# South African multinational enterprises:

# Motivators and predictors of headquarter location

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## Abstract

This report considers Emerging Market multinational enterprise (MNE) maturity paths, with particular reference to firms with a South African origin and the choice of location for the corporate headquarters. A generalised model describing the internationalisation of globalised Emerging Market multinational enterprises is developed, describing three possible trajectories. That is, headquarter relocation, acquisition by another MNE or remaining independent in the country of origin. It is argued that Emerging Markets have offered less location advantage than Developed Markets to multinational enterprise headquarters. Using factor data for 46 nations, significant evidence is found to support this argument. Further, two arguments are built on this conjecture: that Emerging Market multinational enterprises have relocated headquarters to Developed Markets, not to other Emerging Markets, and that firm behaviour was predicted by concentration of private shareholding, levels of state ownership and levels of foreign business interest. Using a firm level sample of 61 South African companies, some evidence was found to support these arguments in this specific context. The implications of the results are considered for policy makers as well as managers, and recommendations for further research are made.

## Keywords

South Africa, Emerging Markets, Multinational enterprise, Location Advantage, Headquarters

# Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business science, University of Pretoria. It has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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# 1. Introduction

## 1.1 Research Title

South African multinational enterprises: motivators and predictors of headquarter location.

## 1.2 Context

### 1.2.1 Emerging Markets

The term "Emerging Market", accredited to Antoine van Agtmael when working for the International Financial Corporation (Authers, 2006), has generally been taken to be a descriptor of a nation in the process of rapid growth and industrialisation (FTSE Group, 2009). The FTSE group classified nations as tabulated below (FTSE Group, 2009).

*Table 1: Country Classification* (FTSE Group, 2009)

| Developed | Emerging | Frontier |
|---|---|---|
| Australia | *Advanced Emerging* | Bahrain |
| Austria | Brazil | Bangladesh |
| Belgium | Hungary | Botswana |
| Canada | Mexico | Bulgaria |
| Denmark | Poland | Côte d'Ivoire |
| Finland | South Africa | Croatia |
| France | Taiwan | Cyprus |
| Germany | | Estonia |
| Greece | *Secondary Emerging* | Jordan |
| Hong Kong | Argentina | Kenya |
| Ireland | Chile | Lithuania |
| Israel | China | Macedonia |
| Italy | Colombia | Malta |
| Japan | Czech Republic | Mauritius |
| Luxembourg | Egypt | Nigeria |
| Netherlands | India | Oman |
| New Zealand | Indonesia | Qatar |
| Norway | Malaysia | Romania |
| Portugal | Morocco | Serbia |
| Singapore | Pakistan | Slovakia |
| South Korea | Peru | Slovenia |
| Spain | Philippines | Sri Lanka |
| Sweden | Russia | Tunisia |
| Switzerland | Thailand | Vietnam |
| UK | Turkey | |
| USA | | |

The diversity within the nations categorised as Emerging Markets is profound. This can be seen using comparative national metrics such as population, gross domestic product, per capita income, geographic size, natural resource endowment and locality (World Economic Forum, 2010). Further, matters of "national competitiveness" vary greatly. Here, in some cases, emerging nations are leaders. For example, South Africa is rated number one in the world for "Strength of auditing and reporting standards" and "Regulation of securities exchanges" (World Economic Forum, 2010).

South Africa has experienced dramatic political adjustments in the last decades as well as discord between government and business (Klein & Wöcke, 2009) with a striking flight of human and financial capital recorded (Mohamed & Finnoff, 2005). Some Emerging Markets have enjoyed medium term stability and greater unity of purpose between firms and the state (Klein & Wöcke, 2009). For example, Companhia Vale do Rio Doce or "Vale" of Brazil.

### 1.2.2 Emerging Market Multinational Enterprises

*"GE has tremendous respect for traditional rivals like Siemens, Philips, and Rolls-Royce. But it knows how to compete with them; they will never destroy GE. By introducing products that create a new price-performance paradigm, however, the emerging giants very well could."* (Immelt, Govindarajan, & Trimble, 2009, P:59)

As seen in the fear of Jeffrey Immelt, head of one of the world's most powerful businesses, the number and prominence of Emerging Market Multinational Enterprises (EMNEs) has grown dramatically in recent years, and not only within the Emerging Markets themselves. Immelt goes on to say that "Success in developing countries is a prerequisite for continued vitality in developed ones" (Immelt *et al.*, 2009, P:58).

In 2005, only 34 of the Fortune Global 500 companies were from Emerging Markets. By 2009, this number had risen to 73 (Fortune, 2009). The headquarter locations of the 2009 Fortune Global 500 firms are shown on the map below (Fortune, 2009).

*Figure 1: Fortune Global 500 Headquarter Locations, 2009* (Fortune, 2009)



As can be seen, despite the recent rise of EMNEs, the vast majority of firms have remained concentrated in the "broad triad" of markets. That is Europe, North America and Asia Pacific (Rugman, 2008). Further, none is in Africa.

One method more established MNEs have used to retain their position at the top is the acquisition of other MNEs to obtain desirable assets, such as market share or technology as in the case of GE before Immelt's tenure (Immelt *et al.*, 2009). As such, the growth of EMNEs may be cut short before they can expand to the size required to belong in the Global 500. For example: Barclays' acquisition of ABSA in South Africa.

Alternatively, as the significance of cross-border trade grows, that is as they internationalise, EMNEs may relocate to industrialised countries. For example: Anglo American moving from South Africa to Britain, now 336 in the Global 500; or, Mittal

moving from India to the Netherlands, now 28 in the Global 500 (Fortune, 2009). It may be argued that relocation is a strategic necessity in order to allow greater access to capital and other resources; as typified by SAB relocating to London "seeking access to capital markets better endowed than those at home" (Hoover's, 2010). This relocation limits the rise of MNEs as distinctly *Emerging Market* firms.

In (2003a), UNCTAD proposed that there is "a developing market for international headquarters". That is, countries, or cities, compete to attract MNEs and extract rents from headquarters located within their borders.

However, some firms may retain indigenous headquarters, grow very large and continue to manage global operations from outside "the triad" (Rugman, 2008), despite the supposed disadvantages of their location. These EMNEs are often supported by the host state and are natural resource specialists, in possible homage to Lenin's "commanding heights" philosophy. For example: Petronas of Malaysia, 80 in the Global 500; or, PDVSA of Venezuela, 27 in the Global 500 (Fortune, 2009).

### 1.2.3 South African Multinational Enterprises

The rise of South African MNEs has been noteworthy. In 1994, no South African firm was among the 50 largest Transnational Corporations from developing economies, ranked by foreign assets (UNCTAD, 1996). In 1997, there were three, and in 2001, there were five (UNCTAD, 1999; UNCTAD, 2003b).

Varying origin country factors give Emerging Market firms varying advantages when competing globally. For example, Vale from Brazil has grown to be amongst the world's largest mining companies, with multiple operations around the world, partly based upon market dominance of natural resources in its home country.

However, further to differences flowing from country level variation, global Emerging Market firms have competed with different firm level advantages. Klein and Wöcke (2009) showed that while Asian MNEs have built on low cost labour to achieve export-orientated success, some South African firms have succeeded by driving international expansion through the deployment of expertise. For example: MTN's expansion in telecommunications across the developed world.

Although Emerging Markets are not homogeneous, they share some location disadvantages such as weak institutional environments, property rights regimes, legal systems, amongst others (Guillén & García-Canal, 2009).

The differences between EMNEs themselves are notable: origins, industries, competitive advantages, markets and internationalisation paths vary widely (Ramamurti, 2009). Further, the "new" MNEs have developed firm specific abilities to compensate for these location disadvantages (Guillén & García-Canal, 2009).

In the time of globalisation, it remains a possibility that firms may relocate their headquarters to secure the location advantages of developed nations. All firms whose origin is disadvantageous, such as those from Emerging Markets, will be motivated to move, although to varying degrees. As such, South African MNEs will also be motivated to relocate their headquarters to locations more advantageous.

## 1.3 Research Problem

The relocation and acquisition of EMNEs has reduced their visibility as Emerging Market firms on such measures as the Fortune Global 500. Further, there are strategic implications to this path selection. Apart from reviewing the literature and the conditions given as predictors of path selection, this research achieved the following:

- Developed a model describing three internationalisation paths of EMNEs – that is, relocation, acquisition or remaining independent in the country of origin

- Considered national location advantages for MNE headquarters and the impact of an Emerging Market origin

- Proposed variables as predictors of the choice of EMNE headquarters to relocate or remain in the country of origin

- Noted patterns in South African MNE headquarters location choices

- Statistically verified the strength of each predictor on the known headquarter location choices of South African MNEs

- Considered implications for further research and business practice


The research did not separately consider the case of headquarter functions being unbundled and relocated, such as Nokia's 2004 decision to relocate its corporate finance activities to New York. Rather, it was assumed that the management centre of the organisation is concentric with the place of primary stock exchange listing.

## 1.4 Research Motivation

EMNEs "have become key actors in foreign direct investment and cross-border acquisitions" (Guillén & García-Canal, 2009, P:24) but "There is as yet no scheme or taxonomy for describing the strategy of 'infant MNEs' as they embark on internationalisation. This case falls between the cracks" (Ramamurti, 2009, P:27).

Birkinshaw *et al.* (2006) reviewed the location dynamics of corporate headquarters yet did not consider the relative advantages of Emerging and Developed Markets. Nor is it clear under what conditions EMNEs either relocate and become indistinguishable from other MNEs or remain indigenous and become "National Champions". An understanding of these predictors would aid the choices of EMNEs, potential suitors and policy makers alike, as well as helping to understand the circumstances under which the capital generated by MNEs leaves a country through relocation or acquisition.

Research has focused on the location choice of MNEs in aggregate and has related this to individual factors. Here, taxation is a popular choice of factor (Barrios, Huizinga, Laeven, & Nicodème, 2008; M. Desai & Hines, 2002; Devereux & Maffini, 2006; Voget, 2008). Current research does not consider the combination of factors that motivate specifically Emerging Market firms in their headquarter location choice (Bel & Fageda, 2008; Birkinshaw, Braunerhjelm, Holm, & Terjesen, 2006; Braunerhjelm, 2004; Brouwer, Mariotti, & van Ommeren, 2004).

MNEs do not bear the costs of relocation without reason. The fact and scale of the location advantage for headquarters in Developed Markets requires verification, especially given the vigorous and continuing debate surrounding the reasons for EMNE relocation, especially in South Africa (McNulty, 2001; McNulty, 2010).

## 2. Theory and Literature

### 2.1 Emerging Market Multinational Enterprises

"A multinational or transnational enterprise is an enterprise that engages in foreign direct investment (FDI) and owns or, in some way, controls value-added activities in more than one country." (Dunning & Lundan, 2008, P:3).

Scholars attempt to crystallise abstract definitions like this with empirical measures of internationalisation using tools such as UNCTAD's Transnationality Index (UNCTAD, 2009). This index is the arithmetic mean of three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment (UNCTAD, 2009). Throughout this report, Transnationality (TN) is taken to be a numerical measure of foreign business interest, measured by one or all of these ratios.

MNE competitive advantages are based upon either or both of the following (Hymer, 1976); (Ramamurti, 2009; Zaheer, 1995):

- Firm Specific Advantages. A firm attempting business in another country must overcome disadvantages relative to local firms since operating abroad costs more than at home. Thus, the firm must poses an inherent quality which allows it to prosper abroad. This quality must be in demand and be unique in order to prevent replication.

- Country Specific Advantages. Here, a firm has access to assets in its home country that can used to supply markets abroad. Again, this quality must be in demand and be unique in order to prevent replication.

The rapid expansion of MNEs from Emerging Markets has challenged the existing understanding of the nature of MNEs and their expansion. Guillén & García-Canal (2009, P:23) noted that "The traditional American model of multinational enterprise

(MNE), characterized by foreign direct investment (FDI) aimed at exploiting firm-specific capabilities developed at home and a gradual country-by-country approach of internationalisation, dominated the global economy during much of the post-World War II period."

However, MNEs from Emerging Markets have disrupted and heightened competitive markets, forcing incumbent, largely Western, MNEs to respond with product innovation, consolidation and reconfiguration of value chains (Guillén & García-Canal, 2009; Ramamurti, 2009). Guillén & García-Canal (2009, P:24) concluded that EMNEs "have become key actors in foreign direct investment and cross-border acquisitions" and showed a comparison of traditional and new multinational enterprises, as below.

*Table 2: A Comparison of "New" and "Traditional" MNEs* (Guillén & García-Canal, 2009)

| Dimension | New MNEs | Traditional MNEs |
|---|---|---|
| Speed of internationalisation | Accelerated | Gradual |
| Competitive advantages | Weak: Upgrading of resources required | Strong: Required resources available in-house |
| Political capabilities | Strong: Firms used to unstable political environments | Weak: Firms used to stable political environments |
| Expansion path | Dual path: Simultaneous entry into developed and developing countries | Simple path: From less to more distant countries |
| Default entry modes | External growth: Alliances and acquisitions | Internal growth: Wholly owned subsidiaries |
| Organisational adaptability | High, because of their meagre international presence | Low, because of their ingrained structure and culture |

Thus, as EMNEs' competitive advantages are "weak" and they need to upgrade their resources, EMNEs are motivated to acquire some of the same firm and country specific capabilities held by their more traditional competitors. If these advantages are concentrated in geographic areas and are freely available to all firms in that area, the firm will be motivated to relocate to the region rich in these assets.

## 2.2 Motivations for Foreign Direct Investment

Dunning and Lundan (2008) described four general motivations for the foreign investment of MNEs. These are: natural resource seeking, market seeking, efficiency seeking or strategic asset seeking.

Natural resource seekers look for resources abundant to a region (Dunning & Lundan, 2008). These resources may be physical such as mineral deposits and are typically location bound. Alternatively, these may be human resources abundant to that location, such as inexpensive labour or skills – technical, managerial or marketing. Thus, EMNE relocation to developed countries may be motivated by the need to acquire skilled human resources, for example: in management or marketing.

Market seekers invest "to supply goods or services to markets in these or adjacent countries. In most cases, part or all of these markets have been serviced previously by exports from the investing country" (Dunning & Lundan, 2008, P:69). These firms may be following the relocation of production of suppliers or customers; may need local adaption of their products; may be taking advantage of reduced transportation costs; or may be following a defensive or aggressive competitive strategy. These investments are heavily related to incentivisation by host governments (Dunning & Lundan, 2008). Thus, EMNE relocation to developed countries may be motivated by the need to market more intensively to customers in those countries.

Efficiency seekers "rationalise the structure of existing resource-based or market-seeking investments" and aim to benefit from "economies of scale and scope and of risk diversification" (Dunning & Lundan, 2008, P:72). Further, efficiency seekers are generally more mature MNEs (Dunning & Lundan, 2008) and optimise using what Adam Smith may have called the "division of labour". Thus, EMNE relocation to developed countries may be motivated by the need to rationalise previous investments

in those countries, or to allocate corporate, rather than business unit level, activity to a more suitable location.

Strategic asset seekers invest in line with a long term strategy, typically to secure long-term competitiveness. These investments seek to augment previous commitments and existing asset bases, or to exclude ownership advantages to other firms. These investments may not be strictly "profitable" in the sense required in the other investment motives described above (Dunning & Lundan, 2008). Thus, EMNE relocation to developed countries may be motivated by the belief that that region will be increasingly significant in the future.

Dunning & Lundan (2008) identify three "other" investment types:

- Escape Investment seeks to avoid disadvantageous conditions in the home country. These conditions may be heavy taxation, a lack of economic dynamism or the unacceptability of the business type in question. Thus, EMNE relocation to developed countries may be motivated by the desire to disengage from disadvantageous conditions in the home country.

- Support Investment seeks to augment the capabilities or activities of the firm. Thus, EMNE relocation to developed countries may be motivated by the need to substantiate previous investment.

- Passive Investment is akin to portfolio investing. Here, a minority stake may be purchased in an existing firm or asset and the emphasis is not necessarily on the management of the investee. This form of investment does not add to the understanding of EMNE relocation.

## 2.3 The Eclectic Paradigm of Production

Dunning (1988) offered a general explanation of MNE activity, accommodating the above motivations. When MNEs expand abroad, the Eclectic, or "OLI", paradigm has argued that "the extent, geography and industrial composition of foreign production undertaken by MNEs is determined by the interaction of three sets of interdependent variables" (Dunning, 2000). The three motivation variables for internationalisation according to Dunning (1988) are:

- "O" - Ownership Advantages. That is, monopolised abilities or assets that can be inexpensively transported within the firm. For example: brand, intellectual property or technology.

- "L" - Location Advantages. That is, beneficial qualities inherent to a given location and available to all firms at that location. These can be economic, political or social. For example: good infrastructure, beneficial government polices or natural resources. Thus, EMNEs may relocate headquarters to Developed Markets to take advantage of the conditions specific to that setting.

- "I" - Internalisation Advantages (IA). That is, the advantages of having transactions within the firm, rather than using market mechanisms to market, or produce, abroad. For example: buying a coal reserve and building a coal mine rather than buying coal on the open market. Thus, EMNEs may relocate headquarters to Developed Markets to internalise transactions that were previously secured through the market.

MNE headquarter locations are geographically concentrated, as discussed in Chapter One and described by Rugman (2008). However, production is more dispersed (Deschryvere, 2009). Dunning (1998) showed that as intangible assets become

increasingly mobile, spatial clusters offer benefits whenever distance-related transactions and coordination costs are high. For example, the Square Mile of the City of London illustrates that the close proximity of distance related activities minimises transaction costs. Dunning (1998: P57) goes on to say that "the locational configuration of a firm's activities may itself be an O-specific advantage, as well as affect the modality by which it augments, or exploits, its existing O advantages."

Following, the location of incumbent firms will herald the close proximity of emerging firms; late movers will locate where infrastructure and support networks have already been established. Thus, the agglomeration legacy will, generally, be maintained.

## 2.4 Origination Theory of Emerging Market Multinational Enterprises

Concerning the origination and originality of EMNEs, three themes of theory have emerged, although these have not been shown to determine the route of international expansion. The "Born Global" model holds that EMNEs may be multinational from their start, given the advances of globalisation (Knight & Cavusgil, 2004). Some scholars have presented evidence that EMNEs present a new phenomenon and require new theory (Guillén & García-Canal, 2009; Mathews, 2002). However, the "Maturity Model" or "Evolutionary Model" has held that EMNEs do not require new theory to explain their emergence (Li, 2007).

## 2.5 Contextual Factors

Ramamurti (2009) noted the following contextual factors as predictors of the EMNE internationalisation paths he described.

Figure 2: EMNE Internationalisation Context (Ramamurti, 2009)



**Home-country context (CSAs)**
• Natural resource endowment
• Human capital
    \* Technical
    \* Managerial
    \* Entrepreneurial
    \* Social networks, incl diaspora
• Market size and growth
• Per-capita income
• Wage levels

**Industry context**
• Level of technology: low, medium, or high
• Industry/product life cycle stage: emerging or mature
• Extent of global product, process standardization

**International competitive advantages**

**Internationalization paths**
• Natural-resource vertical integrator
• Local optimizer
• Low-cost partner
• Global consolidator
• Global first-mover

**Firm context (FSAs)**
• Optimizing products and process for emerging markets
• Operational excellence, project execution, late-mover advantages, and 'capex' + 'opex' advantages
• Privileged access to resources
• Adversity advantage
• Traditional intangibles

**International macro context**
• Domestic and international policies
• Technological change, especially computing and communications

Ramamurti (2009, P:19) suggested that EMNEs in mid-technology industries may occupy a "strategic sweet spot" since "mid-technology industries that are neither so simple that any Emerging Market firm could master them nor so sophisticated that Western MNEs have a clear technological edge in them". Examples of mid-technology industries would be cement, steel, aluminium, auto parts, personal computers, and beverages. Ramamurti explained further that "Many (though not all) of these industries use globally standardised products and processes, which makes it easier for EMNEs to expand internationally."

As seen above, the industry context influences the EMNE's internationalisation choice. That is, an EMNE may decide to relocate based on such elements as industry level of technology, industry life cycle, the extent of global product and process

standardisation, human capital requirements and capital demand. Especially in mature industries, these factors are roughly captured by the industry type in question, for example: petrochemicals.

## 2.6 Implications of Internationalisation: Location and Ownership

Following origination, Ramamurti (2009, P:8) proposed that "the importance of home-country CSAs may decline as an MNE evolves, regardless of nationality". That is, as an MNE progresses from "Infant", to "Adolescent", to "Mature", the consequence of home-country CSAs wanes. As such, the country of origin may have obsolescing relevance to the EMNE in terms of, for example: value chain elements; supply of senior management; capital supply; or relative revenue.

Thus, the maturing global MNE will choose to relocate its head office to a developed country in order to take advantage of economies of agglomeration such as access to physical and human capital (Dunning, 1998) as well as due to increasing accountability to international stakeholders (Birkinshaw *et al.*, 2006), while the customer facing business unit remains in country.

In contrast to this, it can be seen that some EMNEs do not choose to relocate their head office, as per the Petronas and PDVSA examples noted previously. The relevance of origin for these firms may still decline as foreign markets grow in significance. However, it will have a higher "minimum level" than the firm that relocates.

In the figure below, the obsolescing relationship of the MNE to its country of origin is shown in red, with the firm that relocates having a faster rate of "irrelevancy" than the firm that does not. Three internationalisation paths are shown in blue: relocate, remain or be acquired. The relocating firm is shown to have a faster rate of internationalisation than the firm that does not but this is yet to be shown.

*Figure 3: Possible Internationalisation Paths (Author)*
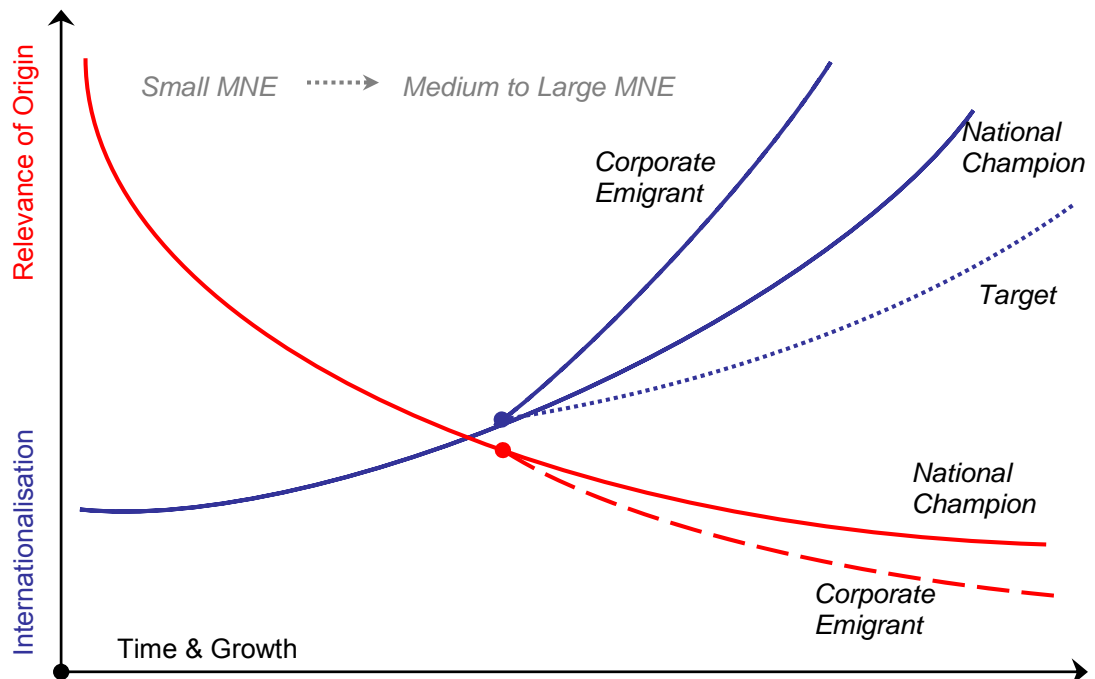


The "Corporate Emigrant" is conceptualised as the firm that relocates its headquarters to obtain location specific advantages for that office while customer facing business unit headquarters may remain in place. The "National Champion" is seen as the firm that does not relocate and bears the costs, and benefits, of this decision. The "Target" is acquired by another MNE, which results in an effective transfer of headquarter functions. A further variation would be the foreign "Outside-In" firm. This firm locates its headquarters and operations separately – managing from "outside", with operations "in" country.

The home country may remain relevant if, for example, the EMNE's industry type is based on natural resource extraction, and the EMNE has privileged access to reserves in its origin country.

## 2.7 Antecedents of EMNE Internationalisation Path Selection

### 2.7.1 Introduction to Headquarter Location Strategy

Considering recent advances in communication and service technologies, location research until the 1990's was based on the presupposition that management and production functions were co-located (Deschryvere, 2009). As such, no distinction was made between headquarter and production relocations.

Desai (2009) visualised the corporate headquarters as a collection of thee divisible functions: Financial, Legal and Managerial. Here, the processes and products are distinct to that of individual business units and production centres. Each of these functions has distinct motivations for its location choice, as illustrated below.

*Figure 4: Reconceptualising the Corporate Home (Desai, 2009)*
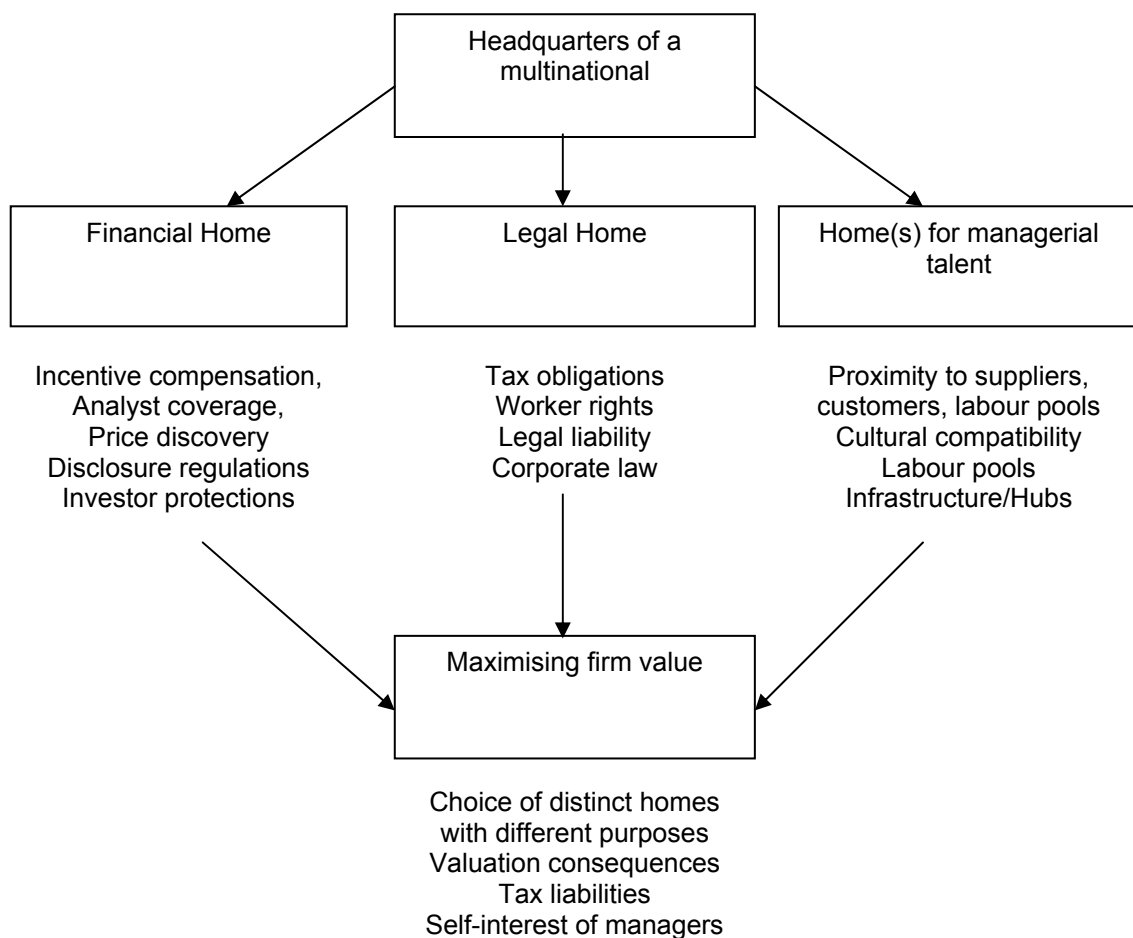
Desai went on to argue that due to reductions in communication and travel costs "Firms are redefining their homes by unbundling their headquarters functions and reallocating them opportunistically across nations. …and, consequently, the idea of firms as national actors rooted in their home countries is rapidly becoming outdated" (M. A. Desai, 2009: P409).

Thus, given the role and needs of each of the three homes, different drivers for competitiveness push and pull for headquarter relocation. Similarly, there are constraints that resist the drive to relocation. Known predictors of MNE behaviour, as described in the literature, are discussed and categorised below. In addition, the likely implications for firms from Emerging Markets are highlighted.

It may be argued that is beneficial for a firm to be located in close proximity to important customers. However, Birkinshaw *et al.* (2006) showed that while this is true for business unit headquarters, this is not true for corporate headquarters as it is typically the business unit, not the headquarters, which interacts with customers.

### 2.7.2 Drivers: Resource and Efficiency Seeking

Given that the most basic input and product of the headquarter office is information; the optimisation of information transfer is the most basic requirement for competitiveness. Researching European and American headquarter relocations respectively, Bel and Fageda (2008) as well as Strauss-Kahn and Vives (2009) agreed that transport infrastructure and the costs of tacit information exchanges were important for the location of the headquarters of large companies.

Headquarters also move in order to optimise value chain elements. That is, the value chain specific to the corporate headquarters: business services. Ono (2003) demonstrated the link between location and the inexpensive procurement of services

such as advertising, accounting, and legal services. In the United States, Pennings and Sleuwaegen (2000), Davis and Henderson (2008), as well as Strauss-Kahn and Vives (2009), found that headquarters location decisions are largely driven by the presence of large and varied local supply of business services rather than by the presence of a large number of headquarters.

The obvious point is that communication and transport connectedness as well as the presence of a large and varied supply of business services is not geographically universal. To remain competitive, the MNE must move to the location that offers the best advantages for both connectedness and value chain optimisation. Following, the greater the relative disadvantage, the greater the motivation to relocate. Since part of the definition of an Emerging Market is a weakness in this support environment (FTSE Group, 2009), EMNEs would generally be more motivated to relocate abroad than firms from the developed world.

If Emerging Markets have a smaller pool of the skilled labour required for MNE corporate management, an impetus exists for EMNEs to relocate to the developed world in order to more easily procure this resource.

### 2.7.3 Drivers: Product and Capital Market Seeking

In Europe, Mucchielli and Saucier (1997) concluded that a response to new products is a cause of headquarter relocation. Many studies have shown that proximity to customers and the size of the product market in a host country are significant predictors of location choice (Birkinshaw *et al.*, 2006; Head & Mayer, 2004; Pennings & Sleuwaegen, 2000; Strauss-Kahn & Vives, 2009). Birkinshaw *et al.* (2006: P682) states that "it is now accepted that proximity to specialised labour, complementary suppliers and customers, and access to knowledge spillovers are all important benefits to the

firm" and finds that this remains true for business unit headquarter location but not for corporate headquarter location.

Apart from proximity benefits, there may be an added marketing benefit. That is, the customers' perceived location quality of the company in a particular industry: the country-of-origin effect. For example: the Swiss watch. As Emerging Markets mature, they must overcome any negative perceptions of their country of origin. For example: Toyota's struggle in the 1960's to establish the creditability of Japan as a centre of automobile production, paralleled by a similar difficulty felt by Korean automobile manufacturers in the contemporary period. MNEs based in the developed economies would not feel this motivation as strongly.

A similar "legitimacy effect" is noted by Birkinshaw *et al.* (2006) and Desai (2009), but this time in the case of investors. Following Birkinshaw *et al.* (2006), MNEs improve their visibility and relationships with shareholders and financial institutions in a progressive pattern. This may start with depositary receipts; continue through to overseas listing, and finally end in a relocation of the corporate office to a global financial centre. This progression can be promoted as a demonstration of commitment to the capital market. The reward may be in terms of borrowing costs, stock liquidity and the value of corporate governance (Birkinshaw *et al.,* 2006). Desai (2009) notes other important factors to be analyst coverage, price discovery, disclosure regulations and investor protections. Birkinshaw *et al.* (2006) also suggests that the act of moving, as a signal to markets, may be more important that benefits of relocation itself.

It has been shown that MNEs list in the developed world to access investor capital Birkinshaw *et al.* (2006). For EMNEs, generally from less well-endowed capital markets, this offers an even more powerful draw. For example, Desai (2009: P1276) noted that News Corporation relocated from Australia to the United States in 2004 "to

access more readily American investors that might better appreciate media companies". Birkinshaw *et al.* (2006, P:698) finally concluded: "corporate HQs move to get closer to important external influencers, primarily shareholders and financial markets".

In this case, where a merger or acquisition is seen as a radical change of shareholding, relocation is necessary to regain proximity to influencers. Supporting this, It has been shown that headquarters more often relocate following an increase of overseas share ownership (Birkinshaw *et al.*, 2006) or following a merger or takeover (Brouwer *et al.*, 2004; Strauss-Kahn & Vives, 2009). Baaij, Van Den Bosch and Volberda (2004) found that in most incidents, the location of the acquirer was chosen as the location for the united firm.

Further, financial markets with a better reputation and a reduced risk perception, can demand a greater premium for their shares. Thus, the relocation of primary listing to a capital market in a lower risk country will increase the perceived value of the company (Mohamed & Finnoff, 2005).

### 2.7.4 Drivers: Institutional Resource Seeking

Brouwer and Mariotti (2004), Birkinshaw *et al.* (2006) as well as Strauss-Kahn and Vives (2009) found that the institutional drivers of location are tax incentives and labour institutions. Mooij and Ederveen (2001) found that a 1% increase in host-country tax rate decreases FDI in that country by 3.3%. Further, firm taxation has a marked impact on the choice of corporate location, in terms of both "push" and "pull" (Devereux & Maffini, 2006; Egger, 2009; Voget, 2008). In addition, the taxation of individual employees influences location choice, and increasingly so as a firm internationalises (Braunerhjelm, 2004).

Separate to the attraction of corporate legal homes, Desai and Hines (2002) found that firms relocated their nominal legal location away from the United States to escape taxation. Barrios, Huizinga, Laeven and Nicodème (2008) found further that parent-country taxation is a predictor of the *pattern* of MNE expansion.

It is accepted that the strength, and rigidity, of the available labour pool is an important location factor (Birkinshaw *et al.*, 2006). Delbecque, Mejean and Patureau (2008) found that in firms' foreign expansion strategies, labour market rigidity puts "a brake" on the host country's attractiveness. Interestingly, this sensitivity increases within OECD countries.

A less frequently discussed location factor is the lobbying and institutional power of the host government in the international arena. Ramamurti proposed in 2001: "Tier-I bargaining between the governments of host and home countries occurs bilaterally or through multilateral institutions" (Ramamurti, 2001: P23). Thus, governments negotiate advantageous terms for their indigenous firms and these become CSAs. Multilateral institutions may include such bodies as the World Bank, the IMF and the WTO. This produces the macro rules on FDI that frame micro negotiations between the MNE and potential subsidiary host countries. Given that Emerging Market countries are seen to have less "voice" in such institutions (U.S. Department of State, 2009), there exists a driver to secure this location advantage through relocation.

MNEs may also be motivated to relocate based on greater protection under law, including for intellectual property, which may be offered by the host country (M. A. Desai, 2009). Emerging Markets have a mixed record in legal enforcement and transparency (Transparency International, 2009).

## 2.7.5 Constraints: Agency Effects

Agency concerns regarding the actions of corporate managers are widely discussed, for example King III (Institute of Directors in Southern Africa, 2009). This is no less relevant with the decision to relocate the headquarters of a MNE. Here, the effects of personal, rather than corporate, taxes may determine the choice (Braunerhjelm, 2004).

In addition to the agency effects of management, dominant shareholders may effect the decision making process to parochial ends. Birkinshaw *et al.* (2006, P:689) found significant evidence to support their hypothesis that "the more concentrated the ownership of the MNE (in terms of the percent shareholding of the largest shareholder), the lower the likelihood of corporate headquarters or business unit headquarters moving overseas". However, their sample was based in a Developed Market.

In many of the examples noted previously, the rising EMNE has a large percentage of state ownership. Here, the government of the day may be motivated to preserve "local jobs" and resist relocation. It follows that the higher a firm's state ownership, where the state is an "important external influencer", the lower the likelihood of relocation of the headquarters abroad.

Alternatively, a dominant private shareholder may push for relocation to a nation seen to be more desirable. Here, accusations of "capital flight" or Dunning's "escape investment" may suit (Dunning & Lundan, 2008). In the case of a merger or acquisition, with a dramatic altering of shareholding, relocation may result because of either the removal or the introduction of shareholder interests.

Where managers seek personal relocation to a country with a higher quality of life, a concentration in private shareholding may motivate relocation from Emerging Markets.

### 2.7.6 Constraints: Firm Characteristics

Industries take numerous forms. These vary in such ways as the level of technology, the stage in the industry life cycle, the extent of global product and process standardisation, human capital requirements and capital demand. As such, some appear better suited to Emerging Market production (Ramamurti, 2009). However, it does not follow that some companies are better suited to having their *headquarters* located in Emerging Markets by virtue of their industry.

However, a firm's revenue, assets or employment may be concentrated geographically, even if these reach a global scale. Rugman (2008) used this as a criticism of, so-called, Emerging Market MNEs were not truly transnational. In this case, it will make little sense to relocate the headquarters outside of that region. This would be partly due to an increase in distance related transaction costs. That is, if production or sales are predominantly in one area, that may be the best place to be settled.

For example, the Tata group's corporate headquarters remains in Mumbai for the foreseeable future. This may be due to the mature industries which still dominant the production of the diverse group: steel and automobiles. Alternatively, this may be because of the dominance of the Indian market, or both reasons together (Tata Group, 2010).

Thus, Transnationality would be associated with relocation. Either as a predictor, or as a motivation, for relocation.

**2.7.7 Summary of Headquarter Location Conditions for EMNEs**

Driving factors for corporate headquarter location selection are tabled below. In addition, the perceived generalised strength of each factor in Emerging and Developed Markets is shown.

*Table 3: Strength of Location Factors for Corporate Headquarters*

| Discussed Location Factor | Generalised Strength of Location Factor in: | |
| --- | --- | --- |
| | Emerging Markets | Developed Markets |
| Supply factors | | |
| • Support infrastructure | Low | High |
| • Headquarter service providers | Low | High |
| • Headquarter labour | Low | High |
| | | |
| Capital market factors | | |
| • Equity market endowment | Low | High |
| • Country risk perception | Low | High |
| • Cost of capital | Low | High |
| | | |
| Institutional factors | | |
| • Incentives and taxation | Mixed | Mixed |
| • Educational Institutions | Low | High |
| • Law and IP protection | Low | High |
| • "Two Tier" bargaining power | Low | High |
| | | |
| Agency factors | | |
| • Quality of life for management | Low | High |
| • Personal taxation for management | Mixed | Mixed |
| | | |
| **Nett Result** | **Low** | **High** |

Following the factors tabulated, Emerging Markets are less advantageous locations for corporate headquarters. Thus, there is a motivation for EMNEs to relocate to Developed Markets, in order to seek out location advantages in their country of residence. Further, following Birkinshaw *et al.* (2006), location choice will be driven particularly by financial market considerations. That is, to the countries housing financial markets with the greatest endowment and best reputation.

Strauss-Kahn and Vives (2009) found that firm relocation within the United Sates was close to 5% a year between 1996 and 2001. Voget (2008) found that 6% of all sampled

MNEs relocated across national boundaries between 1997 and 2007. Those few MNEs from Emerging Markets captured in Voget's sample had a relocation rate of 50% in the same period. This lends some creditability to the expectation that EMNEs have more motivation to relocate and have a higher rate of movement.

Regarding mergers and acquisitions, if the drivers are correct, the chosen headquarters of a merged firm will likely be where the drivers are strongest.

If firms do not relocate, their decision will constrained by those factors discussed above. That is, by the agency effects of concentrated or state shareholding (Birkinshaw *et al.,* 2006) or by a lack of relevance of international operations Rugman (2008). Other agency problems, centred around management's desire for quality of life and low personal taxation, are national factors that may also drive headquarter location choice (Desai, 2009).

As discussed above, the effect of corporate taxation on firm location is already widely researched (Barrios *et al.*, 2008; M. Desai & Hines, 2002; Devereux & Maffini, 2006; Voget, 2008).

## 2.8 Conclusion

Following the summary of internationalisation conditions, it was clear that the following conclusions require empirical verification:

- Emerging Markets have offered less location advantage than Developed Markets to multinational enterprise corporate headquarters.

- Emerging Market multinational enterprises have relocated headquarters to Developed Markets, not to other Emerging Markets.

- Emerging Market multinational enterprises' headquarter location choice has been predicted by concentration of private shareholding, levels of state ownership and levels of foreign business interest

As an Emerging Market, the same conclusions require verification for South Africa and firms of South African origin.

# 3. Research Hypotheses

Following the points that require empirical verification, the research objectives and hypotheses were as follows.

H1.     Emerging Markets offer less location advantage than Developed Markets to multinational enterprise corporate headquarters.

H2.     South African multinational enterprises have relocated headquarters to Developed Markets, not to another Emerging Market.

H3.     South African multinational enterprises' headquarter location choice has been predicted by concentration of private shareholding, levels of state ownership and levels of foreign business interest.

# 4. Methodology

## 4.1 Choice of Methodology

Previous research has established the factors that determine headquarter location choice. This study was an application of those factors with a view to understanding the particular impact on firms from Emerging Markets. As such, a quantitative and descriptive methodology was chosen. The hypotheses required the inferential analysis of statistical data to find relationships in the patterns of national and firm characteristics alongside company behaviour.

South Africa was chosen as the corporate behaviour sampling country for this research for the following reasons:

- South Africa is an Emerging Market (FTSE Group, 2009) allowing some representation of other Emerging Markets.
- South Africa has attracted notable internal debate over the motivations of corporate relocation (McNulty, 2001; McNulty, 2010).
- Reporting standards in South Africa are high, even against global standards, allowing for transparency of shareholding (World Economic Forum, 2010).

It could be argued that South Africa is not a good sampling country given the dramatic political adjustments of the last two decades and the documented flight of human and financial capital (Mohamed & Finnoff, 2005). However, these reasons may change the pace, not necessarily the direction of relocation.

## 4.2 Methodology for Hypothesis One – National Factors

### 4.2.1 Population and Sampling

Following Zikmund (2003, p. 372), the population was defined and the sample selected in the process described below.

1. *Define target population.* The population was nations categorised into two populations, emerging and developed.

2. *Select sampling frame.* The sampling frame was nations whose national characteristics are available along the factors listed.

3. *Determine probability or non-probability.* All nations in the sampling frame were analysed. As such, there was no sampling.

4. *Plan procedure for sampling units.* The sampling unit was each individual country. The raw data source for country specific data was the IMD World Competitiveness Yearbook database (World Competitiveness Center, 2009).

### 4.2.2 Data Gathering Process

As described above, the sample was taken from the latest available data in the IMD database. All available scores were selected between 2000 and 2010 and the aggregate was used for analysis. The variables used as proxies for the concepts to be investigated, as well as the data sources, are tabulated below.

Ramamurti (2001) describes state bargaining power on behalf of national business, so-called two-tier bargaining, as being manifest in such multilateral organisations as the International Finance Corporation (IFC), International Monetary Fund (IMF) and the Wold Trade Organisation (WTO). State power in the IFC and IMF is exercised through

voting power and enshrined in governing documents. State power in the WTO is less visible but is directly related to trade market size. For this research, power in the WTO was related to total value of exported and imported merchandise.

Other concepts, variables and data sources are tabulated below following the structure developed in Section 2.7.7.

*Table 4: Concepts, Variables and Data Sources for Hypothesis One*

| Concept | Variable and Definition | Data Source |
| --- | --- | --- |
| Emerging and developed markets | Published list of categorisations | FTSE Group |
| Support infrastructure | "Connectivity" | IMD World Competitiveness Yearbook |
| Supplier availability | "Banking and financial services" | IMD World Competitiveness Yearbook |
| Labour pool quality | "Competent senior managers" | IMD World Competitiveness Yearbook |
| Equity market endowment | "Stock market capitalisation" | IMD World Competitiveness Yearbook |
| Country risk reputation | "Investment risk" | IMD World Competitiveness Yearbook |
| Cost of capital | "Cost of capital" | IMD World Competitiveness Yearbook |
| Educational Institutions | "Management Education" | IMD World Competitiveness Yearbook |
| Protection under law | "Legal and regulatory framework" "Intellectual property rights" | IMD World Competitiveness Yearbook |
| "Two Tier Bargaining" State power | Average of (a) voting power within the IFC (b) voting power within the IMF and (c) Total national trade | IFC (2010) IMF (2009) CIA World Fact Book (2009) |
| Quality of life | "Quality of life" | IMD World Competitiveness Yearbook |
| Personal taxation | "Real personal taxes" | IMD World Competitiveness Yearbook |

## 4.2.3 Method of Analysis

The hypothesis called for the comparisons of two population groups, emerging and Developed Markets, across various criteria. Across each criterion, the difference between mean values was compared using Analysis of Variance (ANOVA). Further, exploratory Regression Tree and correlation analyses were carried.

### 4.2.4 Research Limitations

The limitations of the proposed research, following the intended scope and design, were recognised as the following:

- The factors were represented by proxies, introducing representation errors

- The variables note national, not regional, characteristics

- There was not enough data for modelling. Only exploratory analysis was possible.

- Regarding "Two Tier Bargaining" State Power within in the WTO, it could be argued that the influence of each European country would be underrepresented, as, in terms of trade, the European Union is a single large block.

## 4.3 Methodology for Hypothesis Two – Location Choices

### 4.3.1 Population and Sampling

Following Zikmund (2003, p. 372), the population was defined and the sample selected in the process described below. In an attempt to overcome method limitations, two methods were used, as tabulated below.

*Table 5: Sampling Procedure for Hypothesis Two: Method I and II*

| Method I | Method II |
|---|---|
| *1. Define target population.* The population was MNEs originating from Emerging Markets that have relocated their corporate headquarters. | |
| *2. Select sampling frame.* The working population was dual listed firms on the Johannesburg Stock Exchange (JSE). | *2. Select sampling frame.* The working population was firms that had relocated corporate headquarters as recorded through merger or acquisition transactions. |
| *3. Determine probability or non-probability.* All firms in the sampling frame were analysed. As such, there was no sampling. | |
| *4. Plan procedure for sampling units.* The sampling unit was each individual MNE. The raw data source for firm specific data was the McGregor database (McGregor BFA, 2010). Firms were categorised as Corporate Emigrants if they relocated their primary listing away from the JSE Firms were categorised as Outside-In firms if they had no productive operations in the country of primary listing. Firms were categorised as National Champions if they had their primary listing on the JSE and their major productive operations in South Africa. | *4. Plan procedure for sampling units.* The sampling unit was each individual MNE. The raw data source for firm specific data was the Zephyr database (Bureau van Dijk, 2010). Relocations were selected in the 2000 to 2010 period where the deal resulted in exiting shareholders and payment was in shares of the acquirer. |

### 4.3.2 Data Gathering Process

As described above, the sample was taken from the latest available data in the McGregor and Zephyr databases. The variables used as proxies for the concepts to be investigated, as well as the data sources are tabulated below.

*Table 6: Concepts, Variables and Data Sources for Hypothesis Two*

| Concept | Variable and Definition | Data Source |
|---|---|---|
| Emerging and developed markets | Published list of categorisations | FTSE Group |
| Method I | | |
| Corporate Emigrant | Company with previous relocation of primary listing away from the JSE, mutually exclusive with other categories | McGregor database |
| Outside-In firm | Company with no productive operations in the country of primary listing, mutually exclusive with other categories | McGregor database |
| National Champion | Company with primary listing on the JSE and major productive operations in South Africa, mutually exclusive with other categories | McGregor database |
| Method II | | |
| Relocation | Cross-border merger or acquisition transaction between 2000 and 2010 where the deal resulted in exiting shareholders and payment was in shares of the acquirer. Final stake between 50 and 100% of the target firm. | Zephyr database |
| Original location | Country of incorporation of Target | Zephyr database |
| New location | Country of incorporation of Acquiring firm | Zephyr database |

## 4.3.3 Method of Analysis

The hypothesis called for the review of a population and the sorting of individual samples using predetermined descriptors described in the internationalisation model developed in the previous section. This is classification.

### 4.3.4 Research Limitations

The limitations of the proposed research, following the intended scope and design, were recognised as the following:

- The analysis assumes that all the firms in the frame are of sufficient size, and have a great enough distinction between corporate and business unit functions, in order to consider relocation.

- The analysis assumes the listed firms are multinational enterprise headquarters

- For method two, movement of corporate ownership was equated with the relocation of corporate headquarters, following Voget (2008). However, developed countries may be more capital rich than emerging ones, giving misleading results when tracking relocation through acquisition.

## 4.4 Methodology for Hypothesis Three – Location Predictors

### 4.4.1 Population and Sampling

Following Zikmund (2003, p. 372), the population was defined and the sample selected in the process described below.

*1. Define target population.* The population was MNEs originating from Emerging Markets, both those that had relocated their corporate headquarters and those who had not.

*2. Select sampling frame.* The working population was dual listed firms on the Johannesburg Stock Exchange in 2010.

*3. Determine probability or non-probability.* All firms in the sampling frame were analysed. As such, there was no sampling.

*4. Plan procedure for sampling units.* The sampling unit was each individual firm. The raw data source for firm specific data was the McGregor database (McGregor BFA, 2010) and the Johannesburg Stock Exchange (JSE, 2010).

### 4.4.2 Data Gathering Process

As described above, the sample will be taken from the McGregor database. The oldest historical data available was chosen to mitigate any changes that have occurred since relocation. The variables used as proxies for the concepts to be investigated, as well as the data sources are tabulated below.

*Table 7: Concepts, Variables and Data Sources for Hypothesis Three*

| Concept | Variable and Definition | Data Source |
|---|---|---|
| Corporate Emigrant | Company with previous relocation of primary listing away from the JSE, mutually exclusive with other category | McGregor database |
| National Champion | Company with primary listing on the JSE and major productive operations in South Africa, mutually exclusive with other category | McGregor database |
| Direct state ownership | The average percentage share ownership held directly by the home government for all years in which data was available, weighted 60% to 2006. | McGregor database |
| Total state ownership | The average total percentage share ownership held directly or indirectly by the home government for all years in which data was available, weighted 60% to 2006. | McGregor database |
| Foreign interest | a) Assets Transnationality: ratio of foreign assets to total assets<br>b) Sales Transnationality: ratio of foreign sales to total sales<br>Averaged for all years in which data was available | McGregor database |
| Transformations on foreign interest | a) Maximum of either the Assets or Sales Transnationality values<br>b) Minimum of either the Assets or Sales Transnationality values<br>c) Average of the Assets and Sales Transnationality values | McGregor database |

### 4.4.3 Method of Analysis

The hypothesis called for the comparisons of two population groups, Corporate Emigrants and National Champions, across various criteria. The differences between mean values were compared using Analysis of Variance (ANOVA). Further, exploratory Regression Tree and correlation analyses were carried out.

Further, the Hypothesis called for an investigation of the relationship between a dependant variable, the selected internationalisation path, and independent variables, State Ownership and Transnationality. The variables representing the

internationalisation path contain nominal data and the relationship between them and the predictors was calculated using logistic regression. Regression is a method for measuring the association between a dependant and independent variables and assumes that "the dependant viable is predictively linked to the independent viable" (Zikmund, 2003, p. 553). It was noted that correlation does not equate to causation.

Stepwise logistic regression was used to determine which factors have the greatest influence on internationalisation path selection. However, this was only exploratory since the data sample was small (Albright, Winston, & Zappe, 2009). Those coefficients (β) with the highest values will indicate which conditions have the greatest effect on path selection (Zikmund, 2003). The coefficient of correlation, R-square, was used to note the fit of the output variables.

### 4.4.4 Research Limitations

The limitations of the proposed research, following the intended scope and design, were recognised as the following:

- The analysis was descriptive and not casual in nature.
- The predictors were represented by proxies, introducing representation errors
- National factor and firm specific predictors were not consistently contemporary with the time of the firms' location choice, affecting the accuracy of the results.
- The analysis assumes that all the firms in the frame are of sufficient size, and have a great enough distinction between corporate and business unit functions, in order to consider relocation.
- The analysis assumes the listed firms are multinational enterprise headquarters
- There was not enough data for modelling. Only exploratory analysis was possible.

# 5. Results

The results of data collection and statistical analysis are presented below in turn, following the research hypotheses.

## 5.1 Sample Description

For the three hypotheses, data was gathered using the methodology detailed in the previous section. The actual sample obtained is described in this section.

### 5.1.1 Hypothesis One – National Factors

All available information was gathered to review the evidence for hypothesis one. The required data was found to be available for the countries tabulated below.

*Table 8: Sample Countries for Hypothesis One – National Factors*

| Developed Markets | Emerging Markets |
|---|---|
| Australia | Argentina |
| Austria | Brazil |
| Belgium | Chile |
| Canada | China |
| Denmark | Colombia |
| Finland | Czech Republic |
| France | Hungary |
| Germany | India |
| Greece | Indonesia |
| Hong Kong | Malaysia |
| Ireland | Mexico |
| Israel | Peru |
| Italy | Philippines |
| Japan | Poland |
| Luxembourg | Russia |
| Netherlands | South Africa |
| New Zealand | Taiwan |
| Norway | Thailand |
| Portugal | Turkey |
| Singapore | Ukraine |
| South Korea | |
| Spain | |
| Sweden | |
| Switzerland | |
| United Kingdom | |
| United States | |

### 5.1.2 Hypotheses Two and Three – Location Choice

All the firms dual listed on the Johannesburg Stock Exchange and another equity market in July 2010 were reviewed. There were 74 of these. Of these, only those registered since before 2004 were selected for further analysis. There were 61 of these. The sample of 61 was catalogued to produce evidence for hypothesis two. Those catalogued as either National Champions or Corporate Emigrants were analysed to produce evidence for Hypothesis Three.

Data on private shareholder concentration was not available due to deficiencies in the McGregor data source (L. Metseeme, personal communication, 28 September 2010). Further, shareholding data was only available from 2006 onwards. Where shareholder or Transnationality data was missing for hypothesis three, the sample point was excluded from the analysis. As such, only 38 data points were ultimately available for Hypothesis Three.

Regarding Method II of Hypothesis Two, 255 transactions were found to match the set criteria. Of these, only 109 transactions occurred between firms based in Developed or Emerging Markets.

## 5.2 Results for Hypothesis One – National Factors

The values across each factor of location advantage were tested for normality. The results of these tests are summarised below. Logarithmic transformations were carried out on two categories in an attempt to produce normality. The normality tests on the transformed values are also shown in the table below.

*Table 9: Results of Normality Tests for Hypothesis One – National Factors*

| Variable | Normality test p-value | Is the sample normal? |
|---|---|---|
| Connectivity | 0.0077 | No |
| Banking and financial services | 0.0440 | Yes |
| Competent senior managers | 0.0068 | No |
| Stock market capitalisation | <.0001 | No |
| Stock market capitalisation LOG | 0.2624 | Yes |
| Investment risk | 0.0012 | No |
| Investment risk LOG | 0.0003 | No |
| Cost of capital | 0.0144 | Yes, but borderline |
| Management education | 0.2390 | Yes |
| Legal and Regulatory framework | 0.5157 | Yes |
| Intellectual property rights | 0.0192 | Yes, but borderline |
| "Two Tier Bargaining" State Power | <.0001 | No |
| Quality of life | 0.0087 | No |
| Real personal taxes | 0.3377 | Yes |

### 5.2.1 Analysis of Variance

Mean scores for the various factors of location advantage were compared across countries. An analysis of variance (ANOVA) was carried out on the various factors of location advantage. The results are summarised in the table below. To aid the reader, normally distributed samples are shown in green; others are shown in blue.

*Table 10: Summary of Results for Hypothesis One – National Factors*

| Variable | Mean for Developed Markets | Std Error | Mean for Emerging Markets | Std Error | ANOVA P-value | W/K-W Signed Rank Test, Chi-square P-value | Significant Difference? |
|---|---|---|---|---|---|---|---|
| Connectivity | 8.19500 | 0.20258 | 6.83350 | 0.23098 | <.0001 | <.0001 | Yes |
| Banking and financial services | 6.90308 | 0.21525 | 5.66550 | 0.24542 | 0.0005 | 0.0008 | Yes |
| Competent senior managers | 6.27923 | 0.19118 | 5.47350 | 0.21797 | 0.0080 | 0.0143 | Yes |
| Stock market capitalisation | 1255.53 | 447.12 | 265.26 | 509.80 | 0.1513 | 0.0064 | Yes |
| Stock market capitalisation LOG | 6.00038 | 0.26280 | 4.86513 | 0.29964 | 0.0067 | 0.0064 | Yes |
| Investment risk | 89.0335 | 1.7202 | 57.2760 | 1.9613 | <.0001 | <.0001 | Yes |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Investment risk LOG | 4.48551 | 0.02742 | 4.03158 | 0.03126 | <.0001 | <.0001 | Yes |
| Cost of capital | 6.15692 | 0.21168 | 4.19450 | 0.24135 | <.0001 | <.0001 | Yes |
| Management education | 6.34038 | 0.21645 | 5.00850 | 0.24679 | 0.0002 | 0.0006 | Yes |
| Legal and Regulatory framework | 5.61923 | 0.25534 | 4.13750 | 0.29113 | 0.0004 | 0.0010 | Yes |
| Intellectual property rights | 7.34808 | 0.21101 | 4.74450 | 0.24059 | <.0001 | <.0001 | Yes |
| "Two Tier Bargaining" State Power | 2.39308 | 0.52655 | 0.93600 | 0.60036 | 0.0748 | 0.0781 | No |
| Quality of life | 8.07000 | 0.23900 | 4.65200 | 0.27250 | <.0001 | <.0001 | Yes |
| Real personal taxes | 4.68308 | 0.25656 | 4.79450 | 0.29252 | 0.7759 | 0.4186 | No |

In the above, "W/K-W" refers to the Wilcoxon / Kruskal-Wallis signed-rank test. This is a non-parametric test, that does not assume normality, and this test must be used if the sample is not normal.

As can be seen, "two tier bargaining" state power was 61% greater in Developed Markets but real personal taxes are very similar for both populations. Neither of these differences was statistically significant. All the other variables do show significantly higher scores for Developed Markets. The standard deviation for "two tier bargaining" state power was very large, which may explain its failure of the normality test and its failure to demonstrate significance.

The score for South Africa's "Banking and Financial service" and "Real personal taxes" was 7.04 and 5.13 respectively. In both cases, above the developed market mean score. For all other variables, the South African score was lower than the mean for developed markets.

## 5.2.2 Multivariate Analysis of Variance

Mean values for the various factors were compared and are graphically displayed below. Only significant values are shown and used in the multivariate analysis of variance.

*Figure 5: Comparison of Means for Hypothesis One – National Factors*
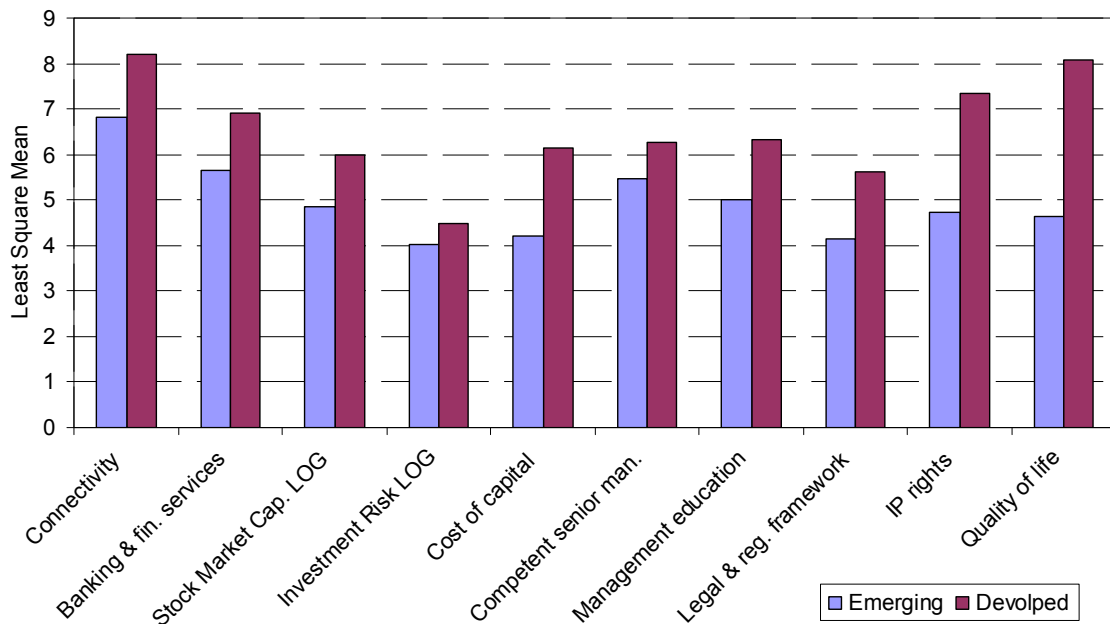


An exploratory multivariate analysis of variance was conducted to compare the overall vector of means difference between Developed and Emerging Market populations. The results of this analysis are tabulated below.

*Table 11: Result of Means Test for One-way MANOVA*

| Country Type | Number | Mean | Std Error | Lower 95% | Upper 95% | | Prob>F |
|---|---|---|---|---|---|---|---|
| Developed | 26 | 8.19500 | 0.20258 | 7.7867 | 8.6033 | | <.0001 |
| Emerging | 20 | 6.83350 | 0.23098 | 6.3680 | 7.2990 | | |

As can be seen, the 95% levels of confidence intervals do not overlap. In addition, the probability value was seen to be less than 0.0001. This means that the two country types are significantly different, with the mean score for developed countries being higher.

## 5.2.3 Regression Tree

An exploratory Regression Tree analysis was conducted. The results are shown graphically below.

*Figure 6: Regression Tree for Hypothesis One – National Factors*
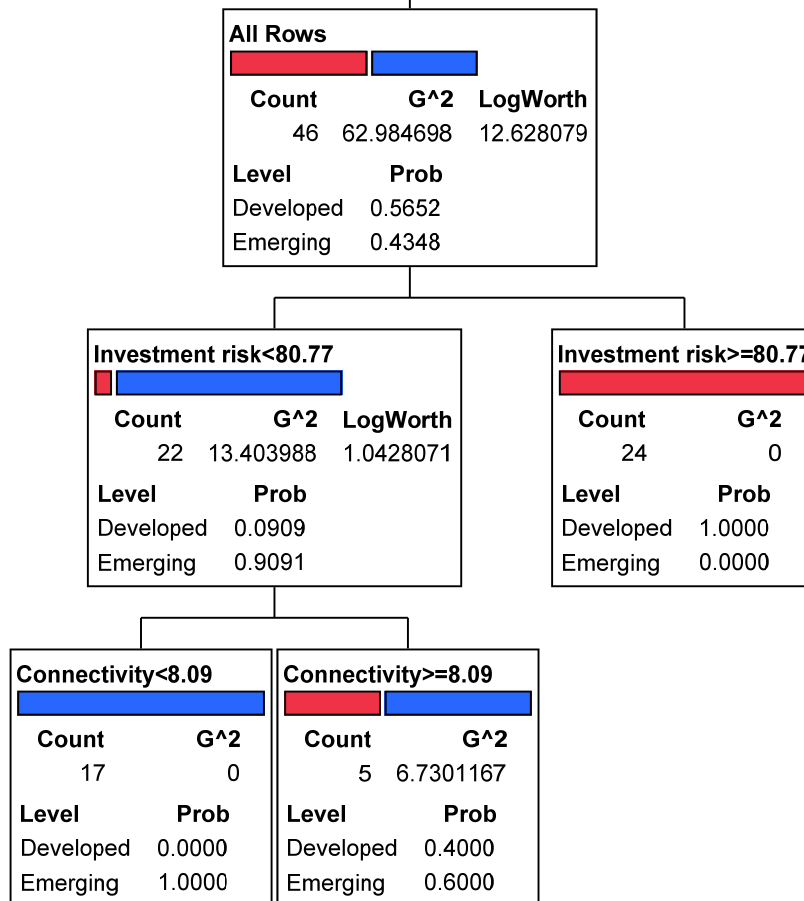


As can be seen, Investment Risk and Connectivity are the most noteworthy descriptors of the difference between the two populations. However, since the sample was small, the Tree can only be used for explanatory purposes. Nevertheless, the results serve to confirm the previously seen result that the Developed and Emerging populations are significantly different.

The Regression Tree showed the possible profile of an Emerging Market as one with an Investment Risk value of less than 80.77 and a Connectivity value of less than 8.09 – 17 of the 46 sample points fit this profile. The Regression Tree the showed the possible profile of a Developed Market as one with an Investment risk value greater than or equal to 80.77 – 24 of the 46 sample points fit this profile.

### 5.2.4 Correlations

The variables were correlated with each other. The variables showing the greatest correlation are shown in the table below. All of these have a probability value of less than 0.0001; that is, they are significant. Here, the country type variable was nominal: referring to either Emerging or Developed Markets.

*Table 12: Correlation Values for National Factor Variables*

| Variable | By Variable | Correlation Value |
| --- | --- | --- |
| "Two Tier Bargaining" State Power | Stock market capitalisation | 0.9318 |
| Quality of life | Intellectual property rights | 0.9214 |
| Quality of life | Investment risk | 0.9035 |
| Intellectual property rights | Investment risk | 0.8938 |
| Investment Risk LOG | Intellectual property rights | 0.8837 |
| Investment Risk LOG | Quality of life | 0.881 |
| Investment risk | Country type | 0.8781 |
| Legal and regulatory framework | Banking and financial services | 0.8732 |
| Investment LOG | Country type | 0.8546 |
| Quality of life | Country type | 0.8179 |
| Investment LOG | Cost of capital | 0.8157 |
| Management education | Banking and financial services | 0.815 |
| Cost of capital | Investment risk | 0.8142 |
| Quality of life | Cost of capital | 0.8094 |

Here, the table was ranked according to correlation value and only correlations greater than 0.8 are shown. A correlation value of one, absolute, would indicate a 100% descriptive relationship. As can be seen, several national factors are strongly correlated with each other. Some, like Cost of Capital and Investment Risk, conform to expectation.

### 5.2.5 Conclusion

The following factors showed significantly higher mean scores for Developed Markets than for Emerging Markets:

- Connectivity

- Banking and financial services

- Competent senior managers

- Stock market capitalisation

- Investment risk

- Cost of capital

- Management education

- Legal and Regulatory framework

- Intellectual property rights

- Quality of life

The mean score for "Two Tier Bargaining" State Power was 61% higher for Developed Markets than for Emerging Markets although this was not shown to be statistically significant. The means for Real personal taxes were roughly equivalent for both Developed Markets and Emerging Markets. Additionally, the MANOVA confirmed a significantly higher mean score for Developed Markets.

The Regression Tree showed the possible profile of the of an Emerging Market as one with an Investment Risk value of less than 80.77 and a Connectivity value of less than 8.09 – 17 of the 46 sample points fit this profile. The Regression Tree the showed the possible profile of a Developed Market as one with an Investment risk value greater than or equal to 80.77 – 24 of the 46 sample points fit this profile.

## 5.3 Results for Hypothesis Two – Location Choices

### 5.3.1 Evidence Found Using Method I

The sample was reviewed for known location choices. Those MNEs that hade made alternative location choices were catalogued as either Corporate Emigrants or Outside-In firms. That is, respectively, those who had chosen to relocate corporate headquarters from the historical centre or those who had chosen to place their headquarters in a country other than that of operation. Tabulated below are the firms that were described as Corporate Emigrants and their destination of relocation.

*Table 13: Location Choices for Corporate Emigrants*

| Company Name | Current Primary Listing | Previous Primary Listing |
|---|---|---|
| Anglo American PLC | London Stock Exchange | Johannesburg Stock Exchange |
| BHP Billiton PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Brait S.A | Luxembourg Stock Exchange | Johannesburg Stock Exchange |
| Dimension Data Holdings PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Investec PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Capital Shopping Centres Group PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Mondi PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Net 1 UEPS Technologies Inc | Nasdaq Stock Market | Johannesburg Stock Exchange |
| Old Mutual PLC | London Stock Exchange | Johannesburg Stock Exchange |
| Sabmiller PLC | London Stock Exchange | Johannesburg Stock Exchange |

Billiton was the first to relocate in 1997. It merged with BHP in 2001 to form BHP Billiton. Brait was formed in 1998 following the merger of the banking interests of Capital Alliance Holdings, South Africa, and Tolux, Luxembourg. Brait is now headquartered in Luxembourg. The Capital Shopping Centres Group was formally known as Liberty International PLC.

As can be seen, all of the ten Corporate Emigrants chose to move from an Emerging Market, South Africa, to Developed Markets in either Europe or North America. The country level scores, from Hypothesis One, for the four nations seen in the table above are shown in the table below.

*Table 14: Country Level Data Location Choices for Corporate Emigrants*

| Country | Luxembourg | United Kingdom | United States | South Africa |
|---|---|---|---|---|
| Country type | Developed | Developed | Developed | Emerging |
| Connectivity | 8.30 | 8.13 | 8.88 | 6.33 |
| Banking and financial services | 7.69 | 6.48 | 7.75 | 7.04 |
| Stock market capitalisation | 59.26 | 2,716.10 | 15,414.27 | 428.65 |
| Investment risk | 99.18 | 91.90 | 94.14 | 60.47 |
| Cost of capital | 6.47 | 5.24 | 6.92 | 3.56 |
| Competent senior managers | 5.77 | 5.89 | 7.39 | 4.34 |
| Management education | 5.41 | 6.00 | 7.29 | 5.60 |
| Legal and regulatory framework | 6.23 | 5.32 | 5.80 | 5.14 |
| Intellectual property rights | 7.40 | 7.26 | 8.26 | 6.48 |
| "Two Tier Bargaining" State Power | 0.12 | 4.43 | 16.97 | 0.69 |
| Quality of life | 9.18 | 7.31 | 8.37 | 5.38 |
| Real personal taxes | 6.62 | 4.74 | 6.23 | 5.13 |

Tabulated below are the firms that were described as Outside-In firms with the locations of primary listing and primary operations.

*Table 15: Location Choices for Outside-In Firms*

| Company Name | Current Primary Listing | Country of Primary Operation |
|---|---|---|
| African Eagle Resources PLC | London Stock Exchange | Zambia |
| Anooraq Resources Corporation | Toronto Stock Exchange | South Africa |
| Aquarius Platinum Limited | Australian Stock Exchange | South Africa |
| BRC Diamondcore Limited | Toronto Stock Exchange | DRC |
| Central Rand Gold Limited | London Stock Exchange | South Africa |
| Coal of Africa Limited | Australian Stock Exchange | South Africa |
| Conafex Holdings SA | Luxembourg Stock Exchange | South Africa |
| Eastern Platinum Limited | Toronto Stock Exchange | South Africa |
| First Uranium Corporation | Toronto Stock Exchange | South Africa |
| Great Basin Gold Limited | Toronto Stock Exchange | South Africa |
| Halogen Holdings SA | Luxembourg Stock Exchange | South Africa |
| IPSA Group PLC | London Stock Exchange | South Africa |
| Lonmin PLC | London Stock Exchange | South Africa |
| Lonrho PLC | London Stock Exchange | Mozambique |
| Marshall Monteagle Holdings SA | Luxembourg Stock Exchange | South Africa |
| Pan African Resources PLC | London Stock Exchange | South Africa |
| Rockwell Diamonds Incorporated | Toronto Stock Exchange | South Africa |
| Tawana Resources NL | Australian Stock Exchange | South Africa |
| Uranium One Inc | Toronto Stock Exchange | South Africa |
| Zambia Copper Investments Limited | JSE Limited | Zambia |

Following the methodology of the London Stock Exchange, country of operation was taken to be the most significant geographical location for revenues or assets. For firms

not listed in London, country of operation was derived from publically available data such as annual reports and firm websites. As can be seen, all except one of the twenty Outside-In firms chose to locate headquarters in Developed Markets, not Emerging Markets, despite their primary operation being in an Emerging Market or other. The curiosity of these firms is demonstrated well in the example of IPSA. Despite having almost all sales and assets vested in one plant in South Africa, as well as future prospects being in South Africa, their head office is specifically in London.

Following the criteria set out, those firms found to be National Champions are tabulated below.

*Table 16: National Champions*

**Company Name**

African Oxygen Limited
African Rainbow Minerals Limited
Anglo Platinum Limited
Anglogold Ashanti Limited
Barloworld Limited
Datatec Limited
DRDGold Limited
FirstRand Limited
Gold Fields Limited
Harmony Gold Mining Company Limited
Highveld Steel and Vanadium Corp Ld
Impala Platinum Holdings Limited
Metorex Limited
Metropolitan Holdings Limited
Mutual & Federal Insurance Comp Ld
Nedbank Group Limited
Nictus Beperk
Oceana Group Limited
Pretoria Portland Cement Company Ld
Randgold & Exploration Company Ld
Sanlam Limited
Santam Limited
Sappi Limited
Sasol Limited
Shoprite Holdings Limited
Standard Bank Group Ltd
Telkom SA Limited
Tongaat Hulett Limited
Trans Hex Group Limited
Truworths International Limited
Woolworths Holdings Limited

Following an acquisition, Highveld Steel and Vanadium is now known as Evraz Highveld Steel and Vanadium. As can be seen, there are 31 firms in this category.

**5.3.2 Evidence Found Using Method II**

Noting cross-border merger and acquisition transactions resulting in headquarter relocation, the following data was obtained.

*Table 17: Headquarter Relocation by Mergers and Acquisitions 2000-2010*

|  | Acquirer was from Developed Market | Acquirer was from Emerging Market | Sum |
|---|---|---|---|
| Target was from Developed Market | 89 | 3 | 92 |
| Target was from Emerging Market | 14 | 3 | 17 |
| Sum | 103 | 6 | 109 |

As can be seen, a much higher number of transactions had the acquirer as from a Developed Market where the target was from an Emerging Market. That is, via mergers or acquisitions, more firms were found to relocate headquarters from Emerging Markets to Developed Markets than visa versa, 14 against three.

**5.3.3 Conclusion**

Within the sample of 61 firms dual listed on both the Johannesburg Stock Exchange and another exchange, 10 were categorised as Corporate Emigrants, twenty as Outside-In firms, and thirty-one as National Champions. All of the Corporate Emigrants relocated to Developed Markets, away from an Emerging Market: South Africa. All except one of the Outside-In firms located in a Developed Market. Further, via mergers or acquisitions, more firms were found to relocate headquarters from Emerging Markets to Developed Markets than visa versa, 14 against three.

## 5.4 Results for Hypothesis Three – Location Predictors

The values across each factor of location advantage were tested for normality. The results of these tests are summarised below. As can be seen, none of the variables was normally distributed.

Table 18: Results of Normality Tests for Hypothesis Three – Location Predictors

| Variable | Normality test p-value | Is the sample normal? |
|---|---|---|
| Direct State Ownership | <.0001 | No |
| Total State Ownership | <.0001 | No |
| Assets Transnationality | 0.0006 | No |
| Sales Transnationality | 0.0034 | No |
| Minimum of Assets or Sales TN | <.0001 | No |
| Maximum of Assets or Sales TN | 0.0079 | No |
| Average of Assets and Sales TN | 0.0052 | No |

### 5.4.1 Analysis of Variance

Mean scores for the various factors of location advantage were compared across countries. An analysis of variance (ANOVA) was carried out on the various factors of location advantage. The results are summarised in the table below.

Table 19: Summary of Results for Hypothesis Three – Location Predictors

| Variable | Mean for Corporate Emigrants | Std Error | Mean for National Champs | Std Error | ANOVA P-value | W/K-W Signed Rank Test, Chi-square P-value | Significant Difference? |
|---|---|---|---|---|---|---|---|
| Direct State Ownership | 6.16450 | 2.6436 | 8.66979 | 1.5799 | 0.4213 | 0.8036 | No |
| Total State Ownership | 7.7110 | 2.8294 | 11.6227 | 1.6909 | 0.2431 | 0.5618 | No |
| Assets Transnationality | 58.4640 | 8.0970 | 21.3386 | 4.8389 | 0.0004 | 0.0037 | Yes |
| Sales Transnationality | 65.2580 | 9.3227 | 32.1719 | 5.6736 | 0.0046 | 0.0050 | Yes |
| Minimum of Sales or Assets TN | 55.9010 | 7.9646 | 17.7254 | 4.7597 | 0.0002 | 0.0030 | Yes |
| Maximum of Sales or Assets TN | 67.8210 | 8.8346 | 35.2593 | 5.2797 | 0.0032 | 0.0048 | Yes |
| Average of Sales and Assets TN | 61.8620 | 7.8512 | 26.4900 | 4.6920 | 0.0004 | 0.0039 | Yes |

Again, "W/K-W" refers to the Wilcoxon / Kruskal-Wallis signed-rank test. This is a non-parametric test, that does not assume normality, and this test must be used if the sample is not normal.

As can be seen, direct and total state ownership was 41 and 51% higher respectively for National Champions versus Corporate Emigrants. However, this was not shown to be statistically significant. All the Transnationality variables show significantly higher values for Corporate Emigrants.

### 5.4.2 Regression Tree

An exploratory Regression Tree analysis was conducted. The results are shown graphically below.

*Figure 7: Regression Tree for Hypothesis Three – Location Predictors*
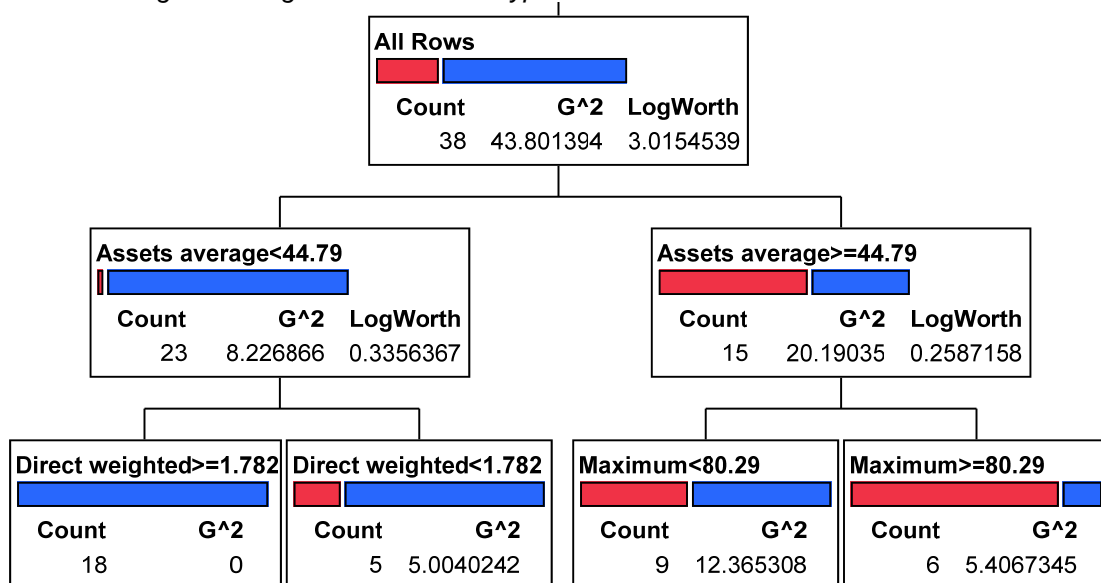


As can be seen, the most noteworthy descriptor relates to the Asset Transnationality variable. However, since the sample was small, the Tree can only be used for explanatory purposes. Nevertheless, the results serve to confirm the previously seen result.

The Regression Tree showed the possible profile of a National Champion as one with Assets Transnationality of less than 44.79 and a Direct State Ownership greater than 1.782% – 18 of the 38 sample points fit this profile. The Regression Tree showed the possible profile of a Corporate Emigrant as one with Assets Transnationality greater than or equal to 44.79 and Maximum Transnationality greater than or equal to 80.29 – 6 of the 38 sample points fit this profile.

### 5.4.3 Correlations

Variables were correlated with each other. The variables showing the greatest correlation are shown in the table below. All of these have a probability value of less than 0.0001; that is, they are significant.

Table 20: Correlation Values for Location Choice

| Variable | By Variable | Correlation Value |
| --- | --- | --- |
| Maximum of Sales or Assets TN | Sales Transnationality | 0.9851 |
| Minimum of Sales or Assets TN | Assets Transnationality | 0.9826 |
| Total State Ownership | Direct State Ownership | 0.9762 |
| Average of Sales and Assets TN | Maximum of Sales or Assets TN | 0.9526 |
| Average of Sales and Assets TN | Minimum of Sales or Assets TN | 0.9492 |
| Average of Sales and Assets TN | Sales Transnationality | 0.9343 |
| Average of Sales and Assets TN | Assets Transnationality | 0.9247 |
| Maximum of Sales or Assets TN | Minimum of Sales or Assets TN | 0.8085 |
| Minimum of Sales or Assets TN | Sales Transnationality | 0.7901 |
| Maximum of Sales or Assets TN | Assets Transnationality | 0.7795 |

Here, the table was ranked according to correlation value and only correlations greater than 0.75 are shown. A correlation value of one, absolute, would indicate a 100% descriptive relationship. As can be seen, the Transnationality minimum was more highly correlated to Assets Transnationality than Sales Transnationality.

### 5.4.4 Logistic Regression

A logistic regression analysis was carried out to test the predictive relationship between the ownership and Transnationality variables with the company type. First, each

independent variable was fitted individually and the results are shown in the table below.

Table 21: Individual Logistic Regression Values for Location Choice

| Variable | Prediction, RSquare (U) | Significance, p-value | Significant Prediction? |
|---|---|---|---|
| Direct State Ownership | 0.0198 | 0.3515 | No |
| Total State Ownership | 0.0421 | 0.1747 | No |
| Assets Transnationality | 0.2673 | 0.0006 | Yes |
| Sales Transnationality | 0.1873 | 0.0045 | Yes |
| Minimum of Sales or Assets TN | 0.2781 | 0.0005 | Yes |
| Maximum of Sales or Assets TN | 0.2015 | 0.0030 | Yes |
| Average of Sales and Assets TN | 0.2622 | 0.0007 | Yes |

A stepwise logistic regression analysis was also carried out to establish the most significantly predictive variable. The results can be seen below.

Table 22: Stepwise Logistic Regression Values for Location Choice

| Selected Stepwise Variable | Prediction, RSquare (U) | Significance, p-value | Significant? |
|---|---|---|---|
| Minimum of Sales or Assets TN | 0.2781 | 0.0005 | Yes |

As can be seen, the minimum of the Sales or Assets Transnationality percentage was the best predictor of headquarter location choice. Further, this variable was statistically significant.

## 5.4.5 Conclusion

All the Transnationality variables showed significantly higher values for Corporate Emigrants versus National Champions. Respectively, Direct and Total State Ownership was 41 and 51% higher for National Champions versus Corporate Emigrants. However, this was not shown to be statistically significant. Further, Sate ownership was not correlated to Transnationality.

The Regression Tree showed the possible profile of a National Champion as one with Assets Transnationality of less than 44.79 and a Direct State Ownership greater than

1.782% – 18 of the 38 sample points fit this profile. The Regression Tree showed the possible profile of a Corporate Emigrant as one with Assets Transnationality greater than or equal to 44.79 and Maximum Transnationality greater than or equal to 80.29 – 6 of the 38 sample points fit this profile.

Stepwise regression showed the minimum of the Sales or Assets Transnationality value to be the best predictor of headquarters location choice with a significant R-square value of 0.2781.

# 6. Discussion of Results

## 6.1 Discussion of Hypothesis One Results – National Factors

The results of the analysis of variance were clear. Following the factors chosen, there was significant evidence that Emerging Markets offer less location advantage than Developed Markets to multinational enterprise headquarters. This conclusion was supported by the exploratory results of the multivariate analysis of variance, Regression Tree and correlation analyses. Each factor is discussed in turn below.

### 6.1.1 Supply Factors

The mean "Connectivity" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Connectivity of people and firms (telecom, IT, etc.) is highly extensive". That is, MNE headquarters in Developed Markets are better able to communicate across internal and external boundaries, improving performance.

The mean "Banking and financial services" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Banking and financial services do support business activities efficiently". That is, MNE headquarters in Developed Markets are better supported by the supplier network desired by a headquarter office, at least in this category.

The mean "Competent senior managers" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Competent senior managers are readily available", which means that a lower score denotes a lesser availability of competent senior managers. That is, MNE headquarters in Developed Markets have greater access to competent senior managers, which is required for business growth.

### 6.1.2 Capital Market Factors

The mean "Stock market capitalisation" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes this as the total national market capitalisation measured in billions of United States Dollars. That is, MNE headquarters in Developed Markets have access to greater pools of equity capital, which is required to fuel business growth.

The mean "Investment risk" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Euromoney country credit-worthiness scale from 0-100", which means that a lower score denotes higher risk. That is, MNE headquarters in Developed Markets benefit from lower country risk perception with investors.

The mean "Cost of capital" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Cost of capital encourages business development", which means that a lower score denotes a more discouraging cost of capital. That is, MNE headquarters in Developed Markets have access to cheaper pools of capital, which is required to fuel business growth.

### 6.1.3 Institutional Factors

The mean "Management education" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Management education meets the needs of the business community." That is, MNE headquarters in Developed Markets have access to better educational support, which is required to inform business growth.

The mean "Legal and regulatory framework" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "The legal and regulatory framework encourages the competitiveness of enterprises". That is, MNE headquarters in Developed Markets have economical legal and regulatory support, which is required for competitiveness in terms of both cost and efficiency.

The mean "Intellectual property rights" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Intellectual property rights are adequately enforced." That is, MNE headquarters in Developed Markets have greater protection of Intellectual Property, which is required for innovation competitiveness.

The mean "Two Tier Bargaining" State Power variable was 61% greater in Developed Markets although this was not shown to be statistically significant. This means that developed economies have greater weight in multi-lateral institutions. This provides advantage to firms located in developed economies as these countries may negotiate more vigorously in favour of themselves and those firms located within their borders.

### 6.1.4 Agency Factors

The mean "Quality of life" variable was significantly lower in Emerging Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Quality of life is high". That is, managers in MNE headquarters in Developed Markets have access to a better personal quality of life.

The mean "Real personal taxes" variable was very similar for both Emerging and Developed Markets. The data source (World Competitiveness Centre, 2009) describes the factor score: "Real personal taxes do not discourage people from working or

seeking advancement". That is, managers in MNE headquarters pay a comparably discouraging amount of tax in Emerging and Developed Markets.

### 6.1.5 Limitations of the National Factor Analysis

The analysis carries some limitations. The sample size was not large enough to ensure normality or the stable use of such techniques as Regression Tree or correlation. Further, the variables chosen may not faithfully characterise the factors as experienced by MNEs, implying a possible representation error. Despite this, the most concerning limitation was the fact that it is most often regions, not only nations, which attract business. For example, it is the Square Mile in London that attracts financial firms as much as it is England.

Regarding "Two Tier Bargaining" State Power within in the WTO, it could be argued that the influence of each European country was underrepresented, as, in terms of trade, the European Union is a single large block. For example, Luxembourg's total trade is small, but through its alignment with the EU, its WTO influence may be seen as large.

Further, the analysis does not prioritise the factors. Previous research, for example Birkinshaw *et al.* (2006), concluded that proximity to investors was the most important factor. In addition, the factors make no account of industry specific needs as highlighted by Ramamurti (2009).

### 6.1.6 Implications of the National Factor Analysis

All of the results are in line with the theoretical arguments developed previously. Despite the limitations, the results have important implications. If Emerging Markets are unsupportive of headquarters, MNEs located in Developed Markets have location advantages and firms will be motivated to relocate their headquarters to Developed

Markets. This assumes that any loss of CSAs will be recovered in the move and that the firm is sufficiently mature such that FSAs such as "Adversity advantage" (Ramamurti, 2009) are fully transportable. Firms that do not relocate, for whatever reason, carry the costs of their disadvantaged location. If a firm does not relocate, and remains globally competitive, this implies that it possesses country or firm specific advantages of greater magnitude than the disadvantage of its headquarter location.

The more disadvantaged a particular location, the more firms would be expected to relocate from that country. However, as a particular country industrialises, the expectation would be that the rate of relocation would slow as the disparity reduces. This assumes a global status quo in terms of capital and personal transportability.

The results imply that if Emerging Market nations seek to remain attractive to MNE headquarter offices and the high value-add employment that they offer, they have significant ground to cover to improve their attractiveness on the factors measured. Specifically, the factors that remain under the control of the host state, the institutional and agency factors, need to be focused on. Other factors that remain out of the control of the host state, and are not captured in the factors, such as geography and proximity to other nations may require either emphasis or mitigation.

## 6.2 Discussion of Hypothesis Two Results – Location Choices

### 6.2.1 Location Choice Analysis

Reviewing the results, it is clear that the South African multinational enterprises that have relocated have moved to Developed Markets, not to other Emerging Markets. All of the ten Corporate Emigrants chose to move to Developed Markets in either Europe or North America. Of further interest, all except one of the twenty Outside-In firms chose to locate headquarters in Developed Markets, despite bearing higher distance-related transaction costs through their primary country of operation being in an Emerging Market or other non-developed nation. Both of these facts support an argument that Developed Markets offer greater location advantages than Emerging Markets to MNE corporate headquarters.

Noting cross-border merger and acquisition transactions resulting in headquarter relocation, a much higher number of transactions had the acquirer as from a Developed Market where the target was from an Emerging Market. Thus, firms were relocating at a higher rate to Developed Markets than to Emerging ones. An Emerging Market firm's headquarters remained in an Emerging Market in only three transactions. In 14 transactions, an Emerging Market firm's headquarters relocated to a Developed Market.

### 6.2.2 Limitations of the Location Choice Analysis

The analysis carries some limitations. The sample size was very small with only ten Corporate Emigrants and twenty Outside-In firms. Conclusions could be more authoritative with an analysis of relocating firms in more countries. Given that the analysis assumed location is equivalent to the nation of primary stock market listing, Desai (2009) would argue that this was an over-simplification. Further, the analysis does not compare the factor strengths, from Hypothesis One, of the nations chosen.

### 6.2.3 Implications of the National Factor Analysis

All of the results are in line with the theoretical arguments developed previously as well as the results of the Hypothesis One investigation. Despite the limitations of the analysis, it seems clear that the pattern of corporate relocations from South Africa has favoured moves to Developed Markets. In addition, acquisition transactions have flowed at a greater rate to headquarters in Developed Markets.

Following Desai (2009), the corporate office could unbundle its various functions to take advantage of location strengths in various centres. Regardless, the pattern seen in the analysis supports the conclusion that Developed Markets offer greater location advantage than Emerging Markets.

The results somewhat support the conclusions of Birkinshaw *et al.* (2006) that firms relocate to countries more attractive in terms of environmental support. However, Birkinshaw *et al.* (2006) most emphasised the role of shareholders in corporate relocations and this is supported by these results. All of the relocations were to global financial centres. However, this is an expected outcome given the method of sample selection.

Admitting that Emerging Markets are diverse and are not naturally represented by South Africa alone, it remains a possibility that this pattern is repeated elsewhere. That is, that corporate headquarter relocations away from other emerging nations tends towards developed nations.

## 6.3 Discussion of Hypothesis Three Results – Location Predictors

Reviewing the results, it is clear that South African multinational enterprises that did not choose to relocate were constrained by low levels of foreign interest. There is some evidence that they may also have been constrained by higher levels of state ownership. There was evidence that relocating firms had businesses that were significantly more transnational than those are that did not. Further, firms that remained indigenous had a notably higher percentage of state ownership although this was not shown to be statistically significant.

### 6.3.1 State Ownership

Direct and total state ownership was 41 and 51% higher respectively for National Champions versus Corporate Emigrants. However, this was not shown to be statistically significant. Further, state ownership was not found to be a significant predictor of relocation. The maximum state share of any Corporate Emigrant was 9.4% direct and 12.1% total ownership.

### 6.3.2 Transnationality

All the Transnationality variables showed significantly higher values for Corporate Emigrants. In addition, all the Transnationality variables were significant predictors of relocation.

Transnationality was not correlated with state ownership. It could be said that on average, the state did not necessarily restrict or impose Transnationality. The Regression Tree showed the possible profile of the of a National Champion as one with Assets Transnationality of less than 44.79 and a Direct State Ownership greater than 1.782% – 18 of the 38 sample points fit this profile. The Regression Tree showed the possible profile of a Corporate Emigrant as one with Assets Transnationality greater

than or equal to 44.79 and Maximum Transnationality greater than or equal to 80.29 – 6 of the 38 sample points fit this profile.

The minimum of the Sales or Assets Transnationality percentage was the best predictor of headquarter location choice with a statistically significant R-square value of 0.2781. Further, Sate ownership was not correlated to Transnationality.

### 6.3.3 Limitations of the Location Predictor Analysis

As with the location choice analysis, the analysis carried some limitations. The sample size was small with only ten Corporate Emigrants and thirty-one National Champions. Again, conclusions could be more authoritative with an analysis of firms in more countries.

As data for the concentration of private ownership was not available, it was not possible to compare these results with those of Birkinshaw *et al.* (2006). Birkinshaw *et al.* (2006) found that concentrated private ownership was likely to constrain relocation. It is not clear that the same would be true in South Africa and Emerging Markets given the agency effect implied in the lifestyle quality offered in Developed Markets.

Given that shareholding data was only available from 2006 onwards and Transnationality data was chosen to be from the same period, data was not contemporary with the decision to relocate.

### 6.3.4 Implications of the Location Predictor Analysis

The results are in line with the theoretical arguments developed previously. Despite the limitations of the analysis, conclusions are possible.

As above, stepwise regression showed the minimum of the Sales or Assets Transnationality values to be the best predictor of headquarters location choice. This despite the conclusion of Birkinshaw *et al.* (2006) that business unit, not corporate, headquarters relocate when there is a large portion of sales and manufacturing activities overseas. This apparent contradiction may present as, for the firm, increasing Transnationality has been seen to follow relocation (McNulty, 2010) and Transnationality was measured after relocation. In addition, while having a somewhat transnational business is necessary before a firm considers relocation, it may not be the reason for relocation. An ambition for Transnationality may be a motivation for the move in the first place.

Rugman and Verbeke (1992; 2001) showed how firm specific advantages may emerge from multiple sources. These may be from the home country office, a foreign subsidiary or across a MNE's network. The relocation of the headquarters to a global financial centre may be one way in which advantages are developed. Those that accuse Emerging Market MNEs of a lack of patriotism or label relocation as capital flight should acknowledge the competitive necessity of firms seeking the same CSAs as their Developed Market rivals.

Admitting that Emerging Markets are diverse and are not naturally represented by South Africa alone, it remains a possibility that the pattern is repeated elsewhere. That is, that corporate headquarter relocations are predicted by levels of state ownership and levels of foreign business interest.

# 7. Conclusion

## 7.1 Main Findings

A model describing the internationalisation of EMNEs was developed, describing three possible trajectories once a firm has grown to a global scale. The "Corporate Emigrant" is conceptualised as the firm that relocates its headquarters to obtain location specific advantages for that office while business unit headquarters may remain in place. The "National Champion" is seen as the firm that does not relocate and bears the costs, or benefits, of this decision. The "Target" is acquired by another MNE, which results in an effective transfer of headquarter functions. A further variation would be the foreign "Outside-In" firm. Here, a foreign firm locates its headquarters and operations separately – managing from "outside", with operations "in" country.

There was significant evidence that Emerging Markets have offered less location advantage than Developed Markets to multinational enterprise headquarters following the factors chosen. A proxy for "Two Tier Bargaining" State Power (Ramamurti, 2001) was developed based on the average of voting power within the IMF and the IFC as well as total national trade value. It was found that the mean score was 61% higher for Developed Markets than for Emerging Markets, although this was not shown to be statistically significant. This means that developed economies have had greater voice in multi-lateral institutions and produce a consequent CSA for firms within their borders.

Within the given sample, it is clear that South African multinational enterprises relocated to Developed Markets, not to other Emerging Markets. Thirty firms had made alternative location choices. That is, 10 Corporate Emigrants had chosen to relocate corporate headquarters from the historical centre in South Africa to the developed world.

Twenty Outside-In firms had chosen to centre the headquarters in a country other than that of operation. Of these, only one had chosen to locate its headquarters in an Emerging Market. Another 31 National Champions made up the balance of the sample, with an indigenous headquarter location

Noting cross-border merger and acquisition transactions resulting in headquarter relocation, a much higher number of transactions had the acquirer as from a Developed Market where the target was from an Emerging Market. Thus, firms relocated at a higher rate to Developed Markets than to Emerging ones. An Emerging Market firm's headquarters remained in an Emerging Market in only three transactions. In 14 transactions, an Emerging Market firm's headquarters relocated to a Developed Market. This adds weight to the argument that the true rise of MNEs from Emerging Markets has been hidden by mergers and acquisitions from Developed Markets.

Again, within the given sample, there is significant evidence that Emerging Market multinational enterprises that did not choose to relocate were constrained by low levels of foreign interest. There is some evidence that they may have also been constrained by higher levels of state ownership.

Direct and total state ownership was 41 and 51% higher respectively for National Champions versus Corporate Emigrants. However, this was not shown to be statistically significant. Further, state ownership was not found to be a significant predictor of relocation. The maximum state share of any Corporate Emigrant was 9.4% direct and 12.1% total ownership.

Interestingly, Transnationality was not correlated with state ownership. It could be said that on average, the state did not necessarily restrict or impose Transnationality.

Asset and Sales Transnationality values were shown to be significantly higher for Corporate Emigrants. In addition, all Transnationality variables were significant predictors of relocation. Stepwise regression showed the minimum of either the Sales or Assets Transnationality values to be the best predictor of headquarters location choice with a significant R-square value of 0.2781. This despite the conclusion of Birkinshaw *et al.* (2006) that business unit, not corporate, headquarters relocate when there is a large portion of sales and manufacturing activities overseas.

This apparent contradiction may present for two reasons. Increasing Transnationality has been seen to follow relocation (McNulty, 2010) and Transnationality was measured after relocation. In addition, while having a somewhat transnational business is necessary before a firm considers relocation, it may not be the reason for relocation. An ambition for Transnationality may be a motivation for the move in the first place.

## 7.2 Recommendations to Stakeholders

The arguments presented above are discussed in the light of historic and aggregated data that does not consider global economic trends. As noted by the OECD (2010, P:15), there has been "a 20-year structural transformation of the global economy in which the world's economic centre of gravity has moved towards the East and the South, from OECD countries to emerging economies". As such, the location advantage of Developed Markets and the firms within their borders is changing.

If a firm did not relocate, and remained globally competitive, this implies that it possessed country or firm specific advantages of greater magnitude than the disadvantage of it's headquarter location.

A key factor of headquarter location advantage affected by this structural change is in terms of capital availability. From the data reviewed above, Emerging Markets are generally capital scarce. However, considering trends in the GDP weighting of the world economy and the relation to capital availability, debt markets in emerging countries are forecast to multiply dramatically (Booth, 2010; OECD, 2010).

### 7.2.1 Recommendations to Policy Makers

Some location factors are beyond the control of policy makers. The results imply that if Emerging Market nations seek to remain attractive to MNE headquarter offices and the high value-add employment that they offer, they have significant ground to cover to improve their attractiveness on the factors measured. Specifically, the factors that remain under the control of the host state, the institutional and agency factors, need to be focused on.

As discussed above, Rugman and Verbeke (1992; 2001) showed how firm specific advantages may emerge from multiple sources. These may be from the home country,

a foreign subsidiary or across a MNE's network. The relocation of the headquarters to a global financial centre may be one way in which advantages may be developed. Those that accuse Emerging Market MNEs of a lack of patriotism or label relocation as capital flight should acknowledge the competitive necessity of firms seeking the same CSAs as their Developed Market rivals.

In 2010, the South African treasury recognised that "The current regulatory framework has tax and exchange control aspects which are inhibitive to international headquarter companies seeking to leverage South Africa's infrastructure and skills base as a means of investing in the rest of the continent." Thus headquarter companies will "be allowed to raise and deploy capital offshore without exchange control approval" (National Treasury - South Africa, 2010). Measures like this are typical of the kind required to retain headquarter offices.

### 7.2.2 Recommendation to Business Managers and Shareholders

There are numerous aspects to the location choice of firm headquarters. The obvious point is that this complex decision must be made carefully, considering the multitude factors of advantage. The reasons for the temptation to relocate MNE headquarters are clear but these must be balanced relative to the needs of the firm. Firms in capital-intensive industries may have a greater need to relocate to capital rich centres – witness Anglo American and Billiton.

The fact that EMNEs overcome the disadvantages of their location to become competitive enough to consider international relocation means that they must have developed noteworthy CSAs or FSAs. Before relocating, managers must be certain that these will not be compromised, or at least that they will be matched by the advantages of their new location.

Given the complexity of the location decision, shareholders must be watchful that managers will not motivate a particular choice for personal reasons. It has been demonstrated that Developed Markets offer better "quality of life" but the lifestyle of managers must not compromise firm competiveness.

## 7.3 Recommendations for Future Research

Regarding the developed model of EMNE internationalisation, substantiation of the three maturity paths is required.

Regarding national factors of location advantage, further research may question the selection of the factors of headquarter location advantage, the selection of the proxy variables or the selection of the data sources. The definition of State Power is particularly open to debate. Greater texture would be given to the analysis if regional, rather than national factors could be reviewed. Further, the true cost of these claimed disadvantages requires quantification. If a firm becomes globally competitive and remains a distinctly Emerging Market MNE, these costs must be must have been overcome by other advantages specific to the firm.

Regarding location choices and predictors, given the small size of the sample, and its focus on a single country, it is recommended that future research into the same hypotheses be broadened to include more countries, especially given the expectation that the rate of relocation from South Africa has been high in recent decades. Further, research could consider the factors of Hypotheses One as predictors of the location choices in Hypothesis Two.

Clarity is required on the finding that business Transnationality is a predictor of relocation, given that it superficially seems to contradict previous research. This could largely be because increasing Transnationality has been seen to follow relocation (McNulty, 2010) and Transnationality was measured after relocation. Alternatively, this may be because while having a somewhat transnational business is necessary before a firm considers relocation, it may not be the reason for relocation. An ambition for Transnationality may in fact be the motivation for the move. Further, confirmation is required that state ownership is a constraint to relocation.

Admitting that Emerging Markets are diverse and are not naturally represented by South Africa alone, it remains a possibility that the pattern of location choices and drivers seen above is repeated in other emerging nations. Verification of this would add greatly to the understanding of MNE internationalisation and the impact of an Emerging Market origin. If country level variation is so great that this pattern is not replicated, further nuance could be brought to the understanding of the rise of EMNEs.

# Appendices

## A.1 Data for Hypothesis One – National Factors

Please see overleaf

# Data for Hypothesis One

**FOR ALL VALUES, HIGH = GOOD**

| Country | Country type | Connectivity | Banking and financial services | Stock market capitalisation US$ billions | Investment risk | Cost of capital | Competent senior managers | Management education | Legal and regulatory framework | Intellectual property rights | "Two Tier Bargaining" State Power | Quality of life | Real personal taxes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Australia | Developed | 7.36 | 7.69 | 706.96 | 90.50 | 6.25 | 6.67 | 6.82 | 6.91 | 8.04 | 1.58 | 9.37 | 4.72 |
| Austria | Developed | 8.88 | 7.32 | 93.83 | 92.30 | 6.41 | 6.98 | 7.06 | 6.32 | 8.39 | 0.92 | 9.60 | 4.35 |
| Belgium | Developed | 8.17 | 6.95 | 240.14 | 90.24 | 5.95 | 6.56 | 7.44 | 4.16 | 7.19 | 2.08 | 8.69 | 2.17 |
| Canada | Developed | 8.25 | 7.69 | 1,173.25 | 91.44 | 6.53 | 6.78 | 7.54 | 6.75 | 8.01 | 2.97 | 9.18 | 4.59 |
| Denmark | Developed | 9.09 | 7.63 | 151.57 | 94.56 | 6.85 | 6.96 | 7.41 | 7.05 | 8.25 | 0.75 | 8.99 | 2.88 |
| Finland | Developed | 9.02 | 8.10 | 219.50 | 93.03 | 7.30 | 6.62 | 7.33 | 6.97 | 8.33 | 0.58 | 8.76 | 3.47 |
| France | Developed | 8.28 | 5.88 | 1,661.54 | 90.24 | 5.61 | 6.49 | 6.38 | 3.89 | 7.43 | 4.66 | 8.23 | 3.34 |
| Germany | Developed | 8.50 | 6.23 | 1,264.36 | 90.40 | 6.29 | 6.65 | 6.49 | 4.57 | 8.28 | 6.61 | 8.74 | 3.34 |
| Greece | Developed | 6.74 | 5.77 | 134.09 | 80.77 | 4.88 | 5.52 | 4.59 | 3.76 | 5.43 | 0.34 | 6.28 | 4.45 |
| Hong Kong | Developed | 8.66 | 8.33 | 669.88 | 82.48 | 6.79 | 7.19 | 6.19 | 7.67 | 6.43 | 0.01 | 6.29 | 7.83 |
| Ireland | Developed | 6.31 | 6.62 | 98.63 | 91.82 | 6.80 | 6.89 | 6.72 | 6.43 | 7.50 | 0.38 | 8.00 | 6.45 |
| Israel | Developed | 8.78 | 6.83 | 112.80 | 69.86 | 4.92 | 6.66 | 6.58 | 6.05 | 6.86 | 0.30 | 6.65 | 4.20 |
| Italy | Developed | 6.29 | 4.35 | 733.24 | 85.37 | 5.27 | 5.28 | 4.57 | 3.19 | 5.47 | 3.30 | 6.98 | 3.90 |
| Japan | Developed | 8.32 | 5.56 | 3,487.86 | 89.01 | 6.22 | 5.02 | 4.82 | 4.47 | 7.10 | 5.36 | 6.65 | 4.48 |
| Luxembourg | Developed | 8.30 | 7.69 | 59.26 | 99.18 | 6.47 | 5.77 | 5.41 | 6.23 | 7.40 | 0.12 | 9.18 | 6.62 |
| Netherlands | Developed | 8.83 | 7.33 | 582.71 | 92.54 | 6.75 | 6.87 | 6.96 | 6.03 | 8.11 | 2.62 | 8.72 | 4.85 |
| New Zealand | Developed | 6.09 | 7.49 | 32.79 | 86.96 | 4.62 | 5.45 | 6.31 | 6.05 | 7.83 | 0.26 | 8.81 | 4.15 |
| Norway | Developed | 9.18 | 7.59 | 154.76 | 98.54 | 5.96 | 5.98 | 6.68 | 6.02 | 7.43 | 0.75 | 9.22 | 3.98 |
| Portugal | Developed | 8.00 | 6.11 | 72.28 | 83.10 | 5.84 | 4.77 | 5.14 | 3.66 | 5.72 | 0.40 | 6.04 | 4.11 |
| Singapore | Developed | 9.22 | 7.81 | 222.77 | 88.60 | 6.94 | 6.88 | 7.81 | 8.15 | 8.16 | 0.84 | 8.32 | 7.96 |
| South Korea | Developed | 8.86 | 5.13 | 507.91 | 69.53 | 4.91 | 4.91 | 4.66 | 3.43 | 5.63 | 1.60 | 5.55 | 4.82 |
| Spain | Developed | 6.88 | 6.01 | 903.74 | 87.19 | 6.20 | 5.24 | 3.82 | 4.61 | 6.01 | 1.67 | 7.95 | 4.84 |
| Sweden | Developed | 9.10 | 7.54 | 361.45 | 93.63 | 6.70 | 6.96 | 6.90 | 6.02 | 7.89 | 1.08 | 8.54 | 2.80 |
| Switzerland | Developed | 8.95 | 7.60 | 867.98 | 97.54 | 7.46 | 6.88 | 7.93 | 6.59 | 8.64 | 1.64 | 9.40 | 6.49 |
| United Kingdom | Developed | 8.13 | 6.48 | 2,716.10 | 91.90 | 5.24 | 5.89 | 6.00 | 5.32 | 7.26 | 4.43 | 7.31 | 4.74 |
| United States | Developed | 8.88 | 7.75 | 15,414.27 | 94.14 | 6.92 | 7.39 | 7.29 | 5.80 | 8.26 | 16.97 | 8.37 | 6.23 |
| Argentina | Emerging | 6.04 | 3.06 | 91.95 | 35.79 | 1.99 | 5.77 | 3.32 | 2.09 | 3.51 | 0.98 | 4.08 | 2.82 |
| Brazil | Emerging | 6.39 | 6.03 | 466.29 | 51.66 | 1.93 | 6.16 | 4.72 | 3.27 | 4.74 | 1.39 | 4.34 | 4.23 |
| Chile | Emerging | 6.91 | 7.43 | 113.78 | 67.13 | 6.73 | 7.39 | 5.04 | 5.88 | 5.72 | 0.43 | 6.59 | 4.85 |
| China | Emerging | 7.62 | 4.85 | 1,679.56 | 61.98 | 4.54 | 3.80 | 4.40 | 5.38 | 5.31 | 4.47 | 4.22 | 5.67 |
| Colombia | Emerging | 5.58 | 5.65 | 40.35 | 49.16 | 4.17 | 6.19 | 4.25 | 4.72 | 4.72 | 0.39 | 3.88 | 4.21 |
| Czech Republic | Emerging | 8.30 | 5.95 | 32.66 | 69.60 | 5.45 | 4.71 | 5.68 | 3.94 | 5.84 | 0.54 | 6.66 | 4.75 |
| Hungary | Emerging | 8.21 | 6.04 | 24.63 | 67.06 | 4.40 | 5.88 | 4.96 | 5.18 | 6.46 | 0.53 | 4.90 | 3.63 |
| India | Emerging | 7.21 | 7.02 | 543.66 | 55.75 | 4.11 | 6.72 | 4.83 | 4.77 | 6.89 | 2.34 | 4.66 | 6.27 |
| Indonesia | Emerging | 6.30 | 6.03 | 82.06 | 44.11 | 3.50 | 4.57 | 4.84 | 2.99 | 3.38 | 0.99 | 3.61 | 5.04 |
| Malaysia | Emerging | 8.02 | 7.43 | 183.17 | 63.14 | 6.58 | 6.66 | 6.70 | 6.36 | 6.02 | 0.81 | 7.28 | 6.70 |
| Mexico | Emerging | 4.12 | 3.79 | 207.43 | 62.43 | 2.84 | 5.39 | 3.48 | 3.03 | 4.27 | 1.49 | 4.28 | 3.98 |
| Peru | Emerging | 5.30 | 5.40 | 36.50 | 54.17 | 4.24 | 3.43 | 3.11 | 4.24 | 2.84 | 0.26 | 4.26 | 3.49 |
| Philippines | Emerging | 7.25 | 6.17 | 42.57 | 48.29 | 3.74 | 7.00 | 6.19 | 3.66 | 4.14 | 0.43 | 4.17 | 5.44 |
| Poland | Emerging | 6.68 | 5.16 | 81.64 | 66.44 | 3.39 | 4.66 | 5.22 | 3.20 | 4.56 | 0.70 | 3.58 | 3.09 |
| Russia | Emerging | 6.09 | 4.00 | 574.30 | 54.49 | 3.59 | 4.84 | 3.95 | 3.31 | 3.27 | 0.32 | 2.60 | 5.93 |
| South Africa | Emerging | 6.33 | 7.04 | 428.65 | 60.47 | 3.56 | 4.34 | 5.60 | 5.14 | 6.48 | 0.69 | 5.38 | 5.13 |
| Taiwan | Emerging | 8.04 | 6.76 | 433.07 | 80.04 | 6.04 | 6.20 | 5.91 | 5.09 | 6.50 | 0.09 | 5.67 | 5.90 |
| Thailand | Emerging | 6.55 | 6.57 | 101.62 | 58.18 | 5.96 | 5.68 | 5.77 | 4.76 | 4.74 | 0.69 | 5.68 | 5.64 |
| Turkey | Emerging | 8.09 | 5.91 | 116.21 | 49.46 | 3.07 | 6.54 | 5.46 | 4.03 | 4.68 | 0.72 | 4.55 | 4.53 |
| Ukraine | Emerging | 7.64 | 4.29 | 25.16 | 46.17 | 4.06 | 3.54 | 4.68 | 2.04 | 2.94 | 0.46 | 2.65 | 4.59 |
| Bulgaria | Frontier | 7.37 | 4.87 | 5.83 | 56.14 | 4.50 | 3.69 | 3.15 | 3.75 | 3.99 | 0.22 | 3.14 | 4.88 |
| Croatia | Frontier | 7.37 | 4.72 | 17.98 | 59.95 | 3.46 | 3.13 | 4.02 | 2.64 | 4.13 | 0.15 | 5.20 | 3.42 |
| Estonia | Frontier | 8.46 | 7.27 | 3.69 | 63.23 | 5.76 | 4.40 | 6.16 | 6.28 | 6.40 | 0.06 | 5.05 | 6.30 |
| Jordan | Frontier | 7.39 | 5.95 | 21.31 | 48.02 | 4.67 | 5.33 | 5.24 | 5.35 | 5.99 | 0.07 | 5.08 | 5.20 |
| Lithuania | Frontier | 8.84 | 5.33 | 5.15 | 62.04 | 4.04 | 5.51 | 5.26 | 3.69 | 5.45 | 0.11 | 5.35 | 5.79 |
| Qatar | Frontier | 7.42 | 6.91 | 66.74 | 80.29 | 5.20 | 5.66 | 6.35 | 6.14 | 6.60 | 0.15 | 7.66 | 5.12 |
| Romania | Frontier | 6.44 | 4.38 | 15.93 | 53.00 | 3.68 | 3.43 | 3.46 | 3.49 | 3.75 | 0.32 | 2.62 | 3.49 |
| Slovak Republic | Frontier | 7.41 | 6.50 | 3.77 | 65.66 | 5.09 | 4.60 | 4.68 | 4.23 | 5.16 | 0.82 | 5.19 | 6.13 |
| Slovenia | Frontier | 7.48 | 5.06 | 10.07 | 79.16 | 3.83 | 4.34 | 5.60 | 3.95 | 4.74 | 0.13 | 6.10 | 2.65 |
| Iceland | Other | 9.55 | 7.24 | 16.87 | 86.57 | 3.45 | 7.12 | 7.80 | 6.96 | 7.55 | 0.03 | 9.32 | 5.83 |
| Kazakhstan | Other | 6.58 | 5.37 | 19.20 | 54.07 | 5.05 | 5.72 | 4.33 | 4.41 | 4.79 | 0.07 | 4.29 | 6.53 |
| Venezuela | Other | 5.11 | 4.99 | 5.97 | 38.81 | 2.54 | 4.78 | 3.05 | 1.17 | 2.88 | 0.92 | 2.15 | 4.55 |

## A.2 Data for Hypothesis Two – Location Choices

Please see overleaf

# Data for Hypothesis Two - Method I

| Company Name | Primary Listing | Current Listing | Previous Primary Listing | Moved? | Formed in a country without operations? | Where are operations? | Firm Type |
|---|---|---|---|---|---|---|---|
| AFRICAN EAGLE RESOURCES PLC | London Stock Exchange | United Kingdom | United Kingdom | | Yes | Zambia | Outside-In Firms |
| AFRICAN OXYGEN LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| AFRICAN RAINBOW MINERALS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| ANGLO AMERICAN PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| ANGLO PLATINUM LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| ANGLOGOLD ASHANTI LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| Anooraq Resources Corporation | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| AQUARIUS PLATINUM LIMITED | Australian Stock Exchange | Australia | Australia | | Yes | South Africa | Outside-In Firms |
| BARLOWORLD LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| BHP BILLITON PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| BRAIT S.A. | Luxembourg Stock Exchange | Luxembourg | Johannesburg Sto | Yes | | | Corporate Emigrants |
| BRC DIAMONDCORE LIMITED | Toronto Stock Exchange | Canada | Canada | | Yes | DRC | Outside-In Firms |
| CENTRAL RAND GOLD LIMITED | London Stock Exchange | United Kingdom | United Kingdom | | Yes | South Africa | Outside-In Firms |
| COAL OF AFRICA LIMITED | Australian Stock Exchange | Australia | Australia | | Yes | South Africa | Outside-In Firms |
| CONAFEX HOLDINGS SOCIETE ANONYME | Luxembourg Stock Exchange | Luxembourg | Luxembourg | | Yes | South Africa | Outside-In Firms |
| DATATEC LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| DIMENSION DATA HOLDINGS PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| DRDGOLD LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| EASTERN PLATINUM LIMITED | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| FIRST URANIUM CORPORATION | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| FIRSTRAND LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| GOLD FIELDS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| GREAT BASIN GOLD LIMITED | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| HALOGEN HOLDINGS SOCIETE ANONYME | Luxembourg Stock Exchange | Luxembourg | Luxembourg | | Yes | South Africa | Outside-In Firms |
| HARMONY GOLD MINING COMPANY LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| HIGHVELD STEEL AND VANADIUM CORP LD | JSE Limited | South Africa | South Africa | | | | National Champs |
| IMPALA PLATINUM HOLDINGS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| INVESTEC PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| IPSA GROUP PLC | London Stock Exchange | United Kingdom | United Kingdom | | Yes | South Africa | Outside-In Firms |
| LIBERTY INTERNATIONAL PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| LONDON FINANCE AND INVEST. GRP PLC | London Stock Exchange | United Kingdom | United Kingdom | | | | |
| LONMIN PLC | London Stock Exchange | United Kingdom | United Kingdom | | Yes | South Africa | Outside-In Firms |
| LONRHO PLC | London Stock Exchange | United Kingdom | United Kingdom | | | Mozambique | Outside-In Firms |
| MARSHALL MONTEAGLE HLDGS SOC ANON | Luxembourg Stock Exchange | Luxembourg | Luxembourg | | Yes | South Africa | Outside-In Firms |
| METOREX LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| METROPOLITAN HOLDINGS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| Mondi plc | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| MUTUAL & FEDERAL INSURANCE COMP LD | JSE Limited | South Africa | South Africa | | | | National Champs |
| NEDBANK GROUP LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| NET 1 UEPS TECHNOLOGIES INC | Nasdaq Stock Market | United States | Johannesburg Sto | Yes | | | Corporate Emigrants |
| NICTUS BEPERK | JSE Limited | South Africa | South Africa | | | | National Champs |
| OCEANA GROUP LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| OLD MUTUAL PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| PAN AFRICAN RESOURCES PLC | London Stock Exchange | United Kingdom | United Kingdom | | Yes | South Africa | Outside-In Firms |
| PRETORIA PORTLAND CEMENT COMPANY LD | JSE Limited | South Africa | South Africa | | | | National Champs |
| RANDGOLD & EXPLORATION COMPANY LD | JSE Limited | South Africa | South Africa | | | | National Champs |
| ROCKWELL DIAMONDS INCORPORATED | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| SABMILLER PLC | London Stock Exchange | United Kingdom | Johannesburg Sto | Yes | | | Corporate Emigrants |
| SANLAM LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| SANTAM LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| SAPPI LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| SASOL LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| SHOPRITE HOLDINGS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| STANDARD BANK GROUP LTD | JSE Limited | South Africa | South Africa | | | | National Champs |
| TAWANA RESOURCES NL | Australian Stock Exchange | Australia | Australia | | Yes | South Africa | Outside-In Firms |
| TELKOM SA LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| TONGAAT HULETT LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| TRANS HEX GROUP LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| TRUWORTHS INTERNATIONAL LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| URANIUM ONE INC | Toronto Stock Exchange | Canada | Canada | | Yes | South Africa | Outside-In Firms |
| WOOLWORTHS HOLDINGS LIMITED | JSE Limited | South Africa | South Africa | | | | National Champs |
| ZAMBIA COPPER INVESTMENTS LIMITED | JSE Limited | South Africa | South Africa | | Yes | Zambia | Outside-In Firms |

# Data for Hypothesis Two - Method II

Switch Databases - Sample Reports - Feedback

| Search | List of Deals | Summary Records | Complete Records | League Tables | Analyses & Overview |
|---|---|---|---|---|---|

Send to · Alert · Print · Export · Support · Trash · Profile · Log out

○ Quick Deal search

● Advanced Deal search

**Search Criteria Locator**

- □ Company Name
- ⊞ Company/Deal ID Number
- ⊞ Buy/Sell rumours
- ⊞ Activity
- □ Text search
- □ Time period
- ⊞ Geography
- □ Current deal status
- ⊞ Deal type & method of pa
- □ Stake
- □ Deal values
- ⊞ Bid premium
- ⊞ Deal multiples
- ⊞ Financials
- □ Quoted companies
- ⊞ Stock Data
- ⊞ Advisor
- □ Regulatory Body
- ⊞ Company
- □ Deals with multiple parti
- ⊞ Updated deals
- ⊞ Load a file
- □ Load a search

⊕ Deals with Zephyr Editorial
ⓘ News related to my searches

## Search summary

| | | Selected criteria | Specified values or options | Step result |
|---|---|---|---|---|
| 1. | ⊗ ☑ □ | Deal type | Acquisition, Merger | 333,358 |
| 2. | ⊗ ☑ □ | Quoted companies | Quoted target | 249,721 |
| 3. | ⊗ ☑ ☑ | Country | **Target** Afghanistan, Albania, Algeria, Andorra, Angola... (Cross Border Deals) | 125,703 |
| 4. | ⊗ ☑ ☑ | Method of payment | Shares | 34,707 |
| 5. | ⊗ ☑ ☑ | Percentage of Stake | **Final Stake** Min = 50 Max = 100 | 296,421 |
| 6. | ⊗ ☑ ☑ | Current deal status | Announced, Completed, Pending - awaiting regulating approval, Pending - awaiting shareholder approval, Pending - reason not specified... | 668,394 |
| 7. | ⊗ ☑ □ | Sub-deal type | Restructuring | 9,225 |
| 8. | ⊗ ☑ ☑ | Sub-deal type | Exit, Partial exit and Exit New Stake | 15,786 |
| 9. | ⊗ ☑ ☑ | Time period | 2000 - Until current date (Announced, Completed, Include deals last updated in this time period) | 668,800 |

Total number of deals selected: 252

○ All ANDs  ○ All ORs  ● Other Boolean search

| 3 And 5 And 6 And 8 And 4 And 9 | OK |
|---|---|

⊗ Delete the search step
☑ Modify the search step
☑ Activate or deactivate the search step

| New search | | | Save a search | Save a file |
|---|---|---|---|---|

To add a search step, click on the selected criterium in the list on the left.

Once the search matches your queries, continue with one of the tabs at the top of screen:
List, Organisation Report, Analyses.

# Data for Hypothesis Two - Method II

| Acquirer \ Countries (Target) | Total |
|---|---|
| Australia | 2 |
| Austria | 2 |
| Canada | 8 |
| Denmark | 7 |
| Finland | 5 |
| France | 15 |
| Germany | 22 |
| Hong Kong | 1 |
| Ireland | 5 |
| Israel | 6 |
| Italy | 1 |
| South Korea | 2 |
| Luxembourg | 2 |
| Netherlands | 9 |
| New Zealand | 1 |
| Norway | 5 |
| Portugal | 1 |
| Singapore | 2 |
| Argentina | 3 |
| Brazil | 1 |
| China | 9 |
| Czech Republic | 2 |
| Hungary | 1 |
| India | 2 |
| Poland | 2 |
| Russian Federation | 2 |
| South Africa | 2 |
| Estonia | 1 |
| Malta | 2 |
| Romania | 1 |
| Slovakia | 1 |
| Barbados | 1 |
| Bermuda | 1 |
| Cayman Islands | 1 |
| Iceland | 1 |
| **Total** | **255** |

Column totals (Total row) by target country:

| Target | Total |
|---|---|
| Argentina | 1 |
| Australia | 2 |
| Belgium | 4 |
| Bermuda | 4 |
| Brazil | 4 |
| Canada | 1 |
| Cayman Is | 25 |
| Chile | 7 |
| Denmark | 1 |
| Finland | 3 |
| France | 8 |
| Germany | 5 |
| Hong Kong | 13 |
| Iceland | 2 |
| India | 3 |
| Ireland | 1 |
| Israel | 5 |
| Italy | 8 |
| Japan | 4 |
| Kenya | 1 |
| Malaysia | 1 |
| Netherland | 4 |
| Norway | 7 |
| Philippines | 1 |
| Poland | 1 |
| Russian F | 1 |
| Singapore | 3 |
| South Afric | 1 |
| Spain | 5 |
| Sweden | 9 |
| Switzerlan | 6 |
| United Kin | 38 |
| United Sta | 78 |
| Virgin Islar | 1 |
| **Total** | **255** |

## A.3 Data for Hypothesis Three – Location Predictors

Please see overleaf

# Data for Hypothesis Three

## Ownership Data

| Company Name | Firm Type | Direct State Ownership % 2008 Jan | 2006 Jan | 2004 Jan | Direct % Weighted Average | Outlier Check | Total State Ownership % 2008 Jan | 2006 Jan | 2004 Jan | Total % Weighted Average | Outlier Check |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ANGLO AMERICAN PLC | Corporate Emigrants | 4,722 | 6,283 | 6,062 | 5,838 | 3.8% | 4,962 | 7,475 | 7,348 | 6,896 | 6.6% |
| BHP BILLITON PLC | Corporate Emigrants | 6,019 | 6,889 | 7,184 | 6,892 | 4.2% | 7,172 | 9,293 | 8,362 | 8,310 | 0.6% |
| BRAIT S.A. | Corporate Emigrants | 15,636 | 5,279 | 6,645 | 8,170 | 18.7% | 19,489 | 6,956 | 11,314 | 12,077 | 6.3% |
| DIMENSION DATA HOLDINGS PLC | Corporate Emigrants | 6,737 | 9,113 | 6,152 | 6,861 | 10.3% | 12,695 | 11,515 | 7,472 | 9,325 | 19.9% |
| INVESTEC PLC | Corporate Emigrants | 10,134 | 7,227 | 9,857 | 9,386 | 5.0% | 12,541 | 8,919 | 12,782 | 11,961 | 6.9% |
| LIBERTY INTERNATIONAL PLC | Corporate Emigrants | 5,217 | 5,522 | 5,374 | 5,372 | 0.0% | 6,663 | 6,263 | 6,471 | 6,468 | 0.0% |
| Mondi plc | Corporate Emigrants | 2,115 | 3,638 | | 2,877 | 26.5% | 2,234 | 3,825 | | 3,030 | 26.3% |
| NET 1 UEPS TECHNOLOGIES INC | Corporate Emigrants | 0 | 0 | | 0.000 | 0.0% | 0.073 | 0 | | 0.037 | 0.0% |
| OLD MUTUAL PLC | Corporate Emigrants | 5,575 | 7,283 | 7,693 | 7,187 | 7.0% | 6,191 | 7.75 | 8,896 | 8,126 | 9.5% |
| SABMILLER PLC | Corporate Emigrants | 3,776 | 6,538 | 11,666 | 9,062 | 28.7% | 4,562 | 7.6 | 14,079 | 10,880 | 29.4% |
| AFRICAN OXYGEN LIMITED | National Champs | 2,517 | 0,604 | 1.84 | 1,761 | 6.5% | 4,616 | 2,571 | 4,178 | 3,944 | 5.9% |
| AFRICAN RAINBOW MINERALS LIMITED | National Champs | 2,726 | 0.83 | 1,749 | 2,614 | 0.7% | 5,225 | 4,134 | 8,364 | 6,890 | 21.4% |
| ANGLO PLATINUM LIMITED | National Champs | 4,155 | 1,482 | 2,478 | 4,159 | 5.2% | 4,363 | 2,429 | 2,905 | 3,101 | 6.3% |
| ANGLOGOLD ASHANTI LIMITED | National Champs | 9,619 | 1.55 | 3,209 | 15,685 | 22.8% | 11,136 | 1,906 | 3,857 | 4,923 | 21.6% |
| BARLOWORLD LIMITED | National Champs | 14,867 | 15,444 | 16,038 | 8,864 | 2.3% | 21,735 | 19,992 | 21,569 | 21,287 | 1.3% |
| DATATEC LIMITED | National Champs | 10,873 | 11,567 | 7,293 | 0,803 | 17.7% | 17,851 | 18,877 | 12,755 | 14,999 | 15.0% |
| DRDGOLD LIMITED | National Champs | 1,357 | 1,538 | 0,374 | 5,093 | 53.4% | 1,472 | 1,555 | 0,374 | 0,830 | 54.9% |
| FIRSTRAND LIMITED | National Champs | 9,766 | 8,702 | 8,549 | 8,823 | 3.1% | 11,828 | 11,052 | 11,712 | 11,603 | 0.9% |
| GOLD FIELDS LIMITED | National Champs | 5,497 | 6,845 | 4,375 | 2,831 | 14.1% | 6,119 | 7,738 | 6,076 | 6,417 | 5.3% |
| HARMONY GOLD MINING COMPANY LIMITED | National Champs | 3.07 | 2,311 | 2,925 | 0,679 | 3.3% | 5,511 | 5,092 | 4,102 | 4,582 | 10.5% |
| HIGHVELD STEEL AND VANADIUM CORP LD | National Champs | 2,256 | 0,015 | 0,374 | 7,724 | 44.9% | 2,367 | 0,482 | 1,634 | 1,550 | 5.4% |
| IMPALA PLATINUM HOLDINGS LIMITED | National Champs | 9,175 | 6,653 | 7,597 | 1,782 | 1.6% | 10,738 | 10.47 | 11,054 | 10,874 | 1.7% |
| METOREX LIMITED | National Champs | 8,908 | 0 | 0 | 14,032 | 100.0% | 9,518 | 3,776 | 6,348 | 6,468 | 1.8% |
| METROPOLITAN HOLDINGS LIMITED | National Champs | 12.92 | 14,373 | 14,289 | 0,863 | 1.8% | 18,933 | 20,433 | 19.71 | 19,699 | 0.1% |
| MUTUAL & FEDERAL INSURANCE COMP LD | National Champs | 0,137 | 0,674 | 1,168 | 5,893 | 35.3% | 0,812 | 1,288 | 1,287 | 1,192 | 8.0% |
| NEDBANK GROUP LIMITED | National Champs | 7,069 | 5,496 | 5,633 | 0,000 | 4.4% | 8,098 | 7,247 | 7.07 | 7,311 | 3.3% |
| NICTUS BEPERK | National Champs | 0 | 0 | 0 | 3,296 | 0.0% | 0 | 0 | 0 | 0,000 | 0.0% |
| OCEANA GROUP LIMITED | National Champs | 3.46 | 4,984 | 2,678 | 5,576 | 18.7% | 6,033 | 7,419 | 4,031 | 5,109 | 21.1% |
| PRETORIA PORTLAND CEMENT COMPANY LD | National Champs | 14,603 | 2,837 | 3.48 | 0,000 | 37.6% | 15,558 | 3,113 | 4,602 | 6,495 | 29.1% |
| RANDGOLD & EXPLORATION COMPANY LD | National Champs | 0 | 0 | 0 | 13,237 | 0.0% | 1,989 | 0 | 0 | 0,398 | 100.0% |
| SANLAM LIMITED | National Champs | 12,616 | 14,377 | 13,064 | 4,120 | 1.3% | 14,889 | 16.93 | 16.93 | 16,522 | 2.5% |
| SANTAM LIMITED | National Champs | 2,191 | 2,781 | 5,209 | 17,541 | 26.4% | 3,602 | 5,321 | 7.61 | 6,351 | 19.8% |
| SAPPI LIMITED | National Champs | 17,895 | 16,473 | 17,779 | 20,977 | 1.4% | 22,05 | 18,011 | 19,902 | 19,953 | 0.3% |
| SASOL LIMITED | National Champs | 17,992 | 22,478 | 21,471 | 9,789 | 2.4% | 19,395 | 24,77 | 24,645 | 23,620 | 4.3% |
| SHOPRITE HOLDINGS LIMITED | National Champs | 10.52 | 9,551 | 9,625 | 13,086 | 1.7% | 14,477 | 14,124 | 13,445 | 13,787 | 2.5% |
| STANDARD BANK GROUP LTD | National Champs | 14,757 | 12,692 | 12.66 | 48,300 | 3.3% | 19.73 | 18,564 | 18,258 | 18,614 | 1.9% |
| TELKOM SA LIMITED | National Champs | 55,172 | 55,118 | 43,737 | 3,257 | 9.4% | 56,563 | 58.1 | 45.08 | 49,981 | 9.8% |
| TONGAAT HULETT LIMITED | National Champs | 6,213 | 5,698 | 1,458 | 6,322 | 55.2% | 8,657 | 8,156 | 3,314 | 5,351 | 38.1% |
| TRANS HEX GROUP LIMITED | National Champs | 5,532 | 7,731 | 6,115 | 8,481 | 3.3% | 7,577 | 10,655 | 7,302 | 8,028 | 9.0% |
| TRUWORTHS INTERNATIONAL LIMITED | National Champs | 11,287 | 10,345 | 6,925 | 9,498 | 18.4% | 13,309 | 16,743 | 15,741 | 15,455 | 1.9% |
| WOOLWORTHS HOLDINGS LIMITED | National Champs | 13,288 | 13,928 | 6,758 | | 28.8% | 18,652 | 19,004 | 15,248 | 15,680 | 8.6% |

## Transnationality % - Assets / Sales

| Company Name | Assets 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Assets Average | Sales 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | Sales Average |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANGLO AMERICAN PLC | | 64.49 | 43.86 | 39.45 | 51.87 | 48.81 | 49.70 | | 53.70 | 60.32 | 52.87 | 88.56 | 87.69 | 68.56 |
| BHP BILLITON PLC | | | 44.39 | 85.39 | 94.08 | 93.89 | 79.44 | | | 89.09 | 95.61 | 96.63 | 97.26 | 94.65 |
| BRAIT S.A. | | | 54.49 | 39.31 | 40.14 | 45.22 | 44.79 | | | | | 29.54 | 15.76 | 22.65 |
| DIMENSION DATA HOLDINGS PLC | | | 89.56 | 66.30 | 81.57 | 84.55 | 80.49 | | | 82.50 | 77.20 | 75.35 | 73.25 | 77.07 |
| INVESTEC PLC | 53.94 | 49.76 | | 44.23 | 56.45 | 52.54 | 46.45 | 53.94 | 49.76 | 43.06 | 50.60 | 53.71 | 54.09 | 50.86 |
| LIBERTY INTERNATIONAL PLC | | | 100.00 | 100.29 | 100.00 | 100.00 | 100.07 | | | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
| Mondi plc | | | | 77.80 | 76.52 | 75.12 | 76.48 | | | | 90.14 | 90.29 | 81.97 | 87.47 |
| NET 1 UEPS TECHNOLOGIES INC | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | | | | 10.70 | 10.70 |
| OLD MUTUAL PLC | | | 55.47 | 57.64 | 55.28 | 57.73 | 56.53 | | | 50.88 | 60.69 | 69.22 | 81.48 | 60.26 |
| SABMILLER PLC | | | 45.88 | 43.95 | 47.55 | 65.39 | 50.69 | | | 78.72 | 79.45 | 81.52 | 15.12 | 80.29 |
| AFRICAN OXYGEN LIMITED | | | 8.85 | 5.16 | 8.96 | 9.34 | 8.08 | | | 74.92 | 54.44 | 61.68 | 76.29 | 13.35 |
| AFRICAN RAINBOW MINERALS LIMITED | | | 3.59 | 1.74 | 7.16 | 1.49 | 3.49 | | | 73.57 | 46.36 | 80.38 | 84.72 | 66.83 |
| ANGLO PLATINUM LIMITED | | 0.00 | 0.00 | 0.00 | 0.00 | 2.51 | 0.50 | | 76.47 | 54.52 | 53.35 | 59.47 | 54.09 | 72.30 |
| ANGLOGOLD ASHANTI LIMITED | | 70.80 | 70.56 | 76.38 | 76.90 | 72.50 | 73.43 | | 56.07 | 40.07 | 42.11 | 38.66 | 32.55 | 55.50 |
| BARLOWORLD LIMITED | | | 50.54 | 49.26 | 53.09 | 40.33 | 48.31 | | | 100.00 | 100.00 | 93.68 | 92.16 | 38.35 |
| DATATEC LIMITED | | | | 86.82 | 87.21 | 84.29 | 86.11 | | | | | | | 96.46 |
| DRDGOLD LIMITED | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.00 | 0.00 | 3.82 | 3.82 | 0.00 |
| FIRSTRAND LIMITED | | | 5.56 | 12.53 | 13.65 | 11.57 | 10.83 | | | 0.00 | 0.00 | 3.82 | | 3.82 |
| GOLD FIELDS LIMITED | 27.76 | 55.42 | 37.15 | 55.11 | 56.99 | | 46.49 | 37.12 | 38.98 | 38.30 | 38.00 | 44.77 | | 39.43 |
| HARMONY GOLD MINING COMPANY LIMITED | | | | 11.25 | 23.96 | 17.15 | 17.45 | | | | 9.53 | 19.72 | 5.07 | 44.77 |
| HIGHVELD STEEL AND VANADIUM CORP LD | | | 0 | 0 | 0 | 0 | 0.00 | | | 50.28 | 48.94 | 40.87 | 38.97 | 74.51 |
| IMPALA PLATINUM HOLDINGS LIMITED | | | 7.56 | 7.52 | 7.64 | 10.88 | 8.40 | | | 59.31 | 75.28 | 77.29 | 86.16 | 74.51 |
| METOREX LIMITED | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 22.71 | 37.97 | 35.96 | 50.32 | 36.74 |
| METROPOLITAN HOLDINGS LIMITED | | | 6.56 | 7.19 | 7.39 | | 7.05 | | | 5.02 | 4.10 | 0.00 | 0.00 | 0.00 |
| MUTUAL & FEDERAL INSURANCE COMP LD | 0.00 | 0.00 | 6.56 | 7.19 | 7.39 | 8.73 | 7.05 | 0.00 | 0.00 | 5.02 | 4.10 | 4.02 | 7.93 | 4.38 |
| NEDBANK GROUP LIMITED | | 11.50 | 11.93 | 7.44 | 9.52 | 8.73 | 9.83 | | | | | 7.13 | | 7.53 |
| NICTUS BEPERK | | | 12.73 | 81.41 | 81.90 | 78.58 | 63.66 | | | 17.36 | 84.89 | 91.30 | 84.96 | 69.63 |
| OCEANA GROUP LIMITED | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | 5.33 | 54.19 | 56.40 | 46.34 | 33.34 | 47.57 |
| PRETORIA PORTLAND CEMENT COMPANY LD | | | 0.00 | 0.00 | 0.00 | 0 | 0.00 | | | 0.00 | 6.00 | 7.04 | 7.89 | 6.56 |
| RANDGOLD & EXPLORATION COMPANY LD | | | | | | 0.32 | 0.00 | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| SANLAM LIMITED | | | 21.02 | | | | 10.67 | | | 6.85 | | 1.76 | 2.31 | 1.16 |
| SANTAM LIMITED | | | 12.15 | 11.87 | | | 12.01 | | | | 7.08 | | 5.23 | 5.23 |
| SAPPI LIMITED | | | 64.08 | 57.35 | 57.54 | 57.16 | 59.03 | | | 73.53 | 73.49 | 74.77 | 78.04 | 78.68 |
| SASOL LIMITED | | | 38.84 | 40.66 | 42.83 | 35.39 | 39.43 | | | 25.49 | 48.12 | 48.57 | 50.26 | 44.54 |
| SHOPRITE HOLDINGS LIMITED | | | 17.58 | 18.82 | 19.86 | 18.48 | 18.69 | | | 10.01 | 11.06 | 12.37 | 13.69 | 11.78 |
| STANDARD BANK GROUP LTD | | | 25.41 | 29.54 | 25.02 | 28.39 | 27.09 | | | 9.06 | 14.28 | 25.38 | 20.78 | 17.37 |
| TELKOM SA LIMITED | | | 3.76 | 6.46 | 14.19 | 19.99 | 11.10 | | | 3.11 | 4.04 | 6.49 | 9.67 | 5.83 |
| TONGAAT HULETT LIMITED | | | 14.24 | 26.07 | 36.96 | | 25.76 | | 32.40 | 32.95 | 10.30 | 13.75 | 7.79 | 22.35 |
| TRANS HEX GROUP LIMITED | | | 49.17 | 31.02 | 28.77 | 8.79 | 29.44 | | | 16.50 | 13.70 | 15.58 | 3.30 | 13.39 |
| TRUWORTHS INTERNATIONAL LIMITED | | | | | 0.16 | 0.11 | 0.14 | | | | | 2.34 | | 2.82 |
| WOOLWORTHS HOLDINGS LIMITED | | | 4.57 | 4.88 | 6.07 | 9.48 | 6.25 | | | 8.52 | 9.07 | 10.84 | 12.00 | 10.11 |

## Summary Statistics

### Direct State Ownership %
| | |
|---|---|
| COUNT | 10 |
| MIN | 0.00 |
| MAX | 9.39 |
| AVERAGE | 6.16 |
| STDEV | 2.88 |

| | |
|---|---|
| COUNT | 31 |
| MIN | 0.00 |
| MAX | 48.30 |
| AVERAGE | 7.96 |
| STDEV | 9.30 |

| MEAN Δ | 1.80 |
|---|---|
| | 29% |

### Total State Ownership %
| | |
|---|---|
| COUNT | 10 |
| MIN | 0.04 |
| MAX | 12.08 |
| AVERAGE | 7.71 |
| STDEV | 3.85 |

| | |
|---|---|
| COUNT | 31 |
| MIN | 0.00 |
| MAX | 49.98 |
| AVERAGE | 10.71 |
| STDEV | 10.01 |

| MEAN Δ | 3.00 |
|---|---|
| | 39% |

### Transnationality % - Sales
| | |
|---|---|
| COUNT | 10 |
| MIN | 0 |
| MAX | 100 |
| AVERAGE | 65.26 |
| STDEV | 29.75 |

| | |
|---|---|
| COUNT | 30 |
| MIN | 0 |
| MAX | 96.46 |
| AVERAGE | 29.70 |
| STDEV | 29.03 |

| MEAN Δ | -35.56 |
|---|---|
| | -54% |

### Transnationality % - Assets
| | |
|---|---|
| COUNT | 10 |
| MIN | 0.00 |
| MAX | 100.07 |
| AVERAGE | 58.47 |
| STDEV | 27.63 |

| | |
|---|---|
| COUNT | 31 |
| MIN | 0.00 |
| MAX | 86.11 |
| AVERAGE | 20.10 |
| STDEV | 24.23 |

| MEAN Δ | -38.36 |
|---|---|
| | -66% |

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