *Journal of International Management*, 1(3): 255-285.

Chung, W. C. (2001) "Identifying Technology Transfer in Foreign Direct Investment: Influence of Industry Conditions and Investing Firm Motives," *Journal of International Business Studies*, 32: 211-229.

Cleeve, E. (1997) "The Motives for Joint Ventures: A Transactions Cost Analysis of Japanese MNEs in the UK," *Scottish Journal of Political Economy*, 44: 31-43.

Dawar, N. and A. Chattopadhyay (2003) "Rethinking Marketing Programs for Emerging Markets," *Long Range Planning*, 35: 457-474.

Delios, A. and P. W. Beamish (1999) "Ownership Strategy of Japanese Firms: Transactional, Institutional and Experience Influences," *Strategic Management Journal*, 20: 915-933.

Dunning, J. H. (1988) "The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions," *Journal of International Business Studies*, 19(1): 1-31.

_____ (1980) "Toward an Eclectic Theory of International Production: Some Empirical Tests," *Journal of International Business Studies*, 11(1): 9-31.

Erramilli, K. M. (1991) "The Experience Factor in Foreign Market Entry Behavior of Service Firm," *Journal of International Business Studies*, 22: 479-501.

Erramilli, K. M. and C. P. Rao (1993) "Service Firms' International Entry-Mode Choice: A Modified Transactions-Cost Analysis Approach," *Journal of Marketing*, 57(July): 19-38.

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Ethier, W. J. (1986) "The Multinational Firm," *Quarterly Journal of Economics*, 101(4): 805-834.

Gatignon, H. and E. Anderson (1988) "The Multinational Corporation's Degree of Control Over Foreign Subsidiaries: An Empirical Test of Transactions Cost Explanation," *Journal of Law Economics and Organization*, 4(2): 305-336.

Gelb, S. (2003) "Background Paper: Institutional Development and FDI in South Africa," DRC Working Paper No. 7, Centre for New and Emerging Markets, London Business School.

Gleason, K. G., C. I. Lee and I. Mathur (2002) "Dimensions of International Expansions by US Firms to China: Wealth Effects, Mode Selection and Firm Specific Factors," *International Review of Economics and Finance*, 11: 139-154.

Gomes-Casseres, B. (1990) "Firm Ownership Preferences and Host Government Restrictions: An Integrated Approach," *Journal of International Business Studies*, 21(1): 1-22.

_____ (1989) "Ownership Structures of Foreign Business Subsidiaries," *Journal of Economic Behavior and Organization*, 11: 1-25.

Gorg, H. (2000) "Analysing Foreign Market Entry: The Choice Between Greenfield Investments and Acquisitions," *Journal of Economic Studies*, 27(3): 165-181.

Hennart, J. F. (1991) "The Transactions Cost Theory of Joint Ventures: An Empirical Study of Japanese Subsidiaries in the United States," *Management Science*, 37(4): 483-497.

_____ and Y. R. Park (1993) "Greenfield vs. Acquisition: The Strategy of Japanese Investors in the United States," *Management Science*, 39(9): 1054-1070.

Horstman, I. J. and J. R. Markusen (1996) "Exploring New Markets; Direct Investment, Contractual Relations and the Multinational Exercise," *International Economic Review*, 37(1): 1-19.

Kim, W. C. and P. Hwang (1992) "Global Strategy and Multinationals' Entry Mode Choice," *Journal of International Business Studies*, 23(1): 29-53.

Kogut, B. and H. Singh (1988a) "Entering United States by Joint Venture: Competitive Rivalry and Industry Structure," (in) F. Contractor and P. Lorange (eds.) *Cooperative Strategies in Business*, Lexington, MA: Lexington Books.

_____ (1988b) "The Effect of National Culture on the Choice of Entry Mode," *Journal of International Business Studies*, 19: 411-432.

Louis, M. and H. Handoussa (2003) "Institutional Development and FDI in Egypt," DRC Working Paper No. 1, Centre for New and Emerging Markets, London Business School.

Luo, Y. (2001) "Determinants of Entry in an Emerging Economy: A Multilevel Approach," *Journal of Management Studies*, 38(3): 443-472.

Meyer, K. E. (2001) "International Business Research on Transition Economies," (in) A. Rugman and T. Brewer (eds.) *Oxford Handbook of International Business*, Oxford: Oxford University Press.

Morck, R. and B. Young (1991) "Why Investors Value Multinationality," *Journal of Business*, 64(2): 165-188.

Padmanabhan, P. and K. R. Cho (1999) "Decision Specific Experience in Foreign Ownership and Establishment Strategies: Evidence from Japanese Firms," *Journal of International Business Studies*, 30(1): 25-44.

Pan, Y., S. Li and D. K. Tse (1999) "The Impact of Order and Mode of Market Entry on Profitability and Market Share," *Journal of International Business Studies*, 30(1): 81-104.

Pan, Y. and D. K. Tse (2000) "The Hierarchical Model of Market Entry Modes," *Journal of International Business Studies*, 31(4): 535-554.

Sinha, U. B. (2001) "International Joint Venture, Licensing and Buy-out Under Asymmetric Information," *Journal of Development Economics*, 66: 127-151.

Smarzynska, B. K. (2000) "Technological Leadership and the Choice of Entry Mode by Foreign Investors," Mimeo, Washington, DC: World Bank.

Teece, D. (1986) "Transactions Cost Economics and the Multinational Enterprise: An Assessment," *Journal of Economic Behavior and Organization*, 7: 21-45.

Tse, D. K., Y. Pan and K. Y. Au (1997) "How MNCs Choose Entry Modes and Form Alliances: The China Experience," *Journal of International Business Studies*, 28(4): 779-805.

Wong, K. and W. Leung (2001) "International Joint Ventures, Moral Hazards, and Technological Spillovers," Mimeo, University of Washington.

Zahra, S., R. D. Ireland, I. Gutierrez and M. Hitt (2000) "Privatization and Entrepreneural Transformation," *Academy of Management Review*, 25: 525-550.

Table 1

Definitions of Variables

Variable	Definition
R&D	R&D intensity of product
GDPPC	GDP per capita of MNC home country
INDGROWTH	Growth of industry in host country
COMPETITION	Number of host country competitors
SIZE	Relative size of host country affiliate
TANGIBLE	MNC's need for host country tangible resources
INTANGIBLE	MNC's need for intangible host country resources
OFFICIALPROC	Index of official procedures
INSTITUTIONS	Index of general institutional context
GOVERNMENT	Index of government policies
INCOUNTRY	Prior in-country experience
EMERGING	Prior experience in emerging markets
LOCALMGMT	Quality of local executive management
CULDISTANCE	Cultural distance
FDIREG	Liberalisation of FDI regulations
LOCALIND	Liberalisation of local industry
MANUFACTURING	Dummy for manufacturing sector

Table 2

Descriptive Statistics for South Africa

		μ	σ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	R&D	3.85	2.02	1.00																
2	GDPPC (USD)	22841	9817	0.09	1.00															
3	INDGROWTH	13.64	11.64	-0.03	0.01	1.00														
4	COMPETITION	3.50	1.30	-0.02	-0.03	-0.13	1.00													
5	SIZE	3.00	1.61	-0.05	-0.05	0.15	-0.07	1.00												
6	TANGIBLE	19.83	35.99	0.00	0.04	0.09	0.06	0.14	1.00											
7	INTANGIBLE	50.61	35.74	-0.01	0.08	-0.02	0.06	0.01	0.20	1.00										
8	OFFICIALPROC	2.45	0.71	0.02	-0.04	-0.01	0.12	-0.12	-0.07	-0.03	1.00									
9	INSTITUTIONS	2.42	0.78	0.08	0.02	0.01	0.27	-0.01	-0.01	0.01	0.35	1.00								
10	GOVERNMENT	2.68	0.89	0.02	-0.03	-0.02	0.13	-0.01	0.06	0.19	0.27	**0.39**	1.00							
11	INCOUNTRY	0.72	0.44	-0.07	-0.16	0.11	-0.08	0.17	0.03	-0.02	-0.04	-0.07	-0.06	1.00						
12	EMERGINGMKT	0.87	0.32	0.25	0.12	-0.16	0.00	**-0.40**	-0.11	0.15	0.11	-0.04	-0.09	-0.17	1.00					
13	LOCALMGMT	3.42	1.17	0.11	0.19	-0.08	0.01	0.02	-0.07	0.18	-0.18	-0.13	0.13	-0.11	0.09	1.00				
14	CULDISTANCE (KMS)	10182	1962	-0.05	0.15	0.06	-0.10	0.03	0.09	0.15	-0.01	-0.03	0.08	0.05	-0.17	0.02	1.00			
15	FDIREG	1.96	0.95	-0.05	0.11	0.08	-0.08	0.00	0.00	0.16	0.11	-0.07	-0.05	0.08	0.10	-0.09	0.13	1.00		
16	LOCALIND	1.96	1.03	0.00	0.02	-0.09	0.03	-0.11	-0.01	-0.01	0.14	0.07	0.05	0.04	0.06	-0.05	0.08	0.37	1.00	
17	MANUFACTURING	0.53	0.50	0.13	-0.15	-0.22	-0.07	0.04	-0.01	0.05	-0.01	-0.05	-0.02	0.06	0.08	-0.03	-0.03	-0.07	0.29	1.00

Note: μ = mean

σ = standard deviation

Table 3

Descriptive Statistics for Egypt

		μ	σ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1	R&D	2.37	1.82	1.00																
2	GDPPC (USD)	18795	11358	0.23	1.00															
3	INDGROWTH	15.42	28.02	-0.06	-0.11	1.00														
4	COMPETITION	3.22	1.45	-0.18	-0.08	-0.08	1.00													
5	SIZE	3.29	1.96	-0.07	-0.44	-0.04	0.13	1.00												
6	TANGIBLE	23.25	37.82	-0.21	-0.10	-0.08	0.14	0.04	1.00											
7	INTANGIBLE	44.74	34.81	-0.15	-0.05	0.07	0.16	-0.01	0.18	1.00										
8	OFFICIALPROC	2.77	0.82	-0.08	-0.09	-0.02	-0.07	-0.03	0.00	-0.03	1.00									
9	INSTITUTIONS	3.15	0.99	-0.06	0.10	0.10	0.00	-0.07	-0.04	0.05	0.27	1.00								
10	GOVERNMENT	3.08	1.08	0.04	-0.03	0.01	-0.06	0.02	-0.05	-0.05	0.38	0.63	1.00							
11	INCOUNTRY	0.63	0.48	0.18	-0.07	0.01	-0.22	0.12	-0.18	-0.17	-0.05	-0.08	-0.02	1.00						
12	EMERGINGMKT	0.88	0.32	0.17	0.18	-0.14	0.12	-0.16	-0.11	-0.17	-0.03	-0.05	0.04	0.03	1.00					
13	LOCALMGMT	3.60	1.42	-0.22	-0.04	-0.05	0.14	-0.02	0.01	0.17	-0.22	0.08	-0.07	-0.11	0.05	1.00				
14	CULDISTANCE (KMS)	3856	3324	0.13	0.67	-0.06	-0.04	-0.28	-0.08	0.06	0.05	0.09	-0.05	-0.04	0.11	-0.02	1.00			
15	FDIREG	3.19	1.29	-0.01	0.14	0.17	-0.05	-0.18	-0.07	0.06	-0.08	-0.01	-0.02	0.09	-0.01	-0.01	0.22	1.00		
16	LOCALIND	3.24	1.23	-0.03	0.12	0.16	-0.04	-0.20	-0.03	0.08	-0.04	-0.01	0.00	0.09	0.00	-0.03	0.19	0.98	1.00	
17	MANUFACTURING	0.43	0.49	-0.01	-0.09	-0.06	-0.28	0.01	-0.07	-0.09	0.05	0.00	-0.04	0.00	-0.22	-0.08	-0.18	-0.20	-0.24	1.00

Note: μ = mean

σ = standard deviation

Table 4
Determinants of Entry Mode Choice in South Africa
(Multinomial Logit Model)

	Acquisition		Joint Venture	
	Coefficient	p-value	Coefficient	p-value
Constant	- 4.424	0.169	- 8.737 *	0.026
R&D	0.047 *	0.777	0.062	0.714
GDPPC	0.000 ***	0.004	0.000	0.129
INDGROWTH	- 0.046	0.188	- 0.054	0.152
COMPETITION	- 0.082	0.743	- 0.538 *	0.074
SIZE	0.077	0.701	- 0.119	0.611
TANGIBLE	0.022 **	0.048	0.029 **	0.021
INTANGIBLE	0.024 **	0.029	0.001	0.899
OFFICIALPROC	- 0.311	0.509	- 0.237	0.618
INSTITUTIONS	- 0.558	0.286	0.414	0.367
GOVERNMENT	0.775 *	0.064	0.157	0.733
INCOUNTRY	0.230	0.731	1.007	0.198
EMERGINGMKT	0.341	0.739	1.854	0.192
LOCALMGMT	0.249	0.370	0.696 **	0.045
CULDISTANCE	0.000	0.989	0.000	0.213
FDIREG	- 0.007	0.989	- 0.083	0.852
LOCALIND	- 0.073	0.861	- 0.364	0.401
MANUFACTURING	1.300	0.089	1.546	0.030
Year of entry		Yes ***		
Log likelihood			- 79.798	
Wald chi-square			10614.410	
(Prob > ch-square)			(0.00)	
Pseudo R-square			0.348	
Obs.			114	

Note: 1. The base category is Greenfield.

2. *, ** and *** indicate significance at the 10%, 5% and 1% level of significance respectively.

Table 5

Determinants of Entry Mode Choice in Egypt

(Multinomial Logit Model)

	Acquisition		Joint Venture	
	Coefficient	p-value	Coefficient	p-value
Constant	- 5.139 *	0.052	- 1.229	0.622
R&D	0.109	0.576	- 0.360 **	0.048
INDGROWTH	0.017 *	0.082	- 0.007	0.825
COMPETITION	0.303	0.297	- 0.245	0.281
SIZE	0.134	0.476	0.127	0.362
TANGIBLE	0.008	0.569	0.003	0.757
INTANGIBLE	- 0.017	0.113	0.006	0.505
OFFICIALPROC	- 0.626	0.172	0.298	0.404
INSTITUTIONS	0.047	0.904	- 1.020 ***	0.001
INCOUNTRY	- 0.332	0.669	- 0.344	0.551
EMERGINGMKT	0.201	0.894	3.459 **	0.046
LOCALMGMT	0.773 ***	0.001	0.300	0.142
CULDISTANCE	0.000	0.124	0.000	0.157
FDIREG	0.436	0.270	0.089	0.764
MANUFACTURING	0.120	0.875	0.219	0.710
Year of entry	Yes ***			
Log likelihood			-79.617	
Wald chi-square			9529.200	
(Prob > chi-square)			(0.00)	
Pseudo R-square			0.295	
Obs.			110	

Note: 1. The base category is Greenfield.

2. *, ** and *** indicate significance at the 10%, 5% and 1% level of significance respectively.