

Macro, Meso, Micro: The Potential of Process Methods in Internationalization Research

Nigel L Williams¹, Tom Ridgman², Y S Shi³, Ms Ferdinand Nicole⁴

1 University of Bedfordshire Business School
Luton
Bedfordshire UK
LU1 3JU
T + 44 (0) 1582 743 122
F + (0) 1234 400 400
Nwilliams01@beds.ac.uk

^{2&3} Institute for Manufacturing, University of Cambridge
Alan Reece Building,
17 Charles Babbage Road,
Cambridge, CB3 0FS, UK
T+ +44 (0)1223 766141
F+ +44 (0)1223 464217
² twr20@cam.ac.uk
³ ys@eng.cam.ac.uk

Nicole Ferdinand
London Metropolitan University
Stapleton House
277 Holloway Road
London N7 8HN
+44 (0)207 133 3830/1
n.ferdinand@londonmet.ac.uk

Abstract

Macro, Meso, Micro: The Potential of Process Methods in Internationalization research

While there have been calls for a more holistic perspective of Internationalization that incorporates firm and environment, research methods currently employed face limitations in capturing and analyzing the required data. This challenge is magnified when attempting to examine the international activities of emerging market firms who are increasingly participating in global markets. Generally, these organizations possess limited resources and are unwilling to participate in research that does not bring immediate perceived benefits.

Adoption of process approaches provides an avenue to resolve both dilemmas. By collecting and analyzing patterns of events over a long period of time, it is possible to assess firm development within a given context. It is also possible to generate useful output at an early stage of research, sustaining organizational commitment and providing progressively deeper access over time. Using an example of a study conducted of firms in small developing countries, this paper develops a process based case methodology for internationalization research. In this method, archival and interview data are collected and analyzed in an iterative manner, utilizing narrative, visual analysis and synthetic strategies. The output is then used to build a framework to explain internationalization from an emerging market context.

INTRODUCTION

Management research has been criticized for adopting a context free perspective (Redding, 2005), ignoring country factors that may influence organizational actions. Internationalization research, in particular, has often taken a context independent approach (G. Jones & Khanna, 2006) treating it as peripheral or fixed constraint (Bijmolt & Zwart, 1994). Most existing international business theory has been formulated using data from developed countries (Markusen, 1995; Rugman & Verbeke, 2005) with strong institutions and relative stability. Countries with a high level of volatility and uncertainty are far more common (Easterly & Kraay, 2000), and in them, the environment is anything but fixed. Under these conditions a broader view of the internationalization phenomenon is required, one that incorporates firm and environment.

To build this holistic understanding, examination of patterns rather than properties associated with organizations is needed. Since IB's current tools face difficulty in capturing this data, extension of methodological options to include Process approaches is necessary (Langley, 1999b). This paper presents the development of such an approach along with an example application in Trinidad and Tobago, a volatile small state. The rest of this paper is structured as follows First, the existing paradigms in IB along with their methods are presented. Next, a process method is developed using an example of firms seeking to internationalize from a small developing country.

LITERATURE REVIEW: RESEARCH METHODS IN INTERNATIONAL BUSINESS

THEORY DEVELOPMENT

Over time, researchers have shifted the unit of analysis in international business (IB) from country in international trade models, to firms and finally to the individual entrepreneur. Early economic work in international trade (Ricardo, 1817, p. 72) sought to explain why countries trade. More recent work, however has examined how and why firms enter international markets with initially economic (Hymer, 1976), followed by behavioral (Johanson & Vahlne, 1977) and finally multi theoretical models (Chandra, 2007; M. V. Jones & Coviello, 2005) being employed to describe the actions of firms. The range of factors examined in these models has also undergone similar expansion, from home country resources to a number of firm and country factors.

Existing theories, however, face some limitations when attempting to describe the internationalization process in manufacturing firms , Eclectic and Internalization theories describe why a firm may choose to operate in external markets but do not describe the process of how such a firm evolves from domestic to international. Behavioral models focus on the evolution of firms from domestic to export production, but assume unidirectional, incremental change in distinct stages. Recent firm internationalization theories such as Born Globals, do not describe sustained development of firms over time(Gabrielsson, Kirpalani, Dimitratos, Solberg, & Zucchella, 2008).

Table 1: Overview of existing paradigms in IB

	Product Life Cycle (1960)	Stage Models (1977)	Eclectic (OLI) (1981)	Internalization (1976)	Eclectic (Alliance Capital)	U Model (1990)	Network Models	Born Globals	IE	Dragon MNE	IIE
Claim	Incremental expansion of MNE following predetermined path	Incremental expansion following a pre determined path	MNE Expansion based on Ownership advantages (assets and transactions), Locational advantages and Internalization advantages	MNE expansion based on type of resources owned by firm and host country characteristics	MNE Expansion based on need to enhance OLI by leveraging resources from partners and countries	Expansion based on increasing market knowledge/ experience	Relationship driven expansion of firms	Global environment lowers costs of and facilitates cross border activity for new firms.	Expansion based on pursuit of opportunities over international boundaries	Rapid expansion to obtain resources unavailable in domestic market	Firms internationalize to exploit domestic resources
Underlying Mechanism	Domestic and foreign market conditions	Risk tolerance determines degree of international commitment	Firm Resources, Country Resource, Country Factors at host location (Transaction costs)	Firm Resources, Transaction costs at host location	Firm Resources, Country Resources, Country factors, Relationships and networks	Market knowledge (Intangible resource) drives market commitment (Resource commitment), resulting in international activity	Firms' activities are performed in a business network comprising of suppliers, customers and competitors.	Combination of Resources and Networks Existence of exploitable global niches, available international market knowledge from management/ partners.	Combination of Resources, Networks and Orientation. Changing international conditions, entrepreneurial orientation and firm characteristics drive international behavior	Combination of Resources, Networks and Orientation. Firms adopt a global outlook to obtain resources and extend their presence through leveraging relationships	Combination of Resources, Networks and Orientation. Entry into cross national institution (ethnic or other network) enables exploitation of domestic resources externally
Empirical Backing	Expansion of US MNEs	Expansion of European SMEs, eg. (Johanson and Vahlne 1977)	Investment patterns by US and Japanese firms	Investment patterns by US	-	Expansion of European SMEs, eg. (Johanson and Vahlne 1977)	Expansion of Scandinavian SMES, eg. Johanson and Mattson 1988	Rapid expansion of High Technology SMES, eg. Bell 1995	Development process of European/US SMES, eg Andersson 2000	Expansion of Firms from South America, India, China and Taiwan	Expansion of Firms from Singapore and Hongkong
Common Criticisms	Deterministic	Context independent Unidirectional Deterministic Independent process	Static, Conceptual framework for building theory	Does not explain how firms develop advantages	Conceptual framework for building theory	-	Does not describe content of international activity (Akhongas 1998)	Little knowledge of development paths over time	Little knowledge of development paths over time	Little knowledge of development paths over time	Little knowledge of development paths over time
Research Method	Case studies	Case studies of European SMEs	FDI statistics	FDI Statistics, case studies	-	Case studies of European SMEs	Case studies of European SMEs	Case studies of European SMEs	Case studies of European SMEs	Case studies of Emerging market MNEs	Comparative Interview

While they rely on differing underlying mechanisms, the theories in Table 1 were created using either statistical analysis, firm level case studies or interviews with key personnel. The implicit underlying assumption is that the organizational environment is fixed and internationalization is an entirely firm driven phenomenon. While this stance is appropriate for an environment with strong institutions, such as developed countries, it may not be appropriate for emerging markets (Dieleman & Sachs, 2008).

Internationalization as a Resource Development Process

Domestic organizations in small, open developing countries face challenges in their home market due to limited institutional resources. Risk capital is rarely available and a high degree of net outward migration (Carrington & Detragiache, 1998) means that skilled labour is rarely available. Generally, organizations from these countries require an inward internationalization step to access complementary foreign resources such as technology to begin or expand operations (Kumar, Kumar, & Persaud, 1999). Firms in these countries that attempt to sustain or increase their level of activity are inherently entrepreneurial in their orientation (Garud & Karnøe, 2003) and engage in opportunity seeking behaviour for survival, not just growth. To engage in exports requires an even greater effort by organizations, as they are required to negotiate both domestic and export uncertainty, competing against firms without such handicaps (Baldacchino, 2005).

In country environments such as this, resource scarcity not management orientation shapes the actions of organizations (Pfeffer & Salancik, 2003). Firms may either attempt to seek resources in order to overcome constraints (Pollock, 2004), or attempt to avoid them by reducing the level of activity (Lee, Lim, & Tan, 1999). To examine the internationalization of firms from emerging markets, the Resource Based View (RBV) may provide a useful platform for developing theory (Kogut & Zander, 2003). In the RBV, firms are modeled as a collection of resources that generate rents or returns (Mahoney & Pandian, 1992), and have been able to provide a

theoretical explanation for the **direction** of a given firm's activity (Mahoney 1992) as firms can engage in domestic or international diversification (internationalization) based on the nature of available resources. For example, firms are more likely to diversify into related industries (MacDonald, 1985) applying their resource advantages to available market opportunities (Chang & Singh, 1999).

Early categorization in the RBV described firms as a coordinated grouping of human and non human resources (Penrose, 1959) which produce items to be sold at a profit. Extending Penrose's definition, researchers have identified six main categories of resources (Amit & Schoemaker, 1993) : 1) financial (size and type of capital), 2) physical, 3) human, 4) technological (product and process-related), 5) reputation (image, brands, loyalty, trust, goodwill) and 6) organizational resources (management systems). Particular resource characteristics have been suggested by researchers in the Resource Based View (RBV) from which sustained rents can be obtained (Barney 1991): Valuable, Rare, Inimitable (difficult to imitate) and Non Substitutable (VRIN). A focus on individual resources, however, may lead to a tautology if a firm's superior performance is deemed due to its possession of superior resources (Priem & Butler, 2001). A focus on distinctive resource combinations, rather than individual resources, may be a stronger basis for explaining differential patterns of firm activity (Bernard, Redding, & Schott, 2007). Such a classification was created by Miller and Shamsie (1996) that modeled firms as a combination of Four types of resources:

1) Discrete Property Based Resources (DPBR) are resources that require the presence of supporting legal framework in order to exhibit VRIN characteristics. Some examples of these resources are patents, property and mineral leases.

2) Systemic Property-Based Resources (SPBR) take the form of organization wide systems and connected components. While some components may be imitable or substitutable (Barney, 1991), combined within a system, they form an integral part of a VRIN resource.

3) Discrete Knowledge-Based Resources (DKBR) are individual skills that are exhibited by firms (Spender & Grant, 1996). The value of them may be derived from the difficulties competitors face in duplicating their efficiency or effectiveness.

4) Systemic Knowledge-Based Resources (SKBR) are patterns of integrative behaviour that combine individual DKBRs (Malerba & Orsenigo, 2000). Through interaction within a firm, they combine an eclectic mix of firm skills to build a VRIN resource in their own right (Takeuchi, Tesluk, & Yun, 2005). They are highly firm specific as they are based in tacit internal interactions (Martin & Salomon, 2003) and are influenced by the organizational structure and historical experiences of a given organization.

Resource combinations are never static and are reconfigured over time (Welch & Luostarinen, 1988). For small states, policy has been employed as a means of overcoming institutional and natural resource constraints (Henry & Miller, 2009). Domestic firms are required to adapt to conditions created by these policies, experimenting with configurations of property and knowledge resources, before adopting one that is appropriate to the environment (Aldrich & Martinez, 2001). Successful combinations are retained (Tushman & Anderson, 1986) in the population and may be imitated by future entrants (Hannan & Carroll, 2003). The perspective of this adjustment can be divided into internal and external. **Internal resources** are directly owned or controlled by the firm and can be developed through its own experience. Internal resources can also be adjusted by leveraging relationships, such as in alliances with other firms. **External resources** are created by the firm's interaction with its environment and other organizations (Andersen & Suat Kheam, 1998). Both internal and external resources can be reconfigured simultaneously in mergers and acquisitions (Roth, 1995).

THEORETICAL FRAMEWORK: SUSTAINED INTERNATIONALIZATION AS RESOURCE PROFILE RECONFIGURATION

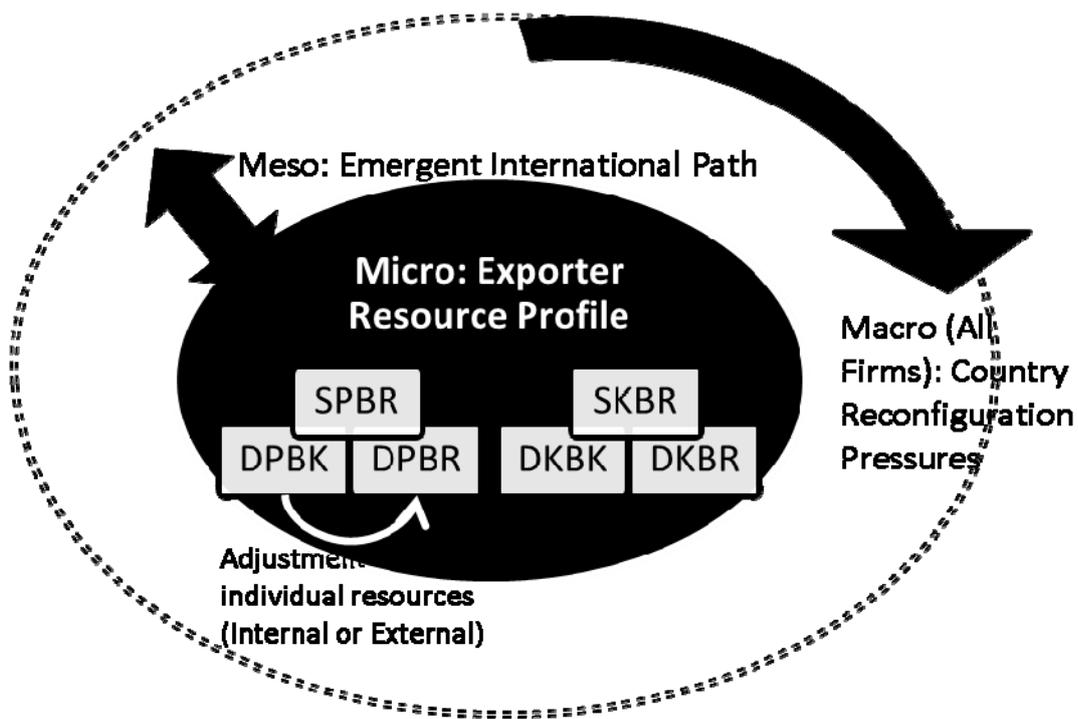
The previous discussion has conceptualized the firm as a combination of property and knowledge resources. Under this perspective, small state manufacturing internationalization can be recast as the outcome of a resource profile development and reconfiguration process (Lewin & Koza, 2001) presented in Figure 1. At the **micro** level, firms build and adjust resource profiles associated with manufacturing composed of property and knowledge assets (Hitt, Ireland, Camp,

& Sexton, 2001). **Macro** forces in the form of policy will encourage organizations to adapt their resource profiles to meet changing domestic and external dictates. Over time, distinct **meso paths** of internationalization in terms of geographic market, mode of operation and product/service configurations may emerge (Figure 1).

The research question that guides this work is therefore:

How do firms adjust resource profiles to sustain internationalization from a Small State?

Figure 1- Theoretical Framework



RESEARCH METHODOLOGY

Examination of internationalization using the above framework requires an approach that can capture dynamic, evolving processes at the Macro, Micro and Meso level. Presently, variance approaches dominate research in the social sciences (A. H. Van de Ven & Engleman, 2004) and have particular strengths in comparing entities or relationships among variables. IB is no

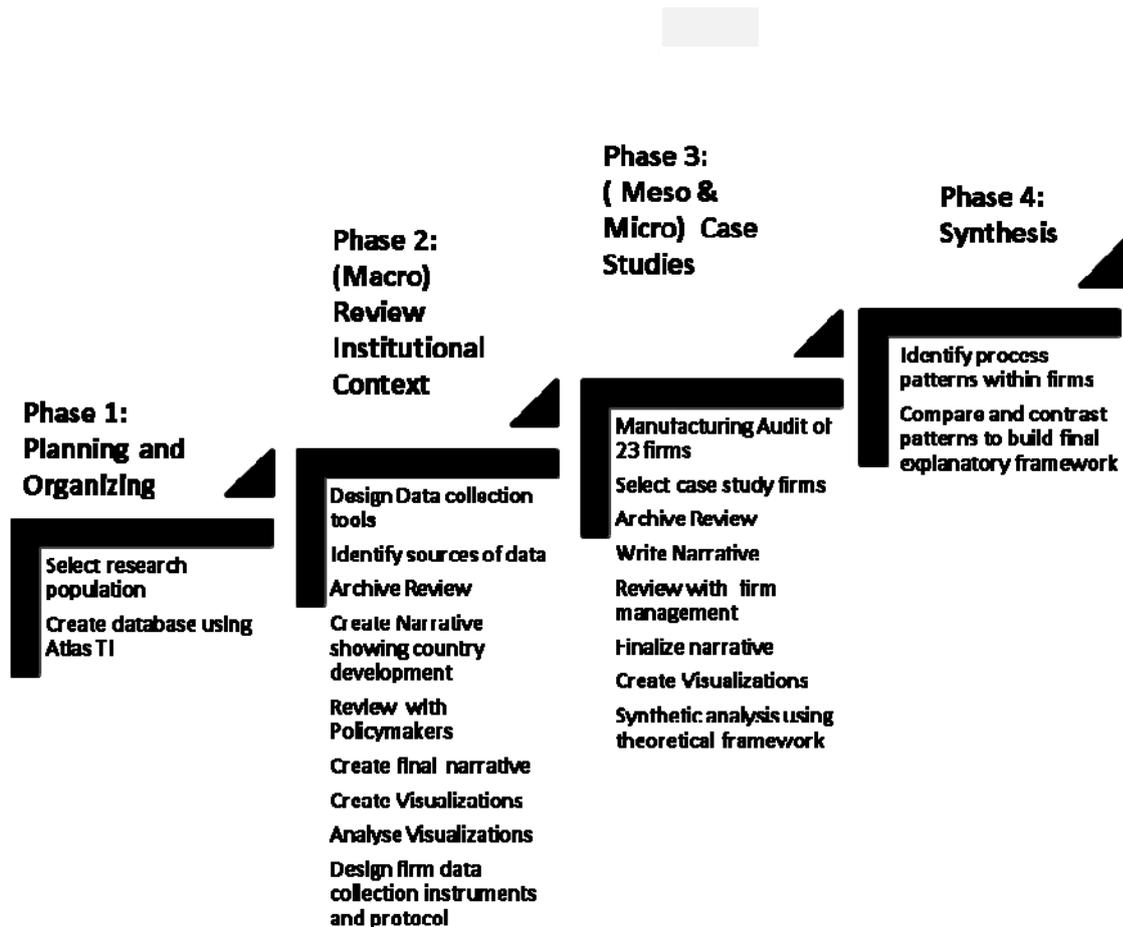
exception as early researchers employed statistical data while later work incorporated qualitative approaches such as case studies (Table 1). Variance methods assume that entities under examination are fixed with varying attributes(A. Van de Ven, 1992). However, they face limitations when attempting to determine causality, and in particular, capturing incidences of path dependence, a critical issue for examination of emergent, dynamic phenomena like internationalization (Clark, Pugh, & Mallory, 1997). Adoption of process methods can help overcome some of these limitations and the next section presents a methodology for employing process methods in IB research.

Data Collection and Analysis

Research into processes is highly complex as it requires the collection of data about how events, actions and decisions evolve over time (Langley, 1999b). The analysis of this data is also a challenge as the researcher is required to integrate an heterogeneous group of data sources into an explanatory framework (Pettigrew, 1997). For this research, our data collection focused on key events at both the country (macro) and firm level (micro and meso) that could affect resource development and hence, internationalization (A. H. Van de Ven & Poole, 2005). At the country level, policy and economic event data was collection while at the firm level, micro level was defined as adjustments in manufacturing processes and systems. In addition to context, internationalization, like other management activity of firms also occurs in a temporal space (Goodman & Krueger, 1988). Very few researchers possess the resources to examine a given country/industry/firm for very long duration, and longitudinal studies in IB rarely exceed 5 years (Haahti, 1998). Incorporation of a historical perspective may be of value in process research (Lawrence, 1984) as it can provide an avenue for examining complex, evolving phenomena, determining underlying causal factors when current data is not available (G. Jones & Khanna, 2006). Combined, these characteristics have great value when examining internationalization by emerging market firms. Generally, firms from developing countries are smaller than their counterparts from their developed world (Barclay, 2007) and are unwilling to participate in research unless they can perceive clear benefits (Tybout, 2000). In processes approaches, however, collection, analysis and interpretation of data are conducted throughout the research

process (Miles & Huberman, 1994) which can provide useful outputs to participants at an early stage. This served to keep organizations interested and allowed progressively deeper access over time.

Figure 2: Research Activity



The research was conducted in four phases as depicted in Figure 2. In Phase 1, the research population and data analysis tools were selected. Since process data can be eclectic, comprising of text, audio and images, a database was created in Atlas TI to support collection and analysis. In phase 2, the resource environment (Macro) development of the country selected earlier was mapped and the outcome used to select firms and data collections tools for the next phase. Meso and Micro levels were assessed in phase 3 by collecting and analyzing firm level data. The outputs of phase 3 were synthesized in phase 4 to create a process theory of internationalization

of firms from small states. The rest of this paper presents how this methodology was enacted in practice along with examples from the study.

Phase 1

In this phase, we selected a research population and implemented systems to manage the rest of the study. Trinidad and Tobago, a small state from the Caribbean was selected as it fit the characteristics of export intensive, resource driven with relatively weak institutions (A. Payne & Sutton, 2001). With a population of 1.3 million, to date, TT's economic development has been fuelled by growth energy sector revenues (Jessen & Vignoles, 2004). However, the limited size of TT's reserves make future energy based growth difficult and the local government has expressed a need to improve the performance of other sectors of the economy (Cook & Harrison, 2005). For analysis, building theoretical understanding or "sensemaking" (Langley, 1999a) employed multiple strategies, each with distinct strengths in the ability to discern patterns, underlying mechanisms, meanings and prediction.

We employed narrative and visual mapping strategies to organize data for later analysis. While narratives served as an initial device to summarize data, visual mapping supported analysis by displaying sequences of events (Langley 1999). Both strategies are not sufficient to support detailed analysis and process theories have been criticized as being descriptive rather than predictive (Van de Ven, 1992). To overcome this limitation we utilized a synthetic method (Eisenhardt, 1989) to refine data obtained from events and compare different cases. In this way, causal relationships were uncovered that supported the development of a predictive theory (Eisenhardt 1989). Process research integrates a combination of data to create a theoretical explanation for a given phenomenon. Specifically, this research utilized a combination of text based archival data (newspaper articles, government reports, company reports), interviews and observations. To manage this volume and variety of data, a research database was established using Atlas TI to support the collection and analysis process.

Phase 2: Context Review

Since TT has attempted to use policy to create an export driven economy, the context review focused on critical policy events and their effect on the non energy manufacturing sector. TT

policy documents were identified in the archives of the following institutions involved in the development of manufacturing:

- Trinidad and Tobago Manufacturers Association
- Metal Industries Company (Development institutions responsible for technology and product development)
- University of the West Indies

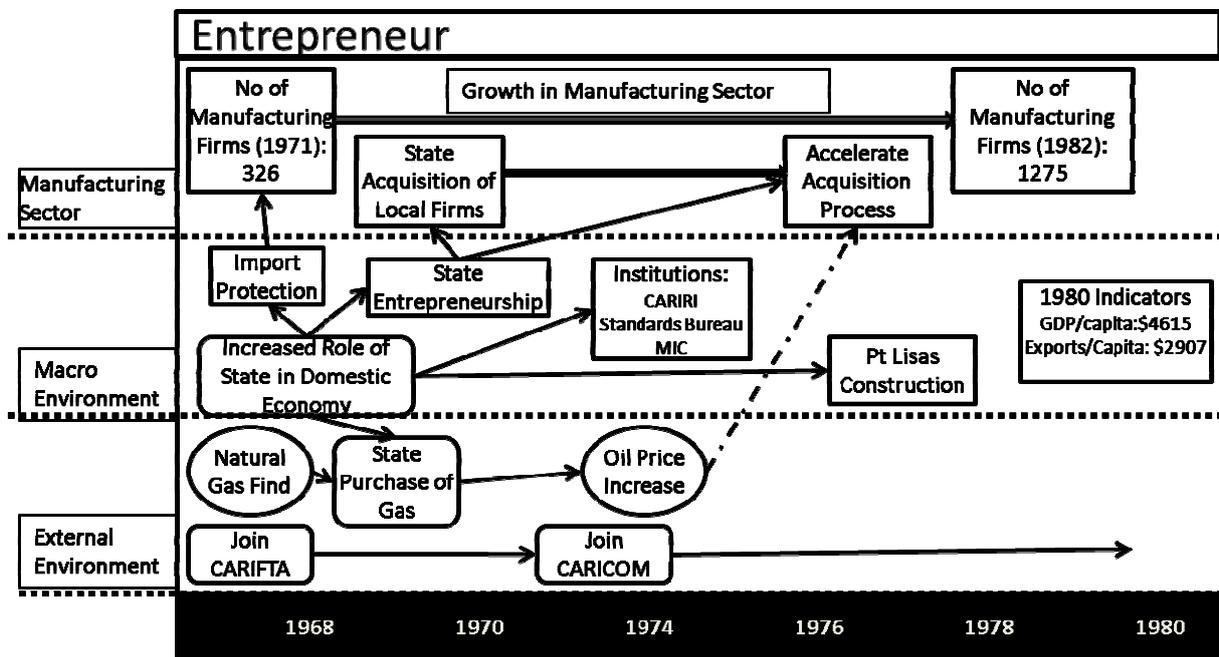
For the archival analysis, a collection tool was devised (appendix 1) to summarize data. Within each archive, documents were identified, tagged and analyzed to create a narrative summary of TT manufacturing development. Narratives or detailed descriptions, builds understanding of phenomena by providing a detailed presentation of the research setting. These summaries were compared across archives and a narrative was created from the findings which formed the basis of discussions with state officials. Any areas of inaccuracy were identified along with additional sources for review.

Once the narrative was finalized, a visual map was created summarizing economic events, policy frameworks and institutional adjustments. Based on this map, TT's policy eras were classified by time period and the state's approach to management of the local economy.

- 1) Promoter: State attempted to attract foreign technology and capital.
- 2) Entrepreneur: State attempted to build international firms directly using energy revenues
- 3) Facilitator: Under IMF guidelines, State removed barriers to foreign capital to encourage FDI
- 4) Architect: State creates institutions to transform TT to a developed country by 2020.

Figure 3 shows a segment of the visual map for the "Entrepreneur" policy era.

Figure 3: Manufacturing Development in the Entrepreneur Era



The TT government’s policy approaches can be summarized into Closed (Promoter and Entrepreneur) and Open(Facilitator and Architect). In the Closed era, TT like many other developing countries at the time (Etzkowitz & Brisolla, 1999), followed an industrial policy led path of development, regulating domestic activity using licenses and taxes .The Open era brought a shift from regulating to actively courting FDI. The state also abandoned “vertical” policies targeting specific sectors(Chandrasekhar, 1996) and embraced “horizontal” approaches aimed at encouraging entrepreneurship and technology development (Breznitz, 2007).

Phase 3: Firm Case Studies

Prevailing conditions around startup influence the early form of organizations. Subsequent development would be influenced by the varying domestic resource environment as a result of closed to open domestic policy frameworks. Organizations were therefore selected that began operation during each successive policy period and continued to the present day. A database of exporters from the TTMA was then used to identify potential study participants. Since websites

provide an easily accessible archive of organizational data (Brugger, 2009), they were reviewed before initial contact to confirm suitability and generate initial lines of inquiry. 23 exporters that met the selection criteria were then screened using a standard assessment instrument (Manufacturing Audit) combined with semi structured interview guide (Appendix 2). This tool provided an immediate, useful output to respondents while aiding researcher in selecting participants for further study. For suitable firms, this initial contact was then leveraged to gain additional access to personnel and archive data required to compile a detailed case study.

Data Collection

After organizations were screened, all public archival data available on were reviewed and compiled. Documents were cataloged and the data compared within and across archives. While retrospective case studies within organizations are heavily dependent on the recall of personnel, data collected during the archive review was used to minimize the inherent risks of omission or errors. Key incidents were identified from the archive review and used as an input to design interview guides. Respondents, for example were asked to recall actions at specific points in the organization's history. Documents such as company press releases were used to prompt respondents about past developments such as plant expansion, alliances and export market entry. After each interview, respondents are asked to suggest additional personnel for the study.

Narrative

For this research, narrative was used as a summarizing device to compile all the data collected into a coherent "story" of each case. This was presented to the firms' management and discussed. Based on this review, corrections were made and the final case used for the study.

Narrative Example

A graduate from the Mechanical Engineering Program at the University of the West Indies in 1974, MT(initials changed) became one of the first Engineers employed at Metal Industries Company, a state company formed to provide services to the local manufacturing sector. On completion of his MSc in 1981, he was employed as works manager and subsequently works director at White Goods Limited (Name changed), the largest local manufacturer of appliances. In 1995, White Goods decided to outsource its production, citing high costs and MT was offered

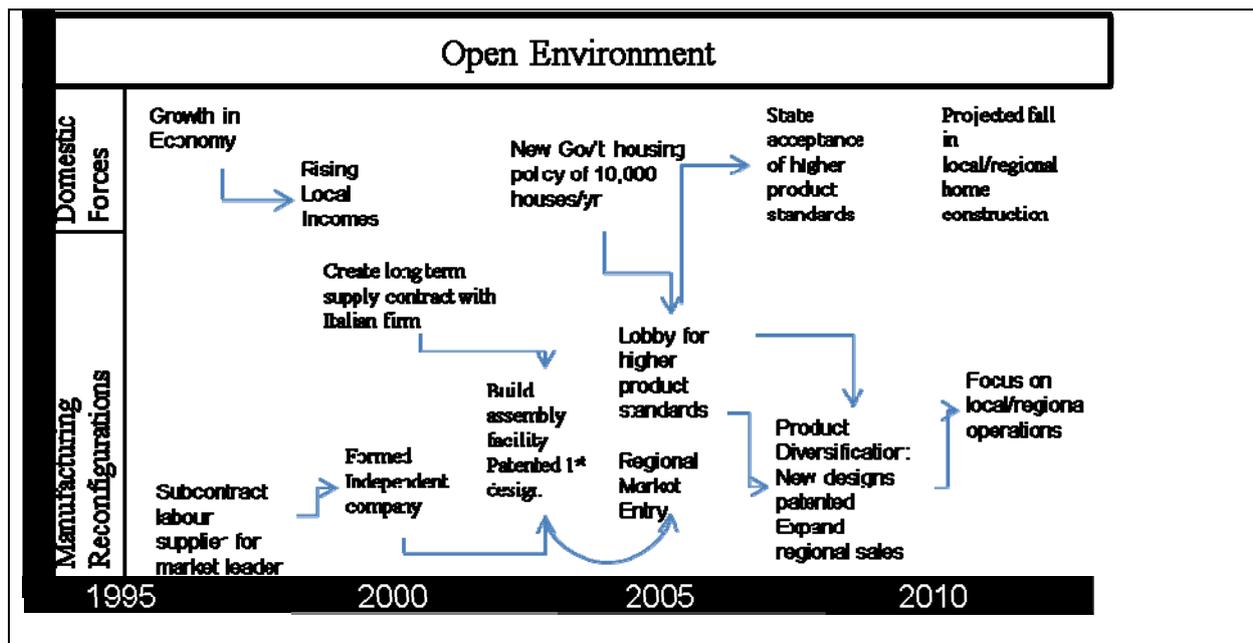
the opportunity to provide design, engineering and production services as a subcontractor. He formed a service company Stovetop Engineering (Name Changed), absorbing the ex White Goods production workers into his own operation.

In the late 1990's MT began working on his own designs for gas stoves and in 2001, began the production and sale of their own brand gas stove. The company faced initial difficulties as banks would not finance a new factory to compete with the established White Goods. Eventually, financing was found from alternative sources and the company began operation. At that time, no safety standards were in place for gas cookers and Stovetop also began lobbying the Trinidad Bureau of Standards. This framework has not yet been ratified; however, it has been accepted as a de facto standard by Customers and competitors.

Visual Mapping

The narratives were discussed with the firms' management and once complete, a visual map strategy was used to summarize the structure domestic forces and corresponding manufacturing reconfigurations experienced in case study firms over time. Figure 4 shows a visual map for Stovetop.

Figure 4: Sample visual map



Process Identification using Synthetic Analysis

In this study, the empirical pattern of events identified from the visual map was analyzed using the constructs in the theoretical framework. The outcome was a matrix showing the relationship between the firm outward activity and its internal resource development. These matrices were compared to identify development processes in small state organizations.

Figure 5: Synthetic Analysis Matrix

	Rental Agency	Importer	Domestic Manufacturer	International Exporter	International Manufacturer
Manufacturing Activities			Production	Design Marketing (Venezuela) Production	Design Marketing (International) International Production
Systemic Knowledge Based Resources				International Marketing Flexible Production	International Manufacturing Flexible Production Marketing
Discrete Knowledge Based Resources	Market Knowledge Supply Relationships	Supply Relationship	Supply Relationship CCU Production	CCU Production DNV Design	Supply Relationship CCU Production DNV Design
Systemic Property Based Resources			Production Facility	Production Facility	Distribution Network
Discrete Property Based Resources	Welding Equipment	Rental Units	Rental Units	Rental Units Certified Designs	Rental Units Certified Designs DNV MSA Agreement
Resource Development		Network-Internal	Network-Internal	Firm- External	Network-Internal Firm- External

In small state environments, there is a relatively small resource base to be accessed by firms. Further, poor institutions may make some resources less valuable than in developed countries. Intellectual property rights, for example, are difficult to enforce (Mathews, 2006) and due to the low level of indigenous technological development (Kumar, et al., 1999), an inward internationalization step to acquire technology or knowledge is required to begin domestic manufacturing operations. Matrices created in the synthetic analysis were compared both within and across firms to identify patterns of development. Organizations in the study progressed through several states during development: Accumulation, Experimentation and Institutionalization. In Accumulation, firms locate, transfer and combine resources, building profiles that are deployed in initial markets. Based on results of their resource deployment, organizations increase or decrease their geographic scope, mode and intensity of external activity. In the final state, institutionalization, firms build an export market specific resource combination that is difficult to redeploy elsewhere.

Phase 4: Synthesis

Multiple case study research aims to create explanatory, middle range theory (Frederickson 1983) using a process of disaggregation of complex scenarios and reintegration of the segments (Bourgeois 1979; Peterson 1998). Nested within a single country case study, they enable the formulation of context specific, situated theory. Macro level shifts encouraged resource evolution in early firms while later organizations coevolved with the environment. Firms shifted from tangible led to intangible resources over time restructuring their organizations from single site to coordinating manufacturing networks. During the Promoter and Entrepreneur eras, the local skill base was undeveloped and the country had limited experience in manufacturing or exporting. While a comprehensive umbrella of state protection existed for local firms, the means of accessing it was by establishing a production facility. Later opening of the TT environment provided access to complementary resources along with increased competition for firms during the Facilitator era. As the environment became less protectionist, firms had to meet the cost and quality requirements of the market. Firms began developing relational resource based strategies, incorporating outsourcing as a means of lowering costs and risks. This shift accelerated in the Architect era as organizations increased both the geographic range and type of items from components to subassemblies and designs.

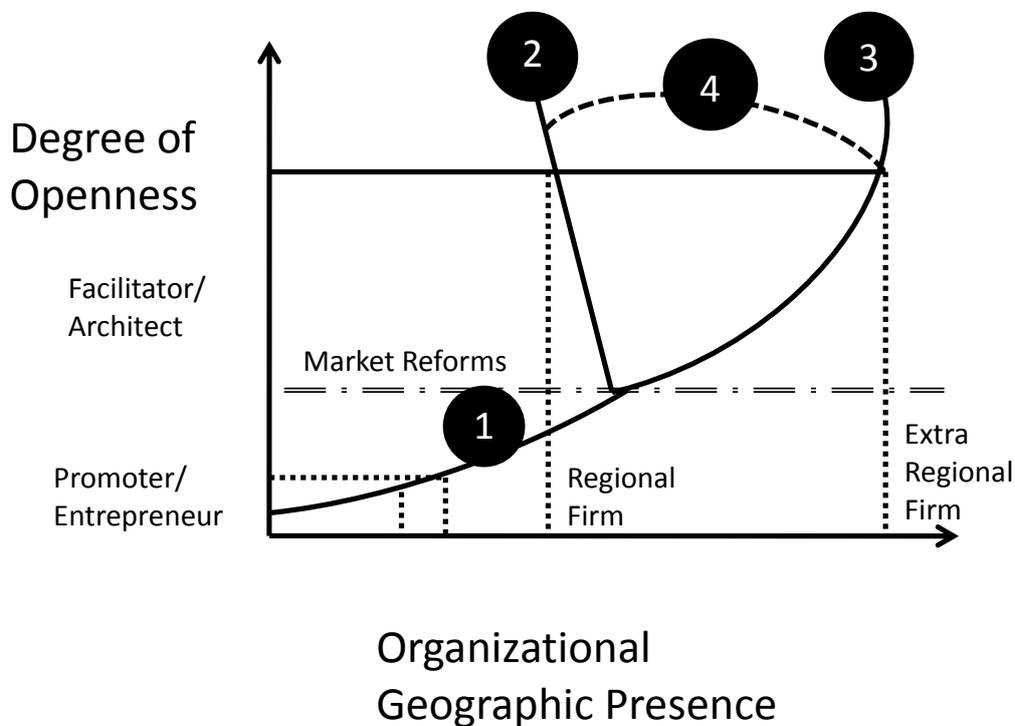
In addition to the content of firm resource portfolio, macro change promoted the adoption of more sophisticated resource development strategies. Early in TT's development firms pursued firm oriented strategies, using captive resources. As the market became more open, network oriented strategies became possible. Both suppliers and customers were involved in the adjustment of resource portfolios. TT firms also exhibited a new mode that has not been captured by previous theory. Some organizations attempted to manipulate the environment, using political actions to change the competitive landscape. New entrants in the Architect era worked with business intermediaries (retailers and importers) to adopt higher technical standards, reducing competition from low cost brands.

While environmental change can affect the configuration of organizations or organizational evolution, organizations and environments may also adapt to each other, or co evolution (Rivkin & Siggelkow, 2003). While improvements in the country skill base through education and training helped reduce resource deficiencies, organizations also built experience and improved their understanding of the production requirements in the domestic environment over time.. Organizations' evolution over time into new forms resulted in activities and resources moving from inside to outside of the firm (Lewin & Volberda, 1999), forming the basis for new exporters such as Stovetop.

Life cycle theories such as the U Model suggests a firm driven internal incremental resource development process as firms experiment with external markets, adjusting resource profiles after experience is accumulated, suggesting an incremental resource development path. Constrained by the closed environment, early expansion by TT firms was similarly incremental; moving from domestic to regional markets (**Path 1**). After obtaining a license, firms acquired technology to build domestic manufacturing enterprises. Initial internationalization to regional markets occurred to deploy excess capacity in regional markets. Further expansion occurred after experimentation was proven to be successful. Opening of the TT environment and fluctuating oil prices introduced uncertainty(Knight, 1921) as competition from imports and demand variation increased. Under these conditions, firms followed divergent paths.

An open economy along with export support in the Facilitator and Architect eras saw more diverse patterns of development. Rapid Regional Expansion (**Path 2**) was observed in SE while others entered extra regional markets quickly (**Path 3**). Alignment of resource profiles and market requirements also resulted in de-internationalization (**Path 4**). For SMEs, the growth rate of domestic markets helps set benchmarks for firm growth and profitability (Bradburd & Caves, 1982). For example, research on exporters from New Zealand (Chetty and Campbell Hunt 2001), revealed that firms experienced a “gusher” or a period of rapid growth when entering extra regional markets. OF encountered the opposite: a rapid increase in demand in markets closer to home, encouraging firms to change their strategies from export expansion to local exploitation (Elango, 1998). This process is visualized below.

Figure 6: Stages to Phases of Sustained Manufacturing Internationalization



The original framework and empirically modified model rely heavily on the RBV, as the focus is on resource accumulation and capability building processes in firms. As such it does not indicate the presence or absence of a specific strategy by firms (Akhongas 1998). Changing environmental conditions influenced resources available and accessible by the firm requiring adaptation and evolution in order to survive. However, resources externalized as a result of adaptation, including increasing experience and company assets became available to later entrants. The characteristics of later entrants can be seen as the outcome of a co-evolutionary process between the domestic environment and the non energy sector. The outcome is a diverse internationalization process, incorporating changes in the rate, direction and mode.

DISCUSSION

Generalizability or the degree to which research findings are applicable to other populations of research (G. Payne & Williams, 2005) is central to the creation of valid knowledge (Seale, 1999). As mentioned in section 1.3, over 40 small states exist worldwide and the findings of this research can be applied in these environments. Unlike developed countries, industrialization in developing countries has been attempted with considerable influence from government policy to compensate for resource and institutional voids. The TT country environment is a typical example of the volatility experienced by firms from small states. Changing oil prices resulted in dramatic changes in GDP, varying the domestic market available to firms. Industrial policy interventions to build exporters directly influenced the resources available to firms and trade agreements provided both complementary resources and increased competition.

For commodity dependent, exporting LDCs, at an earlier stage of development such as sub Saharan countries, this research may even be more relevant. While it is common to refer to natural resources as a “curse” (Sachs & Warner, 2001), resource dependent, low income countries are not automatically condemned to underdevelopment (Lederman & Maloney, 2008). Since the development of institutions may be a long term strategy (Sokoloff & Engerman, 2000),

in the short and medium term, policy interventions can aid in the construction of a resilient export sector. The experiences of TT firms as they adapt to a changing environment may be of special significance to these countries and can be used as a guide for their own policy initiatives. Most work on internationalization has taken a cross sectional approach, with researchers building understanding based on associations between variables. Internationalization, however, is a complex phenomenon and variable approaches, even longitudinal ones, face limitations when attempting to establish causality. Further, developing country environments vary significantly in domestic conditions, making application of standard constructs difficult. Process approaches explicitly recognize context, integrating macro and micro interactions to establish causality. This property is especially useful in developing country research, as the context needs to be explicitly recognized and not taken as a fixed constraint. By observing the development of organizations and the domestic environment in which they operate over time, reasons for firm activity can be linked to larger economic and political developments.

CONCLUSION

While a significant amount of research has been conducted into the internationalization of firms, most of it has taken a cross sectional approach. Since the small state environment is dynamic, any methodology adopted must also incorporate the effect of a changing domestic context. Process approaches have enabled the flexible examination and integration of process and context data into an explanatory framework, an appropriate methodology for this research. Data collection and analysis was guided by a deductive-inductive philosophy in which inductive tools will be used to collect data initially, with the findings confirmed by comparison with the extant literature. The research method chosen incorporates several tools including a historical review of the TT context, a historical review of the focal firm and semi structured interviews with key staff members. In this way, relative weaknesses of any one method could be compensated for and the findings cross analysed to improve validity. The result was a rich description and analysis of the origins and development trajectory of a manufacturing firm from a small state. Insights generated from this process study have demonstrated the potential of the method. Outside of

internationalization, other fields that rely on examination of a phenomenon in its context such as project management may also benefit from applications of process methods.

REFERENCES

- Aldrich, H., & Martinez, M. E. (2001). Many are called but few are chosen: An evolutionary perspective for the study of entrepreneurship. *Entrepreneurship Theory and Practice*, 25, 16.
- Amit, R., & Schoemaker, P. J. H. (1993). Strategic Assets and Organizational Rent. *Strategic Management Journal*, 14(1), 33-46.
- Andersen, O., & Suat Kheam, L. (1998). Resource-based theory and international growth strategies: an exploratory study. *International Business Review*, 7(2), 163-184.
- Baldacchino, G. (2005). Island Entrepreneurs: Insights from Exceptionally Successful Knowledge-Driven SMEs from 5 European Island Territories. *Journal of Enterprising Cultures*, 13(2), 1-32.
- Barclay, L. A. (2007). Can Domestically Owned Manufacturing Firms of Small Developing Countries Compete in a Liberalized Trading Environment. In G. Benito & R. Narula (Eds.), *Multinationals on The Periphery* (pp. 25-48). Houndsmills, Basingstoke: Palgrave MacMillan.
- Bernard, A. B., Redding, S. J., & Schott, P. K. (2007). Comparative Advantage and Heterogeneous Firms. *Review of Economic Studies*, 74(1), 31-66.
- Bijmolt, T., & Zwart, P. (1994). Impact of Internal Factors on the Export Success of Dutch Small and Medium Sized Firms. *Journal of Small Business Management*, 32(2), 69-84.
- Bradburd, R. M., & Caves, R. E. (1982). A Closer Look at the Effect of Market Growth on Industries' Profits. *The Review of Economics and Statistics*, 64(4), 635-645.
- Breznitz, D. (2007). Industrial R&D as a national policy: Horizontal technology policies and industry-state co-evolution in the growth of the Israeli software industry. *Research Policy*, 36(9), 1465-1482.
- Brugger, N. (2009). Website history and the website as an object of study. *New Media Society*, 11(1-2), 115-132.
- Carrington, W. J., & Detragiache, E. (1998). *How Big Is the Brain Drain?*
- Chandra, Y. (2007). *Internationalization as an entrepreneurial process*. University of New South Wales.
- Chandrasekhar, C. P. (1996). External Vulnerability and Industrial Policy in the Era of Globalization. *Social Scientist*, 24(11/12), 92-110.
- Chang, S. J., & Singh, H. (1999). The Impact of Modes of Entry and Resource Fit on Modes of Exit by Multibusiness Firms. *Strategic Management Journal*, 20(11), 1019-1035.
- Clark, T., Pugh, D. S., & Mallory, G. (1997). The process of internationalization in the operating firm. *International Business Review*, 6(6), 605-623.
- Cook, I., & Harrison, M. (2005). Cross over food: postcolonial economic geographies. 33
- Dieleman, M., & Sachs, W. M. (2008). Coevolution of Institutions and Corporations in Emerging Economies: How the Salim Group Morphed into an Institution of Suharto's Crony Regime. *Journal of Management Studies*, 45(7), 1274-1300.
- Easterly, W., & Kraay, A. (2000). Small States, Small Problems? Income, Growth, and Volatility in Small States. *World Development*, 28(11), 2013-2027.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, 14(4), 532-550.

- Elango, B. (1998). An empirical examination of the influence of industry and firm drivers on the rate of internationalization by firms. *Journal of International Management*, 4(3), 201-221.
- Etzkowitz, H., & Brisolla, S. N. (1999). Failure and success: the fate of industrial policy in Latin America and South East Asia. *Research Policy*, 28(4), 337-350.
- Gabrielsson, M., Kirpalani, V., Dimitratos, P., Solberg, C., & Zucchella, A. (2008). Conceptualizations to Advance Born Global Definition: A Research Note. *Global Business Review*, 9(1), 45-51.
- Garud, R., & Karnøe, P. (2003). Bricolage versus breakthrough: distributed and embedded agency in technology entrepreneurship. *Research Policy*, 32(2), 277-300.
- Goodman, R. S., & Krueger, E. J. (1988). Data Dredging or Legitimate Research Method? Historiography and Its Potential for Management Research *Academy of Management Review* 13(2), 315-335.
- Haahti, A. (1998). Interstratos: A pioneering project on internationalization of SMEs from Europe. In R. Donckels, A. Haahti & G. Hall (Eds.), *The Internationalization of Small to Medium Enterprises: The Interstratos Project* (pp. 1-18).
- Hannan, M. T., & Carroll, G. R. (2003). Cascading Organizational Change. *Organization Science*, 14(5), 463-482.
- Henry, P. B., & Miller, C. (2009). Institutions Vs. Policies: A Tale of Two Islands. *American Economic Review*, 99(2), 261-267.
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Guest Editors' Introduction to the Special Issue Strategic Entrepreneurship: Entrepreneurial Strategies for Wealth Creation. *Strategic Management Journal*, 22(6/7), 479-491.
- Hymer, S. (1976). *The international operations of National Firms*. Boston: MIT Press.
- Jessen, A., & Vignoles, C. (2004). *Trinidad and Tobago: Trade performance and Policy Issues in an Era of Growing Liberalization*. Buenos Aires: IDB-INTAL.
- Johanson, J., & Vahlne, J. E. (1977). The internationalization process of the firm—a model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, 8(1), 23-32.
- Jones, G., & Khanna, T. (2006). Bringing history (back) into international business. *Journal of International Business Studies*, 37(4), 453-468.
- Jones, M. V., & Coviello, N. E. (2005). Internationalisation: conceptualising an entrepreneurial process of behaviour in time. [Article]. *Journal of International Business Studies*, 36(3), 284-303.
- Knight, F. H. (1921). *Risk, Uncertainty and Profit*. Boston: Riverside Press.
- Kogut, B., & Zander, U. (2003). Knowledge of the firm and the evolutionary theory of the multinational corporation *Journal of Business Studies*(34).
- Kumar, V., Kumar, U., & Persaud, A. (1999). Building Technological Capability Through Importing Technology: The Case of Indonesian Manufacturing Industry. *The Journal of Technology Transfer*, 24(1), 81-96.
- Langley, A. (1999a). Strategies for Theorizing from Process Data. *The Academy of Management Review*, 24(4), 691-710.
- Langley, A. (1999b). Strategies for Theorizing from Process Data *Academy of Management Review*, 24(4), 19.
- Lawrence, B. S. (1984). Historical perspective: Using the past to study the present. *Academy of Management Review*, 9, 6.

- Lederman, D., & Maloney, W. F. (2008). *In Search of the Missing Resource Curse*: SSRN.
- Lee, K. S., Lim, G. H., & Tan, S. J. (1999). Dealing with Resource Disadvantage: Generic Strategies for SMEs. *Small Business Economics*, 12(4), 299-311.
- Lewin, A. Y., & Koza, M. P. (2001). Editorial. *Organization Studies* (Walter de Gruyter GmbH & Co. KG.), p. V. from <http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=6660139&site=ehost-live>.
- Lewin, A. Y., & Volberda, H. W. (1999). Prolegomena on Coevolution: A Framework for Research on Strategy and New Organizational Forms. *Organization Science*, 10(5), 519-534.
- MacDonald, J. M. (1985). R & D and the Directions of Diversification. *The Review of Economics and Statistics*, 67(4), 583-590.
- Mahoney, J. T., & Pandian, J. R. (1992). The resource-based view within the conversation of strategic management. *Strategic Management Journal*, 13(5), 363-380.
- Malerba, F., & Orsenigo, L. (2000). Knowledge, innovative activities and industrial evolution. *Ind Corp Change*, 9(2), 289-314.
- Markusen, J. R. (1995). The Boundaries of Multinational Enterprises and the Theory of International Trade. *The Journal of Economic Perspectives*, 9(2), 169-189.
- Martin, X., & Salomon, R. (2003). Tacitness, learning, and international expansion: A study of foreign direct investment in a knowledge-intensive industry. [Article]. *Organization Science*, 14(3), 297-311.
- Mathews, J. (2006). Dragon multinationals: New players in 21st century globalization. *Asia Pacific Journal of Management*, 23(1), 5-27.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis (2nd ed.)*. Thousand Oaks, CA: Sage.
- Payne, A., & Sutton, P. (2001). From boom to bust to bouyancy in Trinidad and Tobago. In A. Hennessy & G. Heuman (Eds.), *Charting Carribbean Development* (Vol. 1, pp. 153-172). London: Macmillian.
- Payne, G., & Williams, M. (2005). Generalization in Qualitative Research. *Sociology*, 39(2), 295-314.
- Penrose, E. T. (1959). *The Theory of the Growth of the Firm*. Oxford: Oxford University Press.
- Pettigrew, A. M. (1997). What is a Processual Analysis? *Scandanavian Journal of Management*, 13(4), 12.
- Pfeffer, J., & Salancik, G. R. (2003). *The External Control of Organizations—A Resource Dependence Perspective*. Stanford: Stanford University Press.
- Pollock, T. G. (2004). Constructing deal networks: brokers as network" architects" in the US IPO market and other examples. *Academy of Management. The Academy of Management Review*, 29(1), 50-72.
- Priem, R. L., & Butler, J. E. (2001). Tautology in the Resource-Based View and the Implications of Externally Determined Resource Value *Academy of Management Review*, 26(1), 57-66.
- Redding, G. (2005). The thick description and comparison of societal systems of capitalism *Journal of International Business Studies*, 36(2), 23.
- Ricardo, D. (1817). *On the principles of political economy and taxation*. London.
- Rivkin, J. W., & Siggelkow, N. (2003). Balancing Search and Stability: Interdependencies among Elements Organizational Design. *Management Science*, 49(3), 290-311.

- Roth, K. (1995). Managing international interdependence: CEO characteristics in a resource based framework. *Academy of Management Journal*, Vol. 38(1), 32.
- Rugman, A., & Verbeke, A. (2005). Towards a Theory of Regional Multinationals: A Transaction Costs Economics Approach. *Management International Review*, 45(1), 13.
- Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review*, 45(4-6), 827-838.
- Seale, C. (1999). Quality in Qualitative Research. *Qualitative Inquiry*, 5(4), 465-478.
- Sokoloff, K. L., & Engerman, S. L. (2000). History Lessons: Institutions, Factors Endowments, and Paths of Development in the New World. *The Journal of Economic Perspectives*, 14(3), 217-232.
- Spender, J. C., & Grant, M. (1996). Knowledge and the Firm: Overview. *Strategic Management Journal*, 17(Special Issue: Knowledge and the Firm), 5-9.
- Takeuchi, R., Tesluk, P. E., & Yun, S. H. (2005). An integrative view of international experience. [Article]. *Academy of Management Journal*, 48(1), 85-100.
- Tushman, M. L., & Anderson, P. (1986). Technological Discontinuities and Organizational Environments. *Administrative Science Quarterly*, 31(3), 439-465.
- Tybout, J. (2000). Manufacturing Firms in Developing Countries: How Well Do They Do, and Why? *Journal of Economic Literature*, 38(1), 33.
- Van de Ven, A. (1992). Suggestions for studying strategy process: A research note. *Strategic Management Journal*, 13, 169-188.
- Van de Ven, A. H., & Engleman, R. M. (2004). Event- and outcome-driven explanations of entrepreneurship. *Journal of Business Venturing*, 19(3), 343-358.
- Van de Ven, A. H., & Poole, M. S. (2005). Alternative Approaches for Studying Organizational Change. *Organization Studies*, 26(9), 1377-1404.

